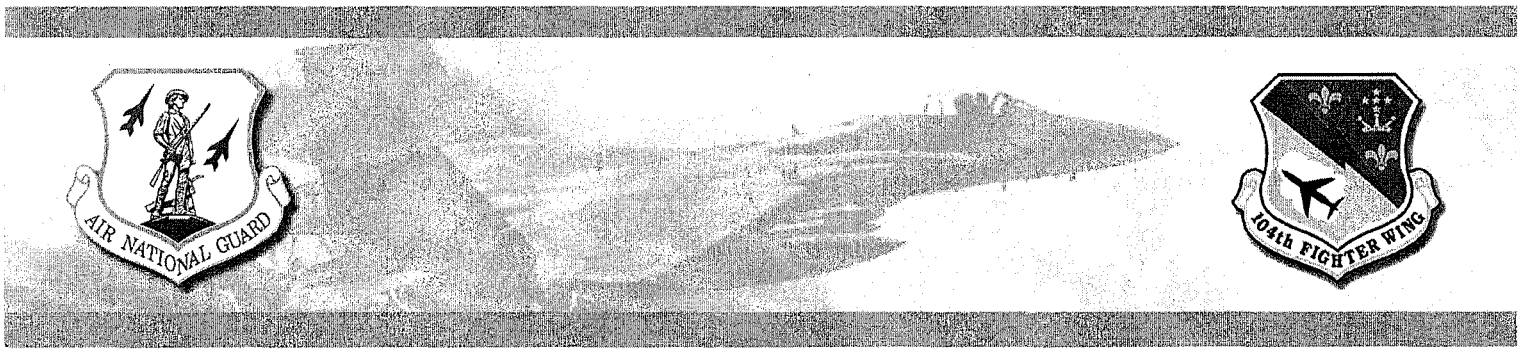



# RECORD OF DECISION

## Implementation of the Base Realignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts

The United States Air Force (USAF) is issuing this Record of Decision (ROD) for Implementation of the Base Realignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing (104 FW), Massachusetts Air National Guard (MAANG) at Westfield-Barnes Airport, Westfield, Massachusetts. This ROD is based on the information, analysis, and public and agency comments contained in the Final Environmental Impact Statement (EIS) (*Federal Register*: November 2, 2007 [Vol. 72, No. 212] Page 62229-62230).

This ROD has been prepared in accordance with the regulations implementing the National Environmental Policy Act (NEPA) and the President's Council on Environmental Quality (CEQ) NEPA regulations, specifically Title 40 Code of Federal Regulations (CFR), Part 1505.2, *Record of decision in cases requiring environmental impact statements* (40 CFR §1505.2). Specifically, this ROD:

- States the Agency's decision, (*See* page 11).
- Identifies all alternatives considered by the Agency in reaching the decision and specifies the alternative considered preferable, (*See* pages 4 and 5).
- Identifies and discusses relevant factors including economic and technical considerations, the Agency's missions, and any essential considerations of national policy which were balanced by the Agency in making this decision, and states how those considerations entered into the decision, (*See* pages 5-9).
- States whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not, (*See* page 11).

# Report Documentation Page

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|---|---|
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| | 5c. PROGRAM ELEMENT NUMBER |
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12. DISTRIBUTION/AVAILABILITY STATEMENT
**Approved for public release; distribution unlimited**

13. SUPPLEMENTARY NOTES

14. ABSTRACT

**This EIS has been prepared in accordance with NEPA. The public and agency scoping process resulted in the analysis of the following environmental resources: noise, land use and visual resources socioeconomics and environmental justice, air quality, airspace management and air traffic control, safety solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. For the Proposed Action, findings indicate that there will be significant impacts to the noise environment at Westfield-Barnes Airport, and therefore impacts to associated land uses, and populations within the 65 decibel (dB) noise contour. Under the Alternative Action impacts would be similar to those under the Proposed Action, although more acreage, homes, and therefore people would be located within the 65 dB noise contour. Under the No Action Alternative the 104 FW would not implement the actions described above. The 104 FW would maintain their existing facilities, would not build the new facilities proposed, and would not undergo an aircraft/mission conversion. Under the No Action Alternative, these deficiencies would continue to impair the 104 FW?s ability to successfully conduct their mission and to maintain wartime readiness and training.**

15. SUBJECT TERMS

| 16. SECURITY CLASSIFICATION OF: | | | 17. LIMITATION OF ABSTRACT | 18. NUMBER OF PAGES | 19a. NAME OF RESPONSIBLE PERSON |
|---|---|---|---|---|---|
| a. REPORT | b. ABSTRACT | c. THIS PAGE | | | |
| **unclassified** | **unclassified** | **unclassified** | **Same as Report (SAR)** | **765** | |

## *Background*

The EIS analyzed the potential environmental consequences of a proposal to implement the BRAC final recommendations and associated actions for the 104 FW of the MAANG, located at Westfield-Barnes Airport in Westfield, Massachusetts.

The purpose of the Proposed Action is to implement the 2005 BRAC Commission Final and Approved Recommendations, which recommended that the 104 FW undergo an aircraft conversion of their Primary Assigned Aircraft (PAA) from their current fleet of 15 A-10s to the proposed fleet of 18 F-15s. In association with the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/air sovereignty alert (ASA) mission associated with the F-15. The 104 FW will also be responsible for providing air-to-air support in response to national emergencies in the northeast United States (U.S.). As part of the aircraft conversion and mission change, the 104 FW will also have an increase of 139 authorized personnel. To accommodate the mission change for the 104 FW, the MAANG will also implement several construction and demolition projects at the 104 FW installation at the Westfield-Barnes Airport.

## *Public Involvement*

The public involvement process used by the USAF for the EIS included the following steps;

1) Issue of a Notice of Intent (NOI) to prepare the EIS in the *Federal Register* (Vol. 71, No. 140, Pages 41430-41431) on July 21, 2006;

2) Performing public and agency scoping from July 21, 2006 through September 1, 2006. Two scoping meetings were held on August 15, 2006, to actively solicit input from the public, local governments, Federal and state agencies, and environmental groups;

3) Conducting Interagency and Intergovernmental Coordination for Environmental Planning (IICEP) and Agency consultation;

4) Issue of a Notice of Availability (NOA) of the Draft EIS in the *Federal Register* (Vol. 72, No. 71, Page 18644) on April 13, 2007, which initiated the public comment period of the Draft EIS;

5) Conducting a Public Hearing on May 9, 2007 at the Westfield North Middle School in Westfield, Massachusetts;

6) Both the public scoping meetings (August 15, 2006) and the public hearing (May 9, 2007) were advertised in numerous local newspapers, including:

- The Republican
- Westfield Evening News
- The Pennysaver
- The Daily Hampshire Gazette

The meetings were also advertised on the local radio and television stations, including:

- TV Channel 22 (NBC)
- TV Channel 3 (CBS)
- TV Channel 40 (ABC)
- Radio Station WHYN (AM)
- Radio Station WMAS (FM)
- Radio Station WFCE (NPR)

Comments received during the scoping and public review periods were considered in the preparation of the EIS. The scoping meeting was attended by 66 people from the local community and agencies. A total of 25 written comments were received during the scoping period. Approximately 200 copies of the Draft EIS were sent to Federal, state, and local agencies, members of the public who requested a copy, and local libraries. More than 40 IICEP letters were sent to appropriate Federal, state, and local agencies. During the public comment period, a formal hearing was held in Westfield to provide the public an opportunity to evaluate and comment on the proposal and analysis contained in the Draft EIS. A total of 55 written comments were received during the 45-day public comment period. Twelve people provided oral testimony during the public hearing.

Comments received during the public comment period were considered in the preparation of the Final EIS, which was issued on November 2, 2007 (*Federal Register* Vol. 72, No. 212, Pages 62229-62230). Appendix C of the EIS contains comments received from Federal, state, and local agencies; Appendix E contains written public review comments on the Draft EIS as well as responses to those comments, as appropriate; Appendix F contains oral public testimony on the Draft EIS as well as responses to those comments, as appropriate.

### *Alternatives Analyzed*

The final EIS analyzed the potential environmental consequences of three alternatives.

*Proposed Action (Preferred Alternative):* Under the Proposed Action, the 104 FW will undergo an aircraft conversion from their current fleet of 15 A-10s to the proposed fleet of 18 F-15s as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/ASA mission associated with the F-15. Under this alternative, the 104 FW proposes to focus aircraft take-offs on Runway 02, which will result in approximately 90 percent of the take-offs occurring toward the north of the airport. The landings and pattern work will be the same across the preferred and alternative actions.

Proposed aircraft training operations under this alternative will include approximately 2,725 total annual training sorties for a total of approximately 3,400 annual flying hours. Airspace that will be utilized by the 104 FW under the Proposed Action will include Warning Areas 102 and 105 (W-102, W-105) located over the Atlantic Ocean off the east coast of the U.S., the Yankee Military Operations Area (MOA), the Condor MOA, and Military Training Route (MTR) Visual Route 840 (VR-840). Aircraft training operations associated with this alternative are not anticipated to result in any substantial changes or increases in the use of airspace because 104 FW training operations will essentially replace operations currently performed by the F-15 aircraft associated with Otis Air National Guard Base (ANGB), which will no longer fly F-15 aircraft as a result of the 2005 BRAC Commission Final and Approved Recommendations.

Under this alternative, the 104 FW will also implement several construction projects in support of their new mission. Some facility demolitions are also proposed for facilities that are either obsolete or deteriorated or that would be in the footprint of proposed facilities.

*Alternative Action:* Under the Alternative Action, the 104 FW would still undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 would change to an air superiority/ASA mission associated with the F-15. However, under this alternative, the 104 FW would focus aircraft take-offs on Runway 20, which would result in approximately 90 percent of the take-offs occurring to the south of the airport. The landings and pattern work would be the same across the preferred and alternative actions. All other activities (mission change, construction, assigned personnel increase) would remain as described under the preferred alternative.

*No Action Alternative:* Although the No Action Alternative is not a viable alternative in this case, the CEQ regulation 40 CFR Section 1502.14(d) specifically requires analysis of the "No

Action" alternative in all NEPA documents. Under the No Action Alternative, the 104 FW would not implement the actions described above. The 104 FW would maintain their existing facilities, would not build the new facilities proposed, and would not undergo an aircraft/mission conversion. Under the No Action Alternative, these deficiencies would continue to impair the 104 FW's ability to successfully conduct their mission and to maintain wartime readiness and training. In addition, the 104 FW would not be able to accomplish their BRAC-directed mission change to convert to the F-15 aircraft.

### *Consequences*

*Noise.* An additional 1,307 acres of land surrounding Westfield-Barnes Airport (629 acres of which are on airport property) will be exposed to sound levels above Day-Night Average Sound Level ($L_{dn}$) 65 A-weighted decibels (dBA). Noise exposure at all eight specific noise sensitive point locations in the vicinity of the airport will increase as a result of the aircraft conversion, but of these point locations, only the Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA. This will result in an incompatible land use due to the elevated noise levels, subjecting the Arbor Mobile Home Park to noise levels in excess of $L_{dn}$ 65 dBA.

In general, military training airspace currently used by the 104 FW will experience decreased noise levels because the F-15s will generally operate at a higher altitude than A-10s. Airspace newly used by the 104 FW F-15s will replace the existing F-15 operations by aircraft stationed at Otis ANGB, so there would be no anticipated change to noise levels associated with this airspace. Construction noise will be intermittent and for a limited duration and will not be expected to create substantial adverse impacts outside the airport.

*Land Use.* The Proposed Action will not introduce any new land uses at the 104 FW installation, and will remain compatible with current uses at the airfield. The 104 FW will coordinate proposed construction projects with the airport to ensure that encroachment into runway object free and safety areas does not occur. None of the proposed new facilities will be located within any of these areas and none will violate height restrictions around the runway. Both the siting and use of new munitions storage facilities and alert mission holding areas have been coordinated with the airport to ensure that new quantity-distance (QD) arcs are compatible with ongoing activities and land uses on the airfield.

An additional 678 acres of off-airport land uses will be affected by noise levels of 65 dBA or greater, including 144 acres of residential land. About 7 acres of residential land will be exposed to noise levels of 70 dBA or higher. A total of 261 households are estimated to be exposed to noise levels greater than 65 dBA. No schools will be exposed to noise levels of 65 dBA or greater. The Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA as a

consequence of the aircraft conversion. This is considered an incompatible land use due to the elevated noise levels.

*Socioeconomics and Environmental Justice.* Construction activities will involve the expenditure of $77 million, leading to the direct creation of 1,440 annual construction job equivalents, as well as additional indirect and induced earnings due to these construction jobs. An additional 139 new permanent jobs will result from personnel increases under the Proposed Action. This increase will not stimulate population increases in the region of influence (ROI). Of the populations that would be exposed to noise levels over 65 decibels (dB), 4.9 percent are minority and 6.0 percent are low-income under the Proposed Action. Overall, the Proposed Action will not have disproportionately high and adverse effects on minority or low-income populations.

*Air Quality.* Emissions from construction will produce short-term and elevated air pollutant concentrations on a localized basis. Total emissions from construction and operations (i.e., aircraft, ground-based mobile sources, stationary sources, commuting) will remain below the conformity *de minimis* thresholds of the air basin emissions for Hampden County.

*Airspace Management.* No changes or modifications to the controlled airspace or Air Traffic Control procedures currently supporting aviation activities at the airport are required. There is essentially no increase in overall airspace utilization under the Proposed Action. The only modified use will involve a general decreased need for low altitude flight training because most air-to-air training is conducted at higher altitudes than the A-10 operations. No impacts to airspace management or regional air traffic control systems are anticipated. Implementation of the alert mission requirement does not pose any unique issues to airspace management. Launch and control of the alert aircraft would be routinely managed by the Federal Aviation Administration (FAA).

*Safety.* Several projects under the Proposed Action will improve ground safety conditions. No unique activities or materials would be introduced to the installation, and established safety procedures and protocols will adequately address safety of personnel and property on the ground. Live munitions for the ASA mission will be stored, assembled, and maintained in facilities meeting Department of Defense (DoD) explosive safety standards. They will be delivered to the aircraft using approved munitions delivery techniques and routes on the installation. All munitions associated with the Proposed Action will be stored at the 104 FW installation. Existing and new facilities will provide adequate capacity and QD easements for this function. All proposed facility construction has been sited to be compliant with the QD arcs. The probability of mishaps with the F-15 compared to the A-10 will not change substantially. The potential for bird-aircraft strikes would be expected to remain approximately the same for both aircraft.

*Solid and Hazardous Materials and Wastes.* Construction and renovation will cause short-term increases in the quantities of hazardous materials and petroleum products used and stored at the installation. Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure (SPCC) Plan. It is not anticipated that there will be any affect to the 104 FW's status as a small quantity generator (SQG). Hazardous materials, petroleum products and their wastes will continue to be managed in accordance with local, state, and Federal regulations. Hazardous materials are received by the base hazmat pharmacy and issued to the various base shops on an as-needed basis. These hazardous materials and petroleum products are stored in containers, drums, and tanks in accordance with the *Spill Prevention Control and Countermeasure Plan.*

Some construction activities associated with the Proposed Action have the potential to encounter contaminated soil or groundwater associated with Environmental Restoration Program (ERP) sites 6N, 5, and 7 and former underground storage tank (FUST) site 4, although the potential is low since all of the ERP sites have received closure status, and contamination associated with FUST site 4 was not detected above regulatory action levels.

Demolition activities will generate an estimated 1,977 tons of debris, which represents a negligible percentage of the regional landfill capacity. Asbestos and lead-based paint may be present in buildings scheduled for demolition and renovation, and lead may be encountered during demolition of the Old Firing Range.

*Infrastructure.* The Proposed Action will result in a temporary increase in vehicle trips to and from the 104 FW installation for construction and demolition activities. This increase will be phased over several years and will be temporary so impacts to the local transportation system will be minor. The increase of 139 permanent personnel will represent a 1.5 percent increase in average daily traffic (ADT) on Southampton Road. This increase is not expected to degrade the effectiveness of the local transportation network. Existing utility systems are considered adequate to support proposed facilities and personnel increases, although some utilities extensions may be required to serve some of the new facilities. Improvements to the storm water drainage system will be required to facilitate the increase of 0.85 acres of impervious surface that will be created by new construction.

*Earth Resources.* Up to 10 acres of land surface will be temporarily disturbed as a result of construction and demolition activities. Approximately 0.85 acres of new impervious surface will

be created by proposed construction. Most construction will occur on previously developed land. Construction activities on Hinckley loamy sand that has a slope of 15-25 percent would not be recommended without special construction techniques. There are no special qualities associated with the soils or geologic resources at the 104 FW installation or Westfield-Barnes Airport.

*Water Resources.* Approximately 10 acres of surface disturbance will occur over the construction period and 0.85 acres of new impervious surface will be created, leading to an increase in the rate of peak discharge. This impact will be minimal given the developed nature of the site. No projects are sited within floodplains. The rate of groundwater recharge of the Barnes Aquifer will be minimally impacted by the increase in impervious surface. Adherence to the Storm Water Pollution Prevention Plan (SWPPP) and other established plans and procedures will generally preclude the potential for substantial impacts to water quality.

*Biological Resources.* Approximately 10 acres of land will be temporarily disturbed and about 0.85 acres of previously undeveloped land will become impervious. The majority of these undeveloped lands are currently landscaped areas or open non-landscaped lands and none of these are considered to contain native vegetation. Long-term impacts due to the negligible loss of habitat is not expected to impact federally or state-listed sensitive species.

There will also be temporary, indirect impacts to wildlife due to increased noise levels during construction but these will be minor given the existing noise environment (i.e., daily aircraft noise). While the acoustic environment at the airport is expected to become louder, most wildlife in the area are likely habituated to aircraft noise. However, some individuals may relocate within the area as a result of changes in aircraft noise. A startle response in animals (wildlife and livestock) is common but highly variable for those newly or infrequently exposed to aircraft noise. However, there are no substantial impacts anticipated from aircraft noise on wildlife, livestock, or humans working with livestock. The Proposed Action will have no impact on federally listed species because there are none in the ROI and habitat for these species does not occur in the ROI. The State listed marbled salamander is documented in the vicinity of the ROI, but not in the project area. No direct, adverse impacts are anticipated for this species. No direct impacts to wetlands will occur under the Proposed Action. Potential indirect impacts to three wetlands located on the East Parcel may include increases in storm water runoff and sedimentation, but these impacts will be minor.

*Cultural Resources.* There are no anticipated effects to historic resources as a result of the Proposed Action. No National Register of Historic Places (NRHP)-listed properties are identified beneath the projected 65 dBA and louder noise contours. A cultural resources inventory consisting of an evaluation of architectural resources and archaeological resources at the 104 FW has been completed. Results of the survey indicate that no buildings are eligible for

the NRHP. One archaeological site lies outside the ROI of the Proposed and Alternative Actions, and will not be affected. All construction will occur within previously disturbed areas. Consultation with the State Historic Preservation Office (SHPO) has been completed.

### *Mitigation Measures*

The MAANG will (as required) take various actions to reduce and minimize potential environmental effects as generally described in Chapter 6 of the Final EIS and discussed as follows.

- Obtain permits for installation or modification of any air emission sources, such as fuel storage and dispensing, boilers and heaters, emergency generators, paint booths, degreasers, etc. with the Massachusetts Department of Environmental Protection (MassDEP).

- Revise the 104 FW's current Restricted Emissions Status Permit as required under the Massachusetts Clean Air Act (CAA).

- Will implement a nest survey in the impact areas with appropriate habitat for the Upland Sandpiper, Grasshopper Sparrow, and/or Vesper Sparrow if construction occurs during the nesting season (i.e., April through August).

Westfield-Barnes Airport, in coordination with the FAA, is preparing an updated review of noise associated with proposed operations at Westfield-Barnes Airport under Title 14 CFR Part 150. The Part 150 Study promotes comprehensive noise evaluation and mitigation and is the primary program under which the FAA supports local airport noise compatibility planning and projects. Part 150 is a voluntary program that allows airport operators to prepare noise exposure maps and to recommend measures in a noise compatibility program to reduce noise and incompatible land uses based on the noise exposure maps. Airport operators may submit airport noise compatibility programs to the FAA for approval under criteria established by the Aviation Safety Noise Abatement Act and Part 150. The FAA is authorized to provide Airport Improvement Program funding for airport noise compatibility planning (i.e., the preparation of the noise exposure maps and the noise compatibility program) and for noise projects (i.e., measures approved by the FAA in a noise compatibility program).

For standard home construction, noise mitigation can include sound insulation or (for the most seriously affected) acquisition and removal of the home. It should be noted that mobile homes cannot be sound insulated and are normally purchased and removed. The details of any sound insulation or acquisition program is the subject of the FAA-funded Part 150 Noise Study, which is underway concurrently with the EIS associated with this ROD, but is not a part of the EIS.

The process of acquiring residences is guided by federal statute, which requires purchase of homes at fair market value and also requires provision of relocation assistance to all displaced residents (both owners and renters). Upon completion of the Part 150 Study, the FAA and Westfield-Barnes Airport will determine what, if any, noise mitigation actions will be implemented.

The 104 FW shall develop or require their contractors to develop as required, plans to address and monitor specific mitigations selected for implementation. These plans, for example, may include a Temporary Erosion Sediment Control Plan, a SWPPP, and a SPCC Plan. During construction activities dust suppression, soils stabilization, and revegetation will be applied to areas disturbed to prevent soils migration.

Releases of hazardous materials and petroleum products are managed in accordance with the 104 FW *Hazardous Material Emergency Planning and Response Plan.* Hazardous waste management at the installation is guided by the site-specific *Hazardous Waste Management Plan* and the *Hazardous Waste Analysis Plan.*

All construction activities where asbestos will be disturbed will be handled in accordance with the MassDEP asbestos regulations. A Bureau of Waste Prevention Air Quality Construction/ Demolition Notification will be filed with the MassDEP prior to demolition. A Bureau of Waste Prevention Asbestos Removal Notification will be also filed with the MassDEP prior to demolition. Asbestos encountered during facility renovation or demolition will be the responsibility of the MAANG and is regulated under National Emission Standards for Hazardous Air Pollutants to prevent the release of asbestos fibers due to damage and disturbance of asbestos-containing materials. Exposed friable asbestos will be removed or remediated in accordance with USAF policy and applicable health laws, regulations, and standards, if it is determined that a health hazard exists. All solid waste will be disposed of in accordance with applicable federal, state, USAF, and Air National Guard (ANG) regulations.

Short-term water quality impacts during construction (e.g., increases in erosion and sedimentation) will be minimized through use of Best Management Practices (BMPs) such as use of hay bales, silt fences, sediment traps, application of water sprays to keep soil from becoming airborne, revegetation of disturbed areas, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, detention/retention ponds, and establishment of buffer areas, as appropriate, in the construction plans.

BMPs would be implemented prior to construction and include, but not be limited to:

- Installation of silt fencing and sediment traps, application of water sprays to keep soil from becoming airborne, and revegetation of disturbed areas, as appropriate.

- Controlling erosion and sedimentation through the use of hay bales, silt fences, sediment traps, application of water sprays to keep soil from becoming airborne, revegetation of disturbed areas, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, detention/retention ponds, and establishment of buffer areas, as appropriate, in the construction plans.

- Obtaining a construction general permit in accordance with National Pollutant Discharge Elimination System requirements for construction activities that disturb one acre or more of land area. Adherence to the requirements of the permit include implementation of the requirements contained in the requisite SWPPP to minimize the potential for exposed soils or other contaminants from construction activities on the installation to reach nearby surface waters.

- Delineation of wetlands will occur prior to the implementation of any construction that could impact potential wetlands.

### *Decision*

After considering the potential environmental consequences of the Proposed Action and alternatives, as well as other factors related to national defense, including current military operational needs, the USAF has decided to implement the Preferred Alternative, as described in this ROD. All practicable means to avoid or minimize environmental harm have been adopted. This includes actions by the airport and the FAA to update the local Part 150 Study and recommend actions to reduce noise and incompatible land uses.

Kathleen I. Ferguson

KATHLEEN I. FERGUSON, P.E.
Deputy Assistant Secretary of the Air Force (Installations)

10 Dec 2007

Date

# FINAL
# ENVIRONMENTAL IMPACT STATEMENT
## VOLUME I
## EXECUTIVE SUMMARY THROUGH CHAPTER 9.0

## PROPOSED IMPLEMENTATION OF THE BASE REALIGNMENT AND CLOSURE (BRAC) FINAL RECOMMENDATIONS AND ASSOCIATED ACTIONS FOR THE 104TH FIGHTER WING, MASSACHUSETTS AIR NATIONAL GUARD

## AT

## WESTFIELD-BARNES AIRPORT
## WESTFIELD, MASSACHUSETTS

NATIONAL GUARD BUREAU

COOPERATING AGENCIES
FEDERAL AVIATION ADMINISTRATION
WESTFIELD-BARNES AIRPORT
MASSACHUSETTS AERONAUTICS COMMISSION

October 2007

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| °F | degrees Fahrenheit |
| µg/$m^3$ | micrograms per cubic meter |
| 102 FW | 102nd Fighter Wing |
| 104 FW | 104th Fighter Wing |
| 131 FS | 131st Fighter Squadron |
| AASF | Army Aviation Support Facility |
| ACC | Air Combat Command |
| ACHP | Advisory Council on Historic Preservation |
| ADT | average daily traffic |
| AFFF | aqueous fire-fighting foam |
| AFI | Air Force Instruction |
| AGE | Aerospace Ground Equipment |
| AGL | above ground level |
| AIRFA | American Indian Religious Freedom Act |
| AMRAAM | Advanced Medium Range Air-to-Air Missile |
| AMU | Aircraft Maintenance Unit |
| ANG | Air National Guard |
| ANGB | Air National Guard Base |
| ANGRC | Air National Guard Readiness Center |
| AOC | Area of Concern |
| AQCR | Air Quality Control Region |
| AR | Aerial Refueling |
| ARTCC | Air Route Traffic Control Center |
| ASA | Air Sovereignty Alert |
| ASE | Aerospace Support Equipment |
| AST | aboveground storage tank |
| AT/FP | Anti-Terrorism/Force Protection |
| ATCAA | Air Traffic Control Assigned Airspace |
| AUL | Activity and Use Limitation |
| AVGAS | aviation gas |
| BASH | Bird-Aircraft Strike Hazard |
| BDU | Bomb Dummy Unit |
| BMP | Best Management Practice |
| BP | Before Present |
| BRAC | Base Realignment and Closure |
| CAA | Clean Air Act |
| CAP | Central Accumulation Points |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CERFA | Community Environmental Response Facilitation Act |
| CFR | Code of Federal Regulations |
| CMR | Code of Massachusetts Regulations |
| CO | carbon monoxide |
| COC | contaminant of concern |
| CSA | Comprehensive Site Assessment |
| CSSM | Computer Site Security Manager |
| CWA | Clean Water Act |
| dB | decibel |
| dBA | A-weighted decibel |
| DoD | Department of Defense |
| ECM | Electronic Countermeasure |
| EIAP | Environmental Impact Analysis Process |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| EOD | Explosive Ordnance Disposal |
| EPCRA | Emergency Planning and Community Right-to-Know Act |
| ERP | Environmental Restoration Program |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FFCA | Federal Facility Compliance Act |
| FUST | former underground storage tank |
| FY | Fiscal Year |
| GA | General Aviation |
| GIS | Geographic Information System |
| GP | general purpose |
| HAP | High Accident Potential |
| HEF | high-expansion foam |
| Hz | hertz |
| I-90 | Interstate 90 |
| I-91 | Interstate 91 |
| IFR | Instrument Flight Rule |
| IICEP | Interagency and Intergovernmental Coordination for Environmental Planning |
| IR | instrument route |
| IRP | Installation Restoration Program |
| KIAS | knots indicated airspeed |
| LASTE | low altitude safety and targeting enhancement system |
| $L_{dn}$ | Day-Night Average Sound Level |
| $L_{eq}$ | Equivalent Sound Level |
| $L_{max}$ | Maximum Sound Level |
| MAANG | Massachusetts Air National Guard |
| MAARNG | Massachusetts Army National Guard |
| MAC | Massachusetts Aeronautical Commission |
| MANG | Massachusetts National Guard |
| MassDEP | Massachusetts Department of Environmental Protection |
| MCP | Massachusetts Contingency Plan |
| MDFW | Massachusetts Division of Fish and Wildlife |
| MEPA | Massachusetts Environmental Policy Act |
| mg/l | milligrams per liter |
| MHC | Massachusetts Historical Commission |
| mm | millimeter |
| MOA | Military Operations Area |
| MSGP | Multi-Sector General Permit |
| MSL | mean sea level |
| MTR | Military Training Route |
| MV | Military Vehicle |
| NAAQS | National Ambient Air Quality Standards |
| NAGPRA | Native American Graves Protection and Repatriation Act |

**CONTINUED ON THE INSIDE BACK COVER**

## Cover Sheet

***FINAL ENVIRONMENTAL IMPACT STATEMENT FOR PROPOSED IMPLEMENTATION OF THE BASE REALIGNMENT AND CLOSURE (BRAC) FINAL RECOMMENDATIONS AND ASSOCIATED ACTIONS FOR THE 104TH FIGHTER WING (104 FW), MASSACHUSETTS AIR NATIONAL GUARD***

a. *Responsible Agency:* National Guard Bureau

b. *Cooperating Agencies:* Federal Aviation Administration, Westfield-Barnes Airport, Massachusetts Aeronautics Commission

c. *Proposals and Actions:* The purpose of the Proposed Action is to implement the 2005 BRAC Commission Final and Approved Recommendations, which recommended that the 104 FW will undergo an aircraft conversion from the A-10 to the F-15. In association with the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/air sovereignty alert (ASA) mission associated with the F-15. As part of the aircraft conversion and mission change, the 104 FW will also have an increase of 139 authorized personnel. To accommodate the mission change for the 104 FW the National Guard Bureau (NGB) also proposes to implement several construction and demolition projects at the 104 FW installation at the Westfield-Barnes Airport. Under the Preferred Alternative, it is estimated that approximately 90 percent of the take-offs would be toward the north (via Runway 02). Under the Alternative Action, all components of the action would remain as described under the Proposed Action; however, under this alternative, the 104 FW would focus aircraft take-offs on Runway 20, which would result in approximately 90 percent of the take-offs occurring to the south of the airport. The landings and pattern work would be the same across the preferred and alternative actions. All other activities (mission change, construction, assigned personnel increase) would remain as described under the preferred alternative. Although the No Action alternative is not a viable alternative in this case, the Council on Environmental Quality (CEQ) regulation 40 Code of Federal Regulations (CFR) Section 1502.14(d) specifically requires analysis of the "No Action" alternative in all National Environmental Policy Act (NEPA) documents. Under the No Action Alternative, the 104 FW would not implement the actions described above.

d. *Comments and Inquiries:* Written comments on this document should be directed to Robert L. Dogan, NGB/A7CVN, Conaway Hall, 3500 Fetchet Avenue, Andrews AFB MD 20762-5157, Fax: (301) 836-7427.

e. *Designation:* Final Environmental Impact Statement

f. *Abstract:* This EIS has been prepared in accordance with NEPA. The public and agency scoping process resulted in the analysis of the following environmental resources: noise, land use and visual resources, socioeconomics and environmental justice, air quality, airspace management and air traffic control, safety, solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. For the Proposed Action, findings indicate that there will be significant impacts to the noise environment at Westfield-Barnes Airport, and therefore impacts to associated land uses, and populations within the 65 decibel (dB) noise contour. Under the Alternative Action impacts would be similar to those under the Proposed Action, although more acreage, homes, and therefore people, would be located within the 65 dB noise contour. Under the No Action Alternative the 104 FW would not implement the actions described above. The 104 FW would maintain their existing facilities, would not build the new facilities proposed, and would not undergo an aircraft/mission conversion. Under the No Action Alternative, these deficiencies would continue to impair the 104 FW's ability to successfully conduct their mission and to maintain wartime readiness and training.

# FINAL
# ENVIRONMENTAL IMPACT STATEMENT
## VOLUME I
## EXECUTIVE SUMMARY THROUGH CHAPTER 9.0

# PROPOSED IMPLEMENTATION OF THE BASE REALIGNMENT AND CLOSURE (BRAC) FINAL RECOMMENDATIONS AND ASSOCIATED ACTIONS FOR THE 104TH FIGHTER WING, MASSACHUSETTS AIR NATIONAL GUARD

# AT

# WESTFIELD-BARNES AIRPORT
# WESTFIELD, MASSACHUSETTS

NATIONAL GUARD BUREAU

COOPERATING AGENCIES
FEDERAL AVIATION ADMINISTRATION
WESTFIELD-BARNES AIRPORT
MASSACHUSETTS AERONAUTICS COMMISSION

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October 2007

# TABLE OF CONTENTS

**ACRONYMS AND ABBREVIATIONS.....INSIDE FRONT AND BACK COVERS**

**VOLUME I**

**EXECUTIVE SUMMARY ..... ES-1**

**1.0 PURPOSE AND NEED ..... 1-1**
1.1 INTRODUCTION ..... 1-1
1.2 PURPOSE AND NEED FOR THE ACTION ..... 1-3
1.3 LOCATION AND DESCRIPTION OF THE 104 FW ..... 1-9
1.4 SUMMARY OF KEY ENVIRONMENTAL REQUIREMENTS ..... 1-9
1.4.1 NATIONAL ENVIRONMENTAL POLICY ACT ..... 1-9
1.4.2 MASSACHUSETTS ENVIRONMENTAL POLICY ACT ..... 1-11
1.4.3 ENDANGERED SPECIES ACT ..... 1-11
1.4.4 CLEAN AIR ACT ..... 1-12
1.4.5 WATER RESOURCES REGULATORY REQUIREMENTS ..... 1-12
1.4.6 CULTURAL RESOURCES REGULATORY REQUIREMENTS ..... 1-12
1.4.7 OTHER REGULATORY REQUIREMENTS ..... 1-13
1.4.8 ENVIRONMENTAL COORDINATION ..... 1-13
1.5 LEAD AND COOPERATING AGENCIES ..... 1-14
1.6 ENVIRONMENTAL IMPACT ANALYSIS PROCESS ..... 1-14

**2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES ..... 2-1**
2.1 INTRODUCTION ..... 2-1
2.2 DESCRIPTION OF CURRENT MISSION ..... 2-1
2.3 PROPOSED ACTION (PREFERRED ALTERNATIVE) ..... 2-8
2.3.1 AIRCRAFT CONVERSION AND MISSION CHANGE ..... 2-8
2.3.2 FACILITIES CONSTRUCTION, MODIFICATION, AND DEMOLITION ..... 2-10
2.3.2.1 Upgrade Aircraft Maintenance Hangar ..... 2-10
2.3.2.2 Addition/Alteration to Fire Crash/Rescue Station ..... 2-10
2.3.2.3 Installation of Aircraft Arresting Systems ..... 2-17
2.3.2.4 Additions/Alterations to the Squadron Operations Facility ..... 2-17
2.3.2.5 Upgrade to the Aircraft Parking Apron and Taxiway ..... 2-17
2.3.2.6 Addition to the Munitions Storage and Maintenance Complex ..... 2-17
2.3.2.7 Upgrade to the Fuel Cell/Corrosion Control Hangar ..... 2-18
2.3.2.8 Construct EOD Facility ..... 2-18
2.3.2.9 Upgrade Munitions Maintenance Facilities ..... 2-18
2.3.2.10 Construct ASA Complex ..... 2-18
2.3.2.11 Addition/Alteration to the Engine Shop ..... 2-19
2.3.2.12 Addition/Alteration to the Dining Facility ..... 2-19
2.3.2.13 Relocate/Construct Aircraft Shelters ..... 2-19
2.3.2.14 Replace Engine and NDI Shops ..... 2-19
2.3.2.15 Replace ASE Facility ..... 2-20
2.3.2.16 Facility Demolitions in Support of Mission ..... 2-20
2.4 ALTERNATIVE ACTION ..... 2-20

2.5 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR DETAILED ANALYSIS ..... 2-21
2.6 NO ACTION ALTERNATIVE ..... 2-21

**3.0 AFFECTED ENVIRONMENT ..... 3-1**
3.1 NOISE ..... 3-2
3.1.1 DEFINITION OF THE RESOURCE ..... 3-2
3.1.1.1 Maximum Sound Level ..... 3-4
3.1.1.2 Sound Exposure Level ..... 3-4
3.1.1.3 Time-Averaged Cumulative Noise Metrics ..... 3-5
3.1.2 EXISTING CONDITIONS ..... 3-7
3.1.2.1 Aircraft Activity at the Airfield ..... 3-7
3.1.2.2 Aircraft Activity in the Military Training Airspace ..... 3-10
3.1.2.3 Other Ground-Based Activity ..... 3-12
3.2 LAND USE AND VISUAL RESOURCES ..... 3-12
3.2.1 DEFINITION OF THE RESOURCE ..... 3-12
3.2.2 EXISTING CONDITIONS ..... 3-13
3.2.2.1 Land Use ..... 3-13
3.2.2.2 Visual ..... 3-17
3.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE ..... 3-19
3.3.1 DEFINITION OF THE RESOURCE ..... 3-19
3.3.2 EXISTING CONDITIONS ..... 3-20
3.3.2.1 Population and Employment ..... 3-20
3.3.2.2 Environmental Justice ..... 3-20
3.4 AIR QUALITY ..... 3-23
3.4.1 DEFINITION OF THE RESOURCE ..... 3-23
3.4.2 EXISTING CONDITIONS ..... 3-27
3.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL ..... 3-31
3.5.1 DEFINITION OF THE RESOURCE ..... 3-31
3.5.2 EXISTING CONDITIONS ..... 3-32
3.5.2.1 Military Operations Areas ..... 3-32
3.5.2.2 Military Training Routes ..... 3-35
3.5.2.3 Restricted Areas ..... 3-35
3.5.2.4 Warning Areas ..... 3-36
3.6 SAFETY ..... 3-37
3.6.1 DEFINITION OF THE RESOURCE ..... 3-37
3.6.2 EXISTING CONDITIONS ..... 3-37
3.6.2.1 Ground Safety ..... 3-37
3.6.2.2 Anti-Terrorism/Force Protection ..... 3-40
3.6.2.3 Explosives and Countermeasures Safety ..... 3-40
3.6.2.4 Flight Safety ..... 3-42
3.7 SOLID AND HAZARDOUS MATERIALS AND WASTE ..... 3-46
3.7.1 DEFINITION OF THE RESOURCE ..... 3-46
3.7.2 EXISTING CONDITIONS ..... 3-48
3.7.2.1 Hazardous Materials and Petroleum Products ..... 3-48
3.7.2.2 Hazardous and Petroleum Wastes ..... 3-49
3.7.2.3 Environmental Restoration Program ..... 3-50

3.7.2.4 Former Underground Storage Tank Sites ..... 3-54
3.7.2.5 Solid Wastes ..... 3-55
3.8 INFRASTRUCTURE ..... 3-56
3.8.1 DEFINITION OF THE RESOURCE ..... 3-56
3.8.2 EXISTING CONDITIONS ..... 3-56
3.8.2.1 Transportation ..... 3-56
3.8.2.2 Utilities ..... 3-57
3.9 EARTH RESOURCES ..... 3-58
3.9.1 DEFINITION OF THE RESOURCE ..... 3-58
3.9.2 EXISTING CONDITIONS ..... 3-58
3.9.2.1 Topography ..... 3-58
3.9.2.2 Geology ..... 3-58
3.9.2.3 Soils ..... 3-59
3.10 WATER RESOURCES ..... 3-59
3.10.1 DEFINITION OF THE RESOURCE ..... 3-59
3.10.2 EXISTING CONDITIONS ..... 3-60
3.10.2.1 Surface Water ..... 3-60
3.10.2.2 Floodplains ..... 3-62
3.10.2.3 Groundwater ..... 3-63
3.11 BIOLOGICAL RESOURCES ..... 3-63
3.11.1 DEFINITION OF THE RESOURCE ..... 3-63
3.11.2 EXISTING CONDITIONS ..... 3-66
3.11.2.1 Vegetation ..... 3-66
3.11.2.2 Wildlife ..... 3-66
3.11.2.3 Rare, Threatened, and Endangered Species ..... 3-66
3.11.2.4 Wetlands and Other Aquatic Habitats ..... 3-69
3.12 CULTURAL RESOURCES ..... 3-70
3.12.1 DEFINITION OF THE RESOURCE ..... 3-70
3.12.2 EXISTING CONDITIONS ..... 3-71
3.12.2.1 Historical Setting ..... 3-71
3.12.2.2 Identified Cultural Resources ..... 3-73

**4.0 ENVIRONMENTAL CONSEQUENCES ..... 4-1**
4.1 NOISE ..... 4-2
4.1.1 METHODOLOGY ..... 4-2
4.1.2 IMPACTS ..... 4-2
4.1.2.1 Proposed Action ..... 4-2
4.1.2.2 Alternative Action ..... 4-9
4.1.2.3 No Action Alternative ..... 4-14
4.2 LAND USE AND VISUAL RESOURCES ..... 4-14
4.2.1 METHODOLOGY ..... 4-14
4.2.2 IMPACTS ..... 4-15
4.2.2.1 Proposed Action ..... 4-15
4.2.2.2 Alternative Action ..... 4-22
4.2.2.2 No Action Alternative ..... 4-25
4.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE ..... 4-27
4.3.1 METHODOLOGY ..... 4-27

4.3.2 IMPACTS ..... 4-28
4.3.2.1 Proposed Action ..... 4-28
4.3.2.2 Alternative Action ..... 4-31
4.3.2.3 No Action Alternative ..... 4-32
4.4 AIR QUALITY ..... 4-32
4.4.1 METHODOLOGY ..... 4-32
4.4.2 IMPACTS ..... 4-33
4.4.2.1 Proposed Action ..... 4-33
4.4.2.2 Alternative Action ..... 4-38
4.4.2.3 No Action Alternative ..... 4-38
4.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL ..... 4-38
4.5.1 METHODOLOGY ..... 4-38
4.5.2 IMPACTS ..... 4-39
4.5.2.1 Proposed Action ..... 4-39
4.5.2.2 Alternative Action ..... 4-41
4.5.2.3 No Action Alternative ..... 4-42
4.6 SAFETY ..... 4-42
4.6.1 METHODOLOGY ..... 4-42
4.6.2 IMPACTS ..... 4-42
4.6.2.1 Proposed Action ..... 4-42
4.6.2.2 Alternative Action ..... 4-49
4.6.2.3 No Action Alternative ..... 4-49
4.7 SOLID AND HAZARDOUS MATERIALS AND WASTE ..... 4-49
4.7.1 METHODOLOGY ..... 4-50
4.7.2 IMPACTS ..... 4-50
4.7.2.1 Proposed Action ..... 4-50
4.7.2.2 Alternative Action ..... 4-55
4.7.2.3 No Action Alternative ..... 4-55
4.8 INFRASTRUCTURE ..... 4-55
4.8.1 METHODOLOGY ..... 4-55
4.8.2 IMPACTS ..... 4-56
4.8.2.1 Proposed Action ..... 4-56
4.8.2.2 Alternative Action ..... 4-57
4.8.2.3 No Action Alternative ..... 4-57
4.9 EARTH RESOURCES ..... 4-57
4.9.1 METHODOLOGY ..... 4-57
4.9.2 IMPACTS ..... 4-57
4.9.2.1 Proposed Action ..... 4-57
4.9.2.2 Alternative Action ..... 4-58
4.9.2.3 No Action Alternative ..... 4-58
4.10 WATER RESOURCES ..... 4-59
4.10.1 METHODOLOGY ..... 4-59
4.10.2 IMPACTS ..... 4-59
4.10.2.1 Proposed Action ..... 4-59
4.10.2.2 Alternative Action ..... 4-61
4.10.2.3 No Action Alternative ..... 4-61

4.11 BIOLOGICAL RESOURCES ..... 4-61
4.11.1 METHODOLOGY ..... 4-61
4.11.2 IMPACTS ..... 4-62
4.11.2.1 Proposed Action ..... 4-62
4.11.2.1 Alternative Action ..... 4-65
4.11.2.2 No Action Alternative ..... 4-65
4.12 CULTURAL RESOURCES ..... 4-65
4.12.1 METHODOLOGY ..... 4-65
4.12.2 IMPACTS ..... 4-66
4.12.2.1 Proposed Action ..... 4-66
4.12.2.2 Alternative Action ..... 4-68
4.12.2.3 No Action Alternative ..... 4-68
4.13 SUMMARY OF IMPACTS ..... 4-69

**5.0 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES ..... 5-1**
5.1 CUMULATIVE IMPACTS ..... 5-1
5.1.1 CURRENT AND REASONABLY FORESEEABLE ACTIONS IN THE ROI ..... 5-1
5.1.2 ANALYSIS OF CUMULATIVE IMPACTS ..... 5-4
5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES ..... 5-9

**6.0 MITIGATIONS AND SPECIAL OPERATING PROCEDURES ..... 6-1**

**7.0 PERSONS AND AGENCIES CONTACTED ..... 7-1**

**8.0 LIST OF PREPARERS ..... 8-1**

**9.0 REFERENCES ..... 9-1**

# FIGURES


1.3-1 Regional Location of Massachusetts National Guard, Westfield-Barnes Airport ..... 1-10
2.1-1 Existing Facilities at the 104 FW Installation, Westfield-Barnes Airport ..... 2-2
2.2-1 Flight Tracks for Aircraft Arrivals at Westfield-Barnes Airport ..... 2-6
2.2-2 Flight Tracks for Aircraft Departures at Westfield-Barnes Airport ..... 2-7
2.3-1 Proposed Facilities at the 104 FW Installation (West Parcel), Westfield-Barnes Airport ..... 2-15
2.3-2 Proposed Facilities at the 104 FW Installation (East Parcel), Westfield-Barnes Airport ..... 2-16
3.1-1 Existing Noise Contours at Westfield-Barnes Airport ..... 3-9
3.1-2 Noise Sensitive Receptors in Relationship to Existing Noise Contours at Westfield-Barnes Airport ..... 3-11
3.2-1 Land Uses in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-15
3.2-2 Schools in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-16
3.2-3 Zoning in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-18
3.5-1 Military Training Airspace Associated with the Existing 104 FW Mission ..... 3-34
3.6-1 Airfield Safety Zones at Westfield-Barnes Airport ..... 3-39
3.6-2 Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport ..... 3-41
3.7-1 ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport ..... 3-51
3.10-1 Barnes Aquifer and Municipal Wells in the Vicinity of Westfield-Barnes Airport ..... 3-64
4.1-1 Noise Contours under the Proposed Action at Westfield-Barnes Airport ..... 4-4
4.1-2 Noise Sensitive Receptors in Relationship to the Noise Contours under the Proposed Action at Westfield-Barnes Airport ..... 4-5
4.1-3 Noise Contours under the Alternative Action at Westfield-Barnes Airport ..... 4-10
4.1-4 Noise Sensitive Receptors in Relationship to the Noise Contours under the Alternative Action at Westfield-Barnes Airport ..... 4-12
4.1-5 Comparison of the Existing Proposed and Alternative 65 dB Noise Contours at Westfield-Barnes Airport ..... 4-13
4.2-1 Land Uses in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport ..... 4-16
4.2-2 Schools in Relationship to Noise Contours under the Proposed Action near Westfield-Barnes Airport ..... 4-19
4.2-3 Zoning in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport ..... 4-20
4.2-4 Land Uses in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport ..... 4-23
4.2-5 Zoning in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport ..... 4-24
4.2-6 Schools in Relationship to Noise Contours under the Alternative Action near Westfield-Barnes Airport ..... 4-26
4.5-1 Military Training Airspace Associated with the Proposed 104 FW Mission ..... 4-40

4.6-1 Proposed Construction Projects in Relationship to Safety Zones at Westfield-Barnes Airport ..... 4-43
4.6-2 Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (West Parcel) ..... 4-47
4.6-3 Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (East Parcel) ..... 4-48
4.7-1 Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (West Parcel) ..... 4-53
4.7-2 Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (East Parcel) ..... 4-54

## TABLES

ES-1 Summary of Impacts ..... ES-4
2.1-1 Anticipated Schedule of Aircraft Reassignment ..... 2-1
2.2-1 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for A-10 Aircraft (Existing Conditions) ..... 2-5
2.3-1 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for F-15 Aircraft (Proposed Action) ..... 2-8
2.3-2 List of Projects Included in the Analysis ..... 2-11
2.3-3 Demolitions Associated with Construction Activities ..... 2-20
3.1-1 Representative Maximum Sound Levels ..... 3-4
3.1-2 Representative Sound Exposure Levels ..... 3-5
3.1-3 Percentage of Population Highly Annoyed By Elevated Noise Levels ..... 3-7
3.1-4 Average Daily Operations at Westfield-Barnes Airport ..... 3-8
3.1-5 Land Area Exposed to Indicated Sound Levels under Current Conditions ..... 3-8
3.1-6 Specific Point Noise Exposure Under Current Conditions ..... 3-10
3.3-1 Community Demographic Conditions ..... 3-22
3.3-2 Schools Within Two Miles of Westfield-Barnes Airport ..... 3-23
3.4-1 Federal and Commonwealth Ambient Air Quality Standards ..... 3-25
3.4-2 Annual Emissions for AQCR 42 in Calendar Year 2001 ..... 3-29
3.4-3 Baseline Emissions for the 104th Fighter Wing, Calendar Year 2004 ..... 3-30
3.5-1 Description of MOAs Currently Utilized by the 104 FW ..... 3-33
3.5-2 Description of MTRs Currently Utilized by the 104 FW ..... 3-35
3.5-3 Description of Restricted Airspace Currently Utilized by the 104 FW ..... 3-36
3.5-4 Description of Warning Areas Currently Utilized by the 104 FW ..... 3-36
3.5-5 Current Airspace Utilization ..... 3-37
3.11-1 Plant Species Occurring at Westfield-Barnes Airport, Westfield, Massachusetts ..... 3-67
3.11-2 State Threatened and Endangered Plant and Animal Species Documented or Likely to Occur in the Town of Westfield, with Assessment of Potential for Occurrence on the Installation ..... 3-68
3.12-1 Buildings Dating to Cold War Era or Older ..... 3-74
4.1-1 Average Daily Operations at Westfield-Barnes Airport with Aircraft Conversion ..... 4-3
4.1-2 Land Area Exposed to Indicated Sound Levels Under the Proposed Action ..... 4-6
4.1-3 Specific Point Noise Exposure Under the Proposed Action ..... 4-6
4.1-4 Typical Equipment Sound Levels ..... 4-8

4.1-5 Land Area Exposed to Indicated Sound Levels Under the Alternative Action ..... 4-11
4.1-6 Specific Point Noise Exposure under Aircraft Conversion (Alternative Action)..... 4-11
4.2-1 Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Proposed Action..... 4-17
4.2-2 Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Proposed Action..... 4-21
4.2-3 Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Alternative Action..... 4-22
4.2-4 Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Alternative Action..... 4-25
4.3-1 Minority Populations Exposed to $L_{dn} \geq 65$ dBA..... 4-30
4.3-2 Low-Income Populations Exposed to $L_{dn} \geq 65$ dBA ..... 4-30
4.4-1 Total Construction Emissions – Proposed Action ..... 4-34
4.4-2 Total Operational Emission Increases at the 104 FW under the Proposed Action..... 4-36
4.4-3 Total Emission Increases at the 104 FW under the Proposed Action..... 4-37
4.5-1 F-15 Airspace Utilization..... 4-41
4.12-1 Buildings Associated with Proposed Construction Projects..... 4-67
4.13-1 Summary of Impacts..... 4-70
5.1-1 Current and Reasonably Foreseeable Actions in the ROI ..... 5-3
5.1-2 Estimated Current and Forecast GA Activity at Westfield-Barnes Airport ..... 5-4

**VOLUME II**

**APPENDIX A INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING (IICEP)**
**APPENDIX B SUMMARY OF SCOPING COMMENTS**
**APPENDIX C AIRCRAFT NOISE ANALYSIS AND AIRSPACE OPERATIONS**
**APPENDIX D AIR EMISSIONS CALCULATIONS FOR THE PROPOSED ACTION**
**APPENDIX E WRITTEN PUBLIC COMMENTS ON THE DRAFT EIS**
**APPENDIX F ..... ORAL PUBLIC COMMENTS ON THE DRAFT EIS**

# EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) analyzes the potential environmental impacts associated with implementation of the Base Realignment and Closure (BRAC) final recommendations and other associated actions for the 104th Fighter Wing (104 FW), of the Massachusetts Air National Guard (MAANG) at Westfield-Barnes Airport in Westfield, Massachusetts.

The Draft EIS was issued for public and agency review and comment by the National Guard Bureau (NGB) and the cooperating agencies, the Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC). The public comment period on the Draft EIS was initiated with the Notice of Availability, which was published in the Federal Register on April 13, 2007, and ended on June 1, 2007. This document has been prepared in accordance with the National Environmental Policy Act (NEPA) and its implementing regulations. Comments on the draft have been incorporated into the Final EIS. These comments, in addition to the analyses presented in this document, will be considered in decision-making regarding the action.

## PURPOSE AND NEED

The purpose of the Proposed Action is to implement the 2005 BRAC Commission Final and Approved Recommendations, which recommended that the 104 FW will undergo an aircraft conversion from the A-10 to the F-15. In association with the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/air sovereignty alert (ASA) mission associated with the F-15. The 104 FW will also be responsible for providing air-to-air support in response to national emergencies in the northeast United States (U.S.). As part of the aircraft conversion and mission change, the 104 FW will also have an increase of 139 authorized personnel. To accommodate the mission change for the 104 FW the NGB also proposes to implement several construction and demolition projects at the 104 FW installation at the Westfield-Barnes Airport.

## PROPOSED ACTION AND ALTERNATIVES

***Proposed Action (Preferred Alternative):*** Under the Proposed Action, the 104 FW will undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/ASA mission associated with the F-15. Under the preferred alternative, the 104 FW proposes to focus aircraft take-offs on Runway 02, which will result in approximately 90 percent of the take-offs occurring toward the north of the airport. The landings and pattern work will be the same across the preferred and alternative actions.

Proposed aircraft training operations under the Proposed Action will include approximately 2,725 total annual training sorties for a total of approximately 3,400 annual flying hours. Airspace that will be utilized by the 104 FW under the Proposed Action will include Warning Areas 102 and 105 (W-102, W-105) located over the Atlantic Ocean off the east coast of the U.S., the Yankee Military Operations Area (MOA), the Condor MOA, and Military Training Route (MTR) Visual Route 840 (VR-840). Aircraft training operations associated with the Proposed Action are not anticipated to result in any substantial changes or increases in the use of airspace because 104 FW training operations will essentially replace operations currently performed by the F-15 aircraft associated with Otis Air National Guard Base (ANGB), which will no longer fly F-15 aircraft as a result of the 2005 BRAC Commission Final and Approved Recommendations.

Under the Proposed Action, the 104 FW will also implement several construction projects in support of their new mission. Some facility demolitions are also proposed for facilities that are either obsolete or deteriorated or that would be in the footprint of proposed facilities.

***Alternative Action:*** Under the Alternative Action, the 104 FW would still undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 would change to an air superiority/ASA mission associated with the F-15. However, under this alternative, the 104 FW would focus aircraft take-offs on Runway 20, which would result in approximately 90 percent of the take-offs occurring to the south of the airport. The landings and pattern work would be the same across the preferred and alternative actions. All other activities (mission change, construction, assigned personnel increase) would remain as described under the preferred alternative.

***No Action Alternative:*** Although the No Action Alternative is not a viable alternative in this case, the Council on Environmental Quality (CEQ) regulation 40 Code of Federal Regulations (CFR) Section 1502.14(d) specifically requires analysis of the "No Action" alternative in all NEPA documents. Under the No Action Alternative the 104 FW would not implement the actions described above. The 104 FW would maintain their existing facilities, would not build the new facilities proposed, and would not undergo an aircraft/mission conversion. Under the No Action Alternative, these deficiencies would continue to impair the 104 FW's ability to successfully conduct their mission and to maintain wartime readiness and training. In addition, the 104 FW would not be able to accomplish their BRAC-directed mission change to converting F-15 aircraft.

ENVIRONMENTAL CONSEQUENCES

NEPA requires focused analysis on environmental resources potentially affected by the Proposed Action or its alternatives. Based on the potential for the Proposed Action to affect the environment at and surrounding Westfield-Barnes Airport, as well as public and agency

concerns, several specific environmental resources were evaluated in detail in this EIS. The potential consequences of each alternative on these resources was evaluated, and is summarized in Table ES-1.

## Table ES-1. Summary of Impacts

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| **Noise** | | |
| An additional 1,307 acres of land surrounding Westfield-Barnes Airport (629 acres of which are on airport property) will be exposed to sound levels above Day-Night Average Sound Level ($L_{dn}$) 65 A-weighted decibels (dBA).<br>Noise exposure at all eight specific point locations in the vicinity of the airport will increase as a consequence of the aircraft conversion, but of these point locations, only the Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA. This will result in an incompatible land use due to the elevated noise levels, subjecting the Arbor Mobile Home Park to noise levels in excess of $L_{dn}$ 65 dBA.<br>In general, military training airspace currently used by the 104$^{th}$ Fighter Wing (104 FW) will experience decreased noise levels because the F-15s will generally operate at a higher altitude than A-10s. Airspace newly used by the 104 FW F-15s will replace the existing F-15 operations by aircraft stationed at Otis Air National Guard Base (ANGB), so there would be no anticipated change to noise levels associated with this airspace.<br>Construction noise will be intermittent and for a limited duration and will not be expected to create substantial adverse impacts outside the airport.<br>The airport is currently updating its Part 150 Study, which will identify any potential noise mitigation measures for land uses that are rendered incompatible due to the Proposed Action. | An additional 1,310 acres of land surrounding Westfield-Barnes Airport (624 acres of which are on airport property) would be exposed to sound levels above $L_{dn}$ 65 dBA.<br>Noise exposure at all eight specific point locations would increase, but of these point locations, only the Arbor Mobile Home Park would be exposed to sound levels above $L_{dn}$ 65 dBA. As with the Proposed Action, this would be considered incompatible land use due to the elevated noise levels.<br>Noise impacts in the military training airspace would be as described under the Proposed Action.<br>Noise impacts associated with construction would be the same as under the Proposed Action.<br>The Part 150 Study would also identify noise mitigation measures for impacts under the Alternative Action. | Noise impacts would remain at current levels. |
| **Land Use** | | |
| There will be no impacts related to on-installation land use (e.g., quantity-distance [QD] arcs) and no encroachment upon runway object free and safety areas.<br>An additional 678 acres of off-airport land uses will be affected by noise levels of 65 dBA or greater, including 144 acres of residential land. About 7 acres of residential land will be exposed to noise levels of 70 dBA or higher. A total of 261 households are estimated to be exposed to noise levels greater than 65 dBA. No schools will be exposed to noise levels of 65 dBA or greater. The Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA, as a consequence of the aircraft conversion. This is considered an incompatible land use due to the elevated noise levels.<br>New construction will be architecturally compatible with existing buildings, and no impacts to visual resources are anticipated. | There will be no impacts related to on-installation land use (e.g., QD arcs) and no encroachment upon runway object free and safety areas.<br>An additional 685 acres of off-airport land uses would be affected by noise levels of 65 dBA or greater, including 164 acres of residential land. About 31 acres of residential land would be exposed to noise levels of 70 dBA or higher. This alternative shifts noise levels to the south where residential development is more dense, so there would be more land use incompatibility issues with regard to noise. Impacts to the Arbor Mobile Home Park would be the same as for the Proposed Action.<br>New construction would be architecturally compatible with existing buildings, and no sensitive views would be affected. Impacts to visual resources are not expected. | No impacts to land use or visual resources would occur. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| **Socioeconomics and Environmental Justice** | | |
| Construction activities will involve the expenditure of $77 million, leading to the direct creation of 1,440 annual construction job equivalents, as well as additional indirect and induced earnings due to these construction jobs.<br>An additional 139 new permanent jobs will result from personnel increases under the Proposed Action. This increase will not stimulate population increases in the region of influence (ROI).<br>Of the populations that would be exposed to noise levels over 65 dB, 4.9 percent are minority and 6.0 percent are low-income under the Proposed Action. Overall, the Proposed Action will not have disproportionately high and adverse effects on minority or low-income populations. | Socioeconomic impacts (i.e., temporary construction jobs, permanent jobs through personnel increase, indirect and induced earnings) would be the same as described under the Proposed Action.<br>Of the populations that would be exposed to noise levels over 65 dB under this alternative, 5.3 percent are minority and 9.6 percent are low-income. This alternative would not have disproportionately high and adverse effects on minority populations, but would have a slight disproportionately high and adverse effect on low-income populations for noise levels over 65 dB. | No socioeconomic or environmental justice impacts would be expected to occur. |
| **Air Quality** | | |
| Emissions from construction will produce short-term and elevated air pollutant concentrations on a localized basis.<br>Total emissions from construction and operations (i.e., aircraft, ground-based mobile sources, stationary sources, commuting) will not exceed any conformity *de minimis* threshold. Emissions will be less than 10 percent of the Air Quality Control Region (AQCR) 42 emissions. | Construction and operations emissions would be the same as described under the Proposed Action. | Air emissions would remain at current levels. |
| **Airspace** | | |
| No changes or modifications to the controlled airspace or Air Traffic Control procedures currently supporting aviation activities at the airport are required.<br>There is essentially no increase in overall airspace utilization under the Proposed Action. The only modified use will involve a general decreased need for low altitude flight training because most air-to-air training is conducted at higher altitudes than the A-10 operations. No impacts to airspace management or regional air traffic control systems are anticipated. Implementation of the alert mission requirement does not pose any unique issues to airspace management. Launch and control of the alert aircraft would be routinely managed by the Federal Aviation Administration (FAA). | Airspace impacts would be the same as described under the Proposed Action. | Airspace use and air traffic control would remain unchanged and no impacts would occur. |
| **Safety** | | |
| Several projects under the Proposed Action will improve ground safety conditions. No unique activities or materials would be introduced to the installation, and established safety procedures and protocols will adequately address safety of personnel and property on the ground. | Ground and explosives safety impacts would be the same as described for the Proposed Action.<br>Although aircraft would take off to the south under the Alternative Action, flight safety characteristics | Existing inadequate facilities would remain and would continue to |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| Munitions will be stored in existing and new facilities that will provide adequate capacity and QD easements.<br>The probability of mishaps with the F-15 compared to the A-10 will not change substantially. The potential for bird-aircraft strikes would be expected to remain approximately the same for both aircraft. | would generally be the same as described under the Proposed Action. | deteriorate from their current condition. |
| **Solid and Hazardous Materials and Waste** | | |
| Construction and renovation will cause short-term increases in the quantities of hazardous materials and petroleum products used and stored at the installation. In the long-term the use of these materials will not likely increase as a result of the Proposed Action, given the reduction in overall flying hours. Therefore, it is not anticipated that there will be any affect to the 104 FW's status as a small quantity generator (SQG). Hazardous materials, petroleum products and their wastes will continue to be managed in accordance with local, state, and federal regulations.<br>Construction activities associated with several projects associated with the Proposed Action have the potential to encounter contaminated soil or groundwater associated with Environmental Restoration Program (ERP) sites 6N, 5, and 7 and former underground storage tank (FUST) site 4, although the potential is low since all of the ERP sites have received closure status, and contamination associated with FUST site 4 was not detected above regulatory action levels.<br>Demolition activities will generate an estimated 1,977 tons of debris, which represents a negligible percentage of the regional landfill capacity. Asbestos and lead-based paint may be present in buildings scheduled for demolition and renovation, and lead may be encountered during demolition of the Old Firing Range. All solid waste will be disposed of in accordance with applicable federal, state, Air Force, and Air National Guard (ANG) regulations. | Impacts associated with solid and hazardous materials and waste would be identical to those described under the Proposed Action. | No impacts to solid and hazardous materials and wastes would occur. |
| **Infrastructure** | | |
| The Proposed Action would result in a temporary increase in vehicle trips to and from the 104 FW installation for construction and demolition activities. This increase will be phased over several years and will be temporary so impacts to the local transportation system will be minor.<br>The increase of 139 permanent personnel will represent a 1.5 percent increase in average daily traffic (ADT) on Southampton Road. This increase is not expected to degrade the effectiveness of the local transportation network.<br>Existing utility systems are considered adequate to support proposed facilities and personnel increases, although some utilities extensions may be required to serve some of the new facilities. | Impacts associated with infrastructure would be the same as described under the Proposed Action. | Infrastructure would continue to operate under less than optimal conditions. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| Improvements to the storm water drainage system will be required to facilitate the increase of 0.85 acres of impervious surface that will be created by new construction. | | |
| **Earth Resources** | | |
| Up to 10 acres of land surface will be temporarily disturbed as a result of construction and demolition activities. Approximately 0.85 acres of new impervious surface will be created by proposed construction.<br>Most construction will occur on previously developed land. Construction activities on Hinckley loamy sand that has a slope of 15-25 percent would not be recommended without special construction techniques. There are no special qualities associated with the soils or geologic resources at the 104 FW installation or Westfield-Barnes Airport. Implementation of Best Management Practices (BMPs) will minimize any impacts associated with erosion. | Impacts to earth resources would be identical to those under the Proposed Action. | No impacts to earth resources would occur. |
| **Water Resources** | | |
| A construction general permit under the National Pollutant Discharge Elimination System (NPDES) will be obtained prior to the start of construction activities. Short-term water quality impacts during construction (e.g., increases in erosion and sedimentation) will be minimized through BMPs.<br>Approximately 10 acres of surface disturbance will occur over the construction period and 0.85 acres of new impervious surface will be created, leading to an increase in the rate of peak discharge. This impact will be minimal given the developed nature of the site.<br>No projects are sited within floodplains.<br>The rate of groundwater recharge of the Barnes Aquifer will be minimally impacted by the increase in impervious surface.<br>Adherence to the Storm Water Pollution Prevention Plan (SWPPP) and other established plans and procedures will generally preclude the potential for substantial impacts to water quality. | Impacts to water resources would be identical to those described for the Proposed Action. | No impacts to water resources would occur under the No Action Alternative. |
| **Biological Resources** | | |
| Approximately 10 acres of land will be temporarily disturbed and about 0.85 acres of previously undeveloped land will become impervious. The majority of these undeveloped lands are currently landscaped areas or open non-landscaped lands and none of these are considered to contain native vegetation.<br>Long-term impacts due to the loss of habitat will have a minimal impact on wildlife due to the fragmented nature and high level of human activity characteristic of the project area. There will also be temporary, indirect impacts to wildlife due to increased noise levels during construction but these will be minor given the existing | Impacts to biological resources (vegetation, wildlife, habitat, threatened and endangered species, other sensitive species, and wetlands and other aquatic habitats) would be identical to those described for the Proposed Action. | No impacts to biological resources would occur. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| noise environment (i.e., daily aircraft noise).<br>While the acoustic environment at the airport is expected to become louder, most wildlife in the area are likely habituated to aircraft noise. However, substantial increases in noise levels due to aircraft may cause some individuals to move from the area. A startle response in animals (wildlife and livestock) is common but highly variable for those newly or infrequently exposed to aircraft noise. However, there are no substantial impacts anticipated from aircraft noise on wildlife, livestock, or humans working with livestock.<br>The Proposed Action will have no impact on federally listed species because there are none in the ROI and habitat for these species does not occur in the ROI. The State listed marbled salamander is documented in the vicinity of the ROI, but not in the project area. No direct, adverse impacts are anticipated for this species. If construction occurs during the nesting season (i.e., April through August), a nest survey in the impact areas with appropriate habitat for the Upland Sandpiper, Grasshopper Sparrow, and/or Vesper Sparrow should be conducted.<br>No direct impacts to wetlands will occur under the Proposed Action. Potential indirect impacts to three wetlands located on the East Parcel may include increases in storm water runoff and sedimentation, but these impacts will be minor given the implementation of appropriate BMPs. | | |
| **Cultural Resources** | | |
| There are no anticipated effects on historic resources as a result of the Proposed Action. No National Register of Historic Places (NRHP)-listed properties are identified beneath the projected 65 dBA and louder noise contours. A cultural resources inventory consisting of an evaluation of architectural resources and archaeological resources at the 104 FW is currently in progress. Preliminary results of the survey indicate that no buildings are eligible for the NRHP. One archaeological site lies outside the ROI of the Proposed and Alternative Actions, and will not be affected. All construction will occur within previously disturbed areas. Consultation with the State Historic Preservation Office (SHPO) is ongoing and will be completed prior to initiation of the Proposed Action. | Impacts to cultural resources would be identical to those described for the Proposed Action. | No impacts to cultural resources would occur. |

# 1.0 PURPOSE AND NEED

## 1.1 INTRODUCTION

The 104th Fighter Wing (104 FW) of the Massachusetts Air National Guard (MAANG) is located at Westfield-Barnes Airport in Westfield, Massachusetts. The 104 FW currently provides support for federal, state, and community interests by maintaining highly trained, well-equipped, and motivated military forces in order to provide combat-ready A-10 (attack/observation) aircraft and support elements in response to wartime and peacetime tasking; protecting life and property; and preserving peace, order, and public safety. The 104 FW currently flies and maintains 15 A-10 Thunderbolt II aircraft in support of its close air support mission.

As a result of recent decisions related to the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations (see inset on next page), the 104 FW will undergo an aircraft conversion from the A-10 to the F-15. In association with the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/air sovereignty alert (ASA) mission associated with the F-15. The 104 FW will also be responsible for providing air-to-air support in response to national emergencies in the northeast United States (U.S.). As part of the aircraft conversion and mission change, the 104 FW will also have an increase of 139 authorized personnel.

To accommodate the mission change for the 104 FW the National Guard Bureau (NGB) also proposes to implement several construction projects at the 104 FW installation at the Westfield-Barnes Airport, including:

- Upgrades to the Aircraft Maintenance Hangar
- Addition/Alterations to Fire Crash/Rescue Station
- Installation of Aircraft Arresting Systems on the Runway
- Addition/Alteration to the Squadron Operations Facility
- Upgrades to the Aircraft Parking Apron and Taxiway
- Addition to the Munitions Storage and Maintenance Complex
- Upgrade to the Fuel Cell/Corrosion Control Hangar
- Construct Explosive Ordnance Disposal (EOD) Facility
- Upgrade to Munitions Maintenance Facilities

## Base Realignment and Closure (BRAC)

The Base Realignment and Closure (BRAC) is a process that has been used historically to transform the Department of Defense (DoD) into a more efficient worldwide capability.

**History of BRAC**

The BRAC process was developed to achieve the government's goal of streamlining the inventory of military installations to reflect current strategic needs while simultaneously addressing the political challenges that often arise when facilities face reduction or elimination. Because a military base can bring millions of dollars in federal money to its surrounding area each year, challenges raised by members of Congress from affected districts make such initiatives politically sensitive. Congress created the BRAC process in 1988 as a politically palatable method to pursue such needed goals. More than 350 installations have been closed in four previous BRAC rounds: 1989, 1991, 1993 and 1995.

**BRAC 2005**

A mandated timeline of significant events during the 2005 BRAC process is shown in Table 1. The Secretary of Defense released the proposed list for BRAC 2005 on May 13, 2005. After an extensive series of public hearings, analysis of DoD-supplied supporting data, and solicitation of comments from the public, the list of recommendations was revised by the 9-member Defense Base Closure and Realignments Commission in two days of public markups and votes on individual recommendations (the proceedings were broadcast by C-SPAN and are available for review on the network's website).

The Congress established the 2005 BRAC Commission to ensure the integrity of the base closure and realignment process. As directed by law, the Commission provided an objective, non-partisan, and independent review and analysis of the list of military installation recommendations issued by the DoD on May 13, 2005. The recommendations provided by DoD were extremely complex and interrelated and required in-depth analysis and careful attention to detail. The Commission followed a fair, open, and equitable process, as set forth by statute. The Commission's mission was to assess whether the DoD recommendations substantially deviated from the Congressional criteria used to evaluate each military base. While giving priority to the criteria of military value, the Commission also took into account the human impact of the base closures and also considered the possible economic, environmental, and other effects on the surrounding communities.

The BRAC Commission submitted its revised list to the President on September 8, 2005. The President approved the list and signaled his approval to Congress on September 15. The House of Representatives took up a joint resolution to disapprove the recommendations on October 26, but the resolution failed to pass. The Secretary of Defense must implement the recommendations not later than September 15, 2011.

**Table 1: Mandated Timeline of Significant Events 2005 BRAC**

| | |
|---|---|
| **16 May 2005:** | Not later than this date, the Secretary of Defense must publish in the *Federal Register* and transmit to the Congressional Defense Committees and the Commission a list of the military installations that the Secretary of Defense recommends for closure or realignment. |
| **1 July 2005:** | Not later than this date the Comptroller General shall transmit to the Congressional Defense Committees a report containing a detailed analysis of the Secretary of Defense's recommendations and selection process. |
| **8 September 2005:** | Not later than this date the BRAC Commission must transmit to the President a report containing its findings and conclusions based on a review and analysis of the Secretary of Defense's recommendations. |
| **23 September 2005:** | Not later than this date the President shall transmit to the Commission and to the Congress a report containing the President's approval or disapproval of the Commission's recommendations. If the President approves the recommendations, the recommendations are binding 45 days after Presidential transmission or adjournment unless Congress enacts joint resolution of disapproval. |
| **20 October 2005:** | If the President disapproves the Commission's initial recommendations, the Commission must submit revised recommendations to the President not later than this date. |
| **7 Nov 2005:** | President's Approval or Disapproval of Revised Recommendations. The President must approve the revised recommendations and transmit approval to Congress by this date or the process ends. The recommendations become binding 45 legislative days after Presidential transmission or adjournment unless Congress enacts a joint resolution of disapproval. |
| **15 April 2006:** | Commission terminates. |

Source: DoD 2006.

- Construct ASA Complex
- Addition/Alteration to the Engine Shop
- Addition/Alteration to the Dining Facility
- Replace Engine and Non-Destructive Inspection (NDI) Shops
- Replace Aerospace Support Equipment (ASE) Facility
- Construct Aircraft Shelters on Apron
- Building demolitions associated with the Proposed Action include: Building 14, Building 20, and Building 21.

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and 32 CFR 989, et seq., *Environmental Impact Analysis Process* (formerly promulgated as Air Force Instruction [AFI] 32-7061), the NGB has prepared this Environmental Impact Statement (EIS) that considers the potential consequences to the human and natural environment that may result from implementation of these projects.

## 1.2 PURPOSE AND NEED FOR THE ACTION

The purpose of the Proposed Action is to implement the decisions of the 2005 BRAC Commission Final and Approved Recommendations for the 104 FW located at Westfield-Barnes Airport. The BRAC Commission's decision to recommend relocation of the F-15 aircraft to Westfield-Barnes Airport does not require a NEPA analysis because of statutory exceptions enacted as part of the BRAC law. However, the actions proposed by the U.S. Air Force (USAF) to implement the Commission's realignment recommendations do still require NEPA analysis.. The Proposed Action will convert the 104 FW's current close air support mission associated with the A-10 to an air superiority/ASA mission associated with the F-15. Additionally, implementation of the Proposed Action will provide the 104 FW with properly sized and configured facilities that are required to effectively accomplish the aircraft conversion and mission changes, as described in Air Force Handbook 32-1084, *Facility Requirements*. The proposed construction is necessary due to the different facility requirements of the F-15 versus the A-10 (the F-15 is longer, taller, and heavier than the A-10), the new requirements related to the ASA mission, and because several facilities at the 104 FW installation are outdated. Six of the existing 104 FW facilities were constructed during the 1950s and 1960s and no longer support current or future mission requirements adequately. Several existing facilities are not adequately sized or configured to

accommodate the proposed change in aircraft. To support the aircraft and mission conversion, the 104 FW will be assigned an additional 139 authorized personnel.

The proposed new facilities and facility modifications will enable the 104 FW to maintain a level of wartime readiness necessary to support the aircraft conversion and mission change. The following paragraphs describe the purpose and need for each of the listed construction projects.

*Upgrade Aircraft Maintenance Hangar*. The 104 FW requires adequately sized and properly configured space to support the various maintenance functions for its aircraft, including the phase dock area, general purpose maintenance area, organizational maintenance area, and weapons system maintenance management (WSMM). The phase dock area currently has adequate space for aircraft but requires space for aircraft support equipment storage. The general purpose maintenance area, organizational maintenance, and WSMM areas are all currently undersized. The repair and reclamation shop, which is a general purpose function, is currently located in Building 28, which is separate from the flightline and aircraft, making it difficult to transport items (e.g., tires) for repair especially during winter months. The survival equipment shop is currently located in the main hangar (Building 15) and has no functional relationship with the other shops that are located in this facility; it would be optimally collocated with the Life Support Shop in Building 25. The space currently allotted for WSMM is about half the required space for this function, which negatively affects accomplishment of aircraft maintenance both under the current mission and for projected requirements. In general, the aircraft maintenance unit is grossly undersized for support of the F-15 aircraft. Upgrades to this hangar will facilitate collocation of functions that operate most efficiently in close proximity to one another.



*The existing Aircraft Maintenance Hangar would be upgraded to provide authorized space for several functions.*


*Additions and modifications would be made to the Fire Crash/Rescue station.*

*Addition/Alteration to the Fire Crash/Rescue Station.* Under the proposed mission change, the 104 FW will be assigned an additional 27 firefighters (one full-time and 26 part-time). The existing Fire Crash/Rescue Station does not currently meet mission requirements and this shortcoming would be exacerbated with the addition of a second mobility unit; therefore, additional space for training and mobility requirements is necessary to accommodate the increase in personnel.

*Installation of Aircraft Arresting Systems.* In association with the anticipated mission and aircraft change, the 104 FW requires aircraft arresting systems at both ends of the Westfield-Barnes Airport runway for the protection of F-15 aircraft in the event of an emergency during takeoff or landing. Lack of aircraft arresting systems would be a violation of USAF regulations and would result in potential safety issues.



*The addition to the Squadron Operations Facility would be on the north side of the building, shown here.*

*Additions/Alterations to the Squadron Operations Facility*. As a result of the aircraft conversion and ASA mission, the 104 FW requires additions and alterations to the existing Squadron Operations Facility (Building 25). The existing facility is not currently large enough to accommodate the requirements of an ASA mission, which include substantially increased intelligence functions compared to the current mission. The installation command post is currently located in Building 1 (Operations and Training [O&T]) but needs to be relocated to the Squadron Operations building so that it can be collocated with other ASA functions due to the 24-hour a day operations required by an ASA mission. The Squadron Operations Facility is the best available solution to combine the command post with other functions needed to meet ASA mission requirements. Additionally, the Survival Equipment Shop, presently located in the main hangar which is over 45 years old and does not provide adequate space for necessary functions, has no functional relationship with the building occupants and it will better suit this shop to collocate with the Life Support Shop, Squadron Operations, where both shops fall under one supervisor who is located in Building 25.


*The aircraft parking apron would be reconfigured to accommodate F-15s and the ASA Complex.*

*Upgrade Aircraft Parking Apron and Taxiway*. The existing aircraft parking apron and taxiway will be modified to accommodate the proposed ASA Complex. Aircraft parking will be re-aligned to accommodate F-15 thrust safety requirements and restriped to accommodate 12 of the incoming F-15 aircraft. Concrete will be installed where the F-15 aircraft are parked, while asphalt in the taxilane areas is upgraded.

*Addition to the Munitions Storage and Maintenance Complex.* As a result of the proposed mission change, the installation requires a properly sited, sized, and configured complex to support munitions associated with ASA mission and F-15 training requirements. Training munitions storage requirements associated with the F-15 and with an ASA mission are more extensive than those of the A-10. Per the requirements of an F-15 and an ASA mission, the installation has current shortfalls of 5,460 square feet (SF) of igloo storage space, 2,900 SF of magazine storage space, and 4,700 SF of missile maintenance bays. Under this project, three new earth-covered munitions igloos, two earth-covered missile maintenance bays, and a multi-cubed munitions magazine will be constructed. A lack of proper munitions facilities would negatively affect the 104 FW's ability to meet its proposed new mission requirements.



*The installation requires additional munitions storage space similar to this existing igloo.*



*The existing pre-engineered fuel cell facility would be demolished and replaced with an adequately sized facility.*

*Upgrades to Fuel Cell/Corrosion Control Hangar.* The installation requires an adequately sized and properly configured Fuel Cell/Corrosion Control hangar and shops to support F-15 maintenance operations. Both the Fuel Cell and Corrosion Control hangar bays must provide required clearance for the F-15 aircraft. The existing pre-engineered Fuel Cell/Corrosion Control facilities, including associated shop areas, are designed to support A-10 aircraft and are not adequate to support the F-15's increased space requirements. Additionally, the jet fuel tank storage area is sized to accommodate 30 tanks, whereas the requirements for the F-15 are an area that can accommodate 54 tanks. Therefore, the 104 FW requires an adequately sized and properly configured tank storage area. If these facility upgrades are not provided, maintenance on aircraft fuel systems and corrosion control activities would have to be performed outside, weather permitting, which would lead to maintenance deficiencies, safety issues, and training shortfalls.

*Construct EOD Facility.* The 104 FW requires an adequately sized and properly configured space for EOD operations in support of F-15 aircraft and an ASA mission. The installation does not currently have an EOD facility, which is used for handling, set-up, and detonating explosives and explosively operated tools. An EOD capability is critical to the ASA mission in support of responses to aircraft with hung weapons and other malfunctions of the live weapons used on these aircraft. Without a proper EOD facility, EOD operations could not be accomplished at the

installation, negatively affecting readiness and response operations. The Proposed Action will provide an EOD facility that adequately supports the needs of the mission conversion and ASA mission of the 104 FW.

*Upgrade Munitions Maintenance Facilities.* Due to an existing shortfall of 3,600 SF of trailer maintenance and inert storage space, the munitions function currently occupies two facilities (Buildings 64 and 65) for the purposes of trailer maintenance and inert storage. As a result, administrative, training, maintenance, and storage space in these facilities is compromised, thereby affecting essential mission capabilities. This project will alleviate this space shortfall by constructing a properly sized and configured facility for trailer maintenance and inert storage.

*Construct ASA Complex.* In order to meet the needs of the proposed beddown of the ASA mission at the 104 FW installation, the 104 FW requires a fighter aircraft alert complex with rapid, direct runway access. The complex must be capable of sheltering six munitions-loaded aircraft. In addition, an alert shelter and crew quarters must be collocated to ensure aircraft response within prescribed time limits, and the complex must be sited to comply with explosive quantity-distance (QD) (safety offset) requirements, airfield restrictive distances, and surfaces. No facilities currently exist at the 104 FW installation that meet the requirements of an ASA mission. Without construction of the proper facilities, the ASA mission cannot be located at the 104 FW installation. If these facilities are not provided, then alert response to national emergencies in the northeast U.S. would be compromised.



*The ASA Complex would be constructed in this paved area.*



*The addition to the Engine Shop would be located on the south side of the building, shown here.*

*Addition/Alteration to the Engine Shop.* The existing Engine Shop (Building 20), which supports A-10 aircraft, is not adequately sized to support F-15 aircraft. The jet engine work bays are too small for the larger (in both diameter and length) F-15 engines, and the engine parts cleaning area is not large enough to accommodate the larger equipment required to clean F-15 parts. Failure to provide adequate facilities would negatively affect the 104 FW's ability to properly maintain F-15 engines, leading to flight safety issues and compromised mission readiness. In order to provide adequate facilities for the F-15, the Proposed Action will result in the construction of an addition that will allow the work bays and parts cleaning area to be expanded to accommodate the larger F-15 engine.

*Addition/Alteration to the Dining Facility.* Under the proposed mission conversion, it is anticipated that the installation population will increase by 139 authorized personnel. The existing dining hall is designed to accommodate a maximum of 1,000 persons eating in three shifts. Therefore, the installation requires an adequately sized and properly configured Dining Facility to accommodate the additional 139 authorized personnel. If proper dining facilities are not provided, this would result in increased time required for meals, keeping personnel from accomplishing assigned duties. The Proposed Action will result in an addition to the existing Dining Facility in order to properly accommodate the anticipated increase in personnel.



*The Dining Hall would be expanded by an addition to the east side of the building.*

*Replace Engine and NDI Shops.* The existing engine and NDI shops are located in a building (Building 20) that is over 35 years old and also provides space for the ASE shop. Building 20 does not provide adequate space for necessary functions, is poorly configured, is not energy efficient, presents potential health and safety issues, has inadequate fire protection, and does not provide sufficient utility support. These deficiencies compromise the unit's ability to properly maintain aircraft engines and negatively affect morale, thereby negatively impacting the unit's mission. As described under a separate project above, Building 20 will undergo an addition/alteration to temporarily provide sufficient space for engine maintenance. Under this project, Building 20 will eventually be replaced with a new, adequately sized, properly configured, technologically up to date building for engine and NDI functions in support of the 104 FW's new mission.

*Replace ASE Facility.* The ASE facility is located in Building 20 along with the Engine and NDI shops. As described above, this building is over 35 years old and does not provide adequate space for necessary functions, is poorly configured, is not energy efficient, presents potential health and safety issues, has inadequate fire protection, and does not provide sufficient utility support. These deficiencies compromise the unit's ability to properly maintain aircraft support equipment and negatively affect morale, thereby negatively impacting the unit's mission. This project will provide sufficient space for ASE functions with a new, adequately sized, properly configured, technologically up to date building.

*Construct Aircraft Shelters.* The 104 FW requires aircraft shelters that will keep at least four of the assigned F-15 aircraft out of inclement weather, assuring operational readiness. These pre-engineered shelters will be relocated from another location and reinstalled at the 104 FW installation on the parking apron.

*Facilities Demolitions.* Building 14, an old firing range, will be demolished and lead-contaminated soil will be removed and remediated. Building 20 (Engine Shop/NDI/ASE) and Building 21 (Aircraft General Purpose Warehouse) are obsolete and will be replaced by new, adequately sized and properly configured facilities under the Proposed Action.

## 1.3 LOCATION AND DESCRIPTION OF THE 104 FW

The 104 FW of MAANG is located at Westfield-Barnes Airport, 5 miles north of downtown Westfield, Massachusetts, in Hampden County (Figure 1.3-1). The 104 FW installation comprises two separate lease holdings on the northwest (main cantonment area) and northeast (munitions area) portions of Westfield-Barnes Airport. The installation occupies approximately 184 acres, located on the two parcels at the airport.

The mission of the 104 FW is to provide highly trained personnel and mission ready equipment for dedicated service to the community, the state and the nation; protecting life and property and preserving peace, order and public safety. The 104 FW currently has an authorized manpower of 958. The 104 FW currently flies and maintains 15 primary assigned aircraft (PAA) (A-10 fighter aircraft) to support its fighter mission. The main support operations performed at the 104 FW include aircraft fueling, aircraft deicing, aircraft maintenance, ASE maintenance, ground vehicle maintenance, fueling of ground vehicles, and facilities maintenance. These operations involve activities such as corrosion control, non-destructive inspection, fuel cell maintenance, engine maintenance, hydraulics, and wheel and tire maintenance.

## 1.4 SUMMARY OF KEY ENVIRONMENTAL REQUIREMENTS

### 1.4.1 NATIONAL ENVIRONMENTAL POLICY ACT

In accordance with NEPA of 1969 (42 USC 4321-4347), CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR §§ 1500-1508), and 32 CFR 989, et seq., *Environmental Impact Analysis Process* (formerly promulgated as AFI 32-7061), the NGB is preparing this EIS that considers the potential consequences to the human and natural environment that may result from implementation of these activities.

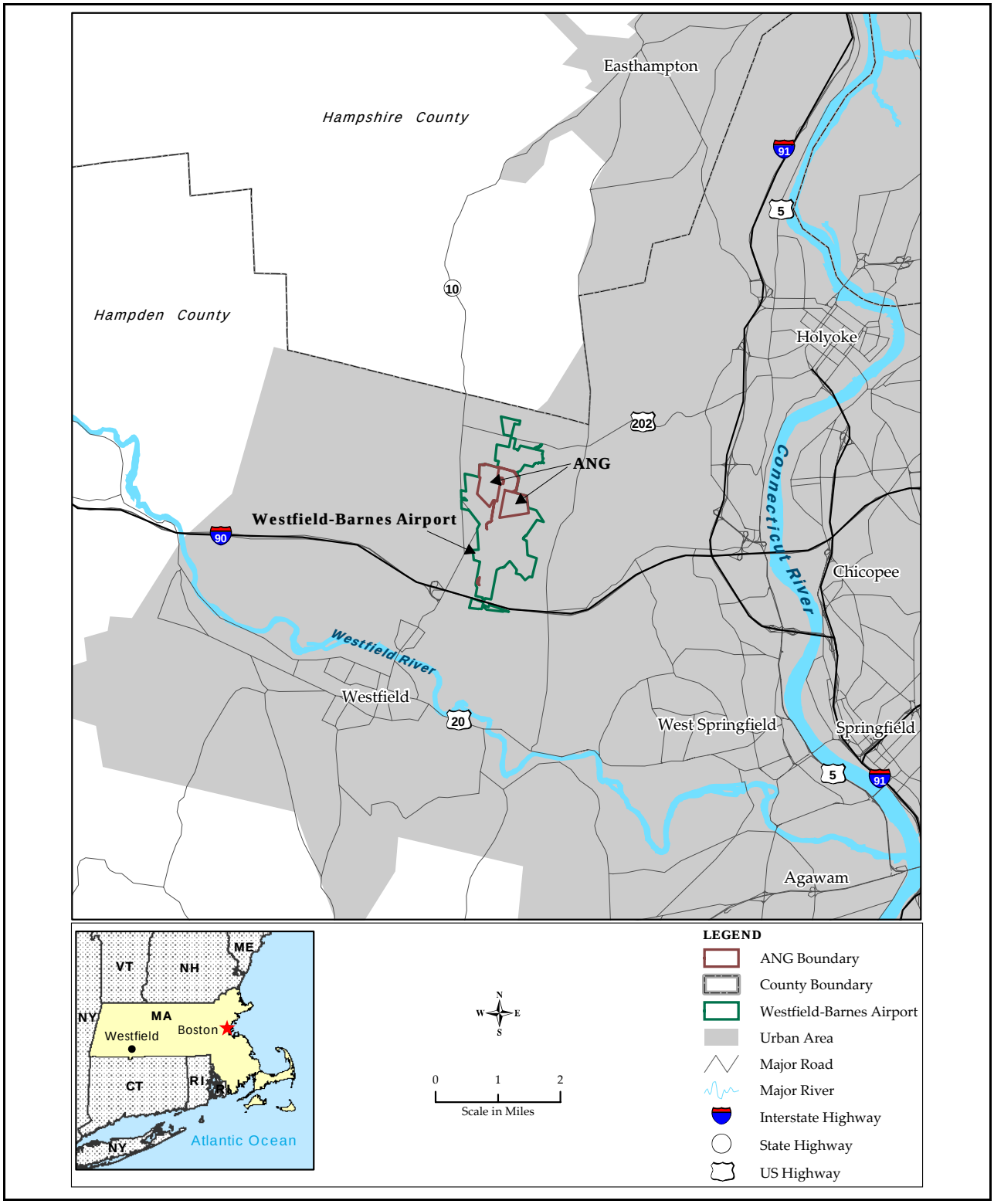



**Figure 1.3-1. Regional Location of Massachusetts National Guard, Westfield-Barnes Airport**

NEPA requires federal agencies to take into consideration the potential environmental consequences of proposed actions in their decision-making process. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. The CEQ was established under NEPA to implement and oversee federal policy in this process. The CEQ subsequently issued the Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR Sections 1500–1508) (CEQ 1978).

The activities addressed within this document constitute a federal action and therefore must be assessed in accordance with NEPA. To comply with NEPA, as well as other pertinent environmental requirements, the decision-making process for the Proposed Action includes the development of this EIS to address the environmental issues related to the proposed activities. The USAF implementing procedures for NEPA are contained in 32 CFR 989 et seq., *Environmental Impact Analysis Process.*

### 1.4.2 MASSACHUSETTS ENVIRONMENTAL POLICY ACT

The Massachusetts Environmental Policy Act (MEPA) (301 Code of Massachusetts Regulation 11.00) requires that agencies of the State of Massachusetts study the environmental consequences of their actions and take all feasible measures to avoid, minimize, and mitigate damage to the environment. The MEPA review process is intended to include any interested State agency or individual. MEPA is administered by the MEPA Office under the direction of the Assistant Secretary of Environmental Affairs (also known as the MEPA Director). MEPA review thresholds involving the nature, size, or location of a project and the likelihood that the project may cause "Damage to the Environment" are established to determine if an Environmental Impact Report (EIR) is required. An EIR is the State's primary means for analysis of a project's potential damage to the environment, as well as means for avoiding, minimizing, and mitigating potential damage. Coordination with the MEPA Office has been initiated to determine whether any State action or approval associated with this proposal will require an EIR.

### 1.4.3 ENDANGERED SPECIES ACT

The Endangered Species Act (ESA) of 1973 (16 USC §§ 1531–1544, as amended) established measures for the protection of plant and animal species that are federally listed as threatened and endangered, and for the conservation of habitats that are critical to the continued existence of those species. Federal agencies must evaluate the effects of their proposed actions through a set of defined procedures, which can include the preparation of a Biological Assessment and can require formal consultation with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Act.

### 1.4.4 CLEAN AIR ACT

The Clean Air Act (CAA) (42 USC §§ 7401–7671q, as amended) provided the authority for the U.S. Environmental Protection Agency (USEPA) to establish nationwide air quality standards to protect public health and welfare. Federal standards, known as the National Ambient Air Quality Standards (NAAQS), were developed for six criteria pollutants: ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur dioxide ($SO_2$), both coarse and fine inhalable particulate matter (less than or equal to 10 micrometers in diameter [$PM_{10}$], and particulate matter less than or equal to 2.5 micrometers in diameter [$PM_{2.5}$]), and lead (Pb). The Act also requires that each state prepare a State Implementation Plan (SIP) for maintaining and improving air quality and eliminating violations of the NAAQS. In nonattainment and maintenance areas, the CAA requires federal agencies to determine whether their proposed actions conform with the applicable SIP and demonstrate that their actions will not (1) cause or contribute to a new violation of the NAAQS, (2) increase the frequency or severity of any existing violation, or (3) delay timely attainment of any standard, emission reduction, or milestone contained in the SIP. Section 4.4 of this EIS presents the project conformity applicability analysis and Appendix D documents the conformity-related emission calculation estimates.

### 1.4.5 WATER RESOURCES REGULATORY REQUIREMENTS

The Clean Water Act (CWA) of 1977 (33 USC § 1251 *et seq*.) regulates pollutant discharges that could affect aquatic life forms or human health and safety. Section 404 of the CWA, and Executive Order (EO) 11990, *Protection of Wetlands*, regulate development activities in or near streams or wetlands. Section 404 also regulates development in streams and wetlands and requires a permit from the U.S. Army Corps of Engineers (USACE) for dredging and filling in wetlands. EO 11988, *Floodplain Management*, requires federal agencies to take action to reduce the risk of flood damage; minimize the impacts of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial values served by floodplains. Federal agencies are directed to consider the proximity of their actions to or within floodplains.

### 1.4.6 CULTURAL RESOURCES REGULATORY REQUIREMENTS

The National Historic Preservation Act (NHPA) of 1966 (16 USC § 470) established the National Register of Historic Places (NRHP) and the Advisory Council on Historic Preservation (ACHP) outlining procedures for the management of cultural resources on federal property. Cultural resources can include archaeological remains, architectural structures, and traditional cultural properties such as ancestral settlements, historic trails, and places where significant historic events occurred. NHPA requires federal agencies to consider potential impacts to cultural resources that are listed, nominated to, or eligible for listing on the NRHP; designated a National Historic Landmark; or valued by modern Native Americans for maintaining their

traditional culture. Section 106 of NHPA requires federal agencies to consult with State Historic Preservation Officers (SHPOs) if their undertakings might affect such resources. *Protection of Historic and Cultural Properties* (36 CFR 800 [1986]) provided an explicit set of procedures for federal agencies to meet their obligations under the NHPA, which includes inventorying of resources and consultation with SHPO.

The American Indian Religious Freedom Act (AIRFA) (42 USC § 1996) established federal policy to protect and preserve the rights of Native Americans to believe, express, and exercise their traditional religions, including providing access to sacred sites. The Native American Graves Protection and Repatriation Act (NAGPRA) (25 USC §§ 3001–3013) requires consultation with Native American tribes prior to excavation or removal of human remains and certain objects of cultural importance.

### 1.4.7 OTHER REGULATORY REQUIREMENTS

Additional regulatory legislation that potentially applies to the implementation of this proposal includes guidelines promulgated by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, to ensure that disproportionately high and adverse human health or environmental effects on citizens in either of these categories are identified and addressed, as appropriate. Additionally, potential health and safety impacts that could disproportionately affect children are considered under the guidelines established by EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks.*

### 1.4.8 ENVIRONMENTAL COORDINATION

EO 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a Proposed Action. Comments from these agencies are subsequently incorporated into the Environmental Impact Analysis Process (EIAP). An IICEP list of relevant federal, state, and local agencies is provided in Appendix A.

In its October 1999 annotated *Department of Defense American Indian and Alaska Native Policy*, formulated to address Department of Defense (DoD) responsibilities to tribes derived from a number of federal statutes and policies, DoD has clarified its policy for interacting and working with federally recognized American Indian and Alaska Native governments. Under this policy guidance, proponents must provide timely notice to, and consult with, tribal governments prior to taking any actions that have the potential to affect protected tribal resources, tribal rights,

or Indian lands. Tribal input must be solicited early enough in the planning process that it may influence the decision to be made.

## 1.5 LEAD AND COOPERATING AGENCIES

The NGB is the proponent for this proposal and is the lead agency for preparation of the EIS. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) are cooperating agencies. As defined in 40 CFR §1508.5, a cooperating agency is "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency, become a cooperating agency."

## 1.6 ENVIRONMENTAL IMPACT ANALYSIS PROCESS




This EIS has been prepared in accordance with all environmental requirements as described in Section 1.4. An EIS is prepared as a tool for compiling information about a proposal and providing a full and fair discussion of environmental impacts to the natural and human environment. Reasonable alternatives to the Proposed Action as well as the No Action Alternative are also evaluated in an EIS. In this EIS, the No Action Alternative means that the 2005 BRAC Commission Final and Approved Recommendation for the 104 FW at Westfield-Barnes Airport would not be implemented. As described in Section 2.5, this will maintain the current aircraft mission, facilities, and personnel levels as they exist today. The NGB analyzes alternatives to ensure that fully informed decisions are made after review of the comprehensive, multidisciplinary analysis of potential environmental consequences. Compliance with NEPA guidance for preparation of an EIS involves several critical steps summarized below.

1. *Announce that an EIS will be prepared.* For this EIS, a Notice of Intent was published in the *Federal Register* on July 21, 2006.




2. *Conduct scoping.* This is the first major step to identify the relevant issues to be analyzed in depth and to eliminate issues that are not relevant. Scoping for this EIS ran from July 21, 2006 through September 1, 2006. Throughout the scoping month period, the NGB actively solicited comments through a press release, newspaper ads, flyers, a project website, fact sheets, and a newsletter were sent to federal, state, and local agencies. These entities were solicited to ensure that their concerns and comments about the proposal were included in the analyses. In August 2006, the NGB initiated the IICEP process by submitting letters to local, state, tribal, and federal agencies informing them of the Air Force's intent to prepare this EIS (Appendix A). A scoping meeting was held on August 15 at Northside Middle School in Westfield, Massachusetts to present details about the proposal, the NEPA process, and opportunities for public and agency involvement. Approximately 65 members of the public and agency representatives attended the meetings. In addition to receiving verbal and written comments at the scoping meetings, the NGB also received written comments from the public and agencies through U.S. mail and email. To the extent possible, scoping comments have been used to shape the analysis and focus the issues in this EIS (see Appendix B). Comments on the Proposed Action and alternatives will continue to be accepted throughout the environmental process.

3. *Prepare a Draft EIS.* The Draft EIS is a comprehensive document for public and agency review. The Draft EIS describes the purpose and need of the Proposed Implementation of the BRAC Final Recommendations and Associated Actions for the 104 FW, MAANG, at Westfield-Barnes Airport, explains the Proposed Action and alternatives, presents the existing conditions in the region potentially affected, and provides analysis of the environmental consequences of the Proposed Action and alternatives, including the No Action Alternative. The Draft EIS has been distributed to agencies, regional libraries, and members of the public who requested copies to ensure the widest dissemination possible. The 45-day public comment period began on April 13, 2007, when the Notice of Availability for the Draft EIS was published in the *Federal Register*, and ended on June 1, 2007.

4. *Public/Agency Review.* The 45-day public comment period provided the public and agencies the opportunity to review the Draft EIS and to provide comments on the analysis. The comment opportunity included a public hearing held on May 9, 2007, during the comment period. The hearing gave the public and agencies an opportunity to verbally comment on the Draft EIS after their review and evaluation of the document.

The hearing provided direct feedback to the NGB from the public and agencies. All comments received during the public comment period were incorporated into the Final EIS. Written comments submitted at public hearings and those received through the mail, email, or on the project website by the NGB have been given equal consideration in the preparation of the Final EIS.

5. *Prepare a Final EIS.* The Final EIS has been prepared following the public comment period and has included all written comments and verbal testimony from public and agency reviewers during the public hearing and the comment period. The Final EIS was revised to reflect public and agency comments, the NGB's responses, and additional information received from reviewers. The Final EIS provides the decision maker with a comprehensive review of the potential environmental consequences of selecting the Proposed Action or an alternative. A Notice of Availability (NOA) will be published in the *Federal Register* to announce availability of the Final EIS.

6. *Issue a Record of Decision.* The final step in the NEPA process is approval of the Record of Decision (ROD). The NOA begins a 30-day waiting period before the ROD is signed. The ROD identifies which action has been selected by the NGB decision maker and what management actions or other measures would be carried out to reduce, where possible, adverse impacts to the environment.

# 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

## 2.1 INTRODUCTION

The National Guard Bureau (NGB) proposes to implement the decisions contained in the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations and associated actions at the 104th Fighter Wing (104 FW) installation located at Westfield-Barnes Airport, Westfield, Massachusetts. The 104 FW will convert from a Primary Assigned Aircraft (PAA) of 15 A-10 aircraft to 18 PAA F-15 aircraft. Table 2.1-1 shows the anticipated schedule of BRAC aircraft reassignments related to the Proposed Action. In association with this aircraft conversion, the 104 FW will inherit an Air Sovereignty Alert (ASA) mission and will receive an increase of approximately 139 authorized personnel. The 104 FW currently maintains 50 permanent facilities at the installation (Figure 2.1-1). Six of these facilities were constructed during the 1950s and 1960s and are now more than 45 years old and some do not support current and potential future mission requirements adequately, as described in Section 1.2. The Proposed Action includes the proposed aircraft conversion, beddown of the ASA mission, and implementation of improvements that will include construction and renovation of the facilities related to the mission conversion, personnel increase, and current deficiencies introduced in Sections 1.1 and 1.2 and further described in Section 2.2.

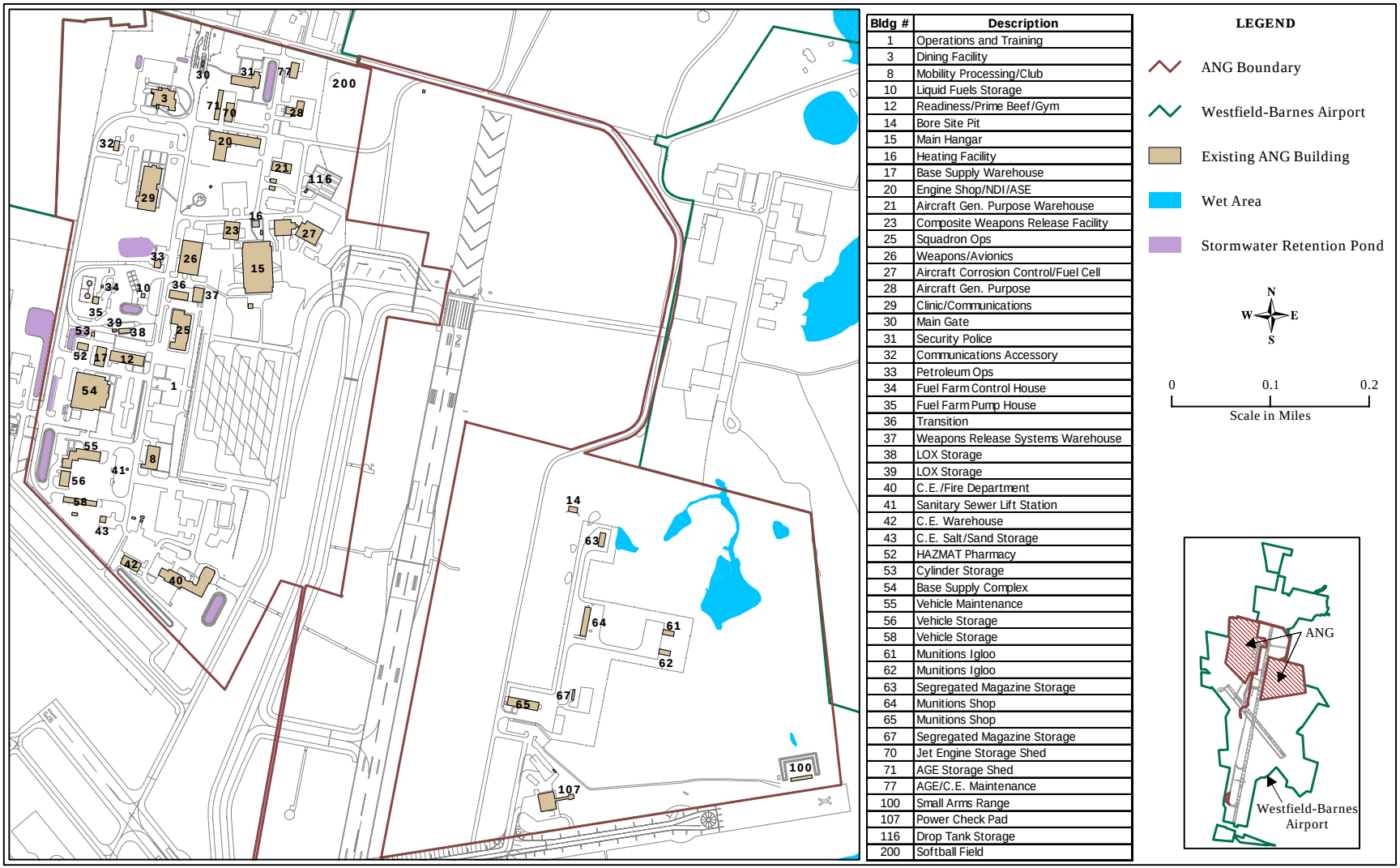
**Table 2.1-1. Anticipated Schedule of Aircraft Reassignment**

| *Aircraft* | *Receiving Installation* | *Releasing Installation* | *Fiscal Quarter/Year* |
|---|---|---|---|
| F-15 | 104 FW, Barnes, Massachusetts | Kadena Air Force Base | 1 & 2/2008 |
| F-15 | 104 FW, Barnes, Massachusetts | Otis ANGB, Massachusetts | 3 & 4/2008 |
| A-10 | 188 FW, Ft. Smith, Arkansas | 104 FW, Barnes, Massachusetts | 3/2007 |
| A-10 | 188 FW, Ft. Smith, Arkansas | 104 FW, Barnes, Massachusetts | 4/2007 |

Note: The F-15s from Otis and from Kadena are both included in the 18 PAA described as a component of the Proposed Action.

## 2.2 DESCRIPTION OF CURRENT MISSION

Westfield-Barnes Airport is classified by the Massachusetts Airport's System Plan as a general aviation (GA) airport. In general, a GA airport is an airport that serves corporate, business, and recreational aircraft users. GA airports usually do not provide commercial passenger service, but often times do include air charter activity.




| Bldg # | Description |
|---|---|
| 1 | Operations and Training |
| 3 | Dining Facility |
| 8 | Mobility Processing/Club |
| 10 | Liquid Fuels Storage |
| 12 | Readiness/Prime Beef/Gym |
| 14 | Bore Site Pit |
| 15 | Main Hangar |
| 16 | Heating Facility |
| 17 | Base Supply Warehouse |
| 20 | Engine Shop/NDI/ASE |
| 21 | Aircraft Gen. Purpose Warehouse |
| 23 | Composite Weapons Release Facility |
| 25 | Squadron Ops |
| 26 | Weapons/Avionics |
| 27 | Aircraft Corrosion Control/Fuel Cell |
| 28 | Aircraft Gen. Purpose |
| 29 | Clinic/Communications |
| 30 | Main Gate |
| 31 | Security Police |
| 32 | Communications Accessory |
| 33 | Petroleum Ops |
| 34 | Fuel Farm Control House |
| 35 | Fuel Farm Pump House |
| 36 | Transition |
| 37 | Weapons Release Systems Warehouse |
| 38 | LOX Storage |
| 39 | LOX Storage |
| 40 | C.E./Fire Department |
| 41 | Sanitary Sewer Lift Station |
| 42 | C.E. Warehouse |
| 43 | C.E. Salt/Sand Storage |
| 52 | HAZMAT Pharmacy |
| 53 | Cylinder Storage |
| 54 | Base Supply Complex |
| 55 | Vehicle Maintenance |
| 56 | Vehicle Storage |
| 58 | Vehicle Storage |
| 61 | Munitions Igloo |
| 62 | Munitions Igloo |
| 63 | Segregated Magazine Storage |
| 64 | Munitions Shop |
| 65 | Munitions Shop |
| 67 | Segregated Magazine Storage |
| 70 | Jet Engine Storage Shed |
| 71 | AGE Storage Shed |
| 77 | AGE/C.E. Maintenance |
| 100 | Small Arms Range |
| 107 | Power Check Pad |
| 116 | Drop Tank Storage |
| 200 | Softball Field |

**Figure 2.1-1. Existing Facilities at the 104 FW Installation, Westfield-Barnes Airport**

The airport's Air Traffic Control Tower is a Federal Aviation Administration (FAA) facility that is operated by a private contractor and operates daily during the hours of 0700 to 2200 year round. While the tower is in operation, the airspace around the airport is designated class D airspace, and while the tower is not in operation the airspace is designated class G airspace. Class D airspace can be described as airspace surrounding an airport that has an operational control tower and extends from the airport ground surface to 2,500 feet above the airport ground surface. Class G airspace can be described as uncontrolled airspace.

The airport features two active runways, with the primary runway being Runway 02/20, and the crosswind runway being Runway 15/33. Runway 02/20 is a Precision Instrument Runway characterized by magnetic headings of 020° and 200°, while Runway 15/33 is a Visual Runway characterized by magnetic headings of 150° and 330°. Runway 02/20 is 9,000 feet long and 150 feet wide. Runway 15/33 is 5,000 feet long and 100 feet wide. Both runways are supported by full-length, parallel taxiways. Runways are labeled with two numbers (i.e., 02/20) that indicate the magnetic headings depending on the direction of take-off or landing; therefore, Runway 02/20 is one runway that can be used in either direction.

The 104 FW currently has a PAA of 15 A-10 aircraft in support of its wartime mission of providing close air support, air interdiction, and airborne forward air control. The 104 FW currently completes approximately 1,704 annual sorties for a total of 4,100 annual flying hours over the course of the year out of Westfield-Barnes Airport (Table 2.2-1). This table identifies sorties flown during the daytime (7:00 a.m. to 10:00 p.m.) and night time (10:00 p.m. to 7:00 a.m.) for noise analysis purposes. Refer to Section 3.1.1.3 for further clarification of use of these time periods. In general, for aircraft arrivals, the 104 FW uses Runway 02 (heading north) approximately 30 percent of the time and Runway 20 (heading south) approximately 70 percent of the time. For departures, they use Runway 02 approximately 15 percent of the time, and Runway 20 approximately 85 percent of the time (Figures 2.2-1, 2.2-2). Therefore, take-offs are currently focused toward the south of the airfield. Local airspace currently utilized by the 104 FW includes the Yankee Military Operations Area (MOA) located over portions of central New Hampshire; Falcon MOA and Fort Drum Air-to-Ground Range and associated Restricted Area (R-5201) located over portions of New York State; the Condor MOA in Maine; the Warren Grove Air-to-Ground Range and associated Restricted Area (R-5002) located over portions of New Jersey; Warning Area 105 (W-105) over the Atlantic Ocean; and Visual Route 842 (VR-842).

## A-10 Thunderbolt II

The A-10 is the first Air Force aircraft specially designed for close air support of ground forces. They are simple, effective, and survivable twin-engine jet aircraft that can be used against all ground targets, including tanks and other armored vehicles. The A-10 aircraft have excellent maneuverability at low air speeds and altitude, and are highly accurate weapons-delivery platforms. They can linger near battle areas for extended periods of time and operate under 1,000-foot ceilings with 1.5-mile visibility. Their wide combat radius and short takeoff and landing capability permit operations in and out of locations near front lines. Using night vision goggles, A-10 pilots can conduct their missions during darkness.



A-10's have Night Vision Imaging Systems (NVIS), goggle compatible single-seat cockpits located in front of their wings and a large bubble canopy that provides pilots all-around vision. The pilots are protected by titanium armor that also protects parts of the flight-control system. The redundant primary structural sections allow the aircraft to enjoy better survivability during close air support than did previous aircraft.

These aircraft can survive direct hits from armor-piercing and high explosive projectiles up to 23 millimeters (mm). Their self-sealing fuel cells are protected by internal and external foam. Manual systems back up their redundant hydraulic flight-control systems. This permits pilots to fly and land when hydraulic power is lost.

The Thunderbolt II can be serviced and operated from bases with limited facilities near battle areas. Many of the aircraft's parts are interchangeable left and right, including the engines, main landing gear and vertical stabilizers.

Avionics equipment includes communications, inertial navigation systems, fire control and weapons delivery systems, target penetration aids, and night vision goggles. Their weapons delivery systems include head-up displays that indicate airspeed, altitude, dive angle, navigation information and weapons aiming references; a low altitude safety and targeting enhancement system (LASTE) that provides constantly computing impact point freefall ordnance delivery; and Pave Penny laser-tracking pods under the fuselage. The aircraft also have armament control panels, and infrared and electronic countermeasures to handle surface-to-air-missile threats.

The A-10 aircraft has two General Electric TF34-GE-100 turbofan engines that each produce 9,065 pounds of thrust. The aircraft can travel at up to 450 knots, with a range of 695 nautical miles (NM) (800 statute miles), and has a ceiling of 35,000 feet. The aircraft is 53.3 feet long, has a height of 14.7 feet, and its wingspan is 57.5 feet.

The A-10's armament includes one 30 mm GAU-8/A seven-barrel Gatling gun; up to 16,000 pounds (7,200 kilograms) of mixed ordnance on eight under-wing and three under-fuselage pylon stations that can include 500 pound (225 kilograms) Mk-82 and 2,000 pound (900 kilograms) Mk-84 series low/high drag bombs, cluster bombs, combined effects munitions, mine dispensing munitions, AGM-65 Maverick missiles, and laser-guided/electro-optically guided bombs; infrared countermeasure flares; electronic countermeasure chaff; jammer pods; 2.75-inch rockets; illumination flares; and AIM-9 Sidewinder missiles.

Source: Air Force 2006a.

**Table 2.2-1. 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for A-10 Aircraft (Existing Conditions)**

| | ANNUAL | | AVERAGE DAILY | |
|---|---|---|---|---|
| | ***7:00 a.m. – 10:00 p.m.*** | ***10:00 p.m. – 7:00 a.m.*** | ***7:00 a.m. – 10:00 p.m.*** | ***10:00 p.m. – 7:00 a.m.*** |
| Departures | 1,704 | 0 | 4.668 | 0 |
| Arrivals | 1,604 | 100 | 4.394 | 0.274 |
| Closed Patterns[1] | 543 | 0 | 1.488 | 0 |

Note: 1. Closed Pattern Events are conducted in conjunction with other flights and do not constitute a specific sortie.

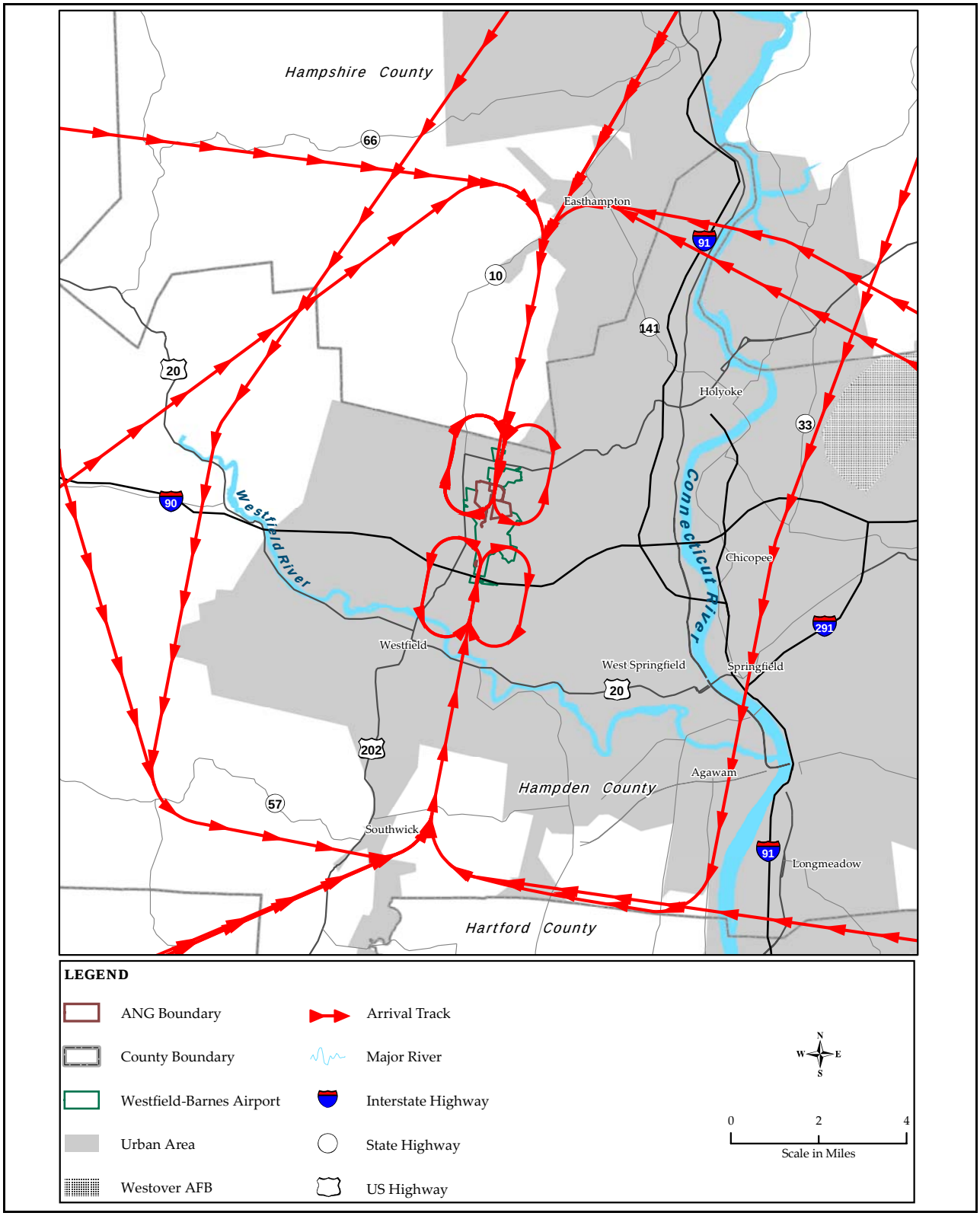



**Figure 2.2-1. Flight Tracks for Aircraft Arrivals at Westfield-Barnes Airport**

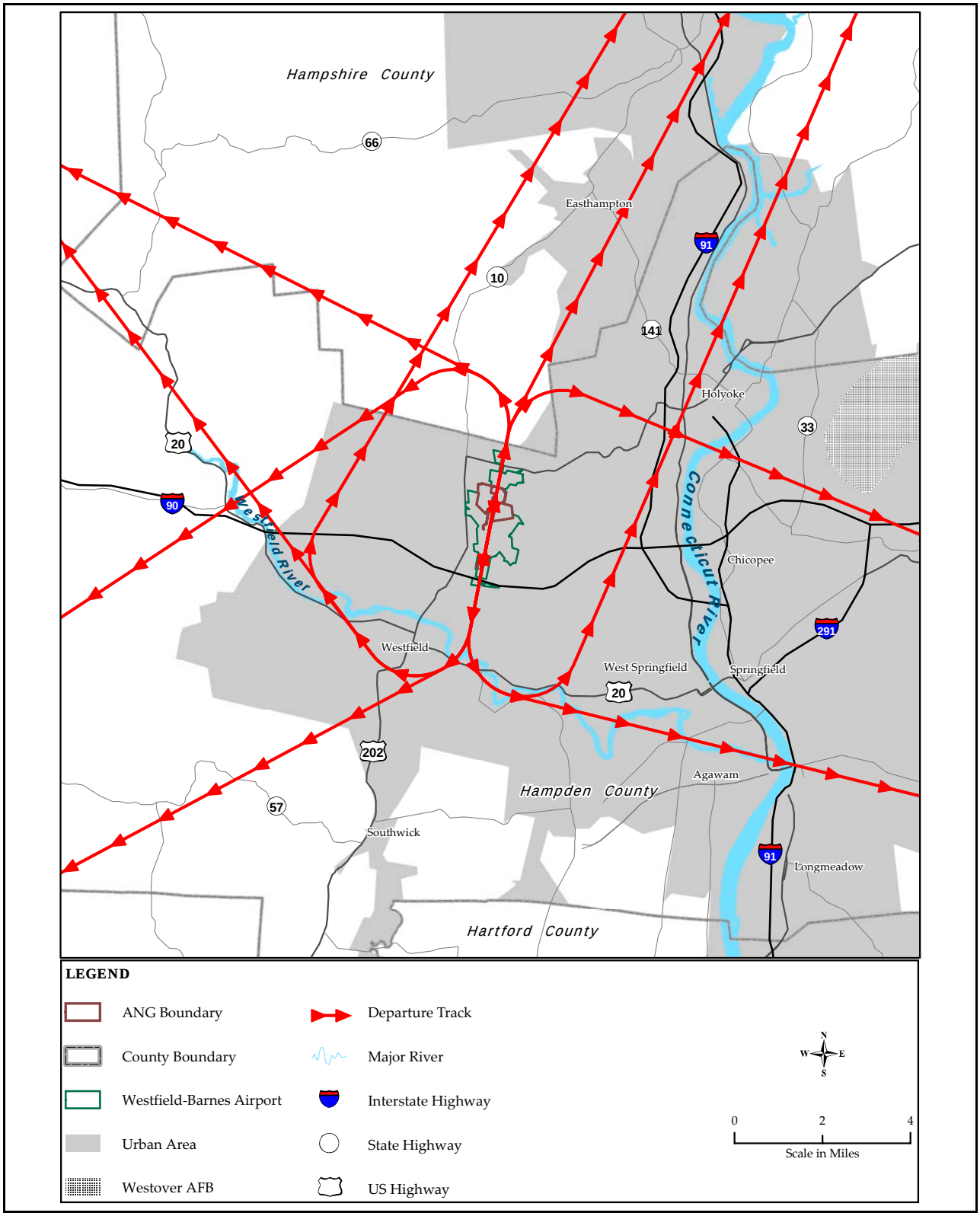



**Figure 2.2-2. Flight Tracks for Aircraft Departures at Westfield-Barnes Airport**

## 2.3 PROPOSED ACTION (PREFERRED ALTERNATIVE)

Under the Proposed Action, the 104 FW will undergo an aircraft conversion, implement the ASA mission, and implement several construction projects. Under this alternative, the majority of aircraft operations will take off toward the north.

### 2.3.1 AIRCRAFT CONVERSION AND MISSION CHANGE

Under the Proposed Action, the 104 FW will undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 will change to an air superiority/ASA mission associated with the F-15. Under the preferred alternative, the 104 FW proposed to focus aircraft take-offs on Runway 02, which will result in approximately 90 percent of the take-offs occurring to the north of the airport (Figure 2.2-1, 2.2-2). The landings and pattern work will be the same across the preferred and alternative actions.

Proposed aircraft training operations under the Proposed Action will include approximately 2,725 total annual training sorties for a total of approximately 3,400 annual flying hours (Table 2.3-1). Airspace that will be utilized by the 104 FW under the Proposed Action will include Warning Areas 102 and 105 (W-102, W-105) located over the Atlantic Ocean off the east coast of the U.S., the Yankee MOA, the Condor MOA, and Military Training Route (MTR) Visual Route 840 (VR-840) (refer to Section 4.5.2.1). Aircraft training operations associated with the Proposed Action are not anticipated to result in any substantial changes or increases in the use of airspace because 104 FW training operations will essentially replace operations currently performed by the F-15 aircraft associated with Otis Air National Guard Base (ANGB), which will no longer fly F-15 aircraft as a result of the 2005 BRAC Commission Final and Approved Recommendations.

**Table 2.3-1. 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for F-15 Aircraft (Proposed Action)**

| | ANNUAL | | AVERAGE DAILY | |
|---|---|---|---|---|
| | ***7:00 a.m.– 10:00 p.m.*** | ***10:00 p.m. – 7:00 a.m.*** | ***7:00 a.m. – 10:00 p.m.*** | ***10:00 p.m. – 7:00 a.m.*** |
| Departures | 2725 | 0 | 7.466 | 0 |
| Arrivals | 2,725 | 0 | 7.466 | 0 |
| Closed Patterns[1] | 936 | 0 | 2.564 | 0 |

Note: 1. Closed Pattern Events are conducted in conjunction with other flights and do not constitute a specific sortie.

## F-15 Eagle



The F-15 Eagle is an all-weather, extremely maneuverable, tactical fighter designed to permit the USAF to gain and maintain air supremacy over the battlefield. The F-15's air superiority is achieved through a mixture of unprecedented maneuverability and acceleration, range, weapons, and avionics. It can penetrate enemy defenses and outperform and outfight any current enemy aircraft. The F-15 has electronic systems and weaponry to detect, acquire, track, and attack enemy aircraft while operating in friendly or enemy-controlled airspace. The weapons and flight control systems are designed so one person can safely and effectively perform air-to-air combat.

The F-15's superior maneuverability and acceleration are achieved through high engine thrust-to-weight ratio and low wing loading. Low wing loading (the ratio of aircraft weight to its wing area) is a vital factor in maneuverability and, combined with the high thrust-to-weight ratio, enables the aircraft to turn tightly without losing airspeed. A multi-mission avionics system sets the F-15 apart from other fighter aircraft. It includes a head-up display, advanced radar, inertial navigation system, flight instruments, ultrahigh frequency communications, tactical navigation system, and instrument landing system. It also has an internally mounted, tactical electronic-warfare system, "identification friend or foe" system, electronic countermeasures set, and a central digital computer.

The pilot's head-up display projects all essential flight information gathered by the integrated avionics system. This display, visible in any light condition, provides information necessary to track and destroy an enemy aircraft without having to look down at cockpit instruments.

The F-15's versatile pulse-Doppler radar system can look up at high-flying targets and down at low-flying targets without being confused by ground clutter. It can detect and track aircraft and small high-speed targets at distances beyond visual range down to close range, and at altitudes down to treetop level. The radar feeds target information into the central computer for effective weapons delivery. For close-in dogfights, the radar automatically acquires enemy aircraft, and this information is projected on the head-up display. The F-15's electronic warfare system provides both threat warning and automatic countermeasures against selected threats.

A variety of air-to-air weaponry can be carried by the F-15. An automated weapon system enables the pilot to perform aerial combat safely and effectively, using the head-up display and the avionics and weapons controls located on the engine throttles or control stick. When the pilot changes from one weapon system to another, visual guidance for the required weapon automatically appears on the head-up display.

The F-15 is operated by a single pilot. This aircraft features two Pratt & Whitney F100-PW-100, or -220, or -229 turbofan engines with afterburners that produce 23,450 pounds of thrust each. The aircraft is 63.8 feet long, has a height of 18.5 feet, and its wingspan is 42.8 feet. They have a flight ceiling of 65,000 feet and a range of 3,450 miles (3,000 NM) with a combination of standard fuel tanks and three external fuel tanks. Top speed is 1,875 miles per hour. The F-15 is armed with one internally mounted M-61A1 20 mm, six-barrel cannon with 940 rounds of ammunition; four AIM-9L/M Sidewinder and four AIM-7F/M sparrow air-to-air missiles, or eight AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), which are carried on the exterior of the aircraft.

Source: Air Force 2006b.

### 2.3.2 FACILITIES CONSTRUCTION, MODIFICATION, AND DEMOLITION

Under the Proposed Action, the 104 FW will undergo an aircraft conversion, implement the ASA mission, and implement several construction projects described in Table 2.3-2. These proposed construction projects meet all criteria specified in the Air Force Handbook 32-1084, *Facility Requirements.* Anti-Terrorism/Force Protection (AT/FP) requirements have also been addressed to the extent practicable. These facilities will be sited approximately as shown in Figures 2.3-1 and 2.3-2. The precise layout and design of these facilities is in the early planning stages and therefore, exact locations and layouts are not currently finalized. Should locations and final layout of the facilities differ substantially from those anticipated (in location, layout, or potential environmental consequences), further environmental analysis would be required. The Proposed Action is the 104 FW's preferred alternative. Some facility demolitions are also proposed for facilities that are either obsolete or deteriorated or that would be in the footprint of proposed facilities (Figures 2.3-1 and 2.3-2; Table 2.3-2). These include Building 14 (Former Firing Range), Building 20 (Engine Shop), and Building 21 (Warehouse). These projects are described in more detail in Sections 2.3.2.1 through 2.3.2.14.

#### 2.3.2.1 Upgrade Aircraft Maintenance Hangar

This project involves several actions associated with the aircraft maintenance hangar (Building 15) in order to accommodate the F-15 aircraft and address workspace shortfalls. Additions to the Aircraft Maintenance Hangar include 2,092 SF to the Phase Dock Area, 3,929 square feet (SF) to the general purpose shops, 5,383 SF to the Aircraft Maintenance Unit (AMU) area, and 4,827 SF to maintenance administrative/logistics areas. Additionally, internal modifications and upgrades to 37,139 SF would also occur under this project. The existing Weapons Release Shop (Building 26) will undergo interior modifications to 18,850 SF of space to provide needed space for relocation of the Avionics/Computer Site Security Manager (CSSM) shops and structural steel metal shops. In addition, Building 28, which currently contains the Repair and Reclamation (R&R) shop, will undergo modifications to accommodate other maintenance functions.

#### 2.3.2.2 Addition/Alteration to Fire Crash/Rescue Station

An addition of 800 SF will be made to the Fire Crash/Rescue Station (Building 40). The addition will be comprised of a reinforced concrete foundation and floor slab, steel-framed masonry walls, and standing-seam metal roof. The addition will match the existing architectural style. Modifications will be made to interior walls and utilities, and a new air conditioning system will be installed. AT/FP improvements will be completed as necessary.

**Table 2.3-2. List of Projects Included in the Analysis**
**(Page 1 of 4)**

| *EA Action Item* | *Project Number* | *Project Title* | *New Facility Size or Additional footprint* | *New Impervious Surface as a Result of Project* | *Project Description* |
|---|---|---|---|---|---|
| 1 | AXQD059003<br>AXQD059315 | Upgrade Aircraft Maintenance Hangar | 18,231 SF<br>Addition of 16.231 SF to Aircraft Maintenance hangar, interior modifications to 37,139 SF.<br>Addition of 2,000 SF to Aircraft Maintenance Unit area; interior modifications to 3,700 SF | 18,231 SF | Upgrade the Aircraft Maintenance Hangar (Building 15) to provide needed space for several functions including phase dock, general purpose (GP) maintenance, organizational maintenance, and Weapons System Maintenance Management (WSMM). Additionally, Building 26, the current Weapons Release Shop, would be used for a structural sheet metal shop. |
| 2 | AXQD059071 | Addition/ Alteration to Fire Crash/Rescue Station | Addition – 800 SF | 800 SF | Construct addition to the Fire Crash/Rescue Station (Building 40) to provide needed space and accommodate additional firefighting personnel as a result of the mission change. |
| 3 | AXQD059311 | Install Aircraft Arresting Systems | N/A | N/A | Install two aircraft arresting systems, one at each end of the commercial runway. Construction to include removal of runway crossing plates, retrofitting barrier pits, installing barrier equipment, refurbishing pavements and site improvements, repainting runway markings, and installing a radio communication system to the control tower. |
| 4 | AXQD059312<br>AXQD062736 | Addition/ Alteration to the Squadron Operations Facility | Addition – 10,400 SF | 0 SF | Construct addition to and alter the Squadron Operations Facility (Building 25) to provide needed space for Security Vault, Command Post, and Survival Equipment shop. Building 15 (existing Survival Equipment shop) will then be renovated to provide space for other needed functions. |

**Table 2.3-2. List of Projects Included in the Analysis**
**(Page 2 of 4)**

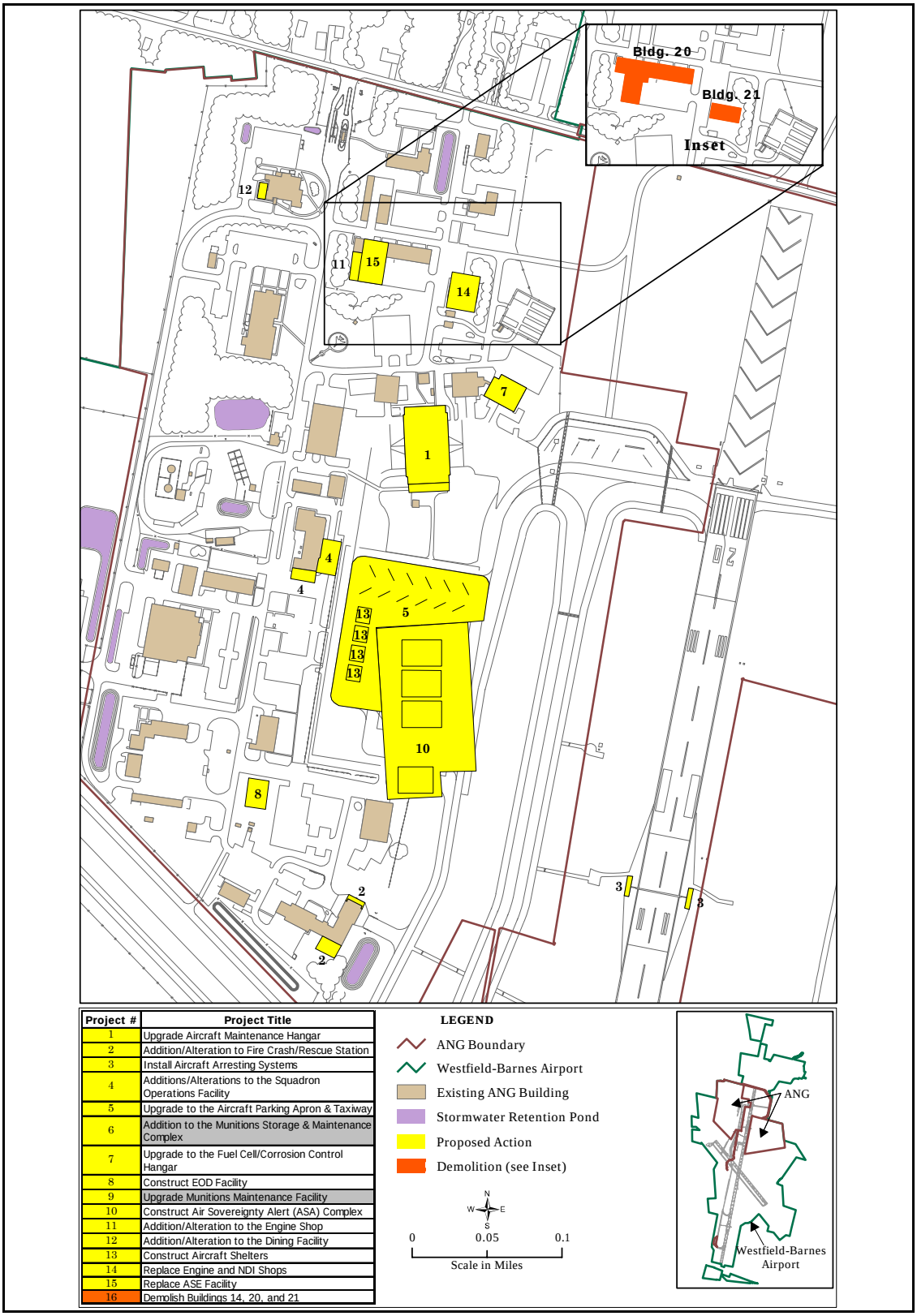
| *EA Action Item* | *Project Number* | *Project Title* | *New Facility Size or Additional footprint* | *New Impervious Surface as a Result of Project* | *Project Description* |
|---|---|---|---|---|---|
| 5 | AXQD059313 | Upgrade to the Aircraft Parking Apron and Taxiway | Refurbished Apron and Taxiway – 2,000 square yards (SY) (18,000 SF)<br>Alter Parking Pads – 5,150 SY<br>Alter Taxiways – 3,335 SY<br>Demolish Existing Parking Pads – 4,250 SY<br>Demolish Existing Asphalt – 4,160 SY | Apx. 1,800 SF (Apx. 10 percent of the Apron will be on previously pervious surface.) | Upgrade the aircraft parking apron to accommodate F-15 aircraft, including new apron and taxiway, alterations to existing aircraft parking pads, and alterations to taxiways. This work will include demolition of existing aircraft parking pads and taxiways. |
| 6 | AXQD059314 | Addition to the Munitions Storage and Maintenance Complex | Storage Igloos – 5,460 SF<br>Above-Ground Maintenance Bays – 4,700 SF. Munitions Magazine – 2,900 SF. | 2,900 SF | Construct additions, including three earth-covered concrete arch igloos, two earth-covered missile maintenance bays, and one above-ground munitions magazine. |
| 7 | AXQD059316 | Upgrade to the Fuel Cell/Corrosion Control Hangar | Addition to Fuel Cell Aircraft Bay – 1,100 SF, and interior alterations to 6,000 SF;<br>Alter Fuel Cell Shops – 2,700 SF, addition to Fuel Cell Shops of 430 SF;<br>Corrosion Control Aircraft Bay Addition – 1,800 SF<br>Corrosion Control Aircraft Bay Alteration – 6,000 SF<br>Corrosion Control Shops Alterations – 1,600 SF<br>Tank Storage Area – Addition – 2,300 SY | 0 SF | Construct an addition to the existing Fuel Cell Aircraft Bay. The existing Fuel Cell Shop areas will be modified to accommodate F-15 aircraft. An addition and modifications will be made to the Corrosion Control Aircraft Bay, and additional alterations will be made to the Corrosion Control Shops. Also, an addition will be made to the installation tank storage area. |

**Table 2.3-2. List of Projects Included in the Analysis**
**(Page 3 of 4)**

| *EA Action Item* | *Project Number* | *Project Title* | *New Facility Size or Additional footprint* | *New Impervious Surface as a Result of Project* | *Project Description* |
|---|---|---|---|---|---|
| 8 | AXQD059345 | Construct Explosive Ordnance Disposal (EOD) Facility | 5,600 SF | 5,600 SF | An EOD facility will be constructed on the west side of the installation. It will be a one story structure with reinforced concrete foundation and floor slab, steel-framed masonry walls, and standing-seam metal roof. |
| 9 | AXQD052258 | Upgrade Munitions Maintenance Facilities | 3,600 SF | 3,600 SF | Interior modifications to Building 65 and construction of a new facility for trailer maintenance and inert storage associated with munitions. |
| 10 | AXQD059359 | Construct ASA Complex | 45,545 SF | 3,250 SF | Construct new access pavement, ramp, and shoulders, install three double-wide aircraft shelters (total capacity six aircraft), construct alert crew quarters with reinforced concrete floor slab, install security entry control house, security fencing and gates, and lighting and utilities. Will require demolition of 15,840 SY of existing concrete and pavement. |
| 11 | AXQD069009 | Addition/ Alteration to the Engine Shop | Addition – 2,100 SF<br>Interior Modifications – 500 SF | 2,100 SF | Construct addition to Building 20 to consist of reinforced concrete foundation and floor slab, steel framed structure, and standing-seam metal roof. Alteration to include removal of existing exterior wall at the addition, and extend required utilities and fire protection. Exterior work to match existing architectural style. |
| 12 | AXQD069010 | Addition/ Alteration to the Dining Facility | Addition – 1,000 SF<br>Interior Modifications – 250 SF | 1,000 SF | Construct addition to Building 3 to include reinforced concrete foundation and floor slab, steel framed structure, glass panel wall, and standing-seam metal roof. Alteration to include removal of existing exterior wall at the addition, and extend required utilities and fire protection. |

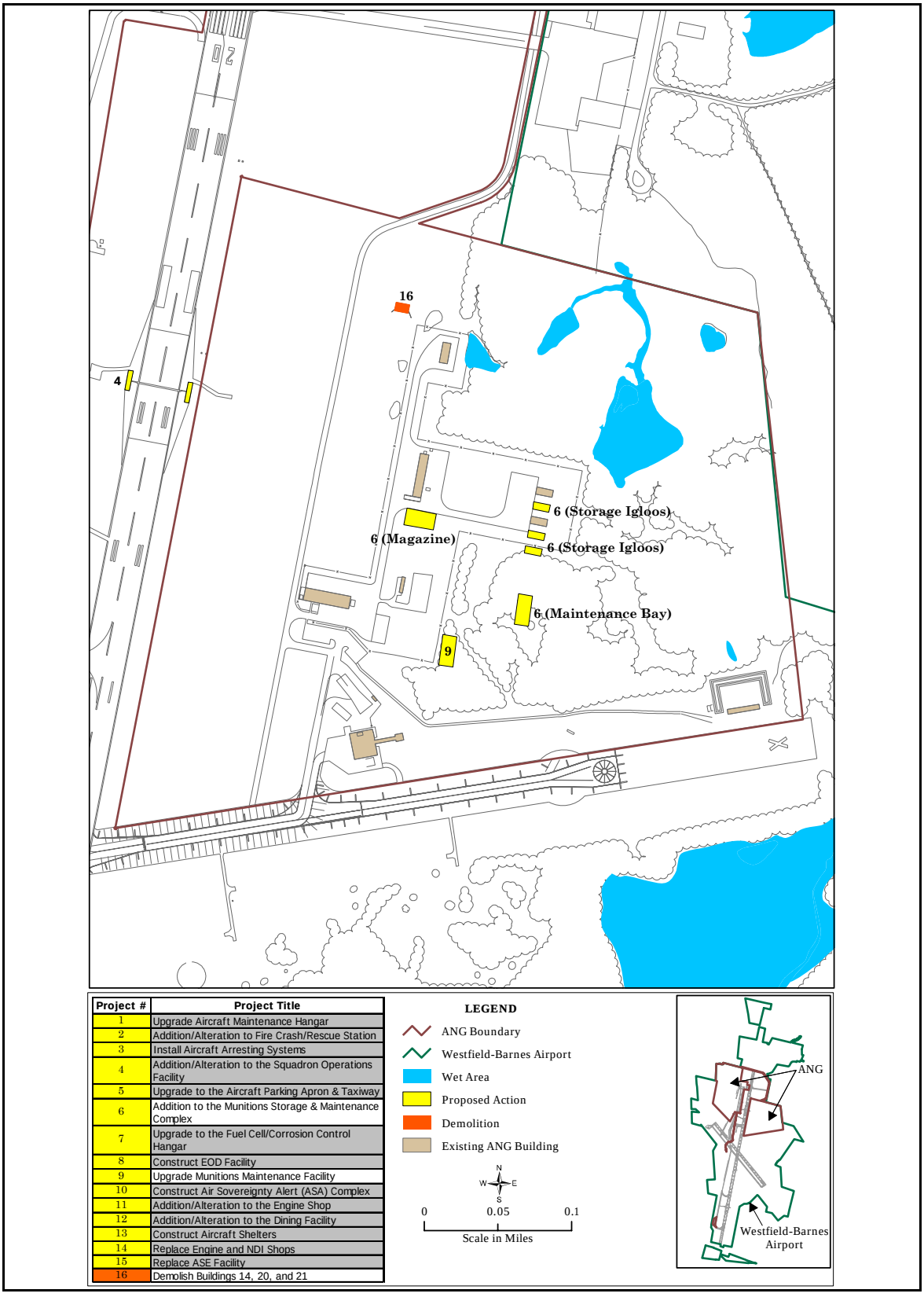
**Table 2.3-2. List of Projects Included in the Analysis**
**(Page 4 of 4)**

| *EA Action Item* | *Project Number* | *Project Title* | *New Facility Size or Additional footprint* | *New Impervious Surface as a Result of Project* | *Project Description* |
|---|---|---|---|---|---|
| 13 | AXQD062392<br>AXQD062393<br>AXQD062394<br>AXQD062395 | Relocate/ Construct Aircraft Shelters | 27,360 SF (each shelter 6,840 SF, will go on aircraft apron). 3,900 SY of existing pavement will be demolished and replaced with concrete. | 0 SF | Emplace 4 pre-engineered metal aircraft shelters on existing apron to serve as shelter for 4 F-15 aircraft during inclement weather. |
| 14 | AXQD049060 | Replace Engine and Non-Destructive Inspection (NDI) Shops | 12,500 SF | 12,500 SF | Construct a new facility to provide needed space for engine maintenance and NDI. |
| 15 | AXQD049061 | Replace ASE Facility | 12,500 SF | 12,500 SF | Construct a new facility to provide needed space for ASE functions. Demolish Building 20 and landscape the site. |
| 16 | AXQD102995 | Facility Demolitions in Support of Mission | 27,404 SF | -27,404 SF | Building demolitions associated with the Proposed Action will include: Building 14, Building 20, and Building 21(see Table 2.3-3). |




| Project # | Project Title |
|---|---|
| 1 | Upgrade Aircraft Maintenance Hangar |
| 2 | Addition/Alteration to Fire Crash/Rescue Station |
| 3 | Install Aircraft Arresting Systems |
| 4 | Additions/Alterations to the Squadron Operations Facility |
| 5 | Upgrade to the Aircraft Parking Apron & Taxiway |
| 6 | Addition to the Munitions Storage & Maintenance Complex |
| 7 | Upgrade to the Fuel Cell/Corrosion Control Hangar |
| 8 | Construct EOD Facility |
| 9 | Upgrade Munitions Maintenance Facility |
| 10 | Construct Air Sovereignty Alert (ASA) Complex |
| 11 | Addition/Alteration to the Engine Shop |
| 12 | Addition/Alteration to the Dining Facility |
| 13 | Construct Aircraft Shelters |
| 14 | Replace Engine and NDI Shops |
| 15 | Replace ASE Facility |
| 16 | Demolish Buildings 14, 20, and 21 |

**Figure 2.3-1. Proposed Facilities at the 104 FW Installation (West Parcel), Westfield-Barnes Airport**




| Project # | Project Title |
|---|---|
| 1 | Upgrade Aircraft Maintenance Hangar |
| 2 | Addition/Alteration to Fire Crash/Rescue Station |
| 3 | Install Aircraft Arresting Systems |
| 4 | Addition/Alteration to the Squadron Operations Facility |
| 5 | Upgrade to the Aircraft Parking Apron & Taxiway |
| 6 | Addition to the Munitions Storage & Maintenance Complex |
| 7 | Upgrade to the Fuel Cell/Corrosion Control Hangar |
| 8 | Construct EOD Facility |
| 9 | Upgrade Munitions Maintenance Facility |
| 10 | Construct Air Sovereignty Alert (ASA) Complex |
| 11 | Addition/Alteration to the Engine Shop |
| 12 | Addition/Alteration to the Dining Facility |
| 13 | Construct Aircraft Shelters |
| 14 | Replace Engine and NDI Shops |
| 15 | Replace ASE Facility |
| 16 | Demolish Buildings 14, 20, and 21 |

**Figure 2.3-2. Proposed Facilities at the 104 FW Installation (East Parcel), Westfield-Barnes Airport**

#### 2.3.2.3 Installation of Aircraft Arresting Systems

Under the Proposed Action, an aircraft arresting system compatible with commercial and civilian aviation operations will be installed. This project will require removal and refurbishing of runway crossing plates, retrofitting barrier plates, and installing barrier equipment in these pits. Barrier equipment will be installed at both ends of Runway 02/20. Additionally, runway markings will be repainted and radio communication system to the control tower will be installed.

#### 2.3.2.4 Additions/Alterations to the Squadron Operations Facility

This project will result in the construction of a 10,400 SF addition and modifications to 16,100 SF of the Squadron Operations Facility (Building 25). An addition of 7,200 SF will be completed to provide necessary space for Security Vault and Command Post. To provide adequate space for the Survival Equipment Shop, construction of a 3,200 SF addition to and renovation of 1,259 SF of existing space associated with Building 15 will also be completed. The addition will be comprised of a reinforced concrete foundation and floor slab, steel framed structure with masonry walls, and standing-seam metal roof. Exterior site improvements including AT/FP measures, extension of necessary utilities, pavements, and communications systems will be completed. Additionally, the existing building transformer will be replaced to meet building equipment requirements. Modifications will include removal and/or reconfiguration of several interior walls, construction of new walls, and installation of electrical, security, and fire protection systems.

#### 2.3.2.5 Upgrade to the Aircraft Parking Apron and Taxiway

To accommodate F-15 aircraft, a 2,000 square yard (SY) asphalt extension will be added to the existing aircraft parking apron and taxiway, and upgrades to 5,150 SY of the concrete aircraft parking pads and 3,335 SY of the asphalt taxiways will be completed. Demolition of 8,410 SY of existing pavements will be required to accommodate the upgrades. The apron pavements will be repainted based on the new aircraft parking and taxi plan, and new grounding rods and tie downs will be installed at each aircraft parking location.

#### 2.3.2.6 Addition to the Munitions Storage and Maintenance Complex

This project includes the construction of several facilities to accommodate the munitions storage and maintenance needs of the 104 FW in anticipation of the proposed mission change (Figure 2.3-3). The projects include three new storage igloos (5,460 SF total); two new earth covered missile maintenance bays (4,700 SF total); and a 2,900 SF above ground munitions magazine.

All of these facilities will be located on a separate Air National Guard (ANG) parcel on the east side of Westfield-Barnes Airport.

#### 2.3.2.7 Upgrade to the Fuel Cell/Corrosion Control Hangar

Under the Proposed Action, several projects will be undertaken to provide properly sized and configured Fuel Cell and Corrosion Control facilities to support F-15 aircraft. An addition of 1,100 SF will be constructed to the existing Fuel Cell Aircraft Bay to support the F-15 aircraft. The existing aqueous fire-fighting foam (AFFF) system will be replaced with a high-expansion foam (HEF) system. This addition will comprise a steel-frame structure, insulated metal panel walls, a vertical lift fabric door, and standing-seam metal roof. Interior modifications to 2,700 SF of fuel cell shops will also be completed. A 1,500 SF addition to the Corrosion Control Aircraft Bay (also part of Building 27) will include the addition of an "eyebrow" (extension to the roof) to the facility, replacement of the existing vertical lift fabric door. Interior modifications to the Corrosion Aircraft Bay (6,000 SF) and Shop Areas (1,600 SF) will include elevating and upgrading to current code ductwork, piping, lighting, fire suppression, and fall protection systems. The concrete pads and asphalt access pavements of the Wing Storage Tank located adjacent to Building 27 will be expanded by 1,900 SY to allow for an increase from 30 to 54 storage tanks necessary for conversion to F-15 aircraft. AT/FP improvements will be completed as necessary.

#### 2.3.2.8 Construct EOD Facility

A 5,600 SF Explosive Ordnance Disposal (EOD) facility will be constructed in support of the F-15 aircraft mission. This one-story facility will be comprised of a reinforced concrete foundation and floor slab, steel-framed masonry walls, and standing-seam metal roof. The building will include administrative and office spaces, classroom, library, break room, laundry, locker room, equipment maintenance and storage area, and a drive-through vehicle/trailer/robot storage and maintenance area. Mechanical, electrical, fire protection, communications, air conditioning, and AT/FP features will be included.

#### 2.3.2.9 Upgrade Munitions Maintenance Facilities

This project will result in the construction of a new 3,600 SF facility for trailer maintenance and inert storage associated with munitions. This facility will be constructed on the ANG parcel on the east side of Westfield-Barnes Airport.

#### 2.3.2.10 Construct ASA Complex

This project will include several actions to provide an adequate ASA Complex for F-15 aircraft in the same location as the existing aircraft ramp. New access pavements and ramps (11,435 SY)

and access pavement shoulders (3,450 SY) will be constructed, and 15,840 SY of existing pavement will be demolished. Three double-wide alert aircraft shelters (total of 38,745 SF to accommodate six aircraft) will be constructed, and will include fire suppression and extension of necessary utilities. A 6,500 SF Alert Crew Quarters facility will be constructed with reinforced concrete floor slab, masonry walls, and roof structure, as well as an air conditioning system and extension of necessary utilities. Additional improvements will include a 300 SF Security Entry Control House, security fencing and gates, lighting, intrusion detection system, backup power, and communications support.

#### 2.3.2.11 Addition/Alteration to the Engine Shop

Under this project, the Engine Shop (Building 20) will be expanded and modified to provide adequate space for maintenance of F-15 aircraft. This project will provide satisfactory engine shop facilities until a new one can be funded, as described in section 2.3.2.14. The addition will be a 2,100 SF steel-framed structure with reinforced concrete foundation and floor slab, insulated panel walls, and standing-seam metal roof. All necessary utilities extensions and fire protection will be included. The exterior work will be designed to match the existing architectural style of the building. Interior modifications to approximately 500 SF of the Engine Shop will be completed. AT/FP improvements will also be incorporated.

#### 2.3.2.12 Addition/Alteration to the Dining Facility

A 1,000 SF addition to the Dining Facility will be comprised of a steel-framed structure, reinforced concrete foundation and floor slab, glass panel wall, and standing-seam metal roof. Extension of utilities and fire protection will also be included. Interior modifications will total 250 SF. AT/FP improvements will be included.

#### 2.3.2.13 Relocate/Construct Aircraft Shelters

Under this project, four pre-engineered aircraft shelters will be installed on the aircraft apron at the 104 FW installation. Each shelter will be a 6,840 SF pre-engineered metal building complete with vertical lift fabric doors, a radiant heating system, fire protection systems, and electrical systems. 3,900 SY of the existing asphalt apron will be demolished and replaced with concrete surface to support the shelters.

#### 2.3.2.14 Replace Engine and NDI Shops

This project will construct a new 16,000 SF building to provide adequate space for an engine shop area (13,000 SF) and a Non-Destructive Inspection (NDI) shop area (3,000 SF). It is unlikely that this project will be funded soon enough to provide satisfactory engine shop facility support for the F-15 conversion, and therefore will be preceded by the previously described

addition/alteration to the existing engine shop (Section 2.3.2.11). The new building will be constructed with reinforced concrete foundations and floor slab with steel framed masonry walls and roof structure, as well as associated extension of utilities, pavements, AT/FP features, etc. This project will include demolition of Building 21, which is in the footprint of this project.

#### 2.3.2.15 Replace ASE Facility

Under the Proposed Action, a new 12,500 SF building will be constructed to provide adequate space for Aerospace Support Equipment (ASE) functions. The new building will be constructed with reinforced concrete foundations and floor slab with steel framed masonry walls and roof structure, as well as associated extension of utilities, pavements, AT/FP features, etc. Upon completion of this project Building 20, which will provide temporary space for ASE functions until the new building is completed, will be demolished.

#### 2.3.2.16 Facility Demolitions in Support of Mission

As a component of constructing new facilities for the 104 FW, some existing facilities will be demolished that are obsolete or deteriorated and/or in the footprint of the proposed facilities. It is expected that three facilities will be demolished under the Proposed Action (see Table 2.3-3). Asbestos will be removed, as necessary, prior to demolition.

**Table 2.3-3. Demolitions Associated with Construction Activities**

| ***Facility/Building Number*** | ***Reason for Demolition*** | ***Square Feet*** |
|---|---|---|
| Building 14 (Old Firing Range) | Building is obsolete and no longer used, and remediation of contaminated soils is needed. | 1,346 SF |
| Building 20 ( Engine Shop/NDI/ASE) | Building is obsolete and will be replaced with a properly configured facility to accommodate F-15 aircraft. | 21,058 SF |
| Building 21 (Aircraft General Purpose Warehouse) | Building 21 is obsolete and will be replaced with a properly configured facility to accommodate F-15 aircraft. | 5,000 SF |
| | Total Affected Area | 27,404 SF |

## 2.4 ALTERNATIVE ACTION

Under the Alternative Action, the 104 FW would still undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission Final and Approved Recommendations. As part of the aircraft conversion, the current close air support mission associated with the A-10 would change to an air superiority/ASA mission associated with the F-15. However, under this alternative, the 104 FW would focus aircraft take-offs on Runway 20, which would result in approximately 90 percent of the take-offs occurring to the south of the airport (see Figures 2.2-1, 2.2-2). The landings and pattern work would be the same across the

preferred and alternative actions. All other activities (mission change, construction, assigned personnel increase) would remain as described under the preferred alternative.

## 2.5 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR DETAILED ANALYSIS

The Proposed Action and its alternative as presented in Sections 2.3 and 2.4 encompass the range of feasible alternatives for implementation of the final BRAC recommendations at Westfield-Barnes Airport. An alternative that was considered, but eliminated from further study was a reduction in the number of total operations by the 104 FW with the F-15 aircraft. This alternative, and its reason for dismissal, is described below.

**Reduced Operations by the 104 FW with the F-15 Aircraft**

The F-15 aircraft creates a larger noise footprint than the A-10 aircraft that is currently flown by the 104 FW. In order to minimize noise impacts in the immediate vicinity of the airport, some reduced level of F-15 operations were considered. Using noise exposure data as a basis, it was calculated that reducing operations by 50 percent (i.e., flying only 1,363 annual sorties as opposed to 2,725) would result in only a 3 decibel (dB) reduction in noise. Even that reduction would be insufficient to avoid impacts to land uses surrounding the airfield.

Any reduction in flight operations would severely impact the unit's ability to complete training requirements and maintain combat readiness. Therefore, this alternative is not considered feasible, and has not been carried forward for detailed analysis.

## 2.6 NO ACTION ALTERNATIVE

The CEQ regulation 40 CFR Section 1502.14(d) specifically requires analysis of the "No Action" alternative in all National Environmental Policy Act (NEPA) documents. Under the No Action Alternative, the 104 FW would not implement the actions described above. The 104 FW would maintain their existing facilities, would not build the new facilities proposed, and would not undergo an aircraft/mission conversion. Under the No Action Alternative, these deficiencies would continue to impair the 104 FW's ability to successfully conduct their mission and to maintain wartime readiness and training. In addition, the 104 FW would not be able to accomplish their BRAC-directed mission change to converting F-15 aircraft. Aside from not undergoing the mission conversion and constructing facilities in support of the conversion, the following deficiencies would remain:

- The Aircraft Maintenance Facilities would continue to lack sufficient space and be improperly configured for several important functions related to the support of aircraft.
- The Fire Department would continue to operate out of a facility that lacks sufficient space for training and mobility needs.

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# 3.0 AFFECTED ENVIRONMENT

This section describes the natural and human environment that would be affected by the proposed aircraft conversion and associated personnel increases and construction projects at the 104th Fighter Wing (104 FW) installation at Westfield-Barnes Airport. It provides a baseline for assessing the environmental effects of the Proposed and Alternative Actions described in Section 2.3. Those potential effects are presented in Section 4.0.

In compliance with the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) guidelines, and 32 Code of Federal Regulations (CFR) Part 989, et seq., the description of the affected environment focuses on those resources and conditions potentially subject to impacts. The affected environment is described for 12 resource topics: Noise, Land Use (including Visual Resources), Socioeconomics (including Environmental Justice), Air Quality, Airspace, Safety, Solid and Hazardous Materials and Waste, Infrastructure (including Transportation), Earth Resources, Water Resources, Biological Resources, and Cultural Resources.

The sections for each resource topic begin with an introduction that defines the resources addressed in the section, summarizes applicable laws and regulations, defines key terms as necessary, and describes the region of influence (ROI) within which the effects from the Proposed and Alternative Actions are anticipated to occur. The ROI varies from resource to resource, but in general, effects from the Proposed and Alternative Action are expected to be concentrated in Hampden County. There are three primary reasons why the ROI can differ among resources:

- The resource itself has a geographic definition. For example, the ROI for earth resources can be defined as limited to the location where ground disturbance from construction would occur (i.e., the 104 FW installation), whereas the ROI for air quality is defined by a much larger area (i.e., air quality control region [AQCR]) due to the nature of air pollutants to travel throughout a broad region.

- The nature of potential impacts from the Proposed and Alternative Actions can vary from resource to resource. For example, impacts to water resources may be defined by drainage patterns from the location of proposed development to surrounding surface water, while impacts from aircraft noise may be defined by proposed flight paths from Westfield-Barnes Airport.

- In some cases, data about the resource are only available for certain defined areas (e.g., at the Census block or block group level); as a result, the analysis can only be performed at that level.

Following the introduction for each resource topic, information is presented about existing environmental or socioeconomic conditions in the ROI. This information provides a frame of reference about conditions that prevail currently or existed in the recent past (e.g., United States [U.S.] Census data).

## 3.1 NOISE

### 3.1.1 DEFINITION OF THE RESOURCE

Noise addressed in this Environmental Impact Statement (EIS) focuses on sound levels produced by aircraft operating within and around Westfield-Barnes Airport and their effect on the surrounding areas subject to aircraft overflight. Additional background reference material regarding noise analysis is presented in Appendix C. This section summarizes baseline noise conditions in the communities surrounding Westfield-Barnes Airport.

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. It may be intermittent or continuous, steady or impulsive. It may be stationary or transient. Stationary sources are normally related to specific land uses (e.g., housing tracts or industrial plants). Transient noise sources move through the environment, either along relatively established paths (e.g., highways, railroads, and aircraft flight tracks around airports), or randomly. There is wide diversity in responses to noise that not only vary according to the type of noise and the characteristics of the sound source, but also according to the sensitivity and expectations of the receptor, the time of day, and the distance between the noise source (e.g., an aircraft) and the receptor (e.g., a person or animal).

The physical characteristics of noise, or sound, include its intensity, frequency, and duration. Sound is created by acoustic energy, which produces minute pressure waves that travel through a medium, like air, and are sensed by the ear drum. This may be likened to the ripples in water that would be produced when a stone is dropped into it. As the acoustic energy increases, the intensity or amplitude of these pressure waves increase, and the ear senses louder noise. The unit used to measure the intensity of sound is the decibel (dB). Sound intensity varies widely (from a soft whisper to a jet engine) and is measured on a logarithmic scale to accommodate this wide range. The logarithm, and its use, is nothing more than a mathematical tool that simplifies dealing with very large and very small numbers. For example, the logarithm of the number 1,000,000 is 6, and the logarithm of the number 0.000001 is -6 (minus 6). Obviously, as more zeros are added before or after the decimal point, converting these numbers to their logarithms greatly simplifies calculations that use these numbers.

The frequency of sound is measured in cycles per second, or hertz (Hz). This measurement reflects the number of times per second the air vibrates from the acoustic energy. Low frequency

sounds are heard as rumbles or roars, and high frequency sounds are heard as screeches. Sound measurement is further refined through the use of "A-weighting." The normal human ear can detect sounds that range in frequency from about 20 Hz to 15,000 Hz. However, all sounds throughout this range are not heard equally well. Therefore, through internal electronic circuitry, some sound meters are calibrated to emphasize frequencies in the 1,000 to 4,000 Hz range. The human ear is most sensitive to frequencies in this range, and sounds measured with these instruments are termed "A-weighted," and are shown in terms of A-weighted decibels (dBA).

The duration of a noise event, and the number of times noise events occur, are also important considerations in assessing noise impacts.

As a basis for comparison when noise levels are considered, it is useful to note that at distances of about 3 feet, noise from normal human speech ranges from 63 to 65 dB, operating kitchen appliances ranges from about 83 to 88 dB, and rock bands approach 110 dB.

The word "metric" is used to describe a standard of measurement. As used in environmental noise analysis, there are many different types of noise metrics. Each metric has a different physical meaning or interpretation and each metric was developed by researchers attempting to represent the effects of environmental noise.

The metrics supporting the assessment of noise from aircraft operations around Westfield-Barnes Airport and other activities assessed in this document are the maximum sound level ($L_{max}$), the Sound Exposure Level (SEL), and Time-Averaged Sound Levels. Each metric represents a "tier" for quantifying the noise environment, and is briefly discussed below.

The following terms are defined to provide a better understanding of how data are developed for input to the various noise models used to calculate noise.

Around an airfield, ***aircraft operations*** are categorized as takeoffs, landings, or closed patterns (which could include activities referred to as touch-and-gos or low approaches). Each takeoff or landing constitutes one operation. A ***closed pattern*** occurs when the pilot of the aircraft approaches the runway as though planning to land, but then applies power to the aircraft and continues to fly as though taking off again. The pilot then flies a circular or rectangular track around the airfield, and again approaches for landing. In some cases the pilot may actually land on the runway before applying power, or in other cases the pilot simply approaches very close to the ground. In either event, since a closed pattern operation essentially consists of a landing and a takeoff, it is considered two operations. A ***sortie*** is defined as a takeoff, performance of a mission, and a landing. During mission performance, the aircraft may fly in several elements of airspace.

### 3.1.1.1 Maximum Sound Level

The $L_{max}$ metric defines peak noise levels. $L_{max}$ is the highest sound level measured during a single noise event (e.g., an aircraft overflight), and is the sound actually heard by a person on the ground. For an observer, the noise level starts at the ambient noise level, rises up to the maximum level as the aircraft flies closest to the observer, and returns to the ambient level as the aircraft recedes into the distance. $L_{max}$ is important in judging a noise event's interference with conversation, sleep, or other common activities.

This document considers noise from aircraft operating around the Westfield-Barnes Airport. Around airfields, the primary operational modes of aircraft are departures (take-offs) and arrivals (landings). Table 3.1-1 shows $L_{max}$ values at various distances associated with typical military and civilian aircraft that could operate at Westfield-Barnes Airport.

**Table 3.1-1. Representative Maximum Sound Levels**

| *Aircraft and Power Type* | **$L_{MAX}$ Values (in dBA) at Varying Distances (in Feet)** | | | | |
|---|---|---|---|---|---|
| | ***500*** | ***1,000*** | ***2,000*** | ***5,000*** | ***10,000*** |
| A-10 Takeoff | 100.9 | 93.2 | 84.6 | 71.7 | 60.7 |
| A-10 Landing | 97.0 | 88.9 | 78.8 | 60.1 | 46.4 |
| F-15C Takeoff | 110.8 | 103.7 | 96.2 | 85.1 | 75.5 |
| F-15C Landing | 92.7 | 85.8 | 78.5 | 67.7 | 58.5 |
| C-130J Takeoff | 91.5 | 84.3 | 76.6 | 65.2 | 55.7 |
| C-130J Landing | 90.8 | 83.7 | 75.9 | 64.1 | 54.4 |
| KC-135R Takeoff | 93.9 | 87.1 | 79.8 | 68.9 | 59.1 |
| KC-135R Landing | 90.4 | 83.4 | 75.8 | 64.4 | 54.2 |
| Gulfstream[1] Takeoff | 116.0 | 109.2 | 101.7 | 90.2 | 80.1 |
| Gulfstream[1] Landing | 81.9 | 75.0 | 67.6 | 56.1 | 46.2 |

Notes: 1. Representative Business Jet (GIIB)
Source: OMEGA108

### 3.1.1.2 Sound Exposure Level

$L_{max}$ alone may not represent how intrusive an aircraft noise event is because it does not consider the length of time that the noise persists. The SEL metric combines intensity and duration into a single measure. It is important to note, that SEL does not directly represent the sound level heard at any given time, but rather provides a measure of the total exposure of the entire event. Its value represents all of the acoustic energy associated with the event as though it was present for one second. Therefore, for sound events that last longer than one second, the SEL value will be higher than the $L_{max}$ value. The SEL value is important because it is the value used to

calculate other time-averaged noise metrics. Table 3.1-2 shows SEL values corresponding to the aircraft and power settings reflected in Table 3.1-1.

**Table 3.1-2. Representative Sound Exposure Levels**

| *Aircraft and Power Type* | SEL Values (in dBA) at Varying Distances (in Feet) | | | | |
|---|---|---|---|---|---|
| | ***500*** | ***1,000*** | ***2,000*** | ***5,000*** | ***10,000*** |
| A-10 Takeoff | 102.8 | 96.9 | 90.1 | 79.6 | 70.4 |
| A-10 Landing | 98.2 | 91.8 | 83.5 | 67.2 | 55.3 |
| F-15C Takeoff | 119.5 | 114.2 | 108.4 | 99.8 | 92.0 |
| F-15C Landing | 99.0 | 93.9 | 88.4 | 80.0 | 72.7 |
| C-130J Takeoff | 97.6 | 92.3 | 86.3 | 77.3 | 69.7 |
| C-130J Landing | 95.6 | 90.3 | 84.2 | 74.9 | 66.9 |
| KC-135R Takeoff | 97.2 | 92.2 | 86.7 | 78.2 | 70.2 |
| KC-135R Landing | 96.0 | 90.8 | 85.0 | 76.0 | 67.6 |
| Gulfstream[1] Takeoff | 118.7 | 113.7 | 108.1 | 99.0 | 90.6 |
| Gulfstream[1] Landing | 88.2 | 83.2 | 77.6 | 68.6 | 60.4 |

Notes: 1. Representative Business Jet (GIIB).
Source: OMEGA108

3.1.1.3 Time-Averaged Cumulative Noise Metrics

The number of times noise events occur during given periods is also an important consideration in assessing noise impacts. The "cumulative" noise metrics supporting the analysis of multiple time-varying noise events are the Day-Night Average Sound Level ($L_{dn}$) and the Equivalent Noise Level ($L_{eq}$).

*Day-Night Average Sound Level*

This metric sums the individual noise events and averages the resulting level over a specified length of time. Thus, it is a composite metric which considers the maximum noise levels, the duration of the events, the number of events that occur, and the time of day during which they occur. This metric adds 10 dB to those events that occur between 10:00 p.m. and 7:00 a.m. to account for the increased intrusiveness of noise events that occur at night when ambient noise levels are normally lower than during the day time. This cumulative metric does not represent the variations in the sound level heard. Nevertheless, it does provide an excellent measure for comparing environmental noise exposures when there are multiple noise events to be considered.

*Equivalent Noise Level*

This metric also sums all of the individual noise events and averages them over a specified time period. Common averaging times are 8- and 24-hour periods [$L_{eq(8)}$ and $L_{eq(24)}$]. This metric assigns no penalty for the time of the noise event. However, if no noise events occur at night, calculations of $L_{dn}$ and $L_{eq(24)}$ would be identical.

Finally, it should be noted that ambient background noise is not considered in the noise calculations that are presented below. There are two reasons for this. First ambient background noise, even in wilderness areas, varies widely depending on location and other conditions. For example, studies conducted in an open pine forest in the Sierra National Forest in California have measured up to a 10 dBA variance in sound levels simply due to an increase in wind velocity (Harrison 1973). Therefore, assigning a value to background noise would be arbitrary. Secondly, and probably most important, is that it is reasonable to assume that ambient background noise in the project's ROI would have little or no effect on the calculated $L_{dn}$. In calculating noise levels louder sounds dominate the calculations and in general, aircraft and other transportation-related noise would be expected to be the dominant noise sources characterizing the acoustic conditions in the ROI.

Using measured sound levels as a basis, the U.S. Air Force (USAF) developed several computer programs to calculate noise levels resulting from aircraft operations. Sound levels calculated by these programs have been extensively validated against measured data, and have been proven to be highly accurate.

In this document, the sound levels calculated for aircraft operations in an airfield environment are all daily $L_{dn}$. $L_{dn}$ metrics are the preferred noise metrics of the Department of Housing and Urban Development, the Department of Transportation, the Federal Aviation Administration (FAA), the USEPA (U.S. Environmental Protection Agency), and the Veteran's Administration.

Ignoring the night-time penalty for the moment, $L_{dn}$ may be thought of as the continuous or cumulative A-weighted sound level which would be present if all of the variations in sound level which occur over the given time period were smoothed out so as to contain the same total sound energy. While $L_{dn}$ does provide a single measure of overall noise impact, it is fully recognized that it does not provide specific information on the number of noise events or the specific individual sound levels that occur. For example, an $L_{dn}$ of 65 dB could result from a very few noisy events, or a large number of quieter events. Although it does not represent the sound level heard at any one particular time, it does represent the total sound exposure. Scientific studies and social surveys have found the $L_{dn}$ to be the best measure to assess levels of community annoyance associated with all types of environmental noise. Therefore, its use is endorsed by the scientific community and governmental agencies (American National Standards Institute 1980,

1988; USEPA 1974; Federal Interagency Commission on Urban Noise 1980; Federal Interagency Commission on Noise 1992).

Additional technical information on the methodology and concept of aircraft noise measurement and modeling, as well as data on noise effects, can be found in Appendix C.

The ROI for the noise assessments is the area around Westfield-Barnes Airport that is exposed to elevated noise levels caused by aviation-related noise.

### 3.1.2 EXISTING CONDITIONS

Public annoyance is the most common concern associated with exposure to elevated noise levels. When subjected to $L_{dn}$ levels of 65 dBA, approximately 12 percent of the persons so exposed will be "highly annoyed" by the noise. At levels below 55 dBA, the percentage of annoyance is substantially lower (less than 3 percent), and at levels above 70 dBA it is substantially higher (greater than 25 percent) (Finegold *et al.* 1994). Table 3.1-3 shows the percentage of the population expected to be highly annoyed at a range of noise levels.

**Table 3.1-3. Percentage of Population Highly Annoyed By Elevated Noise Levels**

| ***Noise Exposure ($L_{dn}$ in dBA)*** | ***Percent Highly Annoyed*** |
|---|---|
| < 65 | < 12 |
| 65 – 70 | 12 – 21 |
| 70 – 75 | 22 – 36 |
| 75 – 80 | 37 – 53 |
| 80 – 85 | 54 – 70 |
| > 85 | > 71 |

Source: Finegold *et al.* 1994.

#### 3.1.2.1 Aircraft Activity at the Airfield

Westfield-Barnes Airport supports both military and civil aviation activity. Under current conditions, it supports approximately 62,300 aviation operations per year. This equates to approximately 171 daily operations. Considering all types of flight activities, a scenario representing an "average day's" operations was developed. The operations considered include arrivals (landings), departures (takeoffs), and closed patterns. Noise calculations consider the frequency of flight operations, runway utilization, and the flight tracks and flight profiles flown by each aircraft. The numbers and types of representative operations considered are shown in Table 3.1-4.

**Table 3.1-4. Average Daily Operations at Westfield-Barnes Airport[1]**

| *Aircraft* | ARRIVALS | | DEPARTURES | | OPERATIONS WITHIN CLOSED PATTERNS[2] | |
|---|---|---|---|---|---|---|
| | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* |
| MAANG A-10 | 4.394 | 0.274 | 4.668 | 0 | 2.976 | 0 |
| MAARNG Helicopters | 2.397 | 0.409 | 2.529 | 0 | 0.756 | 0 |
| Other Military | 0.526 | 0 | 0.526 | 0 | 7.558 | 0 |
| General Aviation | 33.479 | 0 | 33.479 | 0 | 77.090 | 0 |
| **Total** | **40.796** | **0.683** | **41.202** | **0** | **88.380** | **0** |

Notes: 1. Daily operations are based on averages of annual operations; therefore, numbers are not rounded.
2. Since closed patterns consist of a landing and a takeoff (two aviation operations), the 88.380 aviation operations within closed patterns equate to 44.190 closed patterns.
MAARNG = Massachusetts Army National Guard
Source: Air National Guard (ANG) 2006.

These levels and types of activities are then combined with information on climatology, maintenance activities, and aircraft flight parameters, and processed through the USAF's noise computer models to calculate $L_{dn}$. Once noise levels are calculated, they are plotted on a background map in 5-dB increments from 65 dBA to 85 dBA, as applicable. Noise contours associated with current activities at Westfield-Barnes Airport are shown in Figure 3.1-1. The land area off the airport (in acres) encompassed by each contour under current conditions is shown in Table 3.1-5. There are currently 352 acres of land located under the 65 dB and greater noise contours. Nearly all of this acreage is located on airport property. Because none of the land is considered to be residential, it is assumed that there are currently no residences and therefore no persons exposed to these noise levels (refer to Sections 3.2.2.1.2 and 3.3.2.2).

**Table 3.1-5. Land Area Exposed to Indicated Sound Levels under Current Conditions**

| *Sound Level (In $L_{dn}$)* | *Acres of Land[1]* |
|---|---|
| 65 – 70 | 275 |
| 70 – 75 | 75 |
| 75 – 80 | 2 |
| 80 – 85 | 0 |
| > 85 | 0 |
| Total | 352 |

Note: 1. Land areas exposed to indicated sound levels.
Source: ANG 2006.

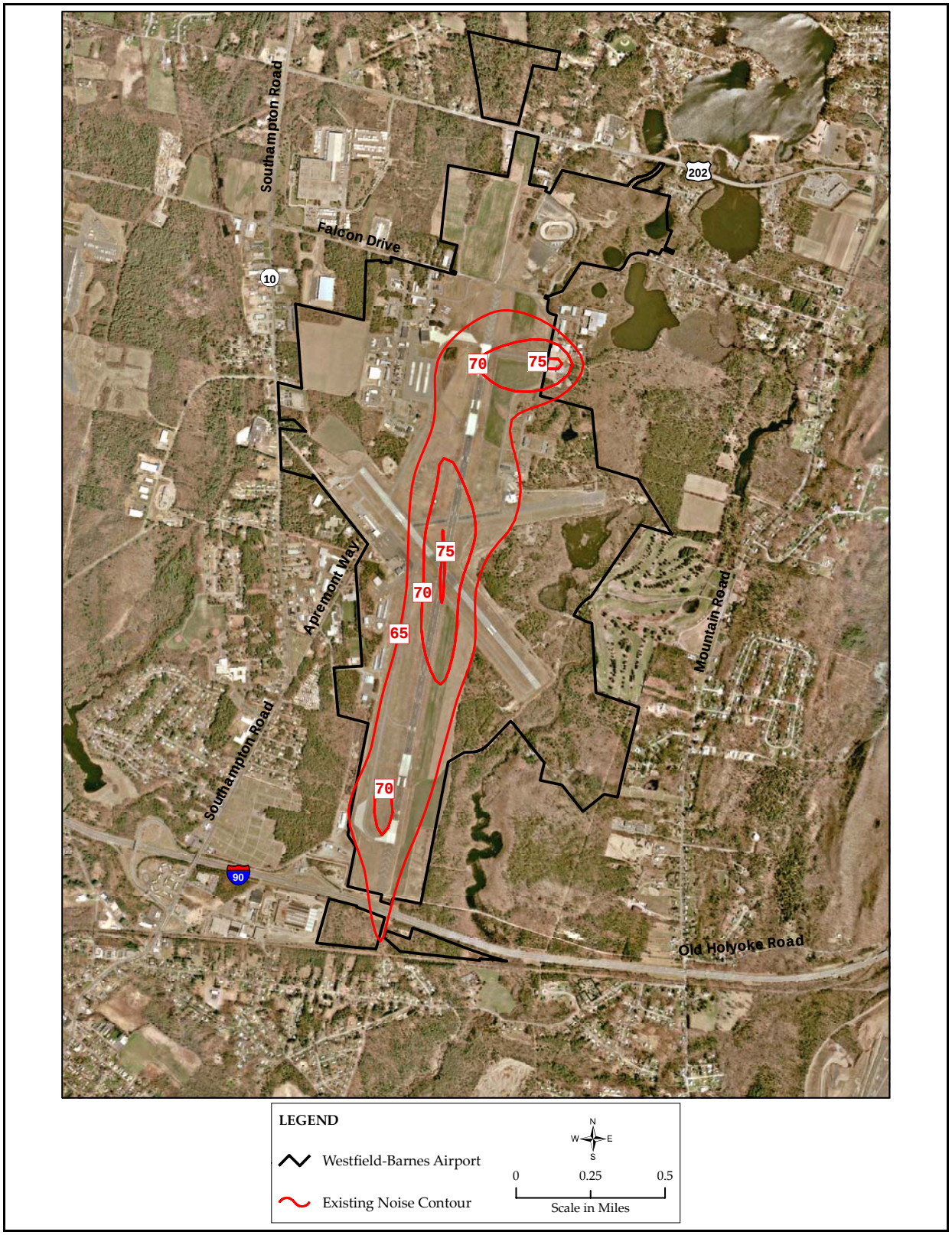



**Figure 3.1-1. Existing Noise Contours at Westfield-Barnes Airport**

In order to further assess noise exposure from aviation activity, several locations around the airport were selected for specific analysis. These locations included a sampling of points in the ROI where land uses could be considered sensitive to elevated noise levels. Noise exposure at these points is shown in Table 3.1-6, and is compared with the noise contours in Figure 3.1-2. These noise levels are all generally considered to be compatible with the existing land uses.

**Table 3.1-6. Specific Point Noise Exposure Under Current Conditions**

| ***Point ID*** | ***Description*** | ***Exposure (in $L_{dn}$)*** |
|---|---|---|
| **1** | Russian Evan Baptist Church | 50.0 |
| **2** | Hampton Ponds State Park | 42.8 |
| **3** | East Mountain Country Club | 42.9 |
| **4** | St. Mary's School | 42.9 |
| **5** | Moseley School | 46.7 |
| **6** | Powder Mill Village Apartment Complex | 51.5 |
| **7** | Northside Middle School | 48.4 |
| **8** | Arbor Mobile Home Park | 52.8 |

Source: ANG 2006.

#### 3.1.2.2 Aircraft Activity in the Military Training Airspace

A-10 aircraft assigned to the 104 FW are currently operated in regional military training airspace. Given the relatively low number of daily operations (a maximum of approximately four in the Yankee Military Operations Areas [MOAs]), there are relatively low noise levels associated with 104 FW training in the MOAs and along the Military Training Routes (MTRs). Noise associated with this military training airspace has been environmentally assessed (Air National Guard Readiness Center [ANGRC] 1992), and has been found to be compatible with land uses associated with the training airspace. The Restricted Areas support air-to-ground gunnery ranges, and such land uses are fully compatible with these activities. The Warning Areas are located over the Atlantic Ocean. These areas are currently used by both the 104 FW (Westfield-Barnes Airport), and the 102nd Fighter Wing (102 FW) (Otis Air National Guard Base [ANGB]), and noise is not an issue.

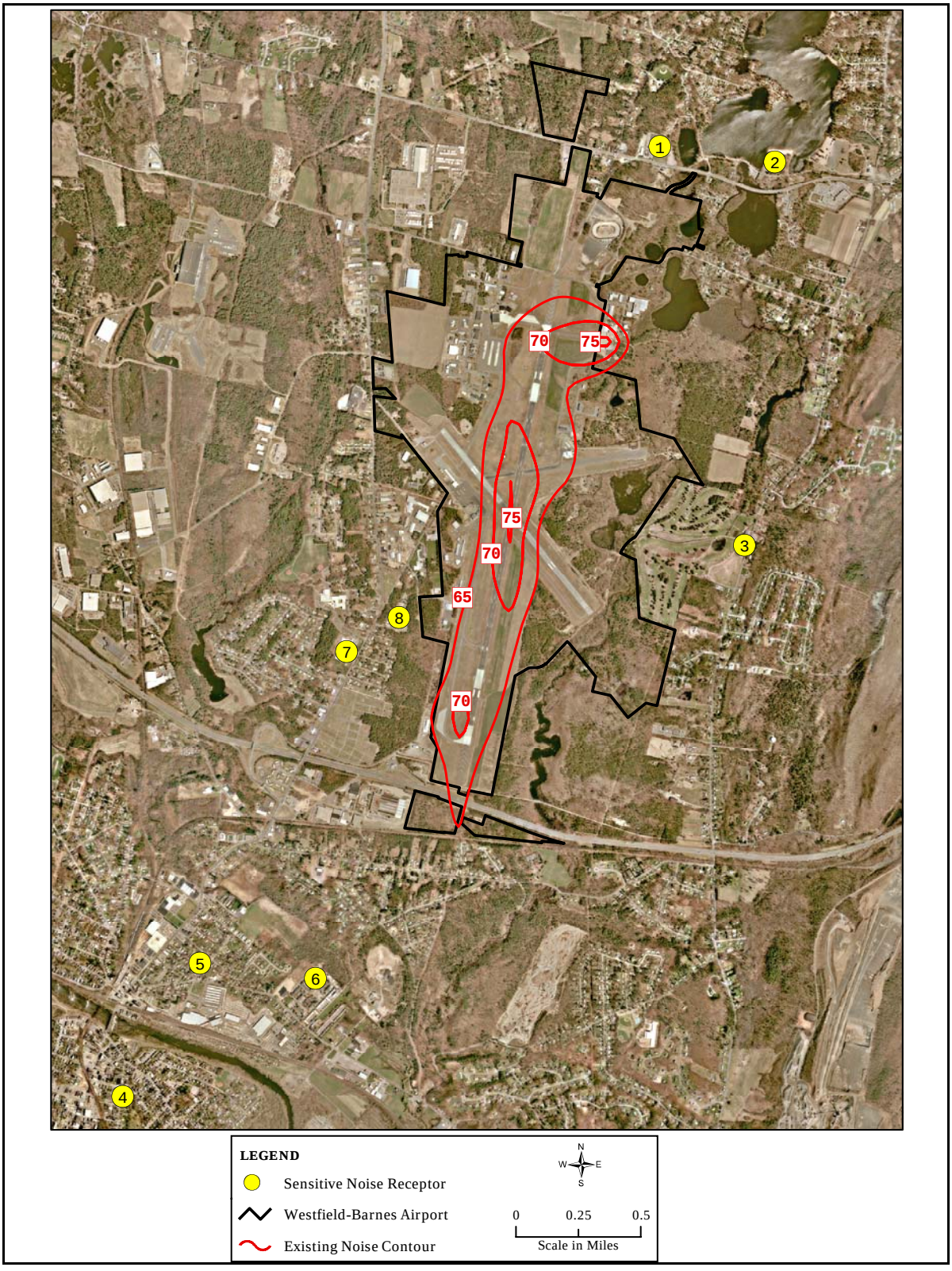



**Figure 3.1-2. Noise Sensitive Receptors in Relationship to Existing Noise Contours at Westfield-Barnes Airport**

#### 3.1.2.3 Other Ground-Based Activity

Some additional noise results from day-to-day activities associated with operations, maintenance, and the industrial functions associated with the operation of Westfield-Barnes Airport, and other commercial activities around the airport. These noise sources include the operation of ground-support equipment, and other transportation noise from vehicular traffic. However, this noise is generally localized in industrial areas on or near the airfield, or on established lines of communication supporting traffic to-and-from the airfield. Noise resulting from aircraft operations remains the dominant noise source in the airfield region.

## 3.2 LAND USE AND VISUAL RESOURCES

### 3.2.1 DEFINITION OF THE RESOURCE

The attributes of land use considered in this analysis include general land use patterns, land ownership, land management plans, and special use areas. General land use patterns characterize the types of uses within a particular area including agricultural, residential, military, and recreational. Land ownership is a categorization of land according to type of owner. The major land ownership categories include private, federal, and state. Land management plans include those documents prepared by jurisdictions and agencies to establish appropriate goals for current and future use and development. These are usually implemented through agency directives and manuals, or local zoning codes and other ordinances. As part of this process, sensitive land use areas are often identified by agencies as being worthy of more rigorous management.

Visual resources, defined as the natural and manufactured features that constitute the aesthetic qualities of an area, are also considered in this section. These features form the overall impression that an observer receives of an area or its landscape character. Landforms, water surfaces, vegetation, and manufactured features are considered characteristic of an area if they are inherent to the structure and function of the landscape.

The ROI for land use and visual resources includes the properties managed by the 104 FW on Westfield-Barnes Airport, adjacent properties, and the surrounding areas underlying airfield arrival and departure tracks.

### 3.2.2 EXISTING CONDITIONS

#### 3.2.2.1 Land Use

##### *3.2.2.1.1 Westfield-Barnes Airport*

Westfield-Barnes Airport is located in southwest Massachusetts, five miles north of the city center of Westfield in Hampden County. The airport property, owned by the City of Westfield, encompasses approximately 1,240 acres. The airport is operated by the Westfield Airport Commission, a three member panel appointed by the Mayor of Westfield (Westfield-Barnes Airport 2004). The airport is zoned as an Airport District to provide for development of the airport to serve the community. This classification encourages uses on the airport that are compatible and harmonious with the surrounding area (City of Westfield 1993a).

Regional access to the airport and the 104 FW installation is provided by Interstate 91 (I-91), which flows north-south and is located approximately five miles to the east of the Westfield-Barnes Airport, and Interstate 90 (I-90), the Massachusetts Turnpike, which is the primary east-west highway from Boston to New York State and is located immediately south of the airport's southern boundary. Local access is provided by Massachusetts Routes 10 and 202 (Southampton Road), located immediately west of the airport, and direct access to the 104 FW main cantonment area is provided via Falcon Drive.

Westfield-Barnes Airport is classified by the Massachusetts Airport's System Plan as a General Aviation (GA) airport. In general, a GA airport is an airport that serves corporate, business, and recreational aircraft users. GA airports typically do not provide commercial passenger service, but often do include air charter activity (Westfield-Barnes Airport 2004). The airport's Air Traffic Control Tower is an FAA facility that is operated by a private contractor and operates daily from 7:00 a.m. to 10:00 p.m. year round. The airport features two runways, with the primary runway being Runway 02/20, and the crosswind runway being Runway 15/33 (Westfield-Barnes Airport 2004).

The 104 FW installation comprises two geographically separate lease holdings contained entirely within the boundaries of Westfield-Barnes Airport. The two parcels comprise approximately 184 acres of land leased from the City of Westfield. The main cantonment area occupies the larger parcel on the northwest portion of the airport. A smaller parcel on the northeast side of the airfield is used for munitions storage. The 104 FW shares use of the runways with the airport.

The unit currently maintains over 50 permanent facilities at the installation, some of which were constructed during the 1950s and 1960s. These facilities support the functions of the unit, which accomplishes the wing's operational flying mission and provide logistical and administrative

support, maintenance, supply, transportation, contracting, communications, civil engineering, personnel services, security, and medical functions.

The definitive use of the leased land is to support the military mission of the 104 FW. Land use and activity on the installation can be described by several categories, including: restricted safety or environmental zones (e.g., aircraft apron clearance zones, explosives and ammunition storage areas); airfield pavement (e.g., taxiways and apron); aircraft maintenance (e.g., hangars and other aircraft maintenance buildings); aircraft operations (e.g., fire station); industrial (e.g., utilities, warehousing and storage, vehicle maintenance shops); command and support (e.g., wing operations/administration, training, dining); special uses (e.g., hazardous waste storage); and open space (e.g., outdoor recreation and undeveloped areas). The arrangement of uses on the parcels reflects incremental development over time and functional relationships between activities and infrastructure. The current layout of facilities for the 104 FW (shown in Figure 2.1-1) is compatible both with other airport functions and the surrounding area.

The Massachusetts Army National Guard (MAARNG) Army Aviation Support Facility (AASF) occupies 31 acres of land leased from the City of Westfield located in the northwest portion of Westfield-Barnes Airport, immediately west of the 104 FW main cantonment area. The primary mission of the AASF is operation and maintenance of UH-60 Blackhawk and OH-58 Jet Ranger helicopters. The primary land use features of the AASF include command, administrative, maintenance, and industrial buildings; aircraft parking apron; roadways and parking areas; and undeveloped areas. Facilities associated with the AASF at Westfield-Barnes Airport were constructed in 2001. Prior to construction of the AASF, lands associated with the AASF were generally undeveloped consisting of approximately 26 acres of mixed upland forest and approximately five acres that was used for agricultural purposes (MAARNG 2000).

#### *3.2.2.1.2 Land Use Surrounding the Airport*

The land surrounding the airport is nearly all privately owned and within the City of Westfield. According to land use information provided by the City of Westfield, predominant existing land uses surrounding the airport include: a mixture of crop land/pasture, forest, low density residential to the north; low and high-density residential developments to the northeast (focused around recreational ponds); forest, wetlands, and recreation to the east; commercial, industrial, residential, transportation, and forest to the south; and commercial, industrial, residential, and forest to the west (Figure 3.2-1) (City of Westfield nda). The nearby area includes a cemetery (to the southwest), the Arbor Mobile Home Park with about 50 units and five schools (see Figure 3.2-2) within 1.5 miles, and East Mountain Country Club to the east. Single and multi-unit residences and four schools are located between I-90 and Westfield River.

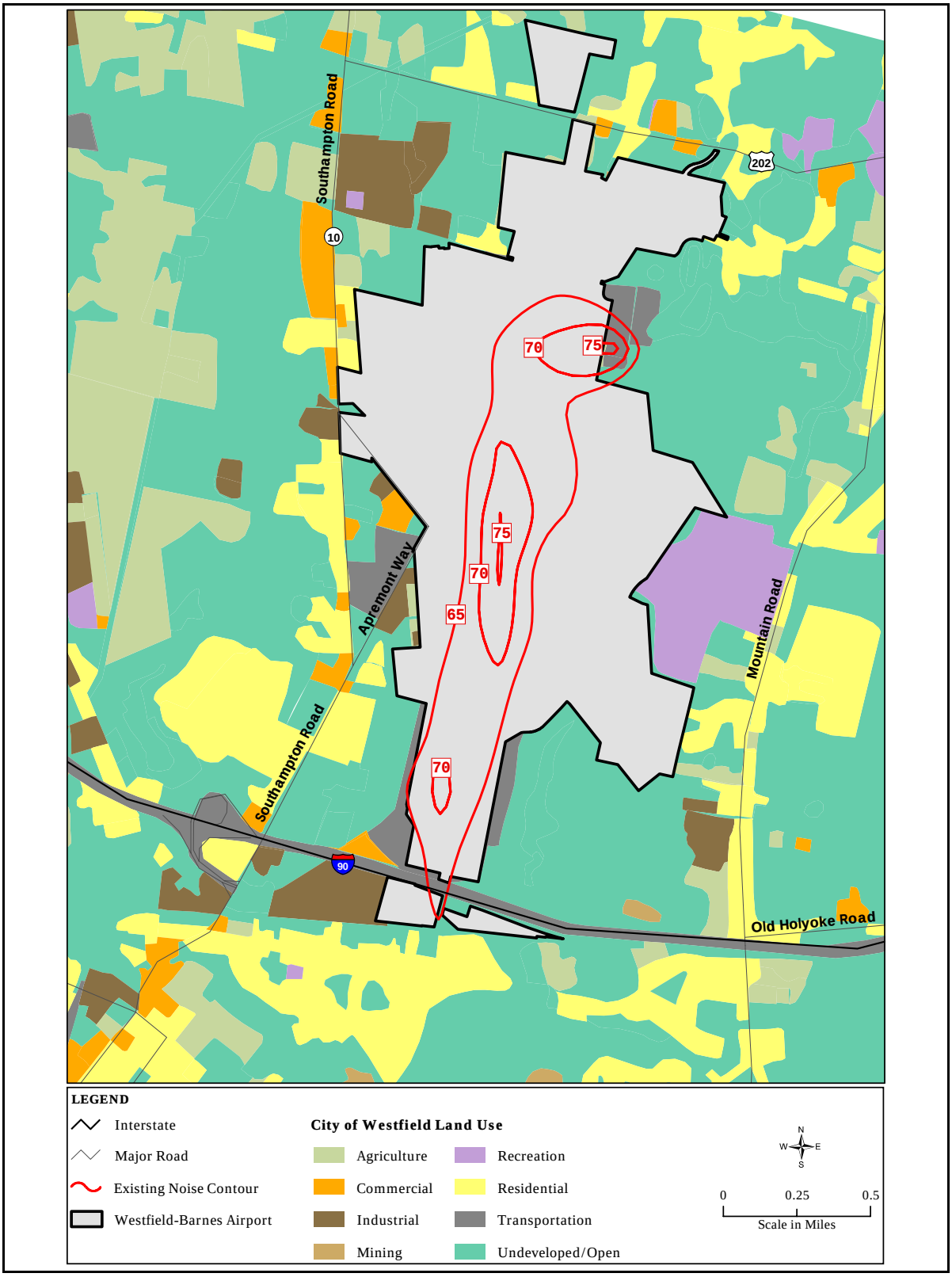



**Figure 3.2-1. Land Uses in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport**

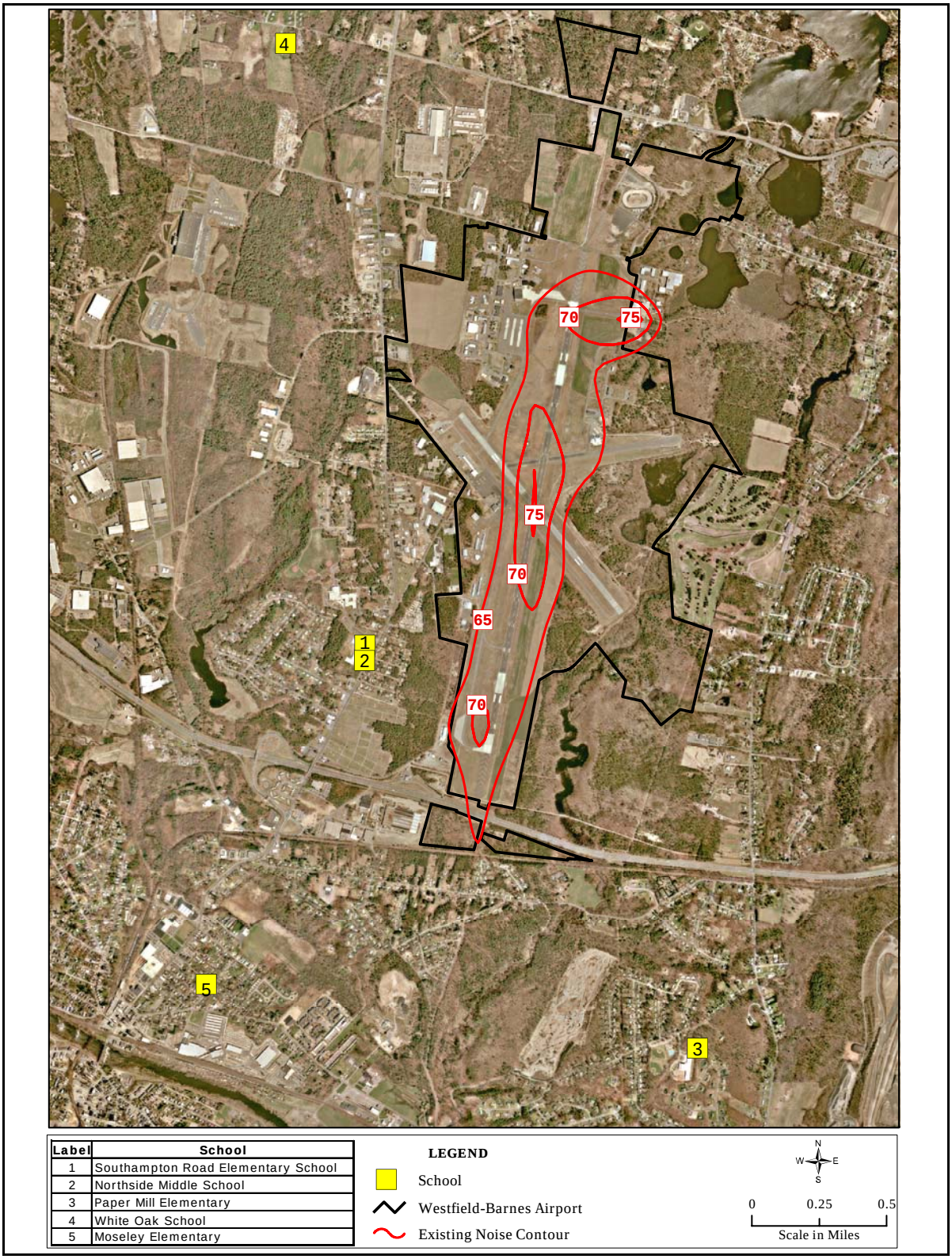



**Figure 3.2-2. Schools in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport**

The City prepared a Master Plan in the 1960s; however, because this plan is outdated it no longer provides land use planning direction for the City (personal communication, Smith 2006). Instead, focused area plans or infrastructure plans address specific areas of concern. The City has recently initiated a visioning process to start managing and planning its future development. Meanwhile, the City's zoning map and ordinances are the primary land use controlling mechanisms (Figure 3.2-3). While much of the land around the airport is currently undeveloped forest, the zoning classifications indicate what is permitted to be developed. The area east of the airport is zoned primarily for rural (low density) residential. Land surrounding the southern half of the airfield is zoned industrial, with commercial and residential along the primary roadways. The area northwest of the airport is zoned industrial and business with rural and low density residential to the north, and interspersed pockets zoned for business districts.

Most of the area around the airport overlies the primary regional water aquifer (Barnes Aquifer). To preserve water quality and supplies, a Water Resource Protection District was created, within which certain uses are restricted and property developers and owners must comply with state and federal standards to ensure that no hazardous or polluting activities could jeopardize water resources (personal communication, Smith 2006).

The City of Westfield has a Noise Ordinance (Code of Ordinances, Chapter 10, Section 10-30 through 10-36) that defines maximum permitted sound levels (at property boundaries) for several zoning categories. For the Airport District, the ordinance sets a limit of 80 dBA between the hours of 7:00 a.m. and 10:00 p.m., and a nighttime limit of 75 dBA between 10:00 p.m. and 7:00 a.m.. However, operations of aircraft and public safety and national defense activities conducted by authorized personnel are exempt from the 80 dBA limit.

For construction activities, the maximum sound level from any related activity is 85 dBA measured 50 feet from the source. In addition, the ordinance restricts hours when noise-generating activities may take place from 7:00 a.m. to 9:00 p.m., Monday through Saturday, and from noon to 9:00 p.m. on Sundays. It also prohibits such activities on selected legal holidays (City of Westfield 1993b).

#### 3.2.2.2 Visual

Westfield-Barnes Airport is located within the Connecticut Valley physiographic region. The Westfield area is in a narrow portion of the Connecticut Valley, and is bounded by East Mountain to the east and the Berkshire Mountains to the west. Westfield-Barnes Airport is located within a relatively flat area of the valley floor. Buildings within the 104 FW installation have been constructed over a period of approximately 56 years, with the oldest having been constructed in 1950. Vegetative cover within the installation is generally limited to ornamental grasses and low-growing shrubs, although areas surrounding the 104 FW installation include stands of naturally occurring evergreen and deciduous trees.

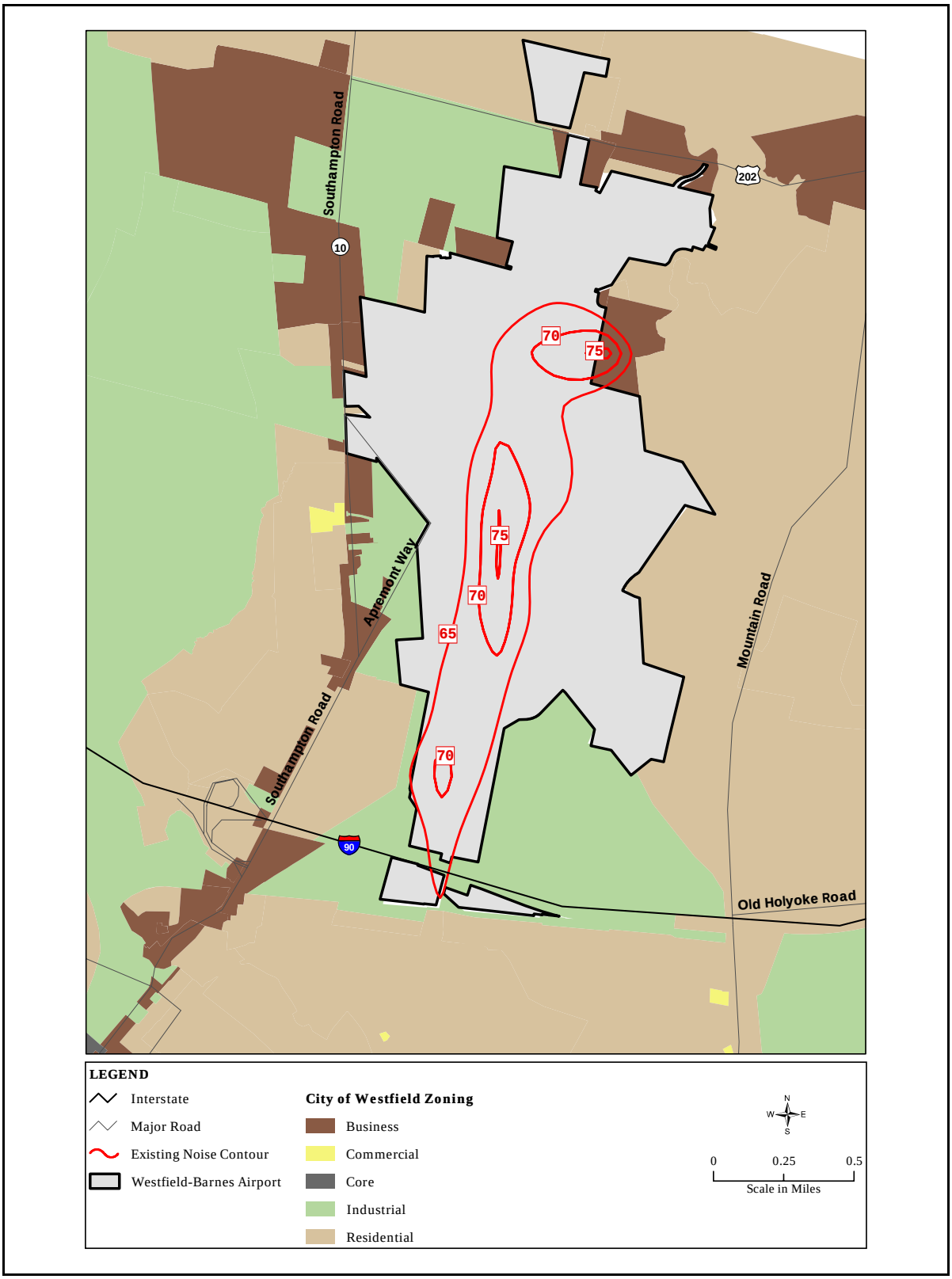



**Figure 3.2-3. Zoning in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport**

To the east and south of the 104 FW main cantonment area, the viewshed encompasses the air-side and land-side facilities of the airport (i.e., runways, the control tower, and other support facilities). There are no substantial natural landforms or man-made structures dominating the viewshed. Offsite views of the 104 FW main cantonment area are limited to a few scattered residences and motorists along Falcon Drive to the north. The 104 FW munitions area is generally not visible from outside the airport property due to intervening vegetation and lack of accessible viewing locations.

## 3.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

### 3.3.1 DEFINITION OF THE RESOURCE

Socioeconomics is defined as the basic attributes and resources associated with the human environment, particularly population and economic activity. Economic activity encompasses employment, personal income, and industrial growth. Impacts on these fundamental socioeconomic components can influence other issues such as housing availability, utility capabilities, and fire and police protection.

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, was issued in 1993 to focus attention of federal agencies on human health and environmental conditions in minority and low-income communities, and to ensure that disproportionately high and adverse human health or environmental effects on these communities are identified and addressed. To provide a thorough environmental justice evaluation, particular attention is given to the distribution of race and poverty status in areas potentially affected by implementation of proposed actions.

Because children may suffer disproportionately from environmental health risks and safety risks, EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, was introduced in 1997 to prioritize the identification and assessment of environmental health risks and safety risks that may affect children, and to ensure that federal agency policy, programs, activities and standards address environmental risks and safety risks to children. This section identifies the distribution of families with children and locations where the number of children in the affected area may be relatively high (e.g., schools). The ROI for this resource is Hampden County.

### 3.3.2 EXISTING CONDITIONS

#### 3.3.2.1 Population and Employment

Hampden County has a population of 456,228, according to the 2000 Census. The 2000 Census indicates that there are 175,288 households in Hampden County, with an average household size of 2.52 persons. There are 185,876 housing units in Hampden County with a vacancy rate of 5.7 percent. The City of Westfield, in which Westfield-Barnes Airport is located, is the fourth largest city in Hampden County, with a 2000 population of 40,072. Census Tract 8125, which is located within Hampden County and the city of Westfield and includes Westfield-Barnes Airport and surrounding areas, had a population of 7,372 in 2000 (U.S. Census Bureau 2002).

The civilian labor force totaled 222,884 persons in Hampden County in 2005, with a total employment figure of 210,042 workers and an unemployment rate of 5.8 percent. In Westfield, the civilian labor force totaled 21,170 persons in 2005, of which 20,201 were employed, for an unemployment rate of 4.6 percent. In comparison, the State of Massachusetts had 4.8 percent unemployment in 2005 (Bureau of Labor Statistics 2006).

In 2004, Hampden County had a per capita personal income (PCPI) of $31,070, compared to a State average of $42,176 and a national average of $33,050 (Bureau of Economic Analysis 2006). PCPI data are only available for the Census tract level (i.e., finer resolution than county) for the 2000 Census. According to the 2000 Census, Hampden County had a PCPI of $19,541 in 1999, while Census Tract 8125 had a PCPI of $21,513. Both figures are lower than the 1999 State and national averages of $25,952 and $30,906, respectively (U.S. Census Bureau 2002).

In terms of number of employees, the health care and social assistance sector was the largest sector in Hampden County in 2004, accounting for 15.6 percent of the workforce. Government, including military employment, accounted for 14.1 percent of employment; retail trade accounted for 12.1 percent of employment; and the manufacturing industry accounted for 10.2 percent of total county employment in 2004 (Bureau of Economic Analysis 2006). All other sectors each accounted for less than 7 percent of total employment in the county.

Military employment represented 0.6 percent of Hampden County employment in 2004, accounting for 1,493 workers (Bureau of Economic Analysis 2006). Presently, authorized manpower at the 104 FW installation is 958.

#### 3.3.2.2 Environmental Justice

Disadvantaged groups within Hampden County, the City of Westfield, and Census Tract 8125, including low-income and minority communities, are specifically considered in order to assess the potential for disproportionate impacts. For the purposes of this analysis, and in accordance

with EO 12898 and related environmental justice guidance, disadvantaged groups are defined as follows:

- *Minority Population*: Persons of Hispanic or Latino origin of any race, and persons who are Black or African-American, American Indian, Eskimo, Aleut, Asian, Pacific Islander, or persons of two or more races.

- *Low-Income Population*: Persons living below the poverty level, according to income data collected in the 2000 U.S. Census.

In addition, to determine the potential for disproportionate health and safety risks to children, the percentage of people under the age of 18 years within Hampden County, the city of Westfield, and Census Tract 8125, as well as locations where concentrations of children may occur (e.g., schools) was determined.

Based on 2000 Census data, the incidence of persons and families in Hampden County with incomes below the poverty level in 1999 was higher than national and state levels (U.S. Census Bureau 2002). As of 1999, 14.7 percent of persons in Hampden County were living below the poverty level, compared to 9.3 percent of persons in the State and 12.4 percent of persons in the nation. On a more local level, the incidence of persons and families in Westfield and within Census Tract 8125 with incomes below the poverty level in 1999 was 10.3 percent and 12.4 percent, respectively; these figures are higher than State averages but comparable to or lower than national levels (U.S. Census Bureau 2002). Census Tract 8125 contains five Census block groups, in which the range of persons in poverty ranges from 1.8 percent (Block Group 9, southeast of Westfield-Barnes Airport and generally bounded by I-90 to the north, Sandy Mill Brook to the west, Route 20 to the south, and the Hampden County boundary to the east) to 29.5 percent (Block Group 3, south of Westfield-Barnes Airport and generally bounded by Holyoke Road and Springdale Road to the north and east, the railroad tracks to the south, and Route 10/202 to the west).

Minority persons represent 25.6 percent of the Hampden County population. Hispanic or Latino persons account for most of the minority population in Hampden County, representing 15.2 percent of the County population. By comparison, minority persons represent 18.1 percent of the State population, with Hispanic or Latino persons accounting for 6.8 percent of the State population. Minority persons comprise 7.9 percent and 8.2 percent of the populations of Westfield and Census Tract 8125, respectively. Thus, minorities represent a greater percentage of Hampden County as compared to the State, although on a more local level the minority population is lower in comparison to Hampden County or State levels.

The multi-family apartment complex to the south of Westfield-Barnes Airport off Sunflower Lane (east of Route 10/202 and north of Union Street) may represent a low-income population. This apartment complex is in Census Block Group 3 in Census Tract 8125, which, as discussed above, has the highest poverty rate among all the block groups in the Census tract. Based on available information, the residents of the approximately 50 units in the Arbor Mobile Home Park off Klondike Avenue, on the west side of Westfield-Barnes Airport, do not constitute a low-income population. Based on the 2000 Census, the average income in 1999 for residents of the 80 mobile homes within Census Tract 8125 was $24,323, whereas the poverty threshold for a family of four was $17,029 (U.S. Census Bureau 2002). However, the Arbor Mobile Home Park is a sensitive receptor for the purpose of analyzing noise impacts. There do not appear to be other known or potential localized concentrations of minority or low-income populations. Neither the Arbor Mobile Home Park nor the multi-family apartment complex on Sunflower Lane is currently within the 65 dB noise contour.

The youth population, which includes children under the age of 18, accounts for 26.1 percent of the Hampden County population, 23.8 percent of the Westfield population, and 29.0 percent of the Census Tract 8125 population, compared to 25.4 percent at the State level.

Table 3.3-1 provides a summary of information on minority and low-income populations and children under 18 years of age.

**Table 3.3-1. Community Demographic Conditions**

| *Area* | *Percent Minority* | *Percent Low-Income* | *Percent Under 18* |
|---|---|---|---|
| Massachusetts | 18.1 | 9.3 | 25.4 |
| Hampden County | 25.6 | 14.7 | 26.1 |
| Westfield | 7.9 | 10.3 | 23.8 |
| Census Tract 8125 | 8.2 | 12.4 | 29.0 |

Source: U.S. Census Bureau 2002.

Several schools are located in the vicinity of Westfield-Barnes Airport (refer to Figure 3.2-2). Table 3.3-2 shows the schools located within two miles of Westfield-Barnes Airport. Most of these schools are located to the southwest, with the closest being Southampton Road Elementary School located 0.28 miles west of Westfield-Barnes Airport.

**Table 3.3-2. Schools Within Two Miles of Westfield-Barnes Airport**

| *School Name* | *Distance from Westfield-Barnes Airport Boundary* |
|---|---|
| Southampton Road Elementary School | 0.28 |
| Northside Middle School | 0.29 |
| Paper Mill Elementary School | 0.80 |
| White Oak School | 0.92 |
| Moseley Elementary School | 0.95 |
| Saint Mary's School | 1.53 |
| Saint Mary High School | 1.57 |
| Westfield High School | 1.59 |
| Fort Meadow Elementary School | 1.62 |
| Franklin Avenue Elementary School | 1.90 |
| Massachusetts State Normal Training School | 1.90 |

Source: U.S. Geological Survey (USGS) 1981.

The 104 FW installation has no on-installation housing and no facilities for children, and there are no known facilities on the installation where children may be encountered on a regular basis.

## 3.4 AIR QUALITY

### 3.4.1 DEFINITION OF THE RESOURCE

This section discusses air quality considerations and conditions in the area around the 104 FW installation in Hampden County, Massachusetts. It addresses air quality standards and describes current air quality conditions in the region.

***Federal Air Quality Standards.*** Air quality is determined by the type and concentration of pollutants in the atmosphere, the size and topography of the air basin, and local and regional meteorological influences. The significance of a pollutant concentration in a region or geographical area is determined by comparing it to federal and/or state ambient air quality standards. Under the authority of the Clean Air Act (CAA), the USEPA has established nationwide air quality standards to protect public health and welfare, with an adequate margin of safety. These federal standards, known as the National Ambient Air Quality Standards (NAAQS), represent the maximum allowable atmospheric concentrations and were developed for six "criteria" pollutants: ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur

dioxide ($SO_2$), both coarse and fine inhalable particulate matter (less than or equal to 10 micrometers in diameter [$PM_{10}$], and particulate matter less than or equal to 2.5 micrometers in diameter [$PM_{2.5}$]), and lead (Pb). The NAAQS are defined in terms of concentration (e.g., parts per million [ppm] or micrograms per cubic meter [$\mu g/m^3$]) determined over various periods of time (averaging periods). Short-term standards (1-hour, 8-hour, or 24-hour periods) were established for pollutants with acute health effects and may not be exceeded more than once a year. Long-term standards (annual periods) were established for pollutants with chronic health effects and may never be exceeded.

Based on measured ambient criteria pollutant data, the USEPA designates areas of the U.S. as having air quality equal to or better than the NAAQS (attainment) or worse than the NAAQS (nonattainment). Upon achieving attainment, areas are considered to be in maintenance status for a period of 10 or more years. Areas are designated as unclassifiable for a pollutant when there is insufficient ambient air quality data for the USEPA to form a basis of attainment status. For the purpose of applying air quality regulations, unclassifiable areas are treated similarly to areas that are in attainment of the NAAQS.

***State Air Quality Standards.*** Under the CAA, state and local agencies may establish ambient air quality standards and regulations of their own, provided that these are at least as stringent as the federal requirements. For all criteria pollutants, the Commonwealth of Massachusetts has adopted the NAAQS, with four differences: (1) the particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$) standard does not have an equivalent in the Massachusetts regulations; (2) the 8-hour $O_3$ standard does not have an equivalent, while an equivalent of the revoked federal 1-hour $O_3$ standard remains in the Massachusetts regulations; (3) the $NO_2$ standard is rounded to 0.05 ppm in the Massachusetts standard and 0.053 ppm in the NAAQS; and (4) while revoked on a federal level, the $PM_{10}$ annual standard of 50 $\mu g/m^3$ remains in the Massachusetts regulations. Table 3.4-1 summarizes the federal and Commonwealth of Massachusetts standards associated with criteria pollutants.

**Table 3.4-1. Federal and Commonwealth Ambient Air Quality Standards**

| *Air Pollutant* | *Averaging Time* | NATIONAL AND MASSACHUSETTS AAQS | |
|---|---|---|---|
| | | ***Primary*** | ***Secondary*** |
| Carbon Monoxide (CO) | 8-hour<br>1-hour | 9 ppm<br>35 ppm | ---<br>--- |
| Nitrogen Dioxide ($NO_2$)[1] | Annual<br>24-hour | 0.053 ppm<br>--- | 0.053 ppm<br>--- |
| Sulfur Dioxide ($SO_2$) | Annual<br>24-hour<br>3-hour | 0.030 ppm<br>0.14 ppm<br>--- | ---<br>---<br>0.50 ppm |
| Particulate Matter ($PM_{10}$) [2] | 24-hr | 150 $\mu g/m^3$ | 150 $\mu g/m^3$ |
| Particulate Matter ($PM_{2.5}$)[3] | Annual<br>24-hour | 15 $\mu g/m^3$<br>35 $\mu g/m^3$ | 15 $\mu g/m^3$<br>35 $\mu g/m^3$ |
| Ozone ($O_3$)[4] | 1-hour<br>8-hour | 0.12 ppm<br>0.08 ppm | 0.12 ppm<br>0.08 ppm |
| Lead (Pb) and Lead Compounds | Calendar Quarter | 1.5 $\mu g/m^3$ | 1.5 $\mu g/m^3$ |

Notes:
1. The Massachusetts standard for $NO_2$ is 0.05 ppm, rather than 0.053 ppm, as in the NAAQS.
2. In 2006, the federal annual standard of 50 $\mu g/m^3$ for $PM_{10}$ was revoked, but remains in Massachusetts regulations.
3. In 2006, the $PM_{2.5}$ standard for the 24-hour averaging time was changed from 65 $\mu g/m^3$ to 35 $\mu g/m^3$. The Commonwealth of Massachusetts has not adopted the $PM_{2.5}$ standard in its regulations.
4. The 8-hour $O_3$ standard replaced the 1-hour standard when the USEPA revoked the 1-hour $O_3$ standard in June 2005. The 8-hour $O_3$ standard is absent from the Massachusetts regulations, while the 1-hour $O_3$ standard remains in effect as a standard of the Commonwealth.

Sources: 40 CFR 50; 310 Code of Massachusetts Regulations 6.00.

***State Implementation Plan.*** A State Implementation Plan (SIP) is a detailed description of the programs a state uses to carry out its responsibilities under the CAA. State implementation plans are collections of the regulations used by a state to reduce air pollution. The CAA requires that USEPA approve each SIP. For nonattainment regions, all states are required to develop an SIP that is designed to eliminate or reduce the severity and number of NAAQS violations, with an underlying goal of bringing state air quality conditions into (and maintaining) compliance with the NAAQS by specific deadlines. The SIP is the primary means for the implementation, maintenance, and enforcement of the measures needed to attain and maintain the NAAQS in each state.

***Prevention of Significant Deterioration.*** In attainment and unclassifiable areas the federal New Source Review (NSR) program is implemented under the Prevention of Significant Deterioration

(PSD) preconstruction program requirements of Section 165 of the CAA and the implementing regulations in 40 CFR § 52.21. Section 162 of the CAA further established the goal of PSD of air quality in all international parks; national parks which exceeded 6,000 acres; and national wilderness areas and memorial parks that exceeded 5,000 acres if these areas were in existence on August 7, 1977. These areas were defined as mandatory Class I areas, while all other attainment or unclassifiable areas were defined as Class II areas. Under CAA Section 164, states or tribal nations, in addition to the federal government, have the authority to re-designate certain areas as (non-mandatory) PSD Class I areas (e.g., a national park or national wilderness area established after August 7, 1977, which exceeds 10,000 acres). PSD Class I areas are areas where any appreciable deterioration of air quality is considered significant. Class II areas are those where moderate, well-controlled growth could be permitted. Class III areas are those designated by the governor of a state as requiring less protection than Class II areas. No Class III areas have yet been so designated. The PSD requirements affect construction of new major stationary sources in the PSD Class I, II, and III areas and serve as a pre-construction permitting system.

***Visibility.*** CAA Section 169A established the additional goal of prevention of further visibility impairment in PSD Class I areas. Visibility impairment is defined as a reduction in the visual range and atmospheric discoloration. Determination of the significance of an activity on visibility in a Class I area is typically associated with evaluation of stationary source contributions. The USEPA is implementing a Regional Haze rule for Class I areas that will address contributions from mobile sources and pollution transported from other states or regions. Emission levels are used to qualitatively assess potential impairment to visibility in Class I areas. Decreased visibility may potentially result from elevated concentrations of $NO_2$, $PM_{10}$, and $SO_2$ in the lower atmosphere.

**General Conformity.** CAA Section 176(c), General Conformity, requires federal agencies to demonstrate that their proposed activities would conform to the applicable SIP for attainment of the NAAQS. Federal activities must not:

a) Cause or contribute to any new violation;

b) Increase the frequency or severity of any existing violation; or

c) Delay timely attainment of any standard interim emission reductions or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of the NAAQS.

General conformity applies only to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment or maintenance area exceed or equal annual *de*

*minimis* thresholds identified in the rule, a formal conformity determination is required of that action unless the action is modified to achieve emissions below *de minimis* thresholds. The thresholds are more restrictive as the severity of the nonattainment status of the region increases. Since the project region is designated as a moderate nonattainment area for the national 8-hour $O_3$ standard and is within the Northeast Ozone Transport Region, the Proposed Action would conform to the applicable SIP if its annual emissions remain below 100 tons of $NO_x$ and 50 tons of VOCs. Due to the 22 December 2006 D.C. Circuit Court of Appeals decision that vacated USEPA's 8-hour $O_3$ Phase I implementation rule, there is some uncertainty regarding the $O_3$ nonattainment classification of the project area. As a result, these conformity *de minimis* thresholds identified for the project area could change in the future. Section 4.4 of this EIS presents the project conformity applicability analysis and Appendix D documents the conformity-related emission calculation estimates.

**Stationary Source Operating Permits.** The Massachusetts Department of Environmental Protection (MassDEP) regulates air management permits for stationary air pollution sources in the Commonwealth of Massachusetts. In addition, Massachusetts is part of the Northeast Ozone Transport Region, created by the CAA Amendments and is subject to more stringent $O_3$ control. Air quality permits must be obtained for new or modified sources of emissions. Title V of the CAA Amendments of 1990 requires states to issue Federal Operating Permits for major stationary sources. A major stationary source in a moderate nonattainment area for the 8-hour $O_3$ standard is a facility (e.g., plant, base, or activity) that has the potential to emit (PTE) of more than 100 tons per year (TPY) of volatile organic compounds (VOCs) or nitrogen oxides ($NO_x$), both of which are atmospheric precursors to the formation of $O_3$; 100 TPY of any attainment air pollutant; 10 TPY of a hazardous air pollutant; or 25 TPY of any combination of hazardous air pollutants (USEPA 2006b). The purpose of the permitting rule is to establish regulatory control over large, industrial activities and to monitor their impact upon air quality.

The Base currently maintains a Restricted Emission Status (RES) approval from the MassDEP (number 1-R-05-045 synthetic minor) for the engine test cell. The RES approval restricts the engine test stand to 284 tests per year, based on a 12-month rolling total. Each test shall be no longer than 4 hours for an overall total of 1,136 hours per year. VOC emissions from the engine test stand shall be restricted to less than 0.5 tons per month and 5.5 TPY, while CO emissions from the engine test stand shall be restricted to less than 1.6 tons per month and 19.5 TPY. There are no facility-wide emission limits associated with the RES approval and the 104 FW installation does not hold any other air permits.

### 3.4.2 EXISTING CONDITIONS

**Climate.** Westfield-Barnes Airport is located in Hampden County in southwestern Massachusetts. The airport lies in the Connecticut River Valley, which is surrounded by areas of

rolling hills. The Taconic Mountains, with a maximum elevation of just over 2,600 feet, lie to the west. To the east, the rolling hills eventually give way to the coastal plain and Atlantic Ocean. The climate of this region is noted for its variability. Temperature ranges can fluctuate greatly on both a daily and seasonal basis while precipitation is fairly evenly distributed with no major seasonal changes. The climate is generally influenced by three different types of air masses: cool/dry continental air, warm/moist air either streaming up from the Gulf of Mexico or from the warm Gulf Stream current that occurs in the immediately offshore regions of the East Coast of North America, or cool/moist air from the North Atlantic. The interaction between and rapid change from one air mass to another often leads to sudden swings in temperature and the extent of cloud cover and precipitation (National Climate Data Center 2005a).

Average temperatures in the southwestern Massachusetts region generally range from the mid to upper 20s (degrees Fahrenheit [ºF]) in the winter months to lower to mid 70s (ºF) in the summer months. Diurnal temperature ranges are generally between 20 and 30 degrees but can be greater, particularly during the summer months and periods of dry conditions. The region generally experiences between 5 and 15 days a year with a maximum temperature over 90ºF, and 5 and 15 days a year with subzero temperatures (National Climate Data Center 2005a).

Average annual precipitation for the City of Westfield is 48.91 inches. There is little variability in month to month averages, with a minimum of 3.06 inches for February and a maximum of 4.55 for August (National Climate Data Center 2005b). It should be noted that while there is not much fluctuation evident in the monthly averages, the observed monthly totals often do vary greatly depending on timing and strength of weather patterns and individual storm systems. However, as the averages reveal, there are no distinct seasonal variations. Snow is not uncommon during the winter months in southwestern Massachusetts. At least 1 inch of snowfall is observed on an average of approximately 20 days per year. Snowfall totals can vary greatly from year to year, and are highly influenced by topography, but the region receives an average of approximately 60 to 70 inches annually (National Climate Data Center 2005a).

The prevailing wind direction for the region is from the west. It becomes more southwesterly during the summer and more northwesterly in the winter. However, local topography can greatly influence prevailing wind speed and direction (National Climate Data Center 2005a).

**Regional Air Quality.** Federal regulations found in 40 CFR 81 delineate certain AQCRs which were originally based upon population and topographic criteria closely approximating each air basin. The potential influence of emissions on regional air quality would typically be confined to the air basin in which the emissions occur. Therefore, the ROI for the Proposed Action is the Hartford-New Haven-Springfield Interstate AQCR (AQCR 42), which includes portions of Connecticut and Massachusetts, including the City of Westfield (40 CFR 81.26; 40 CFR 81).

A review of federally published attainment status for the City of Westfield and Hampden County in 40 CFR 81.322 indicate that this region is designated as a moderate nonattainment area for the Federal 8-hour $O_3$ standard and in attainment (i.e., meeting national standards) for all other criteria pollutants, including CO, $NO_2$, $SO_2$, $PM_{10}$, and Pb. The region is required to attain the 8-hour $O_3$ NAAQS by June 2010. Since the Hampden County $O_3$ nonattainment area encompasses the project site, project emissions are compared to emissions within the County to determine if they are regionally significant.

No mandatory PSD Class I areas are designated for the Commonwealth of Massachusetts. The nearest PSD Class I area is the Lye Brook Wilderness, located in the Green Mountain National Forest of Vermont, approximately 68 miles (110 kilometers) north-northwest of the Westfield-Barnes Airport.

Table 3.4-2 summarizes the 2001 emissions totals for the four-county AQCR 42 that encompasses the project site.

**Table 3.4-2. Annual Emissions for AQCR 42 in Calendar Year 2001**

| *County* | ANNUAL EMISSIONS (TONS) | | | | | |
|---|---|---|---|---|---|---|
| | ***VOC*** | ***CO*** | ***$NO_x$*** | ***$SO_2$*** | ***$PM_{10}$*** | ***$PM_{2.5}$*** |
| Hampden | 17,586 | 125,452 | 19,050 | 16,077 | 12,885 | 3,405 |
| Berkshire | 8,031 | 47,282 | 6,382 | 3,702 | 11,301 | 2,886 |
| Franklin | 5,695 | 28,521 | 3,560 | 1,729 | 8,770 | 1,971 |
| Hampshire | 6,815 | 41,220 | 4,899 | 2,659 | 10,173 | 2,493 |
| **Total** | **38,127** | **242,475** | **33,892** | **24,167** | **43,129** | **10,755** |
| **10% of Hampden County[1]** | **1,759** | **12,545** | **1,905** | **1,608** | **1,289** | **341** |

Notes: (1) Hampden County is the region affected by the Proposed Action for purposes of the project conformity analysis. Ten percent of the Hampden County emissions are the thresholds used to determine if project emissions would be regionally significant.
Source: USEPA 2005c

***Current Air Emissions.*** Air emissions at the 104 FW occur from both stationary and mobile sources. Stationary sources at the installation include heating units, generators, an engine test stand, fuel storage and transfer, paint and chemical usage, degreasers, woodworking activities, welding, fuel cell maintenance, aircraft deicing, and abrasive blasting. The installation is considered to be a minor source under the CAA Amendments because its PTE from stationary sources are below the Title V thresholds for major sources (see Table 3.4-3). Mobile sources at the 104 FW installation include ground-based activities such as on-road and off-road vehicles; aerospace ground equipment; aircraft trim and power checks; and aircraft flying operations, including landings and take-offs and low approaches.

Table 3.4-3 estimates the actual emissions that occurred for sources at the 104 FW in calendar year 2004 (104 FW 2005a). Nitrogen oxides include $NO_2$ and other nitrogen compounds. Because VOCs and $NO_x$ are precursors to the formation of $O_3$ in the atmosphere, control of these pollutants is the primary method of reducing $O_3$ concentrations in the atmosphere. The aircraft flying operation emissions in Table 3.4-3 were calculated using default USAF combat aircraft time-in-mode data and emissions factors (Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis 2003), instead of the time-in-mode estimates from the emissions inventory. Although Pb is also a criteria pollutant, it is often not quantified in EISs because emission sources at ANG installations generally emit minimal amounts of this pollutant. Lead was eliminated in fuels during the 1970s and in residential paint products over a decade ago. Emissions of Pb at the 104 FW installation at Westfield-Barnes Airport in 2004 amounted to 0.9 pounds and paint and solvent usage produced 0.8 pounds.

**Table 3.4-3. Baseline Emissions for the 104th Fighter Wing, Calendar Year 2004**

| *Source Type* | ANNUAL EMISSIONS (TONS) | | | | | |
|---|---|---|---|---|---|---|
| | ***VOC*** | ***CO*** | ***$NO_x$*** | ***$SO_2$*** | ***$PM_{10}$*** | ***$PM_{2.5}$*** |
| Mobile Sources | | | | | | |
| On-Road Vehicles | 0.8 | 6.4 | 1.4 | 0.1 | 0.1 | 0.1 |
| Off-Road Diesel Vehicles | 0.9 | 2.5 | 11.6 | 0.8 | 0.8 | 0.8 |
| AGE | 0.1 | 0.2 | 0.9 | 0.1 | 0.1 | 0.1 |
| Aircraft LTOs | 14.8 | 73.3 | 11.5 | 1.1 | 13.5 | 13.5 |
| Aircraft Low Approaches | 0.3 | 4.4 | 1.2 | 0.1 | 1.8 | 1.8 |
| Aircraft Trim and Power Checks | 0.2 | 0.70 | 0.0 | 0.0 | 0.1 | 0.1 |
| **Subtotal** | **17.0** | **87.4** | **26.6** | **2.1** | **16.4** | **16.4** |
| Stationary Sources | | | | | | |
| Combustion | 0.1 | 0.9 | 1.5 | 0.9 | 0.2 | 0.2 |
| Fuel Storage/Transfer | 0.8 | - | - | - | - | - |
| Operational | 1.8 | - | - | - | 0.1 | 0.1 |
| **Subtotal** | **2.6** | **0.9** | **1.5** | **0.9** | **0.3** | **0.3** |
| **Base Total – Actual Emissions** | **19.6** | **88.3** | **28.1** | **3.0** | **16.7** | **16.7** |
| **Base Stationary Sources – PTE** | **15.4** | **34.1** | **32.7** | **41.9** | **12.2** | **N/A** |

Source: 104 FW 2005.

## 3.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL

### 3.5.1 DEFINITION OF THE RESOURCE

Airspace management and air traffic control are defined as the direction, control, and handling of flight operations in the "navigable airspace" that overlies the geopolitical borders of the U.S. and its territories. "Navigable airspace" is airspace above the minimum altitudes of flight prescribed by regulations under United States Code (USC) Title 49, Subtitle VII, Part A, and includes airspace needed to ensure safety in the takeoff and landing of aircraft, as defined in FAA Order 7400.2E (49 USC). This navigable airspace is a limited natural resource that Congress has charged the FAA with administering in the public interest as necessary to ensure the safety of aircraft and its efficient use (FAA Order 7400.2E 2000). Special Use Airspace (SUA) identified for military and other governmental activities is charted and published by the FAA. Management of this resource considers how airspace is designated, used, and administered to best accommodate the individual and common needs of military, commercial, and general aviation. The FAA considers multiple and sometimes competing demands for aviation airspace in relation to airport operations, Federal Airways, Jet Routes, military flight training activities, and other special needs to determine how the National Airspace System can best be structured to address all user requirements.

The FAA has designated four types of airspace within the U.S.: Controlled, Special Use, Other, and Uncontrolled airspace. Controlled airspace is airspace of defined dimensions within which air traffic control service is provided to Instrument Flight Rule (IFR) flights and to Visual Flight Rule (VFR) flights in accordance with the airspace classification (Pilot/Controller Glossary [P/CG] 2004). Controlled airspace is categorized into five separate classes: Classes A through E. These classes identify airspace that is controlled, airspace supporting airport operations, and designated airways affording en route transit from place-to-place. The classes also dictate pilot qualification requirements, rules of flight that must be followed, and the type of equipment necessary to operate within that airspace.

SUA is designated airspace within which flight activities that require confinement of participating aircraft or place operating limitations on non-participating aircraft are conducted. Restricted Areas and MOAs are examples of SUA.

Other airspace consists of advisory areas, areas that have specific flight limitations or designated prohibitions, areas designated for parachute jump operations, MTRs, and Aerial Refueling (AR) tracks. This category also includes Air Traffic Control Assigned Airspace (ATCAA). When not required for other needs, ATCAA is airspace authorized for military use by the managing Air Route Traffic Control Center (ARTCC), usually to extend the vertical boundary of SUA.

Uncontrolled airspace is designated Class G airspace and has no specific prohibitions associated with its use.

The USAF manages airspace in accordance with processes and procedures detailed in Air Force Instruction (AFI) 13-201, *Air Force Airspace Management*. AFI 13-201 implements Air Force Policy Directive 13-2, *Air Traffic Control, Airspace, Airfield, and Range Management*, and DoD Directive 5030.19, *DoD Responsibilities on Federal Aviation and National Airspace System Matters*. It addresses the development and processing of SUA, and covers aeronautical matters governing the efficient planning, acquisition, use, and management of airspace required to support USAF flight operations (USAF 2001).

### 3.5.2 EXISTING CONDITIONS

Class D controlled airspace has been established around Westfield-Barnes Airport. To the south, this controlled airspace abuts the Class C controlled airspace around Bradley International Airport.

Military training airspace associated with this proposal includes MOAs, MTRs, Restricted Areas, and Warning Areas. Use of these airspace components is normally scheduled by the owning/using agency, and is managed by the military or the applicable ARTCC. Military training airspace associated with the 104 FW's current mission are depicted in Figure 3.5-1.

#### 3.5.2.1 Military Operations Areas

A MOA is airspace of defined vertical and lateral limits established outside Class A airspace to separate and segregate certain non-hazardous military activities from IFR traffic and to identify VFR traffic where these activities are conducted (P/CG 2004). Class A airspace covers the continental U.S. and limited parts of Alaska, including the airspace overlying the water within 12 nautical miles (NM) of the U.S. coast. It extends from 18,000 feet above mean sea level (MSL) up to and including 60,000 feet MSL (P/CG 2004). MOAs are considered "joint use" airspace. Non-participating aircraft operating under VFR are permitted to enter a MOA, even when the MOA is active for military use. Aircraft operating under IFR must remain clear of an active MOA unless approved by the responsible ARTCC. Flight by both participating and VFR non-participating aircraft is conducted under the "see-and-avoid" concept, which stipulates that "when weather conditions permit, pilots operating IFR or VFR are required to observe and maneuver to avoid other aircraft. Right-of-way rules are contained in CFR Part 91" (P/CG 2004). For specific details on these right-of-way rules, refer to Federal Aviation Regulation (FAR) Part 91: General Operating and Flight Rules; Subpart B: Flight Rules; § 91.113: Right-of-Way Rules Except Water Operations. The responsible ARTCC provides separation service for aircraft operating under IFR and MOA participants. The "see-and-avoid" procedures mean

that if a MOA were active during inclement weather, the general aviation pilot could not safely access the MOA airspace.

The MOAs currently utilized by the 104 FW with the A-10 aircraft are described in Table 3.5-1 (refer to Figure 3.5-1). By notices to airmen (NOTAMs), the hours of flight within these components of military training airspace may be temporarily modified. A NOTAM is filed with an aviation authority to alert aircraft pilots of any hazards *en route* or at a specific locations. The authority in turn provides means of disseminating relevant NOTAMs to pilots. NOTAMS can be issued for a variety of reasons, including: hazards such as airshows, closed runways, military exercises, inoperable radio navigational aids, etc. Through coordination with the FAA, NOTAMs are published anytime the MOAs are used outside of the published operating hours. For example, the published hours of operation for the Yankee MOAs are from *sunrise to sunset*. During the winter, if operations are planned to occur at 6:00 P.M., a NOTAM would be published to alert other pilots of the activation of the MOA.

**Table 3.5-1. Description of MOAs Currently Utilized by the 104 FW**

| *MOA* | ALTITUDES (FEET) | | HOURS OF USE | | *Controlling ARTCC* |
|---|---|---|---|---|---|
| | ***Minimum*** | ***Maximum*** | ***From*** | ***To*** | |
| Condor 1/2 | 7,000 MSL[1] | UTBNI FL180[2,3] | Intermittent | | Boston |
| Yankee 1[4] | 9,000 MSL | UTBNI FL180 | Sunrise | Sunset | Boston |
| Yankee 2[4] | 100 AGL[5] | UTBNI 9,000 MSL | Sunrise | Sunset | Boston |
| Falcon 1[4] | 6,000 MSL | UTBNI 18,000 MSL | 8:00 a.m. (Mon – Fri) | 5:00 p.m. (Mon – Fri) | Boston |
| Falcon 3[4] | 6,000 MSL | UTBNI 18,000 MSL | 8:00 a.m. (Mon – Fri) | 5:00 p.m. (Mon – Fri) | Boston |

Notes: 1. MSL = Mean Sea Level
2. UTBNI = Up To, But Not Including
3. FL = Flight Level. Described in terms of hundreds of feet MSL using a standard altimeter setting. Thus, FL180 is approximately 18,000 feet MSL.
4. By Notice to Airmen (NOTAM), Yankee and Falcon MOAs may be used outside these published hours.
5. AGL = Above Ground Level.

Source: Department of Transportation FAA 2006.

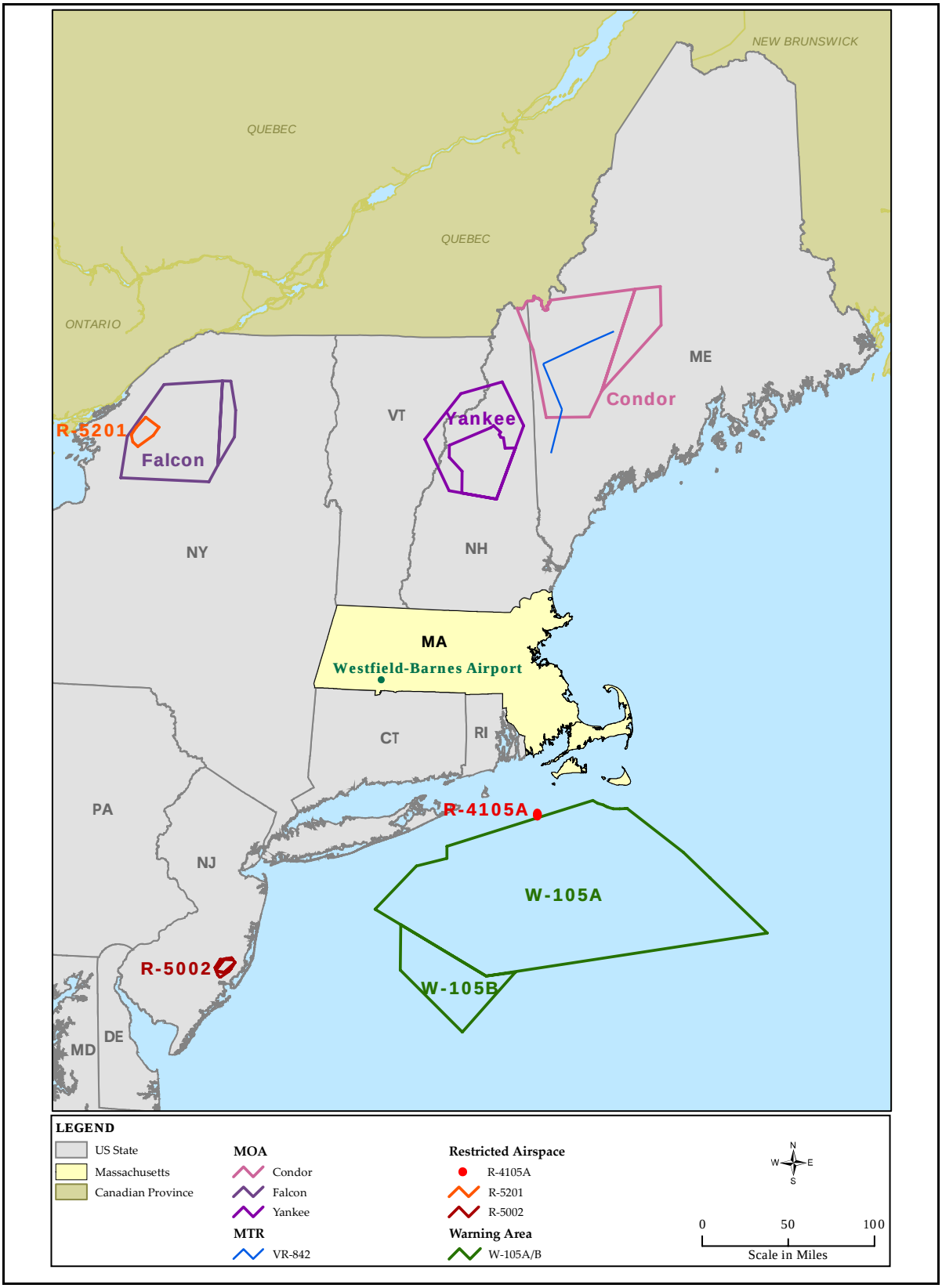



**Figure 3.5-1. Military Training Airspace Associated with the Existing 104 FW Mission**

### 3.5.2.2 Military Training Routes

MTRs are flight corridors developed and used by the Department of Defense (DoD) to practice high-speed, low-altitude flight, generally below 10,000 feet MSL. Specifically, MTRs are airspace of defined vertical and lateral dimensions established conducting military flight training at airspeeds in excess of 250 knots indicated airspeed (KIAS) (P/CG 2004). MTRs are developed in accordance with criteria specified in FAA Order 7610.4 (DoD 2005). They are described by a centerline, with defined horizontal limits on either side of the centerline, and vertical limits expressed as minimum and maximum altitudes along the flight track. MTRs are identified as Visual Routes (VR) or Instrument Routes (IR).

VRs are used by DoD and associated Reserve and Air National Guard (ANG) units for the purpose of conducting low-altitude navigation and tactical training under VFR below 10,000 feet MSL at airspeeds in excess of 250 KIAS (P/CG 2004). IRs are used by DoD, including associated Reserve and ANG units, for the purpose of conducting low-altitude navigation and tactical training in both IFR and VFR weather conditions below 10,000 feet MSL at airspeeds in excess of 250 KIAS (P/CG 2004).

MTRs currently used by the 104 FW with the A-10 aircraft are described in Table 3.5-2. In the last year, two VRs were used by the 104 FW.

**Table 3.5-2. Description of MTRs Currently Utilized by the 104 FW**

| *MTR* | ALTITUDES (FEET) | | ROUTE WIDTH (IN NM)[1] | | HOURS OF OPERATION | |
|---|---|---|---|---|---|---|
| | ***Min*** | ***Max*** | ***Min*** | ***Max*** | ***From*** | ***To*** |
| VR-840 | 100 AGL[2] | 12,000 MSL[3] | 6 | 10 | 8:00 a.m. | Sunset |
| VR-842 | 100 AGL | 8,000 MSL | 8 | 8 | 8:00 a.m. | Sunset |

Notes: 1. NM = Nautical Miles (One Nautical Mile is approximately 6,077 feet)
2. AGL = Above Ground Level
3. MSL = Mean Sea Level

Source: DoD 2005.

### 3.5.2.3 Restricted Areas

A Restricted Area is designated airspace that supports ground or flight activities that could be hazardous to non-participating aircraft. A Restricted Area is airspace designated under 14 CFR Part 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated "joint-use" and IFR/VFR operations in the area may be authorized by the controlling Air Traffic Control facility when it is not being utilized by the using agency (P/CG 2004). The restricted airspaces utilized by the 104 FW in support of their

current training activities include R-4105, R-5002, and R-5201. Specific characteristics of these airspace elements are described in Table 3.5-3.

**Table 3.5-3. Description of Restricted Airspace Currently Utilized by the 104 FW**

| *Restricted Area* | ALTITUDES (FEET) | | HOURS OF USE [3] | | *Controlling ARTCC* |
|---|---|---|---|---|---|
| | *Minimum* | *Maximum* | *From* | *To* | |
| R-4105A | Surface | UTBNI 10,000 MSL[1,2] | Sunrise | Sunset | Cape Approach Control |
| R-5002 A | Surface | 14,000 MSL | Sunrise | Sunset | New York |
| R-5002 B | 1,000 MSL | 14,000 MSL | Sunrise | Sunset | New York |
| R-5002 C | Surface | 3,000 MSL | Sunrise | Sunset | New York |
| R-5002 D | Surface | 4,000 MSL | Sunrise | Sunset | New York |
| R-5002 E | 3,500 MSL | 14,000 MSL | Sunrise | Sunset | New York |
| R-5201 | Surface | 23,000 MSL | Continuous (Apr. – Sep) 6:00 a.m. (Oct – Mar) | Continuous (Apr – Sep) 6:00 p.m. (Oct – Mar) | Boston |

Notes: 1. UTBNI = Up To, But Not Including.
2. MSL = Mean Sea Level.
3. By NOTAM, Ranges may be used outside of these published hours.

Source: FAA 2006.

### 3.5.2.4 Warning Areas

A warning area is airspace of defined dimensions extending from 3 NM outward from the coast of the U.S. that contains activity that may be hazardous to nonparticipating aircraft. The purpose of such warning areas is to warn nonparticipating pilots of the potential danger. A warning area may be located over domestic or international waters or both (P/CG 2004). The warning areas currently utilized by the 104 FW are described in Table 3.5-4.

**Table 3.5-4. Description of Warning Areas Currently Utilized by the 104 FW**

| *Warning Area* | ALTITUDES (FEET) | | HOURS OF USE | | *Controlling ARTCC* |
|---|---|---|---|---|---|
| | *Minimum* | *Maximum* | *From* | *To* | |
| W-102 H | Above 17,000 MSL[1] | FL 600[2] | Intermittent | | Boston |
| W-102 L | Surface | 17,000 MSL | Intermittent | | Boston |
| W-105 A | Surface | FL 500 | Intermittent | | Boston |
| W-105 B | Surface | FL 180 | Intermittent | | Boston |

Notes: 1. MSL = Mean Sea Level.
2. FL = Flight Level. Described in terms of hundreds of feet MSL using a standard altimeter setting. Thus, FL600 is approximately 60,000 feet MSL

Source: FAA 2006.

The airspace described above is currently used by pilots flying A-10 aircraft assigned to the 104 FW at Barnes. Table 3.5-5 reflects current annual utilization.

**Table 3.5-5. Current Airspace Utilization**

| *Airspace Type* | *Airspace Designation* | *Annual Sorties* |
|---|---|---|
| MOAs | Yankee | 1,000 |
| | Falcon | 48 |
| | Condor | 100 |
| MTRs | VR-842 | 24 |
| Restricted Areas | R-4105A | 24 |
| | R-5002 | 500 |
| | R-5201 | 700 |
| Warning Areas | W-105 | 24 |

Source: Personal communication, Kerdavid 2006.

## 3.6 SAFETY

### 3.6.1 DEFINITION OF THE RESOURCE

This section addresses ground, explosive, and flight safety associated with activities conducted by the 104 FW located at Westfield-Barnes Airport, Massachusetts. Ground safety considers issues associated with human activities, and operations and maintenance activities that support unit operations. A specific aspect of ground safety addresses Anti-Terrorism/Force Protection (AT/FP) considerations. Explosive safety discusses the management and use of ordnance or munitions associated with installation operations and training activities. Flight safety considers aircraft flight risks such as aircraft accidents and Bird-Aircraft Strike Hazards (BASH).

The ROI for safety is Westfield-Barnes Airport, the lands immediately adjacent to the airport, and the lands underlying the military training airspace used by the unit.

### 3.6.2 EXISTING CONDITIONS

#### 3.6.2.1 Ground Safety

Day-to-day operations and maintenance activities conducted by the 104 FW are performed in accordance with applicable USAF safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health requirements.

The 104 FW fire department responds to all aircraft accidents on Westfield-Barnes Airport. If increased response is required, the military fire department is party to mutual support agreements

with local fire departments. All required emergency response equipment is available; there are no shortfalls and no waivers are in effect (personal communication, Dumais 2006a). All 104 FW facilities are equipped with required fire suppression systems, and no facility waivers are in effect (personal communication, Dumais 2006a).

As a public use airport, Westfield-Barnes Airport has defined areas around the airfield where activities, objects (such as facilities, equipment or parked aircraft) or obstacles are prohibited. Some of these zones also include a height dimension in order to maintain clear airspace around the airfield. The airfield protection zones for the Westfield-Barnes Airport are shown in Figure 3.6-1. The size of these zones depends on the capabilities of the airfield and type of aircraft served. Their definitions (FAA Advisory Circular 150/5300-13, Airport Design) are provided below:

- Runway Safety Area (RSA). The RSA is a cleared and graded area with no potentially hazardous ruts, humps, depressions, or other surface variations. The area is free of all objects except those that need to be located in the runway safety area due to their function. The RSA is drained and can support snow removal equipment, firefighting and aircraft rescue equipment, and occasional passage of aircraft without causing structural damage to the aircraft.

- Runway Protection Zone (RPZ). The RPZ is trapezoidal in shape and centered about the extended runway centerline beginning 200 feet beyond the end of the area useable for takeoff and landing. It is an area that must be acquired in fee or by easement in order to restrict incompatible uses. Incompatible uses in the RPZ include residences, places of public assembly (churches, schools, hospitals, office buildings, shopping centers and other uses with similar concentrations of persons) and uses inconsistent with airport operations.

- Object Free Area (OFA). The OFA is an area of certain dimensions centered on the runway centerline. The OFA clearing standard requires clearing of objects protruding above the RSA edge elevation. Generally, objects needed for air navigation or aircraft ground maneuvering purposes, taxiing aircraft and holding aircraft are acceptable objects in the OFA; however, parked aircraft and agricultural operations are not acceptable.

- Obstacle free zone (OFZ). OFZs are defined volumes of airspace with specified dimensions for the runway, inner-approach, and inner-transitional zones. These zones ensure that airspace is clear of obstacles for safety of aircraft in the air during takeoff and landing. A clearing standard applies within the volume precluding taxiing and parked airplanes and object penetrations, except for certain navigational aids that need to be in the OFZ due to their function.

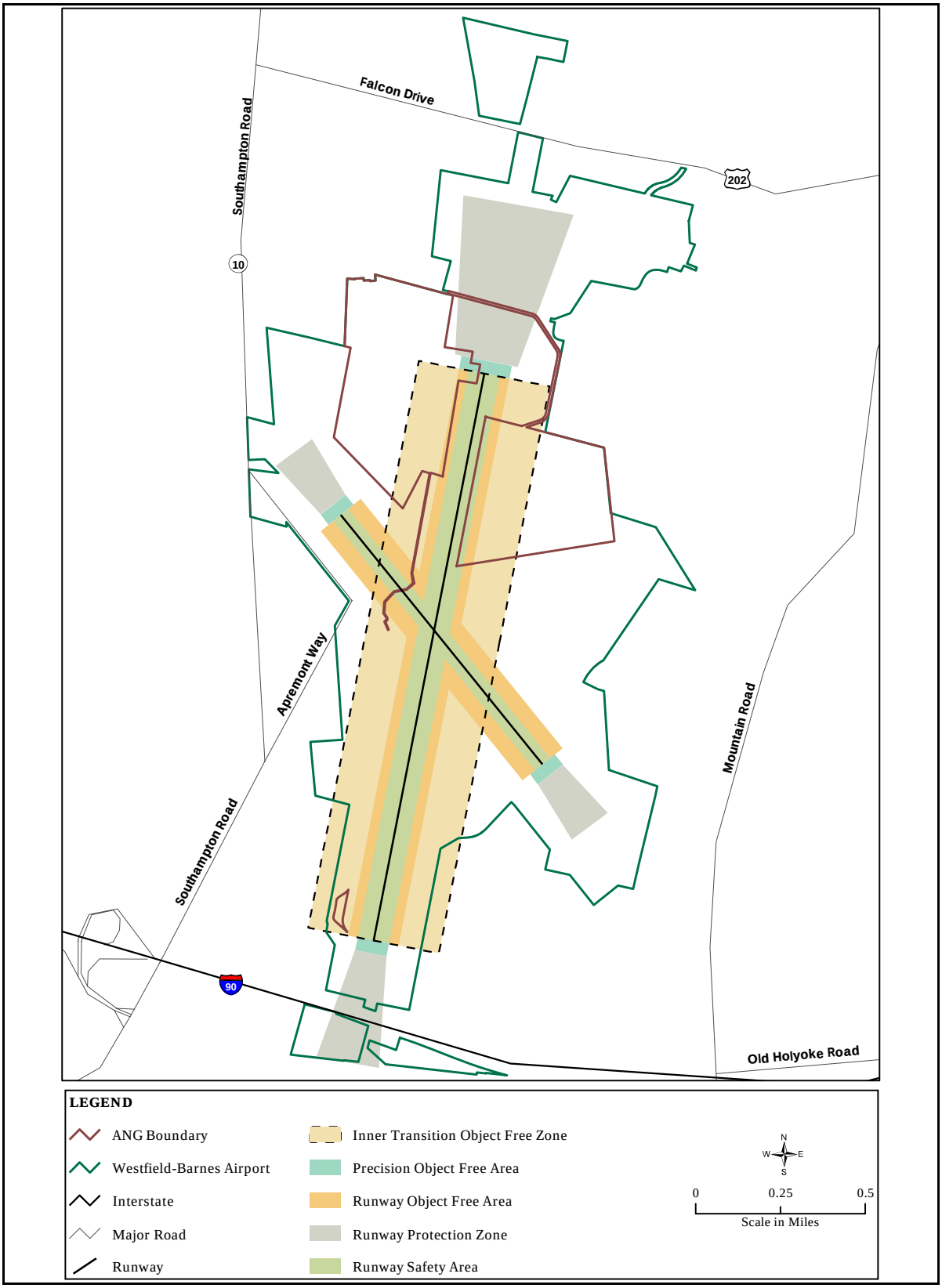



**Figure 3.6-1. Airfield Safety Zones at Westfield-Barnes Airport**

Currently, the 104 FW has no violations of these airfield safety setbacks (personal communication, Dumais 2006a).

#### 3.6.2.2 Anti-Terrorism/Force Protection

As a result of terrorist activities, the DoD and the USAF have developed a series of AT/FP guidelines for military installations (USAF nd). These guidelines address a range of considerations that include access to the installation, access to facilities on the installation, facility siting, exterior design, interior infrastructure design, and landscaping (Unified Facilities Criteria [UFC] 4-010-01 2003; USAF nd). The intent of this siting and design guidance is to improve security, minimize fatalities, and limit damage to facilities in the event of a terrorist attack.

Many military installations, such as the 104 FW, were developed before AT/FP considerations became a critical concern. Thus, under current conditions, many installations are not able to comply with all present AT/FP standards. However, as new construction occurs it would incorporate these standards and, as facilities are modified, AT/FP standards would be incorporated to the maximum extent practicable.

#### 3.6.2.3 Explosives and Countermeasures Safety

The 104 FW stores, maintains, and uses a range of munitions required for performance of their mission. All ordnance is handled and stored in accordance with USAF explosive safety directives (Air Force Manual 91-201, DoD 16055.9STD), and all munitions maintenance is carried out by trained, qualified personnel using USAF-approved technical procedures. Restrictions apply to areas immediately surrounding munitions storage facilities to provide separation between facilities and activities for safety purposes. The size of these areas, known as quantity-distance (QD) arcs, varies depending on the type and quantity of munitions stored (Figure 3.6-2). Setback distances define how close adjacent facilities can be located and inhabited. There are currently no explosive safety waivers in effect for any facilities or activities on the 104 FW installation (personal communication, Dumais 2006a).

Air-to-ground expenditure of munitions during training is limited to ranges within Restricted Airspace. USAF safety standards require safeguards on weapons systems and ordnance to ensure against inadvertent releases. All munitions mounted on an aircraft, as well as guns, are equipped with mechanisms that preclude release or firing without activation of an electronic arming circuit.

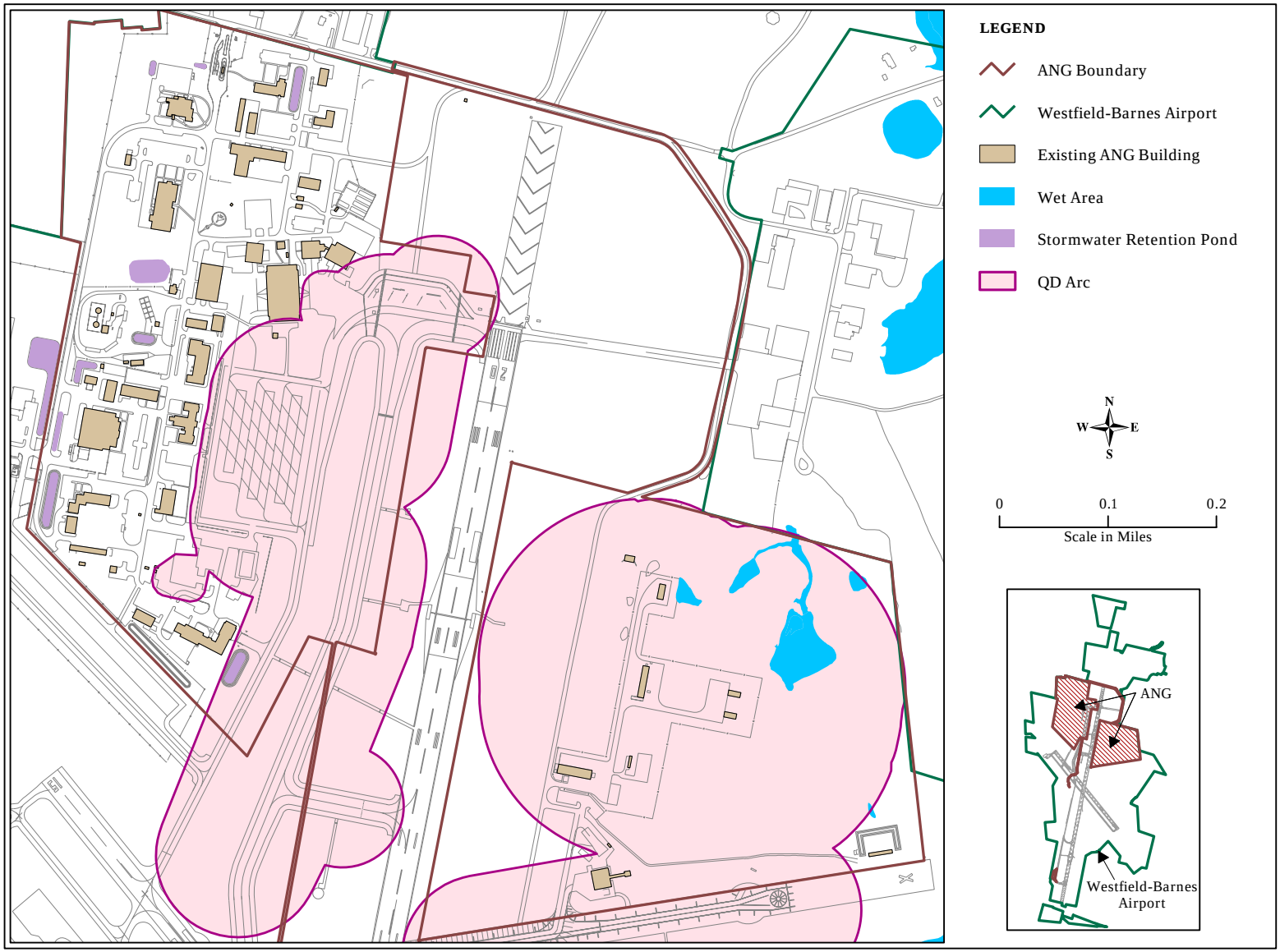



**Figure 3.6-2. Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport**

During Fiscal Year (FY) 2005, the 104 FW expended 2,500 inert practice bombs (Bomb Dummy Unit [BDU]–33), mostly at the Fort Drum Range. Also, 7,000 bundles of chaff (type RR-188) and 9,350 flares (types MJU-7A/B and M206) were dispensed, primarily in the Yankee MOA, and also at Fort Drum (personal communication, Thompson 2006).

The BDU-33 is an inert practice bomb used in training. It does not have a high-explosive warhead. It weighs approximately 25 pounds, and contains a small charge used for spotting the point of impact for scoring delivery accuracy. This small spotting charge is approximately equivalent to two 12-gauge shotgun shells.

Chaff, which is ejected from an aircraft to reflect radar signals, is small fibers of aluminum-coated mica packed into approximately 4-ounce bundles. When ejected, chaff forms a brief "cloud" that temporarily masks the aircraft from radar detection. Although the chaff may be ejected from the aircraft using a small pyrotechnic charge, the chaff itself is not explosive (Air Combat Command [ACC] 1997). The chaff type currently used by the 104 FW (RR-188), functions between 7.0 and 16.0 gigahertz. This range of frequencies does not interfere with FAA air traffic control and weather radars, television, or cell phones, which function between 0.6 and about 6.0 gigahertz (ACC 2001).

Defensive training flares consist of small pellets of highly flammable material that burn rapidly at extremely high temperatures. Their purpose is to provide a heat source other than the aircraft's engine exhaust in order to mislead heat-sensitive or heat-seeking targeting systems and decoy them away from the aircraft. The flare, essentially a pellet of magnesium, ignites upon ejection from the aircraft and burns completely within approximately 3.5 to 5.0 seconds, or approximately 400 feet from its release point (ACC 1997). Flares are released at altitudes that allow for full combustion before reaching the ground.

Explosive Ordnance Disposal (EOD), if required, is currently provided by an EOD unit stationed at Otis ANGB, Massachusetts (personal communication, Dumais 2006a). Explosive products that are past shelf life, dud munitions, or other explosive products requiring special handling generally must be transported to Otis. If an emergency situation with explosives were to occur, this arrangement does not preclude taking whatever measures are needed on site to ensure safety of personnel or the public (personal communication, Dumais 2006b).

#### 3.6.2.4 Flight Safety

The primary public concern with regard to flight safety is the potential for aircraft accidents. Such mishaps may occur as a result of mid-air collisions, collisions with manmade structures or terrain, weather-related accidents, mechanical failure, pilot error, or wildlife collisions. Flight

risks apply to all aircraft; they are not limited to the military. Flight safety considerations addressed include aircraft mishaps and wildlife strikes.

*Aircraft Mishaps*

The USAF defines four major categories of aircraft mishaps: Class A, B, C, and E mishaps and High Accident Potential (HAP). Class A mishaps result in a loss of life, permanent total disability, a total cost in excess of $1 million, or destruction of an aircraft. Class B mishaps result in total costs of more than $200,000 but less than $1 million, result in permanent partial disability or inpatient hospitalization of three or more personnel. Class C mishaps involve reportable damage of more than $20,000, but less than $200,000; an injury resulting in any loss of time from work beyond the day or shift on which it occurred, or occupational illness that causes loss of time from work at any time; or an occupational injury or illness resulting in permanent change of job. HAP events are any hazardous occurrence that has a high potential for becoming a mishap. Class E mishaps and HAP, the most common types of accidents, represent relatively unimportant incidents because they generally involve minor damage and injuries, and rarely affect property or the public (USAF 2004). This discussion will focus on Class A mishaps because of their potentially catastrophic results.

Based on historical data on mishaps at all installations, and under all conditions of flight, the military services calculate Class A mishap rates per 100,000 flying hours for each type of aircraft in the inventory. It should be noted that these mishap rates do not consider combat losses due to enemy action. In evaluating this information, it should be emphasized that data presented are only statistically predictive. The actual causes of mishaps are due to many factors, not simply the amount of flying time of the aircraft.

The 104 FW currently operates A-10 aircraft. Since entering the USAF inventory in 1972, A-10 aircraft have flown approximately 4,350,300 hours. During this time, A-10 aircraft have experienced 100 Class A mishaps. These data reflect a Class A mishap rate per 100,000 flying hours of 2.30 (Air Force Safety Center 2006).

The 104 FW flies the A-10 aircraft approximately 4,100 hours per year. Considering this rate, the probability of one of the 104 FW A-10 aircraft being involved in a Class A mishap is 0.000023, or one such mishap every 10.6 years. In fact, the 104 FW has not experienced a Class A mishap since 1998 (personal communication, Dumais 2006a).

The 104 FW has two areas, Quabbin Reservoir and Westover Bean Bag Area, designated for bailout or emergency jettison in an emergency situation. The F-15 is capable of jettisoning fuel in an emergency situation. If required, fuel dumping would be accomplished over unpopulated areas, and at altitudes above 10,000 feet. Winds would disperse the liquid at these altitudes, and

the fuel would all vaporize before reaching ground level due to the high volatility of the fuel. These incidents are extremely rare and the sites are selected based on remoteness and lack of habitation.

*Bird-Aircraft Strike Hazards*

Bird-aircraft strikes constitute a safety concern because of the potential for damage to aircraft or injury to aircrews or local populations if an aircraft crash should occur in a populated area. Aircraft may encounter birds at altitudes of 30,000 feet above MSL or higher. However, most birds fly close to the ground. Large birds and flocking species present the greatest bird hazards to aircraft. Over 94 percent of reported bird strikes occur below 3,000 feet above ground level (AGL). Approximately 50 percent of bird strikes happen in the airport environment, and almost 15 percent occur during low-altitude flight training and use of weapons ranges (USAF BASH Team 2005).

Migratory waterfowl (e.g., ducks, geese, and swans) are the most hazardous birds to low-flying aircraft because of their size and their propensity for migrating in large flocks at a variety of elevations and times of day. Waterfowl vary considerably in size, from 1 to 2 pounds for ducks, 5 to 8 pounds for geese, and up to 20 pounds for most swans. There are two normal migratory seasons, fall and spring. Waterfowl are usually only a hazard during migratory seasons. These birds typically migrate at night and generally fly between 1,500 to 3,000 feet AGL during the fall migration and from 1,000 to 3,000 feet AGL during the spring migration.

Along with waterfowl, raptors, shorebirds, gulls, herons, and songbirds also pose a hazard. In considering severity, the results of bird-aircraft strikes in restricted areas show that strikes involving raptors result in the majority of Class A and Class B mishaps related to bird-aircraft strikes. Raptors of greatest concern are Vultures and Red-tailed Hawks. Peak migration periods for raptors, especially Eagles, are from October to mid-December and from mid-January to the beginning of March. In general, flights above 1,500 feet AGL would be above most migrating and wintering raptors.

Songbirds are small birds, usually less than one pound. During nocturnal migration periods, they navigate along major rivers, typically between 500 to 3,000 feet AGL. The potential for bird-aircraft strikes is greatest in areas used as migration corridors or where birds congregate for foraging or resting (e.g., open water bodies, rivers, and wetlands).

While any bird-aircraft strike has the potential to be serious, many result in little or no damage to the aircraft, and only a minute portion result in a Class A mishap. During the years 1985 to 2004, the USAF BASH Team documented 62,536 bird strikes. Of these, 25 resulted in Class A

mishaps where the aircraft was destroyed. These occurrences constituted approximately 0.04 percent of all reported bird-aircraft strikes (USAF BASH Team 2005).

A wildlife strike hazard does exist at Westfield-Barnes Airport and the vicinity due to resident and migratory bird species and other wildlife. The USAF BASH Team has 27 bird/wildlife strikes recorded from the 104 FW in its database for the period between 1990 and 2003. More recent strikes were not yet recorded in the database. All of these recorded strikes occurred in the airfield environment, though it is known that there were others on low level routes, training ranges, or unknown areas. Strikes to 104 FW aircraft involved Barn Swallows, Tree Swallows, Bank Swallows, Red-tailed Hawks, a Ring-billed Gull, Horned Lark, Golden Plover, and several small passerines. Also reported in the record is a strike with a coyote. Strikes to civil aircraft at Westfield-Barnes Airport have included gulls, waterfowl, kestrels, shorebirds, and passerines. Certain species of wildlife of notable concern include common American Crows, various species of gulls, waterfowl, Snow Buntings, white-tailed deer, fox, and coyotes (104 FW 2005b).

The local situation changes throughout the year with migrant birds such as ducks, geese, gulls, shorebirds, raptors, crows, doves, swallows, starlings, and blackbirds posing the most potential problems during both migration periods and resident species causing hazards throughout the year.

Several areas of concern are evident in the surroundings and on the airfield itself. Much of the airfield is covered in turf as recommended, but extensive managed grasslands, weedy patches, bare areas, thick forested stands, brush, and water features are potentially attractive to a variety of bird species. Notable are several disparate stands of timber on the airport property with brush and undergrowth that is highly attractive to birds and mammals. Also of concern is a large proportion of the airfield that remains unmowed during most of the growing season to promote the preservation of bird species of special concern to the State of Massachusetts. Unfortunately, these areas also attract a wide variety of other birds and wildlife that can pose potential hazards to aircraft. The airfield is surrounded by a well-constructed fence for security and to deter wildlife such as white-tailed deer, red fox, and coyotes from entering the airfield. Breeches under the fence occasionally occur and are addressed as required. Canada Geese, Mallards, Turkey Vultures, Red-tailed Hawks, European Starlings, Red-winged Blackbirds, and several swallow species were seen on or transiting the field and other species can be expected through the year (104 FW 2005b).

The area surrounding the installation also contains numerous features that are inherently attractive to a variety of birds and other wildlife potentially hazardous to nearby flying operations. The Connecticut River to the east is a major flyway for waterfowl such as Canada Geese and other species such as gulls that travel the river corridor, especially when inclement weather along the coast may drive birds inland. Other water features such as the Pond Brook,

Arm Brook, Long Pond, Buck Pond, Pequat Pond, Horse Pond, and numerous others surrounding the airport serve to attract a wide variety of bird species in the vicinity. The ridgelines and mountains including Mount Tom and Mount Holyoke to the east also provide ideal habitat and thermal soaring conditions for birds including both resident and migratory raptors and other species. Local golf courses, parks, landfills, and wildlife refuges also attract and hold large numbers of gulls, waterfowl, raptors, blackbirds, starlings, shorebirds, and other species that may transit the airport and its surrounding airspace. Wintering/resident Canada Geese were observed on several of the local water bodies and crossing the approach end of Runway 20 and in other areas around the airport. These birds transit the area between feeding, breeding, and resting areas throughout the region. Air Traffic Control provides effective warnings to aircrews during times when direct observations or pilot reports of birds in the vicinity are noted. The Westfield-Barnes Airport FAA Air Traffic Control staff has standard operating procedures for reporting bird strike hazards (104 FW 2005b).

Much of the area surrounding the airport supports a variety of land uses ranging from light agriculture, natural areas, commercial properties, and suburban developments. The natural and regenerated mixed forests surrounding the airport provide ideal cover for large mammals and roosting sites for birds such as blackbirds, starlings, and crows. Most of the features noted in the vicinity of Westfield-Barnes Airport also exist in the training areas and low level routes where the 104 FW aircrews train and operate (104 FW 2005b).

To reduce risk and potential hazards of bird strikes, the 104 FW pilots are briefed routinely prior to takeoff about migratory bird conditions. These include normal seasonal conditions and actual conditions as observed and reported. This information is used by pilots in planning and executing each training mission, for example, by avoiding certain altitudes while in transit to training areas. Also, 104 FW personnel perform "sweeps" of the airfield at least once a day during migratory periods (generally February, August, and September) to check for birds that may potentially interfere with aircraft operations.

## 3.7 SOLID AND HAZARDOUS MATERIALS AND WASTE

### 3.7.1 DEFINITION OF THE RESOURCE

This section describes the affected environment associated with hazardous materials and petroleum products, hazardous and petroleum wastes, environmental restoration program sites (which includes the environmental restoration program [ERP]), former underground storage tanks (FUST) sites, and solid waste at the construction and demolition areas.

The terms "hazardous materials" and "hazardous waste" refer to substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Solid Waste Disposal Act (SWDA), as amended by the Resource Conservation and

Recovery Act (RCRA). In general, hazardous materials include substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health or the environment when released into the environment. Hazardous wastes that are regulated under RCRA are defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that exhibit one or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity, or are listed as a hazardous waste under 40 CFR Part 261. Petroleum products include petroleum-based fuels, oils, and their wastes. The ERP is a USAF program to identify, characterize, and remediate environmental contamination from past activities at USAF installations.

Issues associated with hazardous materials and waste typically center around waste streams, underground storage tanks (USTs), above ground storage tanks (ASTs), and the storage, transport, use, and disposal of pesticides, fuels, lubricants, and other industrial substances. When such materials are improperly used in any way, they can threaten the health and well being of wildlife species, habitats, and soil and water systems, as well as humans.

The management of hazardous materials and hazardous waste is governed by specific environmental statutes. The key regulatory requirements include:

*CERCLA of 1980 (42 USC 9601–9675)* as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. CERCLA/SARA regulates the prevention, control, and compensation of environmental pollution.

*Community Environmental Response Facilitation Act of 1992 (CERFA) (42 USC 9620).* This act amended CERCLA to require that, prior to termination of federal activities on any real property owned by the federal government, agencies must identify real property where hazardous substances were stored, released, or disposed of.

*Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (42 USC 11001–11050).* EPCRA requires emergency planning for areas where hazardous materials are manufactured, handled, or stored and provides citizens and local governments with information regarding potential hazards to their community.

*Clean Water Act (CWA) (33 USC 1251 et seq.).* This statute prohibits discharges of petroleum products from ASTs to waters of the United States.

*RCRA of 1976 (42 USC 6901–6992).* RCRA established standards and procedures for handling, storage, treatment, and disposal of hazardous waste. In addition, RCRA contains regulations for petroleum USTs including overfill prevention, leak detection, and cathodic protection.

*Federal Facility Compliance Act (FFCA) of 1992 (Public Law [P.L.] 102-426).* This act provides for a waiver of sovereign immunity on the part of federal agencies with respect to federal, state, and local requirements relating to RCRA solid and hazardous waste laws and regulations.

*Pollution Prevention Act of 1990 (42 USC 13101–13109).* This act encourages minimization of pollutants and waste through changes in production processes.

*USEPA Regulation on Identification and Listing of Hazardous Waste (40 CFR Part 261).* This regulation identifies solid wastes subject to regulation as hazardous and to notification requirements under RCRA.

*USEPA Regulation on Standards for the Management of Used Oil (40 CFR Part 279).* This regulation delineates requirements for storage, processing, transport, and disposal of oil that has been contaminated by physical or chemical impurities during use.

*USEPA Regulation on Designation, Reportable Quantities, and Notification (40 CFR Part 302).* This regulation identifies reportable quantities of substances listed in CERCLA and sets forth notification requirements for releases of those substances. It also identifies reportable quantities for hazardous substances designated in the CWA.

The ROI for hazardous materials, hazardous waste, and petroleum products encompasses areas that could be exposed to an accidental release of hazardous substances from construction or demolition activities, other specific geographic areas affected by past and current hazardous waste operations, and areas where hazardous materials would be utilized and hazardous wastes generated by the 104 FW. Therefore, the ROI for this section is defined as the boundary of the 104 FW installation at Westfield-Barnes Airport (both the east and west parcels).

### 3.7.2 EXISTING CONDITIONS

This section describes the current management of hazardous materials and petroleum products, hazardous and petroleum wastes, ERP sites, FUST sites, and solid wastes within the ROI.

#### 3.7.2.1 Hazardous Materials and Petroleum Products

Hazardous materials and petroleum products are used within the 104 FW installation during operations related to aircraft maintenance (e.g., corrosion control, fuel cell maintenance, and engine maintenance), ground vehicle maintenance (e.g., fluid changes, filter changes, and minor painting), and facilities maintenance (e.g., structural maintenance, pesticide treatment, and utility maintenance). These hazardous materials and petroleum products include antifreeze, petroleum products, oils, lubricants, fuels, oil filters, scrap metals, pesticides, cleaning solvents, respirator

filter cartridges, sealants, adhesives, paints, and flammable solids. Hazardous materials are received by the base Hazmat Pharmacy (Building 52) and issued to the base shops as needed. These hazardous materials and petroleum products are stored in containers, drums, and tanks in accordance with the Spill Prevention Control and Countermeasures (SPCC) Plan.

Releases of hazardous materials and petroleum products are managed in accordance with the 104 FW *Final Hazardous Material Emergency Planning and Response (Hazmat) Plan* (104 FW 2000). The plan designates the procedures to be followed in the event of a release of hazardous substances of any type or form. Areas at the 104 FW installation with a higher potential for spills include the following:

**Aircraft Parking Apron** – Spills on the Aircraft Parking Apron are likely to occur as a result of fueling operations. Fueling operation spills can be the result of leaking or ruptured fuel loading lines, leaking fittings on the refueler or the aircraft, overfilling of the aircraft, venting of the aircraft fuel tanks, or catastrophic failure of fuel tanks on either the refueler or the aircraft. Other fluid leaks in the apron area might result from aircraft or aerospace ground equipment leaking hydraulic fluids or oils, leaking or ruptured lines from the de-icing vehicle, and coolant from leaking lines on the aircraft or ground support equipment.

**Fuel Cell Maintenance Hangar** – Spills that may occur inside this hangar result from lines that have been disconnected in order to service fuel cells; leaking, ruptured, overturned or otherwise damaged containers; or transferring materials to storage containers.

**Aircraft Maintenance Hangar** – Spills that may occur inside this hangar are from leaking, ruptured, overturned or otherwise damaged containers; transferring material storage containers; leaking fuel, oil, or hydraulic fluid lines on the aircraft; or from fuel, oil, or hydraulic lines that have been disconnected in order to remove engines.

#### 3.7.2.2 Hazardous and Petroleum Wastes

Hazardous waste management at the 104 FW installation adheres to RCRA regulations and is guided by the site-specific *Hazardous Waste Management Plan* and the *Hazardous Waste Analysis Plan* (104 FW nd). These plans establish policies, assign responsibilities, and provide guidance for proper management of hazardous waste. The hazardous wastes are stored at one of two Central Accumulation Points (CAPs): Building 52 for the west side and Building HS-1 for the east side. Hazardous and petroleum wastes generated at buildings scheduled for renovation or demolition include: bulbs, batteries, degreasers, flammable solvents, cutting fluids, paints, paint thinners, oils, nitrogen canisters, grease, corrosion protection compounds, lubricants, alodine, chromic acid, phosphoric acid, resins, polyurethane, methyl ethyl ketone, and adhesives. These wastes are tracked to ensure proper identification, storage, transportation, and disposal, as well as implementation of waste minimization programs. The 104 FW is a small quantity generator (SQG) of hazardous waste (identification number USEPA ID numbers

MA6570025902 for the main installation [west parcel] and MV4135689151 for the mission-separated munitions area [east parcel]) and, therefore, these wastes are managed in accordance with SQG regulations (104 FW nd). Hazardous and petroleum wastes generated by contractors during construction and renovation activities are disposed of by the contractor at offsite locations (personal communication, Richardson 2006a).

#### 3.7.2.3 Environmental Restoration Program

The ANG's ERP is part of a DoD effort to identify, evaluate, and remediate former disposal and spill sites at DoD facilities nationwide. The ERP (formerly known as the Installation Restoration Program [IRP]) was established in 1975 and is conducted in accordance with Section 211 of the 1986 SARA and the Defense Environmental Restoration Program.

Currently, the 104 FW manages ERP activities for sites on the 104 FW installation (ERP Sites 2 through 7 and Area of Concern [AOC] A), and Site 1 located within Westfield-Barnes Airport near the southwestern boundary of the 104 FW installation. There is currently one active ERP site (Site 2) and all of the remaining ERP sites on the installation (including AOC A) have received closure from the MassDEP (personal communication, Richardson 2006a). The 104 FW is actively pursuing cleanup at ERP Site 2, consistent with federal and state regulations and guidance. The active and closed ERP sites (including AOC A) within the ROI for the Proposed Action are shown in Figure 3.7-1 and are described as follows:

*Environmental Restoration Program Site 1*

ERP Site 1 is located on Westfield-Barnes Airport property, outside the southwestern boundary of the 104 FW west parcel. A burn pit area in the center of ERP Site 1 was formerly used for fire training exercises that occurred from 1950 to 1987. On November 29, 2000, the MassDEP received a Release Abatement Measure Completion Report and Response Action Outcome (RAO) Statement. Based on the soil sampling results and historical groundwater monitoring data, site conditions had been reduced to below the Massachusetts Contingency Plan (MCP) Method 1 S-1/GW-1 and GW-3 Cleanup Standards. On December 15, 2000, the MassDEP concurred with the RAO statement and site closure (MassDEP 2000).

*Environmental Restoration Program Site 2*

ERP Site 2 is located on the west side of the 104 FW west parcel, about 300 feet south of Building 29. ERP Site 2 is within the current Petroleum, Oil, and Lubricant (POL) portion of the 104 FW installation. ERP Site 2 is the former location of four 25,000 gallon USTs. The former USTs were used to store and dispense aviation gas (AVGAS) and JP-4 until taken out of service in 1992.

**Figure 3.7-1. ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport**

According to a 2004 Remedial Implementation Plan (RIP), the volume of petroleum contaminated groundwater at ERP Site 2 was estimate to be 37,000 cubic feet with an average total petroleum hydrocarbon (TPH) concentration of 14 milligrams per liter (mg/l). The RIP design specified the installation of 15 biosparge wells which were installed and became operational in 2005. It is estimated that it will take 2 to 3 years to reduce the area of contamination below applicable MCP Method 1 Cleanup Standards (104 FW 2004a).

*Environmental Restoration Program Site 3*

ERP Site 3 is located in the southern portion of the 104 FW west parcel near the former location of Building 6, the former vehicle maintenance complex, which was demolished. ERP Site 3 consists of a former wash rack and dry well that were removed during a source removal action in 1993. The source removal action included limited soil excavation and off-site disposal. Results of post removal soil testing were below MCP Method 1 Soil Cleanup Standards. An RAO supporting closure of ERP Site 3 was submitted to the MassDEP in 1994 (personal communication, Richardson 2006b).

*Environmental Restoration Program Site 4*

EPR Site 4, a storm water detention pond, is located on the west side of the 104 FW west parcel, approximately 110 feet south of Building 29. It receives storm water via overland flow and discharges from Buildings 15, 20, 26, 27, and 28 roof drains, Building 15 floor drains, and from oil/water separators in Buildings 20, 27, and 28.

In 1961, a spill of 100 gallons of jet propulsion fuel (JP-4) that may have migrated into the pond occurred near Building 15. Discharge to the pond from the floor drains and oil/water separators was discontinued between 1994 and 1995. The pond still receives discharge from the building roof drains, overland flow, and from storm water drainage catch basins in asphalt paved parking areas to the east of Tank Destroyer Boulevard.

A Method 1 Risk Assessment concluded that the contaminants of concern (COC) were below the MCP cleanup standards and did not pose an unacceptable risk to human health or the environment. A draft Site Investigation Report and a Class B-1 RAO was submitted to the MassDEP in 1998. After review of the Final Site Investigation Report and RAO in September 1998, the MassDEP concluded that no further action was required (MassDEP 1998).

*Environmental Restoration Program Site 5*

ERP Site 5 is located on the 104 FW west parcel adjacent to the flightline and airport Taxiway G. It consists of two drainage swales identified as the North Swale and South Swale. The

swales are about 10 feet wide and 3 feet deep. The swales receive runoff from the aircraft ramp and from storm drains throughout about two thirds of the facility.

A draft Comprehensive Site Assessment (CSA) report demonstrating a condition of no significant risk to human health and the environment and a RAO for ERP Site 5 was submitted to the MassDEP (104 FW 2006a). According to the 104 FW environmental manager, MassDEP has concurred with this RAO (personal communication, Richardson 2006a).

*Environmental Restoration Program Site 6*

ERP Site 6 consists of two locations within the 104 FW east parcel, ERP Site 6 North (Site 6N) and ERP Site 6 South (Site 6S). Site 6N, approximately 200 feet by 200 feet in size, was used for fire training exercises during the 1950s and still shows signs of soil staining and stressed vegetation. Site 6S, approximately 65 feet by 120 feet in size, was used for fire training exercises during the 1950s and was used for the storage of waste fuels for fire training activities at Site 6N. The RAO for Site 6N was approved by MassDEP (MassDEP 2005). Any sources of oil and/or hazardous material associated with the release have been eliminated or controlled. An Activity and Use Limitation (AUL) was not required to maintain a level of No Significant Risk at the site. The RAO Statement was submitted for ERP Site 6S.

*Environmental Restoration Program Site 7*

ERP Site 7 is approximately 3.5 acres and is located in the northern portion of the 104 FW west parcel adjacent to Building 20. ERP Site 7 consists of two former dry wells identified as the North Dry Well and South Dry Well and an abandoned septic leach field. The former dry wells received effluent from sink drains located in Building 20. Building 20 currently houses an aircraft maintenance shop, the NDI laboratory, and Aerospace Ground Equipment (AGE) shop.

A Phase II CSA and RAO site closure report were submitted to the MassDEP for ERP Site 7 in December 2005. On March 3, 2006, the MassDEP agreed that the RAO satisfied the requirements of the MCP. Therefore, no further response actions are required for ERP Site 7 (104 FW 2005c).

*Area of Concern A*

A Site Investigation was conducted to determine whether a contamination source exists near a suspected dry well located at the rear of Building 006. During the removal of an UST near Building 006, a vitrified clay pipe was uncovered and broken. This pipe was believed to have connected the floor drains from Building 006 to the dry well via a third pipe. (This third pipe was not found during the investigation.) The actual dry well location was found to be between Buildings 006, 008, and the former location of Building 003.

No contamination was detected in the soils around and below the dry well at concentrations exceeding the MCP S-1 standards. In addition, no contamination was detected in the groundwater at levels exceeding the MCP GW-1 standards. Therefore, MassDEP concurred with the No Further Remedial Action Plan recommendation for AOC A on 24 July 1997 (MassDEP 1997).

#### 3.7.2.4 Former Underground Storage Tank Sites

The 104 FW currently manages activities at six FUST Sites (Sites 1 through 6) located within the 104 FW installation (as shown in Figure 3.7-1). Currently, FUST Site 1 is the only active FUST Site and all of the remaining FUST sites on the installation have received closure from MassDEP.

*FUST Site 1*

FUST Site 1 was the location of a former 2,500-gallon UST for No. 2 heating oil, located adjacent to Building 1 on the 104 FW west parcel. The tank was installed circa 1952 and removed during a UST closure and replacement program undertaken by the 104 FW in September 1993.

Several investigations and MCP reports/documents have been submitted for FUST Site 1 including a FUST Site 1 Investigation, FUST 1 Supplemental Sampling, Phase II CSA, and a Phase III Remedial Action Plan (RAP). The Final RIP was submitted to the MassDEP for approval on March 2, 2006 (104 FW 2005d).

*FUST Site 2*

FUST Site 2 is located on the southern portion of the 104 FW west parcel. FUST Site 2 is at the location of a former 500 gallon fuel oil tank. Site investigations in 1995 and 1996 indicated the presence of petroleum hydrocarbons in the soil. Limited soil removal was conducted and a RAO Statement was submitted to the MassDEP in the late 1990s (personal communication, Richardson 2006b).

*FUST Site 3/3A*

FUST Site 3 is at the location of a former 5,000 gallon UST for leaded/unleaded gasoline installed circa 1984, located in the southern portion of the 104 FW west parcel. Site 3A was the fuel-dispensing island associated with the UST.

In 2003, the MassDEP determined that a level of "No Significant Risk" exists at the site and there is no need for an activity and use limitation for future use of the site (MassDEP 2003a).

*FUST Site 4*

FUST Site 4 is located within the 104 FW west parcel, adjacent to Building 27. FUST Site 4 was reportedly the location of an overfill of a fuel oil UST that was removed in 1997. Subsurface investigation of FUST Site 4 did not identify any soil or groundwater contamination (personal communication, Richardson 2006b).

*FUST Site 5*

FUST Site 5 was the location of a former 1,000 gallon UST for No.2 fuel oil installed circa 1982, along the western side of Building 28 (the former munitions building) in the northern portion of the 104 FW west parcel.

The UST appeared to be in good condition when it was removed in 1993; however, petroleum product was noted in the soil and below the pump island during removal. In 2003, the MassDEP determined that a level of "No Significant Risk" exists at the site and there is no need for an activity and use limitation for future use of the site (MassDEP 2003b).

*FUST Site 6*

FUST Site 6 was the location of a former 500 gallon UST for No.2 fuel oil installed circa 1960, along the western side of Building 51, the former Base Civil Engineering building.

In 2003, the MassDEP determined that a level of "No Significant Risk" exists at the site and there is no need for an activity and use limitation for future use of the site (MassDEP 2003c).

#### 3.7.2.5 Solid Wastes

Municipal solid waste management and compliance at USAF installations is established in AFI 32-7042, *Solid and Hazardous Waste Compliance*. In general, AFI 32-7042 establishes the requirements for installations to have a solid waste management program to incorporate the following: a solid waste management plan; procedures for handling, storage, collection, and disposal of solid waste; record-keeping and reporting; and pollution prevention. Source reduction, resource recovery, and recycling of solid waste are addressed in AFI 32-7080, *Pollution Prevention Program*.

Several different waste disposal contractors are used to remove solid waste from the installation. These contractors use one of the nearby landfills to dispose of solid waste (personal communication, Richardson 2006a).

Seven solid waste landfills are located within a 20-mile radius of the 104 FW installation including the Hadley Landfill (Hadley, Massachusetts), Holyoke Landfill (Granby,

Massachusetts), and West Suffield Landfill (West Suffield, Connecticut). One of the closest landfills is the Northampton Sanitary Landfill. This 50,000 TPY landfill is located on a 50-acre site at 170 Glendale Road in Northampton, Massachusetts. The facility has operated since June 1969 with 1.6 million tons of refuse in place, a maximum depth of 90 feet, and 39 acres under refuse. A new 5-acre cell opened in spring 2002 to extend the capacity to operate through 2007. The City of Northampton is obtaining a permit for an adjacent 50-acre parcel to extend the disposal capacity for another 12 to 15 years (USEPA 2006a).

Asbestos and lead-based paint may be in any building constructed prior to 1980 or 1978, respectively. The installation does not dispose of asbestos and lead-based paint wastes generated by contractors during demolition and renovation activities; rather disposal of these wastes is the responsibility of the contractor (personal communication, Richardson 2006a).

## 3.8 INFRASTRUCTURE

### 3.8.1 DEFINITION OF THE RESOURCE

Infrastructure refers to the system of public works, such as transportation and utilities that provide the underlying framework for a community. Transportation and circulation refer to roadway and street systems, the movement of vehicles, pedestrian and bicycle traffic, and mass transit. Utilities include such amenities as water and power supply and waste management.

The infrastructure elements at the 104 FW installation at Westfield-Barnes Airport include both transportation and utility systems. The ROI for this resource primarily consists of the installation, with additional information presented for the surrounding community, where relevant.

### 3.8.2 EXISTING CONDITIONS

#### 3.8.2.1 Transportation

The 104 FW installation is located approximately five miles north of downtown Westfield, Massachusetts in Hampden County. Regional access to the airport and the 104 FW installation is provided by I-91, which conveys traffic north-south and is located approximately five miles to the east of Westfield-Barnes Airport; and I-90, the Massachusetts Turnpike, which is the primary east-west highway from Boston to New York State and is located immediately south of the airport's southern boundary. Local access is provided by Massachusetts Routes 10 and 202 (Southampton Road), located immediately west of the airport, and direct access to the 104 FW main cantonment area is via Falcon Drive. The 104 FW east parcel is accessed internally from a roadway parallel to runway 02/20 within the airport property. Traffic volume counts, conducted by the Massachusetts Highway Department, indicate average daily traffic (ADT) on

Massachusetts Routes 10 and 202 (Southampton Road), north of I-90, was 18,400 vehicles per 24 hour period in 2003 (Massachusetts Highway Department 2006).

#### 3.8.2.2 Utilities

The following discussion summarizes the major utility systems at the 104 FW installation at Westfield-Barnes Airport.

*Water*

Potable water is supplied to the 104 FW installation via a 12-inch main water distribution pipe that is located along Falcon Drive and operated by the City of Westfield. A series of 8-inch distributor pipes connect to this 12-inch main to provide potable water to the 104 FW (MAARNG 2006). This water is provided via the Barnes Aquifer, which underlies Westfield-Barnes Airport (refer to Section 3.10.2). Water supplies and systems serving the 104 FW installation are adequate and there are currently no capacity or supply issues (personal communication, Dubois 2006).

*Sanitary Sewer*

The sanitary sewer system for the 104 FW installation consists of a series of 8-inch pipes that connect to a sewer main along Route 202 and transport wastewater to a publicly owned treatment facility operated by the City of Westfield (MAARNG 2000). The current system is adequate to serve the installation, and there are no capacity issues (personal communication, Dubois 2006).

*Storm Drainage*

Drainage associated with the 104 FW installation is directed by surface topography and perimeter curbing to storm water inlets, drainage catch basins, and roadside ditches and culverts, which are connected via underground pipes (refer to Section 3.10.2). Storm water runoff at the 104 FW west parcel flows into storm water retention ponds, in which the water is filtered through the underlying sandy soils and into the groundwater. Due to the high percolation rate of the soils underlying the retention ponds, the ponds serve as infiltration basins and therefore surface runoff is not discharged outside the installation (personal communication, Dubois 2006).

*Natural Gas*

Natural gas is currently provided to the 104 FW installation by Westfield Gas & Electric via natural gas lines within the utility corridor that runs parallel to Route 202 (MAARNG 2006). There are currently no limitations with respect to the provision of natural gas to the 104 FW installation (personal communication, Dubois 2006).

*Electricity*

Electricity is supplied to the 104 FW installation by Westfield Gas & Electric via overhead power lines located along Falcon Drive (MAARNG 2006). There are currently no limitations with respect to the provision of electricity to the 104 FW installation (personal communication, Dubois 2006).

## 3.9 EARTH RESOURCES

### 3.9.1 DEFINITION OF THE RESOURCE

Earth resources include topography, geology, and soils. Topography refers to an area's surface features including its vertical relief. Geologic resources of an area typically consist of surface and subsurface materials and their inherent properties. The term "soils" refers to unconsolidated materials formed from the underlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. Soil drainage, texture, strength, shrink/swell potential, and erodibility all determine the suitability of the ground to support man-made structures and facilities. These resources may have scientific, historical, economic, and recreational value. The ROI for earth resources is the 104 FW installation at Westfield-Barnes Airport.

### 3.9.2 EXISTING CONDITIONS

#### 3.9.2.1 Topography

The 104 FW at Westfield-Barnes Airport is located in Hampden County, in western Massachusetts. The County is bounded by the Berkshire Hills on the west and by low hills of the Worcester Plateau on the east. The primary topographic features in the vicinity are the nearly level floodplains and gently sloping terraces associated with the Connecticut River, and the steep intrusive dikes that rise several hundred feet above the valley floor. The Connecticut River valley is flanked by undulating ridges. Elevation ranges from about 40 feet, where the river crosses the State line, south of Westfield to about 1,200 feet on Mount Tom north of Holyoke (Natural Resources Conservation Service [NRCS] 1978). The topography of the 104 FW installation is generally flat, with the average elevation being 275 feet MSL.

#### 3.9.2.2 Geology

Westfield-Barnes Airport lies within the Hartford Basin in the Connecticut Valley physiographic region. This region is characterized by glacial material underlain by igneous and sedimentary rock. Surficial glacial deposits at the installation are reported to consist of glacial outwash sand and gravels with a reported thickness of approximately 100 to 150 feet (104 FW 2002).

#### 3.9.2.3 Soils

The dominant surface soils at the installation are loamy sand and urban fill. There are four predominant soil types found on the 104 FW installation; these include the Hinckley loamy sand at 0 to 3 percent slopes, the Hinckley loamy sand at 3 to 8 percent slopes, the Hinckley loamy sand at 15 to 25 percent slopes, and a soil type referred to as Urban Land.

*Hinckley loamy sand 0 to 3 percent slope* – This is a nearly level soil that is deep and excessively drained. It is found on glacial outwash deposits. The surface layer is generally friable, brown loamy sand about 5 inches thick. The subsoil is loose, single grained brown and yellowish brown gravelly loamy sand about 13 inches thick. The substratum consists of alternate layers of loose, single grained, brown sand and gravel to a depth of 60 inches. Permeability of this soil is very rapid, while available water capacity is very low. The hazard of erosion of this soil is slight. This soil has few limitations to most urban uses (NRCS 1978).

*Hinckley loamy sand 3 to 8 percent slope* – This gently sloping and undulating soil is deep and excessively drained. It is also found on glacial outwash deposits. The surface layer is generally friable, brown loamy sand about 5 inches thick. The subsoil is loose, single grained brown and yellowish brown gravelly loamy sand about 9 inches thick. The substratum consists of alternate layers of loose, single grained, brown sand and gravel to a depth of 60 inches. Permeability of this soil is very rapid, while available water capacity is very low. The hazard of erosion of this soil is slight. This soil has few limitations to most urban uses (NRCS 1978).

*Hinckley loamy sand 15 to 25 percent slope* – This moderately steep or hilly soil is deep and excessively drained. It is also found on glacial outwash deposits. The surface layer is generally friable, brown loamy sand about 3 inches thick. The subsoil is loose, single grained brown and yellowish brown gravelly loamy sand about 11 inches thick. The substratum consists of alternate layers of loose, single grained, brown sand and gravel to a depth of 60 inches. Permeability of this soil is very rapid, while available water capacity is very low. The hazard of erosion of this soil is severe. This soil has limited value for most urban uses due to its slope (NRCS 1978).

*Urban Land* – This soil type includes lands that have been so altered by man or obscured by urban works and structures that identification of soils in not possible. Buildings, roadways, pavements, and other man-made structures obscure the original soil. Much of the cantonment area is categorized as urban land soils (NRCS 1978).

## 3.10 WATER RESOURCES

### 3.10.1 DEFINITION OF THE RESOURCE

Water resources analyzed in this section include surface water and groundwater quantity and quality. Surface water resources include lakes, rivers, and streams and are important for a variety of reasons, including economic, ecological, recreational, and human health. Groundwater

includes the subsurface hydrologic resources of the physical environment and is an essential resource. Groundwater properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

Other issues relevant to water resources include the downstream water and watershed areas affected by existing and potential runoff, and hazards associated with 100-year floodplains. Floodplains are defined by EO 11988, *Floodplain Management*, as "the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year" (that area inundated by a 100-year flood). Floodplain values include natural moderation of floods, water quality maintenance, groundwater recharge, as well as habitat for many plant and animal species.

The ROI for water resources includes the existing 104 FW and MAARNG lease holdings, which are situated within the boundaries of Westfield-Barnes Airport, as well as nearby surface waters that receive runoff generated within the project area (see Figure 2.3-1).

### 3.10.2 EXISTING CONDITIONS

#### 3.10.2.1 Surface Water

The 104 FW installation is located within three drainage basins: the Connecticut Lowland drainage basin, which drains into the Connecticut River about 4 miles east of the airport; the Westfield River sub-basin, which includes most of the City of Westfield and drains into the Westfield River about 1.5 miles south of the airport; and the Manhan River drainage sub-basin, which drains into the Manhan River about 2 miles northwest of the airport (ANGRC 1992; MAARNG 2000).

In general, the direction of surface water flow at the airport is influenced by a series of streams and ponds in the surrounding area. Several ponds and two streams are located in the vicinity of the 104 FW installation, though none of these surface water features is located within the installation. The nearby ponds include Buck Pond, Round Pond, Doe Pond, Horse Pond, Long Pond, and Pequot Pond to the northeast of the 104 FW east parcel, and an unnamed pond to the southwest of the airport property (104 FW 2004b). Nearby streams include Arm Brook to the west of the airport boundary, and Pond Brook, which flows immediately east of the 104 FW east parcel (ANGRC 1992).

Surface water drainage at Westfield-Barnes Airport is influenced by a topographic high point that acts as a watershed divide and generally runs north-south along the major runway (Runway 02/20). On the west side of the airport, which includes the 104 FW west parcel, surface water flow is predominantly westward towards Arm Brook. On the east side of the airport, which includes the 104 FW east parcel, surface flow is eastward towards Pond Brook (104 FW 2004b).

Both Arm Brook and Pond Brook flow south and discharge into the Westfield River. The Westfield River flows in an easterly direction and eventually discharges to the Connecticut River (104 FW 2004b).

In addition to the larger regional basins described above, the 104 FW has been divided into multiple storm water drainage sub-basins that reflect the local surface topography (104 FW 2004b). These basins have been designated DA-001 through DA-007 and discharge runoff into on-site retention ponds (Retention Pond #1 through Retention Pond #7) located throughout the facility. Under normal storm event conditions, the on-site retention ponds do not discharge storm water. A majority of the runoff on-site is discharged into the aforementioned retention ponds; however, there are two Storm Water Drainage Outfalls (SDO) located on-site (point source locations where storm water exits the installation property).

The northern half of the 104 FW main cantonment area is the area designated DA-001, which discharges into storm water Retention Pond #1. Retention Pond #1 is located on the west-central portion of the main cantonment area adjacent to the POL Facility.

The southeast portion of the main cantonment area, including the eastern portion of the Aircraft Parking Apron, comprises Drainage Basin DA-002 which discharges into Retention Pond #2. Retention Pond #2 is located immediately southeast of Building 40 in the west-central portion of the main cantonment area adjacent to the POL Facility. Taxiways and off-site drainage from the airport runways also discharge into Retention Pond #2 which contains an overflow spillway discharging into a drainage ditch. The ditch flows south and crosses the installation property at SDO-001.

Drainage Basin DA-003 consists of drainage from the Vehicle Maintenance Facility, the Base Supply Complex, the western portion of the Aircraft Parking Apron, and the southwestern portion of the main cantonment area. DA-003 discharges into Retention Pond #3 located immediately west of Building 52.

The base supply area, including runoff from the HAZMAT Pharmacy building, comprises the area within Drainage Basin DA-004 that drains into Retention Pond #4. Retention Pond #4 is located west of Building 52.

Drainage Basin DA-005 includes drainage from a small portion of the POL facility that discharges into Retention Pond #5. Retention Pond #5 is located in the center of the POL facility.

Building 3, including its parking areas, comprises DA-006 which drains to Retention Pond #6 located northeast of Building 3. DA-007 is located within the western portion of the Base Supply Complex and drains into Retention Pond #7 located immediately west of Building 54 (104 FW 2003, 2004b).

Storm water runoff discharging into the separate storm water retention ponds referenced above permeates into the subsurface sandy soils thus minimizing drainage problems. Due to the high percolation rate of the soils underlying the retention ponds, the ponds serve as infiltration basins and therefore surface runoff is not discharged outside the installation (104 FW 2004b).

A high percentage of airport property, including active administrative and industrial areas of the installation, consists of surfaces impervious to water infiltration such as asphalt, concrete, and buildings/facilities exhibiting high run-off coefficients. Drainage from these areas is directed by surface topography and perimeter curbing to storm water inlets, drainage catch basins, and roadside ditches and culverts, which are connected via underground pipes. In addition, several oil/water separators located throughout the installation are a component of the surface water collection system. Storm water drainage along the airport runways discharges into the drainage system maintained by the airport. Storm water runoff from the aircraft parking apron sheet flows towards storm drainage catch basins located around the perimeter of the apron (104 FW 2004b). Discharge from roofs, parking areas, streets, and associated maintenance facility paved areas currently percolate into the groundwater through direct surface absorption, swales, and lagoons (104 FW 1995a). Currently, no surface water is used for water supply by the 104 FW (104 FW 2004b).

Storm water discharge from industrial activity at the 104 FW installation is covered by a Multi-Sector General Permit (MSGP) issued by the USEPA (MSGP Number MAR05C225). The MSGP requires that a Storm Water Pollution Prevention Plan (SWPPP) be developed and implemented to improve the quality of storm water runoff generated at the 104 FW installation (104 FW 2004b). All installation industrial activities that could impact storm water runoff quality are identified and described in this SWPPP.

Wetlands are present in the northeastern portion of the 104 FW munitions area, as well as to the south of this area and in several areas along Pond Brook. Storm water runoff from the munitions area flows through surface drainage ditches and as overland sheet flow to the east toward the wetland area or to the southeast towards Pond Brook. The wetland area discharges into an unnamed tributary of Pond Brook (104 FW 2004b). Refer to Section 3.11.2.4 for additional information on wetlands.

#### 3.10.2.2 Floodplains

According to the Federal Emergency Management Agency Flood Insurance Rate Map that includes the project area, an isolated area designated Zone A, “areas of 100-year flood; base flood elevations and flood hazard factors not determined” is located in the northeast portion of the munitions area of the 104 FW installation. This area receives surface runoff from the 104 FW installation and is located down slope of the munitions storage complex. No other mapped floodplain areas are located within the 104 FW installation. Additional areas designated as Zone

A associated with Pond Brook and several related ponds are located to the north, east, and south of the munitions area (Federal Emergency Management Agency 1978; 104 FW 2004b).

#### 3.10.2.3 Groundwater

Westfield-Barnes Airport is underlain by the Barnes Aquifer, which is a primary source of potable water for the airport and the community of Westfield. The State of Massachusetts has designated an area that includes Westfield-Barnes Airport as an Approved Zone II Aquifer Protection Area, which means that this area is a contributing zone to a drinking water aquifer. Water quality associated with the aquifer is considered good. The Barnes Aquifer is an unconfined aquifer situated within glacial outwash deposits of sands and gravels and ranges from 50 to 250 feet in thickness. Groundwater below the airport is generally found at a range from 20 to 30 feet below ground surface and flows toward the south. The primary water sources for the City of Westfield and Westfield-Barnes Airport is groundwater from a series of nine municipal wells screened in the surficial deposits of glacial sands and gravels with well yields estimated to range from 300 to 1,000 gallons per minute (104 FW 2003, 2004b). Two of the municipal wells are located approximately 1,000 feet north of Runway 15-33 (Figure 3.10-1)(104 FW 2003).

The groundwater flow velocity may vary across the site due to variations in site geology and may vary seasonally due to fluctuations in groundwater levels and possible resultant fluctuations in site hydraulic gradients. The overall hydraulic conductivity at the site can be considered relatively high and capable of transmitting groundwater and contaminants relatively easily. The capacity of contaminants to migrate also depends on other properties of the aquifer and of individual contaminants including solubility, absorption, adhesion, volatilization, reactions with aquifer material and biodegradation (104 FW 2003).

## 3.11 BIOLOGICAL RESOURCES

### 3.11.1 DEFINITION OF THE RESOURCE

Biological resources consist of native or naturalized plants and animals, and their habitats, including wetlands. Although the existence and preservation of biological resources are both intrinsically valuable, these resources also provide essential aesthetic, recreational, and socioeconomic benefits to society. This section focuses on plant and animal species and vegetation types that typify or are important to the function of the ecosystem, are of special societal importance, or are protected under federal or state law or statute. For purposes of this assessment, sensitive biological resources are defined as those plants and animal species listed by the USFWS or the Massachusetts Division of Fisheries and Wildlife (MDFW) Natural Heritage and Endangered Species Program. Three categories of protection status are included in this section including 1) federally listed threatened and endangered species, 2) state listed threatened and endangered species, and 3) other sensitive species (i.e., federal candidate, proposed threatened, and proposed endangered species).

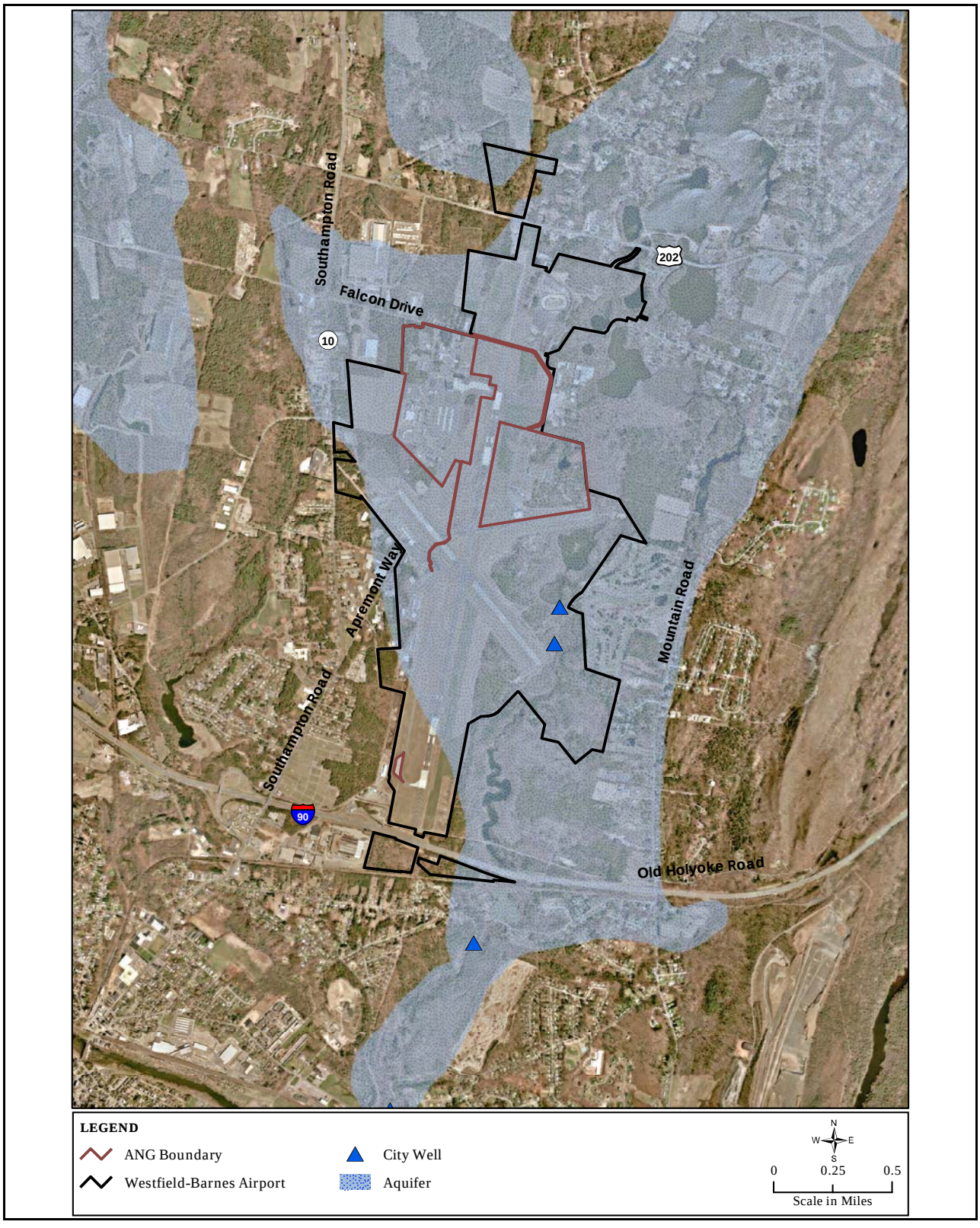



**Figure 3.10-1. Barnes Aquifer and Municipal Wells in the Vicinity of Westfield-Barnes Airport**

**Federally Listed Threatened and Endangered Species.** The Endangered Species Act (ESA) of 1973 provides protection to species federally listed as endangered or threatened. Endangered species are those species that are at risk of extinction in all or a significant portion of their range. Threatened species are those that could be listed as endangered in the near future.

**State Listed Threatened and Endangered Species.** The State of Massachusetts maintains its own list of State endangered and threatened animal species.

**Other Sensitive Species.** Taxa under this heading are those federally listed as candidate, proposed endangered, and proposed threatened species. Candidate species are those for which the U.S. Fish and Wildlife Service (USFWS) has sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened, but issuance of proposed rules for these species is precluded by higher priority listing actions. Proposed endangered and threatened species are those proposed for listing as endangered and threatened, respectively, and for which formal ruling is in progress. At present, none of those species receive legal protection under the ESA.

In addition, EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds* (2001), recognizes the ecological and economic importance of migratory birds to this and other countries. It requires federal agencies to evaluate the effects of their actions and plans on migratory birds (with an emphasis on species of concern) in their NEPA documents. Species of concern are those identified in 1) the report "Birds of Conservation Concern 2002" (USFWS 2002), 2) priority species identified by established plans such as those prepared by Partners in Flight, or 3) listed species in 50 CFR 17.11 *Endangered and Threatened Wildlife*.

**Wetlands.** Wetlands are defined by the U.S. Army Corps of Engineers (USACE) and USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include marshes, bogs, and similar areas" (33 CFR 328.3[b]; 1984). Wetlands provide a variety of functions including groundwater recharge and discharge; flood attenuation; sediment stabilization; sediment and toxicant retention; nutrient removal and transformation; aquatic and terrestrial diversity and abundance; and aesthetic values. Three criteria are necessary to define wetlands: hydrophytic vegetation, hydric soils, and hydrology (frequency of flooding or soil saturation). Jurisdictional wetlands are those subject to regulatory authority under Section 404 of the CWA. The jurisdictional status of wetlands is not considered under EO 11990, *Protection of Wetlands*; therefore, any wetland that meets the three criteria stated above is protected under this EO. Additionally, the Wetlands Protection Act (310 Code of Massachusetts Regulations [CMR] 10.00) also regulates wetlands in the State of Massachusetts.

### 3.11.2 EXISTING CONDITIONS

#### 3.11.2.1 Vegetation

The project area occurs at an elevation of approximately 250 feet MSL in the Eastern Broadleaf Forest (Oceanic) Province. This province is characterized by deciduous forest dominated by tall, broadleaf trees that provide a dense canopy in the summer and completely shed their leaves in winter (Bailey 1995). Lower layers of small trees and shrubs are sparse. The perimeter areas of the airport consist of stands of evergreen and deciduous trees (MAARNG 2000). The most common trees in the area include oak, beech, birch, hickory, walnut, maple, basswood, elm, and ash (Massachusetts Air National Guard [MAANG] nd). Much of the airport is developed and the small amount of vegetation that exists includes grasses and low-growing shrubs. Plant species known to occur on site are listed in Table 3.11-1.

#### 3.11.2.2 Wildlife

This section focuses on terrestrial and aquatic wildlife living in a natural, undomesticated setting. Wildlife at the airport itself may be limited due to the patchy and discontinuous nature of wildlife habitat on site. Species adapted to disturbed and patchy habitat occur on the airport and may include white-footed mouse (*Peromyscus leucopus*), Northern Cardinal (*Cardinalis cardinalis*), and common garter snake (*Thamnophis sirtalis*) (ANGRC 1992). Other species that may occur at the airport include white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), porcupine (*Erithizon dorsatum*), rabbits (*Sylvilagus* sp.), and other small mammals (MAARNG 2000). Grassland birds, not identified as sensitive species, documented as breeding at Westfield-Barnes Airport include Savannah Sparrow (*Passerculus sandwichensis*) and Eastern Meadowlark (*Sturnella magna*) (USFWS 1999). Various other birds, reptiles, and amphibians may also be found within the area.

#### 3.11.2.3 Rare, Threatened, and Endangered Species

Table 3.11-2 lists special status plant and animal species that potentially occur in the project area vicinity. As documented in other reports for the airport, no federally threatened or endangered species are known to occur within the airport area. However, the Bald Eagle (*Haliaeetus leucocephalus*), a federally threatened species, and the Peregrine Falcon (*Falco peregrinus*), a State endangered species, may transiently occur (USFWS 1999). One Peregrine Falcon bird-aircraft strike fatality at Westfield-Barnes Airport was reported to the MassDEP (ANGRC 1992). No federally listed or proposed, threatened or endangered species, or critical habitat under USFWS jurisdiction are known to occur in the project area (USFWS 2006). Six State listed species may occur in the area (Table 3.11-2). The marbled salamander occurs in the wetland areas along Pond Brook to the east of the Westfield-Barnes Airport (MDFW 1994).

**Table 3.11-1. Plant Species Occurring at Westfield-Barnes Airport, Westfield, Massachusetts**

| *Common Name* | *Scientific Name* |
|---|---|
| American plantain | *Plantago americana* |
| Bedstraw | *Galium sp.* |
| Big toothed aspen | *Populus grandidentata* |
| Black cherry | *Prunus serotina* |
| Bushy clover | *Lespedeza violacea* |
| Common dandelion | *Taraxacum officinale* |
| Common ragweed | *Ambrosa artemisiifolia* |
| Cottonwood | *Populus sp.* |
| Crab grass | *Digitaria sanguinalis* |
| English plantain | *Plantago lanceolata* |
| Grass-leaved goldenrod | *Solidago sp.* |
| Hoary alyssum | *Berteroa incana* |
| Japanese knotweed | *Polygonum cuspidatum* |
| Meadowsweet spirea | *Spiraea sp.* |
| Pigweed | *Chenopodium album* |
| Pokeberry | *Phytolacca americana* |
| Raspberry cane | *Arundinaria sp.* |
| Red clover | *Trifolium pretense* |
| Red oak | *Quercus ruba* |
| Staghorn sumac | *Rhus typhina* |
| Tall goldenrod | *Solidago sp.* |
| White clover | *Trifolium repens* |
| White oak | *Quercus alba* |
| White pine | *Pinus strobes* |
| Wild radish | *Raphanus raphanistrum* |

Sources: Baystate Environmental Consultants, Inc. 2002a, 2002b.

**Table 3.11-2. State Threatened and Endangered Plant and Animal Species Documented or Likely to Occur in the Town of Westfield, with Assessment of Potential for Occurrence on the Installation**
**(Page 1 of 2)**

| *Common Name* | *Scientific Name* | *Status* | *Potential for Occurrence* |
|---|---|---|---|
| **Plants** | | | |
| New England blazing star | *Liatris scariosa var. angliae* | SC | Low potential. Not documented at the airport. This species utilizes open areas with dry, sandy, low nutrient soils that are supporting early to mid-successional communities, usually sandplain grasslands or coastal heathlands (MDFW 1995). |
| **Invertebrates** | | | |
| New Jersey tea inchworm | *Apodrepanulatrix liberaria* | SE | Low potential. Not known to occur in the vicinity of the airfield. Occurs in pitch pine-scrub oak woodlands; red cedar glades; and grassy glades and balds (Connecticut Department of Environmental Protection 2004). Baystate Environmental Consultants documented the occurrence of the New Jersey Tea plant, the host plant for the New Jersey tea inchworm, in the southeast quadrant of the airport. The New Jersey tea inchworm was not observed in either worm or moth stages of its life cycle in this area. |
| **Amphibians** | | | |
| Marbled salamander | *Ambystoma opacum* | ST | Moderate potential (southern Massachusetts is at the northern fringe of its habitat range). Documented in the wetland areas east of the airport. This species typically lives beneath stones, logs, and other ground debris near streams and pond margins in wooded areas mixed with white pines and dominated by southern hardwood stands of oak and hickory. |
| **Birds** | | | |
| Upland Sandpiper | *Bartramia longicauda* | SE | Moderate potential. This species occurs in open meadows, pastures, hayfields, and short grasslands. Has been historically documented as breeding at the Westfield-Barnes Airport (USFWS 1999). |
| Grasshopper Sparrow | *Ammodramus savannarum* | ST | Moderate potential. This species occurs in open fields. Documented as breeding within the Westfield-Barnes Airport. Occurs in sandplain grasslands, pastures, hayfields, and airfields characterized by bunch grasses. |

**Table 3.11-2. State Threatened and Endangered Plant and Animal Species Documented or Likely to Occur in the Town of Westfield, with Assessment of Potential for Occurrence on the Installation**
**(Page 2 of 2)**

| *Common Name* | *Scientific Name* | *Status* | *Potential for Occurrence* |
|---|---|---|---|
| Vesper Sparrow | *Pooecetes gramineus* | ST | Moderate potential. This species occurs in plains, prairie, dry shrublands, weedy pastures, fields, and woodland clearings (NatureServe 2006). Has been historically documented from the Westfield-Barnes Airport. |

ST = State Threatened, SE = State Endangered,
SC = State Special Concern.
Note: In accordance with the International Ornithological Congress, common names of birds are capitalized.
Sources: MAARNG 2000; MDFW 2006.

Westfield-Barnes Airport is located within the Massachusetts Natural Heritage and Endangered Species Program 2005 Priority Habitats for State-Protected Rare Species. Under the Massachusetts Endangered Species Act, if the project site is within Priority Habitat of Rare Species and the activity is not exempt, then the project proponent must consult with the Natural Heritage and Endangered Species Program to determine the potential for impacts. No critical habitat as defined by the USFWS has been identified at Westfield-Barnes Airport.

### 3.11.2.4 Wetlands and Other Aquatic Habitats

Section 404 of the CWA established a program to regulate the discharge of dredge and fill material into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. EO 11990, *Protection of Wetlands*, requires federal agencies to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.

A wetland delineation of the Westfield-Barnes Airport has not been accomplished, although site specific evaluations have been conducted in the past (Westfield-Barnes Airport 2004). A review of National Wetland Inventory (NWI) maps that are produced by the USFWS indicates that while there are numerous wetland areas on the airport property, there are only three wetlands on the ANG eastern parcel (and none on the western parcel) (USFWS 2006). Three freshwater ponds are located to the north and northeast of the munitions storage igloos at the 104 FW installation (East Parcel); one is considered a NWI wetland and the other two are identified as wet areas by the City of Westfield. The NWI wetland is categorized as a freshwater forested/shrub wetland and is approximately 12 acres in size (USFWS 2006). This wetland is

identified by the Massachusetts Natural Heritage and Endangered Species Program as an *Estimated Habitat of Rare Wildlife*. Projects that are subject to the Massachusetts Wetlands Protection Act that fall within an area classified as *Estimated Habitat of Rare Wildlife* require that a Notice of Intent be filed with the Natural Heritage and Endangered Species Program for review. Wetland areas identified as estimated habitat of rare wildlife, if proposed for development, must undergo a wildlife habitat evaluation by a trained wildlife biologist (310 CMR 10.60). A Notice of Intent must be filed when disturbing a wetland this is independent of an estimated habitat of rare wildlife area.

## 3.12 CULTURAL RESOURCES

### 3.12.1 DEFINITION OF THE RESOURCE

Cultural resources are historic districts, sites, buildings, structures, or objects considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes. They include archaeological resources, historic architectural/engineering resources, and traditional resources. Cultural resources that are eligible for listing in the National Register of Historic Places (NRHP), called historic properties, are evaluated for potential adverse impacts from actions. In addition some cultural resources, such as American Indian sacred sites or traditional resources may not be historic properties but they are also evaluated under NEPA for potential adverse effects from federal actions. These resources are identified through consultation with appropriate American Indian or other interested groups. On 21 November 1999, the DoD promulgated its American Indian and Alaska Native Policy emphasizing the importance of respecting and consulting with tribal governments on a government-to-government basis. The Policy requires an assessment, through consultation, of the effects of proposed DoD actions that may have the potential to significantly affect protected tribal resources, tribal rights, and Indian lands before decisions are made regarding the action.

The ROI for cultural resources is the area within which the Proposed Action has the potential to affect existing or potentially occurring archaeological, architectural, or traditional cultural resources. For the construction portion of the Proposed Action at the 104 FW installation, the ROI is defined as each project's footprint, including any areas that could be used temporarily for staging or other project-related activities (refer to Figures 2.3-1, 2.3-2). For changes associated with the proposed conversion to F-15 aircraft, the ROI would be the area delimited by the 65 dB noise contour (refer to Figure 4.1-1).

### 3.12.2 EXISTING CONDITIONS

#### 3.12.2.1 Historical Setting

Like most of North America, western Massachusetts was likely first inhabited approximately 12,000 years ago. This time marks the end of nearly two million years of a predominantly glacial and periglacial environment in North America that is responsible for most of the local landscape features. It was the end of the Pleistocene Epoch and the beginning of the Holocene, the current epoch. As the ice melted and retreated northward, it left behind a stark landscape that was quickly colonized by plants and animals alike. In addition to the fauna of today, the area was also host to mammoth, musk ox, giant beaver, mastodon, and sloth. It was a lush, wet environment that could easily support human occupation (Fagan 1991).

The pre-contact occupation of the Mid-Atlantic region is conventionally divided into three major periods that reflect technological developments and associated social adaptation. These periods are the Paleo-Indian, Archaic, and Woodland. The Archaic and Woodland periods are further divided into Early, Middle, and Late sub periods (Fagan 1991).

Paleo-Indian period (12,000 – 9,500 years before present [BP]) sites are uncommon in the Mid-Atlantic region, probably due in part to poor preservation conditions, the rise in sea levels subsequent to the retreat of the ice, and the nomadic nature of the Paleo-Indian people. Sites from this period are characterized by the presence of finely crafted, fluted stone projectile points usually made of high quality cryptocrystalline stone such as chert or jasper. The Archaic period (9,500 – 4,000 BP) is marked by technological and cultural adaptations. The Early Archaic sub period (9,500 – 8,000 BP) served as a transitional phase from the Paleo-Indian period, as new, smaller, projectile point styles were introduced (Funk 1978). During the Middle Archaic sub period (8,000 – 6,000 BP), food technologies changed, including the introduction of ground stone tools for food preparation and an increased reliance on fishing and shellfish gathering. The Late Archaic sub period (6,000 – 4,000 BP), also known as the Terminal Archaic, involved a large increase in population and social complexity. Settlement sizes increased, large base camps were established and trading networks appeared at this time (Funk 1978).

The Woodland period (4,000 – 400 BP) is defined by the introduction of pottery across the region. During the Early and Middle Woodland sub periods (4,000 – 1,100 BP), base camps similar to those found during the Late Archaic shifted from small creek floodplains to large river floodplains (Funk 1978). Although indigenous groups in Massachusetts never developed the large-scale agricultural societies seen on the Ohio and Mississippi Rivers, by the Late Woodland sub period (1,100 – 400 BP), horticulture became a significant part of the overall subsistence system.

At the time Europeans arrived at the small rivers that drain southeastern Massachusetts, the area was inhabited by Algonquin speaking groups including the Pennacook, Mahican (Stockbridge), Pocumtuck, Nipmuck Nauset, and Wampanoag (State of Massachusetts 2006; Snow 1978). Groups were engaged in a maize-beans-squash horticulture while also utilizing upland, riverine, and maritime resources (Salwen 1978). European diseases were introduced as early as 1500 AD, reducing indigenous populations by as much as 90 percent (State of Massachusetts 2006).

Although a number of explorers and wayward fishermen visited the New England Coast between 1497 and 1602, Massachusetts post-contact history is generally assumed to begin with the 1620 arrival of the Mayflower. When the Pilgrims arrived at Plymouth, the area had already been depopulated and abandoned due to sweeping epidemics. Although nearly half of the original immigrants died within the first 2 years of arrival, the Plymouth settlement was successful and became only one of many similar settlements in the area. By 1640 there were more than 16,000 immigrants in Massachusetts (State of Massachusetts 2006). Although the Massachusetts Bay Colony was relatively autonomous for 30 years, the English crown began enforcing more control in 1660, spawning a backlash that would eventually culminate in the American Revolution. During this period Boston was known as the market town to the West Indies (State of Massachusetts 2006). One of the 13 original colonies, Massachusetts became the sixth state of the union on February 6, 1788.

After the Constitution was ratified in 1780, Massachusetts experienced a time of growth and prosperity, largely due to foreign trade. This period lasted until the trade restrictions of the Embargo Act and the disruption of the War of 1812 (State of Massachusetts 2006). This economic isolation was in part responsible for the growing industrialization of New England.

During the Civil War, Massachusetts was host to various stops of the Underground Railroad, and mustered the first African-American regiment of the war (State of Massachusetts 2006). After the war and through the first few decades of the 20$^{th}$ century, the Massachusetts economy was largely driven by industry dependant on non-local raw materials.

The Westfield-Barnes Airport is located just west of the Connecticut River, near the towns of Westfield, Chicopee, Holyoke, and Springfield. The area near Springfield was originally settled in 1639 as a private plantation to the Massachusetts Bay Colony, but also became a successful fur trading center (Massachusetts Info 2006). In 1669, the agricultural community of Westfield was established and remained the westernmost town in the Massachusetts colony until 1725 (City of Westfield 2006).

The area around Westfield-Barnes Airport, known as Hampden Plains, had been used by the military as a training and staging area as early as 1905 (Global Security 2006). During World War I, the Barnes Municipal Airport area was the location of a 1,000-acre Army camp known as

Camp Bartlett. As many as 13,000 men were housed in the camp for a period of 14 weeks prior to being deployed primarily to France and Germany (ANGRC 1992).

The ANG presence was first established at the Westfield Municipal Airport in 1946. With a mission of Air Defense Command, the base was established near its current position at the northwestern corner of the airport. In 1947, the 333$^{d}$ Fighter Squadron was redesignated the 131$^{st}$ Fighter Squadron (131 FS) and assigned to the ANG, flying the P-47 Thunderbolt (Global Security 2006).

The MAANG at Westfield-Barnes Airport has converted aircraft numerous times during its history. In 1950, the 131 FS converted from the P-47 to the P-51 Mustang. In 1954, Barnes received its first jets with the change to the F-94 Starfire which were exchanged for the F-86 Saber in 1957. In 1956, the 131 FS became part of the newly created 104$^{th}$ Fighter Group, both of which were assigned to the MAANG in 1962 (104 FW 1995a, 2006b).

In 1961, approximately 730 Air Guardsmen of the 104 FW were stationed in Phalsbourg, France and participated in the Berlin Airlift. Since then, the 104 FW at Barnes has changed aircraft three additional times. They converted to the F-84 Thunderstreak in 1964, the F-100 Supersaber in 1971, and the A-10A Thunderbolt II in 1979, which is still flown today (104 FW 1995a).

#### 3.12.2.2 Identified Cultural Resources

*Archaeological Resources*

Survey for archaeological resources on the 184 acre ANG installation at Westfield-Barnes Municipal Airport has been completed. Most of the installation surface has been modified by construction and other ground-disturbing activities, but preliminary examination of the ground and topographic maps indicated that approximately 30 acres were relatively undisturbed. The probability of locating archaeological resources in undisturbed locations was considered moderate given the proximity to sources of permanent water, the observed site density in adjacent areas of similar topography, and information received from communications with the Massachusetts Historical Commission (MHC) (ANGRC 1992, MHC 2006). The recent survey located a single small lithic. This location is outside of the ROI for construction and other activities associated with the Proposed Action. Most of the remainder of the 30 acres thought to be undisturbed was found to be disturbed, possibly much of it consisting of fill from runway construction; no other archaeological sites were located.

Although most of the installation represents the highly disturbed context of a built environment, there is still the possibility that other intact archaeological resources could also exist beneath disturbed areas.

No evidence was found of the World War I Army Camp Bartlett, although the installation may overlap with the camp's supposed location. The camp was only used for 14 weeks, but housed 13,000 men. Although such a brief but intense occupation could have left archaeological evidence (ANGRC 1992), nothing indicating the camp's presence was found during the most recent survey or any previous construction projects.

*Architectural Resources*

There are 16 facilities on the 104 FW installation that are either more than 50 years old, or were constructed during the Cold War era (Table 3.12-1). Preliminary evaluations of these buildings suggest that none of these facilities are eligible for the NRHP. Of the 16 facilities, 7 would be altered in some way by the Proposed Action. Although the Massachusetts State Historic Preservation Officer (SHPO)/MHC has not concurred with these eligibility findings, consultation is underway between the 104 FW and the Massachusetts SHPO.

**Table 3.12-1. Buildings Dating to Cold War Era or Older**

| ***Building Number*** | ***Current use*** | ***Build Date*** | ***NRHP Eligibility[1]*** |
|---|---|---|---|
| 1 | Reserve Forces Operational Training | 1951 | Unevaluated |
| 8 | Deployment Processing Facility | 1950 | Unevaluated |
| 10 | Pump Station Liquid Fuels | 1950 | Unevaluated |
| 12 | Base Engineer Storage Shed | 1956 | Unevaluated |
| 14 | Firing In Butt | 1954 | Unevaluated |
| 15 | Aircraft Maintenance Hangar | 1961 | Unevaluated |
| 16 | Heating Facility Building | 1961 | Unevaluated |
| 20 | Shop, Jet Engine Inspection, and Maintenance | 1969 | Unevaluated |
| 21 | Engine Shop, General Purpose | 1969 | Unevaluated |
| 25 | Squadron Operations | 1983 | Unevaluated |
| 26 | Weapons Release System Shop | 1983 | Unevaluated |
| 27 | Fuel System Maintenance Dock | 1983 | Unevaluated |
| 28 | Engine Shop, General Purpose | 1983 | Unevaluated |
| 29 | Telecommunications Facility | 1987 | Unevaluated |
| 30 | Security Police Entry Control Building | 1987 | Unevaluated |
| 67 | Storage, Segregated Magazine | 1967 | Unevaluated |

Note: 1. Preliminary evaluations suggest that none of these buildings are eligible for the NRHP.

*Traditional Resources*

There are no judicially established Native American lands within the State of Massachusetts. The Wampanoag Tribe of Gay Head (Aquinnah) of Massachusetts are a Federally recognized tribe within the State (National Park Service 2006) but have not expressed any particular concerns on or in the vicinity of the Westfield-Barnes Municipal Airport and the 104 FW installation. Additionally, the MHC has indicated that no traditional Native American resources have been documented to exist on or near the installation. In compliance with NEPA and Section 106 of the National Historic Preservation Act (NHPA), the 104 FW has initiated consultation with the Massachusetts SHPO/MHC and interested, federally recognized Native American tribes.

*NRHP Properties*

There are no properties listed on the NRHP within the 104 FW installation at Westfield-Barnes Airport.

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# 4.0 ENVIRONMENTAL CONSEQUENCES

This section describes the environmental effects that could result from the proposed aircraft conversion, associated personnel increases, and construction projects at the 104th Fighter Wing (104 FW) installation at Westfield-Barnes Airport. Section 4.0 describes the impacts analysis for the same 12 resource topics described in Section 3.0. For each resource the Proposed Action, Alternative Action, and No Action Alternative, are assessed for their potential to impact the natural and human environment.

Each of the 12 resource sections in Section 4.0 begin with an explanation of the methodology used to conduct the analysis of impacts, and describes what would constitute a significant impact. The Environmental Impact Statement (EIS) examines two possible scenarios for implementation of the decisions of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations for the 104 FW located at Westfield-Barnes Airport: 1) focusing aircraft take-offs to the north of the airport (Proposed Action) and 2) focusing aircraft take-offs to the south of the airport (Alternative Action). The predominant take-off direction is the only difference between these two action alternatives. Both of these alternatives include the proposed aircraft conversion, beddown of the Air Sovereignty Alert (ASA) mission, and implementation of improvements that will include construction and renovation of the facilities related to mission conversion, personnel increase, and resolution of current deficiencies. Each of these elements would be identical under either alternative. Although the No Action Alternative is not a viable alternative in this case (i.e., the BRAC decision has become law), the No Action Alternative (i.e., not implementing the 2005 BRAC Commission Final and Approved Recommendations) is also examined per Council on Environmental Quality (CEQ) requirements.

The impacts described in this section represent a best estimation of the consequences of implementing the 2005 BRAC Commission Final and Approved Recommendations for the 104 FW. The impact analysis for each alternative includes direct and indirect, as well as short-term and long-term impacts. The impacts of each alternative are compared against the baseline conditions described in Section 3.0. Although Section 4.0 is organized into 12 resource sub-sections, it is acknowledged that these resources are extensively interrelated. In recognition of those interrelationships, each resource topic relies upon the findings of relevant other analyses. For example, the noise impacts described in the Noise analysis are reflected in the analysis of Land Use, Socioeconomics (Environmental Justice), and Biological Resources. Another example is the proposed personnel increases, which are analyzed in Socioeconomics and Infrastructure (traffic). Cumulative impacts and irreversible and irretrievable commitment of resources are described in Section 5.0, and special operating procedures and mitigation measures are described in Section 6.0.

## 4.1 NOISE

### 4.1.1 METHODOLOGY

Noise associated with aircraft operations at Westfield-Barnes Airport, other transportation-related noise, and construction activities associated with the Proposed Action is considered in this section and compared with the current conditions described in Section 3.1.2 to assess potential impacts. Additionally, aircraft noise in the military training airspace will be addressed. Data developed during this process also supports analyses in other resource areas.

Based on numerous sociological surveys and recommendations of federal interagency councils, the most common noise-related benchmark referred to is a Day-Night Average Sound Level ($L_{dn}$) of 65 A-weighted decibels (dBA). This threshold is often used to determine residential land use compatibility around airports, highways, or other transportation corridors. Two other average noise levels are also useful:

- An $L_{dn}$ of 55 dBA was identified by the United States Environmental Protection Agency (USEPA) as a level ". . . requisite to protect the public health and welfare with an adequate margin of safety" (USEPA 1974). Noise may be heard, but there is no risk to public health or welfare.

- An $L_{dn}$ of 75 dBA is a threshold above which effects other than annoyance may occur. It is 10 to 15 dBA below levels at which hearing damage is a known risk (Occupational Safety and Health Administration 1983). However, it is also a level above which some adverse health effects cannot be categorically discounted.

Public annoyance is the most common impact associated with exposure to elevated noise levels. When subjected to $L_{dn}$ of 65 dBA, approximately 12 percent of persons so exposed will be "highly annoyed" by the noise. At levels below 55 dBA, the percentage of annoyance is correspondingly lower (less than 3 percent). The percentage of people annoyed by noise never drops to zero (some people are always annoyed), but at levels below 55 dBA it is essentially considered reduced enough to be essentially negligible.

### 4.1.2 IMPACTS

#### 4.1.2.1 Proposed Action

*Airfield Noise*

Under the Proposed Action, the number of transient military and civil aircraft operations at Westfield-Barnes Airport will not change appreciably from current conditions. However,

regarding based-military operations, the 104 FW will change missions and convert from A-10 aircraft to F-15 aircraft. Aviation-related noise will continue to be the dominant noise source in the region of influence's (ROI's) acoustic environment. Also, under this proposal the 104 FW will construct new facilities, demolish older facilities, and upgrade other aspects of the installation's supporting infrastructure. There are several aspects of this proposal that have the potential to alter the acoustic environment in the ROI.

Under the Proposed Action, the 104 FW will convert from 15 A-10 aircraft to 18 F-15 aircraft. Table 4.1-1 reflects the change in average daily aircraft operations at Westfield-Barnes Airport, which will increase from approximately 171 to approximately 179, a 5 percent increase.

**Table 4.1-1. Average Daily Operations at Westfield-Barnes Airport with Aircraft Conversion[1]**

| | ARRIVALS | | DEPARTURES | | OPERATIONS WITHIN CLOSED PATTERNS[2] | |
|---|---|---|---|---|---|---|
| *Aircraft* | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* | *7:00 a.m. – 10:00 p.m.* | *10:00 p.m. – 7:00 a.m.* |
| MAANG F-15 | 7.466 | 0[3] | 7.466 | 0 | 5.128 | 0 |
| MAARNG Helicopters | 2.397 | 0.409 | 2.529 | 0 | 0.756 | 0 |
| Other Military | 0.526 | 0 | 0.526 | 0 | 7.558 | 0 |
| General Aviation | 33.479 | 0[4] | 33.479 | 0 | 77.090 | 0 |
| **Total** | **43.868** | **0.409** | **44.000** | **0** | **90.532** | **0** |

Notes: 1. Daily operations are based on averages of annual operations; therefore, numbers are not rounded.
2. Since closed patterns consist of a landing and a takeoff (two aviation operations), the 88.380 aviation operations within closed patterns equate to 44.190 closed patterns.
3. There are no scheduled F-15 operations during this time period. Alert aircraft may be called upon to respond to threats; however, these would occur only on an as-needed basis.
4. There are no data available on General Aviation (GA) night time operations because the tower is closed during these periods. This does not mean that there are no GA operations that occur during these hours.

MAARNG = Massachusetts Army National Guard
Source: Air National Guard (ANG) 2006.

Aircraft noise levels at Westfield-Barnes Airport resulting from the Proposed Action are shown in Figure 4.1-1, and are depicted in relation to sensitive noise receptors in Figure 4.1-2. The land areas encompassed by these levels are compared with current noise levels in Table 4.1-2.

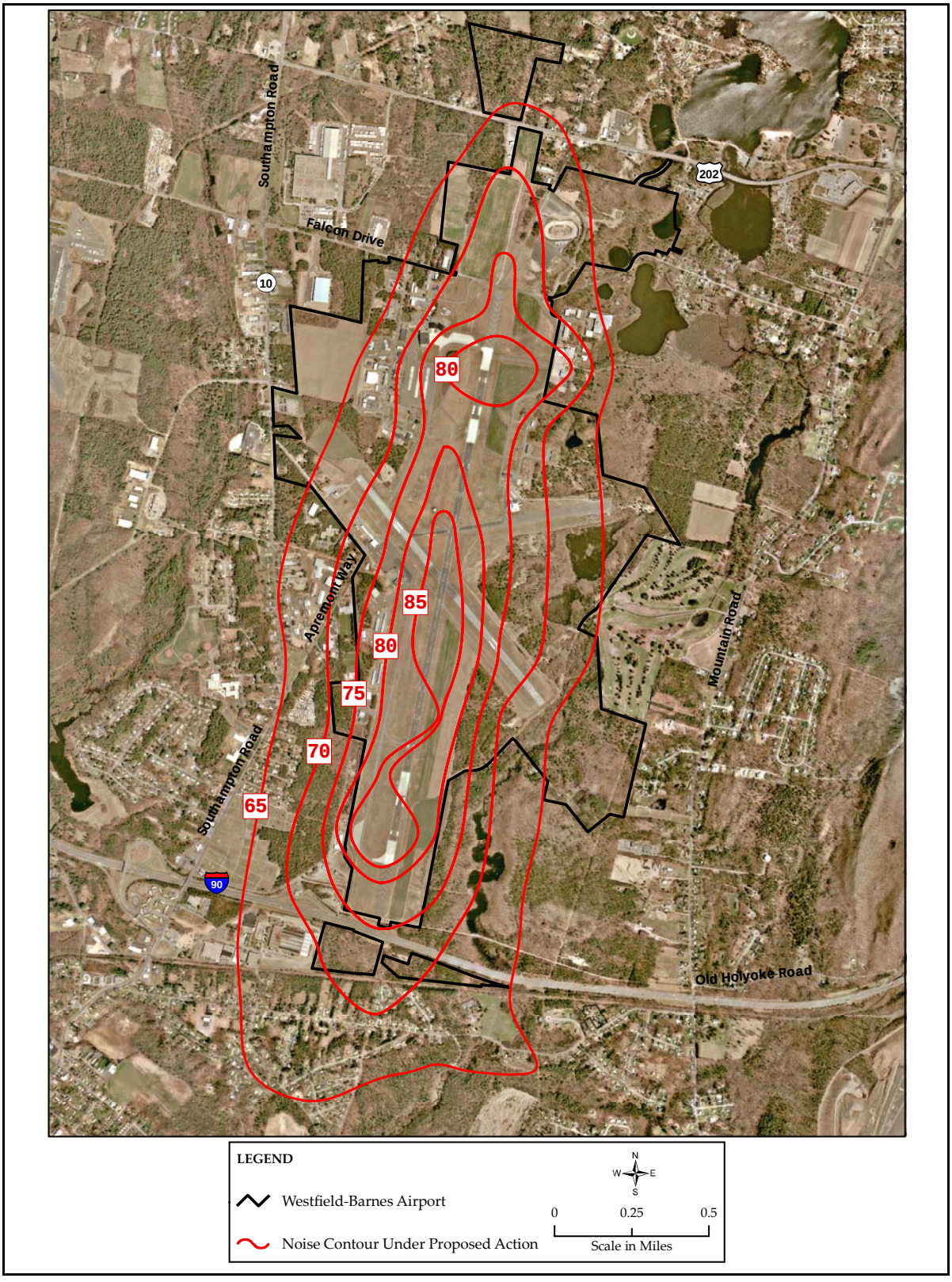



**Figure 4.1-1. Noise Contours under the Proposed Action at Westfield-Barnes Airport**

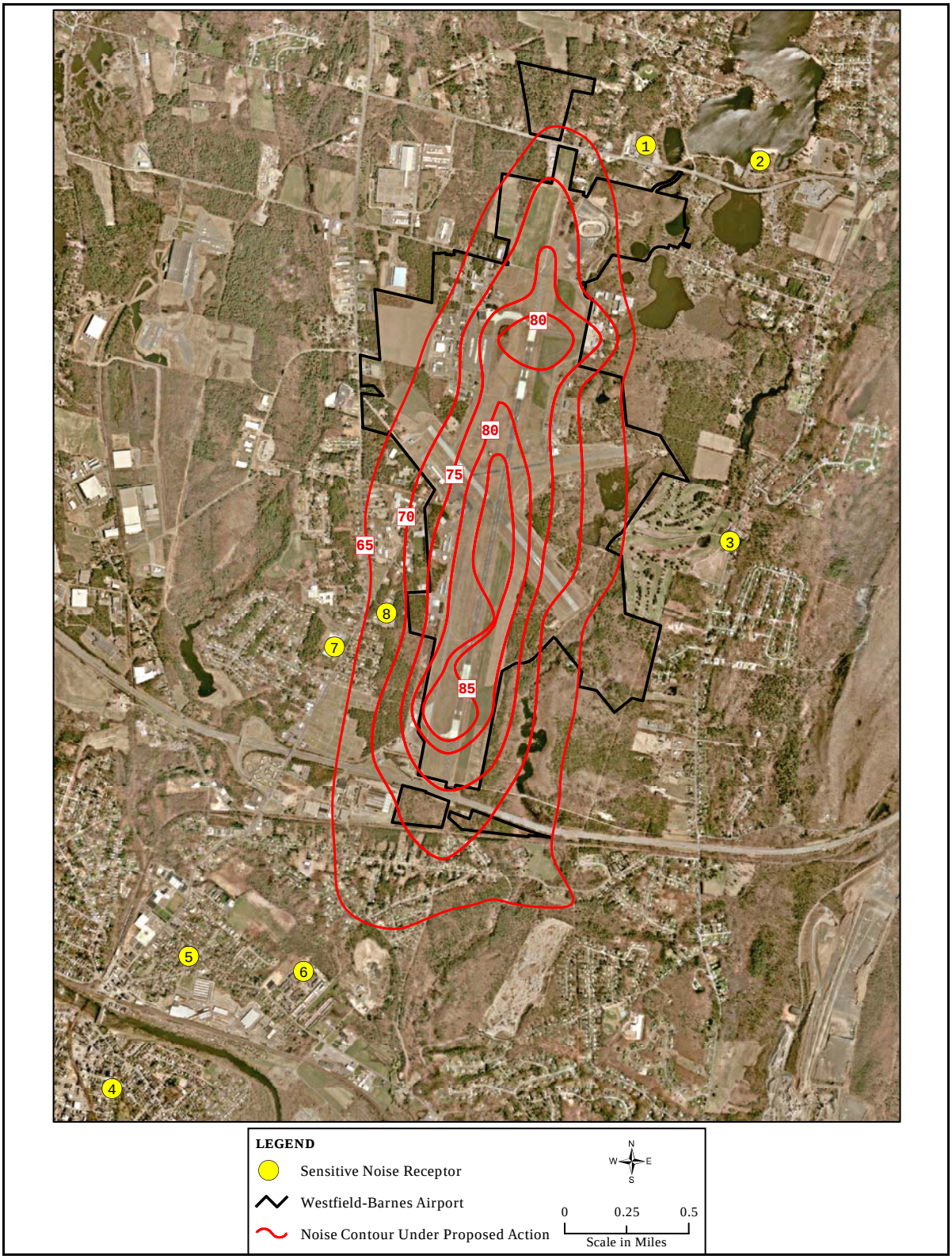



**Figure 4.1-2. Noise Sensitive Receptors in Relationship to the Noise Contours under the Proposed Action at Westfield-Barnes Airport**

**Table 4.1-2. Land Area Exposed to Indicated Sound Levels Under the Proposed Action**

| *Sound Level (In $L_{dn}$)* | ACRES OF LAND[1] | | |
|---|---|---|---|
| | *Current* | *Proposed Action* | *Net Change* |
| 65 – 70 | 275 | 773 | + 498 |
| 70 – 75 | 75 | 386 | + 311 |
| 75 – 80 | 2 | 266 | + 264 |
| 80 – 85 | 0 | 164 | + 164 |
| > 85 | 0 | 70 | + 70 |
| **Total > 65** | **352** | **1,659** | **1,307** |

Note: 1. Land areas exposed to indicated sound levels. Total area exposed to $L_{dn}$ 65 or greater is shown as totals.
Source: ANG 2006.

As shown, overall noise exposure around Westfield-Barnes Airport would increase under the Proposed Action. The acreage under the 65 dB contour (and greater) would increase substantially, from 352 acres to 1,659 acres, an increase of 1,307 acres, or a 371 percent increase. The same is true for noise exposure at specific points around Westfield-Barnes Airport (Figure 4.1-2). As shown in Table 4.1-3, noise exposure at those locations increases substantially over current conditions.

As identified in Section 4.1.1, an $L_{dn}$ of 75 dBA is a threshold above which some adverse health effects cannot be categorically discounted. While the total acreage under the 75 dB contour (and greater) would increase from 2 to 500 acres, it is important to note that there are no inhabited structures off airport property located within this area under the Proposed Action.

**Table 4.1-3. Specific Point Noise Exposure Under the Proposed Action**

| *Point ID* | *Description* | EXPOSURE (IN $L_{DN}$) | | *Change ($L_{dn}$)* |
|---|---|---|---|---|
| | | *Current* | *Proposed Action* | |
| **1** | Russian Evan Baptist Church | 50.0 | 60.8 | + 10.8 |
| **2** | Hampton Ponds State Park | 42.8 | 55.2 | + 12.4 |
| **3** | East Mountain Country Club | 42.9 | 57.4 | + 14.5 |
| **4** | St. Mary's School | 42.9 | 55.2 | + 12.3 |
| **5** | Moseley School | 46.7 | 61.6 | + 14.9 |
| **6** | Powder Mill Village Apartment Complex | 51.5 | 63.7 | + 12.2 |
| **7** | Northside Middle School | 48.4 | 62.9 | + 14.5 |
| **8** | Arbor Mobile Home Park | 52.8 | 67.0 | + 14.2 |

Source: ANG 2006.

As shown, noise levels under the Proposed Action increase at all specific locations assessed. Residential land that experiences increased noise levels in excess of the 65 Ldn threshold will be considered "incompatible" based on the Federal Interagency Committee on Urban Noise (FICUN) guidelines (FICUN 1980), and would be eligible for FAA-funded noise mitigation. It is important to note that compatibility, as determined by FICUN, does not constitute a federal determination that any use of land is necessarily acceptable or unacceptable under federal, state, of local law. The responsibility for determining the acceptable and permissible land uses and their relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Title 14 Code of Federal Regulations (CFR) Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses. Approximately 261 homes (including the Arbor Mobile Home Park) are expected to experience new noise levels above this threshold. All other sensitive receptors, although exposed to increased noise levels, will remain compatible with existing land uses.

Title 14 CFR Part 150 implements the former Aviation Safety and Noise Abatement Act of 1979 (49 United States Code [USC] 47501 through 47509). Part 150 promotes comprehensive noise evaluation and mitigation and is the primary program under which the Federal Aviation Administration (FAA) supports local airport noise compatibility planning and projects. Part 150 is a voluntary program that allows airport operators to prepare noise exposure maps and to recommend measures in a noise compatibility program to reduce noise and incompatible land uses based on the noise exposure maps. Airport operators may submit airport noise compatibility programs to the FAA for approval under criteria established by the Aviation Safety Noise Abatement Act and Part 150. The FAA is authorized to provide Airport Improvement Program funding for airport noise compatibility planning (i.e., the preparation of the noise exposure maps and the noise compatibility program) and for noise projects (i.e., measures approved by the FAA in a noise compatibility program).

For standard home construction, noise mitigation can include sound insulation or (for the most seriously affected) acquisition and removal of the home. It should be noted that mobile homes cannot be sound insulated and are normally purchased and removed. The details of any sound insulation or acquisition program is the subject of an FAA-funded Part 150 Noise Study, which is underway concurrent with this EIS, but is not a part of the EIS. The process of acquiring residences is guided by federal statute, which requires purchase of homes at fair market value and also requires provision of relocation assistance to all displaced residents (both owners and renters).

*Airspace Noise*

Aircraft-generated noise within the military training airspace used by the 104 FW would also be modified. The A-10 aircraft is an air-to-ground attack aircraft. Therefore, pilots make extensive use of low altitude Military Training Routes (MTRs), Low Altitude Tactical Navigation areas, the lower altitude regime of Military Operations Areas (MOAs), and Restricted Areas supporting operations on air-to-ground bombing and gunnery ranges. However, the F-15 aircraft is an air-to-air fighter. Pilots flying this aircraft generally spend most of their training period at higher altitudes, and in different elements of military training airspace.

As a result of the above, much of the land underlying airspace currently used by the 104 FW would be expected to experience decreased noise levels. The military training airspace projected for use after the aircraft conversion (e.g., Warning Areas over the Atlantic Ocean) is the same as that currently used by the F-15 currently stationed at Otis Air National Guard Base (ANGB). Therefore, there will be no change to the airspace currently supporting F-15 operations from Otis.

*Construction Noise*

Construction would most likely occur over an extended time-frame, and at any one time, only a small number of projects would be expected to be ongoing simultaneously. Therefore, noise associated with active construction sites would be expected to be intermittent and of relatively limited duration. A hypothetical scenario was developed to assess potential noise associated with proposed construction activities on the construction site. Primary noise sources during such activity would be expected to be heavy vehicles and earth moving equipment. Table 4.1-4 identifies sound levels associated with typical heavy construction equipment under varying modes of operation.

**Table 4.1-4. Typical Equipment Sound Levels**

| | SOUND LEVEL (IN dBA) UNDER INDICATED OPERATIONAL MODE[1] | | |
|---|---|---|---|
| ***Equipment*** | ***Idle Power*** | ***Full Power*** | ***Moving Under Load*** |
| Forklift | 63 | 69 | 91 |
| Backhoe | 62 | 71 | 77 |
| Dozer | 63 | 74 | 81 |
| Front-End Loader | 60 | 62 | 68 |
| Dump Truck | 70 | 71 | 74 |

Note: 1. Measured at 125 feet.
Source: United States Air Force (USAF) 1998.

The first step in the analysis was to estimate equipment usage and calculate the total acoustic energy that would be expected to be generated on the site. These data also provided information on an individual piece of equipment's relative contribution to the total amount of acoustic energy generated on the site. Next, individual equipment was spatially distributed throughout the construction zone considering "most likely" areas of operation. This yielded an equipment-weighted contribution to total site acoustic energy at different points throughout the site. With this spatial distribution, it was then possible to calculate a mean and standard deviation for the distribution along an axis running through the site. These data were then used to normally distribute the total acoustic energy throughout the site. Finally, the normally distributed energy from multiple source points throughout the site was aggregated at a range of points at varying distances from the site edge. This allowed a determination at those points of the total acoustic energy that had emanated off-site.

Calculations based on this conservative scenario indicate an equivalent noise level over an eight-hour period ($L_{eq(8)}$) of 67 dBA at a distance of 500 feet from the edge of the site. This is then normalized to an equivalent noise level over a 24-hour period ($L_{eq(24)}$) of 62 dBA. Since no construction activity would be expected to occur at night, this would be equivalent to $L_{dn}$ 62. At a distance of 1,000 feet from the site, noise levels are $L_{eq(8)}$ 62 dBA, and $L_{eq(24)}$ 58 dBA. Due to the conservative nature of this scenario, and the fact that sound attenuation only due to spherical spreading was considered, actual levels emanating off-site would be expected to be lower.

It should be noted that the areas involving construction are situated within areas already exposed to elevated noise from airfield operations. All projects are located in, or immediately proximate to the airfield. These areas are well within the $L_{dn}$ 65 contour created by aircraft noise. Construction noise emanating off-site would probably be noticeable in the immediate site vicinity, but would not be expected to create adverse impacts, or alter noise contours associated with aircraft operations. No off-airport sensitive noise receptors are located within the distance that would be affected by construction noise. Furthermore, construction-related noise is intermittent and transitory, ceasing at the completion of construction. The long-term acoustic environment at Westfield-Barnes Airport would not be expected to be influenced by construction activities, and would continue to be dominated by aviation activities.

#### 4.1.2.2 Alternative Action

Under this alternative, the number of aircraft operations would remain as described above for the Proposed Action. However, as opposed to the Proposed Action where 90 percent of the F-15 departures are to the north, under the Alternative Action, 90 percent of the F-15 departures would be to the south. Noise contours associated with this alternative are shown in Figure 4.1-3, and noise exposure to overall land areas and at specific points is reflected in Tables 4.1-5 and 4.1-6, respectively.

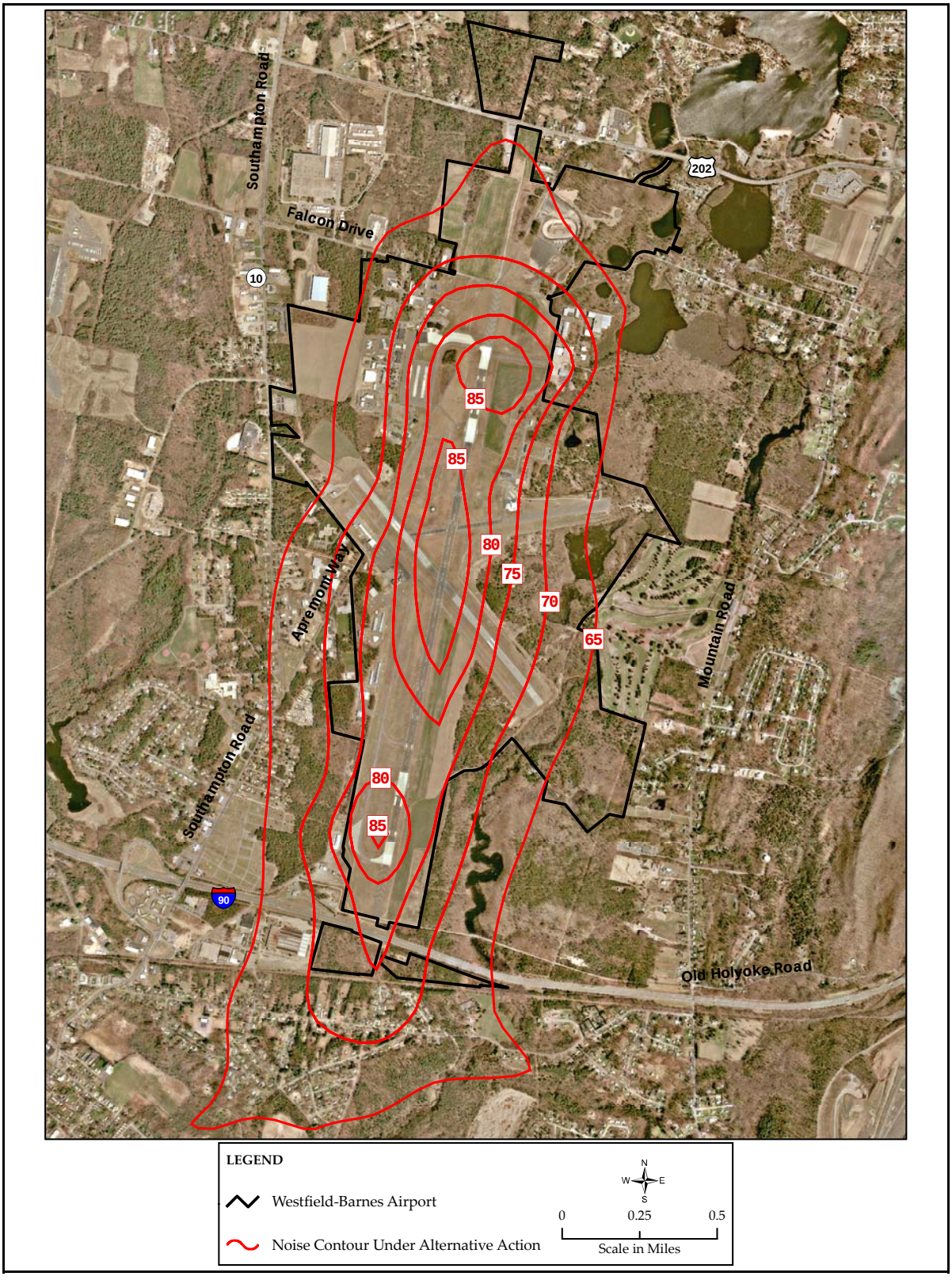



**Figure 4.1-3. Noise Contours under the Alternative Action at Westfield-Barnes Airport**

**Table 4.1-5. Land Area Exposed to Indicated Sound Levels Under the Alternative Action**

| *Sound Level (In $L_{dn}$)* | ACRES OF LAND[1] | | |
|---|---|---|---|
| | *Current* | *Alternative Action* | *Net Change* |
| 65 – 70 | 275 | 792 | 517 |
| 70 – 75 | 75 | 370 | 295 |
| 75 – 80 | 2 | 262 | 260 |
| 80 – 85 | 0 | 164 | 164 |
| > 85 | 0 | 74 | 74 |
| **Total > 65** | **352** | **1,662** | **1,310** |

Note: 1. Land areas exposed to indicated sound levels. Total area exposed to $L_{dn}$ 65 or greater is shown as totals.
Source: ANG 2006.

**Table 4.1-6. Specific Point Noise Exposure under Aircraft Conversion (Alternative Action)**

| *Point ID* | *Description* | EXPOSURE (IN $L_{DN}$) | | *Change (In $L_{dn}$)* |
|---|---|---|---|---|
| | | *Current* | *Alternative* | |
| **1** | Russian Evan Baptist Church | 50.0 | 57.8 | + 7.8 |
| **2** | Hampton Ponds State Park | 42.8 | 54.7 | + 11.9 |
| **3** | East Mountain Country Club | 42.9 | 56.1 | + 13.2 |
| **4** | St. Mary's School | 42.9 | 55.6 | + 12.7 |
| **5** | Moseley School | 46.7 | 61.7 | + 15.0 |
| **6** | Powder Mill Village Apartment Complex | 51.5 | 64.2 | + 12.7 |
| **7** | Northside Middle School | 48.4 | 63.0 | + 14.6 |
| **8** | Arbor Mobile Home Park | 52.8 | 67.6 | + 14.8 |

Source: ANG 2006.

As shown, overall noise exposure around Westfield-Barnes Airport would increase under the Alternative Action (slightly more than under the Proposed Action). The acreage under the 65 dB contour (and greater) would increase substantially, from 352 acres to 1,662 acres, an increase of 1,310 acres. Noise exposure at specific points around Westfield-Barnes Airport also increases under this alternative, as shown in Table 4.1-6 and Figure 4.1-4. The estimated noise contours for the Proposed Action and the Alternative Action are compared (the 65 dB contour) in Figure 4.1-5. As shown, the contours under the Alternative Action expand further south as compared to the Proposed Action, thereby exposing more residential area to elevated noise levels.

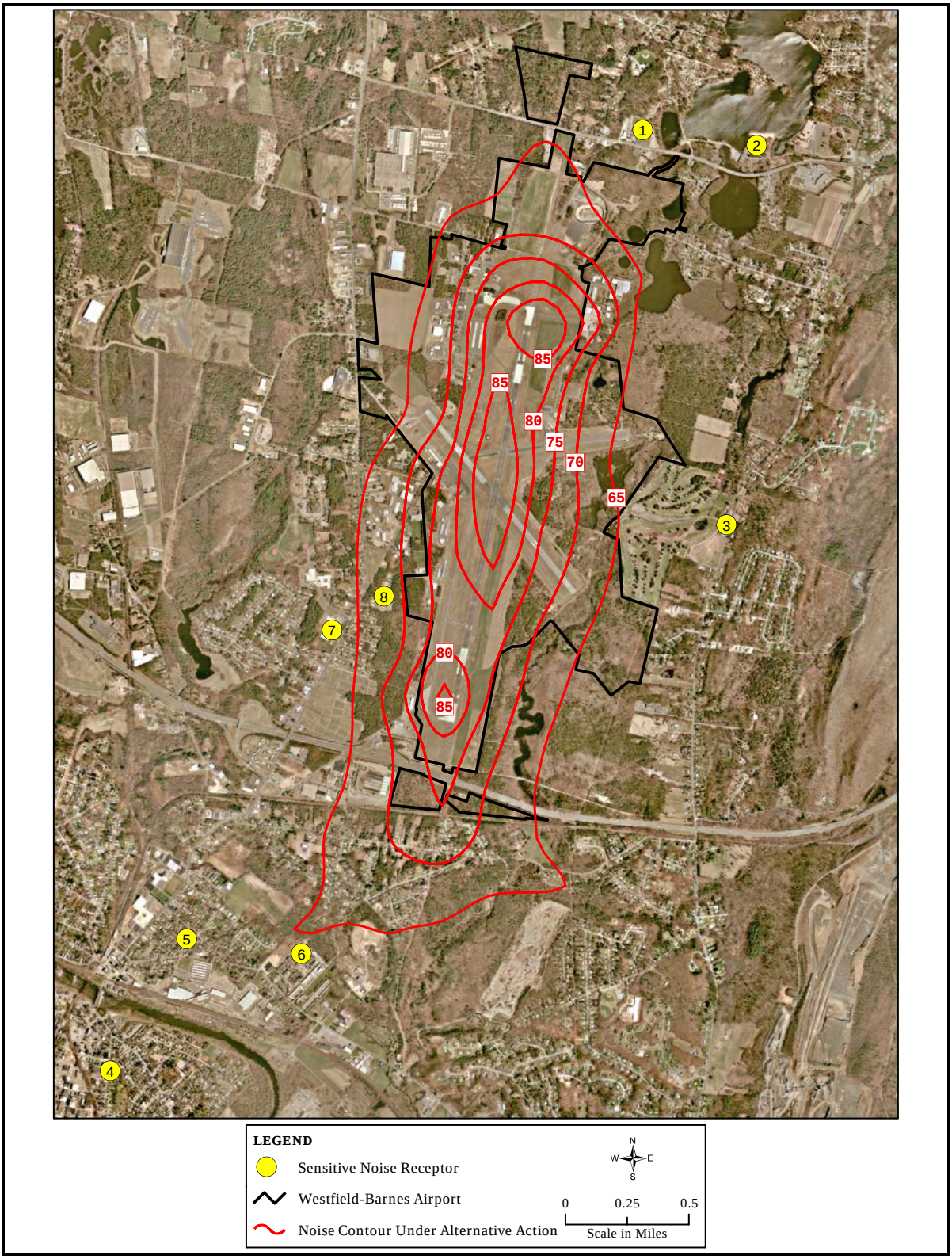



**Figure 4.1-4. Noise Sensitive Receptors in Relationship to the Noise Contours under the Alternative Action at Westfield-Barnes Airport**

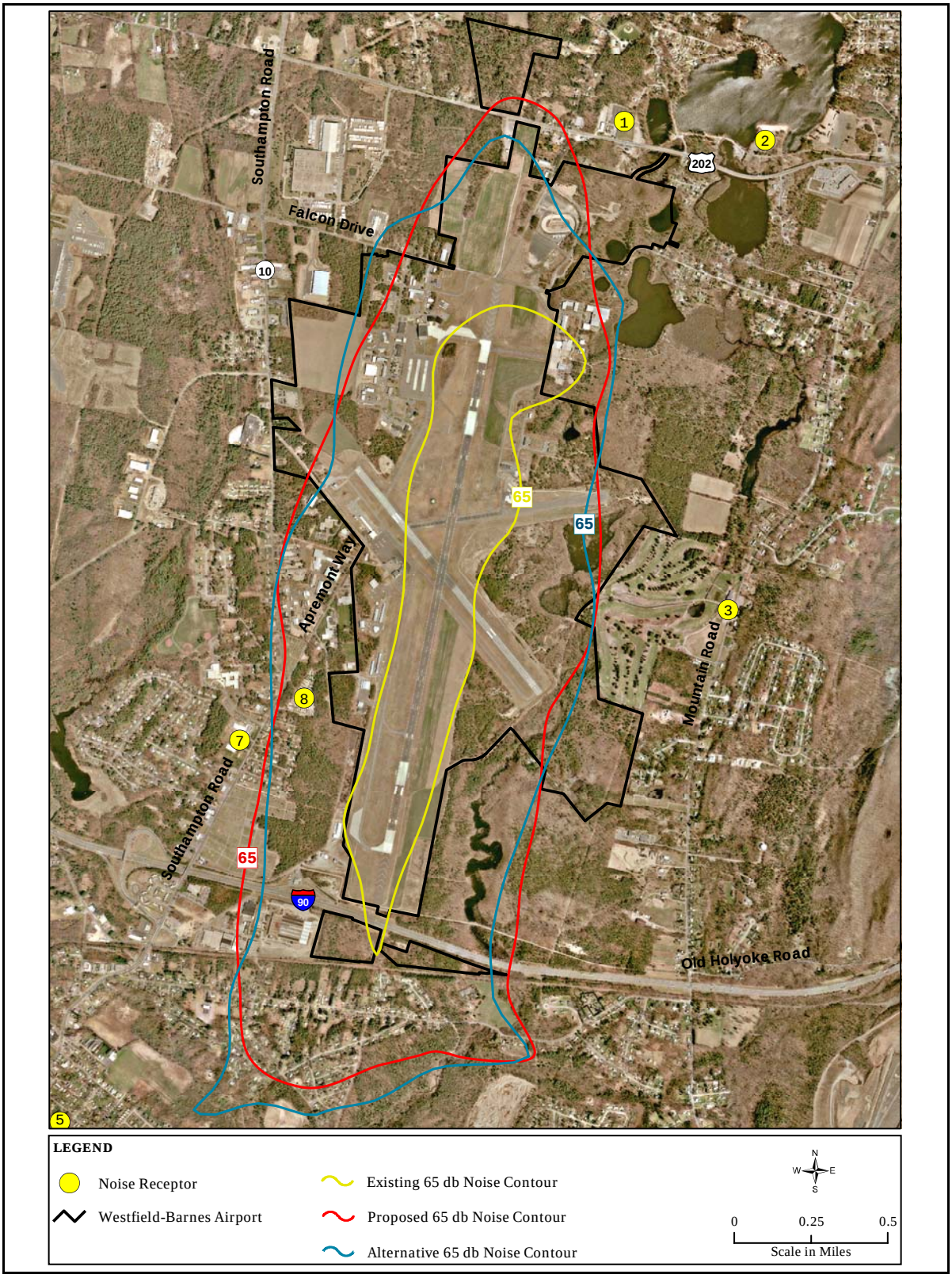



**Figure 4.1-5. Comparison of the Existing Proposed and Alternative 65 dB Noise Contours at Westfield-Barnes Airport**

As shown, noise levels under the Alternative Action increase at all specific locations assessed as compared to the current condition. Noise levels in the most sensitive environments are further increased beyond that described under the Proposed Action. Specifically, it should be noted that land uses associated with the Arbor Mobile Home Park would be exacerbated, and would no longer be considered compatible due to the elevated noise levels (67.6 dB); and as such, would be eligible for FAA-funded noise mitigation as described under the Proposed Action. All other sensitive receptors, although exposed to increased noise levels, remain compatible with existing land uses.

Noise associated with construction activities would remain as described under the Proposed Action above. These noise sources would not influence the overall acoustic environment, and would not impact the regional acoustic environment in the long term, as noise at Westfield-Barnes Airport would continue to be dominated by aircraft.

#### 4.1.2.3 No Action Alternative

Under this alternative, neither the aircraft conversion nor the proposed construction activities would occur. Noise associated with aircraft operations at Westfield-Barnes Airport would remain as described in Section 3.1.2. Since no construction would occur under this alternative, the noise generated as a result of construction activities would not occur.

## 4.2 LAND USE AND VISUAL RESOURCES

### 4.2.1 METHODOLOGY

The methodology to assess impacts on individual land uses requires identifying those uses and determining the degree to which they would be affected by the proposal. Similarly, visual impacts are assessed by determining how, and to what extent, proposed actions would alter the overall visual character of the area.

Significance of potential land use impacts is based on the level of land use sensitivity in areas affected by a proposed action. In general, land use impacts would be significant if they would: 1) be inconsistent or non-compliant with applicable land use plans or policies; 2) preclude the viability of existing land use; 3) preclude continued use or occupation of an area; 4) be incompatible with adjacent land use to the extent that public health or safety is threatened.

Determination of the significance of impacts to visual resources is based on the level of visual sensitivity in the area. Visual sensitivity is defined as the degree of public interest in a visual resource and concern over adverse changes in the quality of that resource. In general, an impact

to a visual resource is significant if implementation of a proposed action would result in substantial alteration to an existing sensitive visual setting.

### 4.2.2 IMPACTS

#### 4.2.2.1 Proposed Action

*Land Use*

The proposed aircraft conversion and mission change, as well as facility construction, alteration, and demolition at the 104 FW installation at Westfield-Barnes Airport will increase the intensity of land use within the project area; however, the Proposed Action will not introduce any new land uses at the 104 FW installation, and will remain compatible with current uses at the airfield. The 104 FW must coordinate proposed construction projects with the airport to ensure that encroachment into runway object free and safety areas does not occur. None of the proposed new facilities will be located within any of these areas and none will violate height restrictions around the runway. Both the siting and use of new munitions storage facilities and alert mission holding areas are being coordinated with the airport to ensure that new quantity-distance (QD) arcs are compatible with ongoing activities and land uses on the airfield (refer to Section 4.6, Safety, for a more detailed discussion of runway safety areas and QD arcs).

Noise from construction would be temporary and would take place only during day-time hours (see Section 4.1.2.1). Noise levels from these activities on adjacent properties would not exceed 65 dBA. Aircraft noise would remain the dominant noise source in adjacent areas. Therefore, construction noise would cause minimal impacts to land uses.

Due to the changes in aircraft noise described in Section 4.1.2, the proposed aircraft conversion from the A-10 to the F-15 would affect land use in some areas beyond the airport boundary. Aircraft noise is the primary source of these impacts. Figure 4.2-1 shows proposed noise contours relative to current land use, and Table 4.2-1 summarizes the acres affected by noise levels above 65 dBA by land use type. The FAA has developed noise exposure compatibility guidelines for various land use categories (see Appendix C, Table C-2). In general, these guidelines indicate that residential land uses (and other sensitive uses such as schools and hospitals) are not compatible with outdoor $L_{dn}$ values above 65 dB.

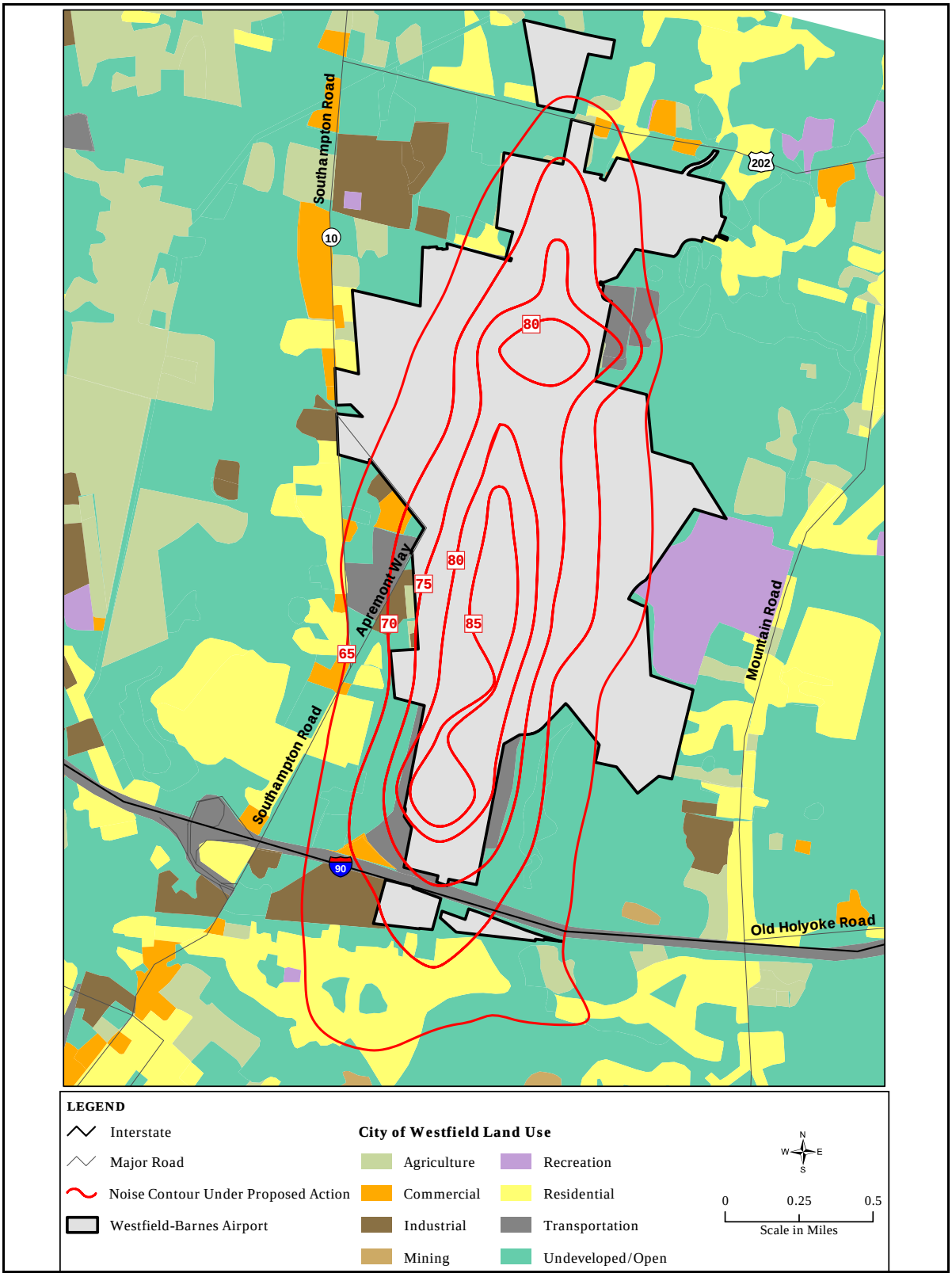



**Figure 4.2-1. Land Uses in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport**

**Table 4.2-1. Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Proposed Action**

| | ACRES | | | | | |
|---|---|---|---|---|---|---|
| | dBA (Current) | dBA (Proposed) | | | | |
| *Land Use* | *>65-80* | *>65-70* | *>70-75* | *>75-80* | *>80* | *Total >65* |
| Agricultural[1] | 0.5 | 12.0 | 3.4 | 0.6 | 0 | 16.0 |
| Undeveloped/open[2] | 5.1 | 255.4 | 92.0 | 15.4 | 0.4 | 363.2 |
| Recreation[3] | 0 | 1.4 | 0 | 0 | 0 | 1.4 |
| Residential[4] | 0 | 137.1 | 7.4 | 0 | 0 | 144.5 |
| Commercial | 0 | 12.3 | 5.7 | 0 | 0 | 18.0 |
| Industrial | 0 | 34.8 | 9.2 | 0.2 | 0 | 44.2 |
| Transportation | 11.5 | 44.1 | 33.6 | 26.4 | 3.8 | 107.9 |
| **Total** | **17.1** | **497.1** | **151.3** | **42.6** | **4.2** | **695.3** |

Notes: The following land use classifications aggregated were made in this analysis:
1. Agricultural includes crop land and pasture.
2. Undeveloped/open includes forest, non-forested wetland, open land, urban open, water, and woody perennial.
3. Recreation includes participatory and spectator.
4. Residential includes high, medium and low density.

Source: City of Westfield nda.

Table 4.2-1 shows that the total area outside of the airport property affected by levels of 65 dBA or greater would increase from about 17 acres to about 695 acres under the Proposed Action. Of this area, about 144 acres (21 percent) is currently zoned as residential land. About 7 acres of residential land could experience noise levels of 70 dBA or slightly higher. Based on United States (U.S.) Census data, an estimated 261 households, compared to zero under current conditions, may experience noise levels greater than 65 dBA (U.S. Census Bureau 2001).

Most of the area affected by increased noise levels is located south of the airfield around Holyoke Road and west of the airport on the east side of Southampton Road. This area has a mixture of land uses, including pockets of residential land. No schools are located within the 65 dBA noise exposure area under the Proposed Action. However, a portion of the Arbor Mobile Home Park to the west of the airfield would be exposed to levels between 65 and 70 dBA.

To the north of the airfield, areas newly exposed to noise levels above 65 dBA are mostly undeveloped or are used for industrial or commercial purposes, which are compatible with noise levels that will result from the Proposed Action. However, a few isolated homes in this area may be exposed to incompatible noise levels.

Impacts from aircraft noise under the Proposed Action are substantial due to the increase in off airport properties that will be exposed to elevated noise levels (i.e., noise levels of 65 dBA or greater). Studies have shown that a predictable percentage of a residential population is annoyed by noise of specific levels. For levels greater than 65 dBA, it is likely that more than 12 percent of people exposed are highly annoyed (refer to Section 4.1.2). This percentage increases for higher noise levels. However, the noise impacts in residential areas associated with the Proposed Action can generally be mitigated. The noise levels predicted for this action would not inhibit the use of outdoor areas for recreation in surrounding areas. While two schools are close to the 65 dB or greater noise contour, none are located within this area (Figure 4.2-2).

The airport is currently updating its Part 150 Airport Noise study (refer to Section 4.1.2.1). As part of this study, a Noise Mitigation Plan will be developed. The plan will incorporate a variety of measures to reduce projected noise levels in the affected areas. Efforts to minimize noise with alternative flight tracks or other operational measures has already been factored into the EIS noise contours, so little improvement would be anticipated in the Part 150 study. With that in mind, mitigation most likely available would include sound insulating some homes and acquisition and removal of homes most seriously affected by new noise.

Figure 4.2-3 depicts projected noise levels relative to current zoning around the airfield and Table 4.2-2 summarizes acres affected by noise levels above 65 dBA by zoning category. Currently no areas zoned Residential are affected by noise levels of 65 dBA or greater. Under the Proposed Action, about 274 acres of land zoned Residential will be within the 65 dBA noise contour (as compared to 144 acres of land already being used for residential purposes). This represents 39 percent of the 695 acres affected. Some of this land is currently undeveloped and could become residential in the future based on the zoning framework. The Airport Noise Study and Mitigation Plan can address appropriate measures or safeguards for affected areas (both developed and undeveloped) that are zoned for residential use.

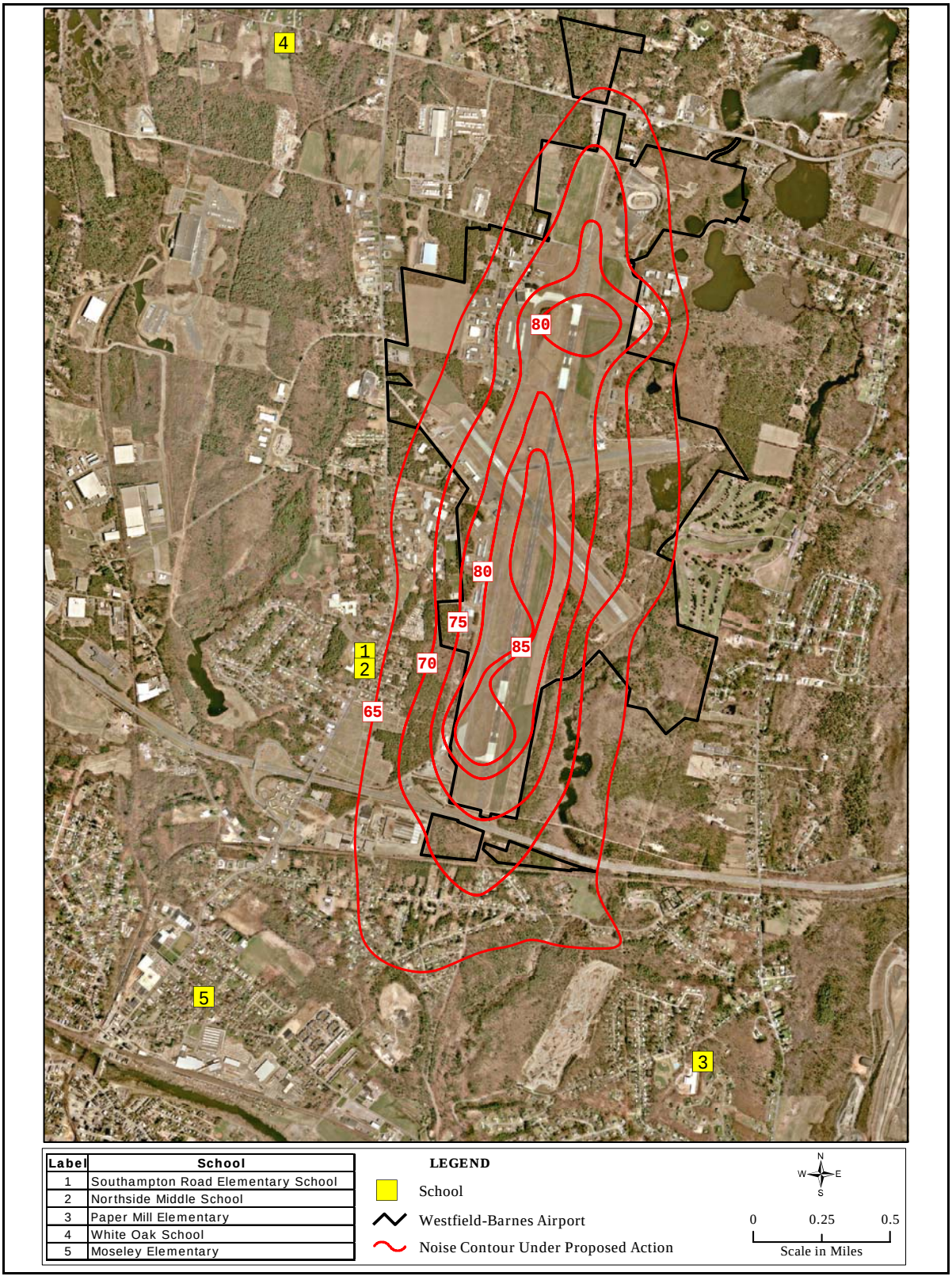



**Figure 4.2-2. Schools in Relationship to Noise Contours under the Proposed Action near Westfield-Barnes Airport**

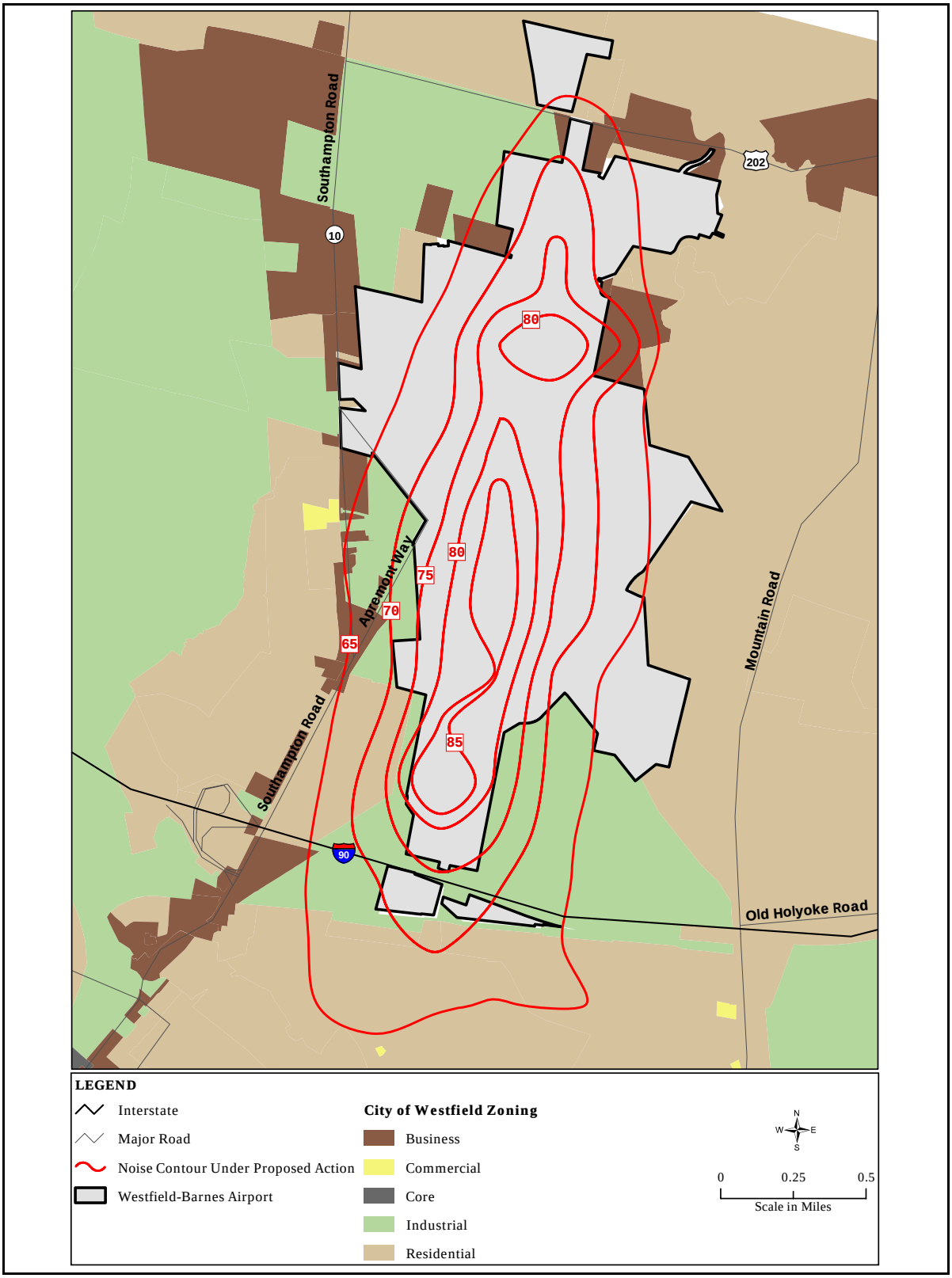



**Figure 4.2-3. Zoning in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport**

**Table 4.2-2. Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Proposed Action**

| | ACRES | | | | | |
|---|---|---|---|---|---|---|
| | dBA (Current) | dBA (Proposed) | | | | |
| *Zoning Category* | *>65-80* | *>65-70* | *>70-75* | *>75-80* | *>80* | *Total >65* |
| Airport District | 0.6 | 5.3 | 3.0 | 0.3 | 0 | 8.6 |
| Business | 13.3 | 59.4 | 13.3 | 4.5 | 0 | 77.2 |
| Industrial | 3.3 | 199.2 | 101.4 | 32.5 | 4.2 | 337.3 |
| Residential | 0 | 234.5 | 33.6 | 5.4 | 0 | 273.5 |
| **Total** | **17.2** | **498.4** | **151.3** | **42.7** | **4.2** | **696.6** |

Note: Differences in total column between Table 4.2-1 and 4.2-2 represent minor deviations in digitized data.
Source: City of Westfield ndb.

Under the Proposed Action, 139 additional 104 FW personnel will be assigned at Westfield-Barnes Airport. It is not anticipated that this increase in personnel will have an effect on local or regional land use. It is anticipated that the majority of the new 104 FW personnel will be from the Westfield area, and therefore the increase in personnel would not likely involve many people relocating from outside the area.

*Visual Resources*

With regard to visual resources, all proposed facilities will be architecturally compatible with existing facilities. While the proposed construction includes large structures, the size and type of buildings will be similar to other buildings on the installation, or in a typical airport environment. Because the proposed structures will not be incongruent with the surrounding buildings or land uses, an impact to visual resources is not expected. The Proposed Action will improve the visual character of the installation through enhancement of installation landscaping. Off installation views of the installation will not be affected given the limited views from Falcon Drive and the east side of the airfield around Lewis Road.

#### 4.2.2.2 Alternative Action

Land use impacts under the Alternative Action would be similar to the Proposed Action. As shown in Table 4.2-3, there would be a slight increase in the area affected by noise levels above 65 dBA compared to the Proposed Action (703 acres compared to 695 acres). This increased acreage encompasses primarily residential and undeveloped land uses (Figure 4.2-4), and areas zoned for residential use (Figure 4.2-5). Based on U.S. Census data, an estimated 294 households, compared to zero under current conditions, may experience noise levels greater than 65 dBA. Because the majority of F-15 aircraft would take off to the south rather than the north (as proposed), the noise effects would shift slightly to the south. This would increase the amount of residential land affected by noise levels above 70 dBA from about 6 acres under the Proposed Action to about 31 acres under the Alternative Action. This slight difference between the Proposed Action and the Alternative Action is also reflected in affected residential-zoned lands as shown in Table 4.2-4, and depicted in Figure 4.2-4. As described in Section 4.2.2.1, the Airport Noise Study and Mitigation Plan will address measures to reduce incompatible noise exposure.

**Table 4.2-3. Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Alternative Action**

| | **ACRES** | | | | | |
|---|---|---|---|---|---|---|
| | **dBA (Current)** | **dBA (Proposed)** | | | | |
| ***Land Use*** | ***>65-80*** | ***>65-70*** | ***>70-75*** | ***>75-80*** | ***>80*** | ***Total >65*** |
| Agricultural[1] | 0.5 | 5.6 | 3.2 | 0.3 | 0.2 | 9.3 |
| Undeveloped/open[2] | 5.1 | 285.3 | 75.6 | 3.8 | 0 | 364.7 |
| Recreation[3] | 0 | 1.6 | 0 | 0 | 0 | 1.6 |
| Residential[4] | 0 | 133.4 | 30.6 | 0 | 0 | 164.0 |
| Commercial | 0 | 16.7 | 2.3 | 0 | 0 | 19.0 |
| Industrial | 0 | 28.7 | 9.4 | 0 | 0 | 38.1 |
| Transportation | 11.5 | 38.0 | 51.4 | 16.4 | 0 | 105.8 |
| **Total** | **17.1** | **509.3** | **172.5** | **20.5** | **0.2** | **702.5** |

Notes: The following land use classifications aggregated were made in the analysis:
1. Agricultural includes crop land, pasture.
2. Undeveloped/open includes forest, non-forested wetland, open land, urban open, water, woody perennial.
3. Recreation includes participatory and spectator.
4. Residential includes high, medium and low density.

Source: City of Westfield nda.

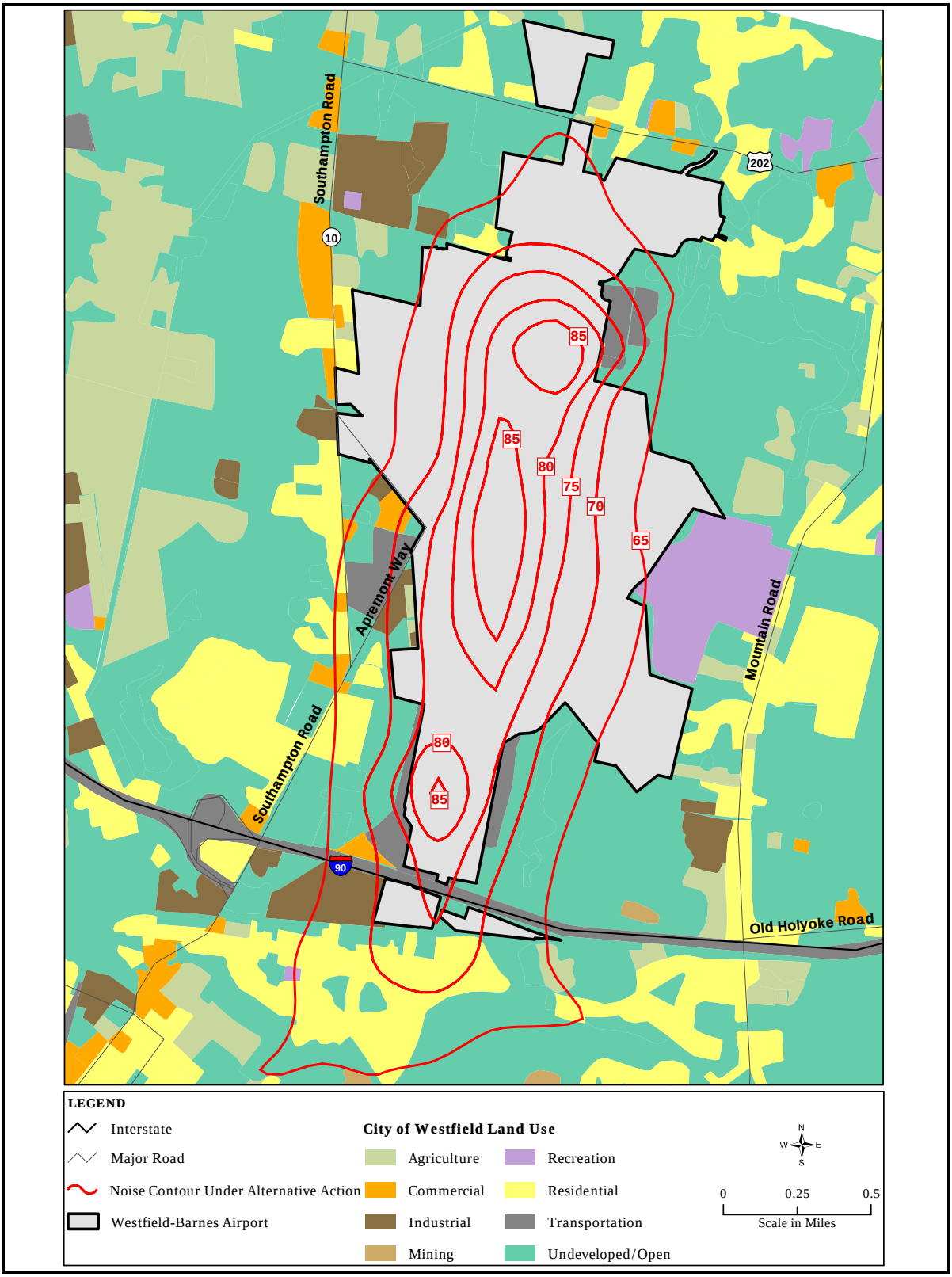



**Figure 4.2-4. Land Uses in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport**

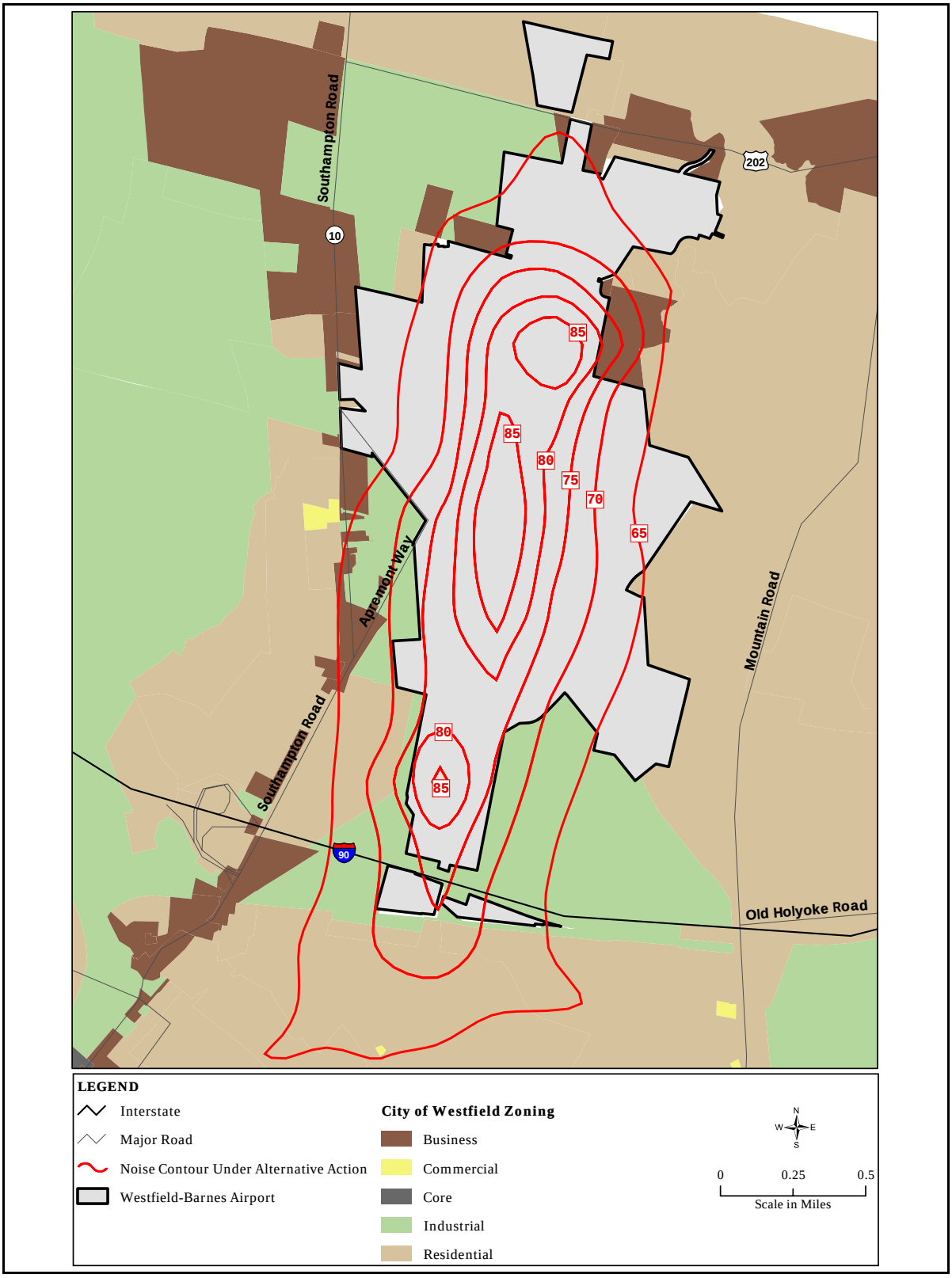



**Figure 4.2-5. Zoning in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport**

**Table 4.2-4. Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Alternative Action**

| | ACRES | | | | | |
|---|---|---|---|---|---|---|
| | dBA (Current) | dBA (Proposed) | | | | |
| *Zoning Category* | *>65-80* | *>65-70* | *>70-75* | *>75-80* | *>80* | *Total >65* |
| Airport District | 0.6 | 2.5 | 4.9 | 0.7 | 0 | 8.1 |
| Business | 13.3 | 53.5 | 18.6 | 7.1 | 0.2 | 79.4 |
| Commercial | 0 | 0.5 | 0 | 0 | 0 | 0.5 |
| Industrial | 3.3 | 187.2 | 98.3 | 12.6 | 0 | 298.1 |
| Residential | 0 | 265.6 | 52.0 | 0.1 | 0 | 317.7 |
| **Total** | **17.2** | **509.3** | **173.8** | **20.5** | **0.2** | **703.8** |

Notes: Differences in total column between Table 4.2-3 and 4.2-4 represent minor deviations in digitized data.
Source: City of Westfield ndb.

Similar to the Proposed Action, the noise levels predicted for this alternative would not inhibit the use of outdoor areas for recreation in surrounding areas. Similarly, no schools are located within 65 dBA or greater noise contours (Figure 4.2-6).

Other aspects of this alternative (such as construction and personnel increase) are identical to the Proposed Action and therefore anticipated effects would be the same as described in Section 4.2.2.1. Because this alternative slightly shifts the location of noise impacts to the south where residential development is denser, this alternative is not preferred for land use over the Proposed Action.

#### 4.2.2.2 No Action Alternative

Under the No Action Alternative, the aircraft and mission conversion would not occur; the 104 FW would maintain their existing facilities and would not undertake the construction and demolition projects described under the Proposed Action. Facility improvements would not occur under this alternative, and would continue to operate under less-than-optimal conditions. Readiness could be adversely affected as a result of this alternative. There would be no impacts to land use or visual resources as a result of implementation of this alternative. In general, conditions would remain as described in Section 3.2.2.

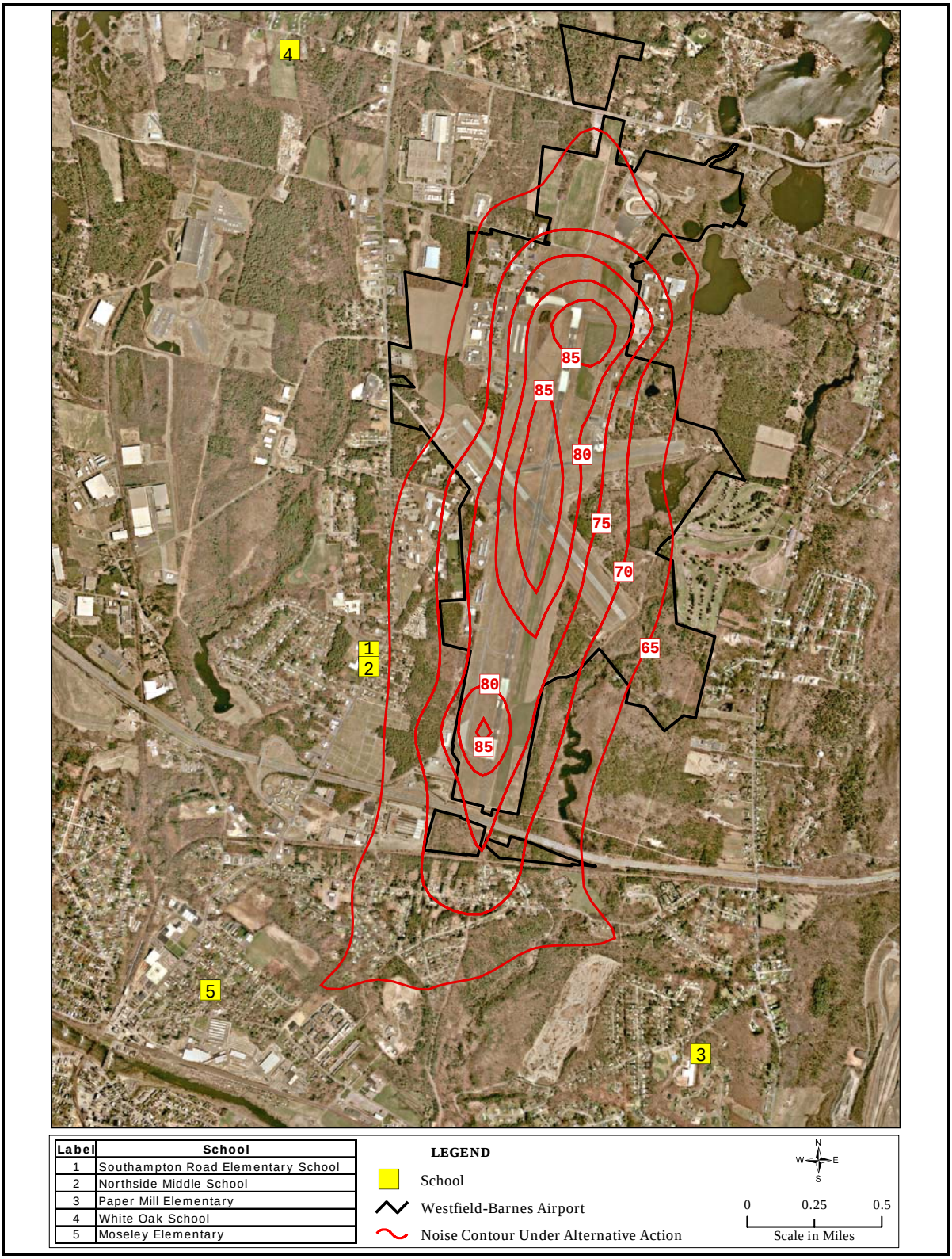



**Figure 4.2-6. Schools in Relationship to Noise Contours under the Alternative Action near Westfield-Barnes Airport**

## 4.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

### 4.3.1 METHODOLOGY

In order to assess the potential socioeconomic and environmental justice impacts of the alternatives, employment, race and ethnicity, poverty status and age characteristics of populations in Hampden County, the City of Westfield, and Census Tract 8125 were analyzed, as presented in Section 3.3.2. In addition, Census block and block group data were used to evaluate the potential for disproportionate impacts on minority and low-income populations.

Potential socioeconomic impacts are assessed in terms of the direct effects of the alternatives on the local economy and related effects on population and socioeconomic attributes. For the environmental justice analysis, the estimated number of minority and low-income persons affected by high adverse impacts are compared to State demographics to determine whether any high adverse impacts occur disproportionately to minority or low-income populations. In accordance with Executive Order (EO) 12898 and EO 13045, described in Section 3.3.1, areas containing relatively high disadvantaged or youth populations are given special consideration regarding potential impacts in order to address the potential for disproportionately high or adverse human health or environmental effects on these communities.

The number of minority and low-income persons affected by the Proposed Action was estimated by overlaying projected noise contours on demographic data from the 2000 Census. For analysis purposes, it was assumed that all persons (including minority persons) were distributed evenly within Census blocks; and persons in poverty were distributed evenly within Census block groups (except for areas within the Westfield-Barnes Airport boundary, where there are no residents). Note that for reasons of confidentiality, poverty data are not released at the Census block level (blocks are smaller than block groups and can be as small as a single city block). To determine whether disproportionate impacts were borne by minority or low-income groups, the estimated percent of persons within these groups was compared to the total estimated number of persons affected, and that percentage was compared to the percentage of persons in these groups at the State level. In addition to the analysis based on Census data, impacts were analyzed for individual sensitive receptors, including the Arbor Mobile Home Park and a multi-family apartment complex to the south of Westfield-Barnes Airport, off Sunflower Lane north of Union Street. This apartment complex is in Census Block Group 3 in Census Tract 8125, which has the highest poverty rate among all the block groups in the Census tract (Section 3.3.2.2).

Expenditures are evaluated in terms of their direct effects on the local economy and related effects on other socioeconomic resources (e.g., housing). The magnitude of potential impacts varies depending on the location of a proposed action; for example, implementation of an action

that creates 20 jobs may be unnoticed in an urban area but may impact a more rural region. Socioeconomic impacts are evaluated to determine if shifts in population trends, or substantial adverse effects on regional spending or earning patterns, would occur as a result of the Proposed Action. With regard to environmental justice, impacts are evaluated to determine if any disproportionately high and adverse human health and/or environmental effects would occur to identified minority and low-income populations.

For the socioeconomic analysis, the impact of demolition and construction expenditures was analyzed with respect to creating direct jobs (i.e., personnel increases and construction jobs), as well as indirect jobs (i.e., in sectors that support the construction industry), and induced jobs (i.e., in sectors such as retail trade, where increased aggregate regional wages create more jobs). For analysis purposes, this analysis converts military construction expenditures into direct jobs based on a ratio of 18.7 jobs per million dollars of military construction expenditures, based on a 2003 analysis of the community economic impact of Hanscom Air Force Base, Massachusetts (Hanscom Air Force Base 2003).

### 4.3.2 IMPACTS

#### 4.3.2.1 Proposed Action

Under the Proposed Action, the 104 FW would implement construction and demolition projects described in detail in Section 2.3. Construction activities associated with the Proposed Action will occur largely over the period of the next five years and involve expenditures of approximately $77 million. Direct impacts under this alternative will include the creation of approximately 1,440 annual job equivalents in the construction sector over the construction period (based on the conversion factor of 18.7 jobs per million dollars in construction expenditures), along with associated earnings from those construction jobs. In addition, there will be indirect and induced employment and earnings due to the construction jobs. The impacts of construction expenditures on employment and earnings will be temporary, occurring for the duration of the construction period only, and are generally perceived as beneficial.

In addition to construction jobs, the Proposed Action will result in the addition of 139 new permanent jobs due to authorized personnel increases for the 104 FW. These new jobs will also result in indirect and induced employment growth in the region, due to linkages among economic sectors that supply goods and services to the 104 FW and to its personnel. The overall number of jobs created is relatively small compared to total regional employment (e.g., the civilian labor force of about 223,000 persons in Hampden County, as reported in Section 3.3.2.1) and is not expected to stimulate population increases in the region. However, the employment gain does result in a minor beneficial impact due to increased employment opportunities, lower

unemployment, higher retail spending and higher tax revenues from income, sales, and other taxes.

Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value as it relates directly to aircraft noise (Frankel 1991, Litman 2007, Thebe nd, Lane 1998). Most of these studies applied to urban rather than rural areas. The results were generally consistent in that they observed no impact to property values for aircraft noise levels below 50 $L_{dn}$ (under 60 $L_{dn}$ in some studies). At noise levels above that, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel.

In another study conducted by Fidell *et al*. (1996), the effects of aircraft noise on property values in the vicinity of Langley AFB in Hampton, Virginia, and Davis-Monthan AFB in Tucson, Arizona were evaluated. Researchers compared property values both inside and outside the 65 $L_{dn}$ contour. The overall pattern of findings indicated that aircraft noise is not a useful predictor of sale prices of residential property in the vicinity of these two USAF Bases, and cannot meaningfully be viewed as causing a reduction of residential property values in either case. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. Depending on a number of other factors, it is possible that aircraft noise might have a minor effect on the sale price of a property. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of property that it is very difficult to isolate and verify.

While there may be minor negative effects to property values in proximity to the airport as described above, it is important to note that there is also a positive impact on the local economy and (therefore property values) as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. The 104 FW employs approximately 300 civilians and 1,000 military personnel. The unit's payroll, construction expenditures, and other local purchases total over 65 million dollars that go directly into the local economy (104 FW 2006c).

Under the Proposed Action, adverse impacts are anticipated with regard to noise (noise levels in excess of 65 dBA). To assess whether noise impacts are disproportionately high and adverse on minority and low-income populations, noise contours were overlaid on Census block data for minority populations and block group data for low-income populations (i.e., population in poverty). These are the finest resolutions of data on minority and poverty status released by the U.S. Census Bureau. Table 4.3-1 shows the relative percentages of minority populations affected by noise levels; Table 4.3-2 shows similar information for low-income populations.

**Table 4.3-1. Minority Populations Exposed to $L_{dn} \geq 65$ dBA**

| | $L_{dn}$ 65-70 dBA | | $L_{dn}$ 70-75 dBA | | $L_{dn}$ 75-80 dBA | | $L_{dn} \geq 80$ dBA | | $L_{dn} \geq 65$ dBA | |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Scenario*** | ***People*** | ***Percent Minority*** | ***People*** | ***Percent Minority*** | ***People*** | ***Percent Minority*** | ***People*** | ***Percent Minority*** | ***Total People*** | ***Total Percent Minority*** |
| No Action Alternative | 0 | n/a | 0 | n/a | 0 | n/a | 0 | n/a | **0** | **n/a** |
| Proposed Action | 549 | 4.8 | 78 | 6.1 | 0 | n/a | 0 | n/a | **627** | **4.9** |
| Alternative Action | 584 | 5.7 | 135 | 3.8 | 0 | n/a | 0 | n/a | **719** | **5.3** |

Note: Number of people and percent minority is estimated based on GIS analysis of noise contours overlaid on Census blocks, except where there is no residential land use within a noise contour (then the estimated population is zero). Number of people is rounded to the nearest whole number (except where number is nonzero and less than 0.5); percentages may reflect fractions of people due to the estimation method.

**Table 4.3-2. Low-Income Populations Exposed to $L_{dn} \geq 65$ dBA**

| | $L_{dn}$ 65-70 dBA | | $L_{dn}$ 70-75 dBA | | $L_{dn}$ 75-80 dBA | | $L_{dn} \geq 80$ dBA | | $L_{dn} \geq 65$ dBA | |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Scenario*** | ***People*** | ***Percent Low-Income*** | ***People*** | ***Percent Low-Income*** | ***People*** | ***Percent Low-Income*** | ***People*** | ***Percent Low-Income*** | ***Total People*** | ***Total Percent Low-Income*** |
| No Action Alternative | 0 | n/a | 0 | n/a | 0 | n/a | 0 | n/a | **0** | **n/a** |
| Proposed Action | 549 | 5.1 | 78 | 12.4 | 0 | n/a | 0 | n/a | **627** | **6.0** |
| Alternative Action | 584 | 9.9 | 135 | 8.0 | 0 | n/a | 0 | n/a | **719** | **9.6** |

Note: Number of people and percent minority is estimated based on GIS analysis of noise contours overlaid on Census blocks and block groups, except where there is no residential land use within a noise contour (then the estimated population is zero). Number of people is rounded to the nearest whole number (except where number is nonzero and less than 0.5); percentages may reflect fractions of people due to the estimation method.

As Table 4.3-1 shows, the total number of people exposed to elevated noise levels increases for the Proposed Action relative to the No Action Alternative. However, for each noise contour (65 dBA, 70 dBA, 75 dBA, and 80 dBA) the percent of minority persons affected is lower than the percent of minority persons in the State (18.1 percent) or Hampden County (25.6 percent). As Table 4.3-2 shows, under the Proposed Action, the percent of low-income persons exposed to noise levels greater than 70 to 75 dBA is greater than the State average (9.3 percent), although it is not greater than the County average (14.7 percent). It should be noted that the number of minority and low-income persons affected is relatively low (e.g., for levels of 70 to 75 dBA, 12.4 percent of 78 persons affected represents about 10 low-income people).

In addition, noise levels under the Proposed Action were modeled for specific sensitive noise receptors. These include the Arbor Mobile Home Park and the multi-family apartment complex

off Sunflower Lane (described in Section 3.3.2.2), as well as schools in the vicinity of Westfield-Barnes Airport. Noise levels at these sensitive receptors are shown in Table 4.1-3 and discussed in Section 4.1.2 and 4.2.2. As those sections indicate, although noise levels increase, they do not exceed $L_{dn}$ 65 at any of the sensitive receptors except for the Arbor Mobile Home Park, where the $L_{dn}$ would be about 67.0 dBA.

Thus, the analysis of Census data and sensitive noise receptors indicates that the Proposed Action would not have disproportionately high and adverse effects on minority or low-income populations (Table 4.3-2).

No facilities for children exist at the 104 FW installation, and children would not have access to construction sites. No disproportionate health risks or safety risks to children are anticipated under the Proposed Action.

#### 4.3.2.2 Alternative Action

Under the Alternative Action, construction and demolition projects would be identical to those presented for the Proposed Action, but aircraft take-offs would focus on Runway 20 (heading south), resulting in a greater proportion of take-offs occurring to the south of Westfield-Barnes Airport. All socioeconomic and environmental justice impacts would be the same as described under the Proposed Action, with the exception of slightly different noise impacts as a result of the different take off direction. Tables 4.3-1 and 4.3-2 above present the impact of this alternative on minority and low-income populations, and Table 4.1-6 presents noise levels on sensitive noise receptors under this alternative.

As shown in Tables 4.3-1 and 4.3-2, under the Alternative Action, more people would be exposed to noise levels over 65 dBA than under the Proposed Action. The percent of affected minority persons would be higher than under the Proposed Action for noise levels greater than 65 dBA; however, the percent of minority persons who would be exposed to noise at any level is lower than the percent of minorities in the State (18.1 percent) or Hampden County (25.6 percent).

The percent of low-income persons exposed to elevated noise levels would be higher than under the Proposed Action, and also higher than the State average (9.3 percent), for noise levels over 65 dBA, although it would be lower than the County average (14.7 percent).

Noise levels for the sensitive receptors are discussed in Section 4.1.2 and 4.2.2. As those sections indicate, projected noise levels ($L_{dn}$) would be 67.6 dBA for the Arbor Mobile Home Park, which is slightly higher than under the Proposed Action. Thus, the Alternative Action would not have disproportionately high and adverse effects on minority populations. However,

it would have a slight disproportionately high and adverse noise effects on low-income populations for noise levels over 65 dBA (Table 4.3-2).

Noise levels would not exceed 65 dBA for any schools in the vicinity of Westfield-Barnes Airport. No disproportionate health risks or safety risks to children are anticipated under the Alternative Action.

#### 4.3.2.3 No Action Alternative

Under the No Action Alternative, the 104 FW would maintain their existing outdated facilities and would not build any of the new facilities proposed. The $77 million would not be spent to implement the various construction activities proposed; and therefore 1,440 annual job equivalents would not be generated under the No Action Alternative. While this is a minor beneficial input into the local economy, it is unlikely that implementation of the No Action Alternative would result in any adverse socioeconomic or environmental justice impacts.

## 4.4 AIR QUALITY

### 4.4.1 METHODOLOGY

Air emissions resulting from the Proposed Action were evaluated in accordance with federal, state, and local air pollution standards and regulations. Air quality impacts from a proposed activity or action would be significant if they:

- increase ambient air pollution concentrations above any National Ambient Air Quality Standards (NAAQS);
- contribute to an existing violation of any NAAQS;
- interfere with or delay timely attainment of NAAQS; or
- impair visibility within any federally mandated federal Class I area.

The approach to the air quality analysis was to estimate the increase in emission levels due to the Proposed and Alternative Actions. Appendix D of this EIS documents the project emission calculation estimates.

According to USEPA's General Conformity Rule in 40 CFR Part 51, Subpart W, any proposed federal action that has the potential to impact air quality, as described above, in a nonattainment or maintenance area must undergo a conformity analysis. A conformity analysis is not required in an attainment area. Since Hampden County is in the Ozone Transport Region and is designated as moderate nonattainment for the 8-hour ozone ($O_3$) standard, a conformity

determination must be performed if project emissions exceed (1) *de minimis* thresholds of 100 tons per year (TPY) of nitrogen oxides ($NO_x$) or 50 TPY of volatile organic compounds (VOCs) or (2) are regionally significant. Project emissions would be regionally significant if the emissions for criteria pollutants for which the area is in nonattainment exceed 10 percent of the regional emissions inventory, as identified for Hampden County in Table 3.4-2.

To assess the significance of project air quality impacts, proposed emissions would be potentially significant if they exceed the major source thresholds that require an operating permit under Massachusetts Regulation 310 CMR 7.00, including (1) 100 TPY of CO, $SO_2$, $PM_{10}$, or $PM_{2.5}$, (2) 50 TPY of VOC or $NO_x$, (3) 10 TPY of a hazardous air pollutant, or (4) 25 TPY of combined hazardous air pollutants (USEPA 2006b). This approach is conservative, as these thresholds are designed to assess the potential for stationary sources to impact a localized area. However, the majority of proposed emission increases would occur from mobile sources that would spread impacts over a large portion of the project region.

If emissions exceeded a significance threshold described above, further analysis of the emissions and their consequences would be performed to assess whether there was a likelihood of a significant impact on air quality. The nature and extent of such an analysis would depend on the specific circumstances. The analysis could range from simply a more detailed and precise examination of the likely emitting activities and equipment, to air dispersion modeling analyses. If project emissions were determined to increase ambient pollutant levels from below to above a national or state ambient air quality standard, these emissions would be significant.

As previously discussed, Section 169A of the Clean Air Act (CAA) established the Prevention of Significant Deterioration (PSD) regulations to protect the air quality in regions that already meet the NAAQS. Certain national parks, monuments, and wilderness areas have been designated as PSD Class I areas, where appreciable deterioration in air quality is considered significant. The nearest PSD Class I area is more than 60 miles from the region potentially affected by the Proposed Action.

### 4.4.2 IMPACTS

#### 4.4.2.1 Proposed Action

The Proposed Action will involve the construction of new structures, additions to or demolition of existing structures, installation of new pavement, and upgrades to existing pavement. Also, the 104 FW will undergo a conversion from the A-10 to the F-15 aircraft.

**Construction Emissions.** Emissions during the construction period were quantified to determine the potential impacts on regional air quality. Calculations of criteria pollutant emissions were performed using emission factors from the USEPA's *MOBILE6.2* and

*NONROAD2005* models (USEPA 2005a, 2005b, 2006b) and *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (Air Force Institute for Environment, Safety, and Occupational Health Risk Analysis 2003). Emissions resulting from construction activities include contributions from engine exhaust emissions (i.e., construction equipment and material handling) and fugitive dust emissions (e.g., from ground disturbance). Demolition emissions evaluated include fugitive dust and transport of demolition debris offsite. Paving emissions consist of combustive emissions from bulldozers, rollers, paving equipment, and dump trucks hauling pavement materials to the site. Table 4.4-1 summarizes the annual emissions estimated for the Proposed Action construction activities.

**Table 4.4-1. Total Construction Emissions – Proposed Action**

| | **EMISSIONS (TONS)** | | | | | |
|---|---|---|---|---|---|---|
| ***Year/Activity*** | ***VOC*** | ***CO*** | ***$NO_x$*** | ***$SO_x$*** | ***$PM_{10}$*** | ***$PM_{2.5}$*** |
| 2007 | | | | | | |
| Demolition | <0.1 | 0.1 | 0.3 | <0.1 | 0.2 | <0.1 |
| Building Construction | 0.2 | 1.0 | 1.7 | 0.2 | 0.5 | 0.3 |
| Paving | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | <0.1 |
| **2007 Total** | **0.2** | **1.2** | **2.1** | **0.3** | **0.8** | **0.3** |
| **2008** | | | | | | |
| Building Construction | 0.3 | 1.4 | 2.4 | 0.3 | 0.7 | 0.3 |
| **2008 Total** | **0.3** | **1.4** | **2.4** | **0.3** | **0.7** | **0.3** |
| **2009** | | | | | | |
| Building Construction | <0.1 | 0.1 | 0.1 | <0.1 | <0.1 | <0.1 |
| **2009 Total** | <0.1 | **0.1** | **0.1** | <0.1 | <0.1 | <0.1 |
| **2010** | | | | | | |
| Building Construction | <0.1 | 0.1 | 0.2 | <0.1 | 0.1 | <0.1 |
| **2010Total** | <0.1 | **0.1** | **0.2** | <0.1 | **0.1** | <0.1 |
| **2011** | | | | | | |
| Demolition | <0.1 | 0.1 | 0.2 | <0.1 | 0.1 | <0.1 |
| Building Construction | <0.1 | 0.1 | 0.2 | <0.1 | 0.1 | <0.1 |
| **2011Total** | **0.1** | **0.3** | **0.4** | **0.1** | **0.2** | **0.1** |
| **Major Source Thresholds** | **50** | **100** | **50** | **100** | **100** | **100** |
| **Conformity *de minimis* Thresholds[1]** | **50** | **-** | **100** | **-** | **-** | **-** |

1. Data presented only include nonattainment pollutants (ozone precursors of VOCs and NOx) associated with the project conformity applicability analysis

Construction emissions associated with the Proposed Action would produce short-term and elevated air pollutant concentrations on a localized basis. However, these impacts would be temporary in nature and would end when construction is complete. Additionally, the construction contractor will comply with the Code of Massachusetts Regulations (CMR) (310 CMR 7.09), Regulation 9 - Dust and Odor (USEPA 2006a), to minimize fugitive dust emissions during construction. For instance, frequent spraying of water on exposed soil during construction, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard procedures that could be used to minimize the amount of dust generated during construction. Efficient use of equipment and avoiding long periods of engine idling will reduce combustion emissions from construction equipment. Carpooling also would reduce vehicular combustion emissions from construction worker commutes.

Emissions associated with construction activities associated with the Proposed Action will produce short-term and elevated air pollutant concentrations on a localized basis. Total construction emissions from the Proposed Action will not exceed any conformity *de minimis* threshold, and will therefore have minor air quality impacts in Hampden County and the Hartford-New Haven-Springfield Interstate Air Quality Control Region (AQCR).

**Operational Emissions.** Implementation of the Proposed Action will affect both mobile and stationary source emission levels at the base. To estimate air emissions from stationary and ground-based non-aircraft mobile sources associated with the Proposed Action, the analysis increased Base emissions for these sources (see Table 3.4-3) by 15 percent, to account for the proposed increase in Base personnel of 15 percent (139 personnel) from current levels. Prior to installation, new facility boilers, fuel storage tanks, arresting systems and possibly generators associated with the Proposed Action would be evaluated on the basis of their PTE to ensure that they would comply with their applicable MassDEP stationary source regulation. It is expected that the current Base RES will be modified to incorporate engine testing associated with the proposed F-15 aircraft.

Emissions from aircraft at the 104 FW installation will change with the Proposed Action, as the new F-15 aircraft will produce emissions at a different rate compared to currently assigned A-10 aircraft. The Proposed Action will also increase the number of annual aircraft sorties compared to current operations. The proposed F-15 aircraft could have three different engine types, each with different emission factors (F100-PW-100, F100-PW-200, and F100-PW-229 engines). To provide the most conservative analysis, the highest pollutant emission factors of the three engines were used to estimate annual emissions from the F-15. Aircraft flying operations were calculated using default time-in-mode data, as described in Section 3.4.2. There will also be a change in emissions from the regular testing of aircraft engines due to the increased number of aircraft and different emission rates of the new aircraft.

The additional employees under the Proposed Action will increase air pollutant emissions from personally owned vehicles due to commuting activities. The increase in commuting emissions was calculated based on the assumption that full-time personnel will commute an average of 20 miles each way, 5 days per week and 50 weeks per year, with an average vehicle occupancy of 1.1 people. The vehicles were assumed to be a standard mix of vehicle types and corresponding emission factors as determined by using the USEPA's MOBILE6 emissions model (USEPA 2005a). This model is approved by the MassDEP to calculate commuter emissions. Table 4.4-2 shows the estimated increase in annual operational emissions at the 104 FW that would occur from the implementation of the Proposed Action.

**Table 4.4-2. Total Operational Emission Increases at the 104 FW under the Proposed Action**

| | **INCREASE IN EMISSIONS (TPY)[1]** | | | | | |
|---|---|---|---|---|---|---|
| ***Source Type*** | ***VOC*** | ***CO*** | ***$NO_x$*** | ***$SO_x$*** | ***$PM_{10}$*** | ***$PM_{2.5}$*** |
| Stationary Sources | 0.4 | 0.1 | 0.2 | 0.1 | <0.1 | <0.1 |
| Mobile Sources | 32.3 | (13.7) | 34.6 | 0.7 | (7.3) | (7.3) |
| Additional Commuting | 0.8 | 15.6 | 1.0 | <0.1 | <0.1 | <0.1 |
| **Total Change** | **33.5** | **2.0** | **35.8** | **0.8** | **(7.2)** | **(7.3)** |
| **Major Source Thresholds** | **50** | **100** | **50** | **100** | **100** | **100** |
| **Conformity *de minimis* Thresholds[2]** | **50** | **-** | **100** | **-** | **-** | **-** |

Note: 1. Parentheses represent a reduction in emissions from current levels.
2. Data presented only include nonattainment pollutants (ozone precursors of VOCs and NOx) associated with the project conformity applicability analysis

**Total Annual Project Emissions/Conformity Applicability Analysis.** The significance of air quality impacts from the Proposed Action were determined by comparing the combined calendar year construction and operational emissions to the NEPA annual emission significance thresholds. Table 4.4-3 displays the calendar year emissions estimated for the Proposed Action. These data show that annual emissions associated with the Proposed Action would not exceed any threshold associated with 310 CMR 7.00. In addition, annual emission increases from the Proposed Action would remain below the conformity *de minimis* thresholds and 10 percent of the regional air basin emissions for Hampden County.

**Table 4.4-3. Total Emission Increases at the 104 FW under the Proposed Action**

| *Year/Activity* | INCREASE IN EMISSIONS (TPY)[1] | | | | | |
|---|---|---|---|---|---|---|
| | ***VOC*** | ***CO*** | ***NOx*** | ***SOx*** | ***PM10*** | ***PM2.5*** |
| 2007 | | | | | | |
| Construction | 0.2 | 1.2 | 2.1 | 0.3 | 0.8 | 0.3 |
| Operation | 8.4 | 0.5 | 9.0 | 0.2 | (1.8) | (1.8) |
| Total 2007 Emissions | **8.6** | **1.7** | **11.0** | **0.5** | **(1.0)** | **(1.5)** |
| 2008 | | | | | | |
| Construction | 0.3 | 1.4 | 2.4 | 0.3 | 0.7 | 0.3 |
| Operation | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total 2008 Emissions | **33.7** | **3.5** | **38.2** | **1.2** | **(6.5)** | **(6.9)** |
| 2009 | | | | | | |
| Construction | <0.1 | 0.1 | 0.1 | <0.1 | <0.1 | <0.1 |
| Operation | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total 2009 Emissions | **33.5** | **2.1** | **35.9** | **0.8** | **(7.2)** | **(7.3)** |
| 2010 | | | | | | |
| Construction | <0.1 | 0.1 | 0.2 | <0.1 | 0.1 | <0.1 |
| Operation | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total 2010 Emissions | **33.5** | **2.2** | **36.1** | **0.9** | **(7.1)** | **(7.2)** |
| 2011 | | | | | | |
| Construction | 0.1 | 0.3 | 0.4 | 0.1 | 0.2 | 0.1 |
| Operation | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total 2011 Emissions | **33.5** | **2.3** | **36.3** | **0.9** | **(7.0)** | **(7.2)** |
| **Major Source Thresholds** | 50 | 100 | 50 | 100 | 100 | 100 |
| **Conformity *de minimis* Thresholds[2]** | **50** | **-** | **100** | **-** | **-** | **-** |
| **10% of Regional Emissions[2]** | **1,759** | **-** | **1,905** | **-** | **-** | **-** |

Note: 1. Parentheses represent a reduction in emissions from current levels.
2. Data presented only include nonattainment pollutants (ozone precursors of VOCs and NOx) associated with the project conformity applicability analysis

Project construction and operational activities would emit hazardous air pollutants that could potentially impact public health. Hazardous air pollutants generally are minor subsets of VOC and $PM_{10}$ emissions. Review of Table 4.4-3 shows that the Proposed Action would produce a maximum annual total of 33.7 tons of VOC and would reduce $PM_{10}$ emissions compared to baseline conditions. Jet fuel combustion produces the overwhelming majority of VOC emissions from the Proposed Action and formaldehyde comprises the largest hazardous air pollutant portion of these VOC emissions, or about 17 percent of the total VOCs (California Air Resources Board 2005). Hence, the peak annual emissions of formaldehyde would amount to approximately 5.8 tons. Additionally, total hazardous air pollutants from proposed jet fuel combustion would amount to approximately 47 percent of the proposed VOC emissions, or 15.9 TPY. As a result, emissions from construction of the Proposed Action will not exceed 10 TPY of any hazardous air pollutant or 25 TPY of combined hazardous air pollutants.

#### 4.4.2.2 Alternative Action

Construction activities associated with the Alternative Action would produce the same air quality impacts as those estimated for the Proposed Action. Operational activities associated with the Alternative Action would produce the same amount of emissions as those estimated for the Proposed Action. The majority of aircraft take-off operations under the Alternative Action would occur on Runway 20 (heading south); therefore emissions related to the proposal would initially be dispersed beyond this runway rather than beyond Runway 02 (to the north), as defined under the Proposed Action. However, the emissions will still occur within AQCR 42, and therefore impacts would be expected to be generally the same as described under the Proposed Action.

#### 4.4.2.3 No Action Alternative

Under the No Action Alternative, no construction emissions would occur and the installation's operational emissions would be identical to the current baseline presented in Section 3.4.

## 4.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL

### 4.5.1 METHODOLOGY

The potential effects of the alternatives on the airspace environment were assessed by considering the changes in airspace utilization that would result from the implementation of the alternatives. This assessment considered compliance with Air Force Instruction (AFI) 13-201 (*Air Force Airspace Management)* and supplements thereto, as well as measures that could minimize potential impacts on other regional air traffic and the Air Traffic Control system.

The type, size, shape, and configuration of individual airspace elements in a region are based upon, and are intended to satisfy, competing aviation requirements. Potential impacts could occur if air traffic in the region and/or the Air Traffic Control systems were encumbered by changed flight activities associated with the Proposed Action or an alternative. When any substantial change is planned, such as new or revised defense-related activities within an airspace area or a change in the complexity or density of aircraft movements, the FAA reassesses the airspace configuration. The FAA seeks to determine if such changes could adversely affect Air Traffic Control systems and/or facilities; movement of other air traffic in the area; or airspace already designated and used for other purposes supporting military, commercial, or general aviation.

## 4.5.2 IMPACTS

### 4.5.2.1 Proposed Action

Under the Proposed Action, F-15 aircraft will replace the A-10 aircraft currently assigned to the 104 FW at Westfield-Barnes Airport. No changes or modifications to the controlled airspace or Air Traffic Control procedures currently supporting aviation activities at the airport are required to support this action. Implementation of the Alert Mission requirements presents no unique airspace management issues. Launch and control of the alert aircraft would be managed by the FAA.

Due to the changed mission associated with the new aircraft, the 104 FW will utilize different military training airspace. The A-10 is primarily an air-to-ground attack aircraft, while the F-15 is an air-to-air fighter aircraft. It is anticipated that the Yankee and Condor MOAs will continue to be used for air-to-air training by the 104 FW; however, operations will generally occur in the higher altitude regimes than are currently used by the A-10s. Since air-to-ground ranges are not required under the new mission, operations performed by the 104 FW on No-Man's Land Island (R-4105), Warren Grove (R-5002), and Fort Drum (R-5201) ranges will cease. Operations will continue in W-102 and W-105 over the Atlantic Ocean. Figure 4.5-1 depicts the airspace elements that will be utilized by the 104 FW with the F-15 aircraft. Table 4.5-1 reflects the current (102 FW) and projected (104 FW) annual airspace utilization by the F-15s under the Proposed Action.

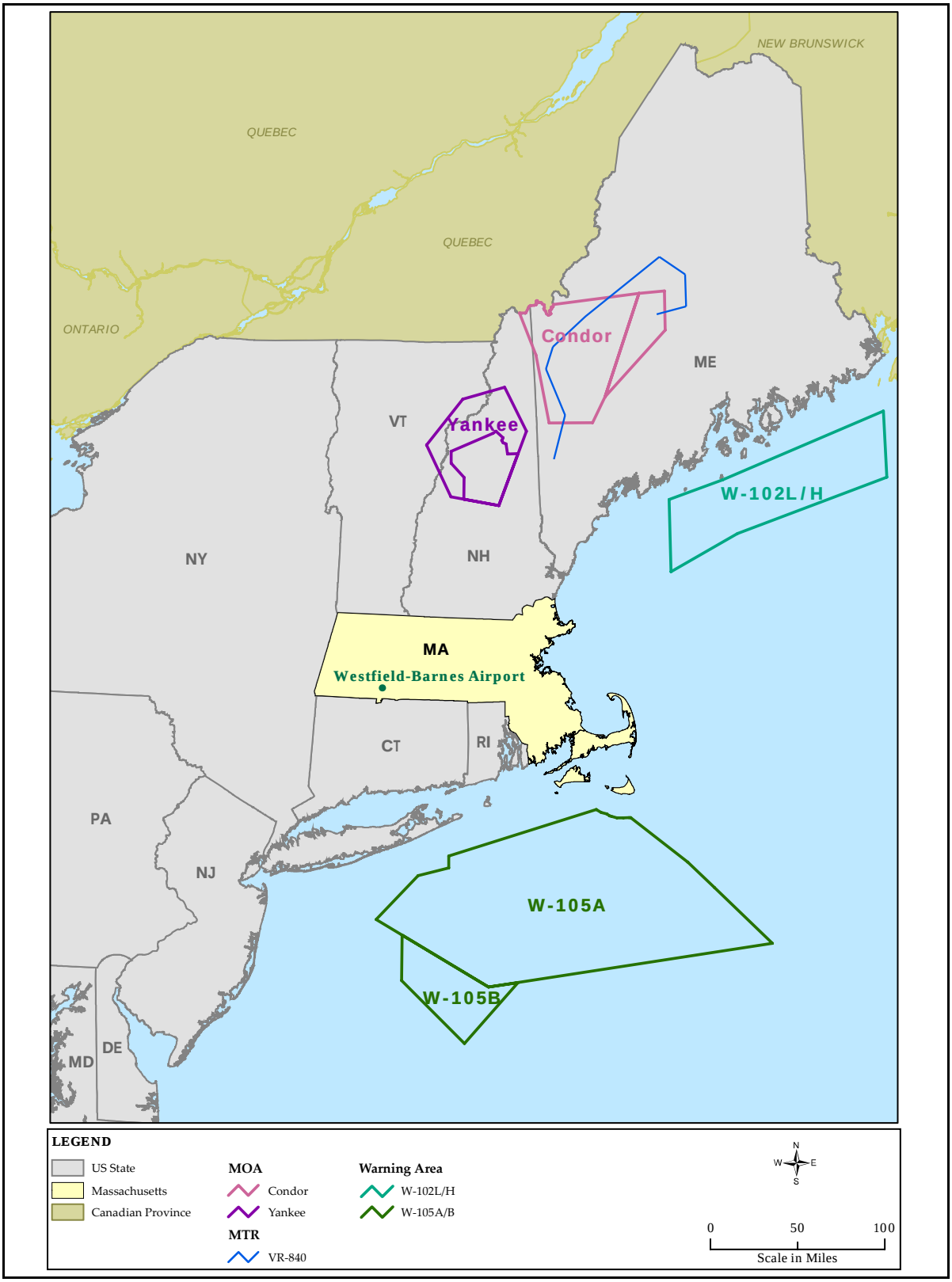



**Figure 4.5-1. Military Training Airspace Associated with the Proposed 104 FW Mission**

**Table 4.5-1. F-15 Airspace Utilization**

| *Airspace Type* | *Airspace Designation* | *Existing Annual Sorties* | *Proposed Annual Sorties* |
|---|---|---|---|
| MOAs | Yankee | 132 | 132 |
| | Condor | 192 | 192 |
| MTRs | VR-840 | 48 | 48 |
| Warning Areas | W-102 | 18 | 18 |
| | W-105 | 2,900 | 2,900 |

Source: Personal communication, Kerdavid 2006.

It should be noted that each of the airspace elements described above is currently used by the F-15s stationed at Otis ANGB, which will no longer be assigned F-15s as a result of the recent 2005 BRAC recommendations. Therefore, after the aircraft conversion associated with the 104 FW, the same airspace elements will continue to be used by the F-15 aircraft. Essentially, there is no increase in overall airspace utilization. The only modified use will involve the decreased need for low altitude flight training in general, in as much as most air-to-air training is conducted at higher altitudes. It should be noted that while the 104 FW does not plan to conduct any sorties during the hours of 10:00 p.m. to 7:00 a.m. in this airspace, it is possible that other users of the airspace will conduct sorties during this time period. Additionally, through coordination with the FAA, NOTAMs would be published anytime the MOAs would be used outside of the published operating hours. For example, the published hours of operation for the Yankee MOAs are from *sunrise to sunset*. During the winter, if operations are planned to occur at 6:00 p.m., a NOTAM would be published to alert other pilots of the activation of the MOA. No impacts to airspace management or the regional Air Traffic Control systems are anticipated as a result of the Proposed Action.

#### 4.5.2.2 Alternative Action

The only difference between the Proposed Action and the Alternative involves a change in the departure pattern at the Westfield-Barnes Airport, with 90 percent of the departures being to the south, rather than to the north. This creates no impacts to airspace utilization for the 104 FW; therefore, impacts associated with implementation of this alternative would be as described above in Section 4.5.2.1.

#### 4.5.2.3 No Action Alternative

Under the No Action Alternative, the aircraft conversion would not occur and aviation activities at Westfield-Barnes Municipal Airport would continue unchanged. Airspace management and air traffic control would remain as described in Section 3.5.2, and no impacts would be expected.

## 4.6 SAFETY

### 4.6.1 METHODOLOGY

Impacts are assessed according to the potential to increase or decrease safety risks to personnel, the public, and property. Project-related activities are considered to determine if additional or unique safety risks are associated with their undertaking. If any project-related activity indicates a major variance from existing conditions, it would be considered a safety impact.

### 4.6.2 IMPACTS

#### 4.6.2.1 Proposed Action

*Ground Safety*

Providing new facilities for the 104 FW that support operational requirements, and are properly sited with adequate space and a modernized supporting infrastructure will generally enhance ground, explosive, and flight safety during required operations, training, maintenance and support procedures, security functions, and other activities conducted by the unit. Figure 4.6-1 shows the relationship of proposed projects to airfield safety zones. None of the proposed projects will violate existing airfield safety and object free criteria that ensure separation between aircraft and obstacles on the ground or during take off and landing. The new arresting barriers along the runway are required airfield equipment and do not need a waiver. The proposed Aircraft Maintenance Hangar, ASA Complex, munitions storage magazine meet the standards for the inner transition Object Free Area (OFA) because they do not penetrate the protected volume of airspace. All other projects are outside the airfield safety areas.

Particular projects highlighted below directly respond to maintaining or improving safety at the 104 FW installation following the aircraft conversion.

- Fire and crash response capability will be improved by the proposed addition of temporary trailers, and the ultimate additions and alterations to the Fire Crash/Rescue Station. Fire safety would be further enhanced with the proposed improvements to the Fuel Cell facility to include an high-expansion foam (HEF) system.

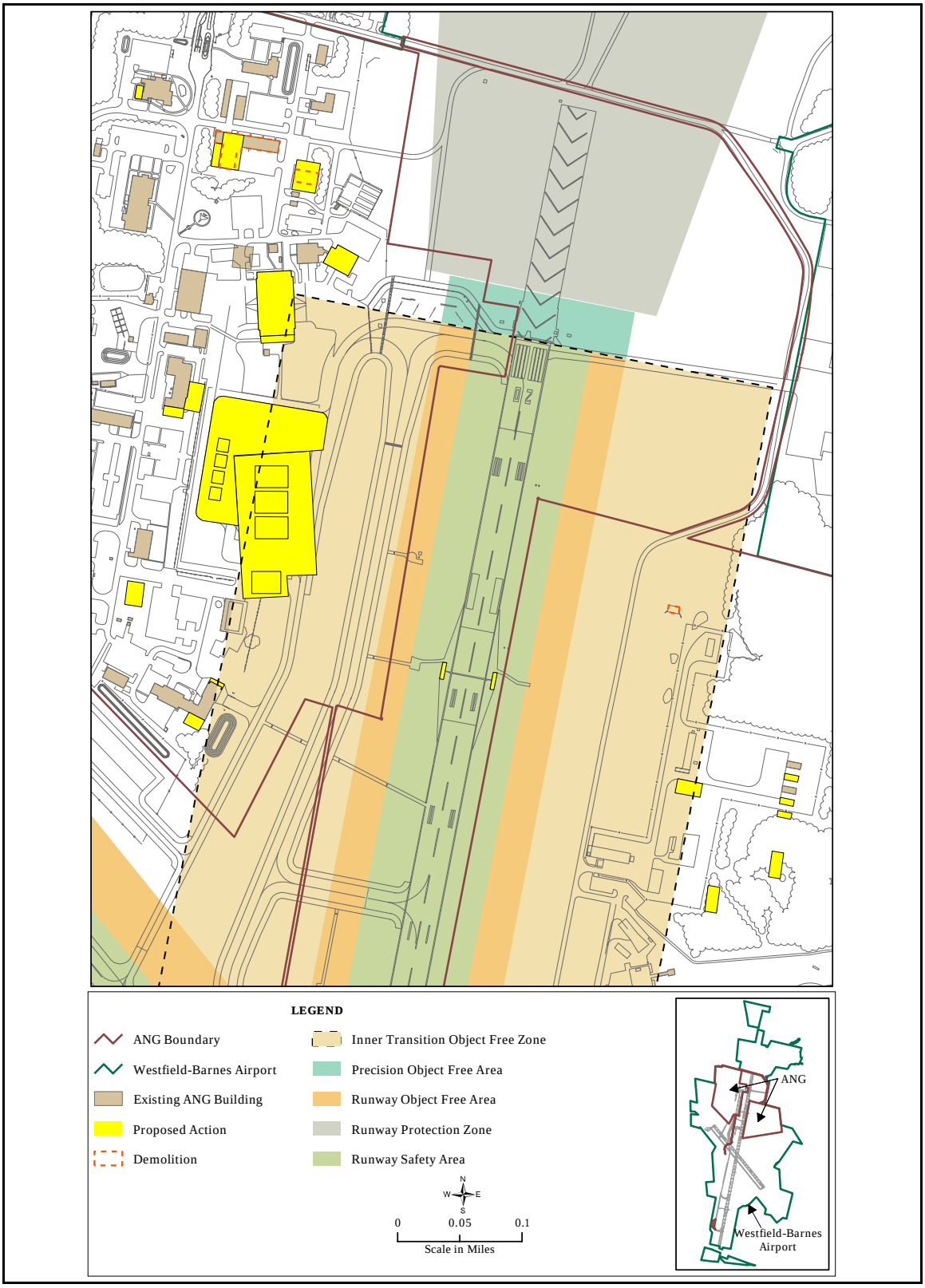



**Figure 4.6-1. Proposed Construction Projects in Relationship to Safety Zones at Westfield-Barnes Airport**

- The proposed upgrade of the aircraft maintenance hangar will be expected to enhance ground safety by providing an adequately sized and functionally configured facility to support required maintenance.

- There are four proposed projects improving munitions maintenance facilities. Each will be expected to enhance explosive safety. With the aircraft conversion, there will no longer be a requirement to support air-to-ground munitions. However, with the mission change there is a requirement to support live munitions associated with the ASA mission, as well as the continued use of chaff and flares. The new magazine, munitions igloos, and ASA Complex will require new QD arcs. The 104 FW has surveyed the area and determined that there is adequate space for the required separation of facilities and activities (personal communication, Dumais 2006). The new QD easements will be coordinated with the airport operators so that adequate safety distances for other activities on and surrounding the airfield are also maintained.

- The QD easements for the new alert aircraft shelters will be the same size as the QD easements for the A-10 aircraft. The location of these new QD arcs is within the airfield boundary and will not conflict with any other airfield operations.

- The proposed installation of aircraft arresting systems will substantially enhance both ground and flight safety at Westfield-Barnes Airport.

- Several facilities will have additions and alterations under the Proposed Action. These projects will also incorporate required Anti-Terrorism/Force Protection (AT/FP) measures for these facilities as part of the improvement.

F-15 aircraft require a 75-foot wide taxiway with 25-foot wide shoulders to ensure adequate airfield safety operations. The southern portion of Taxiway B, which parallels Runway 02/20, is only 50 feet wide. Although not part of the Proposed Action addressed in this EIS, Westfield-Barnes Airport proposes to widen this taxiway to meet requirements of the F-15. This project is addressed in Section 5.1.1, *Current and Reasonably Foreseeable Actions in the ROI*. Implementation of this project will preclude safety issues associated with Taxiway B and the Proposed Action.

The Proposed Action will not introduce any unique activities or materials to the installation, and established safety procedures and protocols adequately address safety of personnel and property on the ground. It is not expected that there would be an increase in the amount of fuel, oils, fluids, and lubricants used, and therefore, there is not a change in safety procedures or increase in safety risks anticipated. The F-15 does use a liquid coolant for avionics that is not currently used by the 104 FW. Any required safety procedures or storage needs for this fluid will be in place prior to bringing it into the local inventory.

Implementation of the Proposed Action will involve ground activities that may expose workers performing the required site preparation, grading, and building construction to some risk. The U.S. Department of Labor, Bureau of Labor Statistics, maintains data analyzing fatal and non-fatal occupational injuries based on occupation. Due to the varying range of events classified as non-fatal injuries, the considerations described below focus on fatal injuries since they are the most catastrophic. Data are categorized as incidence rates per 100,000 workers employed (on an annual average) in a specific occupation.

Activities involved in the proposed facility construction, modification, and demolition are not unique. Standard building and construction procedures and best management practices (BMPs) will be followed by the construction contractor(s).

To assess relative risk associated with this proposal, it is assumed that the industrial classifications of workers involved are the Construction Trades. Based on U.S. Department of Labor data and considerations of worker exposure, the probability of a fatal injury is statistically predicted to be 1.17 out of 10,000 (U.S. Department of Labor 2004). Although Department of Defense (DoD) guidelines for assessing risk hazards would categorize a fatal injury as "catastrophic", the expected frequency of the occurrence would be considered "remote" (MIL-STD-882 1993). Strict adherence to all applicable occupational safety requirements will further minimize the relatively low risk associated with these construction activities.

*Anti-Terrorism/Force Protection*

The relocation of the F-15s to Westfield-Barnes Airport does not pose any significant terrorist concerns. Any fighter aircraft could be used to combat terrorist attacks, including the A-10 which already resides at Barnes, thus the threat from terrorists should not change as a result of the aircraft conversion. Additionally, in the post 9/11 world of Homeland Security, there is a substantial interagency network in place for the protection of both government and non-government assets from terrorist activity, including those in Westfield and the surrounding area. This network currently exists (under the existing condition), and serves to protect all assets of the U.S. Information is shared among these agencies on a real time basis as a part of the Homeland Security network. This network will not change as a result of the Proposed Action. Civil authorities have the responsibility for contingency plans to protect citizens, usually through their emergency management directors.

*Explosives and Countermeasures Safety*

The change from an air-to-ground to an ASA mission will also change the type of munitions used by the 104 FW both for training and in combat.

The 104 FW will use the same type and quantity of training ordnance and countermeasures as currently used by the 102$^{nd}$ Fighter Wing (102 FW) at Otis ANGB. These include inert missiles

(AIM-120 and AIM-9) and small arms munitions (20 millimeter [mm] rounds). Training missiles have no warheads, but have an electronic acquisition device to tell the pilot if a "hit" is registered. The 104 FW will use the same quantities of munitions in the same locations as the 102 FW; therefore, this does not represent a change in the use of training ordnance.

Live munitions for the ASA mission will be stored, assembled, and maintained in facilities meeting DoD explosive safety standards. They will be delivered to the aircraft using approved munitions delivery techniques and routes on the installation. Live munitions associated with the F-15 are described in Section 2.3 (inset "F-15 Aircraft").

There may be a slight reduction in the number of flares used (and stored) by the 104 FW compared to their current air-to-ground mission, but one flare type, the MJU-10A/B will be new to the local inventory, and is slightly larger than the MJU-7A/B type currently used. However, storage and handling of this flare type poses no unique issues and can be safely stored in the proposed munitions storage facilities. The chaff type used by the F-15 is the same as that used by the A-10. Therefore, there are no issues pertaining to radio frequency interference. The 104 FW will continue to coordinate all waivers and approvals for chaff use with the FAA.

All munitions associated with the Proposed Action will be stored at the 104 FW installation. Existing and new facilities will provide adequate capacity and QD easements for this function. All proposed facility construction has been sited to be compliant with the QD arcs (Figures 4.6-2 and 4.6-3).

*Flight Safety*

Under the Proposed Action, the 104 FW will convert from A-10 aircraft (an air-to-ground attack aircraft) to F-15 aircraft (an air sovereignty–air superiority interceptor aircraft). Since 1979, this aircraft has accumulated 2,268,808 hours of flying time, and experienced 57 Class A Mishaps. This equates to a Class A Mishap rate of 2.51 per 100,000 flying hours. It is estimated that the 104 FW will fly the F-15 3,400 hours per year. With this aircraft, the probability of a Class A Mishap is 0.0000251. This equates to a statistically predicted Class A Mishap once every 11.7 years, given the 104 FW's expected flight hours. Compared to the current probability of once every 10.6 years for the A-10 mission, this is not a substantial change for the 104 FW.

While the risk of wildlife-aircraft strikes in the vicinity of Westfield-Barnes Airport will not noticeably change, it should be noted that the F-15 will generally be flown at higher altitudes and higher speeds than the A-10 during training missions. This is expected to reduce the potential for bird-strikes (with migratory birds) during training. In the vicinity of the airfield, the number of takeoff and landings will increase from about 20 to about 30 operations on an average day. All current procedures for managing Bird-Aircraft Strike Hazard (BASH) risks at the airfield will continue. Generally, the F-15 will gain altitude to above 3,000 feet above ground level (AGL) much faster than the A-10 and therefore lessen the amount of time that the aircraft is

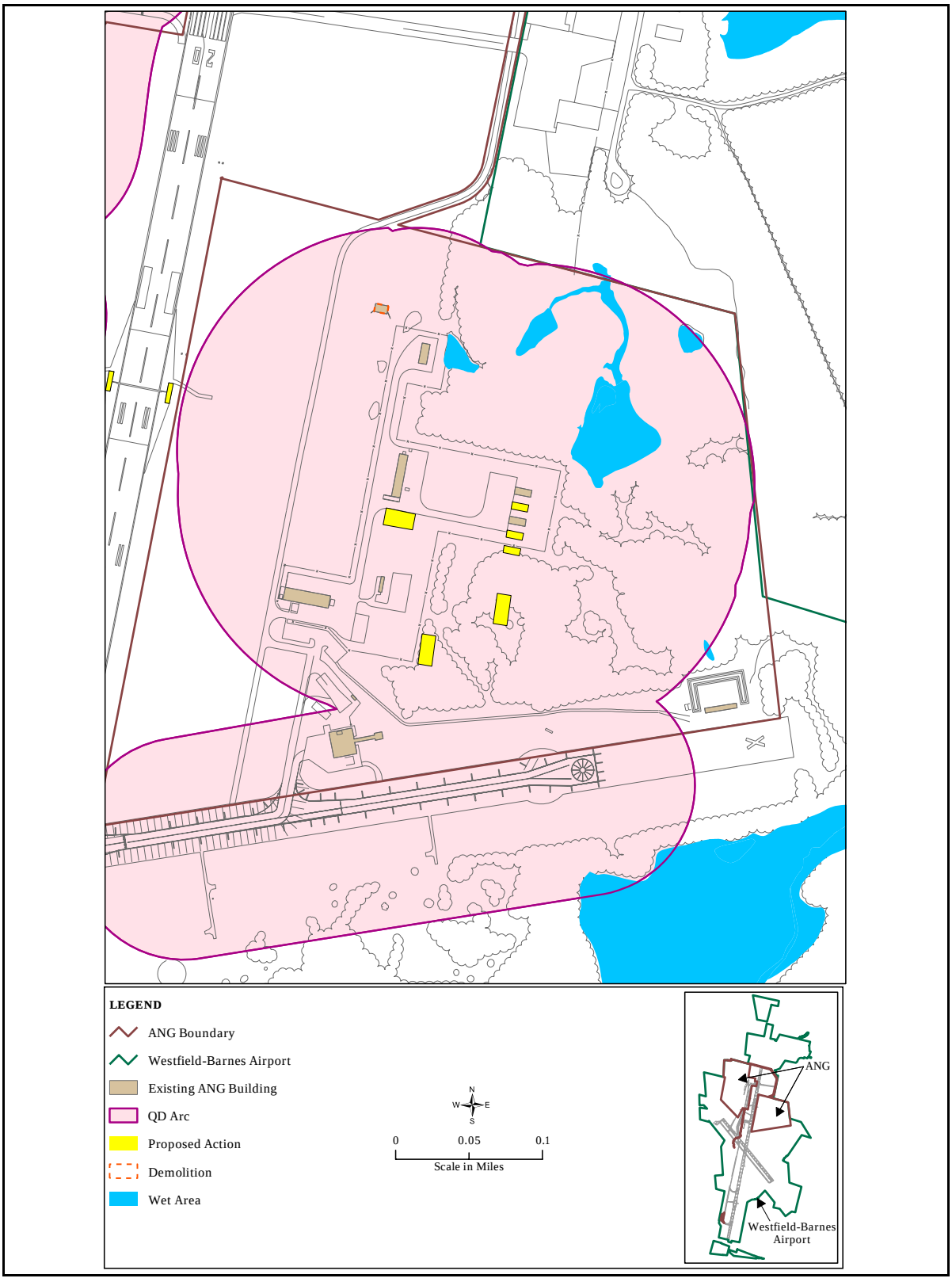



**Figure 4.6-2. Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (West Parcel)**

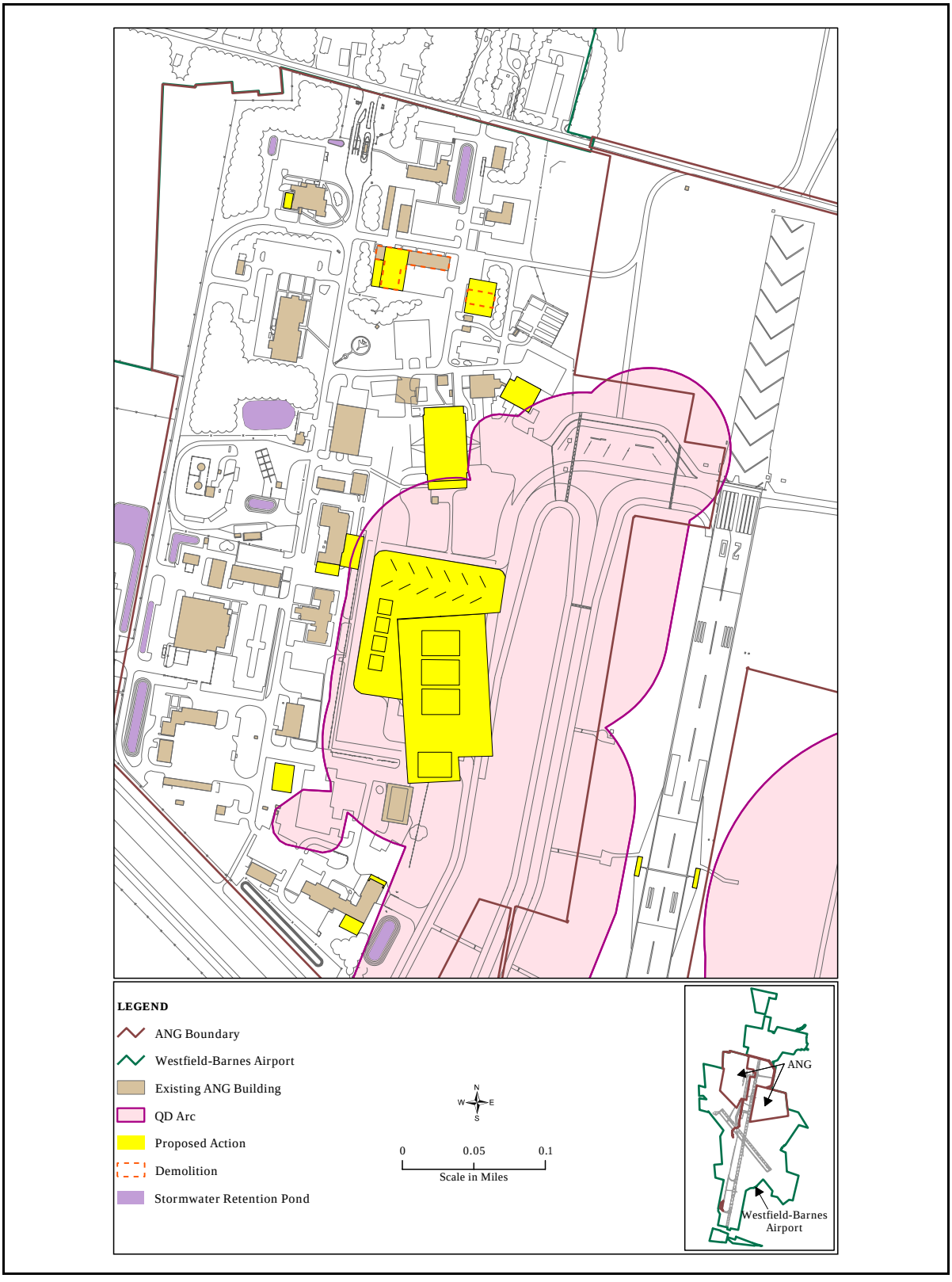



**Figure 4.6-3. Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (East Parcel)**

operating within the lower altitudes that waterfowl and a range of resident birds may occupy. The F-15 will transit to training areas at flight levels of 25,000 feet and higher, well above the altitudes normally used by migrating birds and waterfowl. The potential for bird-aircraft strikes would be expected to remain approximately the same for the F-15 as compared to the A-10 under the Proposed Action.

The ASA mission associated with the Proposed Action is a 24-hour per day, seven days a week mission. Currently, the airport provides air traffic control during the hours of 7:00 a.m. to 10:00 p.m., after which it reverts to Class G uncontrolled airspace. During this time, civilian or commercial aircraft may call up the airfield and remotely activate the runway lighting, and visual flight rules will apply. The 104 FW will not conduct training operations during the night, but in the event of an emergency, the alert aircraft may be called into action. It will be necessary to ensure that the airspace surrounding the airfield is clear of aircraft. The 104 FW must coordinate new procedures with the airport and FAA to provide positive air traffic control and clearance in the event of an alert scramble.

In general, implementation of the Proposed Action will result in positive impacts to safety, and no adverse impacts to safety are anticipated.

#### 4.6.2.2 Alternative Action

The Alternative Action does not differ from the Proposed Action in aspects that would affect safety. Under this alternative, the majority of F-15 aircraft would depart to the south and arrive from the north. The possibility of a Class A mishap would remain extremely low, with the same degree of risk as the Proposed Action. All other safety-related aspects of this alternative are the same as described for the Proposed Action in Section 4.6.2.1 and no adverse impacts are anticipated.

#### 4.6.2.3 No Action Alternative

Under the No Action Alternative, the aircraft conversion would not occur, and no facility improvements would be accomplished. The 104 FW would continue operations and maintenance using existing, inadequate facilities. The size, configuration, and infrastructure associated with these existing facilities would continue to be inadequate and further deteriorate from their current condition. The existing adverse ground, explosive, and safety issues would continue, and ultimately impact on the unit's ability to support its required mission.

## 4.7 SOLID AND HAZARDOUS MATERIALS AND WASTE

This section addresses the potential impacts caused by hazardous materials and waste management practices and the impacts of existing contaminated sites on reuse options.

Hazardous materials and petroleum products, hazardous and petroleum wastes, Environmental Restoration Program (ERP) sites, former underground storage tank (FUST) sites, and solid wastes will be discussed in this section.

### 4.7.1 METHODOLOGY

The qualitative and quantitative assessment of impacts from hazardous materials and solid waste management focuses on how and to what degree the alternatives affect hazardous materials usage and management, hazardous waste generation and management, and waste disposal. A substantial increase in the quantity or toxicity of hazardous substances used or generated would be considered potentially significant. Significant impacts could result if a substantial increase in human health risk or environmental exposure was generated at a level that cannot be mitigated to acceptable standards.

Regulatory standards and guidelines have been applied in evaluating the potential impacts that may be caused by hazardous materials and wastes. The following criteria were used to identify potential impacts:

- Generation of 100 kilograms (or more) of hazardous waste or 1 kilogram (or more) of an acutely hazardous waste in a calendar month, resulting in increased regulatory requirements.
- A spill or release of a reportable quantity of a hazardous substance as defined by the USEPA in 40 CFR Part 302; and 310 CMR 40.000 Massachusetts Contingency Plan.
- Manufacturing, use, or storage of a compound that requires notifying the pertinent regulatory agency according to Emergency Planning and Community Right-to-Know Act (EPCRA).
- Exposure of the environment or public to any hazardous material and/or waste through release or disposal practices.

Impacts to solid waste are evaluated in terms of decrease in capacity or life span at receiving landfills.

### 4.7.2 IMPACTS

#### 4.7.2.1 Proposed Action

*Hazardous Materials and Petroleum Products*

Construction and renovation activities will cause short-term increases in the quantities of hazardous materials (e.g., paint) and petroleum products (e.g., vehicle fuel) used and stored

within the installation. The 104 FW is responsible for managing these materials in accordance with federal, state, and local regulations to protect their employees from occupational exposure to hazardous materials and to protect the public health of the surrounding community. The operating location will be responsible for the safe storage and handling of hazardous materials used in conjunction with all construction and renovation operations. These materials will be delivered to the installation in compliance with the Hazardous Materials Transportation Act under 49 CFR. With regard to long-term impacts, additions to several buildings that currently use and store hazardous materials and petroleum products are being proposed in order to support the aircraft conversion and mission change. These include the following: Buildings 15, 20, 25, 40, Munition Storage and Maintenance Complex, and the Munitions Storage Magazine. Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used (e.g., engine oils and hydraulic fluid) will increase based on the maintenance schedule of the F-15 engine type. In addition, based on the F-15 engine efficiencies, it is anticipated that the jet fuel usage will increase 150 percent from 2.2 million gallons to 5.5 million gallons annually (personal communication, Richardson 2007). Construction of additional jet fuel storage tanks and hazardous materials storage areas is not planned, as storage capacity is currently sufficient on the installation; however, throughput of these materials will increase as described above. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention Control and Countermeasures (SPCC) Plan.

*Hazardous and Petroleum Wastes*

The proposed construction, renovation, and demolition activities will cause short-term increases in the volume of hazardous and petroleum wastes generated. Wastes generated by military activities are managed in accordance with applicable regulations and approved plans, and therefore impacts are not anticipated. The Proposed Action is not expected to impact the two Central Accumulation Points (CAPs) (Building 52 on the western parcel and Building HS-1 on the eastern parcel).

The new buildings in which hazardous and petroleum wastes will be generated are generally replacing existing operations. In addition, personnel increases and a slight increase in aircraft operations and associated aircraft maintenance activities may result in an increase in the volumes of hazardous and petroleum wastes generated and stored within the installation under the Proposed Action. However, it is not anticipated that the Proposed Action will affect the small quantity generator (SQG) status of the 104 FW installation. If generation rates increase to a volume of greater than 1,000 kilograms of non-acutely hazardous waste per month, or accumulation exceeds 1 kilogram of acutely hazardous waste, the 104 FW will be required to

manage their hazardous waste in accordance with the requirements of a Large Quantity Generator.

*Environmental Restoration Program and FUST Sites*

Construction activities associated with Projects 6, 10, and 11 could potentially encounter contaminated soil or groundwater associated with portions of ERP sites 6N, 5, and 7, respectively, located on the 104 FW installation (Figures 4.7-1 and 4.7-2). Although the 104 FW has obtained closure status from MassDEP for these three sites, residual amounts of contaminated soil (below risk-based standards) may be encountered during construction of the munitions storage igloos (Project 6), ASA apron (Project 10), and engine shop addition (Project 11). Any potential impacts may be mitigated through construction worker awareness and safety training.

Although the aircraft parking apron has not been investigated under the ERP, contaminated soils from historical fuel spills may be present beneath the parking apron. However, any potential impacts to the parking apron upgrade (Project 5) would be mitigated through worker awareness and safety training.

*Solid Waste*

The Proposed Action will create solid waste from debris generated during demolition, construction, and renovation. The contractor will have the responsibility of arranging transportation and disposal of waste generated during the demolition and construction of new structures. The demolition of Building 14 (Old Firing Range [1,366 square feet (SF)]), Building 20 (Engine Shop [21,058 SF]), and Building 21 (Aircraft General Purpose Warehouse [5,000 SF]) will generate approximately 1,607 tons of debris over a short period of time. In addition, the construction projects (Projects 1 to 15) will generate approximately 370 tons of debris (based on the total square footage). The 1,977 tons of debris generated is a negligible percentage of the regional landfill capacity (e.g., approximately 14 days capacity of the 50,000 TPY Northampton Landfill). A portion of solid waste generated as a result of building demolition and construction will be recycled. Examples are steel, aluminum, copper, concrete and asphalt. Recycling requirements will be incorporated into the engineering specifications.

Based on the age of some of the buildings proposed for demolition or renovation, asbestos and lead-based paint may be present. In addition, lead bullet fragments may be encountered during the demolition of the Old Firing Range. All solid waste will be disposed of in accordance with applicable federal, state, and Air National Guard (ANG) regulations.

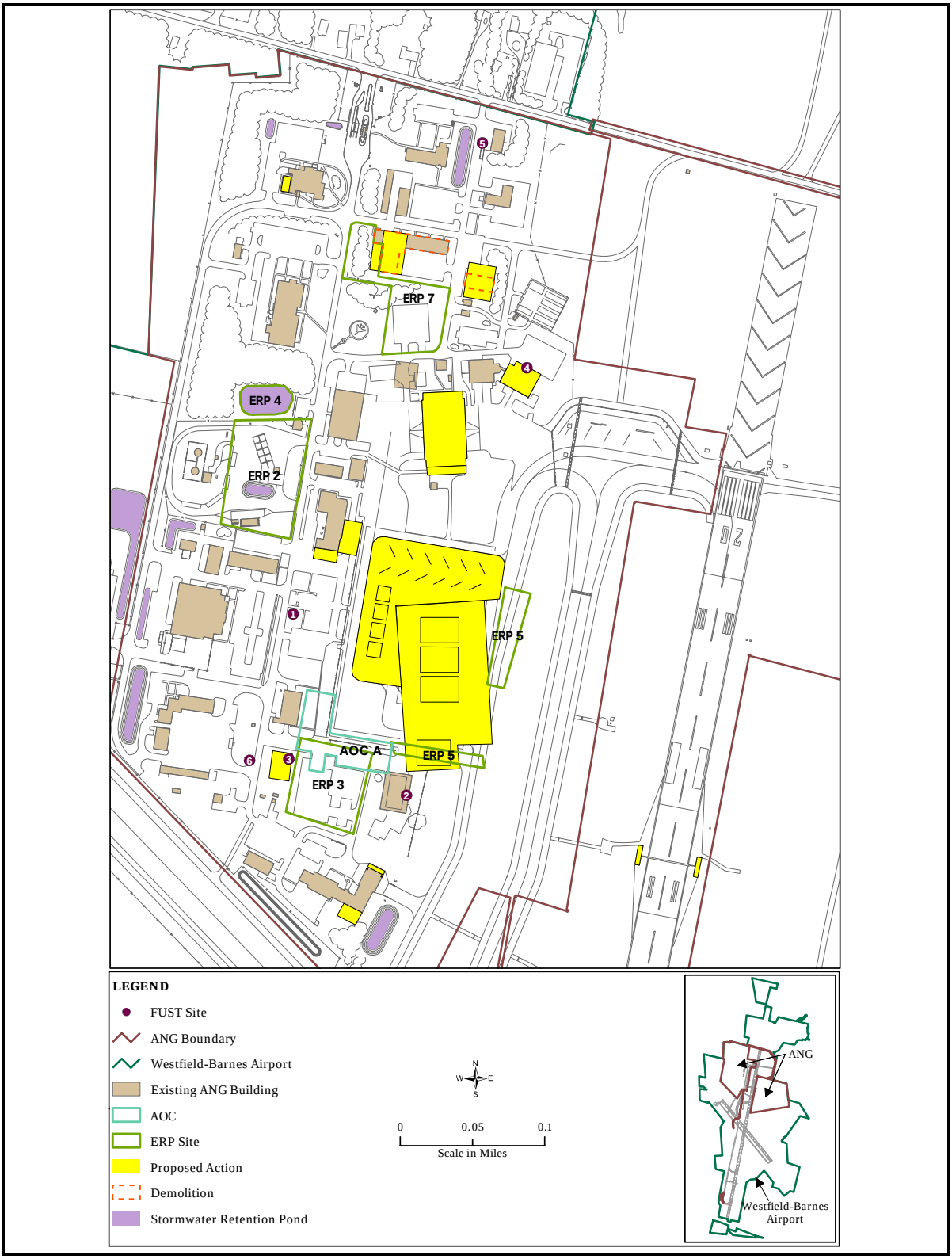



**Figure 4.7-1. Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (West Parcel)**

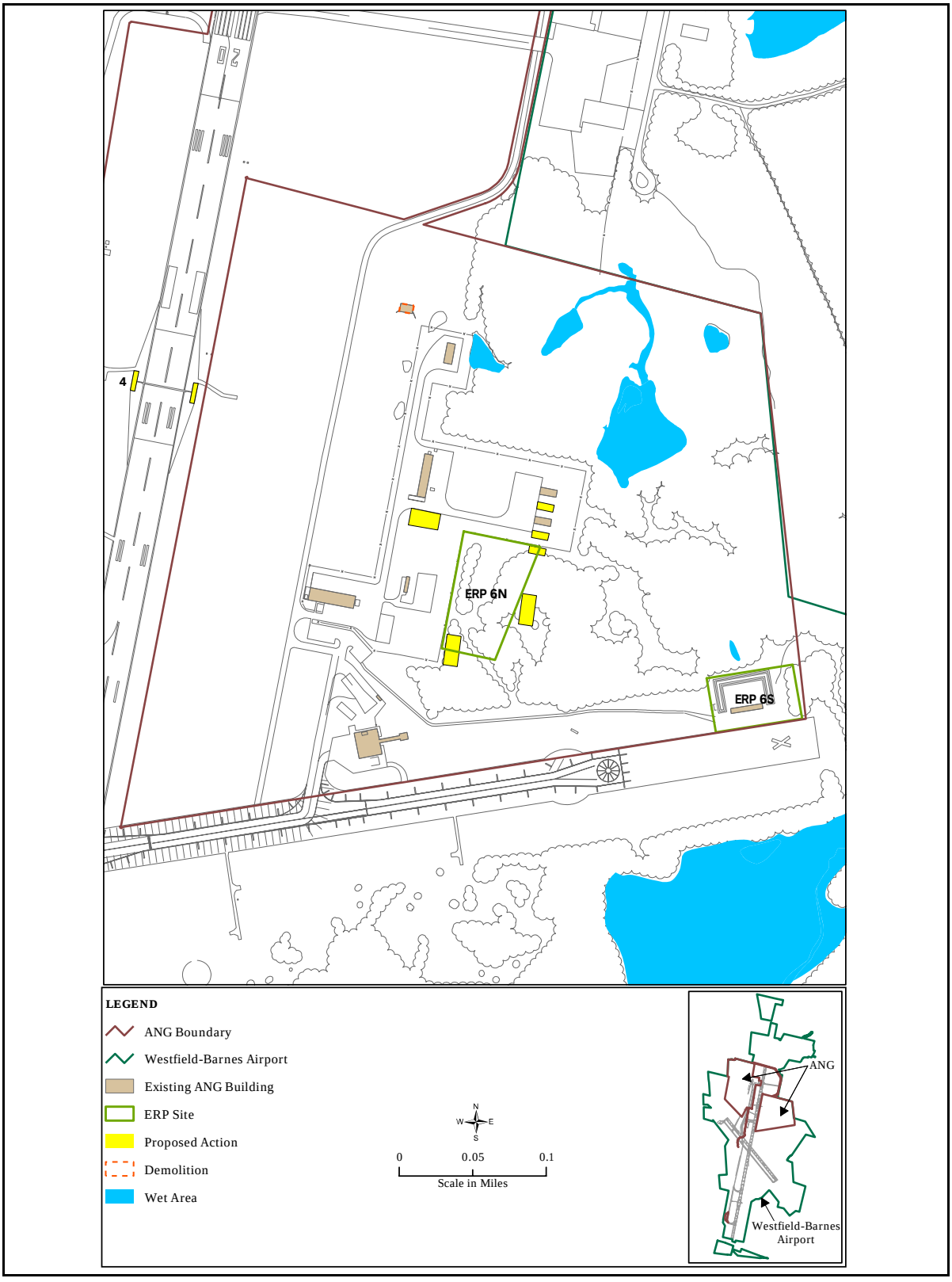



**Figure 4.7-2. Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (East Parcel)**

All projects where asbestos will be disturbed will be handled in accordance with the MassDEP asbestos regulations. A Bureau of Waste Prevention Air Quality Construction/Demolition Notification will be filed with the MassDEP prior to demolition. A Bureau of Waste Prevention Asbestos Removal Notification will be also filed with the MassDEP prior to demolition. Asbestos encountered during facility renovation or demolition will be the responsibility of the Massachusetts Air National Guard (MAANG) and is regulated under National Emission Standards for Hazardous Air Pollutants to prevent the release of asbestos fibers due to damage and disturbance of asbestos-containing materials. Exposed friable asbestos will be removed or remediated in accordance with U.S. Air Force (USAF) policy and applicable health laws, regulations, and standards, if it is determined that a health hazard exists.

#### 4.7.2.2 Alternative Action

Under the Alternative Action, the construction, demolition, and renovation projects would remain the same as described under the Proposed Action. The change in the direction of the take-offs and landings would have no impact on this resource. Therefore, the impacts for the Alternative Action would be the same as described under the Proposed Action (as described in Section 4.7.2.1).

#### 4.7.2.3 No Action Alternative

Under the No Action Alternative, the aircraft and mission conversion would not occur; the 104 FW would maintain their existing facilities and would not undertake the construction and demolition projects described under the Proposed Action. Facility improvements would not occur under this alternative, and would continue to operate under less-than-optimal conditions. Readiness could be adversely affected as a result of this alternative. There would be no impacts to solid and hazardous materials and wastes as a result of implementation of this alternative. In general, conditions would remain as described in Section 3.7.2.

## 4.8 INFRASTRUCTURE

### 4.8.1 METHODOLOGY

Impacts to transportation and utilities are assessed with respect to the potential for disruption to or improvement of current circulation patterns and utility systems, deterioration or improvement of existing levels of service on roadways, changes in existing levels of transportation, changes in demand or utility systems, and utility safety. Impacts may arise from physical changes to circulation or utility corridors, construction activity and introduction of construction-related traffic and utility use. Impacts to roadway capacities would be adverse if roads with no history of capacity exceedence were forced to operate at or above their full design capacity.

### 4.8.2 IMPACTS

#### 4.8.2.1 Proposed Action

Under the Proposed Action, the 104 FW would implement construction and demolition projects described in detail in Section 2.3. Implementation of the Proposed Action would gradually remove and replace aging facilities, improve utilities systems, and improve some aspects of the installation circulation system.

The Proposed Action would result in a temporary increase in vehicle trips to and from the 104 FW installation for construction workers and the delivery of materials and equipment, as well as removal of demolition debris. Increases in traffic volumes on roads surrounding the installation would be temporary, and because the elements of the Proposed Action would be phased over several years, the impacts to the local transportation system would be expected to be minor.

The Proposed Action would also result in long-term increases in vehicle trips to and from the 104 FW installation due to personnel increases at the installation. As a result of the 139 new full-time ANG personnel commuting to and from the installation during the normal business week, an increase of 1.5 percent in average daily traffic (ADT) would be anticipated, which is a minor increase to Massachusetts Routes 10 and 202 (Southampton Road). Additionally, traffic on nearby roadways generally operates within the intended capacity of the roadway; therefore, the Proposed Action would not be expected to result in congestion on those roads. A traffic light at the intersection of Falcon Drive and Massachusetts Routes 10 and 202 (Southampton Road) adequately controls traffic during the busier commuting times and 1.5 percent ADT increase would not be expected to degrade the effectiveness of this intersection to convey traffic.

It is anticipated that existing utility systems are generally adequate to serve proposed facilities and personnel increases, although utility extensions would be required to serve several of the new facilities. In addition, improvements to the storm water drainage system would be required to facilitate additional surface drainage needs associated with the anticipated addition of approximately 0.85 acres of impervious surface. These improvements would include incorporating curbing and storm drainage inlets associated with individual projects, as well as expansion of existing retention ponds, as necessary (refer to Section 4.10.2)

Construction activities associated with the Proposed Action would result in some temporary interruption of utility services and minor hindrance of transportation and circulation during construction periods. These impacts would be temporary, occurring only briefly during active construction periods.

#### 4.8.2.2 Alternative Action

Under the Alternative Action, the only change from the Proposed Action would be the predominant direction of take-offs by the F-15 aircraft. All other activities involving mission change, construction, assigned personnel increase would remain as described under the preferred alternative. Impacts to infrastructure would be expected to be as described under the Proposed Action.

#### 4.8.2.3 No Action Alternative

Under the No Action Alternative, the 104 FW would maintain their existing facilities and would not undertake the construction and demolition projects described under the Proposed Action. Facility and infrastructure improvements would not occur under this alternative, and would continue to operate under less-than-optimal conditions. Readiness could be adversely affected as a result of this alternative. In general, conditions would remain as described in Section 3.8.2.

## 4.9 EARTH RESOURCES

### 4.9.1 METHODOLOGY

Protection of unique geologic features, minimization of soil erosion, and the siting of facilities in relation to potential geologic hazards and soil limitations are considered when evaluating impacts to earth resources. Generally, impacts can be avoided or minimized if proper construction techniques, erosion control measures, and structural engineering designs are incorporated into project development.

Analysis of potential impacts to geologic resources typically includes identification and description of resources that could potentially be affected, examination of the potential effects that an action may have on the resource, assessment of the significance of potential impacts, and provision of mitigation measures in the event that potentially significant impacts are identified. Analysis of impacts to soil resources resulting from proposed activities examines the suitability of locations for proposed operations and activities. Impacts to soil resources can result from earth disturbance that would expose soil to wind or water erosion.

### 4.9.2 IMPACTS

#### 4.9.2.1 Proposed Action

Under the Proposed Action, up to approximately 10 acres of land surface would be temporarily disturbed as a result of construction and demolition of the proposed facilities and pavements.

There would be approximately 0.85 acres of new impervious surface following completion of all the proposed construction.

The construction and demolition under the Proposed Action would all occur on the Hinckley loamy sand and urban land soil types. Permeability is very rapid in the Hinkley soils and consequently are excessively drained leading to low water capacity. These soils are well-suited to construction activities, except for the Hinckley loamy sand, 15 to 25 percent slope, which is limited by slope. Any construction activities on this soil unit would require construction techniques that would facilitate the specific requirements of the given project. It is likely that the site would be graded to specific needs prior to construction activities. Given that the vast majority of the construction proposed would occur on a previously developed land, continued development of these parcels should not be problematic. Previously developed land often has soils that are indistinct as the foundation has been obscured, filled in or destroyed by construction and urban development.

The grading of existing soil and placement of structural fill for new facilities would not substantially alter existing soil conditions at the 104 FW installation at Westfield-Barnes Airport because much of this land has been previously disturbed. There are no special qualities associated with the soils or geologic resources at these sites. The potential for erosion for these soil groups is moderate to slight. Implementation of construction BMPs would minimize any impacts associated with erosion. These BMPs would include, but not be limited to installation of silt fencing and sediment traps, application of water sprays to keep soil from becoming airborne, and revegetation of disturbed areas, as appropriate. Therefore, potential impacts to earth resources as a result of the Proposed Action would be minimal.

#### 4.9.2.2 Alternative Action

Under the Alternative Action, the only change from the Proposed Action would be the predominant direction of take-offs by the F-15 aircraft. All other activities involving mission change, construction, assigned personnel increase would remain as described under the preferred alternative. Therefore, impacts to earth resources would be expected to be as described under the Proposed Action.

#### 4.9.2.3 No Action Alternative

Under the No Action Alternative, none of the proposed construction or demolition activities or the change in aircraft and associated increase in number of aircraft would occur and therefore, there would be no new impacts to earth resources. Conditions would remain as described in Section 3.9.2.

## 4.10 WATER RESOURCES

### 4.10.1 METHODOLOGY

Criteria for evaluating impacts related to water resources associated with the Proposed Action are water availability, water quality, and adherence to applicable regulations. Impacts are measured by the potential to reduce water availability to existing users; endanger public health or safety by creating or worsening health hazards or safety conditions; or violate laws or regulations adopted to protect or manage water resources. An impact to water resources would be significant if it would: 1) reduce water availability to or interfere with the supply of existing users; 2) create or contribute to overdraft of groundwater basins or exceed safe annual yield of water supply sources; 3) adversely affect water quality or endanger public health by creating or worsening adverse health hazard conditions; 4) threaten or damage unique hydrologic characteristics; or 5) violate established laws or regulations that have been adopted to protect or manage water resources of an area. Impacts of flood hazards on proposed actions can be significant if such actions are proposed in areas with high probabilities of flooding; however, these impacts can be minimized through the use of specific design features to minimize the effects of flooding.

The MassDEP and the USEPA Region 1 are the regulatory agencies that govern water resources in the Commonwealth of Massachusetts. The Clean Water Act (CWA) of 1977 regulates pollutant discharges and development activities that could affect aquatic life forms or human health and safety.

### 4.10.2 IMPACTS

#### 4.10.2.1 Proposed Action

With regard to water resources, the primary concerns associated with the Proposed Action include effects on water quality during construction activities, changes to surface water drainage, and groundwater recharge.

In general, increases in impervious surfaces act to increase peak discharge volumes and speed delivery of water to nearby waterways, which ultimately increases the potential for flooding as well as the transport of pollutants to surface waters. In undeveloped land, rainfall is collected and stored in vegetation, in the soil column, or in topographic depressions. Water is then utilized by plants and respired, or it moves slowly into groundwater and/or eventually to waterbodies where it slowly moves through the hydrologic cycle. Removal of vegetation and/or soil compaction decreases infiltration into the soil column and thereby increases the quantity and timing of runoff. Replacement of vegetation with an impervious surface, such as concrete, eliminates any potential for infiltration and also speeds up delivery of the water to nearby

drainage channels. With less storage capacity in the soil column and vegetation, urban streams rise more quickly during storm events and have higher peak discharge rates, both of which increase the potential for flooding downstream and damage to public infrastructure and private property.

The Proposed Action will involve approximately 10 acres of surface disturbance over the anticipated five year construction period, and 0.85 acres of new impervious surfaces for the building footprints of the proposed facilities. An increase in impervious surfaces will likely increase the rate of peak discharge, which is defined as the maximum surface water volume flow rate passing a particular location during a storm event. Peak discharge is a primary design variable used for the design of storm water runoff facilities such as pipe systems, storm inlets and culverts, and small open channels. However, given the developed nature of the site and the high percentage of impervious surfaces already existing, the impact of the proposed construction is expected to be negligible.

Short-term impacts to water quality may occur during construction. For example, the construction of new buildings, parking areas, and additions to buildings may temporarily increase erosion. Erosion and sedimentation would be controlled through the use of BMPs, such as hay bales, silt fences, sediment traps, application of water sprays to keep soil from becoming airborne, revegetation of disturbed areas, covering of soil stockpiles, use of secondary containment for the temporary storage of hazardous liquids, detention/retention ponds, and establishment of buffer areas, as appropriate, in the construction plans.

Construction activities that disturb one acre or more of land area require the proponent to file a Notice of Intent with USEPA, Region 1, to obtain coverage under a construction general permit in accordance with National Pollutant Discharge Elimination System (NPDES) requirements. Adherence to the requirements of the construction general permit include implementation of BMPs within the Storm Water Pollution Prevention Plan (SWPPP) to minimize the potential for exposed soils or other contaminants from construction activities on the installation to reach nearby surface waters (104 FW 2004b). The proposed facilities will not require modifications or disturbance of any streams or ponds located near the installation.

There are no proposed construction projects located within any 100-year or 500-year floodplains; therefore construction activities under the Proposed Action will not directly affect the predicted 100-year or 500-year flood elevations. The increase of impervious surfaces on the installation is not expected to indirectly affect the 100-year predicted flood elevations of Pond Brook or the floodplain area in the northeast corner of the munitions area due to the implementation of BMPs in accordance with the NPDES permit that will be required for the new construction.

The rate of groundwater recharge of the upper aquifer located directly beneath the installation may be minimally impacted due to the increase of approximately 0.85 acres of impervious surfaces. As mentioned above, given the developed nature of the site and the high percentage of impervious surfaces already existing, the impact is expected to be minor. Impacts on the availability and quality of groundwater are determined by analyzing the amount and quality of expected surface water runoff, since the surface water eventually discharges into the groundwater system. In general, runoff will continue to discharge into the groundwater system via percolation (104 FW 1995b).

The small increase in aircraft operations and associated maintenance activities have the potential to result in a correspondingly small increase in the potential for hazardous materials (e.g., petroleum products, paint, etc.) and hazardous wastes to reach groundwater resources underlying the 104 FW installation (i.e., the Barnes Aquifer). However, adherence to established plans (i.e., SWPPP, Hazardous Waste Management Plan, SPCC, etc.) and procedures outlined in those plans will generally preclude the potential for substantial spills to reach the Barnes Aquifer.

#### 4.10.2.2 Alternative Action

There would be no differences related to construction activities between the Proposed Action and the Alternative Action. Therefore, impacts associated with the Alternative Action would be identical to those described under the Proposed Action in Section 4.10.2.1.

#### 4.10.2.3 No Action Alternative

Under the No Action Alternative, the 104 FW would maintain their existing facilities and would not undertake the construction and demolition projects described under the Proposed Action. Facility and infrastructure improvements would not occur under this alternative, and would continue to operate under less-than-optimal conditions. Readiness could be adversely affected as a result of this alternative. In general, no impacts to water resources would occur and conditions would remain as described in Section 3.10.2.

## 4.11 BIOLOGICAL RESOURCES

### 4.11.1 METHODOLOGY

Evaluation of impacts is based upon (1) the importance (legal, commercial, recreational, ecological, or scientific) of the resource, (2) the rarity of a species or habitat regionally, (3) the sensitivity of the resource to proposed activities, and (4) the duration and magnitude of ecological ramifications. Impacts to biological resources are considered to be greater if priority species or habitats are adversely affected over relatively large areas and/or disturbances cause reductions in population size or distribution of a priority species.

### 4.11.2 IMPACTS

#### 4.11.2.1 Proposed Action

*Vegetation*

Approximately ten acres of land would be temporarily disturbed under the proposed construction activities, and approximately 0.85 acres of previously undeveloped land is expected to become impervious due to building construction, parking lots, and paving. The majority of these undeveloped lands are currently landscaped areas or open non-landscaped lands. None of this land would be considered to be native vegetation.

*Wildlife*

The permanent and long-term loss of approximately 0.85 acres of undeveloped land would have minimal impact on resident wildlife given the fragmented nature of the habitat that would be permanently affected as well as the high level of human activity in the project area. Much of the impacted areas are disturbed (i.e., landscaped, urbanized areas). Wildlife may be temporarily displaced during construction activities, but may return after construction and landscaping is complete. Temporary, indirect impacts to wildlife caused by increased noise levels during construction periods are expected to be minor due to the fact that aircraft noise is currently a daily occurrence.

Similarly, while the general acoustic environment at the airport is expected to become louder than it currently is, most wildlife that currently utilize the airport are not likely to be displaced as a result of an increase in the noise conditions; they are likely habituated to the loud noises of aircraft. While most wildlife in the area may be habituated to high noise levels, substantial increases in noise levels due to the aircraft conversion may cause some individuals to move from the area. Potential issues related to noise effects on domestic animals and wildlife may include the following:

- Startle response injury due to trampling or uncontrolled running or flight.
- Increased expenditure of energy, particularly during critical periods.
- Decreased time spent on life functions (e.g., seeking food or mates).
- Temporary masking of auditory signals from other animals of the same species, predators, or prey (e.g., noise could prevent an animal from hearing the approach of a predator).
- Damage to eggs or nestlings if a bird is startled from its nest.

- Exposure of eggs or young in nest if a parent flees.
- Increased risk of predation when startled animals flee from nests, roosts, or other protective cover.
- Site abandonment.

The review of the noise effects literature shows that the most documented reaction of animals newly or infrequently exposed to aircraft noise is the startle response. Although an observer's interpretation of the startle response is behavioral (e.g., the animal runs in response to the sound or flinches and remains in place), it does have a physiological basis. The startle response is a reflex; it is an autonomic reaction to loud, sudden noise (Westman and Walters 1981, Harrington and Veitch 1991). Increased heart rate and muscle flexion are the typical physiological responses.

The literature indicates that the type of noise that can stimulate the startle response is highly variable among animal species (Manci *et al.* 1988). In general, studies have indicated that close, loud, and sudden noises that are combined with a visual stimulus produce the most intense reactions. Wild ungulates appear to vary in sensitivity to aircraft noise. Responses reported in the literature varied from no effect and habituation to panic reactions followed by stampeding (Manci *et al.* 1988, Weisenberger *et al.* 1996). Most studies have found few negative effects of aircraft noise on raptorial birds. Red-tailed Hawks (*Buteo jamaicensis*) and Osprey (*Pandion haliaetus*) appeared to readily habituate to regular aircraft overflights (Andersen *et al.* 1989, Trimper *et al.* 1998). In their review, Manci *et al.* (1988) noted that aircraft can be particularly disturbing to waterfowl. Conomy *et al.* (1998) suggested, though, that responses were species-specific. They found that Black Ducks were able to habituate to aircraft noise, while Wood Ducks did not. In colonial nesters, effects may be more dramatic due to the crowded nature of the nesting colonies.

As with wildlife, the startle reflex is the most commonly documented effect on domesticated animals. Results of the startle reflex are typically minor (e.g., increase in heart rate and nervousness) and do not result in injury. Exceptions may occur when animals are crowded in small enclosures such as corrals or feedlots, where loud, sudden noise may cause a widespread panic reaction. However, such negative impacts were only observed when aircraft were less than 330 feet above ground level (U.S. Forest Service 1992). No controlled studies of the responses of mounted horses to aircraft noise are available. Anecdotal reports indicate that horses with riders startle when exposed to low-altitude overflight, but responses varied with the horse, rider, terrain, and other conditions. It has been noted that horses gallop or bite or kick in response to low-altitude overflights (Manci *et al.* 1988); however, no documented injuries to horses or riders were reported, and there was evidence that horses adapted to aircraft noise. Several studies on the effects of noise on poultry were reviewed in *The Impact of Low Altitude Flights on Livestock*

*and Poultry* (Department of the Air Force 1993). The report found that the major impact concern for poultry from low-altitude flying arises from pileups in turkey flocks (i.e., where turkeys pile together in a concentrated area often resulting in death from suffocation or overheating); pileups of chickens were not reported. The report also concluded that low-altitude flights result in no effects on chicken growth and reproduction functions (e.g., egg laying).

As stated above, animals generally have demonstrated an ability to habituate to loud, regular noises, such as low-altitude overflights. However, animals and humans would have a possibility of experiencing sudden onset low-level noise events. Short-term reactions to new noises may include temporary shifts in habitat use or activities. Resident wildlife and livestock experiencing new noise levels may initially experience negative effects and may temporarily shift habitat use or activities as a result (Harrington and Veitch 1991); however, most wildlife species and livestock are expected to habituate and return to normal activities. Species relying on aural cues for breeding may be adversely impacted if substantial increases in noise levels inhibit this communication. Individuals or groups of migratory birds could be negatively affected because these temporary visitors may not be habituated to aircraft noise and the disturbance may or may not cause them to leave migratory habitat prematurely.

While species relying on aural (i.e., hearing related) cues for breeding may be adversely impacted by increased noise levels, it is likely that these species would have been impacted under the existing condition (A-10 aircraft), and therefore have already relocated. Therefore, it is unlikely that these species would experience increased impacts under the Proposed Action.

*Threatened, Endangered and Other Sensitive Species*

Implementation of the Proposed Action would have no impact on federally listed species because these species do not occur within the ROI and habitat for these species does not occur within the ROI. Impacts to State listed plants are not anticipated under the Proposed Action because the appropriate habitat for these species does not occur in the ROI. Impacts to State listed invertebrates are not anticipated under the Proposed Action because the appropriate habitat for the New Jersey tea inchworm does not occur in the ROI. The State listed marbled salamander has been documented in the vicinity of the ROI, but not within the project area. No direct adverse impacts are anticipated to the marbled salamander. Indirect adverse impacts to marbled salamander habitat such as increased storm water runoff or sedimentation would be minimized by implementation of BMPs. The Upland Sandpiper, Grasshopper Sparrow, and Vesper Sparrow have been historically documented in the vicinity of the ROI, but not within the project area, therefore impacts to these species are not anticipated. However, if construction occurs during the nesting season (approximately April through August), a nest survey in the impact areas with appropriate habitat for the Upland Sandpiper, Grasshopper Sparrow, and/or Vesper Sparrow should be conducted.

Prior to implementation of construction, a Massachusetts ESA project review checklist and required filing materials will be submitted to the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife for review pursuant to 321 CMR 10.18.

*Wetlands and Other Aquatic Habitats*

No direct impacts to wetlands are anticipated as a result of the Proposed Action. There are three wetlands identified on the 104 FW installation Eastern Parcel. No direct impacts are anticipated for these wetlands, as all projects have been sited outside of the wetlands and their 100 foot buffer. If during implementation of the construction activities wetlands are observed within any of the specific project areas, measures would be taken in coordination with the U.S. Army Corps of Engineers (USACE) and the Section 404 permit process and with the MassDEP Wetlands Protection Act to minimize potential impacts to wetlands.

Indirect impacts to known wetlands occurring on the 104 FW Installation (East Parcel) are not anticipated under the Proposed Action. Potential indirect impacts such as increases in storm water runoff and sedimentation would be minimized by implementation of BMPs. A wetland delineation should occur prior to the implementation of any construction that could impact potential wetlands.

#### 4.11.2.1 Alternative Action

Under the Alternative Action, the only change from the Proposed Action would be the predominant direction of take-offs by the F-15 aircraft. All other activities involving mission change, construction, and assigned personnel increase would remain as described under the preferred alternative. Therefore, impacts to biological resources would be expected to be as described under the Proposed Action.

#### 4.11.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented, and thus no impacts to biological resources at the Westfield-Barnes Airport would occur. Conditions would remain as described in Section 3.11.2.

## 4.12 CULTURAL RESOURCES

### 4.12.1 METHODOLOGY

A number of federal regulations and guidelines have been established for the management of cultural resources. Section 106 of the National Historic Preservation Act (NHPA), as amended, requires federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are cultural resources that are listed in, or eligible for listing in,

the National Register of Historic Places (NRHP). Eligibility evaluation is the process by which resources are assessed relative to NRHP significance criteria for scientific or historic research, for the general public, and for traditional cultural groups.

Under federal law, impacts to cultural resources may be considered adverse if the resources have been determined eligible for listing in the NRHP or have been identified as important to Native Americans as outlined in the American Indian Religious Freedom Act (AIRFA) and EO 13007, *Indian Sacred Sites*. DoD *American Indian and Alaska Native Policy* (1999) provides guidance for interacting and working with federally-recognized American Indian governments. DoD policy requires that installations provide timely notice to, and consult with, tribal governments prior to taking any actions that may have the potential to affect protected tribal resources, tribal rights, or American Indian lands.

Analysis of potential impacts to cultural resources considers direct impacts that may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts can be assessed by identifying the types and locations of proposed activity and determining the exact location of cultural resources that could be affected. Indirect impacts generally result from increases in population that translate to increased use of an area, resulting in effects to cultural resources.

NRHP listed properties subjected to noise levels greater than 65dB through overflights could be adversely impacted if the characteristics that qualify the properties for the NRHP were affected, primarily through changing the setting. Such an impact would be rare for NRHP-listed properties located in urban or suburban settings, and even in rural settings that already experience substantial noise. Sonic booms have the potential to impact fragile features of historic properties, particularly buildings, although such impacts are extremely rare.

### 4.12.2 IMPACTS

#### 4.12.2.1 Proposed Action

There are no anticipated effects to historic resources as a result of the aircraft conversion. Although the conversion to F-15 aircraft and associated change in mission would not result in a substantial change in the use of airspace from the A-10, the F-15 has the ability to fly supersonic and its engines may be noisier than those of the A-10 it would replace. This would result in a larger area within 65 dB and louder noise contours surrounding the airport. However, no NRHP-listed properties have been identified beneath the projected 65 dB and louder noise contours. Sonic booms within the military training airspace should not change substantially because

airspace use by the F-15s at Westfield-Barnes Airport would replace that currently flown out of Otis ANGB.

The Proposed Action consists of actions on 11 existing buildings. These actions include the complete demolition of two structures, renovation of one structure and its eventual demolition (Building 20), demolition of a portion of a structure, and additions to seven existing buildings. There would also be new stand-alone construction. Table 4.12-1 lists the 11 facilities by project as described in Section 2.3, with a brief project description, building number and current use, build date, and NRHP eligibility status.

**Table 4.12-1. Buildings Associated with Proposed Construction Projects**

| *EIS Project Number* | *Action Description* | *Building Number* | *Current use* | *Build Date* | *NRHP Eligibility*[1] |
|---|---|---|---|---|---|
| 1 & 4 | Construct Addition and Renovate | 15 | Aircraft Maintenance Hangar | 1961 | Unevaluated |
| 1 | Interior Modifications | 26 | Weapons Release Shop | 1983 | Unevaluated |
| 1 | Modifications | 28 | Repair and Reclamation Shop | 1983 | Unevaluated |
| 2 | Construct Addition | 40 | Fire/Crash Rescue Station | 1992 | Not eligible |
| 4 | Construct Addition | 25 | Squadron Operations Facility | 1983 | Unevaluated |
| 7 | Addition and Alteration | 27 | Corrosion Control Bay | Post 1989[2] | Not eligible |
| 9 | Interior Modifications | 65 | Munitions Shop | 1995 | Not eligible |
| 11 | Construct Addition | 20 | Engine Shop | 1969 | Unevaluated |
| 12 | Construct Addition | 3 | Dining Facility | 1999 | Not eligible |
| 15 | Demolish | 20 | Engine Shop | 1969 | Unevaluated |
| 16 | Demolish | 14 | Firing Range | 1954 | Unevaluated |
| 16 | Demolish | 21 | Engine Shop | 1969 | Unevaluated |

Note: 1. Preliminary evaluation is that all buildings are "not eligible." Massachusetts SHPO/MHC has not yet concurred.
2. Although Building 27 construction date is 1983, the corrosion control bay was built after 1989.

Three buildings included in the Proposed Action were constructed after 1989, the year generally recognized as marking the end of the Cold War (Buildings 3, 40, and 65). The Corrosion Control Aircraft Bay of Building 27 was also built after 1989. As such, these buildings do not merit evaluation for inclusion on the NRHP under any criteria, including special considerations afforded to Cold War era facilities. The remaining seven structures (Buildings 14, 15, 20, 21, 25, 26, and 28) were constructed either more than 50 years ago or during the Cold War era. In compliance with Section 106 of the NHPA, the 104 FW consulted with the SHPO/MHC

regarding eligibility. These buildings have been inventoried and evaluated as not eligible for the NRHP; the SHPO has concurred with their evaluations (Appendix A).

A single archaeological site has been recorded on the 104 FW installation outside the ROI. Most of the remainder of the installation lies within the highly disturbed context of a built environment. Preliminary investigations suggested that approximately 30 acres at the 104 FW could be undisturbed, although none of the Proposed Action projects occur within these possibly undisturbed areas. There is a remote possibility that intact archaeological resources could exist below previously disturbed areas, although this is unlikely because of the extent of the disturbance throughout the ROI. In addition, the 104 FW has completed consultation with the Massachusetts SHPO/MHC, in compliance with Section 106 of the NHPA (Appendix A).

Impacts to traditional cultural resources are not expected under the Proposed Action. There are no judicially established Native American lands within the State of Massachusetts, nor are there federally recognized tribes with specific interests in the vicinity of the Westfield-Barnes Airport and the 104 FW. Additionally, the MHC has indicated that no Native American traditional cultural resources have been documented on or near the installation.

In the event of inadvertent discoveries of cultural resources during any project-related activities, including ground disturbance, construction or demolition, all activities at that location would be halted until the find is evaluated by a qualified professional archaeologist in compliance with USAF and Federal regulations.

#### 4.12.2.2 Alternative Action

The effects of the Alternative Action are similar to those of the Proposed Action, with the exception of the noise distribution. The 65 dB contour would extend slightly further south than under the Proposed Action, as departures are concentrated in that direction. However, no NRHP-listed cultural resources are located beneath the area that would be included within this noise contour. All other impacts would be the same as described in Section 4.12.2.1, with the demolition and renovation projects as described in Table 4.12-1.

#### 4.12.2.3 No Action Alternative

Under the No Action Alternative, the aircraft conversion and the various construction projects of the Proposed Action would not occur. Impacts to cultural resources would not be expected under this alternative. Conditions would remain as described in Section 3.12.2 and resources would continue to be managed in compliance with Federal law and National Guard Bureau (NGB) regulations.

## 4.13 SUMMARY OF IMPACTS

Potential impacts resulting from the Proposed Action, the Alternative Action, and the No Action Alternative are summarized in Table 4.13-1.

**Table 4.13-1. Summary of Impacts**

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| **Noise** | | |
| An additional 1,307 acres of land surrounding Westfield-Barnes Airport (629 acres of which are on airport property) will be exposed to sound levels above Day-Night Average Sound Level ($L_{dn}$) 65 A-weighted decibels (dBA).<br>Noise exposure at all eight specific point locations in the vicinity of the airport will increase as a consequence of the aircraft conversion, but of these point locations, only the Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA. This will result in an incompatible land use due to the elevated noise levels, subjecting the Arbor Mobile Home Park to noise levels in excess of $L_{dn}$ 65 dBA.<br>In general, military training airspace currently used by the 104$^{th}$ Fighter Wing (104 FW) will experience decreased noise levels because the F-15s will generally operate at a higher altitude than A-10s. Airspace newly used by the 104 FW F-15s will replace the existing F-15 operations by aircraft stationed at Otis Air National Guard Base (ANGB), so there would be no anticipated change to noise levels associated with this airspace.<br>Construction noise will be intermittent and for a limited duration and will not be expected to create substantial adverse impacts outside the airport.<br>The airport is currently updating its Part 150 Study, which will identify any potential noise mitigation measures for land uses that are rendered incompatible due to the Proposed Action. | An additional 1,310 acres of land surrounding Westfield-Barnes Airport (624 acres of which are on airport property) would be exposed to sound levels above $L_{dn}$ 65 dBA.<br>Noise exposure at all eight specific point locations would increase, but of these point locations, only the Arbor Mobile Home Park would be exposed to sound levels above $L_{dn}$ 65 dBA. As with the Proposed Action, this would be considered incompatible land use due to the elevated noise levels.<br>Noise impacts in the military training airspace would be as described under the Proposed Action.<br>Noise impacts associated with construction would be the same as under the Proposed Action.<br>The Part 150 Study would also identify noise mitigation measures for impacts under the Alternative Action. | Noise impacts would remain at current levels. |
| **Land Use** | | |
| There will be no impacts related to on-installation land use (e.g., quantity-distance [QD] arcs) and no encroachment upon runway object free and safety areas.<br>An additional 678 acres of off-airport land uses will be affected by noise levels of 65 dBA or greater, including 144 acres of residential land. About 7 acres of residential land will be exposed to noise levels of 70 dBA or higher. A total of 261 households are estimated to be exposed to noise levels greater than 65 dBA. No schools will be exposed to noise levels of 65 dBA or greater. The Arbor Mobile Home Park will be exposed to sound levels above $L_{dn}$ 65 dBA, as a consequence of the aircraft conversion. This is considered an incompatible land use due to the elevated noise levels.<br>New construction will be architecturally compatible with existing buildings, and no impacts to visual resources are anticipated. | There will be no impacts related to on-installation land use (e.g., QD arcs) and no encroachment upon runway object free and safety areas.<br>An additional 685 acres of off-airport land uses would be affected by noise levels of 65 dBA or greater, including 164 acres of residential land. About 31 acres of residential land would be exposed to noise levels of 70 dBA or higher. This alternative shifts noise levels to the south where residential development is more dense, so there would be more land use incompatibility issues with regard to noise. Impacts to the Arbor Mobile Home Park would be the same as for the Proposed Action.<br>New construction would be architecturally compatible with existing buildings, and no sensitive views would be affected. Impacts to visual resources are not expected. | No impacts to land use or visual resources would occur. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| **Socioeconomics and Environmental Justice** | | |
| Construction activities will involve the expenditure of $77 million, leading to the direct creation of 1,440 annual construction job equivalents, as well as additional indirect and induced earnings due to these construction jobs.<br>An additional 139 new permanent jobs will result from personnel increases under the Proposed Action. This increase will not stimulate population increases in the region of influence (ROI).<br>Of the populations that would be exposed to noise levels over 65 dB, 4.9 percent are minority and 6.0 percent are low-income under the Proposed Action. Overall, the Proposed Action will not have disproportionately high and adverse effects on minority or low-income populations. | Socioeconomic impacts (i.e., temporary construction jobs, permanent jobs through personnel increase, indirect and induced earnings) would be the same as described under the Proposed Action.<br>Of the populations that would be exposed to noise levels over 65 dB under this alternative, 5.3 percent are minority and 9.6 percent are low-income. This alternative would not have disproportionately high and adverse effects on minority populations, but would have a slight disproportionately high and adverse effect on low-income populations for noise levels over 65 dB. | No socioeconomic or environmental justice impacts would be expected to occur. |
| **Air Quality** | | |
| Emissions from construction will produce short-term and elevated air pollutant concentrations on a localized basis.<br>Total emissions from construction and operations (i.e., aircraft, ground-based mobile sources, stationary sources, commuting) will not exceed any conformity *de minimis* threshold. Emissions will be less than 10 percent of the Air Quality Control Region (AQCR) 42 emissions. | Construction and operations emissions would be the same as described under the Proposed Action. | Air emissions would remain at current levels. |
| **Airspace** | | |
| No changes or modifications to the controlled airspace or Air Traffic Control procedures currently supporting aviation activities at the airport are required.<br>There is essentially no increase in overall airspace utilization under the Proposed Action. The only modified use will involve a general decreased need for low altitude flight training because most air-to-air training is conducted at higher altitudes than the A-10 operations. No impacts to airspace management or regional air traffic control systems are anticipated. Implementation of the alert mission requirement does not pose any unique issues to airspace management. Launch and control of the alert aircraft would be routinely managed by the Federal Aviation Administration (FAA). | Airspace impacts would be the same as described under the Proposed Action. | Airspace use and air traffic control would remain unchanged and no impacts would occur. |
| **Safety** | | |
| Several projects under the Proposed Action will improve ground safety conditions. No unique activities or materials would be introduced to the installation, and established safety procedures and protocols will adequately address safety of personnel and property on the ground. | Ground and explosives safety impacts would be the same as described for the Proposed Action.<br>Although aircraft would take off to the south under the Alternative Action, flight safety characteristics | Existing inadequate facilities would remain and would continue to |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| Munitions will be stored in existing and new facilities that will provide adequate capacity and QD easements.<br>The probability of mishaps with the F-15 compared to the A-10 will not change substantially. The potential for bird-aircraft strikes would be expected to remain approximately the same for both aircraft. | would generally be the same as described under the Proposed Action. | deteriorate from their current condition. |
| **Solid and Hazardous Materials and Waste** | | |
| Construction and renovation will cause short-term increases in the quantities of hazardous materials and petroleum products used and stored at the installation. In the long-term the use of these materials will not likely increase as a result of the Proposed Action, given the reduction in overall flying hours. Therefore, it is not anticipated that there will be any affect to the 104 FW's status as a small quantity generator (SQG). Hazardous materials, petroleum products and their wastes will continue to be managed in accordance with local, state, and federal regulations.<br>Construction activities associated with several projects associated with the Proposed Action have the potential to encounter contaminated soil or groundwater associated with Environmental Restoration Program (ERP) sites 6N, 5, and 7 and former underground storage tank (FUST) site 4, although the potential is low since all of the ERP sites have received closure status, and contamination associated with FUST site 4 was not detected above regulatory action levels.<br>Demolition activities will generate an estimated 1,977 tons of debris, which represents a negligible percentage of the regional landfill capacity. Asbestos and lead-based paint may be present in buildings scheduled for demolition and renovation, and lead may be encountered during demolition of the Old Firing Range. All solid waste will be disposed of in accordance with applicable federal, state, Air Force, and Air National Guard (ANG) regulations. | Impacts associated with solid and hazardous materials and waste would be identical to those described under the Proposed Action. | No impacts to solid and hazardous materials and wastes would occur. |
| **Infrastructure** | | |
| The Proposed Action would result in a temporary increase in vehicle trips to and from the 104 FW installation for construction and demolition activities. This increase will be phased over several years and will be temporary so impacts to the local transportation system will be minor.<br>The increase of 139 permanent personnel will represent a 1.5 percent increase in average daily traffic (ADT) on Southampton Road. This increase is not expected to degrade the effectiveness of the local transportation network.<br>Existing utility systems are considered adequate to support proposed facilities and personnel increases, although some utilities extensions may be required to serve some of the new facilities. | Impacts associated with infrastructure would be the same as described under the Proposed Action. | Infrastructure would continue to operate under less than optimal conditions. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| Improvements to the storm water drainage system will be required to facilitate the increase of 0.85 acres of impervious surface that will be created by new construction. | | |
| **Earth Resources** | | |
| Up to 10 acres of land surface will be temporarily disturbed as a result of construction and demolition activities. Approximately 0.85 acres of new impervious surface will be created by proposed construction.<br>Most construction will occur on previously developed land. Construction activities on Hinckley loamy sand that has a slope of 15-25 percent would not be recommended without special construction techniques. There are no special qualities associated with the soils or geologic resources at the 104 FW installation or Westfield-Barnes Airport. Implementation of Best Management Practices (BMPs) will minimize any impacts associated with erosion. | Impacts to earth resources would be identical to those under the Proposed Action. | No impacts to earth resources would occur. |
| **Water Resources** | | |
| A construction general permit under the National Pollutant Discharge Elimination System (NPDES) will be obtained prior to the start of construction activities. Short-term water quality impacts during construction (e.g., increases in erosion and sedimentation) will be minimized through BMPs.<br>Approximately 10 acres of surface disturbance will occur over the construction period and 0.85 acres of new impervious surface will be created, leading to an increase in the rate of peak discharge. This impact will be minimal given the developed nature of the site.<br>No projects are sited within floodplains.<br>The rate of groundwater recharge of the Barnes Aquifer will be minimally impacted by the increase in impervious surface.<br>Adherence to the Storm Water Pollution Prevention Plan (SWPPP) and other established plans and procedures will generally preclude the potential for substantial impacts to water quality. | Impacts to water resources would be identical to those described for the Proposed Action. | No impacts to water resources would occur under the No Action Alternative. |
| **Biological Resources** | | |
| Approximately 10 acres of land will be temporarily disturbed and about 0.85 acres of previously undeveloped land will become impervious. The majority of these undeveloped lands are currently landscaped areas or open non-landscaped lands and none of these are considered to contain native vegetation.<br>Long-term impacts due to the loss of habitat will have a minimal impact on wildlife due to the fragmented nature and high level of human activity characteristic of the project area. There will also be temporary, indirect impacts to wildlife due to increased noise levels during construction but these will be minor given the existing noise environment (i.e., | Impacts to biological resources (vegetation, wildlife, habitat, threatened and endangered species, other sensitive species, and wetlands and other aquatic habitats) would be identical to those described for the Proposed Action. | No impacts to biological resources would occur. |

| *Proposed Action* | *Alternative Action* | *No Action Alternative* |
|---|---|---|
| daily aircraft noise).<br>While the acoustic environment at the airport is expected to become louder, most wildlife in the area are likely habituated to aircraft noise. However, substantial increases in noise levels due to aircraft may cause some individuals to move from the area. A startle response in animals (wildlife and livestock) is common but highly variable for those newly or infrequently exposed to aircraft noise. However, there are no substantial impacts anticipated from aircraft noise on wildlife, livestock, or humans working with livestock.<br>The Proposed Action will have no impact on federally listed species because there are none in the ROI and habitat for these species does not occur in the ROI. The State listed marbled salamander is documented in the vicinity of the ROI, but not in the project area. No direct, adverse impacts are anticipated for this species. If construction occurs during the nesting season (i.e., April through August), a nest survey in the impact areas with appropriate habitat for the Upland Sandpiper, Grasshopper Sparrow, and/or Vesper Sparrow should be conducted.<br>No direct impacts to wetlands will occur under the Proposed Action. Potential indirect impacts to three wetlands located on the East Parcel may include increases in storm water runoff and sedimentation, but these impacts will be minor given the implementation of appropriate BMPs. | | |
| **Cultural Resources** | | |
| There are no anticipated effects on historic resources as a result of the Proposed Action. No National Register of Historic Places (NRHP)-listed properties are identified beneath the projected 65 dBA and louder noise contours. A cultural resources inventory consisting of an evaluation of architectural resources and archaeological resources at the 104 FW is currently in progress. Preliminary results of the survey indicate that no buildings are eligible for the NRHP. One archaeological site lies outside the ROI of the Proposed and Alternative Actions, and will not be affected. All construction will occur within previously disturbed areas. Consultation with the State Historic Preservation Office (SHPO) is ongoing and will be completed prior to initiation of the Proposed Action. | Impacts to cultural resources would be identical to those described for the Proposed Action. | No impacts to cultural resources would occur. |

# 5.0 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

## 5.1 CUMULATIVE IMPACTS

Cumulative impacts to environmental resources result from incremental effects of proposed actions when combined with other past, present, and reasonably foreseeable future projects in the region of influence (ROI). Cumulative impacts can result from individually minor, but collectively substantial, actions undertaken over a period of time by various agencies (federal, state, and local) or individuals. In accordance with the National Environmental Policy Act (NEPA), a discussion of cumulative impacts resulting from projects that are proposed (or anticipated over the foreseeable future) is required.

The 104th Fighter Wing (104 FW) and Westfield-Barnes Airport update facilities on a continual basis, as necessary. While it is not practical to catalog all minor projects that could occur over the short-term, the major projects in the ROI have been analyzed for the potential to create cumulative environmental impacts. The ROI for cumulative impacts is generally limited to the Westfield-Barnes Airport and the immediately adjacent property because physical impacts related to the proposal are largely confined to the airport property. Planning efforts in the ROI include the actions described within this Environmental Impact Statement (EIS), as well as those other projects that are ongoing, or planned over the short-term. Additional projects within the ROI are discussed below.

### 5.1.1 CURRENT AND REASONABLY FORESEEABLE ACTIONS IN THE ROI

Currently on-going and other proposed construction activities over the next five years (in addition to those that are a component of this EIS at Westfield-Barnes Airport) are identified in Table 5.1-1.

As a military installation, the 104 FW undergoes changes in mission and training requirements in response to defense policies, current threats, and tactical and technological advances, and as such, requires new construction, facility improvements, infrastructure upgrades, and ongoing maintenance and repairs on a continual basis. Although such known construction and upgrades are a part of the analysis contained in this section, some future requirements cannot be predicted. As those requirements surface, future NEPA analysis will be conducted, as necessary.

In addition to the projected construction activities identified in Table 5.1-1, there is an unrelated proposal to modify the Condor Military Operation Area (MOA) in Maine and northeastern New Hampshire. The Condor MOA provides military training airspace for several military users, including the Air National Guard (ANG) from Massachusetts, Vermont, and Connecticut; active duty United States Air Force (USAF); and the United States (U.S.) Navy. Military units that currently use this MOA fly a variety of aircraft, including the A-10, F-15, F-16, KC-10, KC-135, and P-3. The Condor MOA proposal is independent of the Base Realignment and Closure (BRAC) action described within this EIS (conversion from A-10 to F-15 aircraft), and would occur independent of the final decision related to this conversion. This proposal would combine the Condor 1 and 2 MOAs and divide the combined MOA into Condor Low MOA and Condor High MOA and lower the flight floor from 7,000 feet MSL (between approximately 2,800 to 6,300 feet AGL) to 500 feet AGL. Specifically, Condor Low MOA would extend from 500 feet AGL up to, but not including, 7,000 feet MSL (between approximately 2,800 to 6,300 feet AGL). Condor High MOA would extend from 7,000 feet MSL up to but not including FL 180 (between approximately 13,739 feet to 17,321 feet AGL). The new Condor Low and High MOAs would have the same maximum lateral boundaries as the previous Condor 1 and 2 MOAs (60 NM by 60 NM), thereby providing optimal low, medium, and high altitude airspace to meet training requirements for the users of this airspace. However, at the request of the Canadian ARTCC, the 10 NM northwestern corner of the airspace will be moved south to provide a 3 NM buffer around air traffic routes. This proposal is currently being evaluated under a separate NEPA analysis.

The goal of this section is to document the known projects required at the 104 FW installation and Westfield-Barnes Airport (the ROI) over the next five years in support of their mission and provide an environmental analysis of the cumulative impacts of these projects. It is quite likely that during the course of the next five years, additional projects not included in this analysis may be required. The nature of the military today is that missions are dynamic and planners at the installation level must be proactive in addressing potential impacts associated with these changes.

**Table 5.1-1. Current and Reasonably Foreseeable Actions in the ROI**

| *Project Name/Description* | *Approximate Square Footage* | *Anticipated Fiscal Year (FY) for Implementation* |
|---|---|---|
| **104 FW Projects** | | |
| Construct Composite Weapons Release Facility | 18,200 SF | 2006 |
| Relocate and reconstruct Parking Lots 1, 2, and 3 | 127,800 SF (14,200 SY) | 2006 |
| Relocate and reconstruct Parking Lots 4 and 5 | 103,950 SF (11,550 SY) | 2006 |
| Extend Perimeter Road | 15,003 SF (1,667 SY) | 2006 |
| **Westfield-Barnes Airport Projects** | | |
| Construct New Terminal Building | 17,000 SF (building)<br>44,800 SF (parking)<br>40,000 SF (access road) | 2006 |
| Install 25' High Intensity Runway Lights and Precision Approach Path Indicator on Runway 02/20 | N/A | 2006 |
| Construct aircraft aprons in three phases; remove existing terminal building, hangar 1 and 2. | 342,000 SF (38,000 SY) | 2007<br>2010<br>2012 |
| Reconstruct, mark, sign and light Runway 15/33; construct Runway Safety Areas; install Runway End Identifier Lights; install Precision Approach Path Indicator; remove tree obstructions. | 500,000 SF | 2007-2008 |
| Reconstruct/widen, light, and sign Taxiway "B" south | 118,600 SF (taxiway)/47,440 SF (shoulders) | 2009 |
| Construct Taxiway "H" Extension | 78,500 SF (taxiway)<br>26,250 SF (shoulders) | 2012 |
| **Army National Guard Projects** | | |
| Construct Army National Guard Readiness Center | 94,117 SF | 2010 |
| **TOTAL DISTURBANCE** | **1,573,660/ 36 acres** | |

### 5.1.2 ANALYSIS OF CUMULATIVE IMPACTS

***Noise.*** Overall noise exposure around Westfield-Barnes Airport would increase under the Proposed Action. These impacts would be long-term. The acreage under the 65 decibel (dB) contour (and greater) would increase substantially, from 352 acres to 1,659 acres, an increase of 1,307 acres. The same is true for noise exposure at specific points around Westfield-Barnes Airport. Noise exposure at those locations increases over current conditions. Noise levels under the Proposed Action would also increase at all specific locations assessed, and land use associated with the Arbor Mobile Home Park would no longer be considered compatible due to the elevated noise levels (67.0 dB). Residential land that experiences increased noise levels in excess of the 65 Ldn threshold will be considered "incompatible" based on the Federal Interagency Committee on Urban Noise (FICUN) guidelines (FICUN 1980), and would be eligible for FAA-funded noise mitigation. Approximately 261 homes (including the Arbor Mobile Home Park) are expected to experience new noise levels above this threshold. All other sensitive receptors, although exposed to increased noise levels at Westfield-Barnes Airport, would remain compatible with existing land uses. Nevertheless, impacts from noise without some mitigation could potentially be significant. Under the proposal described in Section 5.1.1, the floor of the Condor MOA would be lowered to 500 feet AGL. The 104 FW would no longer fly the A-10 aircraft they currently do; rather, as a result of the Proposed Action described in this EIS, the 104 FW will fly the F-15 aircraft. Anticipated noise levels under this airspace will remain well below 65 dB and therefore, cumulative impacts are expected to be negligible. Construction noise emanating off-site as a result of the Proposed Action and the activities described in Section 5.1.1 would probably be noticeable in the immediate construction site vicinity, but would not be expected to create adverse impacts in and of themselves.

In addition to the Proposed Action, it is expected that General Aviation (GA) aircraft operations at Westfield-Barnes Airport will also increase. According to the *Westfield-Barnes Airport Master Plan and Airport Layout Plan Update,* GA aircraft operations are expected to increase from an estimated 52,578 annual operations under current conditions to 72,924 annual operations by 2012. This would be a 38.7 increase. Table 5.1-2 summarizes estimated forecasted GA operations at Westfield-Barnes Airport as indicated in the airport Master Plan.

**Table 5.1-2. Estimated Current and Forecast GA Activity at Westfield-Barnes Airport**

| | ***2005*** | ***2007*** | ***2012*** | ***2017*** | ***2022*** |
|---|---|---|---|---|---|
| GA Activity | 62,751 | 68,702 | 72,924 | 77,406 | 82,163 |

Source: Westfield-Barnes Airport 2004.

As shown in Table 5.1-2, GA activity is anticipated to increase substantially compared to current operations. The noise analysis in this EIS does include current GA activity. To assess potential impacts associated with the projected GA increase, all GA operations were increased by 36.7

percent, and then modeled with the Air Force's NOISEMAP aircraft noise model. The results showed that overall land areas exposed to elevated noise levels (i.e., greater than 65 $L_{dn}$) increased by 13.7 acres (a 0.8 percent increase over the Proposed Action) , and noise exposure at all sensitive receptors, save one, remained unchanged from those levels associated with the Proposed Action. The one exception was Noise Receptor #2 (Hampton Ponds State Park), where noise levels increased from 55.2 $L_{dn}$ to 55.3 $L_{dn}$. This increase of 0.1 dBA would not be discernable.

No specific cumulative noise impacts are anticipated.

***Land Use/Visual Resources.*** The proposed aircraft conversion, construction, and demolition projects described under the Proposed Action, as well as those described in Section 5.1.1, are expected to enhance overall installation planning and compatibility of functions on the 104 FW installation and at Westfield-Barnes Airport. Some existing incompatibilities within the 104 FW installation would be corrected. An estimated 261 households, compared to zero under current conditions, may experience noise levels greater than 65 A-weighted decibels (dBA). Impacts from aircraft noise under the Proposed Action are substantial due to the increase in off airport properties that will be exposed to elevated noise levels (i.e., noise levels of 65 dBA or greater). The airport is currently updating its Part 150 Airport Noise study (refer to Section 4.1.2.1). As part of this study, a Noise Mitigation Plan will be developed. The plan will incorporate a variety of measures to mitigate projected noise levels in the affected areas. Additional increases to flight operations associated with GA activity will likely further increase land use impacts associated with noise. Visual resources are generally not expected to be impacted.

***Socioeconomics/Environmental Justice.*** There are no substantial long-term changes in population and/or employment as a result of implementation of the Proposed Action or the projects described in Section 5.1.1. Although there is an anticipated increase of 139 personnel under the Proposed Action, most of these personnel are likely people that already live in the region and should not result in any appreciable socioeconomic impact. Construction activities associated with the Proposed Action will involve expenditures of approximately $77 million and will result in the creation of approximately 1,440 annual job equivalents in the construction field over the construction period along with associated earnings from those construction jobs. In addition, there will be indirect and induced employment and earnings due to the construction jobs. Additional projects associated with the airport would contribute to short-term, beneficial impacts to the region in terms of job creation and earnings. Overall, cumulative effects on socioeconomics will be beneficial but are not expected to have long-term effects on the regional economy.

With regard to environmental justice, the percent of minority persons affected by noise levels greater than 65 dBA as a result of the Proposed Action is estimated to be approximately 5.1

percent, which is lower than the percent of minority persons in the State (18.1 percent) or Hampden County (25.6 percent). Under the Proposed Action, the percent of low-income persons exposed to noise levels greater than 65 dBA is 6.3 percent, which is less than the State average (9.3 percent), and the County average (14.7 percent). The Proposed Action may have disproportionate noise effects on low-income populations for noise levels over 70 dBA. It should be noted that the number of persons affected is relatively low (e.g., for levels over 70 dBA, 12.4 percent of 78 persons affected represents about 10 people). Increases in GA activity at Barnes would possibly increase noise impacts on environmental justice communities.

***Air Quality.*** In general, combustive and fugitive dust emissions from proposed construction activities under the Proposed Action, as well as those activities described in Section 5.1.1, would produce localized, elevated air pollutant concentrations that would occur for a short duration. Emissions associated with construction activities will not exceed any conformity *de minimis* threshold; they will produce minor air quality impacts in Hampden County and the Hartford-New Haven-Springfield Interstate Air Quality Control Region (AQCR).

Air emissions from stationary and ground-based mobile sources after the Proposed Action is completed are expected to be approximately 15 percent higher than from current operations, due to the increase in aircraft and personnel. The Proposed Action will also increase the number of annual aircraft sorties compared to current operations, although the number of annual flying hours will decrease. The projected increase in annual emissions from operations will not exceed any conformity *de minimis* threshold and will be less than 10 percent of the AQCR 42 emissions. Operations associated with the Proposed Action will produce have minor air quality impacts in Hampden County and the Hartford-New Haven-Springfield Interstate AQCR.

***Airspace.*** Essentially, there is no increase in overall airspace utilization associated with the Proposed Action. The only modified use will involve the decreased need for low altitude flight training, inasmuch as most air-to-air training is conducted at higher altitudes. Although the floor of the Condor MOA would be lowered to 500 feet AGL under the project described in Section 5.1.1, this should have little bearing on the conversion of the 104 FW to the F-15 aircraft. No new aircraft types would utilize this airspace, scheduling would continue to be achieved by the Northeast Air Defense Sector (NEADS). Therefore, cumulative impacts to airspace management or the regional Air Traffic Control systems would be negligible. It is possible, although unlikely, that future increases in GA activity will require modifications to airspace management and/or the regional Air Traffic Control systems associated with Westfield-Barnes Airport.

***Safety.*** With regard to aircraft safety, conversion from A-10 to F-15 aircraft is not anticipated to result in substantial changes to the potential for aircraft mishaps. None of the proposed projects will violate existing airfield safety and object free criteria that ensure separation between aircraft and obstacles on the ground or during take off and landing. It is expected that planning of

proposed facilities at the airport listed in Table 5.1-1 will also properly address airfield safety and object free criteria. Implementation of the Proposed Action and the activities described in Section 5.1.1 involve ground activities that may expose workers performing the required site preparation, grading, and building construction to some risk. Strict adherence to all applicable occupational safety requirements would minimize the relatively low risk associated with these construction activities. Several projects associated with these actions and the projects described in Section 5.1.1 are intended to improve air and ground safety conditions at Westfield-Barnes Airport. Additionally, these actions would include measures to enhance and correct Anti-Terrorism/Force Protection (AT/FP) shortfalls as part of the facility designs, as necessary. Cumulative impacts to safety are expected to be minimal. The floor of the Condor MOA would be lowered based on the project described in Section 5.1.1. While there would be no new aircraft types associated with this action, lowering the floor could result in an increase bird-airstrike hazard (BASH). Based on the overall low number of operations, pre-flight review of the avian hazard advisory system, and the resulting modification of training activities, as necessary, impacts are expected to be negligible.

***Hazardous Materials and Waste Management.*** The proposed construction and demolition projects associated with the Proposed Action, as well as those described in Section 5.1.1, would generate construction and demolition waste that would be recycled and/or taken to a local demolition landfill, as appropriate. Hazardous materials and wastes would be handled, stored, and disposed of in accordance with applicable regulations. Any asbestos-containing material, lead-based paint, or contaminated soils associated with Environmental Restoration Program (ERP) sites would be removed and disposed of per applicable regulations.

***Infrastructure.*** The proposed aircraft conversion, construction, and demolition projects associated with the Proposed Action, as well as those projects described in Section 5.1.1, would result in some temporary interruption of utility services and minor hindrance of transportation and circulation during construction activities. These impacts would be temporary, occurring only for the duration of the construction period. The Proposed Action would result in 139 new full-time Air National Guard (ANG) personnel commuting to and from the installation during the normal business week, an increase of 1.5 percent in average daily traffic (ADT) would be anticipated, which is a minor increase to the local roadways. It is not anticipated that personnel increases would have a substantial effect to on- or off-installation traffic. In general, infrastructure at the 104 FW installation and Westfield-Barnes Airport would improve under these actions.

***Earth Resources.*** In addition to the ten acres of surface disturbance over the course of the construction program associated with the Proposed Action an additional 36 acres of surface disturbance would result over the next ten years from other future construction associated with

the current and reasonably foreseeable 104 FW and Westfield-Barnes Airport projects listed in Table 5.1-1. The grading of existing soil and placement of structural fill for new facilities would not substantially alter existing soil conditions at the installation because, to a large extent, the construction described above is planned for areas where surface disturbance has previously occurred. Best management practices (BMPs) would be used to limit soil movement, stabilize runoff, and control sedimentation.

***Water Resources.*** In addition to a net increase of approximately 0.85 acres of impervious surface that would result under the Proposed Action, additional impervious surface would be added as a result of the projects described in Section 5.1.1. To a large extent, the construction described above is planned for areas that already contain a large amount of impervious surface, and therefore much of the proposed construction would occur on already impervious surfaces. The proposed projects would require modifications to the installation storm drainage system (e.g., drainage ditches and basins) and an update to the installation Storm Water Pollution Prevention Plan (SWPPP) in order to properly manage storm water as a result of the increased impervious surface. The 104 FW and Westfield-Barnes Airport would file a Notice of Intent with the United States Environmental Protection Agency (USEPA), Region 1, to obtain coverage under a construction general permit prior to implementation of individual projects. Adherence to the requirements of the permit would include implementation of BMPs to minimize the potential for exposed soils or other contaminants from construction activities to reach nearby surface waters. The creation of new impervious surface would reduce groundwater recharge on a minimal scale regionally.

***Biological Resources.*** In general, the Proposed Action and the projects listed in Section 5.1.1 are at sites that are highly altered by man. The potential for any federally listed species to occur on the airport is low. Project proponents would coordinate, as necessary, with the United States Fish and Wildlife Service (USFWS) prior to implementation of construction activities to ensure that impacts to sensitive species do not occur. Aircraft-related noise increases under the Proposed Action may cause some wildlife species, including sensitive species, to move from the area. Species relying on aural (i.e., hearing related) cues for breeding may be adversely impacted if substantial increases in noise levels inhibit this communication. Some of the projects listed in Section 5.1.1 could include impacts to wetlands; however, it is not anticipated that the Proposed Action would contribute to these impacts. As project descriptions in Table 5.1.1 are refined and potential impacts to wetlands are identified, the airport would coordinate with the United States Army Corps of Engineers (USACE) and the Massachusetts Department of Environmental Protection (MassDEP) to obtain coverage under Section 404 and 401 permits, respectively.

***Cultural Resources.*** Activities associated with the Proposed Action and the projects described in Section 5.1.1 are not expected to impact archaeological or traditional resources. Demolition of any proposed facilities would be coordinated with the Massachusetts SHPO to determine historic eligibility to the NRHP prior to demolition. Impacts to traditional cultural resources are not expected as there are no judicially established Native American lands within the State of Massachusetts.

## 5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

NEPA Council on Environmental Quality (CEQ) regulations require environmental analyses to identify "...any irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented" (40 Code of Federal Regulations [CFR] Section 1502.16). Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Building construction material such as gravel and gasoline usage for construction equipment would constitute the consumption of non-renewable resources.

The Proposed Action would not have irreversible impacts because future options for using these project locations would remain possible. The sites could be used for alternative uses in the future, ranging from natural open space to urban development. No loss of future options would occur as a result of the Proposed Action.

The primary irretrievable impacts of the Proposed Action would involve the use of energy, labor, materials and funds, and the conversion of some lands from an undeveloped condition through the construction of buildings and facilities. Irretrievable impacts would occur as a result of construction, facility operation, and maintenance activities. Direct losses of biological productivity and the use of natural resources from these impacts would be inconsequential.

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# 6.0 MITIGATIONS AND SPECIAL OPERATING PROCEDURES

Based on the results of this Environmental Impact Statement (EIS), it has been determined that there will be environmental impacts related to noise at Westfield-Barnes Airport as a result of implementation of either the Proposed Action or Alternative Action. Concurrent with this EIS, the airport is updating its Part 150 Airport Noise study. As part of this study, a Noise Mitigation Plan will be developed. The plan will incorporate a variety of measures to reduce projected noise levels in the affected areas. Mitigations may include operational measures (such as aircraft power settings, flight tracks), institutional measures (such as managing land uses around the airport through zoning and other land use controls, real estate disclosures, etc.), and physical measures such as noise reducing construction methods.

In order to reduce and minimize potential environmental effects determined to result from the Proposed Action or Alternative Action in this EIS, the following procedures will be completed by knowledgeable, responsible personnel from Massachusetts Air National Guard (MAANG), working through the appropriate federal, state, and local agencies.

- A Noise Mitigation Plan will be developed by the Westfield-Barnes Airport Commission and the Federal Aviation Administration (FAA) as a part of their updated Part 150 Study.

- Residential land that experiences increased noise levels in excess of the 65 $L_{dn}$ threshold will be considered "incompatible" based on the Federal Interagency Committee on Urban Noise (FICUN) guidelines (FICUN 1980), and would be eligible for FAA-funded noise mitigation. For standard home construction, noise mitigation can include sound insulation or (for the most seriously affected) acquisition and removal of the home. It should be noted that mobile homes cannot be sound insulated and are normally purchased and removed. The details of any sound insulation or acquisition program is the subject of an FAA-funded Part 150 Noise Study, which is underway concurrent with this EIS, but is not a part of the EIS. The process of acquiring residences is guided by federal statute, which requires purchase of homes at fair market value and also requires provision of relocation assistance to all displaced residents (both owners and renters).

- The installation or modification of any air emission sources, such as fuel storage and dispensing, boilers and heaters, emergency generators, paint booths, degreasers, etc., may trigger permitting requirements with the Massachusetts Department of Environmental Protection (MassDEP).

- File a Notice of Intent with the United States Environmental Protection Agency (USEPA), Region 1, to obtain coverage under a Construction General Permit in accordance with National Pollutant Discharge Elimination System (NPDES)

requirements prior to implementation of any ground-disturbing activities that could disturb more than 1 acre.

- Construction best management practices (BMPs) will be employed during construction activities to minimize soil movement, stabilize runoff, and generally control sedimentation. These BMPs will include, but not be limited to: the development of a project specific Storm Water Pollution Prevention Plan (SWPPP); regular and documented site inspections; the installation of silt fencing and sediment traps; minimizing surficial area disturbed at any given moment; stabilization of cut/fill slopes; minimization of earth-moving activities during wet weather; use of temporary detention ponds; application of water sprays to keep soil from becoming airborne; and revegetation of disturbed areas as soon as possible, as appropriate.

- The 104th Fighter Wing (104 FW) will revise its current Restricted Emissions Status Permit as required under the Massachusetts Clean Air Act (CAA).

- If construction occurs during the nesting season for the Upland Sandpiper, Grasshopper Sparrow, and Vesper Sparrow (approximately April through August), a nest survey in the impact areas with appropriate habitat should be conducted to ensure that these species are not nesting in the project areas.

- If during implementation of the construction activities wetlands are observed within any of the specific project areas, measures will be taken in coordination with the United States Army Corps of Engineers (USACE) and the Section 404 permit process and with MassDEP Wetlands Protection Act to minimize potential impacts to wetlands.

- The 104 FW will obtain any required permits, approvals, or certifications prior to implementing construction or demolition activities. Any special procedures or methods required by permits or approvals will be implemented.

- Personnel conducting construction and/or demolition activities will strictly adhere to all applicable occupational safety requirements during construction activities.

- If necessary, sampling for asbestos and lead-based paint would occur prior to demolition activities and materials would be handled in accordance with United States Air Force (USAF) policy.

A cultural resources inventory consisting of an evaluation of archaeological sensitivity and architectural resources of the 104 FW installation has been completed. Buildings whose construction dates to the Cold War or earlier were evaluated for National Register of Historic Places (NRHP) eligibility, and undisturbed areas were evaluated for the presence of

archaeological resources. Preliminary analysis indicates that no buildings are eligible for the NRHP, and no archaeological sites are present within the region of influence (ROI). The 104 FW initiated consultation with the State Historic Preservation Officer (SHPO) at the Massachusetts Historical Commission (MHC), in compliance with Section 106 of the National Historic Preservation Act (NHPA), seeking concurrence with these findings. The SHPO concurred with the findings of the cultural resources inventory.

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| | |
|---|---|
| NDI | Non-Destructive Inspection |
| NEPA | National Environmental Policy Act |
| NGB | National Guard Bureau |
| NHPA | National Historic Preservation Act |
| NM | nautical mile $NO_2$ nitrogen dioxide |
| $NO_x$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSR | New Source Review |
| NVIS | Night Vision Imaging Systems |
| NWI | National Wetland Inventory |
| NOA | Notice of Availability |
| O&T | Operations and Training |
| $O_3$ | ozone |
| OFA | Object Free Area |
| OFZ | Obstacle free zone |
| P.L. | Public Law |
| P/CG | Pilot/Controller Glossary |
| PAA | Primary Assigned Aircraft |
| Pb | lead |
| PCPI | per capita personal income |
| $PM_{10}$ | particulate matter less than or equal to 10 micrometers in diameter |
| $PM_{2.5}$ | particulate matter less than or equal to 2.5 micrometers in diameter |
| POL | Petroleum, Oil, and Lubricant |
| POV | Privately Owned Vehicle |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| QD | quantity-distance |
| R&R | Repair and Reclamation |
| RA | Restricted Area |
| RAO | Response Action Outcome |
| RAP | Remedial Action Plan |
| RCRA | Resource Conservation and Recovery Act |
| RES | Restricted Emission Status |
| RIP | Remedial Implementation Plan |
| ROD | Record of Decision |
| ROI | region of influence |
| RPZ | Runway Protection Zone |
| RSA | Runway Safety Area |
| RSF | Readiness Support Facility |
| SARA | Superfund Amendments and Reauthorization Act |
| SDO | Storm Water Drainage Outfall |
| SEL | Sound Exposure Level |
| SF | square feet |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |
| $SO_2$ | sulfur dioxide |
| $SO_x$ | sulfur oxides |
| SPCC | Spill Prevention Control and Countermeasures |
| SQG | small quantity generator |
| SUA | Special Use Airspace |
| SWDA | Solid Waste Disposal Act |
| SWPPP | Storm Water Pollution Prevention Plan |
| SY | square yard |
| TPH | total petroleum hydrocarbon |
| TPY | tons per year |
| U.S. | United States |
| UFC | Unified Facilities Criteria |
| USACE | United States Army Corps of Engineers |
| USAF | United States Air Force |
| USC | United States Code |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UST | underground storage tank |
| VFR | Visual Flight Rule |
| VOC | volatile organic compound |
| VR | visual route |
| W105 | Warning Area 105 |
| WSMM | Weapons System Maintenance Management |




# FINAL
# ENVIRONMENTAL IMPACT STATEMENT
## VOLUME II
## APPENDICES

## PROPOSED IMPLEMENTATION OF THE BASE REALIGNMENT AND CLOSURE (BRAC) FINAL RECOMMENDATIONS AND ASSOCIATED ACTIONS FOR THE 104TH FIGHTER WING, MASSACHUSETTS AIR NATIONAL GUARD

## AT

## WESTFIELD-BARNES AIRPORT
## WESTFIELD, MASSACHUSETTS

NATIONAL GUARD BUREAU

COOPERATING AGENCIES
FEDERAL AVIATION ADMINISTRATION
WESTFIELD-BARNES AIRPORT
MASSACHUSETTS AERONAUTICS COMMISSION

October 2007

# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| °F | degrees Fahrenheit |
| µg/$m^3$ | micrograms per cubic meter |
| 102 FW | 102nd Fighter Wing |
| 104 FW | 104th Fighter Wing |
| 131 FS | 131st Fighter Squadron |
| AASF | Army Aviation Support Facility |
| ACC | Air Combat Command |
| ACHP | Advisory Council on Historic Preservation |
| ADT | average daily traffic |
| AFFF | aqueous fire-fighting foam |
| AFI | Air Force Instruction |
| AGE | Aerospace Ground Equipment |
| AGL | above ground level |
| AIRFA | American Indian Religious Freedom Act |
| AMRAAM | Advanced Medium Range Air-to-Air Missile |
| AMU | Aircraft Maintenance Unit |
| ANG | Air National Guard |
| ANGB | Air National Guard Base |
| ANGRC | Air National Guard Readiness Center |
| AOC | Area of Concern |
| AQCR | Air Quality Control Region |
| AR | Aerial Refueling |
| ARTCC | Air Route Traffic Control Center |
| ASA | Air Sovereignty Alert |
| ASE | Aerospace Support Equipment |
| AST | aboveground storage tank |
| AT/FP | Anti-Terrorism/Force Protection |
| ATCAA | Air Traffic Control Assigned Airspace |
| AUL | Activity and Use Limitation |
| AVGAS | aviation gas |
| BASH | Bird-Aircraft Strike Hazard |
| BDU | Bomb Dummy Unit |
| BMP | Best Management Practice |
| BP | Before Present |
| BRAC | Base Realignment and Closure |
| CAA | Clean Air Act |
| CAP | Central Accumulation Points |
| CEQ | Council on Environmental Quality |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CERFA | Community Environmental Response Facilitation Act |
| CFR | Code of Federal Regulations |
| CMR | Code of Massachusetts Regulations |
| CO | carbon monoxide |
| COC | contaminant of concern |
| CSA | Comprehensive Site Assessment |
| CSSM | Computer Site Security Manager |
| CWA | Clean Water Act |
| dB | decibel |
| dBA | A-weighted decibel |
| DoD | Department of Defense |
| ECM | Electronic Countermeasure |
| EIAP | Environmental Impact Analysis Process |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| EOD | Explosive Ordnance Disposal |
| EPCRA | Emergency Planning and Community Right-to-Know Act |
| ERP | Environmental Restoration Program |
| ESA | Endangered Species Act |
| FAA | Federal Aviation Administration |
| FFCA | Federal Facility Compliance Act |
| FUST | former underground storage tank |
| FY | Fiscal Year |
| GA | General Aviation |
| GIS | Geographic Information System |
| GP | general purpose |
| HAP | High Accident Potential |
| HEF | high-expansion foam |
| Hz | hertz |
| I-90 | Interstate 90 |
| I-91 | Interstate 91 |
| IFR | Instrument Flight Rule |
| IICEP | Interagency and Intergovernmental Coordination for Environmental Planning |
| IR | instrument route |
| IRP | Installation Restoration Program |
| KIAS | knots indicated airspeed |
| LASTE | low altitude safety and targeting enhancement system |
| $L_{dn}$ | Day-Night Average Sound Level |
| $L_{eq}$ | Equivalent Sound Level |
| $L_{max}$ | Maximum Sound Level |
| MAANG | Massachusetts Air National Guard |
| MAARNG | Massachusetts Army National Guard |
| MAC | Massachusetts Aeronautical Commission |
| MANG | Massachusetts National Guard |
| MassDEP | Massachusetts Department of Environmental Protection |
| MCP | Massachusetts Contingency Plan |
| MDFW | Massachusetts Division of Fish and Wildlife |
| MEPA | Massachusetts Environmental Policy Act |
| mg/l | milligrams per liter |
| MHC | Massachusetts Historical Commission |
| mm | millimeter |
| MOA | Military Operations Area |
| MSGP | Multi-Sector General Permit |
| MSL | mean sea level |
| MTR | Military Training Route |
| MV | Military Vehicle |
| NAAQS | National Ambient Air Quality Standards |
| NAGPRA | Native American Graves Protection and Repatriation Act |

**CONTINUED ON THE INSIDE BACK COVER**

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# TABLE OF CONTENTS

**ACRONYMS AND ABBREVIATIONS.....INSIDE FRONT AND BACK COVERS**

**VOLUME II**

**APPENDIX A INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING (IICEP)**
**APPENDIX B SUMMARY OF SCOPING COMMENTS**
**APPENDIX C AIRCRAFT NOISE ANALYSIS AND AIRSPACE OPERATIONS**
**APPENDIX D AIR EMISSIONS CALCULATIONS FOR THE PROPOSED ACTION**
**APPENDIX E WRITTEN PUBLIC COMMENTS ON THE DRAFT EIS**
**APPENDIX F ORAL PUBLIC COMMENTS ON THE DRAFT EIS**

**VOLUME I**

**EXECUTIVE SUMMARY ..... ES-1**

**1.0 PURPOSE AND NEED ..... 1-1**
1.1 INTRODUCTION ..... 1-1
1.2 PURPOSE AND NEED FOR THE ACTION ..... 1-3
1.3 LOCATION AND DESCRIPTION OF THE 104 FW ..... 1-9
1.4 SUMMARY OF KEY ENVIRONMENTAL REQUIREMENTS ..... 1-9
1.4.1 NATIONAL ENVIRONMENTAL POLICY ACT ..... 1-9
1.4.2 MASSACHUSETTS ENVIRONMENTAL POLICY ACT ..... 1-11
1.4.3 ENDANGERED SPECIES ACT ..... 1-11
1.4.4 CLEAN AIR ACT ..... 1-12
1.4.5 WATER RESOURCES REGULATORY REQUIREMENTS ..... 1-12
1.4.6 CULTURAL RESOURCES REGULATORY REQUIREMENTS ..... 1-12
1.4.7 OTHER REGULATORY REQUIREMENTS ..... 1-13
1.4.8 ENVIRONMENTAL COORDINATION ..... 1-13
1.5 LEAD AND COOPERATING AGENCIES ..... 1-14
1.6 ENVIRONMENTAL IMPACT ANALYSIS PROCESS ..... 1-14

**2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES ..... 2-1**
2.1 INTRODUCTION ..... 2-1
2.2 DESCRIPTION OF CURRENT MISSION ..... 2-1
2.3 PROPOSED ACTION (PREFERRED ALTERNATIVE) ..... 2-8
2.3.1 AIRCRAFT CONVERSION AND MISSION CHANGE ..... 2-8
2.3.2 FACILITIES CONSTRUCTION, MODIFICATION, AND DEMOLITION ..... 2-10
2.3.2.1 Upgrade Aircraft Maintenance Hangar ..... 2-10
2.3.2.2 Addition/Alteration to Fire Crash/Rescue Station ..... 2-10
2.3.2.3 Installation of Aircraft Arresting Systems ..... 2-17
2.3.2.4 Additions/Alterations to the Squadron Operations Facility ..... 2-17
2.3.2.5 Upgrade to the Aircraft Parking Apron and Taxiway ..... 2-17
2.3.2.6 Addition to the Munitions Storage and Maintenance Complex ..... 2-17
2.3.2.7 Upgrade to the Fuel Cell/Corrosion Control Hangar ..... 2-18

2.3.2.8 Construct EOD Facility ..... 2-18
2.3.2.9 Upgrade Munitions Maintenance Facilities ..... 2-18
2.3.2.10 Construct ASA Complex ..... 2-18
2.3.2.11 Addition/Alteration to the Engine Shop ..... 2-19
2.3.2.12 Addition/Alteration to the Dining Facility ..... 2-19
2.3.2.13 Relocate/Construct Aircraft Shelters ..... 2-19
2.3.2.14 Replace Engine and NDI Shops ..... 2-19
2.3.2.15 Replace ASE Facility ..... 2-20
2.3.2.16 Facility Demolitions in Support of Mission ..... 2-20
2.4 ALTERNATIVE ACTION ..... 2-20
2.5 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD FOR DETAILED ANALYSIS ..... 2-21
2.6 NO ACTION ALTERNATIVE ..... 2-21

**3.0 AFFECTED ENVIRONMENT ..... 3-1**
3.1 NOISE ..... 3-2
3.1.1 DEFINITION OF THE RESOURCE ..... 3-2
3.1.1.1 Maximum Sound Level ..... 3-4
3.1.1.2 Sound Exposure Level ..... 3-4
3.1.1.3 Time-Averaged Cumulative Noise Metrics ..... 3-5
3.1.2 EXISTING CONDITIONS ..... 3-7
3.1.2.1 Aircraft Activity at the Airfield ..... 3-7
3.1.2.2 Aircraft Activity in the Military Training Airspace ..... 3-10
3.1.2.3 Other Ground-Based Activity ..... 3-12
3.2 LAND USE AND VISUAL RESOURCES ..... 3-12
3.2.1 DEFINITION OF THE RESOURCE ..... 3-12
3.2.2 EXISTING CONDITIONS ..... 3-13
3.2.2.1 Land Use ..... 3-13
3.2.2.2 Visual ..... 3-17
3.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE ..... 3-19
3.3.1 DEFINITION OF THE RESOURCE ..... 3-19
3.3.2 EXISTING CONDITIONS ..... 3-20
3.3.2.1 Population and Employment ..... 3-20
3.3.2.2 Environmental Justice ..... 3-20
3.4 AIR QUALITY ..... 3-23
3.4.1 DEFINITION OF THE RESOURCE ..... 3-23
3.4.2 EXISTING CONDITIONS ..... 3-27
3.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL ..... 3-31
3.5.1 DEFINITION OF THE RESOURCE ..... 3-31
3.5.2 EXISTING CONDITIONS ..... 3-32
3.5.2.1 Military Operations Areas ..... 3-32
3.5.2.2 Military Training Routes ..... 3-35
3.5.2.3 Restricted Areas ..... 3-35
3.5.2.4 Warning Areas ..... 3-36
3.6 SAFETY ..... 3-37
3.6.1 DEFINITION OF THE RESOURCE ..... 3-37
3.6.2 EXISTING CONDITIONS ..... 3-37

3.6.2.1 Ground Safety ..... 3-37
3.6.2.2 Anti-Terrorism/Force Protection ..... 3-40
3.6.2.3 Explosives and Countermeasures Safety ..... 3-40
3.6.2.4 Flight Safety ..... 3-42
3.7 SOLID AND HAZARDOUS MATERIALS AND WASTE ..... 3-46
3.7.1 DEFINITION OF THE RESOURCE ..... 3-46
3.7.2 EXISTING CONDITIONS ..... 3-48
3.7.2.1 Hazardous Materials and Petroleum Products ..... 3-48
3.7.2.2 Hazardous and Petroleum Wastes ..... 3-49
3.7.2.3 Environmental Restoration Program ..... 3-50
3.7.2.4 Former Underground Storage Tank Sites ..... 3-54
3.7.2.5 Solid Wastes ..... 3-55
3.8 INFRASTRUCTURE ..... 3-56
3.8.1 DEFINITION OF THE RESOURCE ..... 3-56
3.8.2 EXISTING CONDITIONS ..... 3-56
3.8.2.1 Transportation ..... 3-56
3.8.2.2 Utilities ..... 3-57
3.9 EARTH RESOURCES ..... 3-58
3.9.1 DEFINITION OF THE RESOURCE ..... 3-58
3.9.2 EXISTING CONDITIONS ..... 3-58
3.9.2.1 Topography ..... 3-58
3.9.2.2 Geology ..... 3-58
3.9.2.3 Soils ..... 3-59
3.10 WATER RESOURCES ..... 3-59
3.10.1 DEFINITION OF THE RESOURCE ..... 3-59
3.10.2 EXISTING CONDITIONS ..... 3-60
3.10.2.1 Surface Water ..... 3-60
3.10.2.2 Floodplains ..... 3-62
3.10.2.3 Groundwater ..... 3-63
3.11 BIOLOGICAL RESOURCES ..... 3-63
3.11.1 DEFINITION OF THE RESOURCE ..... 3-63
3.11.2 EXISTING CONDITIONS ..... 3-66
3.11.2.1 Vegetation ..... 3-66
3.11.2.2 Wildlife ..... 3-66
3.11.2.3 Rare, Threatened, and Endangered Species ..... 3-66
3.11.2.4 Wetlands and Other Aquatic Habitats ..... 3-69
3.12 CULTURAL RESOURCES ..... 3-70
3.12.1 DEFINITION OF THE RESOURCE ..... 3-70
3.12.2 EXISTING CONDITIONS ..... 3-71
3.12.2.1 Historical Setting ..... 3-71
3.12.2.2 Identified Cultural Resources ..... 3-73

**4.0 ENVIRONMENTAL CONSEQUENCES ..... 4-1**
4.1 NOISE ..... 4-2
4.1.1 METHODOLOGY ..... 4-2
4.1.2 IMPACTS ..... 4-2
4.1.2.1 Proposed Action ..... 4-2

4.1.2.2 Alternative Action ..... 4-9
4.1.2.3 No Action Alternative ..... 4-14
4.2 LAND USE AND VISUAL RESOURCES ..... 4-14
4.2.1 METHODOLOGY ..... 4-14
4.2.2 IMPACTS ..... 4-15
4.2.2.1 Proposed Action ..... 4-15
4.2.2.2 Alternative Action ..... 4-22
4.2.2.2 No Action Alternative ..... 4-25
4.3 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE ..... 4-27
4.3.1 METHODOLOGY ..... 4-27
4.3.2 IMPACTS ..... 4-28
4.3.2.1 Proposed Action ..... 4-28
4.3.2.2 Alternative Action ..... 4-31
4.3.2.3 No Action Alternative ..... 4-32
4.4 AIR QUALITY ..... 4-32
4.4.1 METHODOLOGY ..... 4-32
4.4.2 IMPACTS ..... 4-33
4.4.2.1 Proposed Action ..... 4-33
4.4.2.2 Alternative Action ..... 4-38
4.4.2.3 No Action Alternative ..... 4-38
4.5 AIRSPACE MANAGEMENT AND AIR TRAFFIC CONTROL ..... 4-38
4.5.1 METHODOLOGY ..... 4-38
4.5.2 IMPACTS ..... 4-39
4.5.2.1 Proposed Action ..... 4-39
4.5.2.2 Alternative Action ..... 4-41
4.5.2.3 No Action Alternative ..... 4-42
4.6 SAFETY ..... 4-42
4.6.1 METHODOLOGY ..... 4-42
4.6.2 IMPACTS ..... 4-42
4.6.2.1 Proposed Action ..... 4-42
4.6.2.2 Alternative Action ..... 4-49
4.6.2.3 No Action Alternative ..... 4-49
4.7 SOLID AND HAZARDOUS MATERIALS AND WASTE ..... 4-49
4.7.1 METHODOLOGY ..... 4-50
4.7.2 IMPACTS ..... 4-50
4.7.2.1 Proposed Action ..... 4-50
4.7.2.2 Alternative Action ..... 4-55
4.7.2.3 No Action Alternative ..... 4-55
4.8 INFRASTRUCTURE ..... 4-55
4.8.1 METHODOLOGY ..... 4-55
4.8.2 IMPACTS ..... 4-56
4.8.2.1 Proposed Action ..... 4-56
4.8.2.2 Alternative Action ..... 4-57
4.8.2.3 No Action Alternative ..... 4-57
4.9 EARTH RESOURCES ..... 4-57
4.9.1 METHODOLOGY ..... 4-57

4.9.2 IMPACTS ..... 4-57
4.9.2.1 Proposed Action ..... 4-57
4.9.2.2 Alternative Action ..... 4-58
4.9.2.3 No Action Alternative ..... 4-58
4.10 WATER RESOURCES ..... 4-59
4.10.1 METHODOLOGY ..... 4-59
4.10.2 IMPACTS ..... 4-59
4.10.2.1 Proposed Action ..... 4-59
4.10.2.2 Alternative Action ..... 4-61
4.10.2.3 No Action Alternative ..... 4-61
4.11 BIOLOGICAL RESOURCES ..... 4-61
4.11.1 METHODOLOGY ..... 4-61
4.11.2 IMPACTS ..... 4-62
4.11.2.1 Proposed Action ..... 4-62
4.11.2.1 Alternative Action ..... 4-65
4.11.2.2 No Action Alternative ..... 4-65
4.12 CULTURAL RESOURCES ..... 4-65
4.12.1 METHODOLOGY ..... 4-65
4.12.2 IMPACTS ..... 4-66
4.12.2.1 Proposed Action ..... 4-66
4.12.2.2 Alternative Action ..... 4-68
4.12.2.3 No Action Alternative ..... 4-68
4.13 SUMMARY OF IMPACTS ..... 4-69

**5.0 CUMULATIVE IMPACTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES ..... 5-1**
5.1 CUMULATIVE IMPACTS ..... 5-1
5.1.1 CURRENT AND REASONABLY FORESEEABLE ACTIONS IN THE ROI ..... 5-1
5.1.2 ANALYSIS OF CUMULATIVE IMPACTS ..... 5-4
5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES ..... 5-9

**6.0 MITIGATIONS AND SPECIAL OPERATING PROCEDURES ..... 6-1**

**7.0 PERSONS AND AGENCIES CONTACTED ..... 7-1**

**8.0 LIST OF PREPARERS ..... 8-1**

**9.0 REFERENCES ..... 9-1**

# FIGURES


1.3-1 Regional Location of Massachusetts National Guard, Westfield-Barnes Airport ..... 1-10
2.1-1 Existing Facilities at the 104 FW Installation, Westfield-Barnes Airport ..... 2-2
2.2-1 Flight Tracks for Aircraft Arrivals at Westfield-Barnes Airport ..... 2-6
2.2-2 Flight Tracks for Aircraft Departures at Westfield-Barnes Airport ..... 2-7
2.3-1 Proposed Facilities at the 104 FW Installation (West Parcel), Westfield-Barnes Airport ..... 2-15
2.3-2 Proposed Facilities at the 104 FW Installation (East Parcel), Westfield-Barnes Airport ..... 2-16
3.1-1 Existing Noise Contours at Westfield-Barnes Airport ..... 3-9
3.1-2 Noise Sensitive Receptors in Relationship to Existing Noise Contours at Westfield-Barnes Airport ..... 3-11
3.2-1 Land Uses in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-15
3.2-2 Schools in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-16
3.2-3 Zoning in Relationship to Existing Noise Contours Surrounding Westfield-Barnes Airport ..... 3-18
3.5-1 Military Training Airspace Associated with the Existing 104 FW Mission ..... 3-34
3.6-1 Airfield Safety Zones at Westfield-Barnes Airport ..... 3-39
3.6-2 Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport ..... 3-41
3.7-1 ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport ..... 3-51
3.10-1 Barnes Aquifer and Municipal Wells in the Vicinity of Westfield-Barnes Airport ..... 3-64
4.1-1 Noise Contours under the Proposed Action at Westfield-Barnes Airport ..... 4-4
4.1-2 Noise Sensitive Receptors in Relationship to the Noise Contours under the Proposed Action at Westfield-Barnes Airport ..... 4-5
4.1-3 Noise Contours under the Alternative Action at Westfield-Barnes Airport ..... 4-10
4.1-4 Noise Sensitive Receptors in Relationship to the Noise Contours under the Alternative Action at Westfield-Barnes Airport ..... 4-12
4.1-5 Comparison of the Existing Proposed and Alternative 65 dB Noise Contours at Westfield-Barnes Airport ..... 4-13
4.2-1 Land Uses in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport ..... 4-16
4.2-2 Schools in Relationship to Noise Contours under the Proposed Action near Westfield-Barnes Airport ..... 4-19
4.2-3 Zoning in Relationship to Noise Contours under the Proposed Action Surrounding Westfield-Barnes Airport ..... 4-20
4.2-4 Land Uses in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport ..... 4-23
4.2-5 Zoning in Relationship to Noise Contours under the Alternative Action Surrounding Westfield-Barnes Airport ..... 4-24
4.2-6 Schools in Relationship to Noise Contours under the Alternative Action near Westfield-Barnes Airport ..... 4-26
4.5-1 Military Training Airspace Associated with the Proposed 104 FW Mission ..... 4-40

4.6-1 Proposed Construction Projects in Relationship to Safety Zones at Westfield-Barnes Airport ..... 4-43
4.6-2 Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (West Parcel) ..... 4-47
4.6-3 Proposed Construction Projects in Relationship to Explosive Safety Easements (QD Arcs) at the 104 FW Installation, Westfield-Barnes Airport (East Parcel) ..... 4-48
4.7-1 Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (West Parcel) ..... 4-53
4.7-2 Proposed Construction Projects in Relationship to ERP and FUST Sites at the 104 FW Installation, Westfield-Barnes Airport (East Parcel) ..... 4-54

## TABLES

ES-1 Summary of Impacts ..... ES-4
2.1-1 Anticipated Schedule of Aircraft Reassignment ..... 2-1
2.2-1 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for A-10 Aircraft (Existing Conditions) ..... 2-5
2.3-1 104 FW Annual and Average Daily Departure, Arrival, and Closed Pattern Events for F-15 Aircraft (Proposed Action) ..... 2-8
2.3-2 List of Projects Included in the Analysis ..... 2-11
2.3-3 Demolitions Associated with Construction Activities ..... 2-20
3.1-1 Representative Maximum Sound Levels ..... 3-4
3.1-2 Representative Sound Exposure Levels ..... 3-5
3.1-3 Percentage of Population Highly Annoyed By Elevated Noise Levels ..... 3-7
3.1-4 Average Daily Operations at Westfield-Barnes Airport ..... 3-8
3.1-5 Land Area Exposed to Indicated Sound Levels under Current Conditions ..... 3-8
3.1-6 Specific Point Noise Exposure Under Current Conditions ..... 3-10
3.3-1 Community Demographic Conditions ..... 3-22
3.3-2 Schools Within Two Miles of Westfield-Barnes Airport ..... 3-23
3.4-1 Federal and Commonwealth Ambient Air Quality Standards ..... 3-25
3.4-2 Annual Emissions for AQCR 42 in Calendar Year 2001 ..... 3-29
3.4-3 Baseline Emissions for the 104th Fighter Wing, Calendar Year 2004 ..... 3-30
3.5-1 Description of MOAs Currently Utilized by the 104 FW ..... 3-33
3.5-2 Description of MTRs Currently Utilized by the 104 FW ..... 3-35
3.5-3 Description of Restricted Airspace Currently Utilized by the 104 FW ..... 3-36
3.5-4 Description of Warning Areas Currently Utilized by the 104 FW ..... 3-36
3.5-5 Current Airspace Utilization ..... 3-37
3.11-1 Plant Species Occurring at Westfield-Barnes Airport, Westfield, Massachusetts ..... 3-67
3.11-2 State Threatened and Endangered Plant and Animal Species Documented or Likely to Occur in the Town of Westfield, with Assessment of Potential for Occurrence on the Installation ..... 3-68
3.12-1 Buildings Dating to Cold War Era or Older ..... 3-74
4.1-1 Average Daily Operations at Westfield-Barnes Airport with Aircraft Conversion ..... 4-3
4.1-2 Land Area Exposed to Indicated Sound Levels Under the Proposed Action ..... 4-6
4.1-3 Specific Point Noise Exposure Under the Proposed Action ..... 4-6
4.1-4 Typical Equipment Sound Levels ..... 4-8

4.1-5 Land Area Exposed to Indicated Sound Levels Under the Alternative Action ..... 4-11
4.1-6 Specific Point Noise Exposure under Aircraft Conversion (Alternative Action)..... 4-11
4.2-1 Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Proposed Action..... 4-17
4.2-2 Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Proposed Action..... 4-21
4.2-3 Noise Levels Surrounding Westfield-Barnes Airport by Land Use Category under the Alternative Action..... 4-22
4.2-4 Noise Levels Surrounding Westfield-Barnes Airport by Zoning Category under the Alternative Action..... 4-25
4.3-1 Minority Populations Exposed to $L_{dn} \geq 65$ dBA..... 4-30
4.3-2 Low-Income Populations Exposed to $L_{dn} \geq 65$ dBA ..... 4-30
4.4-1 Total Construction Emissions – Proposed Action ..... 4-34
4.4-2 Total Operational Emission Increases at the 104 FW under the Proposed Action..... 4-36
4.4-3 Total Emission Increases at the 104 FW under the Proposed Action..... 4-37
4.5-1 F-15 Airspace Utilization..... 4-41
4.12-1 Buildings Associated with Proposed Construction Projects..... 4-67
4.13-1 Summary of Impacts..... 4-70
5.1-1 Current and Reasonably Foreseeable Actions in the ROI ..... 5-3
5.1-2 Estimated Current and Forecast GA Activity at Westfield-Barnes Airport ..... 5-4

**Summary of Massachusetts National Guard Proposed Implementation of BRAC and other Associated Activities at Westfield-Barnes Airport Environmental Impact Statement DEIS**
**Responses to Formal Comments Made During the Public Hearing**
**May 9, 2007**

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| **T 001**<br>Public testimony of Joe Trant<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 001-01** [Transcript Page] 78 | **T 001-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **T 002**<br>Public testimony of Martin Canty<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 002-01** [Transcript Page] 84 | **T 002-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **T 003**<br>Public testimony of Charles Morris<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 003-01** [Transcript Page] 84 | **T 003-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **T 004**<br>Public testimony of James Buratti<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 004-01** [Transcript Page] 86<br>Some of you may know me. I am the owner of Henry's Mobile Home Park, and I will have quite an impact with this proposed action. For the record, I want to comment that there is a unique opportunity to avoid the potential impact that this conversion will have on the 58 units of affordable home ownership that are currently at our mobile home park.<br>[Transcript Page] 87<br>The park is a 5.8 acre parcel. The owner of the park, myself and my family, are also coincidentally the owner of Henry's Park, one mile away.<br>We have in excess 5.8 acres of vacant land with parcels, 16 acres. And with improvements at the entrance off of Service Star Highway, this property could be used for mobile home park purposes. It | **T 004-01** Westfield-Barnes Airport, in coordination with the Federal Aviation Administration (FAA), is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Airport representatives will investigate this course of action with the owner of the referenced mobile home parks. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | 10 is served by both sewer and water,<br>11 municipal. It is my proposal to the<br>12 Bureau and to the FAA, with the<br>13 cooperation of the owner, myself, that the<br>14 land be investigated and invested in a<br>15 study to explore this option and I end<br>16 with a question: Will the Bureau consider<br>17 this proposal. Thank you. That is the<br>18 only comment that I have. | |
| **T 005**<br>Public testimony of Michael Piripa<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 005-01** [Transcript Page] 88 | **T 005-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **T 006**<br>Public testimony of Lulu Fanion<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 006-01** [Transcript Page] 88<br>16… my comment is directed<br>17 specifically to the Arbor Mobile Home<br>18 Park. I have two comments. One, being<br>19 the map that shows a current level of<br>20 sound, and then the map that shows the new<br>21 level of sound.<br>22 The map that shows the current level<br>23 is not at all accurate in terms of what we<br>24 have experienced at Arbor, and I wonder if<br>[Transcript Page] 89<br>1 that is set in stone and what is the new<br>2 map for sound based on what they show on<br>3 the old map. | **T 006-01** The noise model and metric used takes all noise events that occur throughout the day at a given location and spreads the noise energy evenly across the 24 hour period; thereby reducing the peaks and valleys of noise, but also making the noise environment something that can be compared across locations.<br>The noise analysis was conducted according to accepted and approved federal guidelines. The use of computer noise modeling to implement noise compatibility programs is accepted by the scientific community, and is the methodology used by the Department of Defense (DoD), Department of Transportation (DOT), FAA, and the Department of Housing and Urban Development. The two computer models most used are the FAA's Integrated Noise Model (INM) and the Air Force's NOISEMAP. Both models are based on extensive empirical data gathered from engine manufacturers and overflights conducted under controlled conditions on acoustically-instrumented ranges. In the case of a civil airport (e.g., Westfield-Barnes), governing directives are contained in the Code of Federal Regulations (CFR) and Federal Aviation Regulations (FAR). |
| | **T 006-02** [Transcript Page] 90<br>4 The other comment is: I would like<br>5 to see something specifically addressed to<br>6 the homeowners at the Arbor as to what<br>7 would happen if we have to relocate, as to<br>8 what would be comparable housing? I am<br>9 not at all clear on what would be<br>10 considered comparable housing.<br>11 And moving, other than Mr.<br>12 Burratti's offer, there is no place else<br>13 in Massachusetts, that I am aware of, that<br>14 you could move a mobile home too. | **T 006-02** Mitigation resulting from the Part 150 Study could include compensation for moving mobile homes to another local mobile home park. No landowners would be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation.<br>Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | | determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| **T 007**<br>Public testimony of Darryl Cupak<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 007-01** [Transcript Page] 90<br>15 to tell you that hearing planes in a car,<br>16 for four or five hours -- my kids are all<br>17 grown up now, but now it is my<br>18 grandchildren, and to hear them scream,<br>19 because it irritates them, that was 35<br>20 years ago. My kids were younger then.<br>21 Those planes then were really nice and<br>22 quiet. I do remember the noise. I would<br>23 be sitting there and when the engines shut<br>24 off, it was -- you just didn't realize how<br>[Transcript Page] 91<br>1 much noise it makes. That was many years<br>2 ago. With new planes coming, I am sure<br>3 there must some sort of technology. When<br>4 they are testing for three or four hours<br>5 will it be like it was when the other<br>6 planes were there? | **T 007-01** Engine testing is conducted in a specially designed piece of equipment called a "hush house" that is designed to minimize noise as a result of on-the-ground testing and maintenance. |
| **T 008**<br>Public testimony of Henry Jolin<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 008-01** [Transcript Page] 91 | **T 008-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **T 009**<br>Public testimony of Gail Hohenberger<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 009-01** [Transcript Page] 92<br>8……..And as a family we welcome the<br>9 F-15s to Westfield. We temper that with<br>10 saying that we understand there is going<br>11 to be great impact on many families and I<br>12 hope there is satisfactory resolution for<br>13 all of us. | **T 009-01** Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| **T 010**<br><br>Public testimony of William Brier<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 010-01** [Transcript Page] 93<br>12 was tardy, but I guess my hope is since we<br>13 are on the flight path -- all my life I<br>14 have lived my 65 years in Southampton, and<br>15 my hope is the new planes that are coming<br>16 will have the technology that won't<br>17 increase noise level, but will hopefully<br>18 reduce them. | **T 010-01** The noise analysis determined that an additional 1,307 acres (678 acres off airport property) would be newly exposed to noise levels above 65 A-weighted decibels (dBA). Noise levels are expected to increase around the airport. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| **T 011**<br>Public testimony of Paul Bergeron<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 011-01** [Transcript Page] 96<br>18 Why am I here? I am here because my<br>19 daughter lives in the 65 to 70 decibel<br>20 range off of Holyoke Road. She is<br>21 currently single-sided deafness due to an<br>22 acoustic brain tumor and had surgery four<br>23 years ago. So we are hoping that anything<br>24 that happens won't impact the one side of<br>[Transcript Page] 97<br>1 hearing that she still has remaining. | **T 011-01** Please refer to Sections 3.1, 4.1, and Appendix C of the EIS; however, to summarize, "Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion suggests a time-average sound level of 70 dB over a 24-hour period." |
| | **T 011-02** [Transcript Page] 97<br>2 I talk about that I am from Chicopee<br>3 because of the C-5s. Now, I am sure that<br>4 a noise mitigation study has been done<br>5 there and is still being done there. I<br>6 want to bring out to the folks here<br>7 tonight something that I call pattern<br>8 work, what I call punching holes in the<br>9 sky. Right now at Westover, due to the<br>10 war, a different type of flying is being<br>11 done and it seems to me it is breaking the<br>12 noise lines.<br>13 Now, in my home when the C-5 does an<br>14 invasive maneuver for landing, it breaks<br>15 the normal flight pattern. It goes right<br>16 over my house at a 90 degree angle, banks<br>17 into the runway and scares the hell out of<br>18 us. It is very low. So my concern and<br>19 thought is, what will the F-15s do when<br>20 they are doing their pattern work? Will<br>21 they come across at an angle to the runway<br>22 simulating missile avoidance, RPG rockets,<br>23 or whatever else? | **T 011-02** It is anticipated that the F-15s will fly the same flight tracks that the A-10s currently do surrounding the airport; however the F-15s will take off at a steeper angle and climb faster than the A-10s, and will also take off from a different direction. These patterns have been accounted for in the noise modeling. |
| | **T 011-03** [Transcript Page] 99<br>.7 How did Otis,<br>8 you know, deal with the F-15s throughout<br>9 the years and their noise. Maybe that is<br>10 something that we need to address again<br>11 and share the comments to it. Yes, once<br>12 it is gone, the F-15s, there is no other<br>13 Massachusetts Air National Guard for it<br>14 here. | **T 011-03** Otis is one of the few installations where the NGB has prepared a formal Air Installation Compatible Use Zone Study (AICUZ), which was periodically updated. Once complete the Air Force/Air National Guard would provide it to the local community planners, along with Air Force/Air National Guard recommendations for zoning. The AICUZ is the military equivalent of the FAA's Part 150 Study. AICUZ are prepared for military installations. |
| | **T 011-04** [Transcript Page] 99<br>18 I am hoping that<br>19 the barrier system is -- I think that<br>20 F-15s have a tailhook. So we hope it<br>21 won't get snagged and overruns the runway<br>22 and ends up on the turnpike at 10 and 202<br>23 over there. | **T 011-04** As a component of the proposed action, aircraft arresting systems will be installed at both ends of Runway 02/20. The F-15 aircraft will not use Runway 15/33, and therefore arresting gear will not be installed on that runway. |
| | **T 011-05** [Transcript Page] 100<br>2 I am more concerned about the local<br>3 flying. You know, if you are on a pattern<br>4 doing those kind of invasive maneuvers. I<br>5 am familiar with the hush house, and I am | **T 011-05** Engine testing is conducted in a specially designed piece of equipment called a "hush house" that is designed to minimize noise as a result of on-the-ground testing and maintenance. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | 6 concerned about the high power run off<br>7 pad, which I understand you won't be<br>8 using. | |
| **T 012**<br>Public testimony of John Moran<br><br>Excerpt from May 9, 2007 Westfield North Middle School Public Hearing Transcript | **T 012-01** [Transcript Page] 101 | **T 012-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |

| | |
|---|---|
| NDI | Non-Destructive Inspection |
| NEPA | National Environmental Policy Act |
| NGB | National Guard Bureau |
| NHPA | National Historic Preservation Act |
| NM | nautical mile $NO_2$ nitrogen dioxide |
| $NO_x$ | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NSR | New Source Review |
| NVIS | Night Vision Imaging Systems |
| NWI | National Wetland Inventory |
| NOA | Notice of Availability |
| O&T | Operations and Training |
| $O_3$ | ozone |
| OFA | Object Free Area |
| OFZ | Obstacle free zone |
| P.L. | Public Law |
| P/CG | Pilot/Controller Glossary |
| PAA | Primary Assigned Aircraft |
| Pb | lead |
| PCPI | per capita personal income |
| $PM_{10}$ | particulate matter less than or equal to 10 micrometers in diameter |
| $PM_{2.5}$ | particulate matter less than or equal to 2.5 micrometers in diameter |
| POL | Petroleum, Oil, and Lubricant |
| POV | Privately Owned Vehicle |
| ppm | parts per million |
| PSD | Prevention of Significant Deterioration |
| QD | quantity-distance |
| R&R | Repair and Reclamation |
| RA | Restricted Area |
| RAO | Response Action Outcome |
| RAP | Remedial Action Plan |
| RCRA | Resource Conservation and Recovery Act |
| RES | Restricted Emission Status |
| RIP | Remedial Implementation Plan |
| ROD | Record of Decision |
| ROI | region of influence |
| RPZ | Runway Protection Zone |
| RSA | Runway Safety Area |
| RSF | Readiness Support Facility |
| SARA | Superfund Amendments and Reauthorization Act |
| SDO | Storm Water Drainage Outfall |
| SEL | Sound Exposure Level |
| SF | square feet |
| SHPO | State Historic Preservation Officer |
| SIP | State Implementation Plan |
| $SO_2$ | sulfur dioxide |
| $SO_x$ | sulfur oxides |
| SPCC | Spill Prevention Control and Countermeasures |
| SQG | small quantity generator |
| SUA | Special Use Airspace |
| SWDA | Solid Waste Disposal Act |
| SWPPP | Storm Water Pollution Prevention Plan |
| SY | square yard |
| TPH | total petroleum hydrocarbon |
| TPY | tons per year |
| U.S. | United States |
| UFC | Unified Facilities Criteria |
| USACE | United States Army Corps of Engineers |
| USAF | United States Air Force |
| USC | United States Code |
| USEPA | United States Environmental Protection Agency |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| UST | underground storage tank |
| VFR | Visual Flight Rule |
| VOC | volatile organic compound |
| VR | visual route |
| W105 | Warning Area 105 |
| WSMM | Weapons System Maintenance Management |

# APPENDIX A
# INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING

Final – October 2007

**INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR ENVIRONMENTAL PLANNING (IICEP)**
**DISTRIBUTION LIST**
**FOR THE PROPOSED AIRCRAFT CONVERSION FOR THE MASSACHUSETTS NATIONAL GUARD AT WESTFIELD-BARNES AIRPORT, WESTFIELD, MA**

U.S. Fish & Wildlife Service
Northeast Regional Office
300 Westgate Center Drive
Hadley, MA 01035-9589

Federal Aviation Administration
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Boston, MA 02114-2023

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Concord, MA 01742-2751

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U.S. Department of Agriculture
Natural Resources Conservation Service
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Boston, MA 02133

Senator Michael R. Knapik
State House, Room 421
Boston, MA 02133

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Representative Donald F. Humason, Jr.
State House, Room 443
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Massachusetts Department of
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Massachusetts Executive Office of
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Massachusetts Environmental Policy Act
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Natural Heritage & Endangered Species
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Massachusetts Division of Fisheries &
Wildlife
North Drive, Westborough, MA 01581

Commissioner
Department of Fish & Game
251 Causeway St., Suite 400
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Western Wildlife District
Attn: Tom Keefe, District Manager
400 Hubbard Avenue
Pittsfield, MA 01201

Massachusetts Historical Commission
Attn: Brona Simon
Massachusetts Archives Facility
220 Morrissey Blvd.
Boston, MA 02125

Secretary of the Commonwealth
Massachusetts Historical Commission
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Boston, MA 02125-3314

The Executive Office of Transportation
10 Park Plaza, Suite 3170
Boston, MA 02116

Massachusetts Division of Wildlife
Massachusetts Department of Conservation
and Recreation
Division of Planning and Engineering
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Boston, MA 02114

Massachusetts Department of Public Health
250 Washington Street
Boston, MA 02108-4619

Northeast States for Coordinated Air Use
Management
129 Portland Street, Suite 501
Boston, MA 0214

Pioneer Valley Planning Commission
26 Central Street, Suite 24
West Springfield, MA 01089-2787

City of Westfield Planning Department
Westfield Municipal Building
59 Court Street
Westfield, MA 01085

Westfield Community Development &
Planning Office
Westfield Municipal Building, Room 301
59 Court Street
Westfield, MA 01085

Zoning Board of Appeals
59 Court Street
Westfield, MA 01085

Mayor Richard K. Sullivan, Jr.
59 Court Street
Westfield, MA 01085

Community Development
James M. Boardman, Director
59 Court Street
Westfield, MA 01085

Westfield Public Schools
22 Ashley Street
Westfield, MA 01085

East Mountain Country Club
1458 East Mountain Road
Westfield, MA 01085

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

U.S. Fish & Wildlife Service
Northeast Regional Office
300 Westgate Center Drive
Hadley, MA 01035-9589

Dear Sir or Madam

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

The proposed action consists of an aircraft conversion for the 104 FW from 15 A-10 primary assigned aircraft (PAA) and two backup aircraft inventory (BAI) to 18 F-15 PAA and two BAI. This conversion is a result of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations. In association with the aircraft conversion, the current close air support mission associated with the A-10 aircraft would change to an air superiority/air sovereignty alert mission associated with the F-15 aircraft. This action will also include minor construction and personnel changes associated with the Massachusetts Army National Guard located at Westfield-Barnes Airport.

As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

The EIS will evaluate the potential environmental effects associated with noise, land use, air quality, socioeconomics and environmental justice, safety, solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. The analysis will include an evaluation of the direct, indirect, and cumulative impacts. In addition to the proposed action, the no-action alternative will be analyzed in the EIS. The National Guard Bureau anticipates that nearby surrounding residences and businesses would experience an increase in noise levels from aircraft training at the Westfield-Barnes Airport. In outlying areas under the military training airspace, noise levels are not expected to change. Potentially impacted residential and business areas are shown on the back page of the attached newsletter (Attachment 1). This newsletter will be distributed to the public during an upcoming scoping meeting. There is also an attached flyer (Attachment 2) that we request your agency post in a visible location.

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Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Federal Aviation Administration
New England Region
12 New England Executive Park
Burlington, MA 01803

Dear Sir or Madam

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

U.S. Environmental Protection Agency
Region 1
1 Congress Street
Boston, MA 02114-2023

Dear Sir or Madam

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742-2751

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U.S. Army Corps of Engineers
Baltimore District
P.O. Box 1715
Baltimore, MD 21203-1715

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NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

JUL 26 2006

U.S. Department of Agriculture
Natural Resources Conservation Service
451 West Street
Amherst, MA 01002-2995

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Commission on Indian Affairs
100 Cambridge Street, Suite 300
Boston, MA 02114

Dear Sir or Madam

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NGB/A7CVP
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Andrews AFB MD 20762-5157

Beverly Wright
Chairperson
Wampanoag Reservation
Wampanoag Tribal Council of Gay Head
State Road, RR 1 Box 137
Gay Head, MA 02535

Dear Ms. Wright

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

The proposed action consists of an aircraft conversion for the 104 FW from 15 A-10 primary assigned aircraft (PAA) and two backup aircraft inventory (BAI) to 18 F-15 PAA and two BAI. This conversion is a result of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations. In association with the aircraft conversion, the current close air support mission associated with the A-10 aircraft would change to an air superiority/air sovereignty alert mission associated with the F-15 aircraft. This action will also include minor construction and personnel changes associated with the Massachusetts Army National Guard located at Westfield-Barnes Airport.

As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

The EIS will evaluate the potential environmental effects associated with noise, land use, air quality, socioeconomics and environmental justice, safety, solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. The analysis will include an evaluation of the direct, indirect, and cumulative impacts. In addition to the proposed action, the no-action alternative will be analyzed in the EIS. The National Guard Bureau anticipates that nearby surrounding residences and businesses would experience an increase in noise levels from aircraft training at the Westfield-Barnes Airport. In outlying areas under the military training airspace, noise levels are not expected to change. Potentially impacted residential and business areas are shown on the back page of the attached newsletter (Attachment 1). This newsletter will be distributed to the public during an upcoming scoping meeting. There is also an attached flyer (Attachment 2) that we request your agency post in a visible location.

The National Guard Bureau will conduct a public scoping meeting to solicit community-specific input concerning the proposal. Notices of the scoping meeting will be posted and published in the *Republican*, *Westfield Evening News*, *Pennysaver*, and *Daily Hampshire Gazette* newspapers. The scoping meeting will be held on Tuesday, August 15, 2006 from 6:00 to 9:00 p.m. at North Middle School, 350 Southampton Road, Westfield, Massachusetts. In addition to the public scoping meeting, and to facilitate the involvement of local, state, and federal officials, the National Guard Bureau will also host a question and answer meeting, specifically for government representatives and agencies, at the same location from 2:00 to 4:00 p.m., also on August 15. As a government agency, you are specifically invited to attend this meeting.

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If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

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2. Flyer

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable John Olver
1111 Longworth HOB
Washington, DC 20515

Dear Congressman Olver

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Mitt Romney
State House
Office of the Governor
Room 360
Boston, MA 02133

Dear Governor Romney

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable John Kerry
304 Russell Building, Third Floor
Washington, DC 20510

Dear Senator Kerry

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Michael R. Knapik
State House, Room 421
Boston, MA 02133

Dear Senator Knapik

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Michael R. Knapik
District Office
57 North Elm Street
Westfield, MA 01085

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Donald F. Humason, Jr.
State House, Room 443
Boston, MA 02133

Dear Representative Humason

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If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Donald F. Humason, Jr.
District Office
64 Noble Street
Westfield, MA 01085

Dear Representative Humason

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

The proposed action consists of an aircraft conversion for the 104 FW from 15 A-10 primary assigned aircraft (PAA) and two backup aircraft inventory (BAI) to 18 F-15 PAA and two BAI. This conversion is a result of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations. In association with the aircraft conversion, the current close air support mission associated with the A-10 aircraft would change to an air superiority/air sovereignty alert mission associated with the F-15 aircraft. This action will also include minor construction and personnel changes associated with the Massachusetts Army National Guard located at Westfield-Barnes Airport.

As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Massachusetts Department of Environmental Protection
Main Office
One Winter Street
Boston, MA 02108

Dear Sir or Madam

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Massachusetts Department of Environmental Protection
Western Region
436 Dwight Street
Boston, MA 01103

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

JUL 26 2006

Meg Colclough
Massachusetts Executive Office of Environmental Affairs
100 Cambridge Street, 20th Floor
Boston, MA 02202

Dear Ms. Colclough

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Rick Bourre
Massachusetts Enviornmental Policy Act Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Mr. Bourre

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
North Drive
Westborough, MA 01581

Dear Sir or Madam

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3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Commissioner
Department of Fish & Game
251 Causeway Street, Suite 400
Boston, MA 02114

Dear Sir or Madam

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

The proposed action consists of an aircraft conversion for the 104 FW from 15 A-10 primary assigned aircraft (PAA) and two backup aircraft inventory (BAI) to 18 F-15 PAA and two BAI. This conversion is a result of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations. In association with the aircraft conversion, the current close air support mission associated with the A-10 aircraft would change to an air superiority/air sovereignty alert mission associated with the F-15 aircraft. This action will also include minor construction and personnel changes associated with the Massachusetts Army National Guard located at Westfield-Barnes Airport.

As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

The EIS will evaluate the potential environmental effects associated with noise, land use, air quality, socioeconomics and environmental justice, safety, solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. The analysis will include an evaluation of the direct, indirect, and cumulative impacts. In addition to the proposed action, the no-action alternative will be analyzed in the EIS. The National Guard Bureau anticipates that nearby surrounding residences and businesses would experience an increase in noise levels from aircraft training at the Westfield-Barnes Airport. In outlying areas under the military training airspace, noise levels are not expected to change. Potentially impacted residential and business areas are shown on the back page of the attached newsletter (Attachment 1). This newsletter will be distributed to the public during an upcoming scoping meeting. There is also an attached flyer (Attachment 2) that we request your agency post in a visible location.

The National Guard Bureau will conduct a public scoping meeting to solicit community-specific input concerning the proposal. Notices of the scoping meeting will be posted and published in the *Republican*, *Westfield Evening News*, *Pennysaver*, and *Daily Hampshire Gazette* newspapers. The scoping meeting will be held on Tuesday, August 15, 2006 from 6:00 to 9:00 p.m. at North Middle School, 350 Southampton Road, Westfield, Massachusetts. In addition to the public scoping meeting, and to facilitate the involvement of local, state, and federal officials, the National Guard Bureau will also host a question and answer meeting, specifically for government representatives and agencies, at the same location from 2:00 to 4:00 p.m., also on August 15. As a government agency, you are specifically invited to attend this meeting.

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If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

Attachments:
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2. Flyer

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Tom Keefe
District Manager
Western Wildlife District
400 Hubbard Avenue
Pittsfield, MA 01201

Dear Mr. Keefe

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Brona Simon
Massachusetts Historical Commission
Massachusetts Archives Facility
220 Morrissey Blvd.
Boston, MA 02125

Dear Ms. Simon

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Secretary of the Commonwealth
Massachusetts Historical Commission
220 Morrissey Blvd.
Boston, MA 02125-3314

Dear Sir or Madam

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Executive Office of Transportation
10 Park Plaza, Suite 3170
Boston, MA 02116

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**DEPARTMENT OF THE AIR FORCE**
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NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Massachusetts Division of Wildlife
Massachusetts Department of Conservation and Recreation
Division of Planning and Engineering
251 Causeway Street
Boston, MA 02114

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Massachusetts Department of Public Health
250 Washington Street
Boston, MA 02108-4619

Dear Sir or Madam

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If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

Attachments:
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2. Flyer

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Northeast States for Coordinated Air Use Management
129 Portland Street, Suite 501
Boston, MA 02114

Dear Sir or Madam

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Pioneer Valley Planning Commission
26 Central Street, Suite 24
West Springfield, MA 01089-2787

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

City of Westfield Planning Department
Westfield Municipal Building
59 Court Street
Westfield, MA 01085

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable John Olver
57 Suffolk Street, Suite 310
Holyoke, MA 01040

Dear Congressman Olver

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Westfield Community Development & Planning Office
Westfield Municipal Building, Room 301
59 Court Street
Westfield, MA 01085

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Zoning Board of Appeals
59 Court Street
Westfield, MA 01085

Dear Sir or Madam

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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NGB/A7CVP
3500 Fetchet Avenue
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The Honorable Richard K. Sullivan, Jr.
59 Court Street
Westfield, MA 01085

Dear Mayor Sullivan

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

The proposed action consists of an aircraft conversion for the 104 FW from 15 A-10 primary assigned aircraft (PAA) and two backup aircraft inventory (BAI) to 18 F-15 PAA and two BAI. This conversion is a result of the 2005 Base Realignment and Closure (BRAC) Commission Final and Approved Recommendations. In association with the aircraft conversion, the current close air support mission associated with the A-10 aircraft would change to an air superiority/air sovereignty alert mission associated with the F-15 aircraft. This action will also include minor construction and personnel changes associated with the Massachusetts Army National Guard located at Westfield-Barnes Airport.

As part of the aircraft conversion and mission change, the 104 FW would have an increase of 139 full-time and 111 part-time authorized personnel; and the Army National Guard would have in increase of 25 full-time and 274 part-time. These numbers could vary slightly.

To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

The EIS will evaluate the potential environmental effects associated with noise, land use, air quality, socioeconomics and environmental justice, safety, solid and hazardous materials and wastes, infrastructure, earth resources, water resources, biological resources, and cultural resources. The analysis will include an evaluation of the direct, indirect, and cumulative impacts. In addition to the proposed action, the no-action alternative will be analyzed in the EIS. The National Guard Bureau anticipates that nearby surrounding residences and businesses would experience an increase in noise levels from aircraft training at the Westfield-Barnes Airport. In outlying areas under the military training airspace, noise levels are not expected to change. Potentially impacted residential and business areas are shown on the back page of the attached newsletter (Attachment 1). This newsletter will be distributed to the public during an upcoming scoping meeting. There is also an attached flyer (Attachment 2) that we request your agency post in a visible location.

The National Guard Bureau will conduct a public scoping meeting to solicit community-specific input concerning the proposal. Notices of the scoping meeting will be posted and published in the *Republican*, *Westfield Evening News*, *Pennysaver*, and *Daily Hampshire Gazette* newspapers. The scoping meeting will be held on Tuesday, August 15, 2006 from 6:00 to 9:00 p.m. at North Middle School, 350 Southampton Road, Westfield, Massachusetts. In addition to the public scoping meeting, and to facilitate the involvement of local, state, and federal officials, the National Guard Bureau will also host a question and answer meeting, specifically for government representatives and agencies, at the same location from 2:00 to 4:00 p.m., also on August 15. As a government agency, you are specifically invited to attend this meeting.

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If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

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**DEPARTMENT OF THE AIR FORCE**
**AIR NATIONAL GUARD**

JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

James M. Boardman
Director
Community Development
59 Court Street
Westfield, MA 01085

Dear Mr. Boardman

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Westfield Public Schools
22 Ashley Street
Westfield, MA 01085

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

East Mountain Country Club
1458 E. Mountain Road
Westfield, MA 01085

Dear Sir or Madam

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**DEPARTMENT OF THE AIR FORCE**
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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable John Kerry
Springfield Federal Building
1550 Main Street, Suite 304
Springfield, MA 01101

Dear Senator Kerry

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code [USC] 4321, et seq.), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] Parts 1500-1508), and Air Force policy and procedures (32 CFR Part 989), the National Guard Bureau announces its intent to prepare an Environmental Impact Statement (EIS). The EIS will evaluate the potential environmental consequences that could result from an aircraft conversion and implementation of the proposed construction and demolition program for the 104th Fighter Wing (104 FW) at Westfield-Barnes Airport in Westfield, Massachusetts. The Federal Aviation Administration (FAA), Westfield-Barnes Airport, and the Massachusetts Aeronautics Commission (MAC) join the National Guard Bureau as cooperating agencies for this proposal.

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JUL 26 2006

NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

The Honorable Edward M. Kennedy
317 Russell Senate Building
Washington, DC 20510

Dear Senator Kennedy

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NGB/A7CVP
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

JUL 26 2006

The Honorable Edward M. Kennedy
2400 JFK Building
Boston, MA 02203

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To accommodate these changes, the Massachusetts National Guard proposes to implement several construction projects at their installation at Westfield-Barnes Airport, as well as to correct several existing facility deficiencies through modifications to existing facilities and construction of several new facilities. In addition to the proposed action, the no-action alternative will be analyzed in the EIS.

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The National Guard Bureau will conduct a public scoping meeting to solicit community-specific input concerning the proposal. Notices of the scoping meeting will be posted and published in the *Republican*, *Westfield Evening News*, *Pennysaver*, and *Daily Hampshire Gazette* newspapers. The scoping meeting will be held on Tuesday, August 15, 2006 from 6:00 to 9:00 p.m. at North Middle School, 350 Southampton Road, Westfield, Massachusetts. In addition to the public scoping meeting, and to facilitate the involvement of local, state, and federal officials, the National Guard Bureau will also host a question and answer meeting, specifically for government representatives and agencies, at the same location from 2:00 to 4:00 p.m., also on August 15. As a government agency, you are specifically invited to attend this meeting.

This scoping process will help identify issues to be addressed in the environmental analysis. Comments received by September 1, 2006 will be incorporated into the Draft EIS and the National Guard Bureau will accept relevant comments at any time during the environmental impact analysis process.

This notification has been sent to you to inform you of the National Guard Bureau's intent to prepare an EIS, inform you of the initiation of the public scoping process, and to seek your input to identify specific issues or topics of environmental concern (to include potential permits or other requirements) that should be addressed in the EIS. We are also requesting any point-of-contact information or relevant documentation that is available that would assist in the EIS process.

If you would like the National Guard Bureau to consider your comments for inclusion in the Draft EIS, please forward your comments or responses to Capt. Matthew Mutti, 104 FW Public Affairs Officer, 175 Falcon Drive, Westfield, MA 01085-1482 or matthew.mutti@mabarn.ang.af.mil. You may also submit comments via the internet at www.104conversion.gcsaic.com through September 1, 2006.

Sincerely

HARRY A. KNUDSEN, JR.
Chief, Environmental Planning Branch

Attachments:
1. Newsletter
2. Flyer

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**The Commonwealth of Massachusetts**
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

RECEIVED
2006 AUG 17 AM 9:57
MASSACHUSETTS ANG
104TH FIGHTER WING
ENVIRONMENTAL MGT. OFF.

August 8, 2006

Harry A. Knudsen, Jr.
Chief, Environmental Planning Branch
US Air Force Air National Guard
NGB/A7CVP
3500 Fletcher Avenue
Andrews AFB, MD 20762-5157

RE: Westfield-Barnes Airport, Massachusetts Air National Guard 104th Fighter Wing Aircraft Conversion, and Facilities Demolition and New Construction, Westfield, MA. **MHC #RC.40316.**

Dear Mr. Knudsen:

Thank you for notifying the Massachusetts Historical Commission (MHC), the Office of the Massachusetts State Historic Preservation Officer, of the intent to prepare an Environmental Impact Statement for the project referenced above. If the project also requires review under the Massachusetts Environmental Policy Act (MEPA) (301 CMR 11), NEPA and MEPA coordination should be discussed with the MEPA Office.

MHC encourages the ANG to coordinate, to the extent feasible, the determination, consultation, and documentation requirements under Section 106 of the National Historic Preservation Act of 1966 as amended (16 USC 470f ) with the NEPA requirements (see 36 CFR 800.8). MHC understands that the Air National Guard Bureau (ANG) will be Lead Federal Agency for the purposes of review under Section 106 of the National Historic Preservation Act (36 CFR 800.2(a)(2)), and that other cooperating federal, state, and local agencies include the Federal Aviation Administration, the Massachusetts Aeronautics Commission, and Westfield-Barnes Airport.

Aspects of the proposed undertaking have the potential to affect significant historic and archaeological resources. From the preliminary narrative description of the project, these would potentially include demolition or modification of existing facilities (if the facilities meet the Criteria of Eligibility (36 CFR Part 60) for listing in the National Register of Historic Places, and for modifications that do not meet the Secretary of Interior's Standards for Rehabilitation), and new construction projects that might affect significant historic or archaeological resources. The ANG is also studying the environmental effects of anticipated increased noise levels. Any proposal to physically minimize or mitigate the increased noise levels (e.g., by soundproofing residences and businesses, or by the placement of sound barriers) might also involve direct effects to National Register-eligible historic properties. In contrast, changes to personnel staffing, schedules, and status, and revisions to the 104FW's mission, per se, are not the type of activities likely to cause effects to historic properties (see 36 CFR 800.3(a)).

Additional information is required by the MHC to understand the project, and to assist in the consultation on the scope of any needed identification efforts for the present undertaking (36 CFR 800.4). The locations of the new construction, and the building modifications and demolitions,

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should be clearly indicated on a USGS locus map and larger scale base maps. For the new construction and building modifications, please submit scaled construction plans and elevation drawings that differentiate the existing and proposed conditions. If historic building inventory forms and/or evaluations have been prepared (see below for Section 110 documentation) for the buildings proposed for modifications or demolition, then that documentation should be submitted to the MHC for review. If documentation of the buildings proposed for modifications or demolition has not yet been prepared, please consult further with the MHC as to the nature of documentation required for MHC review.

MHC considers that limited portions of the project area are archaeologically sensitive. If archaeological survey is needed for aspects of the project that have the potential to affect such resources, then the archaeological investigations must be conducted under a State Archaeologist's field investigation permit (950 CMR 70) to ensure that the investigation meets Massachusetts standards for professional qualifications, performance, and reporting. In particular, the research team should have requisite experience in the archaeology of the types of archaeological resources that would be expected in this region, located in the Connecticut River Valley of Massachusetts.

Section 110 of the National Historic Preservation Act of 1966 as amended (16 U.S.C. 470h-2) also requires that the ANG undertake cultural resource surveys on their property to locate, identify, evaluate, nominate, and protect historic and archaeological properties that are eligible for listing in the National Register of Historic Places. MHC is not aware if a comprehensive survey have been conducted, or if a Cultural Resource Management Plan (CRMP) has been developed for the property. Architectural and historical documentation of Hanger #1 and #2 and an administration building was prepared in 2002 and 2005. To assist in MHC's review and consultation for the present undertaking, MHC would appreciate receiving copies of the supporting survey and inventory documentation for any historic properties in the Area of Potential Effect, and the CRMP if one has been prepared.

MHC looks forward to the ANG's determinations and findings, along with the additional project information to be submitted to the MHC for review and comment, and to continued consultation.

These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) and MGL c. 9, ss. 26-27C (950 CMR 70-71). Please contact Edward L. Bell of my staff if you have any immediate questions.

Sincerely,

Brona Simon

Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Acting Executive Director
Massachusetts Historical Commission

xc:
Matthew Mutti, Barnes ANG Base, 104 FW Public Affairs Officer
John W. Richardson, Barnes ANG Base Environmental Coordinator
Richard Doucette, FAA
Secretary Stephen R. Pritchard, EOEA/MEPA Unit
Massachusetts Aeronautics Commission
Westfield-Barnes Airport
Westfield Historical Commission

**The Commonwealth of Massachusetts**
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

March 6, 2007

Matt Nowakowski
National Guard Bureau
ANGRC-CEVP Andrews Air Force Base
Andrews AFB, MD 20762-5157

RE: Westfield-Barnes Airport, Massachusetts Air National Guard 104th Fighter Wing Property, Westfield, MA. **MHC #RC.40316.**

Dear Mr. Nowakowsi:

The Massachusetts Historical Commission have reviewed the management memorandum, reporting on the results of the intensive (locational) archaeological survey (950 CMR 70) conducted by the Archaeological Services at the University of Massachusetts, Amherst (UMAS), in the project area referenced above. MHC looks forward to reviewing the full "summary report" (950 CMR 70.14) from UMAS.

The results of the archaeological survey identified one potentially significant archaeological site, designated the Barnes Site, in UMAS Survey Unit 2. MHC looks forward to reviewing your recommendations for further treatment of the Barnes Site. It may be appropriate for UMAS to conduct a site examination archaeological survey (950 CMR 70) so that the boundaries and significance of the archaeological site can be determined to assist in project planning and cultural resource management decisions for this National Guard property.

MHC also looks forward to reviewing the results and evaluation of the buildings and structures at the facilities.

These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MGL c. 9, ss. 26-27C (950 CMR 70), and the Secretary of Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Fed. Reg. 190 (1983)). Please contact me if you have any immediate questions.

Sincerely,

Edward L. Bell
Senior Archaeologist
Massachusetts Historical Commission

xc:
Lorraine Gross, Science Applications International Corporation
Mitchell T. Mulholland, UMAS

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www.sec.state.ma.us/mhc

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April 30, 2007

**The Commonwealth of Massachusetts**
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

Harry A. Knudsen, Jr.
Chief, Environmental Planning Branch
US Air Force Air National Guard
NGB/A7CVP
3500 Fletcher Avenue
Andrews AFB, MD 20762-5157

RE: Westfield-Barnes Airport, Massachusetts Air National Guard 104th Fighter Wing Aircraft Conversion, and Facilities Demolition and New Construction, Westfield, MA. **MHC #RC.40316.**

Dear Mr. Knudsen:

Staff of the Massachusetts Historical Commission have reviewed the *Draft Environmental Impact Statement* [EIS] *for the Base Realignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts,* received by the MHC on April 9, 2007.

MHC looks forward to receiving the results of the architectural survey and evaluation, with the inventory forms, and the archaeological report (950 CMR 70), with the Air National Guard Bureau's determinations of effect for the demolition and new construction projects proposed as for the preferred alternative. It would be important to provide this information as soon as it is available, so that the results of this consultation can be incorporated into the Final EIS.

Please take into account the following comments in preparing the Final EIS.

**Archaeological Resources**
On pages 3-73 & 4-67, the locational information for the Barnes Native American Site (now assigned MHC #19-HD-307) is too specific. MHC requests that the remainder of the sentence on page 3-73 after "scatter" be deleted; and on page 4-7 the part of the sentence that reads "on a small ridge north of" should be deleted.

Additional information is required to determine what effect the preferred alternative may have on the Barnes Native American Site. The site could be impacted inadvertently during the construction activities proposed for the preferred alternative. MHC previously recommended that a site examination archaeological survey (950 CMR 70) be conducted for the Barnes Native American Site to determine if the site is significant; if the site does not meet the National Register Eligibility Criteria (36 CFR Part 60), then no further planning consideration of the site would be necessary. If the site is eligible, then the boundaries will have been more precisely defined and a more specific protection zone can be established. MHC recommends that the site examination archaeological survey be conducted, and consultation with MHC concluded, prior to completing the Final EIS so that the results of the evaluation, consultation, and treatment can be incorporated.

Provisionally, however, an adequate site avoidance and protection plan should be developed in consultation with MHC to ensure that the site is not impacted inadvertently during the

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construction activities proposed for the preferred alternative. Minimally, the avoidance and protection plan should include the following elements:

4) The maximum site boundaries should be staked by UMass Archaeological Services, and surveyed and plotted (labeled as a "sensitive resource area: no impact allowed") on installation maps and on construction plans and drawings for the new construction at the Munitions and Maintenance Facilities.
5) The boundaries of the archaeological site, and the protective fence should posted with "No Trespassing" signs, and should be designated as a restricted area. Suitable language shall be included in contract and construction documents to prevent inadvertent impacts to the fragile archaeological site. Construction personnel and contractors shall be informed verbally and in writing that the fenced area is a "no impact area." Construction personnel and contractors should neither perform nor permit any tree cutting or tree stumping, construction, excavation, grading, filling, dumping, or the storage or staging of equipment, vehicles, supplies, or debris within the boundaries of the fenced area. No unauthorized artifact collecting or archaeological investigation shall be permitted within the fenced area, other than for which the Massachusetts State Archaeologist has issued an archaeological field investigation permit (950 CMR 70). The fenced area shall remain in its existing natural condition, and the MHC shall be consulted and provided the opportunity to review and comment on any otherwise unforeseen activities that may be proposed within the fenced area. The fence may be removed upon completion of the project.
6) The Barnes Native American Site should be included in the Cultural Resource Management Plan for the facilities.

An unexpected discoveries plan should be developed in consultation with the MHC for the remote possibility that potentially significant archaeological resources are encountered during construction (see Draft EIS, pages 3-73 & 4-67).

Both the archaeological site avoidance and protection plan, and the unexpected discoveries plan, should be incorporated into the "construction best management practices" protocol (Draft EIS, page 6-2).

**Historic Resources**
MHC cannot offer any comments at this time on what effect the preferred alternative may have on historic resources. MHC notes on page 3-74 that preliminary results suggest that none of the buildings may meet the National Register eligibility criteria. As noted above, the results of the architectural survey, original inventory forms, evaluations, and the effect determinations should be submitted to the MHC for review and comment.

MHC also notes that the Part 150 Study is being updated to identify potential noise mitigation measures. Measures that have a geographic area of effect and may result in physical changes to historic properties (such as window replacement or other soundproofing measures) could have an effect on historic properties. MHC looks forward to reviewing the proposed measures, with evaluation and effect determinations for historic properties.

**Traditional Cultural Properties**
On page 3-75, Traditional Cultural Resources, please note that several New England Indian Tribes in Massachusetts, Connecticut, and Rhode Island may have interest in this area. Please note that the Mashpee Wampanoag Tribe has been recognized by the BIA. Please summarize the process and any results of consultation with New England Indian Tribes. Please clarify if any

concerns or any comments at all have been expressed or provided. The presence or absence of "judicially established" Native American lands within the Commonwealth is notwithstanding for the purposes of required consultation with potentially interested Tribal Historic Preservation Officers. (There are, in fact, lands owned in fee-simple by state and federally recognized tribes and their members, tribal trust lands, and reservations established by the General Court.) Delete the sentences on pages 3-75 & 4-67 that begins, "Additionally, the MHC." MHC did not, and could not offer any information about traditional properties. These are in the purview of traditional specialists within Native American tribes, not the MHC.

These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended (36 CFR 800) and MGL c. 9, ss. 26-27C (950 CMR 70-71). Please contact Edward L. Bell or Ann Lattinville of my staff if you have any immediate questions.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc:
Matthew Mutti, Barnes ANG Base, 104 FW Public Affairs Officer
John W. Richardson, Barnes ANG Base Environmental Coordinator
Matt Nowakowski, ANGRC-CEVP Andrews Air Force Base
Keith Driscoll, MANG
Richard Doucette, FAA
John Siva, FAA
Secretary Ian A. Bowles, EOEEA/MEPA Unit
Massachusetts Aeronautics Commission
Massachusetts Commission on Indian Affairs
Westfield-Barnes Airport
Westfield Historical Commission
David A. Nelson, Gale Associates, Inc.
Lorraine Gross, Science Applications International Corporation
Mitchell T. Mulholland, UMAS

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# The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

June 19, 2007

Harry A. Knudsen, Jr.
Chief, Environmental Planning Branch
US Air Force Air National Guard
NGB/A7CVP
3500 Fletcher Avenue
Andrews AFB, MD 20762-5157

RE: Westfield-Barnes Airport, Massachusetts Air National Guard 104th Fighter Wing Property, Westfield, MA. **MHC #RC.40316.**

Dear Mr. Knudsen:

Staff of the Massachusetts Historical Commission have reviewed the report, *Final Draft, Cultural Resource Survey of the 104th Fighter Wing, Massachusetts Air National Guard, Westfield-Barnes Airport, Westfield, Hampden County, Massachusetts,* dated April 2007.

MHC agrees with the evaluation of the buildings at the property, which do not meet the Criteria of Eligibility (36 CFR Part 60). MHC requests that the original MHC inventory forms (Appendix C) be submitted to the MHC.

MHC has previously recommended that an archaeological site examination (950 CMR 70) be conducted for the Barnes Site so that the boundaries and significance of the archaeological site can be determined to assist in project planning and cultural resource management decisions for this National Guard property.

These comments are offered to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act of 1966 as amended (36 CFR 800), MGL c. 9, ss. 26-27C (950 CMR 70), and the Secretary of Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 Fed. Reg. 190 (1983)). Please contact Edward L. Bell if you have any immediate questions.

Sincerely,

Brona Simon

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commission

xc:
Matthew Mutti, Barnes ANG Base, 104 FW Public Affairs Officer
John W. Richardson, Barnes ANG Base Environmental Coordinator
Matt Nowakowski, ANGRC-CEVP Andrews Air Force Base
Keith Driscoll, MANG
Lorraine Gross, Science Applications International Corporation
Mitchell T. Mulholland, UMAS

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DEPARTMENT OF THE AIR FORCE
AIR NATIONAL GUARD

RECEIVED
JUN 27 2007
MASS. HIST. COMM
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RC 40316

NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Brona Simon
State Historic Preservation Officer
Executive Director
State Archaeologist
Massachusetts Historical Commissions
220 Morrissey Boulevard
Boston, Massachusetts 02125

RE: Westfield-Barnes Airport, Massachusetts Air National Guard 104th Fighter Wing Cultural Resources Survey, MHC #RC.40316.

Dear Ms. Simon:

Thank you for your letter regarding the Draft EIS for the subject project that included comments on the cultural resources inventory at the 104 FW, received by our office on May 18th, 2007.

In this letter we would like to present our position regarding MHC's suggestion that the 104 FW formally determine the eligibility of the "Barnes Native American site."

Based on conversations with Dr. Mitchell Mulholland, University of Massachusetts (UMASS), as well as the results of shovel probes by UMASS Archaeological Services, NGB/A7CVN believes that Phase II testing of this site would not be an efficient or cost-effective use of government resources. MHC's policies specifically recommend that "sites be avoided" and that further testing be conducted only "if avoidance is not possible." The National Guard Bureau (NGB) has taken the following steps to avoid any disturbance to the site:

a. The 104 FW knows where the site is and is able to avoid it, treating it as if it were eligible;
b. The site area is already fenced, and the fencing provides protection from inadvertent encroachment;
c. The action proposed in the above-referenced EIS would occur south of the site, with a fence and an existing bunker between the site and the proposed new construction;
d. The site lies within the protection zone of the new construction and existing bunkers, so that future construction would not be allowed to impinge on the site; and
e. The site is located on a ridge, so would not receive indirect effects from construction, such as silt runoff or traffic. Finally, the EIS specifies best management

practices would be in place for construction, and there would be no traffic in the area because existing fencing does not allow access.

The 104 FW and the NGB want to make the best use of government funds, avoiding unwarranted investigations. In this case, avoidance and protection measures are already in place, so further site disturbance would not change the conservation outcome planned for this undertaking.

The 104 FW and the NGB propose the following actions:

a. Stake the area as suggested in your letter;
b. Remove site location language from the EIS; and
c. Continue to include language for site avoidance, protection, and inadvertent discovery.

The point of contact for this issue is Mr. Robert Dogan, (301)836-8859 or email robert.dogan@ang.af.mil. Thank you for your assistance in this matter.

Sincerely

CONCURRENCE: Brona Simon
6/29/07
BRONA SIMON
STATE HISTORIC
PRESERVATION OFFICER
MASSACHUSETTS
HISTORICAL COMMISSION

HARRY A. KNUDSEN, JR., GS-14, REM
Chief, Natural Infrastructure Mgmt Branch

Attachments:
1. Map and Explanation
2. Proposed Inadvertent Discovery Policy for 104FW

Commonwealth of Massachusetts
**Division of Fisheries & Wildlife**
MassWildlife

Wayne F. MacCallum, *Director*

31 May 2007

Mr. Robert Dogan
NGB EIS Project Manager
NGB/A7CVN, Conaway hall
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

*Re: Draft Environmental Impact Statement*
*Proposed Implementation of the BRAC at Westfield-Barnes Airport*
*NHESP Tracking No. 98-4593*

Dear Mr. Dogan:

The Natural Heritage & Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries & Wildlife (the "Division") has reviewed the Draft EIS for the above-listed project and would like to offer the following comments regarding state-listed species. Westfield-Barnes Airport provides habitat for grassland birds such as the Grasshopper Sparrow and Vesper Sparrow, and rare grassland or scrub barrens invertebrates such as the Pine Barrens Itame and New Jersey Tea Inchworm. These species are protected pursuant to the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing Regulations (321 CMR 10.00) (MESA).

The proposed project appears to be outside of grassland area that provide habitat for state-listed grassland birds. Therefore, it does not appear that the proposed work will adversely affect these species or their habitat.

It appears that the proposed work shown on page 2-16 of the draft EIS could have some impact to shrubland habitat of the New Jersey Tea Inchworm and Pine Barrens Itame. Such impact appears to be minimal, and is unlikely to result in a "take" of these species. However, we request that the Air National Guard have potential impacts to these species and their habitats evaluated by a qualified wildlife biologist. Every effort should be made to minimize habitat impacts to the greatest extent practical. Before work is initiated, a MESA project review checklist and required filing materials must be submitted to the NHESP for review, pursuant to 321 CMR 10.18.

If you have any questions about this letter, or would like to arrange a meeting, please contact Jon Regosin, Ph.D., Regulatory Review Manager, at (508) 389-6376. We appreciate the opportunity to comment on this project.

Sincerely,

Thomas W. French

Thomas W. French, Ph.D.
Assistant Director

*www.masswildlife.org*

Division of Fisheries and Wildlife
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7891
*An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement*

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

OFFICE OF THE
REGIONAL ADMINISTRATOR

May 31, 2007

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB 20762-5157

RE: Comments on Draft Environmental Impact Statement for the Proposed Implementation of the Base Alignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts (CEQ # 20070141)

Dear Mr. Dogan:

The Environmental Protection Agency-New England Region (EPA) has reviewed the National Guard Bureau's (NGB) Draft Environmental Impact Statement (DEIS) for the actions at the Westfield-Barnes Airport, Westfield, Massachusetts. We submit the following comments on the Draft Environmental Impact Statement (DEIS) in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

The DEIS describes the work necessary to implement the 2005 BRAC Commission Final and Approved Recommendations which when implemented will convert aircraft using the airport from the A-10 to the F-15. Work described in the DEIS includes the upgrades to various existing buildings on the airport including the aircraft maintenance hanger, additions/alterations to the existing fire crash/rescue station, installation of aircraft arresting systems, modifications to the squadron operations facility, additions to the munitions storage and maintenance complex and other improvements to support the aircraft conversion at the airport. The primary impact identified in the DEIS associated with the proposed action is an increase in noise from the transition to the F-15 aircraft at the airport. According to the DEIS, an additional 1307 acres of land on and surrounding the airport will be exposed to sound levels above a Day-Night Average Sound Level of 65 decibels. This increase in noise will directly impact an estimated 261 households within an existing mobile home park to the west of the airport.

We appreciate the opportunity to comment on the DEIS for the proposed actions at the Westfield-Barnes airport. Based on our review of the DEIS we note that noise impacts to the communities surrounding the airport are significant and will require significant mitigation. To that end, we strongly encourage the NGB to work closely with the host

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communities and the neighborhoods that will be impacted by noise increases from the conversion to specifically identify and explain the impacts and potential mitigation measures in the FEIS. It would serve the NGB well to support efforts to document these impacts and potential mitigation measures in the FEIS with a comprehensive public involvement program that educates and involves the affected residents. These efforts appear warranted given the explanation in the DEIS that "mobile homes cannot be sound insulated and are normally purchased and removed." (DEIS page 4-7) Based on our review of the proposed work we have rated the DEIS "EC-1—Environmental Concerns-Adequate" in accordance with EPA's national rating system, a description of which is attached to this letter.

Please contact Timothy Timmermann (617-918-1025) of EPA's Office of Environmental Review with any comments or questions about this letter.

Sincerely,

Robert W. Varney
Regional Administrator

Attachment

**Summary of Rating Definitions and Follow-up Action**

Environmental Impact of the Action

**LO--Lack of Objections**
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

**EC--Environmental Concerns**
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

**EO--Environmental Objections**
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

**EU--Environmentally Unsatisfactory**
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

**Category 1--Adequate**
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

**Category 2--Insufficient Information**
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

**Category 3--Inadequate**
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

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# United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
408 Atlantic Avenue – Room 142
Boston, Massachusetts 02210-3334

May 31, 2007

(9043.1)
(ER 07/0356)

Mr. Robert Dogan
NGB EIS Project Manager
NGB/A7CVN, Conaway Hall
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

Dear Mr. Dogan:

The Department of the Interior (Department) has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed Implementation of the Base Realignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing (104 FW), Massachusetts Air National Guard, at Westfield-Barnes Airport, Westfield, Massachusetts.

**Specific Comments**

Cultural Resources Preservation

We note that the Massachusetts Historical Commission/State Historic Preservation Officer's (SHPO) letter of March 6, 2007, exhibited in this DEIS, indicates the SHPO's outlook that this compliance consultation is incomplete and/or inconclusive, and that the SHPO is looking forward to review of further stages or completion of necessary preservation documents. Also, Table 4, 13-1 (pages 4-68 through 4-73), SUMMARY OF IMPACTS, Cultural Resources (page 4-73), indicates a cultural resources inventory evaluation of architectural and archeological resources is currently in progress and that consultation (presumably to include the survey and evaluation mentioned) will be completed prior to initiation of the proposed action. This appears suitable and reasonable, and corroborates the SHPO's letter of March 6, 2007, which we endorse.

Endangered Species Act Comments

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the Department of the Interior are known to occur in the project area. Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required. This concludes our review of listed species and critical habitat in the project location and environs referenced above. No further Endangered

Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Fish & Wildlife Resources

Page 3-69, Section 3.11.2.4, Biological Resources, Wetlands and Other Aquatic Habitats, states that a wetland delineation of the Westfield-Barnes Airport has not been accomplished. The National Guard Bureau is relying on National Wetland Inventory (NWI) maps to identify wetlands.

The proposed action does not have direct or indirect impacts to wetlands. However, page 5-8, Section 5.12, Analysis of Cumulative Impacts, Biological Resources, states that some of the actions being planned in the foreseeable future may impact wetlands. We recommend that wetland delineation be completed at Westfield-Barnes Airport to aid in future project planning efforts.

**Conclusion**

The Department has a continuing interest in this project. For further coordination on fish and wildlife concerns, please contact Maria Tur of the U.S. Fish and Wildlife Service, New England Field Office, at (603) 223-2541. Questions concerning cultural resources should be directed to Mr. David Clark, National Park Service, at (617) 223-5141.

Thank you for the opportunity to provide input on the DEIS. Feel free to contact me at (617) 223-8565 if you have any other concerns.

Sincerely,

Andrew L. Raddant
Regional Environmental Officer

**TOWN OF SOUTHAMPTON**
*P.O. BOX 397*
*Southampton, Massachusetts 01073*

**BOARD OF SELECTMEN**

May 29, 2007 *Sent by Certified/Overnight Mail*

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

RE: Public Comment on the draft Environmental Impact Statement: "Proposed Implementation of the Base Realignment and Closure (BRAC) – Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts"

Dear Mr. Dogan:

We are writing to respectfully ask that you consider our citizens' requests as they have been presented to you regarding the draft "Environmental Impact Statement" issued by the MA Air National Guard, FAA, Westfield-Barnes Airport, and MA Aeronautics Commission.

We have received thoughtful and valid comments from several concerned Southampton citizens and thereby appeal to you and your agency to address such concerns thoroughly and incorporate as necessary into the final EIS. We would like to be included in any response to such comments and most particularly would like documentation that they have been reviewed, considered and incorporated as appropriate. Moreover, we request a formal process and vehicle (e.g. community advisory board) for remaining engaged with the Air National Guard on issues over the long-term (e.g. noise abatement, community support, etc.).

Finally, we encourage your agency to provide significant and generous noise abatement to all residents in Southampton affected by this plan in order to provide a safe and livable community for our citizens.

We trust that you will honor this request and include us by direct contact in any further public comment or discussion on this subject. You can reach our Town Administrator, Diana Schindler, at (413) 529-0106 or by email at townadministrator@town.southampton.ma.us. Thank you for your consideration and attention.

Sincerely,

BOARD OF SELECTMEN

Michael Phelan, Chair

Edward Batchelder

David McDougall

Douglas Blanchard

Jess Dods

cc: Representative Peter Kocot
Senator Michael Knapik

# TOWN OF SOUTHAMPTON
# MASSACHUSETTS

*Board of Health*

May 29, 2007 Sent Certified/Overnight Mail

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

RE: Public Comment on the draft Environmental Impact Statement: "Proposed Implementation of the Base Realignment and Closure (BRAC) – Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts".

Dear Mr. Dogan,

We are writing to respectfully ask that you consider our citizens' requests as they have been presented regarding the "Environmental Impact Statement" issued by the Massachusetts Air Nation Guard, FFA, Westfield – Barnes Airport, and MA Aeronautics Commission.

The Board of Health has received many inquires and concerns from many of the residents in Southampton. We would like to be included in any response to such comments and most particularly would like documentation that they have been reviewed, considered and incorporated as appropriate. We respectfully request a formal process and vehicle (e.g. community advisory board) for remaining engaged with the Air National Guard on issues over the long-term (e.g. noise abatement, community support, etc.).

In conclusion, we encourage your agency to provide significant and generous noise abatement to all residents in Southampton affected by this plan in order to provide a safe and healthy community for our residents.

Southampton residents would like to be included in any further discussions on this subject.

You can reach the Southampton Board of Health at (413) 529-1003 or by email at boardofhealth@southampton.ma.us

Sincerely,

Michael LaValley, Chair

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Federal Aviation Administration
New England Region

12 New England Executive Park
Burlington, MA 01803

October 1, 2007

Kate Bartz
SAIC Inc.
2617 East 7th St.
Tucson AZ 85716

Dear Kate:

This office has reviewed the Draft Final Environmental Impact Statement for the BRAC conversion for the 104th Fighter Wing, Massachusetts Air National Guard, at Westfield-Barnes Airport.

My comments have been fully addressed and I have no further comment.

Sincerely,

Richard P. Doucette
Environmental Protection Specialist
New England Region

CC : Robert Dogan

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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF TRANSPORTATION
MASSACHUSETTS AERONAUTICS COMMISSION

EOT

COL (RET.) ROBERT E. WELCH, JR.
EXECUTIVE DIRECTOR

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

BERNARD COHEN
SECRETARY AND CHAIR

October 5, 2007

Robert L. Dogan, REM
Natural Infrastructure Management Branch
Conaway Hall – Air National Guard Readiness Center
NGB/A7CVN
3500 Fetchet Ave
Andrews AFB MD 20762-5157

Subject: Environmental Impact Statement (EIS) - Preliminary Final
Proposed Implementation of the (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing (MANG) at Westfield-Barnes Airport
Westfield, Massachusetts

Dear Mr. Dogan:

As a cooperating agency, the Massachusetts Aeronautics Commission has read and reviewed the Preliminary Final EIS for Westfield-Barnes Airport and their proposed action to undergo an aircraft conversion from the A-10 to the F-15 as a result of the 2005 BRAC Commission and Approved Recommendations.

Upon review of the Final Environmental Impact Statement document, the Massachusetts Aeronautics Commission has "no comments" on the proposed actions of the 104th Fighter Wing at Westfield-Barnes Airport as presented.

Should you have any further questions, please do not hesitate to call me at (617) 973-8890.

Sincerely,

Denise J. Garcia
Mgr of Aviation Planning

TEN PARK PLAZA, ROOM 3190, BOSTON, MA 02116-3969
TELEPHONE: (617) 973-8881 • TELEFAX: (617) 973-8889 • WWW.MASSAERONAUTICS.ORG

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WESTFIELD-
BARNES AIRPORT

October 2, 2007

Ms. Kate Bartz
SAIC, Inc.
2617 Eat 7th Street
Tucson, AZ 85716

Dear Kate:

We have reviewed the Draft Final Environmental Impact Statement for the BRAC conversion for the 104th Fighter Wing, MA Air National Guard at Westfield-Barnes Airport.

My comments have been fully addressed and I have no further comment.

Sincerely,

Christopher J. Willenborg,
Airport Manager

Westfield – Barnes Airport, 110 Airport Road, Westfield, MA 01085-5331
**Tel: 413-572-6275, Fax: 413-572-6296**
Email: barnesairport@mail.ci.westfield.ma.us
Website: www.barnesairport.com

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# APPENDIX B
# SUMMARY OF SCOPING COMMENTS

# Summary of Massachusetts National Guard Proposed Implementation of BRAC and other Associated Activities at Westfield-Barnes Airport Environmental Impact Statement Scoping Comments

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| 001 Comment letter from Donna Vella | I have been approached and called by 18-20 people regarding the moving of the F15's from Otis to Barnes. The recent newspaper coverage prompted several of these calls. They have asked that I email you the following questions to which they hope to hear a response to at the 8/15 meeting:<br><br>**001-01** WHY is the change necessary?<br><br>**001-02** The $50,000 cost to the taxpayers does not make sense because the F15's have been "happily" located at Otis for a long time. Keeping them there makes more sense. The "new" environment will not be impacted and the taxpayers will not be charged with the $50 million expense.<br><br>**001-03** The feeling is that Barnes has a significant amount of residential housing located in the general area<br><br>**001-04** that Barnes will increase its' risk of being a military target. They are already somewhat of a target with the A10's and the munitions storage.<br><br>**001-05** It was also stated that there are 3 schools located in the area as well, namely; North Middle, Southampton Road and Papermill [*sic*] elementary schools.<br><br>**001-06** Their is also serious concern because Barnes is located on the aquifer.<br><br>**001-07** There were additional comments made regarding the moving of the Army National Guard from Westover to Barnes. The concerns were presented as follows:<br><br>The Unit already existed at Westover and was well accepted and situated. It was stated that the move was necessary because they could not get funding to upgrade their facility and needed to move or be moved out of the Western Ma area. This was at a cost of $13 million to the taxpayers. It should be noted that other business (private or military) took the space of the Army National Guard. It was also brought up that Westover is owned by the Federal Government and that Barnes is a municipally owned airport that is being taken over by the military without a fair representation of the community at large being involved. | **001-01** The aircraft conversion is necessary because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Refer to Section 1.1 (inset)<br><br>**001-02** The overall cost for the projects described in the EIS is actually approximately $77 million . Some of which is directly related to the aircraft conversion and some of which is related to other construction for the 104 FW. Refer to Sections 4.3.2.1, and 1.1 (inset).<br><br>**001-03** It is anticipated that more residences will be located within the 65 dB noise contour in association with the F-15 as compared to the A-10. This will be analyzed in detail in the EIS. Refer to Sections 4.1.2.1 and 4.2.2.1.<br><br>**001-04** It is not expected that the conversion from the A-10 to the F-15 will increase the risk of Westfield-Barnes being a military target.<br><br>**001-05** It is not anticipated that these schools will be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. Refer to Section 4.1.2.1.<br><br>**001-06** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 3.10.2.1 and 4.10.2.1.<br><br>**001-07** The Army National Guard project is no longer a part of this Proposed Action, and will be subject to separate environmental review. |
| 002 Comment form from Albert Masciadrelli | **002-01** This facility is a homerun for the nation-city & Northeast. The spin off is unmeasureable [*sic*]. The personnel of the best are the communication mind people to keep the community informed. Leaving nothing to chance.<br><br>With their attributes the city and base will work together as a team to benefit all.<br><br>We are very fortunate to have an organization like this as partner in the best interest of National Security.<br><br>The technology will with-out doubt spin off as an education tool to the infrastructure throughout the community as mutual aid not only as a service but training together in the best interest of the city. | **002-01** The National Guard Bureau looks forward to continuing its positive relationship with the local community, the City of Westfield, and the surrounding region. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| 003 Comment form from Josh Galaska | **003-01** I would just like to say I look forward to getting the F-15s. While I will miss the A-10s, but I think the excitement for the F-15s outweighs my sorrow for the A-10s. I look forward to the noise and vibrations from the engines. I hope they stay for a long time. | **003-01** Comment noted |
| 004 Comment form from Charlie Galaska | **004-01** It's going to [be] great to have the F-15 Eagles at Barnes Airport. It's too bad the A-10's are being replaced but these planes will be fun to watch and hear the roar of the F-15's. I thought that it would be better to get positive feedback than negative feedback that many in Westfield tend to support (no progress). This in fact will give Westfield good progress. | **004-01** Comment noted |
| 005 Comment form from Michael Salvini | **005-01** I do realize that this change of aircraft and mission of the unit will take some getting used to, I fully support this change and wish everyone the best of luck! | **005-01** Comment noted |
| 006 Comment form from William Mead | My concerns are:<br>**006-01** What hours of operation?<br>For train[ing] purposes?<br>**006-02** What will be the noise impact on take off?<br>Landing?<br>**006-03** Will they (F-15) overfly local residential areas<br>What will the minimum height be over residential areas<br>**006-04** Will afterburners or thrustes [*sic*] be used for take off and/or landing | **006-01** The 104 FW will continue to perform flying during the hours that the Westfield-Barnes Airport Air Traffic Control Tower is operational, which are 7 AM to 10 PM. Virtually all scheduled flights associated with the 104 FW are for training purposes. However, due to the proposed Alert mission, occasional takeoffs and landings may occur outside of the normal hours of operation during contingency or emergency operations. Refer to Table 2.3-1.<br><br>**006-02** Noise impacts from takeoffs and landings will be analyzed in the EIS. It is anticipated that noise levels will be higher with the F-15 than they are currently with the A-10. Refer to Section 4.1.2.1.<br><br>**006-03** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle, climb faster than the A-10s, and will take off in a different direction. This means that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. Refer to Section 4.1.2.1.<br><br>**006-04** Afterburners are only used for takeoffs. Noise is being modeled with 64% of the daily takeoffs using afterburner and 36% of the daily takeoffs using military power (a lower power setting than afterburners). Refer to Section 4.1.21. |
| 007 Comment form from Gary Hayward | **007-01** Currently, the A-10's fly over my house at tree-top level both landing & taking off 3 or 4 planes at a time and the noise is deafening.<br><br>I was told that the new F-15's are much louder.<br><br>I'm very concerned about the noise levels in my backyard & even in my living room when these planes fly over.<br><br>**007-02** We need to be concerned with the spike in noise levels 15 or 20 times a day rather than the average noise levels for a 24 hour period.<br><br>Thank you!<br><br>**007-03** Do military aircraft have to meet the same noise level standards as commercial aircraft? | **007-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle so that they can spend less time in the vicinity of the airport, and will take off in a different direction, and thereby minimize noise impacts. The F-15s will be louder than the A-10s, and noise impacts will be analyzed in the EIS. Refer to Section 4.1.2.1.<br><br>**007-02** The EIS will discuss various metrics, or measurements used in noise assessments. However, also discussed is the fact that over many years of scientific and sociological research by many federal agencies, there is general agreement among these agencies that the Day-Night Average Sound Level is the best predictor of public annoyance and concern from exposure to elevated noise. Refer to Section 3.1 and 4.1.<br><br>**007-03** The noise level standards referred to are those associated with the Stage 3-designated engines. These |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | | standards are not applicable for engines powering military aircraft. |
| 008 Comment form from Emma Hayward | **008-01** The paper said the federal study will be on the environmental impact of this transition. Environmental issues are those that have a detrimental effect on the populace. The noise level of the A-10s is already at a decimbel [*sic*] level that is harmful to the ears. Will the F-15s be quieter?<br><br>**008-02** An audiologist in our neighborhood has moved because she know this noise was effecting her daughter's hearing.<br><br>**008-03** Isn't there noise abatement procedures from the FAA that are in place?<br><br>**008-04** What about the schools that are located closer to the airport than we are? Do the children not get to play outside? Do the teachers need to suspend lessons when they are flying over? | **008-01** The F-15 is a louder aircraft than the A-10. The F-15s will take-off at a steeper angle than the A-10 though, which will minimize their time in the vicinity of the airport. Refer to Section 4.1.2.1.<br><br>**008-02** The NGB and FAA are committed to minimizing noise impacts on the community to the extent practicable, which is why various takeoff patterns that would minimize impacts to the community are being reviewed. Refer to Sections 4.1.2.1; 4.2.2.1; 4.3.2.1.<br><br>**008-03** Yes, there are currently noise abatement procedures in place at Westfield-Barnes Airport that were identified during the 1990 Part 150 Study. These procedures can be found at www.barnesairport.com. Additionally, the FAA is preparing an updated Part 150 Study that will evaluate the potential increase in noise and potential mitigation efforts that may be accomplished to mitigate the effects of the increased noise in the vicinity of the airport.<br><br>**008-04** It is not anticipated that schools will be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. There would be no restrictions associated with outdoor play. Refer to Section 4.1.2.1. |
| 009 Comment form from Gail Hohenberger | **009-01** I live in walking distance to Barnes. Like everyone, I have questions regarding the noise levels. I understand & can accept there will be elevated noise. If this is brief and occasional, I can live with it. I'm wondering how often the planes will fly over the surrounding neighborhoods.<br><br>**009-02** My major questions and/or concerns revolve around the acquifer [*sic*]. I'm wondering if over 90% of this project will be directly over the acquifer [*sic*], how can the acquifer [*sic*] be adequately protected. I like many others in Westfield & surrounding communities, have well water & depend on this water resource to be protected, no just now, but for our children and grandchildren.<br><br>**009-03** I have a question regarding security. Will the addition of these planes possibly make this base more of a terrorist target.<br><br>**009-04** I just want to say I am very pro-military. I am not necessarily opposed to this project. My son is in the Air Force in So. Korea and contemplating coming back to Westfield when he is out in a few months. He works on the F-15's and F-16's and will want to do the same if he comes home and joins the Nat'l Guard or Reserves and probably work as a civilian on the base. I am absolutely pro-military. But the issues are real, people have a right to know the truth so they can decide to stay or move, or whatever decisions they want to make and should have the truth to make those decisions in an informed manner. I look forward to learning more and to the public hearings coming up when questions will be posed and answered in a public forum. | **009-01** There will be an average of 7.3 arrivals/departures and 2.6 closed patterns flown by the F-15s at the airport daily. Refer to Table 2.3-1.<br><br>**009-02** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 4.10.2.1.<br><br>**009-03** It is not expected that the conversion from the A-10 to the F-15 will increase the risk of Westfield-Barnes being a military target.<br><br>**009-04** Comment noted. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| 010 Comment form from John H. Gamache | **010-01** I & my wife are pleased that the F-15s are coming to Barnes. It will be good for the city and for the economy. I hope the people of Westfield will come to realize we need the Air Guard. | **010-01** Comment noted. |
| 011 Comment form from Chris Taylor | **011-01** Anticipated noise levels do not go out far enough for the residents in local area to get a better idea of how the F-15 will affect them. Most people know there will be an increase at the airport it shelf. It should go ½, 1 mile 2 mile radius from the airport.<br><br>**011-02** I know noise levels that the F-15 going over my house ¾ from Rwy would be above OSHA level of allowable noise (max power take offs and other high power maneuvers [*sic*]).<br><br>**011-03** The residence already have an idea of the average noise level that the legend depicts of all aircraft. We need to know what an F-15 alone will impact us. | **011-01** The Federal Interagency Committee on Urban Noise developed guidelines on land use compatibility with respect to noise. Based on these guidelines, virtually all land uses are compatible with yearly day-night average sound levels under 65 dB. Therefore, it is standard practice to show noise contours out to only the 65 dB contour. Refer to Section 3.1.<br><br>**011-02** Federal workplace standards for protection from hearing loss allow a time-averaged level of 90 dB over an 8-hour period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency) suggests a time-averaged sound level of 70 dB over a 24-hour period. Refer to Section 3.1.<br><br>**011-03** There are many ways to measure noise: maximum sound level, peak sound pressure level, sound exposure level, equivalent sound level, day-night average sound level, onset rate-adjusted monthly day-night average sound level, etc. The day-night average sound level is the preferred noise metric used by numerous federal agencies, including the Department of Housing and Urban Development, the Department of Transportation, the FAA, USEPA, and the Veteran's Administration and therefore it is used for the noise measurements in this EIS. Refer to Section 3.1. |
| 012 Comment form from Dan Williams | **012-01** As a citizen of Westfield I feel that it would be to the benefit of the city and all of its citizens to implement the program of BRAC. Not only the jobs that this program will create, but it will show the government and other people that this is a growing community with a vital role in today's society. | **012-01** Comment noted |
| 013 Comment form from Greg & Lisa Masciadrelli | **013-01** We are pleased with how well the proposed changes are being presented to our community.<br><br>The 104th is a proud member of Westfield and we expect to see great things in our futures.<br><br>Thank you for your continued support. We will be behind you 100% of the way. | **013-01** Comment noted |
| 014 Typed-in Comment from Dave Wardner | **014-01** The primary concern is that due to the Massachusetts Air Guard's mission change to an alert mission, how often are alert training sorties going to be done? Currently the A-10s don't conduct alert missions or alert training sorties. With the new F-15s, alert training and alert missions can be done at any time during the day. Is there a number for how many per day or monthly and or when they will occur?<br><br>**014-02** The second concern is that when the F-15s take off in close vicinity to North Middle School, Southampton Road School, and Papermill [sic] School, they have potential to interrupt studies and/or student attention due to the noise and potential shaking of buildings and furniture. Additionally, there is a safety issue in that children out on the play ground during recess and walking to and from school will not have hearing protection when the F-15s take off. | **014-01** Alert aircraft do not fly training missions. If launched, these alert aircraft would be responding to an actual emergency situation. It is impossible to predict how often, or during what time of the day such an emergency may occur. However, it should be noted that there is no difference in taking off for a training mission or in responding to an alert; although the alert aircraft will generally take off to the south given that the alert shelters are at the north end of the runway. The A-10s do not perform an alert mission. The 102 FW performed alert missions 32 times last year. Refer to Section 2.3.1.<br><br>**014-02** It is not anticipated that these schools would be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. Refer to Section 4.1.2.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| | **014-03** The F-15s carry live dangerous munitions, likely to be stored on base, including missiles. The storage of these munitions could potentially be harmful to personnel and the environment, as well as threaten the safety of the local community.<br><br>**014-04** With respect to biological resources, will there be a study regarding impacts to wildlife and domestic animals? | **014-03** Although the specific type of ordnance is different, A-10 aircraft currently carry training ordnance on their training missions, as will the F-15s. As a general rule, only alert aircraft would launch with operational weapons. The same safety processes and procedures currently used in the handling, processing, storage, and maintenance of ordnance will continue. Also, just as with the A-10, F-15 aircraft have electro-mechanical safeguards to prevent the accidental or inadvertent release of ordnance. Additionally, there are safety easements established around all facilities that contain ordnance. Refer to Section 4.6.2.1.<br><br>**014-04** There have been numerous studies related to the effects of aircraft noise on domestic animals and wildlife and the results of these have indicated that impacts are generally negligible. No further studies related to this are anticipated under this action. This subject will be further analyzed in the EIS. Refer to Section 4.11.2.1. |
| 015 Comment letter from Joan H. Corell | I am writing to emphasize the importance of dealing appropriately with three environmental concerns as you change aircraft and build at the base.<br><br>**015-01** Air pollution. The National Lung Association already rates Westfield with an "F" in air quality. Will there be a change for better or worse from the F-15s in the pollutants they emit or chemicals that will be required to service them at the base? If worse, what can be done to reduce the impact?<br><br>**015-02** Noise pollution. The A-10s are tolerable, but will the F-15s be? There are a number of well-documented psychological studies that indicate noise levels (out of the control of the people who are subjected to them) cause problems in learning, sleep and sense of well being. Will there be a way to hush the work on these engines at the base? Will there be a way to design flight patterns to minimize noise for the residence especially on the north end of the city?<br><br>**015-03** Water pollution. It is unfortunate that the base sits on the very large and important Barnes Aquifer that serves not only Westfield, but other communities. But seeing that it does, what plans are in place for protecting that body of water given the new construction and the new chemicals required for these planes?<br><br>**015-04** Although it isn't the base responsibility, a very serious problem in Westfield is that we have air, noise, and water pollution from many sources – the vast number of growing trucking and warehouse businesses, the race track, the municipal airport and military ports. Very nearby these businesses we have three schools and one or two pre-schools. Many children have asthma and more and more the medical profession is linking this serious ailment to air pollution. We are in a valley that traps the fumes. Noise studies show that children in schools near airports have trouble concentrating. As to water pollution, if Target Warehouse comes in and proposed shopping center, just about all of Barnes Aquifer will be paved over. Engineers involved say that this is o.k. because there are ways to clean dirty water and get it back into the ground under the pavement. But is there anywhere in the country that serves as a model to show this is actually what will happen? And if the biomass plant goes in up river, there is another source of pollution. | **015-01** Air emissions from the F-15 are expected to be higher due to slightly more sorties per year and higher emission factors (pounds of pollutants per time flown) for the F-15 as compared to the A-10. The effects of this will be somewhat offset by the fact that the F-15 take-offs will be steeper, enabling to aircraft to reach higher altitudes (above the mixing levels) faster. Any increases are expected to be well below the *de minimis* levels identified by the USEPA. In terms of stationary sources, little increase is expected as older outdated equipment is replaced with newer, more efficient equipment. Refer to Section 4.4.2.1.<br><br>**015-02** Noise affects different people in different ways. The Federal Interagency Committee on Urban Noise developed guidelines on land use compatibility with respect to noise. Based on these guidelines, virtually all land uses are compatible with yearly day-night average sound levels under 65 dB. The 104 FW has proposed to concentrate take-offs to the north, which will minimize noise impacts to the majority of the community. Additionally, the F-15 will fly a steeper take-off pattern to achieve higher elevation faster, thereby minimizing their time in the environment around the airport. Additionally, a hush house, which functions as a muffler, would be used to reduce noise during maintenance of aircraft engines. Refer to Section 4.1.2.1.<br><br>**015-03** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. The F-15 uses the same fuels and lubricants that are currently being utilized safely on the A-10 aircraft. Refer to Section 4.10.2.1.<br><br>**015-04** The NGB is coordinating with the City of Westfield and Westfield-Barnes Airport to develop a concise list of reasonably foreseeable projects for the cumulative impacts analysis in the EIS. Refer to Sections 4.4.2.1; 4.1.2.1; 5.1.1. |

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| | I serve on the Community Advisory Board (CAB) of the 104th. I have great respect for the care that the Guard is taking to make sure the environment is the best that it can be. I have respect for the administrator, Chris Willenborg, at Barnes Airport for his care in making sure the flight patterns are as quiet as possible for the residents, especially those near the airport. I trust, therefore, that you will do the very best you can to mitigate pollution problems and, as the good citizen the 104th has been, perhaps to look for ways to form a coalition in Westfield and surrounding communities of organizations interested in curbing pollution. | |
| 016 Comment letter from Jean Carpenter | **016-01** How many F15 and F16 planes will be at Barnes?<br><br>**016-02** How many trips will these planes make on a monthly basis?<br><br>**016-03** What is the decibel reading of an F-15 taking off at 150 feet from the plane on takeoff?<br><br>**016-04** On a yearly basis, how many tons of emissions and pollutants will the F15s and F16s produce when they fly in and out of Barnes Airport? What chemicals and how much of each will be emitted? We are located in a valley which holds all these emissions and pollutants. What health effects will this have on the children and elderly who live within 1-3 miles of the airport?<br><br>**016-05** There are many schools located here. Southampton Road School, North Middle School, Head Start, a day care center on Route 202, White Oak School on North Road, Westfield High on Montgomery Road and Paper Mill School on Paper Mill Road. How will these children be protected from the noise and pollutants from the F15s and F16s?<br><br>**016-06** What health effects will the pollutants and emissions from the F15s and F16s, when combined with the emissions from all the diesel trucks traveling on Route 202 and the turnpike, have on the people living, working or going to school in a 1 to 3 mile radius from the airport? Hampden County is already one of the dirtiest counties in the country. How much worse will it be when the emissions from the F15s and F16 are added to what is already here? What will be the total estimated tonnage of pollutants and emissions in this immediate area for the years 2006, 2007 and 2008?<br><br>**016-07** Why are the F15s and F16s coming to Barnes when Otis Airbase where I believe they are now, is going to remain open? Are there increase health problems in the residents who live near Otis air base where the F16s and F15s are located presently? If so, what health problems? | **016-01** There will be 18 primary assigned F-15 aircraft at Westfield-Barnes Airport under the proposed action. There will be no assigned F-16s. Refer to Section 2.1.<br><br>**016-02** It is projected that there will be an average of 7.3 arrivals/departures and 2.6 closed patterns flown by the F-15s at the airport daily (223 arrivals/departures and 78 closed patterns monthly). Refer to Table 2.3-1.<br><br>**016-03** Sound Exposure Levels at 150 feet:<br>Afterburner Power: 134.3 dB<br>Military Power: 125.7 dB<br>It is important to note however, that no people would be within 150 feet of the aircraft upon take-off. Refer to Table 3.1-1.<br><br>**016-04** It is anticipated that emissions will be well below *de minimis* levels. Air emissions will be analyzed in detail in the EIS. Refer to Section 4.4.2.1.<br><br>**016-05** It is not anticipated that these schools would be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. Refer to Section 4.1.2.1.<br><br>**016-06** The NGB is coordinating with the City of Westfield and Westfield-Barnes Airport to develop a concise list of reasonably foreseeable projects for the cumulative impacts analysis in the EIS and their potential to impact the air quality of the region. Refer to Section 4.4.2.1.<br><br>**016-07** The aircraft conversion is occurring because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Based on current information, there are no known health problems associated with residents living near Otis ANGB due to F-15 aircraft. Refer to Section 1.1 (inset). |
| 017 Comment form from I.A. Bezo-Besaw | Having lived in Westfield 60+ years and on Holyoke Rd 30+ yrs I consider the ANG at Barnes the City's most valuable asset. Whenever the A-10s fly (and those before) I love going out in the backyard to get a glimpse of them and there maneuverability. Many who live in town do not know their "best in the nation" status. I do appreciate that status and feel that those teams that retrain on the F-15's will carry out that same combat ready status.<br><br>**017-01** However I do not understand why if one of their missions is interception over the Atlantic of unwanted hostile | **017-01** The aircraft conversion is occurring because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Refer to Section 1.1 (inset).<br><br>**017-02** The overall cost for the projects described in the EIS is actually approximately $77 million . Some of which is directly related to the aircraft conversion and some of which is related to other construction for the 104 FW. Refer to Section 4.3.2.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| | aircraft would the F-15s move inland where they are right there at the ocean now?<br><br>**017-02** And bring with it $21+M in renovations to Barnes? Seemingly these $$'s could be used (in wartime) for our nation's service people that are in warzones or to aide in suppression of those battlefields.<br><br>**017-03** I have a concern that between the ANG and the Army Guard the city will see 200+ added residents which will result in added buildings – homes, schools, services expanded (fire water gas electric) (landfill use – sewer). All this means to me (and many others that are homeowners on a "fixed income" is a raise in our R.E. Tax Rate. Many of us now are on the brink of losing our properties let alone having added increases.<br><br>**017-04** I asked at the 8/15 meeting if any real estate abatements may come forth as a result of the added noise and also traffic. This could not be answered and I hope it could be assessed and addressed w/ conclusions made public to those areas affected as soon as possible. Also, I questioned (as was done at Westover) would the BRAC or FAA or State MANG have perhaps $$'s available for noise-insulation, windows, etc. if the level exceeds certain levels – would also like to see this addressed and favorably recommended for those in the affected areas.<br><br>Happy to hear anyone presently at the 104th will be staying here (unless they ant transfers). That was a bright note at the meeting.<br><br>Also that the F-15's would generally be taking off to the north for practice time etc. and landing from that end too. So I guess we will not be seeing that much flying south of the runway –<br><br>In conclusion when this repositioning of aircraft occurs, I am still glad we will have an operation here in Westfield – live and vibrant and in support of freedom. I certainly will be sad to see our A-10s go – they were like my personal air show for many years each time they took the sky for training, flite [*sic*] time, etc., I will miss them!!!! Thank you A-10 pilots & support personnel<br><br>**017-05** (Also what effect will F-15 fuel have on pollution as it seems to be a more prevalent odor than with the A-10s????) Hope to be informed of next info meeting. | **017-03** There will be no expected increase in community infrastructure required as a result of the proposed action. It is anticipated that the full-time authorized personnel for the 104 FW will be increased by only 139 persons. It is likely that a substantial portion of this increase will be individuals already living in the Westfield area. Refer to Section 4.8.2.1.<br><br>**017-04** Real estate tax abatements are the responsibility of the local tax assessor, and are outside the scope of this study. There is an FAA-funded sound insulation program at Westover Air Reserve Base, as numerous homes fall within the specified noise threshold that allows for FAA-funded sound insulation. A similar program currently exists at Westfield-Barnes Airport. If the noise levels under the Proposed Action reach that same threshold, then homes in those areas will be eligible for sound insulation. FAA is preparing a Part 150 study concurrently with the EIS. Any potential noise mitigation procedures will be explored in that study. Refer to Section 4.1.2.1.<br><br>**017-05** It is anticipated that emissions will be well below *de minimis* levels. Air emissions will be analyzed in detail in the EIS. The fuels and lubricants that will be used for the F-15 aircraft are the same ones that have been in use for the A-10. Refer to Section 4.4.2.1. |
| 018 Comment letter from Eleanor D. Martin | **018-01** First of all – thank you all for being here in Westfield. For the new planes – bring'em on – they are keeping us safe<br><br>My husband used to belong to the 104!<br><br>The noise lets me know I'm safe! | **018-01** Comment noted. |
| 019 Comment letter from Joan & George Bausch | **019-01** Regarding the Barnes Air National Guard conversion to the F15 fighter jets – our concern is that the loud noise overhead from these jets will frighten our draft horses while we are feeding or grooming them or in an even more dangerous situation while we are logging with them n the woods. We also have a farrier with his assistant and a veterinarian that come on a regular basis to work on these animals; along with family and friends (many of whom have young children) all want to go and see the horses everytime [*sic*] they visit. We feel obligated to provide everyone with a safe and secure environment. | **019-01** There have been numerous studies related to the affect of aircraft noise on domestic animals and wildlife and the results of these have indicated that impacts are generally negligible. No further studies related to this are anticipated under this action. This subject will be further elaborated upon in the EIS. Refer to Section 4.11.2.1. |

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| | You are welcome to stop by and we can demonstrate the potential hazards involved as it is difficult for many people to realize the size and strength of a 2000 lb. horse.<br><br>We would greatly appreciate your consideration in this matter when completing the environmental impact study for our area. Thank you. | |
| 020 Comment form from Alice Wielgus | **020-01** I am in the path of the F15 aircraft flying out of MA Air National Guard at Barnes Airport. The noise from the present planes are awful loud. I can not keep my windows open in the summer. When I work in my garden, the noise from the A-10's flying out is irritatingly piercing. The F15's are supposedly louder? The residents are expected to put up with this additional noise? I hate this noise over my home. I moved into my home in 1953 when the airport was only a small city airport. My quality of life has suffered because of the noise and your printed statement "anticipates nearby residences will experience an increase in noise levels from aircraft accessing the Westfield-Barnes Airport."<br><br>**020-02** How will these planes emissions and pollutants and other chemicals used for maintenance have on the Barnes Aquifer? Many people rely on the Aquifer for their water supply not only in Westfield, but other nearby towns. | **020-01** It is anticipated that the F-15 will be louder than the A-10. Refer to Section 4.1.2.1.<br><br>**020-02** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 4.10.2.1. |
| 021 Comment form from Leo J. Blake, Jr. | **021-01** I think it's a good idea to have the F-15's based at Barne's Municipal Airport. The dedication and professionalism shown by the Air Guard by their awards and recognition demonstrates their valuable contribution to the City of Westfield. The F-15's are the next level of improvement to the Air Guard in Westfield and it's role in protecting our country. People knew they were buying property near an airport. Don't complain about noise. For someone who watched F-86's F-100's A-10s it's nice to see and hear the newest addition arrive in the future.<br><br>I wish to say congratulations and good luck to all that have served and to those who will serve in the future. The best to all who help to protect our country at the Air Guard in every department. | **021-01** Comment noted. |
| 022 Emailed comment from Timothy Forde | **022-01** In one sense, it is flattering that the BRAC values Barnes so much to switch the F-15 mission to Barnes. However, undoubtebtly [*sic*], this is also a reaction to the poor reaction times of the Otis F-15's to the attacks on 9-11. By moving the F-15's closer to NYC, that has to increase reaction time to any possible air-threat. I understand their need to address that concern.<br><br>To my mind, I only have two possible areas of concern. The first is the *increased noise* that the F-15's will make, vis avis the A-10. When the first F-15's arrive and for the first year or two, I expect that Barnes will take lots of complaints regarding the increased noise level. I don't expect that there will be much that you can do about it.<br><br>**022-02** Secondly and more importantly, in terms of the *Barnes aquifier* [*sic*]that is located under the runway and along the base property and in regards to the maintenance needs of the F-15 and the F-100 engine that powers it. Will there be an increased likelihood of a spill of harmful chemicals like benzene and other chemicals? Because of the difference in engines that power the A-10 (TF-34) versus the F-100 engine, will that mean a difference in the chemicals used to maintain and to clean the metal parts? | **022-01** It is anticipated that noise levels will be higher with the F-15 than they are currently with the A-10. Refer to Section 4.1.2.1.<br><br>**022-02** Hazardous materials and wastes will continue to be handled and managed according to local, state, federal, and USAF regulations. There are no changes in the management of hazardous materials and wastes that have an inherent capacity to impact the Barnes Aquifer. All spills are reported to the Base Fire Department for initial response. The facility maintains a separate Hazardous Material Emergency Planning and Response (HAZMAT) Plan that discusses specific spill prevention activities. The facility also maintains the Spill Prevention and Countermeasure Plan, which is a comprehensive spill response procedure intended to increase the awareness of various spill plans and to provide guidance on the appropriate plan(s) for a particular situation. If a spill should occur, these documents will be implemented. The facility stocks spill response materials in areas where spills could occur. Spill kits are readily available at liquid and hazardous waste storage areas. Refer to Section 4.7.2.1. |

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| | The concern is that there is always a potential for a chemical spill and some of these chemicals are more harmful than others, especially to an underground water aquifer, like the one under the runway.<br>Would there be any storage tanks at Barnes for these harmful chemicals? Would there be trucks to transport the harmful chemicals between the storage tanks and the airplanes at Barnes? Do you see the *potential* for harm to the aquifer from something like benzene? Are there any plans to notify the city of Westfield and its residents of any such leaks and possible contamination of the Barnes aquifier[*sic*]?<br>**022-03** Also, if there are some of these harmful chemicals onboard the airplane, what would be the effects of two F-15's colliding on the runway and spilling these harmful chemicals onto the ground? What would be the effect of one F-15 colliding with the ground (runway)? What would be the effect of two F-15's colliding above the runway, as in one taking off and one trying to land, but colliding with each other over the runway?<br><br>Those are my two chief areas of concern regarding the conversion from the A-10 to the F-15 mission at Barnes. Other than that, I have no complaints. I doubt that the BRAC commission or the Pentagon were aware of the Barnes aquifier [*sic*] and the potential harm that can be brought about by leaking or spilling harmful chemicals like benzene into that drinking water. Perhaps, that ought to be one concern addressed by the environmental impact statement? Is that being accomplished by Scientific Applications International Corp? I will attempt to copy this email and send it to them. | **022-03** In the unlikely event of a plane crash, the most likely scenario is that any product would be consumed during the ensuing fire. However, in the event that hazardous materials are spilled there are very specific spill response measures that are implemented in accordance with federal regulations to ensure that any risks associated with these materials are minimized; these measures are included in the various plans described in Response 022-02 above. Again, the F-15 will utilize the same fuels and lubricants that are already in use for the A-10. |
| 023<br>Emailed comment from Tom & Cindy Drewski | We are sorry that we could not attend last evening's event. But we did have one question for you.<br><br>**023-01** We are wondering in which direction the F15s will be landing and departing. (We attached a .jpg image of the airfield). We also would like to know if these planes will be passing directly overhead of Eastwood Acres development at any time.<br><br>Thanks for your attention in this matter | **023-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s, and will also take off from a different direction. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. Refer to Section 4.1.2.1. |
| 024<br>Emailed comment from Jim Haley | As an airport neighbor I have a few questions I am submitting to you for inclusion in the environmental impact statement for the A10 to F15 conversion at Barnes Airport Westfield, MA.<br><br>**024-01** Why hasn't there been any F15 flights as of this date that have taken off from a dead stop with full power (both afterburners) from Barnes between 22:00 hours and 07:00 hours ?<br><br>**024-02** Are the F15'S going to possibly fly 24 hours a day 7 days a week ?<br><br>**024-03** Will the single event noise level footprint of F15 full power takeoff be printed and super imposed over Barnes Airport for the public to see ?<br><br>**024-04** Are sound barrier/blast fences going to be implemented at the ends of the runways to deflect some of the takeoff noise?<br><br>**024-05** Are sound suppressors going to be installed for F15 jet engine testing? | **024-01** No F-15s are currently based at Westfield-Barnes Airport. Additionally, there will be no scheduled flights during the hours of 2200-0700. The only F-15 flights that would occur during these hours would be during an Alert launching.<br><br>**024-02** No, all scheduled flights will occur between the hours of 0700-2200. Alert takeoffs would occur only on an emergency basis, and there is no way to predict when these emergencies would occur. Refer to Table 2.3-1.<br><br>**024-03** The EIS will discuss various metrics, or measurements used in noise assessments. However, also discussed is the fact that over many years of scientific and sociological research by many federal agencies, there is general agreement among these agencies that the Day-Night Average Sound Level is the best predictor of public annoyance and concern from exposure to elevated noise. Therefore, the single event noise contours will not be provided in the EIS. Refer to Section 3.1. |

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| | **024-06** Are there going to be public education seminars to explain dangerous noise?<br><br>**024-07** Have F15 noise abatement take off and landing procedures been tried and will the public be informed as to what they are?<br><br>**024-08** Who will be designated the single point of contact for registering noise complaints?<br><br>As an air force veteran and strong supporter of the 104th Fighter Wing soldiers and veterans I sincerely hope this conversion to F15's will work for us all. | **024-04** Noise mitigation techniques will be analyzed by the FAA, and implemented, as appropriate. Refer to Section 4.1.2.1.<br><br>**024-05** Jet engine testing is performed in a hush house, which acts to minimize the noise associated with this function.<br><br>**024-06** No public education seminars are currently planned.<br>**024-07** Yes, there are currently noise abatement procedures in place at Westfield-Barnes Airport that were identified during the 1990 Part 150 Study. These procedures can be found at www.barnesairport.com. Additionally, the FAA is preparing an updated Part 150 Study that will evaluate the potential increase in noise and potential mitigation efforts that may be accomplished to mitigate the effects of the increased noise in the vicinity of the airport. Refer to Section 4.1.2.1.<br><br>**024-08** As always, the public is welcome to call the 104 FW Public Affairs Office regarding noise or other complaints. |
| 025<br>Emailed comment from Emma Hayward | **025-01** My husband and I, and indeed all of our neighbors on Springdale Road, are very concerned about the noise level of the new F-15 jets. The A-10s already are quite disruptive and from your television interview, it sounded as though the F15s will be even louder. An audiologist that lived here moved because she knew that the A-10s were detrimental to her new baby's hearing and I was wondering if we could bill the military for our hearing aides we will definitely need in just a few short years. After having attended the meeting at North Middle School, we learned that although they are indeed noisier, these jets will be taking off at the other end of the runway thus sparing us on Springdale Road. We shouldn't be driven from our yards and our homes by Air Force maneuvers. I hope that this is needless worry and that we can live with the F-15s easier than the A-10s. ! ; It sounds as though this is possible if these new jets do stick to the plan of using the other end of the runway.<br>Thank you for taking our comments and for the informational meeting, | **025-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. Refer to Section 4.1.2.1. |
| 026<br>Emailed comment from Michael Bolton, Westover Metropolitan Airport | Thank you for holding the Public Scoping Meeting, it was interesting and informative. I am submitting a couple questions for your review and comment.<br><br>**026-01** First, I would like to offer my welcome to the "F-15 Mission Conversion" at the 104th Massachusetts Air National Guard located at Westfield-Barnes Airport. The 104th is a great asset to our region and their employees are valuable members of our community in the Pioneer Valley.<br><br>**025-02** I have an interest in the departure and arrival routes in and out of Westfield-Barnes Airport. Will your study address this question and show these routes on a map?<br><br>**025-03** I would also like to understand how and where the local training and pilot proficiency flying will be done?<br><br>**025-04** Will your study consider Air Installation Compatibility Use Zones (AICUZ) and an FAA Part 150 Noise Study? | **026-01** Comment noted.<br><br>**025-02** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. The maps will be in the EIS. Refer to Section 4.1.2.1.<br><br>**025-03** Once the F-15s are relocated to Westfield-Barnes Airport, the pilots will conduct training out of Westfield-Barnes and into the airspace that is currently used by the F-15s (New York, New Jersey, New Hampshire, Vermont, and over the Atlantic Ocean); there will be no change in use of the airspace. Refer to Section 4.5.2.1.<br><br>**025-04** An AICUZ study is not prepared at civil airports; however, an FAA Part 150 Study is being prepared concurrently with the EIS. |

# APPENDIX B
# SUMMARY OF SCOPING COMMENTS

# Summary of Massachusetts National Guard Proposed Implementation of BRAC and other Associated Activities at Westfield-Barnes Airport Environmental Impact Statement Scoping Comments

| Comment Number, Type, and Commenter Name | Comment | Response |
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| 001 Comment letter from Donna Vella | I have been approached and called by 18-20 people regarding the moving of the F15's from Otis to Barnes. The recent newspaper coverage prompted several of these calls. They have asked that I email you the following questions to which they hope to hear a response to at the 8/15 meeting:<br><br>**001-01** WHY is the change necessary?<br><br>**001-02** The $50,000 cost to the taxpayers does not make sense because the F15's have been "happily" located at Otis for a long time. Keeping them there makes more sense. The "new" environment will not be impacted and the taxpayers will not be charged with the $50 million expense.<br><br>**001-03** The feeling is that Barnes has a significant amount of residential housing located in the general area<br><br>**001-04** that Barnes will increase its' risk of being a military target. They are already somewhat of a target with the A10's and the munitions storage.<br><br>**001-05** It was also stated that there are 3 schools located in the area as well, namely; North Middle, Southampton Road and Papermill [*sic*] elementary schools.<br><br>**001-06** Their is also serious concern because Barnes is located on the aquifer.<br><br>**001-07** There were additional comments made regarding the moving of the Army National Guard from Westover to Barnes. The concerns were presented as follows:<br><br>The Unit already existed at Westover and was well accepted and situated. It was stated that the move was necessary because they could not get funding to upgrade their facility and needed to move or be moved out of the Western Ma area. This was at a cost of $13 million to the taxpayers. It should be noted that other business (private or military) took the space of the Army National Guard. It was also brought up that Westover is owned by the Federal Government and that Barnes is a municipally owned airport that is being taken over by the military without a fair representation of the community at large being involved. | **001-01** The aircraft conversion is necessary because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Refer to Section 1.1 (inset)<br><br>**001-02** The overall cost for the projects described in the EIS is actually approximately $77 million . Some of which is directly related to the aircraft conversion and some of which is related to other construction for the 104 FW. Refer to Sections 4.3.2.1, and 1.1 (inset).<br><br>**001-03** It is anticipated that more residences will be located within the 65 dB noise contour in association with the F-15 as compared to the A-10. This will be analyzed in detail in the EIS. Refer to Sections 4.1.2.1 and 4.2.2.1.<br><br>**001-04** It is not expected that the conversion from the A-10 to the F-15 will increase the risk of Westfield-Barnes being a military target.<br><br>**001-05** It is not anticipated that these schools will be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. Refer to Section 4.1.2.1.<br><br>**001-06** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 3.10.2.1 and 4.10.2.1.<br><br>**001-07** The Army National Guard project is no longer a part of this Proposed Action, and will be subject to separate environmental review. |
| 002 Comment form from Albert Masciadrelli | **002-01** This facility is a homerun for the nation-city & Northeast. The spin off is unmeasureable [*sic*]. The personnel of the best are the communication mind people to keep the community informed. Leaving nothing to chance.<br><br>With their attributes the city and base will work together as a team to benefit all.<br><br>We are very fortunate to have an organization like this as partner in the best interest of National Security.<br><br>The technology will with-out doubt spin off as an education tool to the infrastructure throughout the community as mutual aid not only as a service but training together in the best interest of the city. | **002-01** The National Guard Bureau looks forward to continuing its positive relationship with the local community, the City of Westfield, and the surrounding region. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| 003 Comment form from Josh Galaska | **003-01** I would just like to say I look forward to getting the F-15s. While I will miss the A-10s, but I think the excitement for the F-15s outweighs my sorrow for the A-10s. I look forward to the noise and vibrations from the engines. I hope they stay for a long time. | **003-01** Comment noted |
| 004 Comment form from Charlie Galaska | **004-01** It's going to [be] great to have the F-15 Eagles at Barnes Airport. It's too bad the A-10's are being replaced but these planes will be fun to watch and hear the roar of the F-15's. I thought that it would be better to get positive feedback than negative feedback that many in Westfield tend to support (no progress). This in fact will give Westfield good progress. | **004-01** Comment noted |
| 005 Comment form from Michael Salvini | **005-01** I do realize that this change of aircraft and mission of the unit will take some getting used to, I fully support this change and wish everyone the best of luck! | **005-01** Comment noted |
| 006 Comment form from William Mead | My concerns are:<br>**006-01** What hours of operation?<br>For train[ing] purposes?<br>**006-02** What will be the noise impact on take off?<br>Landing?<br>**006-03** Will they (F-15) overfly local residential areas<br>What will the minimum height be over residential areas<br>**006-04** Will afterburners or thrustes [*sic*] be used for take off and/or landing | **006-01** The 104 FW will continue to perform flying during the hours that the Westfield-Barnes Airport Air Traffic Control Tower is operational, which are 7 AM to 10 PM. Virtually all scheduled flights associated with the 104 FW are for training purposes. However, due to the proposed Alert mission, occasional takeoffs and landings may occur outside of the normal hours of operation during contingency or emergency operations. Refer to Table 2.3-1.<br><br>**006-02** Noise impacts from takeoffs and landings will be analyzed in the EIS. It is anticipated that noise levels will be higher with the F-15 than they are currently with the A-10. Refer to Section 4.1.2.1.<br><br>**006-03** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle, climb faster than the A-10s, and will take off in a different direction. This means that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. Refer to Section 4.1.2.1.<br><br>**006-04** Afterburners are only used for takeoffs. Noise is being modeled with 64% of the daily takeoffs using afterburner and 36% of the daily takeoffs using military power (a lower power setting than afterburners). Refer to Section 4.1.21. |
| 007 Comment form from Gary Hayward | **007-01** Currently, the A-10's fly over my house at tree-top level both landing & taking off 3 or 4 planes at a time and the noise is deafening.<br><br>I was told that the new F-15's are much louder.<br><br>I'm very concerned about the noise levels in my backyard & even in my living room when these planes fly over.<br><br>**007-02** We need to be concerned with the spike in noise levels 15 or 20 times a day rather than the average noise levels for a 24 hour period.<br><br>Thank you!<br><br>**007-03** Do military aircraft have to meet the same noise level standards as commercial aircraft? | **007-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle so that they can spend less time in the vicinity of the airport, and will take off in a different direction, and thereby minimize noise impacts. The F-15s will be louder than the A-10s, and noise impacts will be analyzed in the EIS. Refer to Section 4.1.2.1.<br><br>**007-02** The EIS will discuss various metrics, or measurements used in noise assessments. However, also discussed is the fact that over many years of scientific and sociological research by many federal agencies, there is general agreement among these agencies that the Day-Night Average Sound Level is the best predictor of public annoyance and concern from exposure to elevated noise. Refer to Section 3.1 and 4.1.<br><br>**007-03** The noise level standards referred to are those associated with the Stage 3-designated engines. These |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| | | standards are not applicable for engines powering military aircraft. |
| 008 Comment form from Emma Hayward | **008-01** The paper said the federal study will be on the environmental impact of this transition. Environmental issues are those that have a detrimental effect on the populace. The noise level of the A-10s is already at a decimbel [*sic*] level that is harmful to the ears. Will the F-15s be quieter?<br><br>**008-02** An audiologist in our neighborhood has moved because she know this noise was effecting her daughter's hearing.<br><br>**008-03** Isn't there noise abatement procedures from the FAA that are in place?<br><br>**008-04** What about the schools that are located closer to the airport than we are? Do the children not get to play outside? Do the teachers need to suspend lessons when they are flying over? | **008-01** The F-15 is a louder aircraft than the A-10. The F-15s will take-off at a steeper angle than the A-10 though, which will minimize their time in the vicinity of the airport. Refer to Section 4.1.2.1.<br><br>**008-02** The NGB and FAA are committed to minimizing noise impacts on the community to the extent practicable, which is why various takeoff patterns that would minimize impacts to the community are being reviewed. Refer to Sections 4.1.2.1; 4.2.2.1; 4.3.2.1.<br><br>**008-03** Yes, there are currently noise abatement procedures in place at Westfield-Barnes Airport that were identified during the 1990 Part 150 Study. These procedures can be found at www.barnesairport.com. Additionally, the FAA is preparing an updated Part 150 Study that will evaluate the potential increase in noise and potential mitigation efforts that may be accomplished to mitigate the effects of the increased noise in the vicinity of the airport.<br><br>**008-04** It is not anticipated that schools will be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. There would be no restrictions associated with outdoor play. Refer to Section 4.1.2.1. |
| 009 Comment form from Gail Hohenberger | **009-01** I live in walking distance to Barnes. Like everyone, I have questions regarding the noise levels. I understand & can accept there will be elevated noise. If this is brief and occasional, I can live with it. I'm wondering how often the planes will fly over the surrounding neighborhoods.<br><br>**009-02** My major questions and/or concerns revolve around the acquifer [*sic*]. I'm wondering if over 90% of this project will be directly over the acquifer [*sic*], how can the acquifer [*sic*] be adequately protected. I like many others in Westfield & surrounding communities, have well water & depend on this water resource to be protected, no just now, but for our children and grandchildren.<br><br>**009-03** I have a question regarding security. Will the addition of these planes possibly make this base more of a terrorist target.<br><br>**009-04** I just want to say I am very pro-military. I am not necessarily opposed to this project. My son is in the Air Force in So. Korea and contemplating coming back to Westfield when he is out in a few months. He works on the F-15's and F-16's and will want to do the same if he comes home and joins the Nat'l Guard or Reserves and probably work as a civilian on the base. I am absolutely pro-military. But the issues are real, people have a right to know the truth so they can decide to stay or move, or whatever decisions they want to make and should have the truth to make those decisions in an informed manner. I look forward to learning more and to the public hearings coming up when questions will be posed and answered in a public forum. | **009-01** There will be an average of 7.3 arrivals/departures and 2.6 closed patterns flown by the F-15s at the airport daily. Refer to Table 2.3-1.<br><br>**009-02** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 4.10.2.1.<br><br>**009-03** It is not expected that the conversion from the A-10 to the F-15 will increase the risk of Westfield-Barnes being a military target.<br><br>**009-04** Comment noted. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| 010 Comment form from John H. Gamache | **010-01** I & my wife are pleased that the F-15s are coming to Barnes. It will be good for the city and for the economy. I hope the people of Westfield will come to realize we need the Air Guard. | **010-01** Comment noted. |
| 011 Comment form from Chris Taylor | **011-01** Anticipated noise levels do not go out far enough for the residents in local area to get a better idea of how the F-15 will affect them. Most people know there will be an increase at the airport it shelf. It should go ½, 1 mile 2 mile radius from the airport.<br><br>**011-02** I know noise levels that the F-15 going over my house ¾ from Rwy would be above OSHA level of allowable noise (max power take offs and other high power maneuvers [*sic*]).<br><br>**011-03** The residence already have an idea of the average noise level that the legend depicts of all aircraft. We need to know what an F-15 alone will impact us. | **011-01** The Federal Interagency Committee on Urban Noise developed guidelines on land use compatibility with respect to noise. Based on these guidelines, virtually all land uses are compatible with yearly day-night average sound levels under 65 dB. Therefore, it is standard practice to show noise contours out to only the 65 dB contour. Refer to Section 3.1.<br><br>**011-02** Federal workplace standards for protection from hearing loss allow a time-averaged level of 90 dB over an 8-hour period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency) suggests a time-averaged sound level of 70 dB over a 24-hour period. Refer to Section 3.1.<br><br>**011-03** There are many ways to measure noise: maximum sound level, peak sound pressure level, sound exposure level, equivalent sound level, day-night average sound level, onset rate-adjusted monthly day-night average sound level, etc. The day-night average sound level is the preferred noise metric used by numerous federal agencies, including the Department of Housing and Urban Development, the Department of Transportation, the FAA, USEPA, and the Veteran's Administration and therefore it is used for the noise measurements in this EIS. Refer to Section 3.1. |
| 012 Comment form from Dan Williams | **012-01** As a citizen of Westfield I feel that it would be to the benefit of the city and all of its citizens to implement the program of BRAC. Not only the jobs that this program will create, but it will show the government and other people that this is a growing community with a vital role in today's society. | **012-01** Comment noted |
| 013 Comment form from Greg & Lisa Masciadrelli | **013-01** We are pleased with how well the proposed changes are being presented to our community.<br><br>The 104th is a proud member of Westfield and we expect to see great things in our futures.<br><br>Thank you for your continued support. We will be behind you 100% of the way. | **013-01** Comment noted |
| 014 Typed-in Comment from Dave Wardner | **014-01** The primary concern is that due to the Massachusetts Air Guard's mission change to an alert mission, how often are alert training sorties going to be done? Currently the A-10s don't conduct alert missions or alert training sorties. With the new F-15s, alert training and alert missions can be done at any time during the day. Is there a number for how many per day or monthly and or when they will occur?<br><br>**014-02** The second concern is that when the F-15s take off in close vicinity to North Middle School, Southampton Road School, and Papermill [sic] School, they have potential to interrupt studies and/or student attention due to the noise and potential shaking of buildings and furniture. Additionally, there is a safety issue in that children out on the play ground during recess and walking to and from school will not have hearing protection when the F-15s take off. | **014-01** Alert aircraft do not fly training missions. If launched, these alert aircraft would be responding to an actual emergency situation. It is impossible to predict how often, or during what time of the day such an emergency may occur. However, it should be noted that there is no difference in taking off for a training mission or in responding to an alert; although the alert aircraft will generally take off to the south given that the alert shelters are at the north end of the runway. The A-10s do not perform an alert mission. The 102 FW performed alert missions 32 times last year. Refer to Section 2.3.1.<br><br>**014-02** It is not anticipated that these schools would be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. Refer to Section 4.1.2.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| | **014-03** The F-15s carry live dangerous munitions, likely to be stored on base, including missiles. The storage of these munitions could potentially be harmful to personnel and the environment, as well as threaten the safety of the local community.<br><br>**014-04** With respect to biological resources, will there be a study regarding impacts to wildlife and domestic animals? | **014-03** Although the specific type of ordnance is different, A-10 aircraft currently carry training ordnance on their training missions, as will the F-15s. As a general rule, only alert aircraft would launch with operational weapons. The same safety processes and procedures currently used in the handling, processing, storage, and maintenance of ordnance will continue. Also, just as with the A-10, F-15 aircraft have electro-mechanical safeguards to prevent the accidental or inadvertent release of ordnance. Additionally, there are safety easements established around all facilities that contain ordnance. Refer to Section 4.6.2.1.<br><br>**014-04** There have been numerous studies related to the effects of aircraft noise on domestic animals and wildlife and the results of these have indicated that impacts are generally negligible. No further studies related to this are anticipated under this action. This subject will be further analyzed in the EIS. Refer to Section 4.11.2.1. |
| 015 Comment letter from Joan H. Corell | I am writing to emphasize the importance of dealing appropriately with three environmental concerns as you change aircraft and build at the base.<br><br>**015-01** Air pollution. The National Lung Association already rates Westfield with an "F" in air quality. Will there be a change for better or worse from the F-15s in the pollutants they emit or chemicals that will be required to service them at the base? If worse, what can be done to reduce the impact?<br><br>**015-02** Noise pollution. The A-10s are tolerable, but will the F-15s be? There are a number of well-documented psychological studies that indicate noise levels (out of the control of the people who are subjected to them) cause problems in learning, sleep and sense of well being. Will there be a way to hush the work on these engines at the base? Will there be a way to design flight patterns to minimize noise for the residence especially on the north end of the city?<br><br>**015-03** Water pollution. It is unfortunate that the base sits on the very large and important Barnes Aquifer that serves not only Westfield, but other communities. But seeing that it does, what plans are in place for protecting that body of water given the new construction and the new chemicals required for these planes?<br><br>**015-04** Although it isn't the base responsibility, a very serious problem in Westfield is that we have air, noise, and water pollution from many sources – the vast number of growing trucking and warehouse businesses, the race track, the municipal airport and military ports. Very nearby these businesses we have three schools and one or two pre-schools. Many children have asthma and more and more the medical profession is linking this serious ailment to air pollution. We are in a valley that traps the fumes. Noise studies show that children in schools near airports have trouble concentrating. As to water pollution, if Target Warehouse comes in and proposed shopping center, just about all of Barnes Aquifer will be paved over. Engineers involved say that this is o.k. because there are ways to clean dirty water and get it back into the ground under the pavement. But is there anywhere in the country that serves as a model to show this is actually what will happen? And if the biomass plant goes in up river, there is another source of pollution. | **015-01** Air emissions from the F-15 are expected to be higher due to slightly more sorties per year and higher emission factors (pounds of pollutants per time flown) for the F-15 as compared to the A-10. The effects of this will be somewhat offset by the fact that the F-15 take-offs will be steeper, enabling to aircraft to reach higher altitudes (above the mixing levels) faster. Any increases are expected to be well below the *de minimis* levels identified by the USEPA. In terms of stationary sources, little increase is expected as older outdated equipment is replaced with newer, more efficient equipment. Refer to Section 4.4.2.1.<br><br>**015-02** Noise affects different people in different ways. The Federal Interagency Committee on Urban Noise developed guidelines on land use compatibility with respect to noise. Based on these guidelines, virtually all land uses are compatible with yearly day-night average sound levels under 65 dB. The 104 FW has proposed to concentrate take-offs to the north, which will minimize noise impacts to the majority of the community. Additionally, the F-15 will fly a steeper take-off pattern to achieve higher elevation faster, thereby minimizing their time in the environment around the airport. Additionally, a hush house, which functions as a muffler, would be used to reduce noise during maintenance of aircraft engines. Refer to Section 4.1.2.1.<br><br>**015-03** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. The F-15 uses the same fuels and lubricants that are currently being utilized safely on the A-10 aircraft. Refer to Section 4.10.2.1.<br><br>**015-04** The NGB is coordinating with the City of Westfield and Westfield-Barnes Airport to develop a concise list of reasonably foreseeable projects for the cumulative impacts analysis in the EIS. Refer to Sections 4.4.2.1; 4.1.2.1; 5.1.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
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| | I serve on the Community Advisory Board (CAB) of the 104th. I have great respect for the care that the Guard is taking to make sure the environment is the best that it can be. I have respect for the administrator, Chris Willenborg, at Barnes Airport for his care in making sure the flight patterns are as quiet as possible for the residents, especially those near the airport. I trust, therefore, that you will do the very best you can to mitigate pollution problems and, as the good citizen the 104th has been, perhaps to look for ways to form a coalition in Westfield and surrounding communities of organizations interested in curbing pollution. | |
| 016 Comment letter from Jean Carpenter | **016-01** How many F15 and F16 planes will be at Barnes?<br><br>**016-02** How many trips will these planes make on a monthly basis?<br><br>**016-03** What is the decibel reading of an F-15 taking off at 150 feet from the plane on takeoff?<br><br>**016-04** On a yearly basis, how many tons of emissions and pollutants will the F15s and F16s produce when they fly in and out of Barnes Airport? What chemicals and how much of each will be emitted? We are located in a valley which holds all these emissions and pollutants. What health effects will this have on the children and elderly who live within 1-3 miles of the airport?<br><br>**016-05** There are many schools located here. Southampton Road School, North Middle School, Head Start, a day care center on Route 202, White Oak School on North Road, Westfield High on Montgomery Road and Paper Mill School on Paper Mill Road. How will these children be protected from the noise and pollutants from the F15s and F16s?<br><br>**016-06** What health effects will the pollutants and emissions from the F15s and F16s, when combined with the emissions from all the diesel trucks traveling on Route 202 and the turnpike, have on the people living, working or going to school in a 1 to 3 mile radius from the airport? Hampden County is already one of the dirtiest counties in the country. How much worse will it be when the emissions from the F15s and F16 are added to what is already here? What will be the total estimated tonnage of pollutants and emissions in this immediate area for the years 2006, 2007 and 2008?<br><br>**016-07** Why are the F15s and F16s coming to Barnes when Otis Airbase where I believe they are now, is going to remain open? Are there increase health problems in the residents who live near Otis air base where the F16s and F15s are located presently? If so, what health problems? | **016-01** There will be 18 primary assigned F-15 aircraft at Westfield-Barnes Airport under the proposed action. There will be no assigned F-16s. Refer to Section 2.1.<br><br>**016-02** It is projected that there will be an average of 7.3 arrivals/departures and 2.6 closed patterns flown by the F-15s at the airport daily (223 arrivals/departures and 78 closed patterns monthly). Refer to Table 2.3-1.<br><br>**016-03** Sound Exposure Levels at 150 feet:<br>Afterburner Power: 134.3 dB<br>Military Power: 125.7 dB<br>It is important to note however, that no people would be within 150 feet of the aircraft upon take-off. Refer to Table 3.1-1.<br><br>**016-04** It is anticipated that emissions will be well below *de minimis* levels. Air emissions will be analyzed in detail in the EIS. Refer to Section 4.4.2.1.<br><br>**016-05** It is not anticipated that these schools would be within the 65 dB noise contour under the Proposed Action; however, this will be analyzed in detail in the EIS. While the aircraft may be heard within the classrooms at times, it should not disrupt the classroom environment. Refer to Section 4.1.2.1.<br><br>**016-06** The NGB is coordinating with the City of Westfield and Westfield-Barnes Airport to develop a concise list of reasonably foreseeable projects for the cumulative impacts analysis in the EIS and their potential to impact the air quality of the region. Refer to Section 4.4.2.1.<br><br>**016-07** The aircraft conversion is occurring because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Based on current information, there are no known health problems associated with residents living near Otis ANGB due to F-15 aircraft. Refer to Section 1.1 (inset). |
| 017 Comment form from I.A. Bezo-Besaw | Having lived in Westfield 60+ years and on Holyoke Rd 30+ yrs I consider the ANG at Barnes the City's most valuable asset. Whenever the A-10s fly (and those before) I love going out in the backyard to get a glimpse of them and there maneuverability. Many who live in town do not know their "best in the nation" status. I do appreciate that status and feel that those teams that retrain on the F-15's will carry out that same combat ready status.<br><br>**017-01** However I do not understand why if one of their missions is interception over the Atlantic of unwanted hostile | **017-01** The aircraft conversion is occurring because the President of the United States approved and signed into law the recommendations of the 2005 BRAC commission. Refer to Section 1.1 (inset).<br><br>**017-02** The overall cost for the projects described in the EIS is actually approximately $77 million . Some of which is directly related to the aircraft conversion and some of which is related to other construction for the 104 FW. Refer to Section 4.3.2.1. |

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| | aircraft would the F-15s move inland where they are right there at the ocean now?<br><br>**017-02** And bring with it $21+M in renovations to Barnes? Seemingly these $$'s could be used (in wartime) for our nation's service people that are in warzones or to aide in suppression of those battlefields.<br><br>**017-03** I have a concern that between the ANG and the Army Guard the city will see 200+ added residents which will result in added buildings – homes, schools, services expanded (fire water gas electric) (landfill use – sewer). All this means to me (and many others that are homeowners on a "fixed income" is a raise in our R.E. Tax Rate. Many of us now are on the brink of losing our properties let alone having added increases.<br><br>**017-04** I asked at the 8/15 meeting if any real estate abatements may come forth as a result of the added noise and also traffic. This could not be answered and I hope it could be assessed and addressed w/ conclusions made public to those areas affected as soon as possible. Also, I questioned (as was done at Westover) would the BRAC or FAA or State MANG have perhaps $$'s available for noise-insulation, windows, etc. if the level exceeds certain levels – would also like to see this addressed and favorably recommended for those in the affected areas.<br><br>Happy to hear anyone presently at the 104th will be staying here (unless they ant transfers). That was a bright note at the meeting.<br><br>Also that the F-15's would generally be taking off to the north for practice time etc. and landing from that end too. So I guess we will not be seeing that much flying south of the runway –<br><br>In conclusion when this repositioning of aircraft occurs, I am still glad we will have an operation here in Westfield – live and vibrant and in support of freedom. I certainly will be sad to see our A-10s go – they were like my personal air show for many years each time they took the sky for training, flite [*sic*] time, etc., I will miss them!!!! Thank you A-10 pilots & support personnel<br><br>**017-05** (Also what effect will F-15 fuel have on pollution as it seems to be a more prevalent odor than with the A-10s????) Hope to be informed of next info meeting. | **017-03** There will be no expected increase in community infrastructure required as a result of the proposed action. It is anticipated that the full-time authorized personnel for the 104 FW will be increased by only 139 persons. It is likely that a substantial portion of this increase will be individuals already living in the Westfield area. Refer to Section 4.8.2.1.<br><br>**017-04** Real estate tax abatements are the responsibility of the local tax assessor, and are outside the scope of this study. There is an FAA-funded sound insulation program at Westover Air Reserve Base, as numerous homes fall within the specified noise threshold that allows for FAA-funded sound insulation. A similar program currently exists at Westfield-Barnes Airport. If the noise levels under the Proposed Action reach that same threshold, then homes in those areas will be eligible for sound insulation. FAA is preparing a Part 150 study concurrently with the EIS. Any potential noise mitigation procedures will be explored in that study. Refer to Section 4.1.2.1.<br><br>**017-05** It is anticipated that emissions will be well below *de minimis* levels. Air emissions will be analyzed in detail in the EIS. The fuels and lubricants that will be used for the F-15 aircraft are the same ones that have been in use for the A-10. Refer to Section 4.4.2.1. |
| 018 Comment letter from Eleanor D. Martin | **018-01** First of all – thank you all for being here in Westfield. For the new planes – bring'em on – they are keeping us safe<br><br>My husband used to belong to the 104!<br><br>The noise lets me know I'm safe! | **018-01** Comment noted. |
| 019 Comment letter from Joan & George Bausch | **019-01** Regarding the Barnes Air National Guard conversion to the F15 fighter jets – our concern is that the loud noise overhead from these jets will frighten our draft horses while we are feeding or grooming them or in an even more dangerous situation while we are logging with them n the woods. We also have a farrier with his assistant and a veterinarian that come on a regular basis to work on these animals; along with family and friends (many of whom have young children) all want to go and see the horses everytime [*sic*] they visit. We feel obligated to provide everyone with a safe and secure environment. | **019-01** There have been numerous studies related to the affect of aircraft noise on domestic animals and wildlife and the results of these have indicated that impacts are generally negligible. No further studies related to this are anticipated under this action. This subject will be further elaborated upon in the EIS. Refer to Section 4.11.2.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | You are welcome to stop by and we can demonstrate the potential hazards involved as it is difficult for many people to realize the size and strength of a 2000 lb. horse.<br><br>We would greatly appreciate your consideration in this matter when completing the environmental impact study for our area. Thank you. | |
| 020 Comment form from Alice Wielgus | **020-01** I am in the path of the F15 aircraft flying out of MA Air National Guard at Barnes Airport. The noise from the present planes are awful loud. I can not keep my windows open in the summer. When I work in my garden, the noise from the A-10's flying out is irritatingly piercing. The F15's are supposedly louder? The residents are expected to put up with this additional noise? I hate this noise over my home. I moved into my home in 1953 when the airport was only a small city airport. My quality of life has suffered because of the noise and your printed statement "anticipates nearby residences will experience an increase in noise levels from aircraft accessing the Westfield-Barnes Airport."<br><br>**020-02** How will these planes emissions and pollutants and other chemicals used for maintenance have on the Barnes Aquifer? Many people rely on the Aquifer for their water supply not only in Westfield, but other nearby towns. | **020-01** It is anticipated that the F-15 will be louder than the A-10. Refer to Section 4.1.2.1.<br><br>**020-02** There is no aspect of the aircraft conversion that has the capacity to directly impact the aquifer. It is anticipated that impacts to ground water will be limited to a minor reduction in ground water recharge due to an increase in impervious surface from construction. This will be analyzed in detail in the EIS. Refer to Section 4.10.2.1. |
| 021 Comment form from Leo J. Blake, Jr. | **021-01** I think it's a good idea to have the F-15's based at Barne's Municipal Airport. The dedication and professionalism shown by the Air Guard by their awards and recognition demonstrates their valuable contribution to the City of Westfield. The F-15's are the next level of improvement to the Air Guard in Westfield and it's role in protecting our country. People knew they were buying property near an airport. Don't complain about noise. For someone who watched F-86's F-100's A-10s it's nice to see and hear the newest addition arrive in the future.<br><br>I wish to say congratulations and good luck to all that have served and to those who will serve in the future. The best to all who help to protect our country at the Air Guard in every department. | **021-01** Comment noted. |
| 022 Emailed comment from Timothy Forde | **022-01** In one sense, it is flattering that the BRAC values Barnes so much to switch the F-15 mission to Barnes. However, undoubtebtly [*sic*], this is also a reaction to the poor reaction times of the Otis F-15's to the attacks on 9-11. By moving the F-15's closer to NYC, that has to increase reaction time to any possible air-threat. I understand their need to address that concern.<br><br>To my mind, I only have two possible areas of concern. The first is the *increased noise* that the F-15's will make, vis avis the A-10. When the first F-15's arrive and for the first year or two, I expect that Barnes will take lots of complaints regarding the increased noise level. I don't expect that there will be much that you can do about it.<br><br>**022-02** Secondly and more importantly, in terms of the *Barnes aquifier* [*sic*]that is located under the runway and along the base property and in regards to the maintenance needs of the F-15 and the F-100 engine that powers it. Will there be an increased likelihood of a spill of harmful chemicals like benzene and other chemicals? Because of the difference in engines that power the A-10 (TF-34) versus the F-100 engine, will that mean a difference in the chemicals used to maintain and to clean the metal parts? | **022-01** It is anticipated that noise levels will be higher with the F-15 than they are currently with the A-10. Refer to Section 4.1.2.1.<br><br>**022-02** Hazardous materials and wastes will continue to be handled and managed according to local, state, federal, and USAF regulations. There are no changes in the management of hazardous materials and wastes that have an inherent capacity to impact the Barnes Aquifer. All spills are reported to the Base Fire Department for initial response. The facility maintains a separate Hazardous Material Emergency Planning and Response (HAZMAT) Plan that discusses specific spill prevention activities. The facility also maintains the Spill Prevention and Countermeasure Plan, which is a comprehensive spill response procedure intended to increase the awareness of various spill plans and to provide guidance on the appropriate plan(s) for a particular situation. If a spill should occur, these documents will be implemented. The facility stocks spill response materials in areas where spills could occur. Spill kits are readily available at liquid and hazardous waste storage areas. Refer to Section 4.7.2.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | The concern is that there is always a potential for a chemical spill and some of these chemicals are more harmful than others, especially to an underground water aquifer, like the one under the runway.<br>Would there be any storage tanks at Barnes for these harmful chemicals? Would there be trucks to transport the harmful chemicals between the storage tanks and the airplanes at Barnes? Do you see the *potential* for harm to the aquifer from something like benzene? Are there any plans to notify the city of Westfield and its residents of any such leaks and possible contamination of the Barnes aquifier[*sic*]?<br>**022-03** Also, if there are some of these harmful chemicals onboard the airplane, what would be the effects of two F-15's colliding on the runway and spilling these harmful chemicals onto the ground? What would be the effect of one F-15 colliding with the ground (runway)? What would be the effect of two F-15's colliding above the runway, as in one taking off and one trying to land, but colliding with each other over the runway?<br><br>Those are my two chief areas of concern regarding the conversion from the A-10 to the F-15 mission at Barnes. Other than that, I have no complaints. I doubt that the BRAC commission or the Pentagon were aware of the Barnes aquifier [*sic*] and the potential harm that can be brought about by leaking or spilling harmful chemicals like benzene into that drinking water. Perhaps, that ought to be one concern addressed by the environmental impact statement? Is that being accomplished by Scientific Applications International Corp? I will attempt to copy this email and send it to them. | **022-03** In the unlikely event of a plane crash, the most likely scenario is that any product would be consumed during the ensuing fire. However, in the event that hazardous materials are spilled there are very specific spill response measures that are implemented in accordance with federal regulations to ensure that any risks associated with these materials are minimized; these measures are included in the various plans described in Response 022-02 above. Again, the F-15 will utilize the same fuels and lubricants that are already in use for the A-10. |
| 023<br>Emailed comment from Tom & Cindy Drewski | We are sorry that we could not attend last evening's event. But we did have one question for you.<br><br>**023-01** We are wondering in which direction the F15s will be landing and departing. (We attached a .jpg image of the airfield). We also would like to know if these planes will be passing directly overhead of Eastwood Acres development at any time.<br><br>Thanks for your attention in this matter | **023-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s, and will also take off from a different direction. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. Refer to Section 4.1.2.1. |
| 024<br>Emailed comment from Jim Haley | As an airport neighbor I have a few questions I am submitting to you for inclusion in the environmental impact statement for the A10 to F15 conversion at Barnes Airport Westfield, MA.<br><br>**024-01** Why hasn't there been any F15 flights as of this date that have taken off from a dead stop with full power (both afterburners) from Barnes between 22:00 hours and 07:00 hours ?<br><br>**024-02** Are the F15'S going to possibly fly 24 hours a day 7 days a week ?<br><br>**024-03** Will the single event noise level footprint of F15 full power takeoff be printed and super imposed over Barnes Airport for the public to see ?<br><br>**024-04** Are sound barrier/blast fences going to be implemented at the ends of the runways to deflect some of the takeoff noise?<br><br>**024-05** Are sound suppressors going to be installed for F15 jet engine testing? | **024-01** No F-15s are currently based at Westfield-Barnes Airport. Additionally, there will be no scheduled flights during the hours of 2200-0700. The only F-15 flights that would occur during these hours would be during an Alert launching.<br><br>**024-02** No, all scheduled flights will occur between the hours of 0700-2200. Alert takeoffs would occur only on an emergency basis, and there is no way to predict when these emergencies would occur. Refer to Table 2.3-1.<br><br>**024-03** The EIS will discuss various metrics, or measurements used in noise assessments. However, also discussed is the fact that over many years of scientific and sociological research by many federal agencies, there is general agreement among these agencies that the Day-Night Average Sound Level is the best predictor of public annoyance and concern from exposure to elevated noise. Therefore, the single event noise contours will not be provided in the EIS. Refer to Section 3.1. |

| Comment Number, Type, and Commenter Name | Comment | Response |
|---|---|---|
| | **024-06** Are there going to be public education seminars to explain dangerous noise?<br><br>**024-07** Have F15 noise abatement take off and landing procedures been tried and will the public be informed as to what they are?<br><br>**024-08** Who will be designated the single point of contact for registering noise complaints?<br><br>As an air force veteran and strong supporter of the 104th Fighter Wing soldiers and veterans I sincerely hope this conversion to F15's will work for us all. | **024-04** Noise mitigation techniques will be analyzed by the FAA, and implemented, as appropriate. Refer to Section 4.1.2.1.<br><br>**024-05** Jet engine testing is performed in a hush house, which acts to minimize the noise associated with this function.<br><br>**024-06** No public education seminars are currently planned.<br>**024-07** Yes, there are currently noise abatement procedures in place at Westfield-Barnes Airport that were identified during the 1990 Part 150 Study. These procedures can be found at www.barnesairport.com. Additionally, the FAA is preparing an updated Part 150 Study that will evaluate the potential increase in noise and potential mitigation efforts that may be accomplished to mitigate the effects of the increased noise in the vicinity of the airport. Refer to Section 4.1.2.1.<br><br>**024-08** As always, the public is welcome to call the 104 FW Public Affairs Office regarding noise or other complaints. |
| 025<br>Emailed comment from Emma Hayward | **025-01** My husband and I, and indeed all of our neighbors on Springdale Road, are very concerned about the noise level of the new F-15 jets. The A-10s already are quite disruptive and from your television interview, it sounded as though the F15s will be even louder. An audiologist that lived here moved because she knew that the A-10s were detrimental to her new baby's hearing and I was wondering if we could bill the military for our hearing aides we will definitely need in just a few short years. After having attended the meeting at North Middle School, we learned that although they are indeed noisier, these jets will be taking off at the other end of the runway thus sparing us on Springdale Road. We shouldn't be driven from our yards and our homes by Air Force maneuvers. I hope that this is needless worry and that we can live with the F-15s easier than the A-10s. ! ; It sounds as though this is possible if these new jets do stick to the plan of using the other end of the runway.<br>Thank you for taking our comments and for the informational meeting, | **025-01** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. Refer to Section 4.1.2.1. |
| 026<br>Emailed comment from Michael Bolton, Westover Metropolitan Airport | Thank you for holding the Public Scoping Meeting, it was interesting and informative. I am submitting a couple questions for your review and comment.<br><br>**026-01** First, I would like to offer my welcome to the "F-15 Mission Conversion" at the 104th Massachusetts Air National Guard located at Westfield-Barnes Airport. The 104th is a great asset to our region and their employees are valuable members of our community in the Pioneer Valley.<br><br>**025-02** I have an interest in the departure and arrival routes in and out of Westfield-Barnes Airport. Will your study address this question and show these routes on a map?<br><br>**025-03** I would also like to understand how and where the local training and pilot proficiency flying will be done?<br><br>**025-04** Will your study consider Air Installation Compatibility Use Zones (AICUZ) and an FAA Part 150 Noise Study? | **026-01** Comment noted.<br><br>**025-02** The F-15s will fly virtually the same patterns at the airport that the A-10s currently do; however, the F-15s will take off at a steeper angle and climb faster than the A-10s. This means so that they will spend less time at low altitudes in the vicinity of the airport and thereby minimize noise impacts. The proposed action is to have 90% of the take-offs to the north. The maps will be in the EIS. Refer to Section 4.1.2.1.<br><br>**025-03** Once the F-15s are relocated to Westfield-Barnes Airport, the pilots will conduct training out of Westfield-Barnes and into the airspace that is currently used by the F-15s (New York, New Jersey, New Hampshire, Vermont, and over the Atlantic Ocean); there will be no change in use of the airspace. Refer to Section 4.5.2.1.<br><br>**025-04** An AICUZ study is not prepared at civil airports; however, an FAA Part 150 Study is being prepared concurrently with the EIS. |

# APPENDIX C
# AIRCRAFT NOISE ANALYSIS AND AIRSPACE OPERATIONS

Final – October 2007

# APPENDIX C AIRCRAFT NOISE ANALYSIS AND AIRSPACE OPERATIONS

This appendix provides supplemental information regarding noise in order to support this EIS. A list of documents cited in preparation of this appendix may provide additional information (see section 4.0 of this appendix)

Noise is generally described as unwanted sound. Unwanted sound can be based on objective effects (such as hearing loss or damage to structures) or subjective judgments (community annoyance). Noise analysis thus requires a combination of physical measurement of sound, physical and physiological effects, plus psycho- and socio-acoustic effects.

Section 1.0 of this appendix describes how sound is measured and summarizes noise impact in terms of community acceptability and land use compatibility. Section 2.0 of this appendix gives detailed descriptions of the effects of noise that lead to the impact guidelines presented in section 1.0 of this appendix. Section 3.0 or this appendix provides a description of the specific methods used to predict aircraft noise, including a detailed description of sonic booms.

## 1.0 NOISE DESCRIPTORS AND IMPACT

Aircraft operating in the Military Operations Areas (MOAs) and Warning Areas generate two types of sound. One is "subsonic" noise, which is continuous sound generated by the aircraft's engines and also by air flowing over the aircraft itself. The other is sonic booms (only in MOAs and Warning Areas authorized for supersonic), which are transient impulsive sounds generated during supersonic flight. These are quantified in different ways.

Section 1.1 of this appendix describes the characteristics which are used to describe sound. Section 1.2 of this appendix describes the specific noise metrics used for noise impact analysis. Section 1.3 of this appendix describes how environmental impact and land use compatibility are judged in terms of these quantities.

### 1.1 QUANTIFYING SOUND

Measurement and perception of sound involve two basic physical characteristics: amplitude and frequency. Amplitude is a measure of the strength of the sound and is directly measured in terms of the pressure of a sound wave. Because sound pressure varies in time, various types of pressure averages are usually used. Frequency, commonly perceived as pitch, is the number of times per second the sound causes air molecules to oscillate. Frequency is measured in units of cycles per second, or hertz (Hz).

***Amplitude.*** The loudest sounds the human ear can comfortably hear have acoustic energy one trillion times the acoustic energy of sounds the ear can barely detect. Because of this vast range, attempts to represent sound amplitude by pressure are generally unwieldy. Sound is, therefore, usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the

decibel scale is referred to as a sound level. The threshold of human hearing is approximately 0 dB, and the threshold of discomfort or pain is around 120 dB.

Because of the logarithmic nature of the decibel scale, sounds levels do not add and subtract directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is doubled, the sound level increases by approximately 3 dB, regardless of the initial sound level. Thus, for example:

60 dB + 60 dB = 63 dB, and

80 dB + 80 dB = 83 dB.

The total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB.

Because the addition of sound levels behaves differently than that of ordinary numbers, such addition is often referred to as "decibel addition" or "energy addition." The latter term arises from the fact that combination of decibel values consists of first converting each decibel value to its corresponding acoustic energy, then adding the energies using the normal rules of addition, and finally converting the total energy back to its decibel equivalent.

The difference in dB between two sounds represents the ratio of the amplitudes of those two sounds. Because human senses tend to be proportional (i.e., detect whether one sound is twice as big as another) rather than absolute (i.e., detect whether one sound is a given number of pressure units bigger than another), the decibel scale correlates well with human response.

Under laboratory conditions, differences in sound level of 1 dB can be detected by the human ear. In the community, the smallest change in average noise level that can be detected is about 3 dB. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud sounds and for quieter sounds. A decrease in sound level of 10 dB actually represents a 90 percent decrease in sound intensity but only a 50 percent decrease in perceived loudness because of the nonlinear response of the human ear (similar to most human senses).

The one exception to the exclusive use of levels, rather than physical pressure units, to quantify sound is in the case of sonic booms. As described in Section 3.0 of this appendix, sonic booms are coherent waves with specific characteristics. There is a long-standing tradition of describing individual sonic booms by the amplitude of the shock waves, in pounds per square foot (psf). This is particularly relevant when assessing structural effects as opposed to loudness or

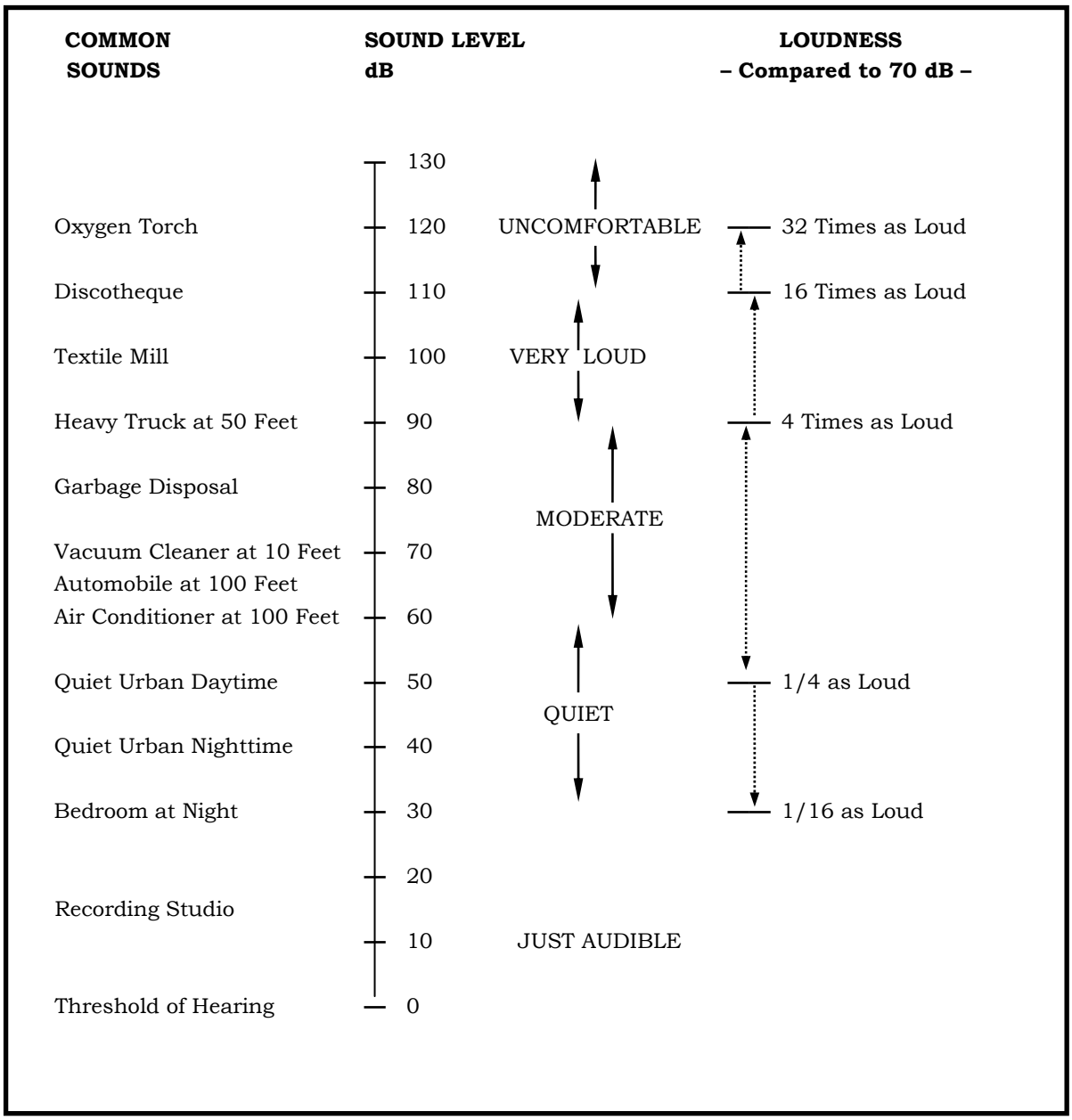
cumulative community response. In this study, sonic booms are quantified by either dB or psf, as appropriate for the particular impact being assessed.

***Frequency.*** The normal human ear can hear frequencies from about 20 Hz to about 20,000 Hz. It is most sensitive to sounds in the 1,000 to 4,000 Hz range. When measuring community response to noise, it is common to adjust the frequency content of the measured sound to correspond to the frequency sensitivity of the human ear. This adjustment is called A-weighting (ANSI 1988). Sound levels that have been so adjusted are referred to as A-weighted sound levels. The amplitude of A-weighted sound levels is measured in dB. It is common for some noise analysts to denote the unit of A-weighted sounds by dBA. As long as the use of A-weighting is understood, there is no difference between dB or dBA: it is only important that the use of A-weighting be made clear. In this study, sound levels are reported in dB and are A-weighted unless otherwise specified.

A-weighting is appropriate for continuous sounds, which are perceived by the ear. Impulsive sounds, such as thunder or sonic booms, are perceived by more than just the ear. When experienced indoors, there can be secondary noise from rattling of the building. Vibrations may also be felt. C-weighting (ANSI 1988) is applied to such sounds. This is a frequency weighting that is flat over the range of human hearing (about 20 Hz to 20,000 Hz) and rolls off above and below that range. In this study, C-weighted sound levels are used for the assessment of sonic booms and other impulsive sounds. As with A-weighting, the unit is dB, but dBC is sometimes used for clarity. In this study, sound levels are reported in dB.

***Time Averaging.*** Sound pressure of a continuous sound varies greatly with time, so it is customary to deal with sound levels that represent averages over time. Levels presented as instantaneous (i.e., as might be read from the dial of a sound level meter) are based on averages of sound energy over either 1/8 second (fast) or 1 second (slow). The formal definitions of fast and slow levels are somewhat complex, with details that are important to the makers and users of instrumentation. They may, however, be thought of as levels corresponding to the root-mean-square sound pressure measured over the 1/8-second or 1-second periods.

The most common uses of the fast or slow sound level in environmental analysis is in the discussion of the maximum sound level that occurs from the action, and in discussions of typical sound levels. Figure C-1 is a chart of A-weighted sound levels from typical sounds. Some (air conditioner, vacuum cleaner) are continuous sounds whose levels are constant for some time. Some (automobile, heavy truck) are the maximum sound during a vehicle passby. Some (urban daytime, urban nighttime) are averages over some extended period. A variety of noise metrics have been developed to describe noise over different time periods. These are described in section 1.2 of this appendix.




Source: Harris 1979 and FICON 1992.

**Figure C-1. Typical A-Weighted Sound Levels of Common Sounds**

## 1.2 NOISE METRICS

### MAXIMUM SOUND LEVEL

The highest A-weighted sound level measured during a single event in which the sound level changes value as time goes on (e.g., an aircraft overflight) is called the maximum A-weighted sound level or maximum sound level, for short. It is usually abbreviated by ALM, $L_{max}$, or $L_{Amax}$. The maximum sound level is important in judging the interference caused by a noise event with conversation, TV or radio listening, sleeping, or other common activities.

### PEAK SOUND LEVEL

For impulsive sounds, the true instantaneous sound pressure is of interest. For sonic booms, this is the peak pressure of the shock wave, as described in section 3.2 of this appendix. This pressure is usually presented in physical units of pounds per square foot. Sometimes it is represented on the decibel scale, with symbol $L_{pk}$. Peak sound levels do not use either A or C weighting.

### SOUND EXPOSURE LEVEL

Individual time-varying noise events have two main characteristics: a sound level that changes throughout the event and a period of time during which the event is heard. Although the maximum sound level, described above, provides some measure of the intrusiveness of the event, it alone does not completely describe the total event. The period of time during which the sound is heard is also significant. The Sound Exposure Level (abbreviated SEL or $L_{AE}$ for A-weighted sounds) combines both of these characteristics into a single metric.

SEL is a composite metric that represents both the intensity of a sound and its duration. Mathematically, the mean square sound pressure is computed over the duration of the event, then multiplied by the duration in seconds, and the resultant product is turned into a sound level. It does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event. It has been well established in the scientific community that SEL measures this impact much more reliably than just the maximum sound level.

Because the SEL and the maximum sound level are both used to describe single events, there is sometimes confusion between the two, so the specific metric used should be clearly stated.

SEL can be computed for C-weighted levels (appropriate for impulsive sounds), and the results denoted CSEL or $L_{CE}$. SEL for A-weighted sound is sometimes denoted ASEL. Within this study, SEL is used for A-weighted sounds and CSEL for C-weighted.

**EQUIVALENT SOUND LEVEL**

For longer periods of time, total sound is represented by the equivalent continuous sound pressure level ($L_{eq}$). $L_{eq}$ is the average sound level over some time period (often an hour or a day, but any explicit time span can be specified), with the averaging being done on the same energy basis as used for SEL. SEL and $L_{eq}$ are closely related, differing by (a) whether they are applied over a specific time period or over an event, and (b) whether the duration of the event is included or divided out.

Just as SEL has proven to be a good measure of the noise impact of a single event, $L_{eq}$ has been established to be a good measure of the impact of a series of events during a given time period. Also, while $L_{eq}$ is defined as an average, it is effectively a sum over that time period and is, thus, a measure of the cumulative impact of noise.

**DAY-NIGHT AVERAGE SOUND LEVEL**

Noise tends to be more intrusive at night than during the day. This effect is accounted for by applying a 10-dB penalty to events that occur after 10 pm and before 7 am. If $L_{eq}$ is computed over a 24-hour period with this nighttime penalty applied, the result is the day-night average sound level (DNL or $L_{dn}$). DNL is the community noise metric recommended by the USEPA (USEPA 1974) and has been adopted by most federal agencies (FICON 1992). It has been well established that DNL correlates well with community response to noise (Schultz 1978; Finegold *et al.* 1994). This correlation is presented in Section 1.3 of this appendix.

While DNL carries the nomenclature "average," it incorporates all of the noise at a given location. For this reason, DNL is often referred to as a "cumulative" metric. It accounts for the total, or cumulative, noise impact.

It was noted earlier that, for impulsive sounds, C-weighting is more appropriate than A-weighting. The day-night average sound level can be computed for C-weighted noise and is denoted CDNL or $L_{Cdn}$. This procedure has been standardized, and impact interpretive criteria similar to those for DNL have been developed (CHABA 1981).

**ONSET-ADJUSTED MONTHLY DAY-NIGHT AVERAGE SOUND LEVEL**

Aircraft operations in military airspace, such as MOAs and Warning Areas, generate a noise environment somewhat different from other community noise environments. Overflights are sporadic, occurring at random times and varying from day to day and week to week. This situation differs from most community noise environments, in which noise tends to be continuous or patterned. Individual military overflight events also differ from typical community noise events in that noise from a low-altitude, high-airspeed flyover can have a rather sudden onset.

To represent these differences, the conventional DNL metric is adjusted to account for the "surprise" effect of the sudden onset of aircraft noise events on humans (Plotkin *et al.* 1987; Stusnick *et al.* 1992; Stusnick *et al.* 1993). For aircraft exhibiting a rate of increase in sound level (called onset rate) of from 15 to 150 dB per second, an adjustment or penalty ranging from 0 to 11 dB is added to the normal SEL. Onset rates above 150 dB per second require an 11 dB penalty, while onset rates below 15 dB per second require no adjustment. The DNL is then determined in the same manner as for conventional aircraft noise events and is designated as Monthly Onset-Rate Adjusted Day-Night Average Sound Level ($L_{dnmr}$). Because of the irregular occurrences of aircraft operations, the number of average daily operations are determined by using the calendar month with the highest number of operations. Noise levels are calculated the same way for both DNL and $L_{dnmr}$. $L_{dnmr}$ is interpreted by the same criteria as used for DNL.

## 1.3 NOISE IMPACT

### COMMUNITY REACTION

Studies of community annoyance to numerous types of environmental noise show that DNL correlates well with impact. Schultz (1978) showed a consistent relationship between DNL and annoyance. Shultz's original curve fit (Figure C-2) shows that there is a remarkable consistency in results of attitudinal surveys which relate the percentages of groups of people who express various degrees of annoyance when exposed to different DNLs.

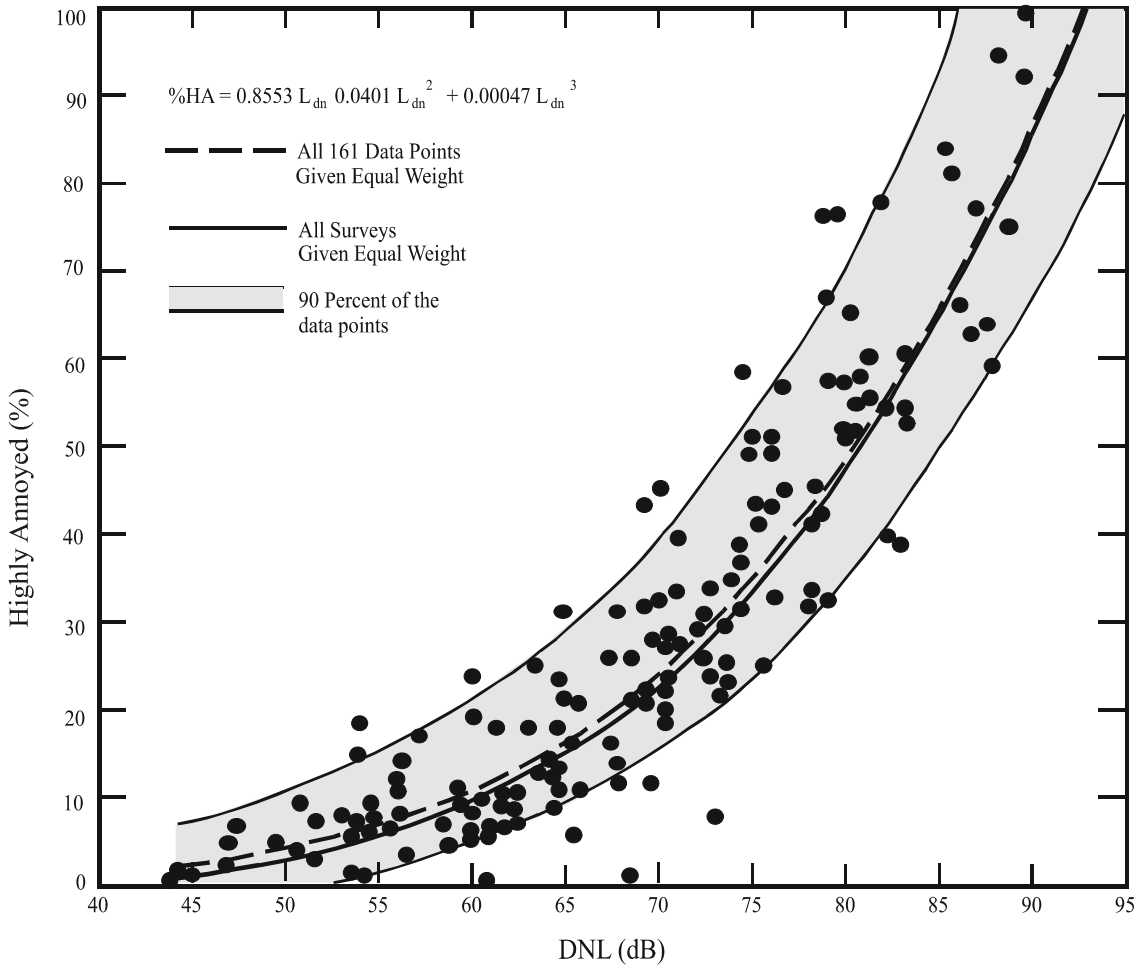
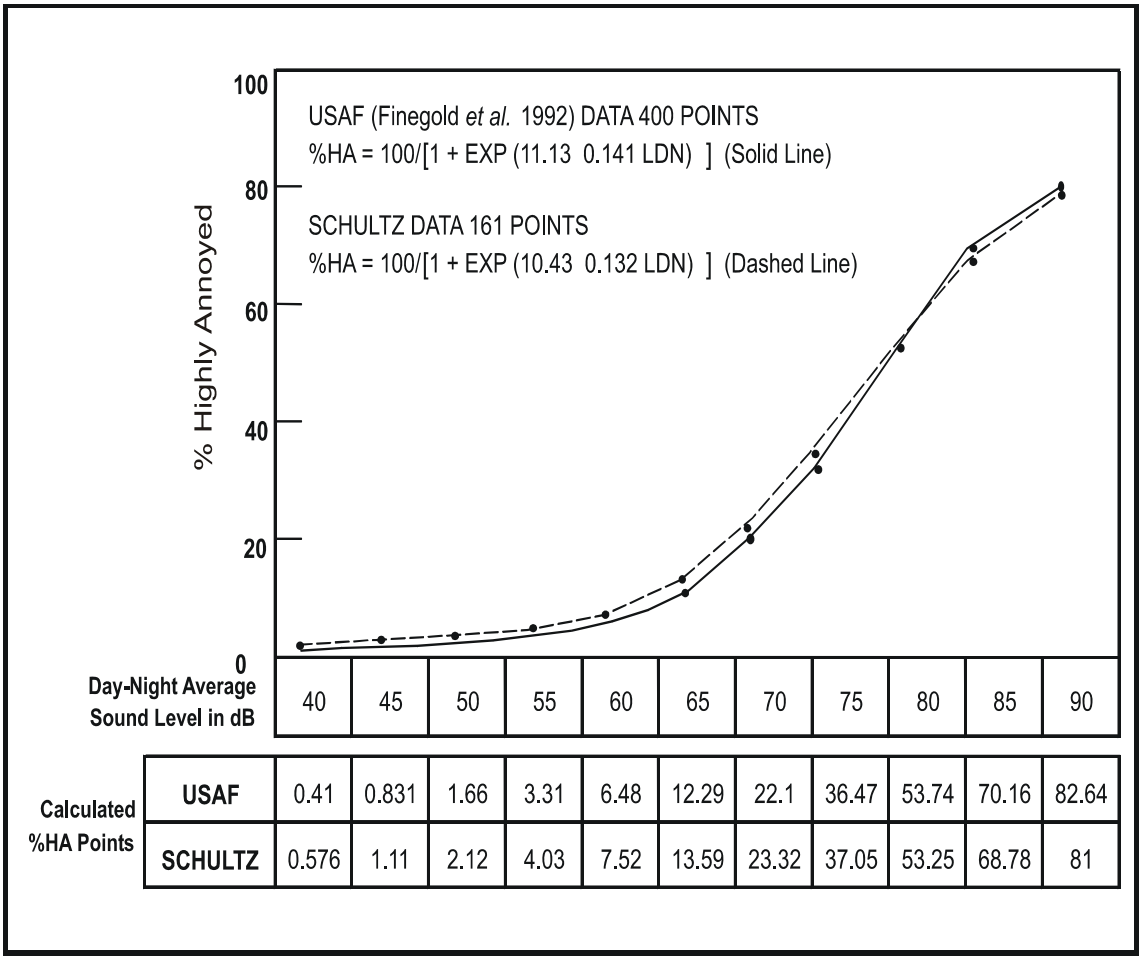



**Figure C-2. Community Surveys of Noise Annoyance**
**(Source: Schultz 1978)**

A more recent study has reaffirmed this relationship (Fidell *et al.* 1991). Figure C-3 (FICON 1992) shows an updated form of the curve fit (Finegold *et al.* 1994) in comparison with the original. The updated fit, which does not differ substantially from the original, is the current preferred form. In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors that influence the manner in which individuals react to noise. Nevertheless, findings substantiate that community annoyance to aircraft noise is represented quite reliably using DNL.




| Day-Night Average Sound Level in dB | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calculated %HA Points — USAF | 0.41 | 0.831 | 1.66 | 3.31 | 6.48 | 12.29 | 22.1 | 36.47 | 53.74 | 70.16 | 82.64 |
| Calculated %HA Points — SCHULTZ | 0.576 | 1.11 | 2.12 | 4.03 | 7.52 | 13.59 | 23.32 | 37.05 | 53.25 | 68.78 | 81 |

**Figure C-3. Response of Communities to Noise; Comparison of Original (Schultz 1978) and Current (Finegold et al. 1994) Curve Fits.**

As noted earlier for SEL, DNL does not represent the sound level heard at any particular time, but rather represents the total sound exposure. DNL accounts for the sound level of individual noise events, the duration of those events, and the number of events. Its use is endorsed by the scientific community (ANSI 1980; ANSI 1988; USEPA 1974; FICUN 1980; FICON 1992).

While DNL is the best metric for quantitatively assessing cumulative noise impact, it does not lend itself to intuitive interpretation by non-experts. Accordingly, it is common for environmental noise analyses to include other metrics for illustrative purposes. A general indication of the noise environment can be presented by noting the maximum sound levels which can occur and the number of times per day noise events will be loud enough to be heard. Use of other metrics as supplements to DNL has been endorsed by federal agencies (FICON 1992).

The Schultz curve is generally applied to annual average DNL. In Section 1.2 of this appendix, $L_{dnmr}$ was described and presented as being appropriate for quantifying noise in military airspace. In the current study, the Schultz curve is used with $L_{dnmr}$ as the noise metric. $L_{dnmr}$ is always

equal to or greater than DNL, so impact is generally higher than would have been predicted if the onset rate and busiest-month adjustments were not accounted for.

There are several points of interest in the noise-annoyance relation. The first is DNL of 65 dB. This is a level most commonly used for noise planning purposes and represents a compromise between community impact and the need for activities like aviation which do cause noise. Areas exposed to DNL above 65 dB are generally not considered suitable for residential use. The second is DNL of 55 dB, which was identified by USEPA as a level "...requisite to protect the public health and welfare with an adequate margin of safety," (USEPA 1974) which is essentially a level below which adverse impact is not expected. The third is DNL of 75 dB. This is the lowest level at which adverse health effects could be credible (USEPA 1974). The very high annoyance levels correlated with DNL of 75 dB make such areas unsuitable for residential land use.

Sonic boom exposure is measured by C-weighting, with the corresponding cumulative metric being CDNL. Correlation between CDNL and annoyance has been established, based on community reaction to impulsive sounds (CHABA 1981). Values of the C-weighted equivalent to the Schultz curve are different than that of the Schultz curve itself. Table C-1 shows the relation between annoyance, DNL, and CDNL.

**Table C-1. Relation Between Annoyance, DNL and CDNL**

| *CDNL* | *% Highly Annoyed* | *DNL* |
|---|---|---|
| 48 | 2 | 50 |
| 52 | 4 | 55 |
| 57 | 8 | 60 |
| 61 | 14 | 65 |
| 65 | 23 | 70 |
| 69 | 35 | 75 |

Interpretation of CDNL from impulsive noise is accomplished by using the CDNL versus annoyance values in Table C-1. CDNL can be interpreted in terms of an “equivalent annoyance” DNL. For example, CDNL of 52, 61, and 69 dB are equivalent to DNL of 55, 65, and 75 dB, respectively. If both continuous and impulsive noise occurs in the same area, impacts are assessed separately for each.

**LAND USE COMPATIBILITY**

As noted above, the inherent variability between individuals makes it impossible to predict accurately how any individual will react to a given noise event. Nevertheless, when a community is considered as a whole, its overall reaction to noise can be represented with a high degree of confidence. As described above, the best noise exposure metric for this correlation is

the DNL or $L_{dnmr}$ for military overflights. Impulsive noise can be assessed by relating CDNL to an "equivalent annoyance" DNL, as outlined in Section 1.3.1 of this appendix.

In June 1980, an ad hoc Federal Interagency Committee on Urban Noise (FICUN) published guidelines (FICUN 1980) relating DNL to compatible land uses. This committee was composed of representatives from DoD, Transportation, and Housing and Urban Development; USEPA; and the Veterans Administration. Since the issuance of these guidelines, federal agencies have generally adopted these guidelines for their noise analyses.

Following the lead of the committee, DoD and FAA adopted the concept of land-use compatibility as the accepted measure of aircraft noise effect. The FAA included the committee's guidelines in the Federal Aviation Regulations (USDOT 1984). These guidelines are reprinted in Table C-2, along with the explanatory notes included in the regulation. Although these guidelines are not mandatory (note the footnote "*" in the table), they provide the best means for determining noise impact in airport communities. In general, residential land uses normally are not compatible with outdoor DNL values above 65 dB, and the extent of land areas and populations exposed to DNL of 65 dB and higher provides the best means for assessing the noise impacts of alternative aircraft actions. In some cases, where noise change exceeds 3 dB, the 1992 FICON indicates the 60 dB DNL may be a more appropriate incompatibility level for densely populated areas.

## 2.0 NOISE EFFECTS

The discussion in Section 1.3 of this appendix presents the global effect of noise on communities. The following sections describe particular noise effects.

### 2.1 HEARING LOSS

Noise-induced hearing loss is probably the best defined of the potential effects of human exposure to excessive noise. Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency, 4,000 Hz, after a 40-year exposure) suggests a time-average sound level of 70 dB over a 24-hour period (USEPA 1974). Since it is unlikely that airport neighbors will remain outside their homes 24 hours per day for extended periods of time, there is little possibility of hearing loss below a DNL of 75 dB, and this level is extremely conservative.

## Table C-2. Land-Use Compatibility With Yearly Day-Night Average Sound Levels

| LAND USE | Yearly Day-Night Average Sound Level (DNL) in Decibels | | | | | |
|---|---|---|---|---|---|---|
| | **Below 65** | **65–70** | **70–75** | **75–80** | **80–85** | **Over 85** |
| RESIDENTIAL | | | | | | |
| Residential, other than mobile homes and transient lodgings | Y | N(1) | N(1) | N | N | N |
| Mobile home parks | Y | N | N | N | N | N |
| Transient lodgings | Y | N(1) | N(1) | N(1) | N | N |
| PUBLIC USE | | | | | | |
| Schools | Y | N(1) | N(1) | N | **N** | **N** |
| Hospitals and nursing homes | Y | 25 | 30 | N | N | N |
| Churches, auditoria, and concert halls | Y | 25 | 30 | N | N | N |
| Government services | Y | Y | 25 | 30 | N | N |
| Transportation | Y | Y | Y(2) | Y(3) | Y(4) | Y(4) |
| Parking | Y | Y | Y(2) | Y(3) | Y(4) | N |
| COMMERCIAL USE | | | | | | |
| Offices, business and professional | Y | Y | 25 | 30 | N | N |
| Wholesale and retail—building materials, hardware, and farm equipment | Y | Y | Y(2) | Y(3) | Y(4) | N |
| Retail trade—general | Y | Y | 25 | 30 | N | N |
| Utilities | Y | Y | Y(2) | Y(3) | Y(4) | N |
| Communication | Y | Y | 25 | 30 | N | N |
| MANUFACTURING AND PRODUCTION | | | | | | |
| Manufacturing, general | Y | Y | Y(2) | Y(3) | Y(4 ) | N |
| Photographic and optical | Y | Y | 25 | 30 | N | N |
| Agriculture (except livestock) and forestry | Y | Y(6) | Y(7) | Y(8) | Y(8) | Y(8) |
| Livestock farming and breeding | Y | Y(6) | Y(7) | N | N | N |
| Mining and fishing, resource production and extraction | Y | Y | Y | Y | Y | Y |
| RECREATIONAL | | | | | | |
| Outdoor sports arenas and spectator sports | Y | Y(5) | Y(5) | N | N | N |
| Outdoor music shells, amphitheaters | Y | N | N | N | N | N |
| Nature exhibits and zoos | Y | Y | N | N | N | N |
| Amusements, parks, resorts, and camps | Y | Y | Y | N | N | N |
| Golf courses, riding stables, and water recreation | Y | Y | 25 | 30 | N | N |

Numbers in parentheses refer to notes.

* The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise-compatible land uses.

KEY TO TABLE C-2

Y (YES) = Land Use and related structures compatible without restrictions.

N (No) = Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 = Land Use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structures.

NOTES FOR TABLE C-2

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor-to-indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide an NLR of 20 dB; thus the reduction requirements are often stated as 5, 10, or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(3) Measures to achieve NLR 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.

(5) Land-use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

(8) Residential buildings not permitted.

## 2.2 NONAUDITORY HEALTH EFFECTS

Nonauditory health effects of long-term noise exposure, where noise may act as a risk factor, have not been found to occur at levels below those protective against noise-induced hearing loss, described above. Most studies attempting to clarify such health effects have found that noise exposure levels established for hearing protection will also protect against any potential nonauditory health effects, at least in workplace conditions. The best scientific summary of these findings is contained in the lead paper at the National Institutes of Health Conference on Noise and Hearing Loss, held on January 22–24, 1990, in Washington, D.C., which states "The nonauditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an eight-hour day)" (von Gierke 1990; parenthetical wording added for clarification). At the International Congress (1988) on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss; and even above these criteria, results regarding such health effects were ambiguous.

Consequently, it can be concluded that establishing and enforcing exposure levels protecting against noise-induced hearing loss would not only solve the noise-induced hearing loss problem but also any potential nonauditory health effects in the work place.

Although these findings were directed specifically at noise effects in the work place, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the nonauditory health effects of aircraft noise are ambiguous, at best, and often contradictory. Yet, even those studies which purport to find such health effects use time-average noise levels of 75 dB and higher for their research.

For example, in an often-quoted paper, two University of California at Los Angeles (UCLA) researchers found a relation between aircraft noise levels under the approach path to Los Angeles International Airport (LAX) and increased mortality rates among the exposed residents by using an average noise exposure level greater than 75 dB for the "noise-exposed" population (Meecham and Shaw 1979). Nevertheless, three other UCLA professors analyzed those same data and found no relation between noise exposure and mortality rates (Frerichs *et al*. 1980).

As a second example, two other UCLA researchers used this same population near LAX to show a higher rate of birth defects during the period of 1970 to 1972 when compared with a control group residing away from the airport (Jones and Tauscher 1978). Based on this report, a separate group at the United States Centers for Disease Control performed a more thorough study of

populations near Atlanta's Hartsfield International Airport for 1970 to 1972 and found no relation in their study of 17 identified categories of birth defects to aircraft noise levels above 65 dB (Edmonds 1979).

A recent review of health effects, prepared by a Committee of the Health Council of The Netherlands (CHCN 1996), analyzed currently available published information on this topic. The committee concluded that the threshold for possible long-term health effects was a 16-hour (6:00 am to 10:00 pm) $L_{eq}$ of 70 dB. Projecting this to 24 hours and applying the 10 dB nighttime penalty used with DNL, this corresponds to DNL of about 75 dB. The study also affirmed the risk threshold for hearing loss, as discussed earlier.

In summary, there is no scientific basis for a claim that potential health effects exist for aircraft time-average sound levels below 75 dB.

## 2.3 ANNOYANCE

The primary effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the USEPA as any negative subjective reaction on the part of an individual or group (USEPA 1974). As noted in the discussion of DNL above, community annoyance is best measured by that metric.

Because the USEPA Levels Document (USEPA 1974) identified DNL of 55 dB as ". . . requisite to protect public health and welfare with an adequate margin of safety," it is commonly assumed that 55 dB should be adopted as a criterion for community noise analysis. However, financial and technical resources are generally not available to achieve that goal. Most agencies have identified DNL of 65 dB as a criterion which protects those most impacted by noise, and which can often be achieved on a practical basis (FICON 1992). This corresponds to about 13 percent of the exposed population being highly annoyed.

Although DNL of 65 dB is widely used as a benchmark for significant noise impact, and is often an acceptable compromise, it is not a statutory limit, and it is appropriate to consider other thresholds in particular cases.

In this EIS, no specific threshold is used. The noise in the affected environment is evaluated on the basis of the information presented in this appendix and in the body of the EIS.

## 2.4 SPEECH INTERFERENCE

Speech interference associated with aircraft noise is a primary cause of annoyance to individuals on the ground. The disruption of routine activities in the home, such as radio or television listening, telephone use, or family conversation, gives rise to frustration and irritation. The

quality of speech communication is also important in classrooms, offices, and industrial settings and can cause fatigue and vocal strain in those who attempt to communicate over the noise. Research has shown that the use of the SEL metric will measure speech interference successfully, and that a SEL exceeding 65 dB will begin to interfere with speech communication.

## 2.5 SLEEP INTERFERENCE

Sleep interference is another source of annoyance associated with aircraft noise. This is especially true because of the intermittent nature and content of aircraft noise, which is more disturbing than continuous noise of equal energy and neutral meaning.

Sleep interference may be measured in either of two ways. "Arousal" represents actual awakening from sleep, while a change in "sleep stage" represents a shift from one of four sleep stages to another stage of lighter sleep without actual awakening. In general, arousal requires a somewhat higher noise level than does a change in sleep stage.

An analysis sponsored by the Air Force summarized 21 published studies concerning the effects of noise on sleep (Pearsons *et al*. 1989). The analysis concluded that a lack of reliable in-home studies, combined with large differences among the results from the various laboratory studies, did not permit development of an acceptably accurate assessment procedure. The noise events used in the laboratory studies and in contrived in-home studies were presented at much higher rates of occurrence than would normally be experienced. None of the laboratory studies were of sufficiently long duration to determine any effects of habituation, such as that which would occur under normal community conditions. A recent extensive study of sleep interference in people's own homes (Ollerhead 1992) showed very little disturbance from aircraft noise.

There is some controversy associated with the recent studies, so a conservative approach should be taken in judging sleep interference. Based on older data, the USEPA identified an indoor DNL of 45 dB as necessary to protect against sleep interference (USEPA 1974). Assuming a very conservative structural noise insulation of 20 dB for typical dwelling units, this corresponds to an outdoor DNL of 65 dB as minimizing sleep interference.

A 1984 publication reviewed the probability of arousal or behavioral awakening in terms of SEL (Kryter 1984). Figure C-4, extracted from Figure 10.37 of Kryter (1984), indicates that an indoor SEL of 65 dB or lower should awaken less than 5 percent of those exposed. These results do not include any habituation over time by sleeping subjects. Nevertheless, this provides a reasonable guideline for assessing sleep interference and corresponds to similar guidance for speech interference, as noted above.

## 2.6 NOISE EFFECTS ON DOMESTIC ANIMALS AND WILDLIFE

Animal species differ greatly in their responses to noise. Each species has adapted, physically and behaviorally, to fill its ecological role in nature, and its hearing ability usually reflects that role. Animals rely on their hearing to avoid predators, obtain food, and communicate with and attract other members of their species. Aircraft noise may mask or interfere with these functions. Secondary effects may include nonauditory effects similar to those exhibited by humans: stress, hypertension, and other nervous disorders. Tertiary effects may include interference with mating and resultant population declines.

## 2.7 NOISE EFFECTS ON STRUCTURES

Normally, the most sensitive components of a structure to airborne noise are the windows and, infrequently, the plastered walls and ceilings. An evaluation of the peak sound pressures impinging on the structure is normally sufficient to determine the possibility of damage. In general, at sound levels above 130 dB, there is the possibility of the excitation of structural component resonance. While certain frequencies (such as 30 Hz for window breakage) may be of more concern than other frequencies, conservatively, only sounds lasting more than one second above a sound level of 130 dB are potentially damaging to structural components (National Research Council/National Academy of Sciences 1977).

A study directed specifically at low-altitude, high-speed aircraft showed that there is little probability of structural damage from such operations (Sutherland 1989). One finding in that study is that sound levels at damaging frequencies (e.g., 30 Hz for window breakage or 15 to 25 Hz for whole-house response) are rarely above 130 dB.

Noise-induced structural vibration may also cause annoyance to dwelling occupants because of induced secondary vibrations, or “rattle,” of objects within the dwelling, such as hanging pictures, dishes, plaques, and bric-a-brac. Window panes may also vibrate noticeably when exposed to high levels of airborne noise, causing homeowners to fear breakage. In general, such noise-induced vibrations occur at sound levels above those considered normally incompatible with residential land use. Thus assessments of noise exposure levels for compatible land use should also be protective of noise-induced secondary vibrations.

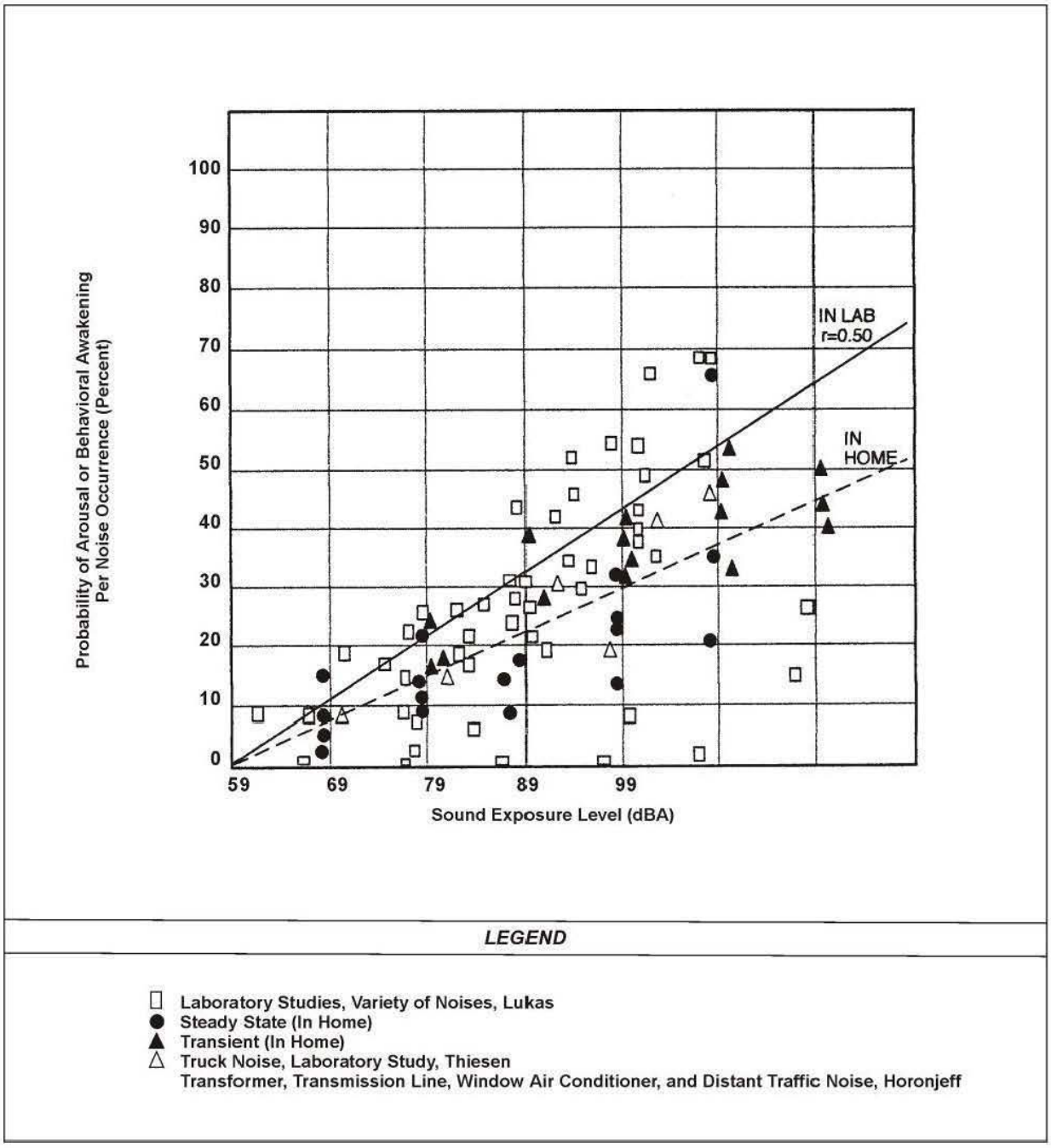



**Figure C-4. Probability of Arousal or Behavioral Awakening in Terms of Sound Exposure Level**

## 2.8 NOISE EFFECTS ON TERRAIN

Members of the public often believe that noise from low-flying aircraft can cause avalanches or landslides by disturbing fragile soil or snow structures in mountainous areas. There are no known instances of such effects, and it is considered improbable that such effects will result from routine, subsonic aircraft operations**.**

## 2.9 NOISE EFFECTS ON HISTORICAL AND ARCHAEOLOGICAL SITES

Because of the potential for increased fragility of structural components of historical buildings and other historical sites, aircraft noise may affect such sites more severely than newer, modern structures. Again, there are few scientific studies of such effects to provide guidance for their assessment.

One study involved the measurements of sound levels and structural vibration levels in a superbly restored plantation house, originally built in 1795, and now situated approximately 1,500 feet from the centerline at the departure end of Runway 19L at Washington Dulles International Airport. These measurements were made in connection with the proposed scheduled operation of the supersonic Concorde airplane at Dulles (Wesler 1977). There was special concern for the building's windows, since roughly half of the 324 panes were original. No instances of structural damage were found. Interestingly, despite the high levels of noise during Concorde takeoffs, the induced structural vibration levels were actually less than those induced by touring groups and vacuum cleaning within the building itself.

As noted above for the noise effects of noise-induced vibrations on normal structures, assessments of noise exposure levels for normally compatible land uses should also be protective of historic and archaeological sites.

# 3.0 NOISE MODELING

An aircraft in subsonic flight generally emits noise from two sources: the engines and flow noise around the airframe. Noise generation mechanisms are complex and, in practical models, the noise sources must be based on measured data. The Air Force has developed a series of computer models and aircraft noise databases for this purpose. The models include NOISEMAP (Moulton 1992) for noise around airbases, ROUTEMAP (Lucas and Plotkin 1988) for noise associated with low-level training routes, and MR_NMAP (Lucas and Calamia 1996) for use in MOAs and ranges. These models use the NOISEFILE database developed by the Air Force. NOISEFILE data includes SEL and $L_{Amax}$ as a function of speed and power setting for aircraft in straight flight.

Noise from an individual aircraft is a time-varying continuous sound. It is first audible as the aircraft approaches, increases to a maximum when the aircraft is near its closest point, then diminishes as it departs. The noise depends on the speed and power setting of the aircraft and its trajectory. The models noted above divide the trajectory into segments whose noise can be computed from the data in NOISEFILE. The contributions from these segments are summed.

MR_NMAP was used to compute noise levels in the airspace. The primary noise metric computed by MR_NMAP was $L_{dnmr}$ averaged over each airspace. Supporting routines from NOISEMAP were used to calculate SEL and $L_{Amax}$ for various flight altitudes and lateral offsets from a ground receiver position.

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# APPENDIX D
# AIR EMISSIONS CALCULATIONS FOR THE PROPOSED ACTION

Table 1. Construction and Paving Projects Included in the Proposed Action.

| | Buildings | | Pavement | | Surface | | |
|---|---|---|---|---|---|---|---|
| | Building Area | Pavement Area | Pavement Depth | Pavement Volume | Total Area | Building Type | |
| Project Details | SF | SF | Feet | CF | SF | | Year |
| Upgrade aircraft maintenance hangar | 16,231 | | | 0 | 16,231 | Gen. Ind. | 2007 |
| Addition to Fire Crash/Rescue station | 13,665 | | | 0 | 13,665 | Gen. Ind. | 2008 |
| Install aircraft arresting systems | | | | 0 | 0 | Gen. Ind. | 2007 |
| Add to Squad Ops Facility | 10,400 | | | 0 | 10,400 | Gen. Ind. | 2007 |
| Upgrade aircraft parking/taxiway | | 94,365 | 1 | 94,365 | 94,365 | Gen. Ind. | 2007 |
| Additions to munitions storage | 12,900 | | | 0 | 12,900 | Gen. Ind. | 2008 |
| Upgrade fuel cell/corr control hangar | 21,200 | | | 0 | 21,200 | Gen. Ind. | 2007 |
| Const EOD facility | 5,600 | | | 0 | 5,600 | Gen. Ind. | 2009 |
| Upgrade mun storage mag | 3,600 | | | 0 | 3,600 | Gen. Ind. | 2008 |
| Const ASA complex | 45,545 | | | 0 | 45,545 | Gen. Ind. | 2008 |
| Add/modify engine shop | 2,100 | | | 0 | 2,100 | Gen. Ind. | 2007 |
| Add/alter dining facility | 1,000 | | | 0 | 1,000 | Gen. Ind. | 2009 |
| Relocate/Construct Aircraft Shelters | 27,360 | | | 0 | 27,360 | Gen. Ind. | 2010 |
| Replace Engine and NDI Shops | 12,500 | | | 0 | 12,500 | Gen. Ind. | 2010 |
| Replace ASE Facility | 12,500 | | | 0 | 12,500 | Gen. Ind. | 2011 |
| Totals | 184,601 | 94,365 | | 94,365 | 6.40 | acres | |

Table 2. Demolition Projects Included in the Proposed Action.

| | Buildings | Pavement | Pavement Depth | Pavement Volume | |
|---|---|---|---|---|---|
| Project Details | Sq Feet | Sq Feet | Feet | CF | Year |
| Upgrade aircraft parking/taxiway | | 75,690 | 1 | 75,690 | |
| Const ASA complex | | 142,560 | 0.5 | 71,280 | |
| Aircraft Shelters | | 35,100 | 1 | 35,100 | |
| Building 14 | 1,346 | | | | 2007 |
| Building 20 | 21,058 | | | | 2011 |
| Building 21 | 5,000 | | | | 2007 |
| Building 27 | 7,500 | | | 0 | 2007 |
| Totals | 34,904 | 253,350 | | 182,070 | |

Table 3. Stationary Source Emissions - 104th FW - Baseline.

| Sources | Annual Actual Emissions | | | | | |
|---|---|---|---|---|---|---|
| | CO | NOx | PM-10 | PM-2.5 | SO2 | VOCs |
| Combustion | 1,742 | 3,034 | 393 | 380 | 1703 | 232 |
| Fuel Storage/Transfer | 0 | 0 | 0 | 0 | 0 | 1,512 |
| Operational | 0 | 0 | 226 | 226 | 0 | 3,517 |
| Total (lbs) | 1,742 | 3,034 | 619 | 606 | 1,703 | 5,261 |
| Total (tons) | 0.9 | 1.5 | 0.3 | 0.3 | 0.9 | 2.6 |

Source: 104th FW 2005

Table 4. Stationary Source Emissions - 104th FW - Proposed Action.

| Sources | Annual Actual Emissions | | | | | |
|---|---|---|---|---|---|---|
| | VOCs | CO | NOx | SO2 | PM-10 | PM-2.5 |
| Combustion | 267 | 2,003 | 3,489 | 1,958 | 452 | 437 |
| Fuel Storage/Transfer | 1,739 | 0 | 0 | 0 | 0 | 0 |
| Operational | 4,045 | 0 | 0 | 0 | 260 | 260 |
| Total (lbs) | 6,050 | 2,003 | 3,489 | 1,958 | 712 | 697 |
| Total (tons) | 3.0 | 1.0 | 1.7 | 1.0 | 0.4 | 0.3 |

Notes: (1) Stationary Sources increase by 15% in proportion to increase in base personnel.

Table 5. Change in 104th FW Stationary Source Emissions due to Increased Base Operations and Change in PAA.

| Source | Annual Actual Emissions (tons/yr) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM-2.5 |
| Baseline Stationary Source Emissions (1) | 2.63 | 0.87 | 1.52 | 0.85 | 0.31 | 0.30 |
| Stationary Source Emissions After Implementation of Proposed Action | 3.03 | 1.00 | 1.74 | 0.98 | 0.36 | 0.35 |
| Change | 0.39 | 0.13 | 0.23 | 0.13 | 0.05 | 0.05 |

Notes: (1) See Table 3

Table 6. Mobile Source Emissions - 104th FW - Baseline.

| Activities | Annual Actual Emissions (lbs/yr) | | | | | |
|---|---|---|---|---|---|---|
| | CO | NOx | PM-10 | PM-2.5 | SO2 | VOCs |
| On-Road Vehicles | 12,729 | 2,763 | 186 | 169 | 206 | 1,510 |
| Off-Road Diesel Vehicles | 4,989 | 23,155 | 1,643 | 1,643 | 1,531 | 1,878 |
| AGE | 374 | 1,747 | 123 | 123 | 115 | 139 |
| Aircraft LTOs | 146,518 | 23,065 | 27,002 | 27,002 | 2,138 | 29,518 |
| Aircraft Low Approaches | 8,861 | 2,447 | 3,580 | 3,580 | 236 | 568 |
| Aircraft Trim and Power Checks | 1,407 | 85 | 205 | 205 | 12 | 294 |
| Total (lb) | 174,878 | 53,262 | 32,739 | 32,722 | 4,238 | 33,907 |
| Total (ton) | 87.44 | 26.63 | 16.37 | 16.36 | 2.12 | 16.95 |

Source: 104th FW 2005

Table 7. Mobile Source Emissions - 104th FW - Proposed Action.

| | VOCs | CO | NOx | SO2 | PM-10 | PM-2.5 |
|---|---|---|---|---|---|---|
| On-Road Vehicles (1) | 1,737 | 14,638 | 3,177 | 237 | 214 | 194 |
| Off-Road Diesel Vehicles (1) | 2,160 | 5,738 | 26,628 | 1,761 | 1,890 | 1,890 |
| AGE (1) | 160 | 430 | 2,009 | 132 | 141 | 141 |
| Aircraft LTOs & Closed Patterns (2) | 26,049 | 110,004 | 73,460 | 2,482 | 11,461 | 11,358 |
| Aircraft Trim and Power Checks (3) | 68,357 | 16,677 | 17,164 | 1,000 | 4,479 | 4,439 |
| Increase (tons/yr) - Other | 49.23 | 73.74 | 61.22 | 2.81 | 9.09 | 9.01 |

Notes: (1) Non-aircraft mobile sources increase by 15% in proportion to increase in base personnel.
(2) See Table 10
(3) See Table 11

Table 8. Change in 104th FW Mobile Source Emissions due to Increased Base Operations and Change in PAA.

| Source | Tons Per Year | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM-2.5 |
| Baseline Mobile Source Emissions (1) | 16.95 | 87.44 | 26.63 | 2.12 | 16.37 | 16.36 |
| Mobile Source Emissions After Implementation of Proposed Action | 49.23 | 73.74 | 61.22 | 2.81 | 9.09 | 9.01 |
| Change | 32.28 | (13.70) | 34.59 | 0.69 | (7.28) | (7.35) |

Notes: (1) See Table 6

Table 9. Emission Factors for the 104th FW Proposed Action.

| Source Type | Units | Emission Factors | | | | | | References |
|---|---|---|---|---|---|---|---|---|
| | | VOC | CO | NOx | SOx | PM10 | PM2.5 | |
| Construction/Demolition Sources | | | | | | | | |
| Heavy Duty Diesel Vehicles - Idle | Gms/Hr | 4.97 | 29.86 | 68.08 | 0.04 | 1.30 | 1.20 | (8) |
| Heavy-Duty Diesel Vehicles | Gms/Mile | 0.52 | 2.96 | 10.97 | 0.04 | 0.34 | 0.31 | (1) (7) |
| Light-Duty Gasoline Vehicles | Gms/Mile | 1.06 | 22.83 | 0.96 | 0.01 | 0.03 | 0.02 | (1) (7) |
| Composite of All Onroad Vehicles | Gms/Mile | 1.16 | 22.38 | 1.43 | 0.01 | 0.04 | 0.04 | (1) (7) |
| Grader - 180 Hp | Gms/Hp-Hr | 0.35 | 1.36 | 4.73 | 0.75 | 0.33 | 0.32 | (2) |
| Scraper - 195 Hp | Gms/Hp-Hr | 0.35 | 1.40 | 4.78 | 0.75 | 0.34 | 0.33 | (2) |
| Roller - 165 Hp | Gms/Hp-Hr | 0.44 | 1.92 | 5.33 | 0.75 | 0.41 | 0.39 | (2) |
| Backhoe - 160 Hp | Gms/Hp-Hr | 1.31 | 5.07 | 7.55 | 0.87 | 0.85 | 0.82 | (2) |
| Paving Machine - 200 Hp | Gms/Hp-Hr | 0.43 | 1.98 | 5.41 | 0.75 | 0.40 | 0.39 | (2) |
| Bulldozer -165 Hp | Gms/Hp-Hr | 0.40 | 1.64 | 5.02 | 0.75 | 0.38 | 0.37 | (2) |
| Bulldozer - 310 Hp | Gms/Hp-Hr | 0.32 | 2.32 | 5.45 | 0.75 | 0.34 | 0.33 | (2) |
| Air Compressor - 50 Hp | Gms/Hp-Hr | 0.59 | 3.50 | 4.87 | 0.83 | 0.65 | 0.63 | (2) |
| Concrete/Industrial Saw - 84 Hp | Gms/Hp-Hr | 0.73 | 4.67 | 5.74 | 0.83 | 0.81 | 0.78 | (2) |
| Crane - 190 Hp | Gms/Hp-Hr | 0.37 | 1.06 | 5.34 | 0.74 | 0.29 | 0.28 | (2) |
| Forklift - 94 Hp | Gms/Hp-Hr | 0.70 | 4.50 | 5.54 | 0.83 | 0.77 | 0.75 | (2) |
| Loader - 215 Hp | Gms/Hp-Hr | 1.21 | 4.64 | 7.27 | 0.87 | 0.80 | 0.77 | (2) |
| Water Truck - 175 Hp | Gms/Hp-Hr | 0.38 | 1.42 | 4.49 | 0.75 | 0.34 | 0.33 | (2) |
| Generator - 45 Hp | Gms/Hp-Hr | 0.59 | 3.50 | 4.87 | 0.83 | 0.65 | 0.63 | (2) |
| Fugitive Dust | lbs/acre-day | --- | --- | --- | --- | 13.45 | 2.80 | (3) (7) |
| Building Demolition | lbs/1000 cf | --- | --- | --- | --- | 0.42 | 0.09 | (4) (7) |
| Aircraft | | | | | | | | |
| F-15C - Idle | lbs/1000 lbs of fuel | 8.60 | 35.29 | 4.99 | 0.46 | 2.06 | 2.04 | (5) (6) (7) |
| F-15C - Intermediate | lbs/1000 lbs of fuel | 0.30 | 0.91 | 30.89 | 0.46 | 2.06 | 2.04 | (5) (6) (7) |
| F-15C - Military | lbs/1000 lbs of fuel | 0.54 | 0.90 | 57.65 | 0.46 | 1.33 | 1.32 | (5) (6) (7) |
| F-15C | lbs/LTO | 9.49 | 39.88 | 21.11 | 0.81 | 3.70 | 3.67 | (5) (6) (7) |
| F-15C | lbs/TGO | 0.21 | 1.42 | 17.01 | 0.31 | 1.48 | 1.46 | (5) (6) (7) |

Notes: (1) Obtained from the USEPA's MOBILE6 emissions model for a US average fleet age distrubition, climate and fuel compostion for central Massachusetts, and year 2006.

(2) Obtained from the USEPA's NONROAD2005 emissions model for a US average fleet age distribution for the year 2006.

(3) Units in lbs/acre-day from section 11.2.3 of AP-42 (EPA 1995). Emissions reduced by 75% from uncontrolled levels to represent complaince with Code of Massachusetts Regulations (310 CMR 7.09), Regulation 9 - Dust and Odor.

(4) CEQA Air Quality Handbook, Table 9-2 (SCAQMD 1993). Building demolition units in lbs of pollutant/1000 cubic feet (cf) of demolished building. Construction - General Industrial in units of lbs of pollutant/1000 square feet (sf).

(5) From Untied States Air Force Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations (USAF 2003). LTO = Landing and Takeoff Cycle, TGO = Touch and Go cycle.

(6) The F-15C may be equipped with any one of three different engines (F100-PW-100, F100-PW-200, F100-PW-229), so for the most conservative analysis the highest emission factor from the group of engines was used for each pollutant.

(7) PM2.5 fractions ontained from CEIDARS list.

(8) Idling emission factors developed from EMFAC2002 (ARB 2003). Units in grams/hour.

Table 10. Aircraft Emissions - 104th FW - Proposed Action.

| F-15C | | Emission Factors (lb/LTO) | | | | | | Emissions (tons/year) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sorties/year | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO | VOC | NOx | SOx | PM10 | PM2.5 |
| Local Sorties | 2673 | 39.88 | 9.49 | 21.11 | 0.81 | 3.70 | 3.67 | 53.30 | 12.68 | 28.22 | 1.08 | 4.94 | 4.90 |
| Cross-country sorties | 52 | 39.88 | 9.49 | 21.11 | 0.81 | 3.70 | 3.67 | 1.04 | 0.25 | 0.55 | 0.02 | 0.10 | 0.10 |
| | | Emission Factors (lb/TGO) | | | | | | Emissions (tons/year) | | | | | |
| | | CO | VOC | NOx | SOx | PM10 | PM2.5 | CO | VOC | NOx | SOx | PM10 | PM2.5 |
| Closed Patterns | 936 | 1.42 | 0.21 | 17.01 | 0.31 | 1.48 | 1.46 | 0.67 | 0.10 | 7.96 | 0.14 | 0.69 | 0.68 |
| TOTAL | 3661 | | | | | | | 55.00 | 13.02 | 36.73 | 1.24 | 5.73 | 5.68 |

Table 11. Aircraft Engine Testing Emissions - 104th FW - Proposed Action.

| Engine Type | Power Setting | Hrs per Year | Fuel Flow Rate (lb fuel /hr) | Emission Factor (lb/1000 lb fuel) Highest out of F100-PW-100, F100-PW-200, F100-PM-229 | | | | | | Emissions (lb/yr) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | CO | VOC | NOx | SO2 | PM-10 | PM-2.5 | CO | VOC | NOx | SO2 | PM-10 | PM-2.5 |
| F-15C | Idle | 1,760 | 1,097 | 35.29 | 8.60 | 4.99 | 0.46 | 2.06 | 2.04 | 68,135 | 16,604 | 9,634 | 888 | 3,977 | 3,941 |
| (worst case) | Intermediate | 32 | 7,617 | 0.91 | 0.30 | 30.89 | 0.46 | 2.06 | 2.04 | 222 | 73 | 7,529 | 112 | 502 | 498 |
| | Military | 5 | 11,490 | 0.90 | 0.54 | 57.65 | 0.46 | 1.33 | 1.32 | 52 | 31 | 3,312 | 26 | 76 | 76 |
| TOTAL EMISSIONS (lb/yr) | | | | | | | | | | 68,357 | 16,677 | 17,164 | 1,000 | 4,479 | 4,439 |
| TOTAL EMISSIONS (lb/yr) | | | | | | | | | | 34.18 | 8.34 | 8.58 | 0.50 | 2.24 | 2.22 |

Table 12. Increased Emissions from Commuting of New Personnel - 104th FW - Proposed Action.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Commuting Data** | FT personnel | | | | | | | | | |
| **Commuting Distance =** | 20 | **miles/RT** | | | | | | | | |
| **Weekly schedule =** | 5 | **days/week** | | | | | | | | |
| **Annual schedule =** | 50 | **weeks** | | | | | | | | |
| **AVR =** | 1.1 | **commuters/RT** | | | | | | | | |
| **% of Employees Living On-Base** | - | **%** | | | | | | | | |
| **Emission Calculation** | | **Daily Trips** | | **Annual Miles** | **Annual Emissions (Tons)** | | | | | |
| | **Manpower** | (RT/day) | | (miles) | **CO** | **VOC** | **NOx** | **SOx** | **PM10** | **PM2.5** |
| **Proposed Action** | 139 | 126 | | 631,818 | 15.59 | 0.81 | 0.99 | 0.01 | 0.03 | 0.03 |

Table 13. Demolition Emission Source Data for 2007 - 104th FW - Proposed Action.

| Building 14 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Backhoe | 160 | 0.50 | 2 | 160 | 8 | 1,280 | 0.2 | 290 |
| Bulldozer | 310 | 0.50 | 2 | 310 | 8 | 2,480 | 0.2 | 562 |
| Crane w/Wrecking Ball | 180 | 0.50 | 1 | 90 | 8 | 720 | 0.2 | 163 |
| Loader | 215 | 0.50 | 3 | 323 | 8 | 2,580 | 0.2 | 585 |
| Haul Truck (2) | NA | NA | 30 | NA | 20 | 600 | 0.2 | 136 |
| Building Demolition - Dust (3) | NA | NA | NA | NA | 8 | NA | 0.2 | 20,190 |
| Building 21 | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Backhoe | 160 | 0.50 | 2 | 160 | 8 | 1,280 | 0.8 | 1,077 |
| Bulldozer | 310 | 0.50 | 2 | 310 | 8 | 2,480 | 0.8 | 2,087 |
| Crane w/Wrecking Ball | 180 | 0.50 | 1 | 90 | 8 | 720 | 0.8 | 606 |
| Loader | 215 | 0.50 | 3 | 323 | 8 | 2,580 | 0.8 | 2,171 |
| Haul Truck (2) | NA | NA | 30 | NA | 20 | 600 | 0.8 | 505 |
| Building Demolition - Dust (3) | NA | NA | NA | NA | 8 | NA | 0.8 | 75,000 |
| Building 27 | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Backhoe | 160 | 0.50 | 2 | 160 | 8 | 1,280 | 1.3 | 1,616 |
| Bulldozer | 310 | 0.50 | 2 | 310 | 8 | 2,480 | 1.3 | 3,131 |
| Crane w/Wrecking Ball | 180 | 0.50 | 1 | 90 | 8 | 720 | 1.3 | 909 |
| Loader | 215 | 0.50 | 3 | 323 | 8 | 2,580 | 1.3 | 3,257 |
| Haul Truck (2) | NA | NA | 30 | NA | 20 | 600 | 1.3 | 757 |
| Building Demolition - Dust (3) | NA | NA | NA | NA | 8 | NA | 1.3 | 112,500 |

Notes: (1) Work days determined by mulitplying days from POLA-TraPac-DEIR (POLA 2006) project - demolition of an admisitrative building (401,000 cf) by the ratio of volume of the building to be demolished/401,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Total Hp-Hrs = total cubic feet (cf) of demolished buildings.

Table 14. Demolition Emission Source Data for 2011 - 104th FW - Proposed Action.

| Building 20 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Backhoe | 160 | 0.50 | 2 | 160 | 8 | 1,280 | 3.5 | 4,537 |
| Bulldozer | 310 | 0.50 | 2 | 310 | 8 | 2,480 | 3.5 | 8,791 |
| Crane w/Wrecking Ball | 180 | 0.50 | 1 | 90 | 8 | 720 | 3.5 | 2,552 |
| Loader | 215 | 0.50 | 3 | 323 | 8 | 2,580 | 3.5 | 9,145 |
| Haul Truck (2) | NA | NA | 30 | NA | 20 | 600 | 3.5 | 2,127 |
| Building Demolition - Dust (3) | NA | NA | NA | NA | 8 | NA | 3.5 | 315,870 |

Notes: (1) Work days determined by mulitplying days from POLA-TraPac-DEIR (POLA 2006) project - demolition of an admisitrative building (401,000 cf) by the ratio of volume of the building to be demolished/401,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Total Hp-Hrs = total cubic feet (cf) of demolished buildings.

Table 15. Demolition Emissions for 2007 - 104th FW - Proposed Action.

| Building 14 | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Backhoe | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Bulldozer | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crane w/Wrecking Ball | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Loader | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Haul Truck (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Building Demolition - Dust | --- | --- | --- | --- | 0.00 | 0.00 |
| Building 21 | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Backhoe | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Bulldozer | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Crane w/Wrecking Ball | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Loader | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 |
| Haul Truck (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Building Demolition - Dust | --- | --- | --- | --- | 0.02 | 0.00 |
| Building 27 | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Backhoe | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Bulldozer | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 |
| Crane w/Wrecking Ball | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Loader | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Haul Truck (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Building Demolition - Dust | --- | --- | --- | --- | 0.02 | 0.00 |
| Year 2007 Total | 0.02 | 0.07 | 0.13 | 0.01 | 0.05 | 0.02 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 16. Demolition Emissions for 2011 - 104th FW - Proposed Action.

| Building 20 | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Backhoe | 0.01 | 0.03 | 0.04 | 0.00 | 0.00 | 0.00 |
| Bulldozer | 0.00 | 0.02 | 0.05 | 0.01 | 0.00 | 0.00 |
| Crane w/Wrecking Ball | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Loader | 0.01 | 0.05 | 0.07 | 0.01 | 0.01 | 0.01 |
| Haul Truck (1) | 0.00 | 0.01 | 0.03 | 0.00 | 0.00 | 0.00 |
| Building Demolition - Dust | --- | --- | --- | --- | 0.07 | 0.01 |
| Year 2011 Total | 0.02 | 0.10 | 0.21 | 0.02 | 0.08 | 0.03 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 17. Removal of Demolished Pavement - 104th FW - Proposed Action.

| | | |
|---|---|---|
| Removal of pavement | 0 | sq ft |
| Pavement thickness | 0 | ft |
| volume to be removed | 182,070 | cu ft |

| | | |
|---|---|---|
| Total volume to be removed (bldgs + parking) | 182,070 | cu ft |
| | 6,743 | cu yd |
| Volume per truckload | 15 | cu yd/truckload |
| Number of truckloads | 450 | truckloads |
| Round trip mileage | 30 | miles/load |
| Miles traveled | 13487 | miles |

| | CO | VOC | NOx | SOx | PM10 | PM2.5 |
|---|---|---|---|---|---|---|
| Dump truck emission factors (gms/mile) | 0.52 | 2.96 | 10.97 | 0.04 | 0.34 | 0.31 |
| Emissions (lbs) | 16 | 88 | 326 | 1 | 10 | 9 |
| Emissions (tons) | 0.01 | 0.04 | 0.16 | 0.00 | 0.01 | 0.00 |

| | Emissions (Tons) | | | | | |
|---|---|---|---|---|---|---|
| Source | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Fugitive dust | --- | --- | --- | --- | 0.11 | 0.02 |
| Haul away of material (1) | 0.01 | 0.04 | 0.16 | 0.00 | 0.01 | 0.00 |
| Total | 0.01 | 0.04 | 0.16 | 0.00 | 0.11 | 0.03 |

Notes: (1) Assuming demolition waste materials are hauled away by heavy-duty diesel vehicles at the rate of 15 cubic yards per load, and a round trip distance of 30 miles per trip to waste dispoal site.

Table 18. Total Emissions from Demolition - 104th FW - Proposed Action.

| Total Project | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| Year | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| 2007 | 0.02 | 0.11 | 0.30 | 0.02 | 0.17 | 0.05 |
| 2008 | --- | --- | --- | --- | --- | --- |
| 2009 | --- | --- | --- | --- | --- | --- |
| 2010 | --- | --- | --- | --- | --- | --- |
| 2011 | 0.02 | 0.10 | 0.21 | 0.02 | 0.08 | 0.03 |
| Project Total | 0.05 | 0.22 | 0.50 | 0.04 | 0.25 | 0.08 |

Note: Removal of demolished pavement assumend to occur in 2007.

Table 19. Building Construction Emission Source Data for 2007 - 104th FW - Proposed Action.

| Aircraft Maintenance Hangar | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 73 | 13,147 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 73 | 26,873 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 73 | 24,980 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 73 | 19,567 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 73 | 15,777 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 3 | 1,394 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 6 | 1,660 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 18 | 18 |
| Squardron Ops Facility | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 23 | 4,212 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 23 | 8,609 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 23 | 8,003 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 23 | 6,269 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 23 | 5,054 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 447 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 2 | 532 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 6 | 6 |
| Fuel Cell/Corrosion Control Hangar | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 95 | 17,172 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 95 | 35,100 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 95 | 32,627 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 95 | 25,558 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 95 | 20,606 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 4 | 1,821 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 7 | 2,168 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 23 | 23 |
| Engine Shop | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 5 | 851 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 5 | 1,738 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 5 | 1,616 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 5 | 1,266 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 5 | 1,021 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 0 | 90 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 0 | 107 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 1 | 1 |

Notes: (1) Developed by mulitplying work days from POLA-TraPac-DEIR (POLA 2006) project - construction of an admisitrative building (440,000 cf) by the ratio of the volume of building to be constructed/440,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 20. Building Construction Emission Source Data for 2008 - 104th FW - Proposed Action.

| Fire Crash/Rescue Station | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 31 | 5,534 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 31 | 11,312 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 31 | 10,515 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 31 | 8,237 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 31 | 6,641 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 587 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 2 | 699 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 7 | 7 |
| Munitions Storage | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 29 | 5,225 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 29 | 10,679 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 29 | 9,927 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 29 | 7,776 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 29 | 6,269 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 554 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 2 | 660 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 7 | 7 |
| Munitions Maintenance Facility | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 8 | 1,458 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 8 | 2,980 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 8 | 2,770 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 8 | 2,170 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 8 | 1,750 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 0 | 155 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 1 | 184 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 2 | 2 |
| ASA Complex | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 205 | 36,891 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 205 | 75,406 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 205 | 70,094 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 205 | 54,907 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 205 | 44,270 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 9 | 3,913 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 16 | 4,658 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 50 | 50 |

Notes: (1) Developed by mulitplying work days from POLA-TraPac-DEIR (POLA 2006) project - construction of an admisitrative building (440,000 cf) by the ratio of the volume of building to be constructed/440,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 21. Building Construction Emission Source Data for 2009 - 104th FW - Proposed Action.

| EOD Facility | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 13 | 2,268 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 13 | 4,636 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 13 | 4,309 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 13 | 3,376 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 13 | 2,722 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 241 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 1 | 286 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 3 | 3 |
| Dining Facility | | | | | | | | |
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 2 | 405 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 2 | 828 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 2 | 770 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 2 | 603 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 2 | 486 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 0 | 43 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 0 | 51 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 1 | 1 |

Notes: (1) Developed by mulitplying work days from POLA-TraPac-DEIR (POLA 2006) project - construction of an admisitrative building (440,000 cf) by the ratio of the volume of building to be constructed/440,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 22. Building Construction Emission Source Data for 2010 - 104th FW - Proposed Action.

| Engine and NDI Shops | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 28 | 5,063 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 28 | 10,348 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 28 | 9,619 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 28 | 7,535 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 28 | 6,075 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 537 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 2 | 639 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 7 | 7 |

Notes: (1) Developed by mulitplying work days from POLA-TraPac-DEIR (POLA 2006) project - construction of an admisitrative building (440,000 cf) by the ratio of the volume of building to be constructed/440,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 23. Building Construction Emission Source Data for 2011 - 104th FW - Proposed Action.

| ASE Facility | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Air Compressor - 100 CFM | 50 | 0.60 | 1 | 30 | 6 | 180 | 28 | 5,063 |
| Concrete/Industrial Saw | 84 | 0.73 | 1 | 61 | 6 | 368 | 28 | 10,348 |
| Crane | 190 | 0.30 | 1 | 57 | 6 | 342 | 28 | 9,619 |
| Forklift | 94 | 0.48 | 1 | 45 | 6 | 268 | 28 | 7,535 |
| Generator | 45 | 0.60 | 1 | 27 | 8 | 216 | 28 | 6,075 |
| Concrete Trucks (2) | NA | NA | 30 | NA | 14 | 420 | 1 | 537 |
| Supply Trucks (2) | NA | NA | 30 | NA | 10 | 300 | 2 | 639 |
| Fugitive Dust (3) | NA | NA | 1 | NA | 8 | NA | 7 | 7 |

Notes: (1) Developed by mulitplying work days from POLA-TraPac-DEIR (POLA 2006) project - construction of an admisitrative building (440,000 cf) by the ratio of the volume of building to be constructed/440,000 cf.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 24. Building Construction Emissions for 2007 - 104th FW - Proposed Action.

| Aircraft Maintenance Hangar | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.01 | 0.05 | 0.07 | 0.01 | 0.01 | 0.01 |
| Concrete/Industrial Saw | 0.02 | 0.14 | 0.17 | 0.02 | 0.02 | 0.02 |
| Crane | 0.01 | 0.03 | 0.15 | 0.02 | 0.01 | 0.01 |
| Forklift | 0.02 | 0.10 | 0.12 | 0.02 | 0.02 | 0.02 |
| Generator | 0.01 | 0.06 | 0.08 | 0.01 | 0.01 | 0.01 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.12 | 0.02 |
| Squardron Ops Facility | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.01 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 |
| Crane | 0.00 | 0.01 | 0.05 | 0.01 | 0.00 | 0.00 |
| Forklift | 0.00 | 0.03 | 0.04 | 0.01 | 0.01 | 0.01 |
| Generator | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.04 | 0.01 |
| Fuel Cell/Corrosion Control Hangar | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.01 | 0.07 | 0.09 | 0.02 | 0.01 | 0.01 |
| Concrete/Industrial Saw | 0.03 | 0.18 | 0.22 | 0.03 | 0.03 | 0.03 |
| Crane | 0.01 | 0.04 | 0.19 | 0.03 | 0.01 | 0.01 |
| Forklift | 0.02 | 0.13 | 0.16 | 0.02 | 0.02 | 0.02 |
| Generator | 0.01 | 0.08 | 0.11 | 0.02 | 0.01 | 0.01 |
| Concrete Trucks (1) | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.01 | 0.03 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.16 | 0.03 |
| Engine Shop | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Crane | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Forklift | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Generator | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.01 | 0.00 |
| Year 2007 Total | 0.18 | 1.04 | 1.69 | 0.24 | 0.51 | 0.25 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 25. Building Construction Emissions for 2008 - 104th FW - Proposed Action.

| Fire Crash/Rescue Station | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.01 | 0.06 | 0.07 | 0.01 | 0.01 | 0.01 |
| Crane | 0.00 | 0.01 | 0.06 | 0.01 | 0.00 | 0.00 |
| Forklift | 0.01 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 |
| Generator | 0.00 | 0.03 | 0.04 | 0.01 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.05 | 0.01 |
| Munitions Storage | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.01 | 0.05 | 0.07 | 0.01 | 0.01 | 0.01 |
| Crane | 0.00 | 0.01 | 0.06 | 0.01 | 0.00 | 0.00 |
| Forklift | 0.01 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 |
| Generator | 0.00 | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.05 | 0.01 |
| Munitions Maintenance Facility | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 |
| Crane | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Forklift | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Generator | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.01 | 0.00 |
| ASA Complex | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.02 | 0.14 | 0.20 | 0.03 | 0.03 | 0.03 |
| Concrete/Industrial Saw | 0.06 | 0.39 | 0.48 | 0.07 | 0.07 | 0.06 |
| Crane | 0.03 | 0.08 | 0.41 | 0.06 | 0.02 | 0.02 |
| Forklift | 0.04 | 0.27 | 0.34 | 0.05 | 0.05 | 0.05 |
| Generator | 0.03 | 0.17 | 0.24 | 0.04 | 0.03 | 0.03 |
| Concrete Trucks (1) | 0.00 | 0.01 | 0.05 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.02 | 0.06 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.33 | 0.07 |
| Year 2008 Total | 0.25 | 1.44 | 2.35 | 0.33 | 0.71 | 0.35 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 26. Building Construction Emissions for 2009 - 104th FW - Proposed Action.

| EOD Facility | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Crane | 0.00 | 0.01 | 0.03 | 0.00 | 0.00 | 0.00 |
| Forklift | 0.00 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 |
| Generator | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.02 | 0.00 |
| Dining Facility | | | | | | |
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Crane | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forklift | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Generator | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.00 | 0.00 |
| Year 2009 Total | 0.01 | 0.08 | 0.13 | 0.02 | 0.04 | 0.02 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 27. Building Construction Emissions for 2010 - 104th FW - Proposed Action.

| Engine and NDI Shops | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.01 | 0.05 | 0.07 | 0.01 | 0.01 | 0.01 |
| Crane | 0.00 | 0.01 | 0.06 | 0.01 | 0.00 | 0.00 |
| Forklift | 0.01 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 |
| Generator | 0.00 | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.05 | 0.01 |
| Year 2010 Total | 0.03 | 0.15 | 0.24 | 0.03 | 0.07 | 0.04 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 28. Building Construction Emissions for 2011 - 104th FW - Proposed Action.

| ASE Facility | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Air Compressor - 100 CFM | 0.00 | 0.02 | 0.03 | 0.00 | 0.00 | 0.00 |
| Concrete/Industrial Saw | 0.01 | 0.05 | 0.07 | 0.01 | 0.01 | 0.01 |
| Crane | 0.00 | 0.01 | 0.06 | 0.01 | 0.00 | 0.00 |
| Forklift | 0.01 | 0.04 | 0.05 | 0.01 | 0.01 | 0.01 |
| Generator | 0.00 | 0.02 | 0.03 | 0.01 | 0.00 | 0.00 |
| Concrete Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Supply Trucks (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.05 | 0.01 |
| Year 2011 Total | 0.03 | 0.15 | 0.24 | 0.03 | 0.07 | 0.04 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 29. Total Emissions from Building Construction - 104th FW - Proposed Action.

| | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| Year | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| 2007 | 0.18 | 1.04 | 1.69 | 0.24 | 0.51 | 0.25 |
| 2008 | 0.25 | 1.44 | 2.35 | 0.33 | 0.71 | 0.35 |
| 2009 | 0.01 | 0.08 | 0.13 | 0.02 | 0.04 | 0.02 |
| 2010 | 0.03 | 0.15 | 0.24 | 0.03 | 0.07 | 0.04 |
| 2011 | 0.03 | 0.15 | 0.24 | 0.03 | 0.07 | 0.04 |
| Project Total | 0.50 | 2.86 | 4.66 | 0.66 | 1.40 | 0.69 |

Table 30. Paving Emission Source Data for 2007 - 104th FW - Proposed Action.

| Upgrade to Aircraft Parking Apron and Taxiway | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Construction Activity/Equipment Type* | *Hp Rating* | *Ave. Daily Load Factor* | *Number Active* | *Hourly Hp-Hrs* | *Hours/ Day* | *Daily Hp-Hrs* | *Work Days (1)* | *Total Hp-Hrs* |
| Paving Machine | 200 | 0.50 | 1 | 100 | 8 | 800 | 0.9 | 681 |
| Water Truck - 5000 Gallons | 175 | 0.40 | 1 | 70 | 8 | 560 | 3.1 | 1,733 |
| Compactive Roller | 165 | 0.50 | 2 | 165 | 8 | 1,320 | 1.3 | 1,675 |
| Scraper | 195 | 0.50 | 2 | 195 | 8 | 1,560 | 1.3 | 1,979 |
| Grader | 180 | 0.50 | 1 | 90 | 8 | 720 | 1.4 | 1,014 |
| Loader | 215 | 0.50 | 1 | 108 | 8 | 860 | 1.4 | 1,211 |
| Backhoe | 160 | 0.50 | 1 | 80 | 8 | 640 | 1.0 | 634 |
| Bulldozer - D6 | 165 | 0.50 | 1 | 83 | 8 | 660 | 1.0 | 654 |
| Haul Truck - Paving (2) | NA | NA | 30 | NA | 33 | 990 | 1.4 | 1,394 |
| Haul Truck - Base (2) | NA | NA | 30 | NA | 16 | 480 | 1.4 | 676 |
| Semi Truck (2) | NA | NA | 30 | NA | 16 | 480 | 1.4 | 676 |
| Fugitive Dust (3) | NA | NA | 5 | NA | 8 | NA | 3.1 | 15 |

Notes: (1) Work days determined by mulitplying days from POLA-TraPac-DEIR (POLA 2006) - improve/pave demolished areas (14 acres) by the ratio of area of the region to be paved/14 acres.

(2) Number Active = miles/roundtrip, Hours/Day = daily truck trips, Daily Hp-Hrs = daily miles, and Total Hp-Hrs = total miles.

(3) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table 31. Paving Emissions for 2007 - 104th FW - Proposed Action.

| Upgrade to Aircraft Parking Apron and Taxiway | | | | | | |
|---|---|---|---|---|---|---|
| | Total Emissions (Tons) | | | | | |
| *Construction Activity/Equipment Type* | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Paving Machine | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Water Truck - 5000 Gallons | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Compactive Roller | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Scraper | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Grader | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Loader | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| Backhoe | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Bulldozer - D6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Haul Truck - Paving (1) | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Haul Truck - Base (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Semi Truck (1) | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| Fugitive Dust | --- | --- | --- | --- | 0.10 | 0.02 |
| Year 2007 Total | 0.01 | 0.03 | 0.09 | 0.01 | 0.11 | 0.03 |

Notes: (1) Includes 5 minutes of idling time per round trip.

Table 32. Construction Emissions - 104th FW - Proposed Action

| Source | Emissions (tons) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| 2007 | | | | | | |
| Building Construction | 0.2 | 1.0 | 1.7 | 0.2 | 0.5 | 0.3 |
| Demolition | 0.0 | 0.1 | 0.3 | 0.0 | 0.2 | 0.0 |
| Paving | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Subtotal - 2007 | 0.2 | 1.2 | 2.1 | 0.3 | 0.8 | 0.3 |
| 2008 | | | | | | |
| Building Construction | 0.3 | 1.4 | 2.4 | 0.3 | 0.7 | 0.3 |
| Demolition | --- | --- | --- | --- | --- | --- |
| Paving | --- | --- | --- | --- | --- | --- |
| Subtotal - 2008 | 0.3 | 1.4 | 2.4 | 0.3 | 0.7 | 0.3 |
| 2009 | | | | | | |
| Building Construction | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Demolition | --- | --- | --- | --- | --- | --- |
| Paving | --- | --- | --- | --- | --- | --- |
| Subtotal - 2009 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| 2010 | | | | | | |
| Building Construction | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 |
| Demolition | --- | --- | --- | --- | --- | --- |
| Paving | --- | --- | --- | --- | --- | --- |
| Subtotal - 2010 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 |
| 2011 | | | | | | |
| Building Construction | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 |
| Demolition | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 |
| Paving | --- | --- | --- | --- | --- | --- |
| Subtotal - 2011 | 0.1 | 0.3 | 0.4 | 0.1 | 0.2 | 0.1 |
| Project Total | 0.6 | 3.1 | 5.3 | 0.7 | 1.8 | 0.8 |

Table 33. Operational Emissions - 104th FW - Baseline

| Source | Emissions (tons) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Stationary | 2.6 | 0.9 | 1.5 | 0.9 | 0.3 | 0.3 |
| Mobile | 17.0 | 87.4 | 26.6 | 2.1 | 16.4 | 16.4 |
| Total | 19.6 | 88.3 | 28.1 | 3.0 | 16.7 | 16.7 |

Table 34. Operational Emissions - 104th FW - Proposed Action

| Source | Emissions (tons) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Stationary | 3.0 | 1.0 | 1.7 | 1.0 | 0.4 | 0.3 |
| Mobile | 49.2 | 73.7 | 61.2 | 2.8 | 9.1 | 9.0 |
| Additional Commuting | 0.8 | 15.6 | 1.0 | 0.0 | 0.0 | 0.0 |
| Total | 53.1 | 90.3 | 64.0 | 3.8 | 9.5 | 9.4 |

Table 35. Operational Emissions - 104th FW - Change from Baseline to Proposed Action

| Source | Emissions (tons) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| Stationary | 0.4 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 |
| Mobile | 32.3 | (13.7) | 34.6 | 0.7 | (7.3) | (7.3) |
| Commuting | 0.8 | 15.6 | 1.0 | 0.0 | 0.0 | 0.0 |
| Total | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |

Table 36. Yearly Change in Emissions from Baseline - 104th FW - Proposed Action.

| Year | Emissions (tons) | | | | | |
|---|---|---|---|---|---|---|
| | VOC | CO | NOx | SOx | PM10 | PM2.5 |
| 2007 | | | | | | |
| Construction | 0.2 | 1.2 | 2.1 | 0.3 | 0.8 | 0.3 |
| Operations | 8.4 | 0.5 | 9.0 | 0.2 | (1.8) | (1.8) |
| Total | 8.6 | 1.7 | 11.0 | 0.5 | (1.0) | (1.5) |
| 2008 | | | | | | |
| Construction | 0.3 | 1.4 | 2.4 | 0.3 | 0.7 | 0.3 |
| Operations | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total | 33.7 | 3.5 | 38.2 | 1.2 | (6.5) | (6.9) |
| 2009 | | | | | | |
| Construction | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Operations | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total | 33.5 | 2.1 | 35.9 | 0.8 | (7.2) | (7.3) |
| 2010 | | | | | | |
| Construction | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 |
| Operations | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total | 33.5 | 2.2 | 36.1 | 0.9 | (7.1) | (7.2) |
| 2011 | | | | | | |
| Construction | 0.1 | 0.3 | 0.4 | 0.1 | 0.2 | 0.1 |
| Operations | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total | 33.5 | 2.3 | 36.3 | 0.9 | (7.0) | (7.2) |
| 2012 | | | | | | |
| Construction (2) | --- | --- | --- | --- | --- | --- |
| Operations | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| Total | 33.5 | 2.0 | 35.8 | 0.8 | (7.2) | (7.3) |
| NEPA Significance Thresholds | 50 | 100 | 50 | 100 | 100 | 100 |
| Conformity *de minimis* Thresholds | 50 | - | 100 | - | - | - |
| 10% of Regional Emissions (3) | 1,789 | 12,545 | 1,905 | 1,608 | 1,289 | 341 |

Notes: (1) 25% of the operational increases would occur in 2007, and the full beddown of new resources and accordingly the full change to operational emissions would occur in 2008.

(2) Construction would reach completion in 2011.

(3) USEPA 2005c

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# APPENDIX E
# WRITTEN PUBLIC COMMENTS ON THE DRAFT EIS

# APPENDIX E
# WRITTEN PUBLIC COMMENTS ON THE DRAFT EIS

INTRODUCTION

This appendix presents all written public comments received by the Air National Guard (ANG) on the *Draft Environmental Impact Statement for Proposed Implementation of the Base Realignment and Closure (BRAC) final Recommendations and Associated Activities for the 104th Fighter Wing, Massachusetts Air National Guard, at Westfield-Barnes Airport, Westfield, Massachusetts*. The Draft Environmental Impact Statement (EIS) was distributed for public review and comment on April 13 and public comments were accepted through June 1, 2007 for inclusion in the Final EIS. One public meeting was held on May 9, 2007 to accept oral comments.

This appendix contains all written comments received during the review period for the Draft EIS. Original letters can be found using Table E-1 on the following page. Individual letters were then incorporated into a table that follows the original letters, with specific comments identified and responded to in the right-hand column of the table. Comments that only offered opinions or information are included, but no specific response, other than "comment noted" was provided. All substantive, relevant comments will be considered by the decision-maker.

Table E-1 lists all those who provided written comments during the comment period, alphabetically by last name. The table provides the page number where their original letter can be found, as well as the page number where the responses to each specific comment can be found. Individual home addresses were removed from these letters.

The ANG thanks all commenters for participating in the National Environmental Policy Act (NEPA) process and for providing input.

**Table E-1. Individuals that Submitted Written Comments on the Draft EIS**

| *Comment Number* | *Name of Commenter* | *Date of Comment* | *Comment Page Number* | *Response Page Number* |
|---|---|---|---|---|
| **W-007** | Begala, Jane | May 14, 2007 | E-15 | E-89 |
| **W-008** | Begala, Jane | May 21, 2007 | E-18 | E-91 |
| **W-006** | Bergeron, Paul A. | April 16, 2007 | E-14 | E-88 |
| **W-005** | Blews, Donna J. | May 16, 2007 | E-13 | E-87 |
| **W-028** | Boucher, Kenneth | May 28, 2007 | E-50 | E-101 |
| **W-036** | Breyer, William | May 30, 2007 | E-60 | E-104 |
| **W-018** | Bruneau, Rosalie | May 18, 2007 | E-35 | E-97 |
| **W-049** | Burkhalter, Deborah | May 23, 2007 | E-77 | E-113 |
| **W-045** | Carpenter, Jean | May 30, 2007 | E-71 | E-111 |
| **W-022** | Cass, Stephen D. | May 23, 2007 | E-42 | E-98 |
| **W-020** | Columbe, Alan and Mary Ellen | May 18, 2007 | E-38 | E-98 |
| **W-040** | Cosgriff, Michael | May 31, 2007 | E-64 | E-107 |
| **W-046** | Cotnoir, Mary E. | May 31, 2007 | E-72 | E-111 |
| **W-021** | Covell, William and Mary | May 16, 2007 | E-40 | E-98 |
| **W-027** | Cresswell, Dorothy | May 26, 2007 | E-49 | E-100 |
| **W-032** | Crockwell, Richard and Joan | May 22, 2007 | E-56 | E-101 |
| **W-017** | D'Angelo, Gregg and Ann | May 14, 2007 | E-34 | E-97 |
| **W-050** | Demelbauer, Leo and Mary-Claire | May 23, 2007 | E-78 | E-113 |
| **W-051** | Demelbauer, Leo and Mary-Claire | May 24, 2007 | E-80 | E-115 |
| **W-004** | Drake, David R. | April 12, 2007 | E-11 | E-87 |
| **W-015** | Easkalka, Mark | May 9, 2007 | E-32 | E-96 |
| **W-035** | Fanion, Lulu and James | May 24, 2007 | E-59 | E-103 |
| **W-037** | Folta, Frank J., Jr. | May 29, 2007 | E-61 | E-104 |
| **W-019** | Forauer, Linda A. and Lisa M. Tinney | May 17, 2007 | E-37 | E-97 |
| **W-023** | Fries, Henry | May 31, 2007 | E-43 | E-99 |

| *Comment Number* | *Name of Commenter* | *Date of Comment* | *Comment Page Number* | *Response Page Number* |
|---|---|---|---|---|
| **W-048** | Gagliano, Carl and Joy | May 24, 2007 | E-76 | E-112 |
| **W-024** | Goodwin, Molly | May 30, 2007 | E-44 | E-99 |
| **W-052** | Greenwood, Michael and Karen Guzman | May 23, 2007 | E-81 | E-115 |
| **W-039** | Hall, Allyn and Kimberly | May 31, 2007 | E-63 | E-106 |
| **W-033** | Hetu, Renee and Scott | May 29, 2007 | E-57 | E-102 |
| **W-012** | House, Bill | May 21, 2007 | E-29 | E-95 |
| **W-044** | Kirsch, Karen and Claude Borowsky | June 1, 2007 | E-69 | E-109 |
| **W-026** | Krupa, Bruce and Dorothy Cresswell | May 18, 2007 | E-47 | E-100 |
| **W-047** | LaPalme, A. R. | May 24, 2007 | E-74 | E-112 |
| **W-016** | Layman, Cary | May 9, 2007 | E-33 | E-97 |
| **W-013** | Layman, Sally | May 9, 2007 | E-30 | E-96 |
| **W-003** | Masciadrelli,Albert Joseph | May 2, 2007 | E-8 | E-87 |
| **W-038** | McNamara, Susan | May 30, 2007 | E-62 | E-105 |
| **W-053** | Murphy, Paula | May 23, 2007 | E-82 | E-117 |
| **W-002** | owner of Arbor mobile home park | May 4, 2007 | E-6 | E-85 |
| **W-001** | Pais, Jeremy | April 26, 2007 | E-5 | E-85 |
| **W-031** | Pelletier, Patricia | May 25, 2007 | E-54 | E-101 |
| **W-014** | Pighetti, Heather L. | May 9, 2007 | E-31 | E-96 |
| **W-054** | Pudlo, William J. | May 30, 2007 | E-83 | E-117 |
| **W-009** | Ripa, Thomas | May 11, 2007 | E-22 | E-94 |
| **W-025** | Rogers, Allison | May 24, 2007 | E-46 | E-99 |
| **W-030** | Rundquist, Marcea | May 22, 2007 | E-53 | E-101 |
| **W-034** | Rundquist, Robert A. | May 22, 2007 | E-58 | E-103 |
| **W-029** | Samonds, Kenneth W. | May 22, 2007 | E-52 | E-101 |
| **W-055** | Sampson, Patricia | May 23, 2007 | E-84 | E-118 |

| *Comment Number* | *Name of Commenter* | *Date of Comment* | *Comment Page Number* | *Response Page Number* |
|---|---|---|---|---|
| **W-043** | Sanders, Laurie and Fred Morrison | May 31, 2007 | E-68 | E-109 |
| **W-011** | Sizer, Quentin | May 19, 2007 | E-25 | E-95 |
| **W-010** | Slinski, Marge | May 16, 2007 | E-23 | E-95 |
| **W-042** | Tverdokhlebov, Alexander | May 29, 2007 | E-67 | E-109 |
| **W-041** | Tverdokhlebov, Vladimir | May 29, 2007 | E-66 | E-109 |

April 26, 2007

Mr. Robert Dogan
NGB EIS Project Manager NGB/A7CVN
Conaway Hall
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

CC: Donald F. Humason, Jr.
Massachusetts State Representative
64 Noble Street
Westfield, MA 01085

CC: Congressman John Olver
1111 Longworth HOB
Washington, D.C. 20515

***Subject: F-15 Noise Mitigation Funding for Barnes Municipal Airport in Westfield, MA.***

Dear Mr. Dogan,

I am writing this letter as a concerned son of parents that live on the perimeter of the estimated 65 decibel noise impact from the newly arriving F-15 fighters to Barnes Airport. My mother has worked nights for twenty years, and my chief concern is that this new air traffic will disrupt her sleep. In the past the A-10 fighters have not caused a problem, but as I understand it, the F-15s are considerably louder and there are going to be more of them.

In the April 11th edition of *The Springfield Republican* the cover story did little to ease my concern. According to the article, 261 housing units have been designated for noise mitigation funding that would include thicker windows and added insulation. My parents' home is clearly on the envelop of the 65 decibel zone, however, they have not heard if they qualify for noise mitigation.

I would appreciate if my parents' home would be considered for noise mitigation. If there are more proactive steps my parents need to take, please send further information on the process and criteria. They live at the following address:

**Thomas and Mona Pais**
[redacted]

Thank you,

Jeremy Pais
(concerned son)
[redacted]

[redacted]

May 4. 2007

Robert Dogan
NGB EIS Project manager
NGB/A7CVN. Conaway Hall
3500 Fetchet Avenue
Andrews AFB. MD 20762-5157

Via Mail and fax 301-836-7427

Dear Mr. Dogan.

[redacted]

**Comments and Questions on the Draft EIS for**
**Westfield-Barnes Airport Westfield MA**

1. There is a unique opportunity to avoid the potential impact that his conversion will have to the 58 units of affordable home ownership that are currently available Arbor Mobile Home Park. The park is a 5.8 acre parcel. The owner of Arbor Mobile Home Park is also coincidently the same owner as Henrys Mobile Home Park located 1 mile north of Arbor and also in the city of Westfield. Henrys has vacant land in excess of 5.8 acres and with improvements could be used for mobile home placement. Municipal sewer and water service both properties. It is proposed to the Bureau and or the FAA with cooperation of the owner of the land to investigate and invest in an engineering study to explore this option. Will the Bureau consider this proposal?

2. A MAI appraisal of Arbor Mobile Home Park completed Feb 13. 2006 states that "the highest and best us of the subject is for continued use as a Mobile home park". The introduction of the F-115 makes the noise level at the Arbor Mobile Home Park in excess of 65 dBA. This level is stated as an "incompatible" use (page 145 of Draft EIS). The inherent value is of the land is derived from being able to lease the land to mobile home owners. If the land is "incompatible" with mobile homes the value of the land is substantially decreased people may not want or be able to rent this land. Is it in the National Guard bureau's scope to consider this decrease in land value? Is it in the FAA scope to consider this decrease in land value? Removing these homes would create and economic hardship to the Arbor Mobile Home Park Management and owners. Do you have a plan to compensate the ownership of the park for this potential loss in revenue. land value, and economic hardship?

1 of 2

3. According to the response on page 249 of the Draft EIS this project will cost approximately $77 million. Is any of that money budgeted for noise remediation for the homes and land areas affected by the increased noise level?

4. Who form the FAA is in charge of the F150 impact study and remediation report?
Does the FAA have any information about the Barnes conversion project from A-10's to F-15's in addition to the Draft EIS by the National Guard Bureau? If available, how can the public obtain that information?

5. What are the steps and timelines for each step for the F150 Impact study?

6. The new F-115 aircraft is expected to start flying in the first quarter of 2008, will the FAA 150 study be in draft or completed form be available before the new aircrafts are expected to fly?

7. The National Guard Bureau has provided the web site http://www.104conversion.gcsaic.com/ does the FAA have an equivalent informational site for this matter?

8. If homes are purchased and removed will "new" residents be able to move homes onto those vacant lots?

9. Will the land owner of Arbor Mobile Home park have the option to NOT have the houses removed and transfer their ownership to the land owner if they are purchased by the FAA?

10. If an FAA 150 study is completed and purchase and removal is presented as an option to residents how long will residents have to decide to elect this option?

11. What other FAA 150 studies have been completed in the last 5 years that have mobile home parks and or mobile homes as part of the land use mitigation measures?

12. According to a FAA presentation published be Rick Etter on March 9, 2005 titled " changes to 49 CFR Part 24" slide A-56 states that "Limited to $22,500 unless last resort applies" could you comment about this information. I have attached the 10 page presentation.

13. The Draft EIS report indicates on page 20 under the proposed action section that the affected residents do not have a "disproportionately high and adverse effects on minority or low-income populations". If new data wascollected to show that there is a disproportionably high number of residents with low income and or many residents are disabled what impact might that have on the findings or proposed remediation plans?

Thank you for your consideration on these questions and answers. I realize there are a lot of questions here but this actions could have tremendous impact on residents, home owners, and land owners in the immediate area due to this proposed change.

[redacted]

2 OF 2



Albert Joseph Masciadrelli [redacted]



May 2, 2007

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetcher Avenue
Andrews AFB, MD 20762-5157

Dear Mr. Robert Dogan,

I am in receipt, from your office, the Draft "*Environmental Impact Statement (EIS) for the Proposed Implementation of the Base Realignment and Closure (BRAC) Final Recommendations and Associated Actions for the 104th Fighter Wing (104 FW), Massachusetts Air National Guard at Westfield-Barnes Airport*".

I consider this opportunity, which you have awarded me, a privileged and a great honor in allowing me to review and comment on the contents of this document and I can assure you that I have read this document with an open mind. We are all cognizant that in reviewing a document, such as this, an open mind in premier when it comes to what is best for National Security, the effected Communities, Personnel and the effects on the Environment. These are all key concerns and must be in partnership with each other to resolve any anomalies to a successful conclusion.

Upon reading this document you have not left anything to chance, your in-depth studies on the conversion statements of the November 2005, "The Base Relocation and Closure Committees Recommendation", which became law by their actions. I am cognizant that the 104th Fighter Wing through this promulgation will go through a transformation that will impact the local community, as well as the Air National Guard and the Air Force. We all must be partners in this as we all together undergo a metamorphosis change from our present top-rate A-10 Unit as we all got to know through the 104th Fighter Wing Public Relations Unit process to a stellar F-15 Unit that we will in the future get to know through the same 104th Fighter Wing Public Relations process.

This Draft Document, EIS, has set the stage as a catalytic process for full acceptance by all parties of this great Nation of ours. Yes, there will be anomalies by some but the bottom line is that in this age of uncertainty stealth treats to our daily life we must put those anomalies to one side. Over my years as an adult in the United States Army, as an employee in the Aero Space Industry and my private life I have always been cognizant of the Defense Department's, 104th Fighter Wing, and their affiliations in their awareness and concerns on the environmental impacts on all of their processes and their efforts in finding ways to minimize and or eliminate these impacts on the environment globally. This Draft EIS surly is sensitive to the impacts on all aspects of the environment and the concerns of all citizens. These Draft EIS surly addresses the mission statements of the Defense Department's and the104th Fighter Wing's on the environment without reservations.

I was very impress in how you addressed three key elements (Listed below "Key Elements".) of concern of the 104th Fighter Wing's Organization not to exclude the United States Defense.

Department on the community and the facility that it resides at in this comprehensive document, The Draft EIS, which I personally considered as a forthright document that I believe should satisfies every individuals concerns without reservations.

KEY ELEMENTS:

- In-depth description of the Proposed Action.
- Technical descriptions of the existing conditions.
- Quantitative and qualitative analyses of projected environmental impacts from implementing the aircraft conversion.

The Draft EIS addressed without reservation in forthright investigative and active studies focused on the National Environmental Policy Act (NEPA) requirements in a very scientific analysis process on environmental resources potentially affected by any proposal such as this. This scientific analysis process considered many elements that would affect the environment at and surrounding Westfield-Barnes Airport, several specific environmental resources were evaluated in detail as covered in the Draft EIS. The potential environmental consequences for each resource (Listed below "Resource Area".) are summarized in the report with up-most sensitivity of concerns to eliminate any negative response by any individuals on the conversion mission of the 104th Fighter Wing.

RESOURCE AREA:

- Noise
- Land Use
- Socioeconomics
- Air Quality
- Airspace
- Safety
- Solid & Hazardous waste
- Infrastructure
- Earth & Water
- Biological
- Cultural

I am satisfied at the length this Draft EIS process went to eliminating and controlled any threats to the Environment at and surrounding Westfield-Barnes Airport.

I am pleased to ENDORSE the Draft EIS and the proposed action of implementing the "2005 BRAC Commission Final and Approved Recommendations, which recommended that the 104th Fighter Wing undergo an aircraft conversion from the A-10 to the F-15. As part of the aircraft conversion and mission change, the 104th Fighter Wing will also have an increase of personnel and to accommodate the mission change for the 104th Fighter Wing the National Guard Bureau and this process will implement several construction and demolition projects at the 104th Fighter Wing installation at the Westfield-Barnes Airport

Albert Joseph Masciadrelli
[redacted]

There should be no reservations by anyone person on an endorsement of this Draft Environmental Impact Statement. The Westfield-Barnes Airport is a jewel and now the City of Westfield, Massachusetts has a door fully open to benefit economically for a long time with an impact of enhanced infrastructure that can only benefit our local community and other surrounding communities. With everything that is accruing at Westfield Barnes Airport presently the assets can't be measure except for a value benefit.

We are very fortunate to have an organization, 104th Fighter Wing, like this as a partner to the community in the best interest of National Security. The technology that this conversion will bring now and in the future through up-grades will spin off as an economical and educational tool to the infrastructure throughout the community as mutual aid processes not only as shared partnership but the possibilities of training together in mutual processes of Public Safety in the best interest of the City of Westfield and surrounding communities.

We are very fortunate also in having an organization like this as partners in the best interest of National Security on our door step and we are cognizant that the personnel over the years have exhibited attributes of professionalism of esteem integrity as one world class team. The personnel of the 104th Fighter Wing and all members of this organization are the best and they are the most communicating sensitive organization in keeping the community informed leaving nothing to chance.

We and all of us must ENDORSE this facility as a homerun for the Nation and City. The spin offs will be immeasurable as a benefit in all aspects of our daily life. The National Guard Bureau stated "*that they look forward to continued its positive relationship with the local community, the City of Westfield, and the surrounding regions*" in a response to a comment in the Draft EIS Scoping Comments. This statement is a reflection of their sensitivity to what is encompassed in the Draft EIS and the impact on the City of Westfield and surrounding areas.

Thank you for this opportunity to comment on this and you have my full **ENDORSEMENT**.

Respectfully your,

Albert Joseph Masciadrelli
[redacted]

Cc.: Colonel Marcel E. Kerdavid Jr., 104th Fighter Wing Commander - Massachusetts Air National Guard at Barnes Airport's
Captain Mary Harrington, Public Affairs Officer, 104th Fighter Wing
Captain Matthew Mutti, Public Affairs Officer, 104th Fighter Wing

[redacted]




April 12, 2007

Robert Dogan
NGB EIS Project Manager,
NGB/A7CVN Conaway Hall,
3500 Fetchet Ave.,
Andrews Air Force Base, MD 20762-5157

Dear Mr. Dogan,

Along with many others, we are pleased to welcome the Air National Guard 104th Fighter Wing's newest personnel and aircraft to Westfield.

During the comment period that has now begun, I do want to make you aware of White Oak School's presence near the northern end of the Barnes airport. White Oak serves over a hundred students with specific learning disabilities who come to us from throughout the region. We are a state-approved, not-for-profit school devoted primarily to helping our students develop age-appropriate academic skills.

Frequently, our students' also show difficulties with auditory processing and auditory distractibility; many of them also have been diagnosed with attention deficit issues.

I'm writing to you at this point out of concern for what has been in the press about increased noise associated with the F-15 aircraft, and with the plan to have "90 percent of the takeoffs to the north of the airport to minimize noise" (*Springfield Republican*, 4/12/2007). If the takeoff-related noise of this aircraft is this significant, I'm sure you can share my concern about its potential effect on children's learning.

Our experience with the Air National Guard's A-10 aircraft has been excellent. Their takeoffs and landings have been in patterns that have taken them away from the school, and their overflights have been at an altitude that eliminated any significant sound problem. Frankly, they've been great and we couldn't have asked for better neighbors.

I'm writing in the hope that we can continue this kind of experience -- and that this information about the nature of the school and its location can be passed along to those responsible for overseeing the takeoff and flight patterns of the F-15's. I attach a map of the school's location in relation to Barnes, for your reference.

Noise management is a significant concern for us, but one that I'm sure we can address through planning and advance discussions. I would be pleased to respond to any questions or comments in regard to this letter.

Sincerely,

David R. Drake
Headmaster

May 16,2007

Mr.Robert Dogan
NGB EIS Project Manager
NGB/A7CVN, Conaway Hall
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Dear Sir:

This letter is in reguards to the articales published in the Springfield Republican, and the Westfield Evening News concerning the movements of the Air National Guard at Barnes Airport, Westfield, Massachusetts.

In the articales written in the newspaper,were the statements that the mobil homes located at the Arbors Mobil Home Park and I quote..."can not be sound insulated and will normally be purchased and removed."

As a resident of this park, I have questions concerning the future of this mobil home park. The questions I have are....

1) Will the FAA possibly approach our land lord, Mr James Burrotti to by out the property from him?

2) When the FAA decides to start the by-out and removal of the mobil homes, will a new mobil home be able to be put in its place?

3) What will happen to those people who wish to remain living in the park, do they get compensated is some way same as the regular homeowners?

4)Is there a date when the FAA will begin the by-out of the mobil homes, and when is this by-out tobegin taking place?

5) How will the FAA determine the amount paid to the mobil home owner for the by-out?

6) If a by -out happens, how long will the by- out offer stand for?
Meaning,if some residents wish to continue living at the park, say after two years, they can not stand the noise any longer will they still be eligable for the by- out program?

7) If there will be a person in charge of the by- out program, who will that person be so we can direct our questions to them?

I am also writting for a hard copy of the DRAFT EIS as well.
If available, please give me more information on the mobil home by-out program.
The reason I ask, is I have just moved into the park as of 2006,by purchasing a brand new mobil home which is paid in full. What will become of the newer homes in the park?
I would appreciate your answers to the above questions,as they will clearify what will be the future of my home here.
Your assistance in this matter would be great appreciated.

Sincerely yours

Donna J. Blews

[redacted]

April 16, 2007

TO: Mr. Robert Dogan (PM)

NGB EIS Project Manager
NGB/A7CCVN
Conaway Hall
3500 Fetchet Ave.
Andrews AFB, MD. 20762-5157

RE: Request for Draft EIS copy.

Mr. Dogan

I am requesting a hard copy, and if one is available a "computer disc" copy of the Draft EIS document that is part of the 104th conversion from A10s to F15s.

My computer efforts to pull down a copy from the website www.104conversion.gcsaic.com, indicated to me the very large "pdf" file of +9mg would be too much for my ISP dial up system.

I have an interest in this project and its impact to the community and housing. I am a former Westfield, Mass. Resident, and my daughter owns a home in the "noise impact" identified area; she is in the 65-dbl areas.

Ironically I also have an interest due to the fact of a related issue here in Chicopee, Mass., home of Westover ARB. In the last year, the C5s at Westover have been practicing low level approaches utilizing patterns out of the normal "runaway" takeoffs and landings. They have been out of the "normal" noise abatement control area, and these "landing/take off avoidance" maneuvers have, and are becoming a serious noise issue. These low level maneuvers are very concerning as they now fly directly over our homes.

I know Westover ARB's issues have nothing to do with your project, but the issue of "noise" now seems to help bring to the forefront my interest in the 104th Fighter Wing project, especially as it relates to the possibility of F15s flying "out of the Normal" takeoff and landing patterns; in other words, breaking the "noise identified patterns".

Thank you very much,

Paul A. Bergeron (SMGT, retired)

[redacted]

007

Jon,

Per our discussion this morning, I am raising the following concerns regarding the recently-released draft "Environmental Impact Statement" issued by the MA Air National Guard, FAA, Westfield-Barnes Airport, and MA Aeronautics Commission. Following my concerns, I list specific questions that I would appreciate an answer to as rapidly as possible, given that the period for public comment expires on June 1, 2007.

Concern 1: I am concerned that the EIS was prepared by Air National Guard funded consultants, without any input from objective federal or state environmental scientists, and is entirely based on methodology using projections from a "noise model". As we all know, the parameters of such simulation models can be greatly manipulated. No direct noise observations or recordings of F-15s that take-off and land at other airports were included in the calculation of "anticipated noise levels". Given this, the numerous noise contour maps presented in the EIS are questionable because:

a) they do not include the after-burner noise effect of the F-15s;

b) they are "averages" that underestimate the frequency and duration of planned flights. At the public hearing on May 9, 2007, it was explained that there will be an increase from the current 5 sorties a day that the ten A-10s carry out to 7 sorties a day by the eighteen F-15s, 7 days a week (from 7AM to 10 PM every day), and 355 days a year, plus "scrambles", ground tests, etc.

c) they lead to underestimated noise impact and recommendations.

The EIS presents noise contour maps in the range of 65 to 85 decibels. However, as explained at the public hearing, these are "averages" based on take-offs and landings, so noise levels will most certainly reach to 90 decibels and beyond. It is a well documented and scientific fact that sustained exposure to 90 decibel noise levels leads to permanent hearing loss. It is almost a given that under takeoff and landing situations when using afterburners, that even that 90 decibel level will be reached or exceeded. At the public hearing, it was proposed that folks could apply for roof insulation. That will not correct the situation for anyone spending anytime outside one's home, including the people on Hampton/Pequot pond who are boating and trying to enjoy recreational activities of any kind. Public verbal comments at the hearing included the testimony of a man who heard the "good noise" of the RAF during World War II. While I admire the man's service to this country, his wartime recollection of noise is not the "quality indicator" that should guide the quality of life for those living in the Westfield, Southampton, and other neighboring areas impacted by this.

Similarly, concerning the part of the EIS that addresses wildlife and water conservation, the report makes statements like: "The permanent and long-term loss of approximately 0.85 acres of undeveloped land would have minimal impact on resident wildlife given the fragmented nature of the habitat that would be permanently affected as well as the high level of human activity in the project area. Much of the impacted areas are disturbed (i.e., landscaped, urbanized areas). Wildlife may be temporarily displaced during construction activities, but may return after construction and landscaping is complete." (pages 4-60, 4-61). These portions of the report only include the federal and Massachusetts laws but do not include any references to any scientific studies that support these kinds of claims (this quote is only one such example). The report lacks scientific rigor and reaches conclusions that are not evidence-based. I live on the Hampton/Pequot pond and have directly observed the increase of bird life, including the Great Blue Herons and other fragile bird life that will not simply shift their patterns and rebound under constant noise in decibel ranges which can exceed 90 dbl, a level that causes human hearing loss. One can

imagine how all of this constant, high level noise will affect pets and other animal life as well, which is not addressed in the report. We have directly observed a black bear walking down our beach on this pond in recent years, so there are other mammals not mentioned in the report.

Again, even the head of the private company hired by Barnes to perform this study has used such terms as "dramatic" and "drastic" in his report to the Massachusetts Aeronautics Board at the 967th Commission Meeting of the Aeronautics Commission (held on Wednesday, December 20, 2006 at 10:17 A.M. at the State Transportation Building, in Boston, Massachusetts).

Concern 2: I understand that the BRAC and resulting federal law means that the 18 F-15s are reassigned to Westfield-Barnes airport and that there is no possibility to influence that decision. However, I observed at the public hearing that the general public did not seem aware that the two "Proposed Actions" in the EIS, which describe only two alternatives for the F-15 flight patterns, could be influenced. The public seemed relegated to moving their mobile homes or applying for soundproofing, rather than having carefully read the EIS or questioning the two proposed actions.

I am extremely concerned that the first (preferred and planned for) proposed action, which would guide an estimated 2725 departures, 2725 arrivals, and 936 "closed patterns" per year is: "the 104FW proposed to focus aircraft take-offs on Runway 02, which will result in approximately 90 percent of the take-offs occurring to the north of the airport (Figure 2.2-1)" (page 2-8 of the draft EIS report). Though not many/any of the contour maps show the location of the Hampton/Pequot pond, the Department of Recreation and Conservation, and the state park, it is directly affected by this flight pattern. No rationale was given during the public hearing for how these two proposed actions were determined, or why there are not other alternative flight patterns that would affect fewer residences, protect the nature and open space of the Hampton/Pequot pond and its wildlife, etc. Certainly the MA Air National Guard has sufficient funds, given their construction plans within this conversion, to realign or re-asphalt the runway so that other, citizen-friendly angles of take-offs and landings could be accomplished. Yet there is no discussion in the EIS and no discussion at the public hearing about other alternative flight patterns that are more citizen-friendly, including possible noise abatements (since the F-15s can climb to higher altitudes, faster, than the A-10s).

Concern 3: I am concerned that there be a more meaningful series of opportunities for private citizens, advocates, and environmental groups to: review and comment on EIS; and have a chance to intervene and/or influence the proposed flight patterns of the F15s. I have been calling groups far and wide and have yet to find an office that was aware of the public hearing. I only found it advertised in a "Penny Saver", which is a far cry from wide public advertisement that would also include notification of all relevant agencies.

Here are my specific questions:

Question 1: After the public comment period ends on June 1, what happens to these comments (other than becoming an appendix in the EIS)? In other words, what are the opportunities to discuss other alternative proposed actions for the flight patterns and also noise abatement? What is the process, and what opportunity is there to effectively engage and intervene concerning these topics?

Question 2: How can a full and independent EIS be prepared by the Massachusetts EPA, Department of Environmental Protection, and appropriate partners to ensure that scientifically-accurate noise contours be established using actual data obtained under real flight conditions? Recommendations of this Air National Guard EIS should be reviewed in conjunction with such an independent EIS or study.

Question 3: How can the affected 1300 acres (according to the draft EIS) be included in a noise abatement program that begins before the F-15s start flying at the beginning of 2008? These planes are able to take off and fly at high altitudes in order to reduce engine thrust to the absolute minimum during both take-off and landings, and hours of flight operation should be restricted further.

Question 4: How can I get multiple copies (both hard copies and CD-ROMs) of the draft EIS immediately, so that I can bring them with me and distribute to the Southampton Board of Health? I am on their agenda for the evening of May 22nd to speak about this issue. (Note: While there appears to be a link to the draft EIS on the website: www.104conversion.gcsaic.com, after multiple attempts I am not able to open neither the draft document nor the schedule from this website. At a minimum, it seems to me that this should be corrected immediately or, alternatively, the comment period should be extended so that the public and agencies can actually access these materials.)

Thank you very much for consideration of these issues and questions. I look forward to as rapid a reply as possible, given the June 1 deadline for public comment.

Jane Begala, MSPH, MBA
[redacted]

Public Comment on the draft Environmental Impact Statement: "Proposed Implementation of the Base Realignment and Closure (BRAC) - Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport, Westfield, Massachusetts"

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

May 21, 2007

Mr. Dogan:

I am submitting a second set of public comments and concerns regarding the recently-released draft "Environmental Impact Statement" issued by the MA Air National Guard, FAA, Westfield-Barnes Airport, and MA Aeronautics Commission. I received a reply to my "statements" (only) – but not the "concerns" I outlined in my previous public comment, which I consider an incomplete and unsatisfactory reply. Also, the reply from Matthew Mutti, Public Affairs Officer of the 104 Fighter Wing (which was relayed through Congressman Olvers' district office) is non-specific. For these reasons, I am submitting additional, serious concerns and reservations concerning the poorly studied impact analysis before the June 1 deadline. I hope that the Air National Guard will proactively seek to work with the affected communities (particularly Southampton and Westfield, MA) to ensure that communities benefit from the conversion, and do not just suffer the negative effects of noise on humans, pets, wildlife, property values, etc.

Additional Issue 1: The following of Captain Mutti's statements is not specific and not scientifically corroborated in the draft EIS: "Some of the environmental resources areas potentially affected and analyzed in the EIS include aircraft noise, water resources including wetlands, protected wildlife, and safety; for both the area's residents and the members of the 104W, just to list a few." While "effects to wetlands and wildlife are considered in the EIS" (again, quoting Captain Mutti's letter), the assessment and analysis approach in the draft EIS is not sufficiently science-based. In other words, very broad statements are made, particularly in the sections concerning effects on wildlife and the environment, but also throughout the report, without footnotes or an annotated bibliography that would provide scientific evidence via the published literature for these statements. In places where there are references to sources like the U.S. Forest Service, the document does not make clear that the referenced study was specific to this type of military, high-noise producing F15s aircraft, but rather makes general statements about the effects of 'aircraft', without specifying what kind.

I would like a copy of the draft EIS that has an annotated bibliography, that is, so that remarks like following are scientifically corroborated: "Similarly, while the general acoustic environment at the airport is expected to become louder than it currently is, most wildlife that currently utilize the airport are not likely to be displaced as a result of an increase in the noise conditions; they are likely habituated to the loud noises of aircraft.

While most wildlife in the area may be habituated to high noise levels, substantial increases in noise levels due to aircraft conversion may cause some individuals to move from the area."
In other words, we can expect to hear either the roar of these non-commercial, very high noise F-15s….or a literal "dead silence", since all the migratory, nesting, and mating birds will have gone forever.

I would also like a specific explanation of how it will be determined which residences are targeted within the 65 decibels that would trigger mitigation of noise effects? The current noise contour maps only present average decibels, which would suggest that there are additional noise contour lines that have not yet been drawn/determined which would include residences that will experience 65 decibels as part of an average noise load less than 65 decibels. That would mean that many more residences are going to be effected by noise than just those meeting the 65 decibel average. Please provide corrected contour noise maps that show the real extent of all those residences that will hear occasional, regular, and frequent 65 decibel levels.

Additionally, I would like to see the same noise contour maps produced with the FAA noise model for comparison to the results produced by the Air National Guard noise model. How do these results compare? Since all of these estimated "results" are produced on the basis of simulations or forecasts of these models, it would seem most prudent to include the larger group of effected residences and property, not the most conservative estimate, wouldn't it?

Additional Issue 2: The draft EIS does not present analysis of the cumulative effects of noise at such high intensity and duration. The assessment lacks actual F-15 recorded noise data. The analysis falls short of an in depth analysis that would include anticipated long-term effects (and what the plan is for mitigating these effects). In my opinion, the EIS should be validated by an objective party that has a genuine, technical noise expert (with demonstrable academic and field experience and publications on the topic of the effect of noise from non-commercial planes).

Additional Issue 3: It is not clear if the FAA Part 150 Study has been initiated, is completed, or is underway – what is the status of this FAA-controlled study? What is the relationship of the results that will be produced using a FAA noise model vis a vis the results SAIC produced using the Air National Guard noise model?

The relationship of the FAA's findings to the military-funded and controlled findings are unclear. Which would take precedence and why? I do not understand how a FAA study would take precedence over the BRAC; my guess is that the FAA Part 150 Study will have little or no effect.

As a member of the interested public, I would like a comparison of the parameters, assumptions, and results of each of these different noise models. This is extremely important, particularly since statements were made at the public hearing on May 9, 2007,

indicating that "very limited, restricted criteria" were going to guide any type of support for soundproofing assistance, property acquisition, etc.

Additional Issue 4: I would like to point out that soundproofing – even if provided very freely and to a wide swathe of residences – is only a partial solution. Does the Air National Guard intend that all public citizens will only live within their residences, never free to garden or be outside, or have any peaceful, recreational time on the lakes, ponds, and other waterways in the area? I would like an outline of the rest of the noise mitigation plan, including ensuring that children can play outdoors throughout the affected area (not just effects at the immediate airport).

Additional Issue 5: I would like to know what technical experts in noise conducted and wrote the draft EIS within SAIC. Captain Mutti's statement that: "SAIC was selected on the merits of their ability to objectively do this work" is highly questionable. How can it be claimed that SAIC is "objective" when in fact SAIC is under contract to the Air National Guard? I would like to be provided proof of this objectivity, especially since this statement indicates that "objectivity" was a criterion of awarding the contract. I would also like to be provided with proof of their technical expertise, including specific degrees and academic and field experience that qualifies them as "noise experts".

Additional Issue 6: What is the specific process by which (before or after the Part 150 Study?) the communities can have input into the "proposed actions" described in the draft EIS? I would like to register serious dismay and concern that there are only two proposed actions, presented again without the scientific evidence that would explain why these are: a) appropriate; b) the only alternatives (!); and c) assurance that the priority proposed action is the least detrimental to surrounding communities (not only the most appropriate from the perspective of a military tactic).

I am concerned by Captain Mutti's statement: "F-15 flight operations will be based on training requirements and more importantly national security." Where is the community component in these considerations? How will/can the community be involved in an active and ongoing basis with the expected long-term noise abatement and community benefits programs that will be needed?

Additional Issue 7: The issuance of the draft EIS and the invitation for agency and public comment have not been sufficient. Captain Mutti states that: "The availability of the draft EIS along with the date, place, and time for the public hearing was published in the Federal Register, national and local media including the Republican, Reminder, and Gazette, as well as every major local television station, and multiple radio stations, including clear channel stations and National Public Radio."

While I did not see or hear any of these advertisements (and question how frequently they were advertised and for what duration), what is more important is that most of the agencies and offices I have contacted also did not know about the availability of the draft EIS, the public hearing, or the entire process for comment. It is not sufficient to simply advertise via the media. The Air National Guard should have directly contacted relevant

town officials, relevant citizens groups (like the Hampton Pond Association), and local offices of state agencies that oversee the state park, etc. None of this was done, for none of these folks knew about the EIS or its process or the possibility for comment. So the intent of the law with regards to widely publicizing and informing the public and relevant agencies about the draft EIS and the process for comment, discussion, and influence has not been accomplished.

Additional Issue 8: The relocation of the 18 F-15s raises significant concerns and possibilities that the Westfield-Barnes airport and surrounding area could be a target for nuclear ("dirty bombs") and/or non-nuclear attack or terrorist threat. The draft EIS omits assessment of these safety concerns and potential impacts on the surrounding towns and area. The draft EIS should be amended to include this assessment and a resulting detailed nuclear and non-nuclear safety precaution and evacuation plan that includes both military families and civilian families in surrounding communities.

I would appreciate a reply to this and the prior public comment, including specific answers to the prior concerns (from my public comment provided since the May 9th public hearing) and additional issues I have also raised in this May 21 public comment.

Thank you very much for your serious consideration of these issues, and immediate actions to address each of the concerns and each of the additional issues above. I would appreciate not only that this be included, in total and verbatim, in the final EIS issued by the Air National Guard, but that I also receive specific answers regarding how we can effectively engage on these issues. You can write me at the email below or please also feel free to call me.

Sincerely,

Jane Begala

Jane Begala, MSPH, MBA
[redacted]

May 11, 2007

Robert Dogan
NGB EIS Project Manager
NGB/A7CVN Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base
MD 20762-5157

Sir:

I wish to be included in those receiving hard copy of the draft federal environmental impact statement on the conversion of the Westfield, Massachusetts Air National Guard's conversion over to F-15s. I live slightly to the side of the flight path and a short distance from the field.

Operating on the reasonable assumption that Andrews Air Force Base is a real military base with a correctly sized operating field, Barnes is but a very small version of that. It in addition suffers from being close to East Mountain, essentially parallel. This reality will center flight behavior and the resulting effects and affects(see enclosed news item).

You are a professional, to some degree this is a silly matter, we have a large air field close by, Westover Air force Base(or formerly), with 12,000 foot runways and essentially no Mountain ridges interfering in the channeling of aircract performance. I see this as a clasic example of political influence in what should be a straight military matter of what is best for aircraft performance. One than witnesses such stupifying comment as the former City Councilor of Westfield, (enclosed and annotated), moving a fighter wing from here to there will have no effect upon economics

If you had to move them, I would wager, left to your professional concerns and that they had to remain in Massachusetts, Westover would have been the better alternative.

I suggest for yourpersonal reading a fine very short read, "On Bullshit" by Harry G. Frankfurt, Professor, Philosophy, Princeton University, $9.95 very small hardback.

Sincerely yours,

Thomas Ripa

[redacted]

P.S. Thank you, in advance, for the hard copy

May 16, 2007

To: Laverne Reid, FAA, New England Airports Division
Robert Dogan, NGE EIS Project Manager

From: Marge Slinski, Community Participant
1980's Barnes Airport Noise Study

Re: 2007 Barnes Air Guard Noise Study

I am a community citizen who is well aware of the damage that F16s noise levels will cause large numbers of children and families of Westfield and Southampton. As a community member on a Barnes Airport Noise Study twenty years ago I learned that F16 noise levels would cause serious harm to area residents. The abundance of science about noise damage available today will only further substantiate this. If you have an accurate 2007 report – and terrific scientific reviewers, I am sure your team will be quick to see the problems yourselves.

Given the availability of many more appropriate places for the F16's to reside, it seems foolish to even consider Barnes Airport. F16s are highly valued as important tools to protect our country – yet they are being set up to become identified as reckless noise demons that will damage the hearing of thousands of children and cause premature death of hundreds of residents in the tightly packed neighborhoods that surround a site as small as Barnes. One can only suspect that egos – not sound judgment are leading this effort. Thus, I hope the FAA will be the voice of science and reason.

The increase in the numbers of children and families negatively affected by the noise of the F16s since the 80's is enormous. If this study has been developed accurately (in the 80's there was much confusion. . .) you will see that noise levels of F16s have not decreased in twenty years, yet the number of homes, schools, elderly facilities and day care sites affected by the noise levels has increased dramatically since the 80s. The values of the homes range from $80,000 to $750,000. The availability of sound scientific studies documenting the damage of high noise levels has also increased dramatically. We now know that a team of children playing regularly on a nearby field within high noise contours would slowly lose their hearing – forever – if they were subject to the damage of F16 noise on a regular basis. Many new recreational fields have been developed within the noise contours of the Barnes study over the past 20 years.

[redacted]

While the talk among the general public in Westfield is one of concern, many hesitate to strongly voice their opinions for fear of being labeled anti-Guard or un-American – a lesson we all learned through participation in the study of the 1980's. Instead, I suspect, you will see an abundance in law suits in hindsight, should the arrival of the F16s be approved in spite of all the science that would discourage such approval. This is especially sad because the damage will be done – children will have lost their hearing, educational scores will have decreased and higher numbers of citizens will have died prematurely by the time law suits begin. At that point the Air Guard and the F16s will be hated, rather than revered as they are today.

In summary, all I can ask is that you choose very astute scientists and very brave reviewers to review the materials related to this Air Guard noise study. Examine the noise contours carefully to see if they make sense. Keep in mind that many neighborhoods are high on the hills surrounding the airport – close to the planes as they fly over. Also note the number of homes that fill the noise contours and check for accuracy. If there were problems in the 80's – current maps should indicate far more potential problems.

The majority of us want what is best for US citizens and best for the F16s. Unfortunately, Barnes may not do either justice on the long term. Then again, that is for you, in all your wisdom to decide.

Respectfully yours,

Marge Slinski

Cc: Speaker of the House, Nancy Pelosi
Senator Edward Kennedy
Senator John Kerry
FAA Aviation Noise Ombudsman AEE2,
Nan Shellabarger

[redacted]

[redacted]

# FROM THE DESK OF

Quentin Sizer 5/19/07

Robert Dogan
3500 Fetchet Ave.
Andrews Air Force Base, MD
20762-
5157

Dear Mr. Dogan,
Thank you for sending me the Draft Environmental Impact Statement relating to the 104th Fighter Wing change at Barnes airport in Westfield, Mass.
The following are a few of my observations. Relates also to helicopter ~~ment~~.

1. Would you please show by a side view (elevation, cross section) of ~~approach~~ approach and departure at both ends

of the main runway (F-15, A-10, and the F-100) with power settings used (speed, direction, altitudes) at a distance of 4 miles (more if required) from the end of each runway to and from cruising altitudes and along the length of the runway. This data would also be incorporated in a plan view (looking down at the airport and vicinity). Decibel ratings would be indicated on both views. Also indicate emergency procedures in case of aircraft failures relating to the previous material.

(2) What is the volume of commercial, general aviation and military aircraft and all their related activity (speed, direction, altitude) done at the existing

# FROM THE DESK OF

(3)

Quentin Sizer

102 FW at Otis AFB and the new area of operations surrounding Barnes Airport, Westover ARB, and Bradley Field operations in Connecticut for a distance of 200 miles north, east, and South and 180 miles West from the above areas of Base Operations. This would include the tracks (flight paths) of aircraft as mentioned above.

(3.) What additional costs are involved if the 102 FW is kept where

(4)
it is? Is there a cost saving in either case. What are the variations in both cases?

(4) What are the strategic vulnerabilities of each location? What are the positive aspects in each case?

Kindly send me the Final report and any supplemental Environmental Impact Statement.

Thank you for your interest.

Sincerely,
Quentin Winfield Siger
Former Captain, USAFR
Retired Architect
Installations Officer

P.S. Preserve as many buildings as possible for over-flow and storage.

[redacted]

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | May 21, 2007 |
| **NAME:** | Bill House |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/ZIP:** | |

**PLEASE PRINT COMMENTS HERE:**

I first became aware of the proposed changes in today's newspaper, and was saddened that we 'abutters' were not notified of the proposal directly. I will need time to review the proposal, but at first glance, 2 questions came to mind.

First, when you say "… approximately 90% of take-offs to the north…" what does approximately mean, in more precise terms (eg, 72-93% +/- 16%).

Second, the decibel map seems limited to 1 mile of the airstrip. What is the map for areas 1-5 miles? 5-10 miles from the base? Will the sound levels be less than 65 dB? Would you please give us a map showing the current decibel map for up tp 10 miles away for comparison?

Thanks for your help.

Bill House

PS – why not allow comments via e-mail?

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

013

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | May 9th 2007 |
| **NAME:** | SALLY CAYMAN |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/Z** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

We live just on the edge of the white 65 Dec area the Watt Hogs come over now and they are very close to the house we can see the men inside. the noise is loud. it reverberates off the hills. I'll very concerned that when you did your noise study you did not take this into the equation.
Please help me with the noise that I am going to have to endure.
All I want is some quiet.

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

014

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 5/9/07 |
| **NAME:** | Heather L. Pigbotti |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE** | |

**PLEASE PRINT COMMENTS HERE:**

I am under the impression that my street is not on the those included for noise mitigation/buffering, though my street is located in close proximity to the airport runways. My home is greatly affected by noise from the present aircraft landing at Barnes; I cannot imagine an even louder aircraft making its home at the base. I am concerned that the noise level will negatively impact the quality of my home environment, and also that I will not be eligible for any benefits such as sound buffering or tax breaks. I support the mission of the 104th Fighter Wing, but I am concerned about my home decreasing in value and the noise that I will have to endure as a result of the F-15's.

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

015

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

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**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | 5/9/2007 |
| **NAME:** | Mark Gaskalka |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS** | [redacted] |
| **CITY/STA** | |

**PLEASE PRINT COMMENTS HERE:**

Please provide information regarding sound proofing my home in preparation for F15 arrival Thankyou.

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

016

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 5/9/07 |
| **NAME:** | Cary Layman |
| **ORGANIZATION (IF APPLICABLE):** | N/A THE LAYMAN FAMILY |
| **ADDRESS:** | [redacted] |
| **CITY/STATE** | |

**PLEASE PRINT COMMENTS HERE:**

Why is this important to us?

Is the mission worth the marked deterioration of our life style, the price of our homes, our hearing, our ability to concentrate on activities at home?

Tell us why.

Cary Layman

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

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Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | May 14, 2007 |
| **NAME:** | Guy + Ann D'angelo |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/** | |

**PLEASE PRINT COMMENTS HERE:**

WHILE WE HAVE NO PROBLEM WITH THE CONVERSION TO F-15's WE FEEL THAT YOUR NOISE MITIGATION STUDY IS NOT TAKING INTO CONSIDERATION THOSE THAT LIVE AT THE END OF THE RUNWAY.

WE LIVE 4/10^ths OF A MILE FROM THE END OF THE RUNWAY NORTH SIDE. WE ARE CLOSE ENOUGH TO SEE THE PILOTS WHEN THEY LAND. YET WE ARE NOT BEING CONSIDERED FOR ANY NOISE SUPPRESSION ISSUES. PEOPLE WHO LIVE FURTHER AWAY DO QUALIFY. THIS WE FEEL IS UNFAIR AND NEEDS TO BE RECONSIDERED

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield - Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 6/17/07 |
| **NAME:** | Rosalie Bruneau |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STAT** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

I have just purchased and OWN my Mobile Home this past Jan. 2007, using all my savings any money I received from a pension plan, which I lost money on for early withdrawl because I was not 65 years of age yet. I Also put 10,000 into refurnishing the Inside and outside of my mobile Home. I used everything I had, because I planned on living here till I die, and not have to realy on anyone to have a place to live. I have no mortgage, just pay lot fees + Sewer. I also have some credit Card Bills from Refuenishing my mobile Home. I am on a Limited Income, because I am on SS for Disability. I am concerned with the increase of lot fees if people move and I plan to stay. Also concerned with ware on the mobile Home do to FIS's (cracked walls, broken windows). Also concerned with the Noise from the F15's + viabration

****** CONTINUE ON BACK FOR MORE SPACE ******

Because of the FIS's. I have no Resale Value on my Home. What is going to happen to me. I will Relocate if the Airport will Assist in getting another Home without a mortgage like I have now OR a Home with a very small mortgage (like the amount of my taxes + sewer ~~for a little bit~~). I can not afford to do anything more. Also I would need assistance in Relocating COSTS.

**PRIVACY ADVISORY**

Your comments on this Draft Environmental Impact Statement (DEIS) are requested. Letters or other written or oral comments provided may be published in the Final EIS. As required by law, substantive comments will be addressed in the Final EIS and made available to the public. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the Final EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EIS. However, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EIS.

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | May 17, 2007 |
| **NAME:** | Linda A. Forauer and Lisa M. Tinney |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/ZIP:** | |

**PLEASE PRINT COMMENTS HERE:**

We have lived at Arbor Mobile Home Park for four years this fall. We are homeowners, not renters and will not be moved to an apartment or condo. We have three indoor cats who, I am sure are of no concern to you but, are very important in our lives. Our mobile home was built in 1974, therefore is considered older, however, we have spent a great deal of money and time replacing windows, painting, and numerous upgrades, we also transformed our small yard from a sand pit to a grassy oasis with many flowering plants, Our plan was to live here for about five years as we upgraded our modest dwelling, and then sell at a profit for a down payment on a house.

The draft proposal reads like a science fiction novel, I cannot believe we will be forced to step up our plans by a year or more, we are not ready to relocate at this time, but will consider adjusting our plans in order to accommodate the upcoming events.

We would like to know if we could get any assistance from you or the city of Westfield (owner of the airport) in making our transition?

What would the time frame be for us to get any assistance and what documentation will we need to show to receive any assistance?

Could we be eligible for compensation for future profits on the sale of our home?

Will there be any future meetings for us to ask any more questions?

Will we be notified when the person comes around to evaluate our homes, can we be present when this happens?

Will we be able to move our appliances with us?

What will happen to our home once we are gone?

What part does the City of Westfield play in our displacement?

Where can we get more information?

We were unable to attend the only meeting we were aware of, but would like to be notified of further developments. We are both have full time jobs and are just trying to make ends meet, we hope we can get some answers in a timely manner so we will be able to arrange our lives in the least disruptive way.

Thank you for your time and trouble.

**PRIVACY ADVISORY**

Your comments on this Draft Environmental Impact Statement (DEIS) are requested. Letters or other written or oral comments provided may be published in the Final EIS. As required by law, substantive comments will be addressed in the Final EIS and made available to the public. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the Final EIS or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the Final EIS. However, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the Final EIS.

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

**DATE:** May 18, 2007
**NAME:** Alan and Mary Ellen Columbe
**ORGANIZATION (IF APPLICABLE):**
**ADDRESS:** [redacted]
**CITY/STAT** [redacted]

**PLEASE PRINT COMMENTS HERE:** As a resident at Arbor Mobile Home Park I am concerned about relocating some place else. My wife and I purchasted a mobile home here about two years ago. We expect to have it paid for in about two or three more years. We are both 55 years of age, with no retirement income I am self employed and my wife has been on her present job for about Seven years. Before moving here we rented an apartment at the willows here in Westfield. We were there for seven years and every year there was a rent increase, when we left we were paying $1865.00 a month. We do not wish to go back to renting an apartment and as we are getting older niether will be able to afford it. The rent at the Arbor's is resonable about $300.00 a month. I can't image finding another place for that amount. We have made major home improvements

****** CONTINUE ON BACK FOR MORE SPACE ******

in the two years we have been here and would hate to leave now. We hope it will remain our option to stay here.

Sincerely,
Alan & Mary Ellen Columbe

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | May 16, 2007 |
| **NAME:** | William + Mary Covell |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE:** | |

**PLEASE PRINT COMMENTS HERE:** To Whom It may Concern:
We live in Arbor Mobilehome Park, We like living in the Park and do not want to move, We bought our home 11 years ago with the intention of retireing there and living out the rest of our lives there, When I (William) was a child we (my family) lived in the park, the F100's were based there, We moved out to Hampton Ponds Area where the F100's flew over our back yards we got used to them, Now as an Adult, My wife + I feel that the jets are the sound of FREEDOM and they are OURS. There is an access road behind the Park, I walk our Dog out there Every day and like very much to see the A-10's Take off and Land. I have had the pleasure of seeing a couple of F-15's come in for a visit to the Base - I DO NOT think that they are as noisy as some seem to Think. We also enjoy sitting out in our yard and watching the Aerobatics of the Air Show and We know that the noise of the F-15's will not be

****** CONTINUE ON BACK FOR MORE SPACE ******

As loud as the Air Show. We would like to see if the Government could help us (the tenents of Arbor) do something to Grandfather this property to keep us a living Mobilehome Community and may be even help us with some sort of Rent Control. Mobile homes used to be considered Affordable Living, Not So. Affordable Anymore ~~th~~ with the ever increasing Lot fee's and utilities. Our Lives are in Your Hands, We like living Next to the Base.
Thank You for Protecting our Country and Homeland.

Remember- To us, it is the Sound of FREEDOM

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | 5/23/07 |
| **NAME:** | Stephen D. Cass |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/Z** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

As a home owner here for 19 years I'm very concerned about what is really going to happen to our park. I would like to stay here. My home is paid for and I have a very nice lot. I am retired/disabled and relocating would be a hardship. If some homes are sold, what will the landlord (Jones Buratti) then do with the land. If I were forced to sell (or relocate) I doubt I would be paid the value for my location and my outdoor amenities (Fences, Decks, Patio, Sheds, Shrubs, trees, paved driveway, beautiful Lakes, woods behind me, Etc. Why would we not be eligible for doors, windows etc. Very concerned about loss of value of my home and all of the conflicting stories and statements I'm hearing. Who to believe should I continue to improve my home. Please see attached letter.

Thank You Stephen D Cass

****** CONTINUE ON BACK FOR MORE SPACE ******

A reply would be Appreciated

Henry J. Fries
[redacted]

Mr. Robert Dogan
NGB EIS Project Manager
NGB/A&CVN, Conaway Hall
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

RE: Proposed Implementation of the Base Realignment And Closure Final Recommendations and Associated Actions for the 104th Fighter Wing, Massachusetts Air National Guard at Westfield-Barnes Airport

Dear Sir,

The thorough and complete disclosure of the environmental impact of the changes taking place at the Westfield-Barnes Airport is appreciated. As a neighbor of the airport that will be significantly impacted by these changes I am of course concerned. Below are three questions that I have that I could not find answers for in the Draft Environmental Impact Study. Please see that these are included in the public comments that were being solicited with the release of this draft.

1. What assurances does the community have that the proposed plan will be followed with 90% of the sorties taking off to the north? Can the number of sorties and runway used during take off be posted on a monthly basis to allow monitoring of actual activity as compared to the Environmental Impact Study?

2. Other than the Arbor Mobile Home Park, it appears that the greatest environmental impact is noise to the south of the airport. With all of the planned construction projects, none involved noise mitigation. A heavy growth of trees in combination with solid barrier on the airports property south of the Massachusetts Turnpike would not interfere with flight operations and should help this. Why is this not part of the Massachusetts Air National Guard's construction plans?

3. The Flight Tracks for Aircraft Arrivals at Westfield-Barnes Airport (Figure 2.2-1) illustrates low altitude patterns that the A-10s use to circle the airport prior to landing. Will the F-15s also follow this pattern, circling prior to landing? If so, what contribution to the noise contours is attributed to this?

Thank You,
Henry Fries

[redacted]

May 30, 2007

Robert Dugan
NGB EIS Project Manager
Conaway Hall
3500 Fetchet Ave.
Andrews Air Force Base MD 20762-5157

Dear Mr. Dugar,

I live in Easthampton, Massachusetts, two towns north of Barnes Air Force Base in Westfield, MA. I am writing to you regarding the F-15 jets which are proposed to fly out of Barnes Air Force Base.

Most people in Massachusetts who live in the western part of the state are here because they want a quieter and slower paced lifestyle. It is still quite rural out here and the traffic and congestion are nothing like the busier eastern seaboard cities. I grew up in the eastern part of the state and decided to make this area my home after attending college here many years ago.

I have just turned 55 and I have worked as a clinical social worker for nearly thirty years. I spend my days attending to the needs of others which is very rewarding and satisfying but not very well paid. My home is my haven where I come to rejuvenate. My father recently passed away at the age of 93. With a small amount money that I inherited from him, I have built a deck that looks out into the woods in my backyard. When I first stood on the deck, I realized that I had just achieved a life long goal of having a lovely deck in a beautiful setting. Practically the next day, I saw an article in the local paper about the changes at Barnes and the potential for increased noise.

My whole house rattles every year on the weekend of the Air Show at Barnes. Several years ago, larger jets were housed briefly at Barnes and the noise level at my home was really unbearable. I already have some ear damage and have sensitive ears. I have to wear ear plugs on the weekends of the air show to prevent further damage.

I am so saddened to think that rather than relaxing on my deck after a long week of attending to the needs of others, fondly remembering my father and appreciating the beauty of nature around me, I will be huddled in the house with my ear plugs shoved in my ears. If this is what it means to live in America, than I am not convinced that life here is worth defending.

Please think deeply about the impact that the addition of these jets will have on the area. If they have to come, please consider the flight patterns and the hours of operation so that they will have impact on the smallest number of people

This issue has affected my very deeply and I thank you for your consideration.

[redacted]

Sincerely,

Molly Goodwin, LICSW

[redacted]

cc: Senator Edward Kennedy
Senator John Kerry
Representative John Olver
Senator Michael Knapik
Representative John Scibak
Mayor Michael Tautznik

May 24, 2007
Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fletcher Ave
Andrews Air Force Base
Maryland 20762-5157

Dear Mr. Dogan,
I am writing to you today to express my deep concern over the proposed plans for Barnes Municipal Airport. Flying 18 F-15 Fighter Jets 15 hours a day 7 days a week over the homes of residents is likely to destroy the quality of life for people and wildlife. That level of noise in a highly populated area will have profound effects on the health and behavior of all the inhabitants who already live with noise level above acceptable standards. It is hard to imagine that it is absolutely necessary to fly the jets that much. It will use enormous amounts of fossil fuels and create and unfair air pollution load, adding to existing respiratory problems. The cost will then be born twice to the taxpayers living near Barnes, once to pay for the Jets and then to pay for the negative impact.
I am requesting that the flight schedule be dramatically reduced, that an extensive noise abatement program be created that we could all have have a say in. This should be done by creating a community advisory board with oversight over the proposed changes at Barnes and their impact.
I would appreciate a response acknowledging receipt of this letter.
Sincerely,
Alison Rogers
[redacted]

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | 5/18/07 |
| **NAME:** | BRUCE KRUPA & LISA MACFARLANE |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STAT** | |

**PLEASE PRINT COMMENTS HERE:** BRUCE AND I HAVE LIVED IN ARBOR MOBILE HOME PARK FOR 3 YRS. BRUCE BOUGHT THIS MOBILE HOME WITH AN INHERITANCE FROM HIS MOTHER'S DEATH. ONE OF THE REASONS WE PURCHASED THIS HOME WAS THE FACT THAT WE HAVE NO MORTGAGE AND ONLY PAY A LOT FEE OF $85.00. WE ARE BOTH ON SSDI AND THIS WAS THE IDEAL SITUATION FOR US MOVE WISE. WE ALSO HAVE CATS THAT WE HAVE HAD FOR YEARS AND WE WILL NOT GIVE UP FOR NOTHING. IF WE WERE TO MOVE I FEEL THAT WE SHOULD BE GIVEN A HOME WITH NO MORTGAGE AND WHERE WE CAN KEEP OUR ANIMALS. I FEEL THIS WOULD BE ONLY FAIR. A TWO-BEDROOM MOBILE HOME OR HOUSE WITH NO MORTGAGE. IF WE WERE TO STAY THE OWNER WOULD PROBABLY RAISE THE LOT FEES TO MAKE UP FOR THE PEOPLE MOVING OUT. I FEEL THAT THERE SHOULD BE SOME CONTROL OF SOME SORT SO WE WOULDN'T BE TAKEN ADVANTAGE OF IF WE WERE TO STAY. BRUCE AND I HAVE HEALTH ISSUES WHERE WE DON'T HAVE TO WORRY ABOUT

****** CONTINUE ON BACK FOR MORE SPACE ******

LOSING OUR HOME AND ANIMALS. WE HAVE NO SAY IN WHAT IS GOING ON IN OUR CITY. WE ARE FORCED TO DEAL WITH MOVING EXPENSES. I FEEL THAT THE F-15'S ARE GOING TO BE TOO LOUD AND I FEEL THE MOBILE HOMES WON'T BE ABLE TO WITHSTAND THE VIBRATION AS FAR AS WINDOWS AND WALLS CRACKING AND NOISE.

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base
Maryland 20762-5157

Dear Sir:

An editorial in the local paper alerted me to the fact that F-15's are being brought to the area. I live in the southern part of Hampshire County and already the noise from the C5A's completely disrupt our lives. When I am on the phone inside my house I have to stop my conversation until the plane has passed because I cannot hear! Sitting outdoors face to face with someone is even harder. That noise is borderline painful, and I cannot imagine having something even louder. The article said that F-15s are 10 times louder than A-10s. I am not certain which plane that is, but I'm definitely worried if there will be planes louder than the C5As.
The article also says that there will be 14 take-offs a day, every day of the year, from 7AM to !0 PM.

I want to go on record as being completely against these ridiculous expensive noise machines. There needs to be some sort of muffler, or simply fly smaller planes, or you will destroy the lives of the very people you claim to be protecting.

I live right on Lake Arcadia in Belchertown. There is something about how the sound bounces off the lake and hills that seems to magnify the noise even more than for my more land-locked neighbors. If there is anyway to re-direct the flights so that they don't fly over the water, it would be greatly appreciated. Better yet, fly fewer, less noisy planes.

Sincerely,

Dorothy Cresswell

Dorothy Cresswell
[redacted]

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


Mr. Robert Dogan
NGB EIS Project Manager
NGB/A7CVN, Conaway Hall
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157
Fax: (301) 836-7427


| | |
|---|---|
| **DATE:** | May 28, 2007 |
| **NAME: KENNETH BOUCHER** | |
| **ORGANIZATION (IF APPLICABLE):** | |
| [redacted] | |

**PLEASE PRINT COMMENTS HERE:**

1. The Draft EIS was very informative. I received my copy May 9, 2007 at the Public Hearing which was very informative and beneficial. The question listed will enable me to understand the data better.

2. Page 3-5, Day-Night Average Sound Level. I haven't been able to understand totally how Ldn is calculated. Could someone give me more detail with a representative example? It would be very helpful.

3. Could I have a copy of the final EIS when it becomes available?

Thank you for your help.

****** CONTINUE ON BACK FOR MORE SPACE ******

Mr. Robert Dogan, REM
NGB/A7CVN
Conway Hall
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Mr. Dogan,

Keep your damned noisy airplanes away from my home! My wife and I moved from Boston to Amherst 30 years ago for peace and quiet. Until roughly 10 years ago, quiet was the norm. But the A-10s, especially during the Iraq conflict, have caused my wife to be irritable and anxious. She counts the planes that go over… day after day… banking low over Amherst. This intrusion into our lives must STOP! And the proposed introduction of F-15s will only make the situation worse. I plan to complain by phone every time an airplane interrupts our life… calls to you, to Congressman Olver, and to the White House, if necessary. I will not tolerate this intrusion.

Sincerely and vehemently,

Kenneth W. Samonds, Ph.D.
Professor of Nutrition (retired)
University of Massachusetts

[redacted]

May 22, 2007

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762-5157

Subject: Noise of F15s, Westfield

Dear Mr. Dogan:

We cannot stand more aircraft noise. Please find a way to reduce the impact of moving the F15's to Westfield. This area is rural, beautiful, and otherwise quiet. There are dense areas of people such as here in Northampton that should be protected. Also, there are important wildlife habitats.

Thank you,

Marcea Rundquist

[redacted]

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | |
| **NAME:** | PATRICIA A. PELLETIER |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/Z** | |

**PLEASE PRINT COMMENTS HERE:**

I would like to know if you going to force us to move to another mobile home park such as an "wonderful" landlord suggested. His other park shall be condemned. We all need to work with the Gov. & There is fairness & a fair price for our homes. I am on a fixed income and want a residence to live the rest of my life in. A decent clean area, not the pit the landlord suggested. There many allergies asthma & cannot live with the big trucks drive by every five minutes.

****** CONTINUE ON BACK FOR MORE SPACE ******

I appreciate any suggestions & concerns they may have
to support Barnes Airport & our military

Thankyou,

Patricia A. Pelletier

[redacted]

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

**DATE:**

**NAME:** Richard & Joan Crockwell

**ORGANIZATION (IF APPLICABLE):** Arbor Mobile Home Park

**ADDRESS:** [redacted]

**CITY/STA** [redacted]

**PLEASE PRINT COMMENTS HERE:** We don't WANT to Lose Our home, We've been here going on twenty years.
If There's a way to keep it We would do ALL We could to keep it, we don't want to Move.
There must be another airport that These planes can go besides here.
We have no mortage it's ours and We don't want to Lose it because of the planes.
Please find a way for us to stay here.

****** CONTINUE ON BACK FOR MORE SPACE ******

[redacted]

May 29, 2007

Mr. Robert Dogen REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Ave
Andrews Air Force Base MD 20762-5157

Ref: F15 airplanes based at Westfield MA – Barnes Airport

Dear Mr. Dogan:

We are residents of Southampton, Massachusetts who have young children and have the following concerns that were not adequately addressed in the draft EIS. The economic, environmental and emotional damage to the community was not considered by the Air Force High Command when Westfield was chosen as the new home for the F15.

Listed below are our main concerns about the negative impact the presence of the F15 will create:

1. High noise pollution during take offs and landings.
2. High noise pollution during maintenance testing of engines.
3. Environmental pollution during operation of the engines in the air and on the ground.
4. Environmental pollution through spillage of fuel and solvents during maintenance and de-icing of aircrafts during the winter time.
5. Pollution of the pure water aquifier which runs under the Westfield – Barnes Airport, through seepage of fuel and industrial chemical. The aquifier is a major source of drinking water for residences and communities north of Barnes Airport. A previous application for the construction of a gas station in the aquifier area was denied by the DEP, even though the plans were based on California earthquake proof concept. How does the military guarantee to exceed the California standards?
6. Emotional stress due to the high frequency of operation at elevated noise level.
7. Loss of real estate resale value due to the aforementioned factors.
8. Loss of quality of life and recreational pleasure at the State Park facility and the local communities affected by the noise pollution.
9. Loss of the singing bird population which has returned again since the departure of the F100 aircrafts.
10. The fear in my children during the constant take off and landings, due to the incredible sound of the F15.

I ask, what steps are being taken by the authorities in charge of the transition to protect its citizens, in the affected areas and how do they plan to compensate people for their financial losses and possible emotional and medical consequences?

Sincerely,

Renee and Scott Hetu

Robert A. Rundquist
[redacted]

May 22, 2007

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Subject: F15s at Westfield

Dear Mr. Dogan:

PLEASE don't inflict more aircraft noise on us! The A10 noise is already maddening, even here, about 12 miles north of Barnes Air Field. It is not FAIR for us to suffer. This is a densely populated, relatively pleasant area. There must be better places to fly the noisy F15s. But if you must put them near us, find ways to mitigate the noise – soon (not in 10 to 20 years).

We are good citizens and deserve better treatment than this.

Sincerely,

Robert A. Rundquist

LULU AND JAMES FANION

[redacted]

May 24, 2007

Mr. Robert Dogan
NGB EIS Project Manager
NGB/A7CVN, Conaway Hall
3500 Fetchet Avenue
Andrews AFB, MD 20762-5157

Mr. Dogan,

I am writing you in regards to the future of the mobile homes at Arbor Park in Westfield, MA which will be affected by the arrival of the F-15's.
I have lived here for 20 years and had planned to live out my life here. I was disabled in 1987 and purchased my home because it was one floor and in the area I have always lived. I also felt I had "moved up" in the world because I was finally a homeowner. No more renting, no more apartments. I finally had a house I could lovingly decorate, update, and take care of. Over the years I have remodeled and updated to make this a home I could live a long time in. The fact that it was not a "house" made no difference in the remodeling I chose to do since I never planned to move anyway. So I have invested a lot of money and time in my mobile home.
I now find my home at risk. Will we be able to stay here after the planes arrive? Will we be allowed to? If I accept a Government offer to buy my home where will I go? How can my lifestyle not change when I now live in my own home, but a house is beyond my means? Equitable housing for me would be a private home, not a condo, not an apartment. Will we receive assistance finding a home to buy with the amount given as fair market value of our mobile home? Since I am disabled and my husband retired we are on a fixed income and cannot afford a mortgage. Our house is paid for. Unless we got a mortgage no higher than the current lot fee of $285.00, I don't see how you can say our lifestyle will not change. If we choose not to leave and many houses in this park are sold, will the owner be forced to close the park due to loss of income? And will I then be left with no government funds and still having to move?
I think one of the cruelest results of all this so far is that we now have to live our lives in limbo. Could you live this way? Not knowing what will happen or when, but that our lives will be changed drastically by unseen forces that have decreed this to be so. The planes are coming with no input from the 268 families that will be affected. And I am faced with an unknown future that I cannot even begin to prepare for because I have no idea what the government is going to do. And won't know until 2009. Meanwhile, do I do nothing further to my home? I have to buy a new furnace this week because my current one is no longing working. That's a big investment for us, but we must have heat in the winter while our fate is decided.
My family, my grandchildren, and all my friends are in Westfield, Southwick, and Southampton. My life right now is my Grandchildren, so I cannot move far from them.
Since the City of Westfield is the owner of Barnes, I really believe the only equitable thing for them to do is let us have a piece of land to move our mobile homes onto.
Since the meeting at the Westfield Middle School North I have been very nervous to the point of illness. My home is at stake and the meeting answered nothing. I cannot make plans with no information, nor can I feel in control of my life. This is no way to live, Mr. Dogan.

Sincerely,
Lulu Fanion James E Fanion

[redacted]

Mr. Robert Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

I writing to express my concerns about the planned conversion to the F-15 jets at Barnes Airport in Westfield, MA.

I have lived my entire life on Middle Road and over the course of those 68 years have experienced many changes in National Guard jets.

My appeal is that every possible effort be made to control the noise that we are subjected to. I am partially retired and hope to retire in the near future. I am looking forward to relative tranquility in the country environment where my wife and I along with our two daughters live. I believe that I have earned that right. I am concerned that with the proposed change to the F-15, along with its expanded mission, that my hopes for retirement may not be realized.

Can the take-off and landing route be varied? Typically Middle Road has been the route for take-off and landings. What other steps can be taken to minimize noise?

I hope that you can understand how I feel about the proposed changeover and that alternatives may be considered which may satisfy both your mission and the concerns of the community.

Sincerely yours,

William Breyer

William Breyer

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 5/29/07 |
| **NAME:** | FRANK J FOLTA JR. |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

DEAR SIR
We our very concerned with our home being Right across the street on Southampton Road 'West' next to the School's. We our Concerned About the 65 DB Noise Volume which could go even higher. We have worked our whole Life For our home. Our home is valued at 343,400 By the City of Westfield, We are sure this will effect the Resale value of our home. This area around the Airport have many Residential homes in the same situation that will be greatly effected by the F15 Aircraft. So far everything we have Read and have been Told is very complicated about the Noise Midigation process And how can we as homeowners get help. Is the F15 Aircraft Right For this heavy Residential area Is the F15 Right To be so close To our Schools and children. We do hope who ever is making this decesion will consider All of above that we have great Concern About

Sincerely
Frank J Folta
Rita Jervoise-Folta

****** CONTINUE ON BACK FOR MORE SPACE ******

May 30, 2007

Dear Mr. Dogan,

I am not using your format to respond as I was not able to download the information.

I am writing in response to the public opinion period regarding the base conversion at The Barnes-Westfield Airport. I am a citizen of Southampton and am deeply concerned about the impact this conversion will have on the livability in and around my community.

I will begin my comments with an observation. It appears to me that you have done the bare minimum in making the impact of this conversion public knowledge. It also appears that the comment period was intentionally brief to keep people from having adequate time to gather information and organize.

Given that this conversion is legislated, I understand that the arrival of the F-15s is a "done deal." However, it appears that there are many ways that this can unfold. For instance, is it truly necessary that as the planes land they circle in a clover leaf or is this based more in tradition. Changing this procedure would keep some homes from being flown over twice, as well as saving on fuel and other related costs. I wonder also of the real necessity of the number of flights being considered. What is truly necessary and how can that number be in balance with the day to day well-being of the citizens you are charged to protect? Additionally, it seems like it would be prudent to gradually break into increased activity on the base to get a sense of the impact.

It is my contention that the public needs to be actively involved on an ongoing basis. What you are proposing has the potential of seriously damaging the health, well-being and quality of life of the citizens in the surrounding communities. By virtue of your presence, you endanger our air and water quality, which I consider to be basic civil rights. What will be left to protect if the people and the environment are poisoned?

In deep hope that something can change.

Susan McNamara



# Massachusetts Air National Guard

Environmental Impact Statement

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**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | May 31, 2007 |
| **NAME:** | Allyn + Kimberly Hall |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STA** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

As a long time resident of Westfield [redacted]). We have many concerns about the incoming F-15, be charted at 70dBA (page 4-19 EIS) figure 4.2-2.
What can be done to lessing the noise level, how can we lessing the effects of noise induced vibration on our home?
My wife + I have two young children, both in elemantary school in need of a full nights sleep.
Are there any programs a home owner charted at 70dBA, can use to help lessing the impact of the F-15?
A fact that can't be overlooked is the loss value on the sale of the home. Taxes have only gone up, with nothing to show for but more truck traffic on Holyoke Road day + night, heavy railroad use and now F-15.
Please share any information, programs or any financial assistantance, that maybe offered.

Thank you, for your help.

****** CONTINUE ON BACK FOR MORE SPACE ******

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE: 31 MAY 2007** | |
| **NAME:** | MICHAEL COSGRIFF |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/ZIP:** | |

**PLEASE PRINT COMMENTS HERE:**

IN RESPONSE TO THE PUBLISHED EIS REPORT FOR THE BARNES AIRPORT CONVERSION TO USE BY F15 AIRCRAFT I FIND THE EIS HAS NOT DEALT EITHER ADEQUATELY OR SCIENTIFICALLY TO MEET THE LEGAL OBLIGATIONS OF A COMPLETE ENVIRONMENTAL IMPACT STUDY.

FIRST, THE SECTION DEALING WITH NOISE POLLUTION IS COMPLETELY INADEQUATE. THE STUDY CITED IN THE EIS HAS BEEN PREPARED BY COMPUTER MODELING, NOT THROUGH ACTUAL SCIENTIFIC EXPERIMENTAL DESIGN, MEASUREMENT AND OBSERVATION. IN A STATEMENT FROM THE PREPARING FIRM TO THE MASSACHUSETTS AERONAUTICS BOARD, HE STATED THAT THE ARMED FORCES DO NOT USE NOISE MODELING THAT IS THE SAME AS CIVILIAN AIRCRAFT. THIS STATEMENT IN ADDITION TO HIS OTHER STATEMENT IN THE SAME TESTIMONY, THAT THE F15'S HAVE A SUBSTANTIALLY LARGER NOISE FOOTPRINT THAN THE CURRENT 104 PLANES SUPPORTS THE BELIEF THAT THE RESULTS ARE COMPLETELY ERRONEOUS, FALSE AND MISLEADING. AS A RESIDENT WHO LIVES DIRECTLY UNDER THE TURNING AREA ON THE LANDING APPROACH I CAN ANECDOTALLY REPORT THAT ACCORDING TO PUBLISHED DECIBEL CHARTS THE CURRENT 104'S CERTAINLY EXCEED THE LESS THAN 65 DECIBEL PROFILE SHOWN ON THE MAP. I HAVE PURCHASED A VERY ACCURATE SOUND LEVEL METER AND WILL BE MEASURING AND RECORDING THE ACTUAL REAL NOISE LEVELS PRODUCED BY THE CURRENT 104'S. THESE RESULTS WILL BE FORWARD BOTH TO THE EIS COMMENT OFFICE, THE MASSACHUSETTS AERONAUTICS BOARD, THE MASSACHUSETTS ATTORNEY GENERAL'S OFFICE AND THE LICENSING BODY FOR THE ENGINEERING FIRM THAT PREPARED THE REPORT

SECONDLY, THE COMMENTS THAT THERE WILL BE LITTLE IMPACT ON WILDLIFE. THE TAKEOFF AND LANDING PATTERN IS DIRECTLY OVER PEQUOT (HAMPTON) POND. AS RECENTLY AS MAY 22, 2007 FOUR AMERICAN BALD EAGLES WERE OBSERVED FEEDING FROM THE FISH IN THE POND. ADDITIONALLY, A NESTING PAIR OF BLUE HERONS WERE OBSERVED ON THE POND THROUGHOUT THE ENTIRE SUMMER AND FALL OF 2005 AND

THE NATIONAL FISH AND WILDLIFE SERVICES IN YELLOWSTONE NATIONAL PARK DEMONSTRATED SUBSTANTIAL BEHAVIOR CHANGES DUE TO NOISE IN WILDLIFE THAT LED TO CHANGES IN EATING AND REPRODUCTIVE BEHAVIOR. THE FIRM WHO HAS PREPARED THIS REPORT HAS NOT CONSIDERED ENDANGERED SPECIES WITHIN THE EFFECTED AREA.

THIRD, THE EIS REPORT HAS NOT ADEQUATELY ADDRESSED THE ISSUES OF POTENTIAL WATER POLLUTION. WITH THE SUBSTANTIALLY INCREASED NUMBER OF DAILY AND ANNUAL FLIGHTS THERE WILL BE A DRAMATIC INCREASE IN THE OPPORTUNITIES FOR SPILLING OF JET FUEL, THE LACK OF CONTAINMENT OF DE-ICING SOLUTIONS WITH A VERY REAL POTENTIAL OF SERIOUS CONTAMINATION TO THE AQUIFER LYING DIRECTLY UNDER BARNES AIR BASE. NO WHERE IN THE THE EIS REPORT WAS THE ISSUE OF CONTAINMENT OF FUEL SPILLAGE OR DE-ICING OR MAINTENANCE RELATED SOLUTIONS DEALTH WITH. TO SIMPLY ASSUME THAT IT WON'T BE AN ISSUE GIVEN PRESENT FLIGHT FREQUENCY AND PROCEDURES IS A HUGE LEAP OF FAITH WHICH THE HISTORICAL EVIDENCE OF GROUND WATER POLLUTION SURROUNDING MILITARY BASES DOES NOT SUPPORT. THE STUDY SIMPLY IS INCOMPLETE WITHOUT DEALING WITH THIS ISSUE.

FINALLY, THERE IS VERY LITTLE IN THE WAY OF REAL SCIENTIFIC INFORMATION DEALING WITH THE ISSUE OF AIR QUALITIY. MOVING FROM A VERY LOW FREQUENCY OF FLIGHTS TO MANY MORE DAILY AND MANY MORE DAYS PER YEAR CAN ONLY ADVERSLY EFFECT THE LEVELS OF POLLUTANTS IN THE LOCAL ENVIRONMENT. TO SIMPLY STATE THAT IT WON'T EXCEED THE MINIMUM IS DODGING THE ISSUE. REPORT THE ACTUAL CURRENT LEVELS OF RECOGNIZED POLLUTANTS IDENTIFIED BY THE FEDERAL CLEAN AIR ACT AND THEN THE EXPECTED LEVELS OF THOSE SAME POLLUTANTS WITH THE ARRIVAL OF THE F15'S AND THEIR EXPECTED USEAGE PATTERN.

IT IS APPARENT THAT THIS EIS REPORT WAS HASTILY PREPARED AND DONE WITHOUT SCIENTIFIC RIGOR. THE TIMELINE PRESENTED FASTTRACKS THIS REPORT AND THE COMMENT PERIOD SO THAT LOCAL RESIDENTS HARDLY HAD TIME TO EVEN STUDY THE ISSUE PRIOR TO THE JUNE 1 DEADLINE. FINALLY, THE WEBSITE SAYS THAT IT IS POSSIBLE TO RESPOND DIRECTLY TO THE EIS REPORT THROUGH THE WEBSITE. I FOUND NO SUCH LINK OR BUTTON. THE ONLY WAY WAS TO DOWNLOAD A DOCUMENT, FILL IT IN AND THEN MAIL OR FAX IT.

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

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**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 05/29/2007 |
| **NAME:** | Vladimir Tverdokhlebov |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/ZIP:** | |

**PLEASE PRINT COMMENTS HERE:**

For many years we dreamed to build a new house. Finally we found and bought a land lot on 23 Valley Rd Southampton MA. All preparation for construction is almost done: blueprints, septic design, cleanup of lot. But now we found out about the proposed changes in the area around our construction lot. It is a very disturbing news for us. We would like to know what options do we have before we start the construction of new home for our family with four little children. We already made a big investment in the construction project and would like to know what can you do so we could still finish construction and live there comfortably.

V. Tverdokhlebova
V. Tverdokhlebov

****** CONTINUE ON BACK FOR MORE SPACE ******

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | 05-29-07 |
| **NAME:** | ALEXANDER TVERDOKHLEBOV |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/Z** | [redacted] |

**PLEASE PRINT COMMENTS HERE:**

Dear Mr. Robert Dogan,

I own a home in the airport area. I live there with my wife and four little children. I've heard about proposed changes in the community we live in and are not happy about it. I also heard that you are offering to install insulation for soundproofing and other types of help. Please let me know what do you plan to do for residents in the area to resolve the problem of noise and disturbance

****** CONTINUE ON BACK FOR MORE SPACE ******

[redacted]

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base, Maryland 20762-5157

Dear Mr. Dogan,

We are writing to express our concern over the decision to relocate F-15s to Barnes Airport in Westfield, Massachusetts. Beyond the decision to base the jets here, what we find particularly distressing is the number of proposed flights. Given the noise generated by F-15s, the suggested schedule represents a dramatic change in the amount of noise pollution. Many of us living in Westhampton and rural Hampshire County moved here because we value the peace and quiet. Our area is already are affected by regular flights to and from major and minor airports in the region, as well as many military flights in and out of Westover Air Force Base. The number of flights proposed for the F-15s will further compromise our quality of life and shatter the quiet we cherish.

That said, we recognize that flights are part of our nation's security program. However, we also believe that part of living in United States of America is about community and working together. In the spirit of cooperation, we appeal to you and your colleagues to review the flight plans for Westfield-based F-15 flights and design a schedule that is able to (1) maintain the skills and needs of your pilots, while also (2) protecting the important environmental qualities (air quality; noise), fundamental to residents of southern Hampshire County. Besides the direct benefits to local residents, decreased flights will provide significant cost savings (equipment, fuel, staff time) and also reduce carbon dioxide emissions. Air quality concerns in the Connecticut River Valley are already a serious issue; on many summer days, the region fails to meet certain EPA Air Quality standards.

We appreciate your attention to this matter, which we view as extremely important.

Sincerely,

Laurie Sanders & Fred Morrison

CC Senator Edward Kennedy
Senator John Kerry
Congressman John Olver
Congressman Richard Neal
State Representative Peter Kocot
State Senator Benjamin Downing
Governor Deval Patrick

June 1, 2007

Karen Kirsch
Claude Borowsky
[redacted]

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway hall
3500 Fletchet Avenue
Andrews Air force Base, MD 20762-5157

Re: F-15's based at Barnes Airport, Westfield, Mass

Dear Mr. Dogan,

Both my husband and I have very serious concerns regarding the impact of the F-15's due to be stationed at Barnes Airport, a mere 2 miles from our home. These concerns are environmental, economic and emotional damages to the community, particularly the pure water aquifier, which runs directly underneath Barnes Airport. This acquifier supplies many private wells, including our own, along with being a major source of drinking water for the area. It seems inevitable that pollution of fuel and solvent spillages into the acquifier will contaminate it permanently.

The damage to quality of life for local residents, along with damage to real estate values, will be suffered by many innocent people due to the noise levels that accompany the F-15 aircraft. These noise levels will be deafening and extremely stressful to those residents as the noise levels of the F-15 are times are ten times louder than the current A-10's. Since they will be flying significantly more flights - 14 take-offs every day, from 7 am until 10 pm, and considering these horrible noise levels, it makes no sense to relocate the high noise F-15 aircraft in the highly populated Westfield and the surrounding towns of Southampton, Westhampton, Holyoke and Easthampton. Why not in the countryside?

Can the flight patterns be altered to minimize the noise levels? Can the flight patterns, take-offs and landings be altered to give maximum consideration to the local

communities? Can the F-15's be located to another airport, more isolated from highly populated communities? Can the number of F-15's be reduced? Can the schedule of flights (from 7 am until 10 pm) be reduced? Can you create a more extensive noise abatement program that everyone has input into? Can you create a community advisory board to provide oversight on behalf of the affected communities?

We appreciate your consideration of these matters. Thank you.

Karen Kirsch
s/s Claude Borowsky

Karen Kirsch
Claude Borowsky

KK:kk

[redacted]

May 30, 2007

Robert L. Dogan
NGB/A7CVN
Conaway Hall
3500 Fetchet Ave
Andrews AFB MD 20762-5157

Re: Draft EIS for F-15 conversion at Westfield-Barnes

The noise level on the North Side of Westfield is already unbearable. I live close to Lowe's warehouse and am annoyed all day long by their vehicles backing up with the "beep", then going forward. Plus, when the planes fly over my house, the noise is unbearable. And they DO fly over my house. That accompanied by the Turnpike noise and they wonder why I am so irritable. Add all the pollution from these factors and the effect on the residents needs to be known. We have several schools off Southampton Road and a day care center. What health problems will these children have in the near future, if they don't already have some? Who is monitoring this?

The air quality here is extremely poor, on the North Side of Westfield. I would like a copy of the health reports that have been done around airports that have the military transport planes, the A-10s or F-15s over a 5 or 10 year span. Has there been any increase of heart incidents (from all the pollution and noise), asthma, or a rise in cancer rates of any sort?

What health reports exist now about the North side of Westfield? I hope Westfield was smart enough to do some studies. I would like a copy of that, also

Have any studies been done to check the effect of noise on hearing? Include these, if you have them from the Westfield area.

Probably most important, what effect will the planes, and their emissions have on the Aquifer and our water supply?

Sincerely,

Jean Carpenter

Jean Carpenter

104th Fighter Wing, Westfield Barnes Airport, Westfield, MA

# Massachusetts Air National Guard

Environmental Impact Statement

**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:


**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**


| | |
|---|---|
| **DATE:** | May 31, 2007 |
| **NAME:** | Mary E Cotnoir |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STATE/ZIP:** | |

**PLEASE PRINT COMMENTS HERE: ONE OF MY DAUGHTERS ATTENDED THE WESTFIELD TOWN MEETING ON 5/9/07 ON MY BEHALF (I WAS OUT OF TOWN). SHE WAS UNABLE TO DETERMINE BY THE MAP PRESENTED AT THE MEETING WHETHER OR NOT MY HOME WAS WITHIN THE OFFICIAL ZONE THAT IS BEING CONSIDERED FOR HOME IMPROVEMENTS RELATIVE TO NOISE REDUCTION. WE THEN RECEIVED A PACKAGE IN THE MAIL LAST WEEK WITH ANOTHER MAP AND WE'RE FAIRLY CERTAIN THAT MY HOME IS WITHIN THE APPROVED ZONE; HOWEVER IT IS IMPORTANT TO ME TO MAKE MY STATEMENT TO YOU NOW THAT I WISH FOR MY HOME TO BE INCLUDED IN THE ZONE IF IT IS NOT ALREADY. CURRENTLY, PLANES COMING IN AND OUT OF BARNES FLY RIGHT OVER MY HOME AND PASS RIGHT BY MY KITCHEN AND LIVING ROOM AS THEY ARE COMING IN TO BARNES. THE PLANES THAT ARE ALREADY BEING FLOWN HERE ARE VERY NOISY. SINCE THE UPCOMING PLANES ARE SUPPOSED**

GOING TO REQUIRE IMPROVEMENTS TO ENSURE WE CAN REASONABLY LIVE IN THAT SORT OF AIR TRAFFIC ENIRONMENT. I'VE ALSO SENT A LETTER TO OUR CITY HALL TO LET THEM KNOW OF MY CONCERN AND DESIRE TO BE INCLUDED IN THE ZONE.

IF WE WILL BE CONSIDERED IN THE ZONE, WHAT IS THE TIME LINE FOR HOME IMPROVEMENTS? IF THE PLANES ARE ARRIVING BY FALL, IS IT SAFE TO ASSUME THAT THERE IS A PLAN IN PLACE TO GET ALL THE HOMES THAT ARE AFFECTED TAKEN CARE OF BEFORE THAT OCCURS? I AM ALSO CONCERNED ABOUT HOW LONG IT WILL ACTUALLY TAKE TO DO THE IMPROVEMENTS AND CAN THEY BE DONE WHILE WE ARE STILL LIVING IN THE HOUSE OR WOULD WE HAVE TO TEMPORARILY RELOCATE? IF SO, WHO WILL PICK UP THAT COST?

THANK YOU FOR YOUR TIME AND ATTENTION.

Mary E Cotnoir

**** CONTINUE ON BACK FOR MORE SPACE ****

[redacted]

-1-

5/24/07

Dear Mr. Dogan:

I am writing out of deep concern pertaining to the ANG arrival of 18 F-15 fighter jets at Barnes Municipal Airport in Westfield Ma. I am located just a few miles north of Barnes Airport in N-Hampton right in the flight landing pattern, and at times take off flights.

Let me say, that as an average citizen I am very proud the part the ANG plays in protecting our country. The question is, mainly the noise faction

Its bad enough with the A-10's which is somewhat bearable due to the infrequencies of the fligths. From what I've read and heard the F-15's are considerably much much louder wich is going to have a big effect on our everyday lives and the whole environment.

I would also like to add, I as well as the rest of the community are in close proximity to

Westover Field airbase in Chicopee, Ma.,
and our local airfield in N-Hampton, Ma.,
so you see it can be very disrupting.
I am asking the ANG to act responsibly
to mediate these serious issue.

Sincerely

Mr. G.R. LaPalme

dear mr. dogan

hello.
i have lived in the southampton area for 36 years.. my house i believe.. is used by planes at barnes airport as a guidepost back to the airfield.

i understand that some f-15's will be stationed at barnes soon.

when we bought the property.. some type of jets.. were stationed at barnes.. and the noise.. was truly incredible.. inside the house.. all closed up... one could not only.. not hear a phone conversation .. you could not.. hear yourself talking.. you cannot.. talk to someone standing next to you..

we now have the air show about once a year.. i liken the noise to the sky getting ripped open. the planes.. seem a few feet above the trees..the exhaust.. visible..the air pollution in this valley is already causing many residents health problems..myself included..
so i see from the newspaper.. that 14 flights will be happening.. 7 days a week.. from 7 in the morning.. to 10 pm at night.

i understand.. my property value will be going down, my hearing ..which is failing.. may be affected.. and my property may get re-zoned.. and useless for re-sale.
my husband works nights.. sleeps days.. and will now.. not be able to get consistent sleep in. we suffer enough with sleep deprivation..

is there any way.. to change the flight patterns? perhaps direct them over an already noisy city? or use another airport to do this in?
or group the take-offs and landings into a much shorter space of time.. and get it over with? and perhaps have some fly free days?

basically.. these planes.. will greatly affect my quality of life, my hearing, my investment for looming retirement.. our wildlife, my blood pressure and health [i am on disability already] stress makes me worse..

we need to have a community advisory board in place to deal with all these negative affects.. quickly..i do not have 10 to 20 years.left... to make life bearable for myself.

i understand.. that.. the noise levels.. haven't been measured.. only guessed at.. i only know what previous fly overs sounded like.. and they were nasty.. you wouldn't want your office or home here...it would be impossible to conduct business.
thank you
carl and joy gagliano
[redacted]

Wednesday, May 23, 2007 [redacted]

Deborah Burkhalter
[redacted]

NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base
Maryland 20762-5157

May 23, 2007

Dear Mr. Robert Dogan, REM,

I am deeply concerned to hear of the proposed changes at Westover Air Base, regarding the arrival of the F-15's and the noise that this will bring.

I call on you for a more extensive noise abatement program that includes all citizens in the effected communities to offer their input. I am requesting that a community advisory board be established to provide oversight on behalf of our communities. This decision by the federal government effects all of us and will impact our community greatly.

My concerns center around the flight patterns and hours of operation as they are projected to be frequent throughout the day and 7 days a week. I chose to live in Westhampton due to it's rural character and peace and quiet. The proposed changes will diminish my quality of life and that of our community.

I urge your attention to this matter.

Sincerely,

Deborah Burkhalter

Leo Demelbauer
[redacted]

Mr. Robert Dogan REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base MD 20762-5157

May 23, 2007

Ref: F15 airplanes based at Westfield MA – Barnes Airport

Dear Mr. Dogan,

As a former member of the 104 Tac Fighter group and as a pilot, I am certainly approving of the validity of their mission. However I question the wisdom to move high noise F15 aircrafts and environmental polluters from a low population density area at Cape Cod to the highly populated community of Westfield and its surrounding towns of Southampton, Easthampton and West Holyoke.

I have all these following concerns because they were not adequately addressed in the draft EIS. The economic, environmental and emotional damage to the community was not considered by the Air Force High Command when Westfield was chosen as the new home for the F15.

Here are my main concern the negative impact the presence of the F15 will bring:

A) High noise pollution during take off and landings
B) High noise pollution testing engines during maintenance

C) Environmental pollution during operation of the engines in the air and on the ground.

D) Environmental pollution through spillage of fuel and solvents during maintenance and de-icing of aircrafts during winter time

E) Pollution of the pure water aquifer which runs under the Westfield – Barnes airport, through seepage of fuel and industrial chemical.
The aquifer is a major source of drinking water for residences and communities north of Barnes Airport. A previous application for the construction of a gas station in the aquifer area was denied by the DEP even so the plans were based on California earthquake proof concept. How does the military guarantee to exceed the California standards?

F) Emotional stress through the high frequency of operation at high noise level.

G) Loss of real estate resale value due to above mentioned factors.

H) Loss of quality of life and recreational pleasure on the State Park facility and the local communities affected by the noise pollution

I) Loss of singing bird population who has returned again after the departure of the F100 aircrafts.

The above points have been researched and are documented.

What steps are taken by the authorities in charge of the transition to protect its citizens, in the affected areas and how do they plan to compensate people for their financial losses and possible emotional and medical consequences?

Sincerely,

Leo Demelbauer

Mary-Claire Demelbauer

Leo & Mary-Claire Demelbauer
[redacted]

Mr. Robert Dogan REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base MD 20762-5157

May 24, 2007

Ref: Commercial Real Estate loss due to F15 arrival at Westfield – Barnes Airport

Dear Mr. Dogan,

We are the owners of an office building at [redacted] Westfield MA, located at the departure end of the runway 02 at Barnes airport. We are concerned that financial loss compensation has not been adequately addressed in the EIS draft.

After the expiration of the 5 year lease contract, the tenant chose not to renew it. All efforts to sell or rent the building since December 2005 with move in date of June 1 2006, have failed. We had many showings through our commercial real estate agent but after due diligence by the serious contenders they opted not to buy or lease. The A10 aircrafts were never an issue but the F15 have received so much bad publicity in regards to noise pollution, that their action is understandable.

How does the government plan to compensate equitably for financial losses?

Other issues concerning negative environmental impacts are attached in a separate cover.

Sincerely,

Leo Demelbauer

Mary-Claire Demelbauer

Mr. Robert Dogan, REM
NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base, MD
20762-5157

May 23, 2007

Dear Mr. Dogan,

Thank you for making yourself available for comments and questions concerning plans to change the type of aircraft based at Barnes Municipal Airport in Westfield, MA. I would like to say that my wife and I support the US military and respect its professionalism and sacrifice.

We are, however, concerned about the impending change from A-10s to F-15s at this aiport, which is surrounded by a peaceful country setting. We are in the process of buying a home approximately two miles north of the airport and have four basic concerns: 1) How loud will the noise levels be? 2) How will this effect property values in the area? 3) What is the Air National Guard doing to minimize the impact this will have on citizens? 4) What are the potential health effects to humans and animals from continued exposure to unnaturally loud noises?

We would also like to know the general flight direction of these aircraft. In other words, is there a dedicated flight route, i.e. always due north (over our house) or are other routes taken as well?

We understand that the Air National Guard has been using this facility for some time and people who have bought property in this area have done so with the understanding this is part of the terrain. But for the Air National Guard to then change the status quo by introducing airplanes that dramatically change the existing dynamics and parameters is cause for considerable concern.

We look forward to your response.

Sincerely,
Michael Greenwood and Karen Guzman

Michael Greenwood + Karen Guzman

[redacted]

Paula Murphy
[redacted]

NGB/A7CVN
Conaway Hall
3500 Fetchet Avenue
Andrews Air Force Base
Maryland 20762-5157

May 23, 2007

Dear Mr. Robert Dogan, REM,

I write as a concerned citizen of Westhampton, MA about the proposed flights of the F-15's out of Westover Air Base.

I call on you for a more extensive noise abatement program that includes all citizens in the effected communities to offer their input. I am requesting that a community advisory board be established to provide oversight on behalf of our communities. This decision by the federal government effects all of us and will impact our community greatly.

I am deeply concerned about the flight patterns and hours of operation as they are projected to be frequent throughout the day and 7 days a week. I chose to live in Westhampton due to it's rural character and quiet. This change will inexorably alter my quality of life and that of our community.

I urge your attention to this matter.

Sincerely,

Paula Murphy

Paula Murphy

LAW OFFICES OF
WILLIAM J. PUDLO, P.C.

[redacted]

May 30, 2007

Robert Dogan
NGB/A7CVN
Conway Hall
3500 Fetchet Avenue
Andrews AFB, Maryland 20762-5157

Re: Henry Geryk
Property in Westhampton
and Southampton, Mass.
EIS – BRAC – 104FW

Dear Mr. Dogan,

Our office represents Henry and Rose Geryk, owners of substantial acreage in the Towns of Westhampton and Southampton, Massachusetts, including one of the higher mountain peaks in the area. It is our understanding that Mr. Geryk spoke with you to advise you that he and his family experience significant noise pollution form the activities currently conducted at Barnes Airfield in Westfield, Massachusetts.

The basis of our clients' complaint is that the proposed realignment of the Air National Guard contingent at Barnes Airfield will substantially increase the noise pollution in the areas of his property, particularly in the vicinity of the mountain peak. The impact of this significant and substantial change resulting from the assignment of the 104th Fighter Wing to Barnes Airfield will negatively impact the value of our clients' property, by as much as one half. Further, the impact of the proposed realignment will negatively impact the value of any subdivisions of their property by decreasing the value as the property is in a "fly over" area of the regular activities of the Air National Guard activities.

Please treat this letter as our clients' formal response to the April 6, 2007 letter from Harry Knudsen, Jr., Chief of the Natural Infrastructure Management Branch. If you have any questions, please feel free to call on our office at your convenience.

Very truly yours,

William J. Pudlo

cc: Henry Geryk

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**Thank you for your input! Please note that comments may also be submitted via the internet at www.104conversion.gcsaic.com.**

Please hand this form in or mail before **JUNE 1, 2007** to:

**Mr. Robert Dogan**
**NGB EIS Project Manager**
**NGB/A7CVN, Conaway Hall**
**3500 Fetchet Avenue**
**Andrews AFB, MD 20762-5157**
**Fax: (301) 836-7427**

| | |
|---|---|
| **DATE:** | |
| **NAME:** | Patricia Sampson |
| **ORGANIZATION (IF APPLICABLE):** | |
| **ADDRESS:** | [redacted] |
| **CITY/STA** | [redacted] |

**PLEASE PRINT COMMENTS HERE:** I don't want to leave Arbor Mobile home park. I bought my home for my two disabled sons. They can walk in the park and feel safe. Everybody gets along with my two boys. I wish we could get rent control. I would like this to stay a mobile home park and not get sold

****** CONTINUE ON BACK FOR MORE SPACE ******

## Summary of Massachusetts National Guard Proposed Implementation of BRAC and other Associated Activities at Westfield-Barnes Airport Environmental Impact Statement Draft EIS Comments

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| **W 001**<br>Comment letter from Jeremy Pais<br><br>April 26, 2007 | **W 001-01** I am writing this letter as a concerned son of parents that live on the perimeter of the estimated 65 decibel noise impact from the newly arriving F-15 fighters to Barnes Airport. My mother has worked nights for twenty years, and my chief concern is that this new air traffic will disrupt her sleep. In the past the A-10 fighters have not caused a problem, but as I understand it, the F-15s are considerably louder and there are going to be more of them. | **W 001-01** The FAA is currently preparing the Part 150 Study, which is the mechanism for provision of noise mitigation. The Part 150 Study will result in a final determination as to which, if any homes qualify for noise mitigation. |
| | **W 001-02** In April 11th edition of the Springfield Republican the cover story did little to ease my concern. According to the article, 261 housing units have been designated for noise mitigation funding that would include thicker windows and added insulation. My parents' home is clearly on the envelope of the 65 decibel zone, however, they have not heard if they qualify for noise mitigation. | **W 001-02** The Part 150 Study is currently underway and will guide any noise mitigation that will occur. Westfield-Barnes Airport will contact those residences that qualify for noise mitigation. Additionally, there will likely be a "humanizing factor" used in identifying those residences that qualify for mitigation. This will ensure that neighbors are treated in a similar manner to each other. For instance, if a residence is just outside the 65 decibel (dB) contour, while the vast majority of that residence's neighbors are within (and therefore qualify for mitigation), the neighbor outside the contour may receive similar mitigation for their home. |
| **W 002**<br>Comment letter from owner of Arbor mobile home park<br><br>May 4, 2007 | **W 002-01** There is a unique opportunity to avoid the potential impact that this conversion will have to the 58 units of affordable home ownership that are currently available at Mobile Home Park. The park is a 5.8 acre parcel. The owner of Arbor Mobile home Park is also coincidently the same owner as Henrys Mobile Home Park located 1 mile north of Arbor and also in the city of Westfield. Henrys has vacant land in excess of 5.8 acres and with improvements could be used for mobile home placement. Municipal sewer and water service both properties. It is proposed to the Bureau and or the FAA with cooperation of the owner of the land to investigate and invest in an engineering study to explore this option. Will the Bureau consider this proposal? | **W 002-01** Westfield-Barnes Airport, in coordination with the Federal Aviation Administration (FAA), is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Airport representatives will investigate this course of action with the owner of the referenced mobile home parks. |
| | **W 002-02** A MAI appraisal of Arbor Mobile Home Park completed Feb 13, 2006 states that "the highest and best use of the subject is for continued use as a Mobile home park". The introduction of the F-15 makes the noise level at the Arbor Mobile Home Park in excess of 65 dB. This level is stated "incompatible" use (page 145 of Draft EIS). The inherent value is of the land is derived from being able to lease the land to mobile home owners. If the land is "incompatible" with mobile homes the value of the land is substantially decreased people may not want or be able to rent this land. | **W 002-02** The Part 150 Study will address any land use incompatibility issues and make a determination as to whether mitigation is required. |
| | **W 002-03** Is it in the National Guard Bureau's scope to consider this decrease in land value?<br>Is it in the FAA scope to consider this decrease in land value? | **W 002-03** The Environmental Impact Statement (EIS) that the National Guard Bureau (NGB) has prepared has identified that there is a compatibility issue with the Arbor Mobile Home Park and the change in the aircraft noise footprint. The Part 150 Study is the mechanism for addressing this incompatibility. |
| | **W 002-04** Removing these homes would create an economic hardship to the Arbor Mobile Home Park Management and owners.<br>Do you have a plan to compensate the ownership of the park for this potential loss in revenue, land value, and economic hardship? | **W 002-04** Mitigation resulting from the Part 150 Study could include fair market compensation to the owner of Arbor Mobile Home Park for acquisition of the property, as well as compensation for moving mobile homes to another local mobile home park. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| | **W 002-05** According to the response on page 249 of the Draft EIS this project will cost approximately $77 million. Is any of the budgeted for noise remediation for the homes and land areas affected by the increased noise level? | **W 002-05** No, none of that dollar value is related to noise mitigation. That dollar value is related strictly to construction and operation costs. Mitigation funding comes from different funding sources. |
| | **W 002-06** Who from the FAA is in charge of the F150 impact study and remediation report? Does the FAA have any information about the Barnes conversion project from A-10s to F-15s in addition to the Draft EIS by the National Guard Bureau? If available, how can the public obtain that information? | **W 002-06** The Part 150 Study is being prepared by Westfield-Barnes Airport in cooperation with the FAA. Mr. Chris Willenborg, the Airport Director, is the primary point of contact for the Airport. Mr. Richard Doucette is the primary point of contact for FAA. The Part 150 Study is currently underway. The preparers of the Part 150 Study do not have additional information regarding the conversion beyond that which is included in the EIS. |
| | **W 002-07** What are the steps and timelines for each step for the F150 Impact study?<br>The new F-15 aircraft is expected to start flying in the first quarter of 2008, will the FAA 150 study be in draft or completed form be available before the new aircrafts are expected to fly? | **W 002-07** The FAA website for the Part 150 Study: http://www.faa.gov/about/office_org/headquarters offices/aep/planning_toolkit/. There is a link that describes the Part 150 process on this website.<br>It is currently unknown whether there will be a draft of the Part 150 Study prior to initiation of training with the F-15. Contact Westfield-Barnes Airport for details on the status of the Part 150 Study. |
| | **W 002-08** The National Guard Bureau has provided the web site http://www.104conversion.gcsaic.com/ does the FAA have an equivalent information site for this matter? | **W 002-08** The website for the Part 150 Study: http://www.faa.gov/about/office_org/headquarters_offices/aep/planning_toolkit/ |
| | **W 002-09** If homes are purchased and removed will "new" residents be able to move homes onto those vacant lots? | **W 002-09** The FAA would likely not purchase and relocate a mobile home unless the land which was being vacated was also purchased or rezoned to nonresidential land use. The FAA may recommend to the City of Westfield that the property be acquired so that new mobile homes do not become established on these lots. |
| | **W 002-10** Will the land owner of Arbor Mobile Home Park have the option to not have the houses removed and transfer their ownership to the land owner if they are purchased by the FAA? | **W 002-10** No. If the mobile home owners opt for assistance in moving their mobile home, the homes will be moved if they are in such condition that they can be moved. If not, they will be demolished. |
| | **W 002-11** If an FAA 150 study is completed and purchase and removal is presented as an option to residents how long will residents have to decide to elect the option? | **W 002-11** Typically this process takes about 60 days, after the completion of property appraisals and written offers are made to each owner. Each homeowner's needs must be evaluated to determine if there are extenuating circumstances for the occupants. |
| | **W 002-12** What other FAA 150 studies have been completed in the last 5 years that have mobile home parks and or mobile homes as part of the land use mitigation measures? | **W 002-12** None in the New England Region. |
| | **W 002-13** According to a FAA presentation published by Rick Etter on March 9, 2005 titled "change to 49 CFR Part 24" slide A-56 state that "Limited to $22,500 unless last resort applies" could you comment about this information. I have attached the 10 page presentation. | **W 002-13** Under the Federal Uniform Relocation Act, the "last resort provision" applies if there are no replacement mobile home sites available and there are no comparable conventional homes available within the $22,500 amount. The FAA can, as a result, approve an amount in excess of the $22,500. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| | **W 002-14** The Draft EIS report indicates on page 20 under the proposed action section that the affected residents do not have a "disproportionately high and adverse effects on minority or low-income populations." If new data was collected to show that there is a disproportionately high number of residents with low income and or many residents are disabled what impact might that have on the findings or proposed remediation plans? | **W 002-14** The Presidential Executive Order (EO) requires that each agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse effects on minority or low-income populations.<br>Requirements for inclusion in the Part 150 noise mitigation program are determined by quantified noise levels in a standard noise study. Eligibility for this program is not affected by disability or income, and it is a voluntary program. These factors are considered in how the acquisition/relocation process is implemented, so as to minimize impacts to the greatest extent possible. |
| **W 003**<br>Comment letter from Albert Joseph Masciadrelli<br><br>May 2, 2007 | **W 003-01** | **W 003-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **W 004**<br>Comment letter from David R. Drake<br><br>April 12, 2007 | **W 004-01** During the comment period that has now begun, I do want to make you aware of White Oak School's presence near the northern end of the Barnes airport. White Oak serves over a hundred students with specific learning disabilities who come to us from throughout the region.<br>Frequently, our students' also show difficulties with auditory processing and auditory distractibility; many of them also have been diagnosed with attention deficit issues.<br>I'm writing to you at this point out of concern for what has been in the press about increased noise associated with the F-15 aircraft, and with the plan to have "90 percent of the takeoffs to the north of the airport to minimize noise" (Springfield Republican, 4/12/2007). If the takeoff-related noise of this aircraft is significant, I'm sure you can share my concern about its potential effect on children's learning.<br>Our experience with the Air National Guard's A-10 aircraft has been excellent. Their takeoffs and landings have been in patterns that have taken them away from the school, and their over flights have been at an altitude that eliminated any significant sound problem. Frankly, they've been great and we couldn't have asked for better neighbors.<br>I'm writing in the hope that we can continue this kind of experience – and that this information about the nature of the school and its location can be passed along to those responsible for overseeing the takeoff and flight patterns of the F-15's. I attached a map of the school's location in relation to Barnes, for you reference. | **W 004-01** White Oak School is depicted on page 3-16 of the Draft EIS (Figure 3.2-2) to the northwest of Westfield-Barnes Airport, approximately 0.9 miles from the airport boundary. This school is not located within the 65 dB contour under any alternative. While aircraft may be heard within the classrooms at times, they should not be disruptive to the students. |
| **W 005**<br>Comment letter from Donna J. Blews<br><br>May 16, 2007 | **W 005-01** This letter is in regards to the articles published in the Springfield Republican, and the Westfield Evening News concerning the movements of the Air National Guard at Barnes Airport, Westfield, Massachusetts. In the articles written in the newspaper, were the statements that the mobile homes located at the Arbors Mobile Home Park "can not be sound insulated and will normally be purchased and removed." As a resident of this park, I have questions concerning the future of this mobile home park.<br>Will the FAA possibly approach our land lord, Mr. James Burrotti to buy out the property form him? | **W 005-01** The Westfield-Barnes Airport Part 150 Study is currently underway and will guide any noise mitigation that will occur. At this time, specific mitigation has not been developed; however, it is possible that the Arbor Mobile Home Park property could be purchased. |

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| | **W 005-02** When the FAA decides to start the buyout and removal of the mobile homes, will a new mobile home be able to be put in its place? | **W 005-02** No, the FAA will likely not purchase mobile homes without ensuring first that the vacated land will not be used for residential purposes again in the future. This could be done through property acquisition, rezoning, etc. |
| | **W 005-03** What will happen to those people who wish to remain living in the park, do they get compensated in some way same as the regular homeowners? | **W 005-03** For landowners impacted by noise sufficient to qualify for FAA-funded noise mitigation, the only option is acquisition and removal of the mobile home. The FAA has very limited authority on the types of compensation it can provide. It cannot provide monetary compensation for homeowners who choose to remain in their homes, when it has been determined that residential land use is incompatible with new noise levels. |
| | **W 005-04** Is there a date when the FAA will begin the buyout of the mobile homes, and when is this buyout to begin taking place? | **W 005-04** The timetable will be established as part of the Part 150 Noise Study, and has not yet been developed. Buyouts would likely not take place before June 2008. |
| | **W 005-05** How will the FAA determine the amount paid to the mobile home owner for the buyout? | **W 005-05** Appraisals and review appraisals would be conducted and written offers would be made to all homes in noise-impacted areas, as defined by federal regulations. |
| | **W 005-06** If a buyout happens, how long will the buyout offer stand for? Meaning, if some residents wish to continue living at the park, say after two years, they can not stand the noise any longer will they still be eligible for the buyout program? | **W 005-06** Owners generally have 60 days to respond to a written offer. There is no guarantee that federal funds will be available two years in the future. But the new aircraft should be in place, and new noise levels will be experienced for many months before any offers are made. |
| | **W 005-07** If there will be a person in charge of the buyout program, who will that person be so we can direct our questions to them? | **W 005-07** All airport land acquisition programs are managed by the local entity who manages the civilian airport, in this case the City of Westfield. The City will hire a relocation consultant who will provide the technical expertise to meet federal requirements. That consultant will not be hired until the completion of the Part 150 Study, in 2008 or later. |
| | **W 005-08** If available, please give me more information on the mobile home buyout program. The reason I ask, is I have just moved into the park as of 2006, by purchasing a brand new mobile home which is paid in full. What will become of the newer homes in the park? | **W 005-08** A home that is in such condition that it can be moved, will be moved to a new location. A home that is not in condition to be moved, would be acquired and demolished. |
| **W 006**<br>Comment letter from Paul A. Bergeron<br><br>April 16, 2007 | **W 006-01** In the last year, the C-5s at Westover have been practicing low level approaches utilizing patterns out of normal "runaway" takeoffs and landings. They have been out of the "normal" noise abatement control area, and these "landing/take off avoidance" maneuvers have, and are becoming a serious noise issue. These low level maneuvers are very concerning as they now fly directly over our homes.<br>I know Westover ARB's issues have nothing to do with your project, but the issue of "noise" now seems to help bring to the forefront my interest in the 104th Fighter Wing project, especially as it relates to the possibility of F-15s flying "out of Normal" takeoff and landing patterns; in other words, breaking the "noise identified patterns". | **W 006-01** The only time that the 104 FW would potentially fly out of "normal" circumstances would be under an alert "scramble" circumstance. The 102 FW (at Otis Air National Guard Base [ANGB]) performed 32 alert scrambles in Fiscal Year (FY) 2006. |

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| **W 007**<br>Comment letter from Jane Begala<br><br>Postmarked<br>May 14, 2007 | **W 007-01** Concern 1: I am concerned that the EIS was prepared by Air National Guard funded consultants, without any input from objective federal or state environmental scientists, and is entirely based on methodology using projections from a "noise model". As we all know, the parameters of such simulation models can be greatly manipulated. No direct noise observations or recordings of F-15s that take-off and land at other airports were included in the calculation of "anticipated noise levels". Given this, the numerous noise contour maps presented in the EIS are questionable because:<br>a) they do not include the after-burner noise effect of the F-15s;<br>b) they are "averages" that underestimate the frequency and duration of planned flights. At the public hearing on May 9, 2007, it was explained that there will be an increase from the current 5 sorties a day that the ten A-10s carry out to 7 sorties a day by the eighteen F-15s, 7 days a week (from 7 a.m. to 10 p.m. every day), and 355 days a year, plus "scrambles", ground tests, etc.<br>c) they lead to underestimated noise impact and recommendations.<br><br>**W 007-02** The EIS presents noise contour maps in the range of 65 to 85 decibels. However, as explained at the public hearing, these are "averages" based on take-offs and landings, so noise levels will most certainly reach to 90 decibels and beyond. It is a well documented and scientific fact that sustained exposure to 90 decibel noise levels leads to permanent hearing loss. It is almost a given that under takeoff and landing situations when using afterburners, that even that 90 decibel level will be reached or exceeded. At the public hearing, it was proposed that folks could apply for roof insulation. That will not correct the situation for anyone spending anytime outside one's home, including the people on Hampton/Pequot pond who are boating and trying to enjoy recreational activities of any kind. Similarly, concerning the part of the EIS that addresses wildlife and water conservation, the report makes statements like: "The permanent and long-term loss of approximately 0.85 acres of undeveloped land would have minimal impact on resident wildlife given the fragmented nature of the habitat that would be permanently affected as well as the high level of human activity in the project area. Much of the impacted areas are disturbed (i.e., landscaped, urbanized areas). Wildlife may be temporarily displaced during construction activities, but may return after construction and landscaping is complete." (pages 4-60, 4-61). These portions of the report only include the federal and Massachusetts laws but do not include any references to any scientific studies that support these kinds of claims (this quote is only one such example). The report lacks scientific rigor and reaches conclusions that are not evidence-based. I live on the Hampton/Pequot pond and have directly observed the increase of bird life, including the Great Blue Herons and other fragile bird life that will not simply shift their patterns and rebound under constant noise in decibel ranges which can exceed 90 dbl, a level that causes human hearing loss. One can imagine how all of this constant, high level noise will affect pets and other animal life as well, which is not addressed in the report. We have directly observed a black bear walking down our beach on this pond in recent years, so there are other mammals not mentioned in the report. | **W 007-01** The Council on Environmental Quality (CEQ) regulations (Section 1508.16) requires the Lead agency to prepare the National Environmental Policy Act (NEPA) document. The regulations (§1506.5(c)) require that a contractor hired by an Agency must prepare a disclosure statement indicating that they have no financial or other interest in the outcome of the project - the EIS contractor is chosen solely by the lead agency to avoid any conflict of interest. In any case, the United States Air Force (USAF) must independently evaluate the information contained in an EIS and is responsible for its accuracy. All appropriate federal agencies were sent copies of the Draft EIS to review and provide their comments on both the action and the associated analyses within the Draft EIS. The noise analysis was conducted according to accepted and approved federal guidelines.<br>The noise analysis did include after-burner use. Afterburner use was included in the modeling such that 64 percent of the take-offs employed afterburner, 36 percent employed military power (a lower power setting than afterburner), and no landings employed afterburner.<br><br>**W 007-02** It is unlikely that anyone would suffer permanent hearing loss as a result of the Proposed Action. Please refer to Sections 3.1, 4.1, and Appendix C; however, to summarize, “Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion suggests a time-average sound level of 70 dB over a 24-hour period.”<br>The Hampton/Pequot pond area is outside the 65 dB noise contour and therefore is not expected to be significantly impacted by noise levels.<br>Studies are cited throughout the biological resources section (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al*. 1988, Weisenberger *et al*. 1996, Anderson *et al*. 1989, Trimper *et al*. 1998, Conomy *et al*. 1998, etc.) These studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The United States Fish and Wildlife Service (USFWS) has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the Proposed Action will have no significant adverse affects to protected species. |

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| | **W 007-03** Concern 2: I understand that the BRAC and resulting federal law means that the 18 F-15s are reassigned to Westfield-Barnes airport and that there is no possibility to influence that decision. However, I observed at the public hearing that the general public did not seem aware that the two "Proposed Actions" in the EIS, which describe only two alternatives for the F-15 flight patterns, could be influenced. The public seemed relegated to moving their mobile homes or applying for soundproofing, rather than having carefully read the EIS or questioning the two proposed actions.<br><br>I am extremely concerned that the first (preferred and planned for) proposed action, which would guide an estimated 2725 departures, 2725 arrivals, and 936 "closed patterns" per year is: "the 104FW proposed to focus aircraft take-offs on Runway 02, which will result in approximately 90 percent of the take-offs occurring to the north of the airport (Figure 2.2-1)" (page 2-8 of the draft EIS report). Though not many/any of the contour maps show the location of the Hampton/Pequot pond, the Department of Recreation and Conservation, and the state park, it is directly affected by this flight pattern. No rationale was given during the public hearing for how these two proposed actions were determined, or why there are not other alternative flight patterns that would affect fewer residences, protect the nature and open space of the Hampton/Pequot pond and its wildlife, etc. Certainly the MA Air National Guard has sufficient funds, given their construction plans within this conversion, to realign or re-asphalt the runway so that other, citizen-friendly angles of take-offs and landings could be accomplished. Yet there is no discussion in the EIS and no discussion at the public hearing about other alternative flight patterns that are more citizen-friendly, including possible noise abatements (since the F-15s can climb to higher altitudes, faster, than the A-10s). | **W 007-03** Under NEPA, only reasonable alternatives need to be evaluated and carried forward for detailed analysis. Runways are generally aligned such that prevailing winds do not prohibit safe take-off and landings. While the winds are generally not a concern at Westfield-Barnes Airport, relocating or reorienting the runways is not considered a feasible alternative; and furthermore, would simply place potential impacts upon other persons. During the development of the EIS, the team looked at the direction of take-offs and landings that the 104 FW currently flies, and determined that impacts would be minimized if they changed their take-off pattern to the extent practicable. Other alternatives such as 80 percent north/20 percent south; 70 percent north/30 percent south, etc. could have been evaluated, but would have gained nothing in terms of improving potential impacts. Reduced operations were considered (Section 2.5); however, the number of operations would have had to be reduced to such an extent that the 104 FW would not have been able to maintain combat readiness. Hampton/Pequot pond are outside the projected 65 dB noise contour. |
| | **W 007-04** Concern 3: I am concerned that there be a more meaningful series of opportunities for private citizens, advocates, and environmental groups to: review and comment on EIS; and have a chance to intervene and/or influence the proposed flight patterns of the F15s. I have been calling groups far and wide and have yet to find an office that was aware of the public hearing. I only found it advertised in a "Penny Saver", which is a far cry from wide public advertisement that would also include notification of all relevant agencies. | **W 007-04** Both the public scoping meeting (August 15, 2006) and the public hearing (May 9, 2007) were advertised in numerous local newspapers, including:<br>• The Republican<br>• Westfield Evening News<br>• The Pennysaver<br>• The Daily Hampshire Gazette<br>The meetings were also advertised on the local radio and television stations, including:<br>• TV Channel 22 (NBC)<br>• TV Channel 3 (CBS)<br>• TV Channel 40 (ABC)<br>• Radio Station WHYN (AM)<br>• Radio Station WMAS (FM)<br>• Radio Station WFCE (NPR)<br>Additionally, copies of the EIS were sent directly to all relevant local, state, and federal agencies for review and comment. |
| | **W 007-05** Question 1: After the public comment period ends on June 1, what happens to these comments (other than becoming an appendix in the EIS)? In other words, what are the opportunities to discuss other alternative proposed actions for the flight patterns and also noise abatement? What is the process, and what opportunity is there to effectively engage and intervene concerning these topics? | **W 007-05** All relevant, substantive comments submitted by June 1, 2007 will be addressed in the final EIS. The NGB will continue to accept comments after the formal public comment period ends, but they will not be included in the final EIS. All relevant, substantive comments received in time for consideration will be addressed in the final EIS. |

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| | | Reasonable alternatives were developed in accordance with NEPA (please see response 007-03 above). |
| | **W 007-06** Question 2: How can a full and independent EIS be prepared by the Massachusetts EPA, Department of Environmental Protection, and appropriate partners to ensure that scientifically-accurate noise contours be established using actual data obtained under real flight conditions? Recommendations of this Air National Guard EIS should be reviewed in conjunction with such an independent EIS or study. | **W 007-06** The CEQ regulations (Section 1508.16) requires the Lead agency to prepare the NEPA document. The noise analysis was conducted according to accepted and approved federal guidelines.<br>The use of computer noise modeling to implement noise compatibility programs is accepted by the scientific community, and is the methodology used by the Department of Defense (DoD), Department of Transportation (DOT), FAA, and the Department of Housing and Urban Development. The two computer models most used are the FAA's Integrated Noise Model (INM) and the USAF's NOISEMAP. Both models are based on extensive empirical data gathered from engine manufacturers and overflights conducted under controlled conditions on acoustically-instrumented ranges. In the case of a civil airport (e.g., Westfield-Barnes), governing directives are contained in the Code of Federal Regulations (CFR) and Federal Aviation Regulations (FAR). |
| | **W 007-07** Question 3: How can the affected 1300 acres (according to the draft EIS) be included in a noise abatement program that begins before the F-15s start flying at the beginning of 2008? These planes are able to take off and fly at high altitudes in order to reduce engine thrust to the absolute minimum during both take-off and landings, and hours of flight operation should be restricted further. | **W 007-07** It is unlikely that noise abatement will be initiated prior to the arrival of the F-15s due to the lengthy Part 150 Study process. |
| **W 008**<br>Comment Letter From Jane Begala<br><br>May 21, 2007 | **W 008-01** Additional Issue 1: The following of Captain Mutti's statements is not specific and not scientifically corroborated in the draft EIS: "Some of the environmental resources areas potentially affected and analyzed in the EIS include aircraft noise, water resources including wetlands, protected wildlife, and safety; for both the area's residents and the member of the 104FW, just to list a few." While "effects to wetlands and wildlife are considered in the EIS" (again, quoting Captain Mutti's letter), the assessment and analysis approach in the draft EIS is not sufficiently science-based. In other words, very broad statements are made, particularly in the sections concerning effects on wildlife and the environment, but also throughout the report, without footnotes or an annotated bibliography that would provide scientific evidence via the published literature for these statements. In place where there are references to sources like the U.S. Forest Service, the document does not make clear that the referenced study was specific to this type of military, high-noise producing F15s aircraft, but rather makes general statements about the effects of 'aircraft', without specifying what kind. | **W 008-01** The analysis is scientifically-based. Scientific studies are cited throughout the document, including the Biological Resources Section 4.11.2.1 (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al*. 1988, Weisenberger *et al.* 1996, Anderson *et al.* 1989, Trimper *et al*. 1998, Conomy *et al*. 1998, etc.) There are many different aircraft that fly today, and it would not be practical to conduct a study for each and every aircraft type. Generalizations are a necessary reality. These studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The USFWS has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the proposed action will have no significant adverse affects to protected species.<br>Annotated bibliographies are not a required component of an EIS. |

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| | **W 008-02** I would like a copy of the draft EIS that has an annotated bibliography, this is, so that remarks like following are scientifically corroborated: "Similarly, while the general acoustic environment at the airport is expected to become louder than it currently is, most wildlife that currently utilize the airport are not likely to be displaced as a result of an increase in the noise conditions; they are likely habituated to the loud noises of aircraft. While most wildlife in the area may be habituated to high noise levels, substantial increases in noise levels due to aircraft conversion may cause some individuals to move from the area."<br>In other words, we can expect to hear either the roar of these non-commercial, very high noise F-15s… or a literal "dead silence", since all the migratory, nesting, and mating birds will have gone forever. | **W 008-02** An annotated bibliography has not, and will not be prepared for this EIS. The studies cited in this EIS are commonly cited studies in NEPA documents related to noise. Refer to Section 4.11.2.1 in the EIS. |
| | **W 008-03** I would also like a specific explanation of how it will be determined which residence are targeted within the 65 decibels that would trigger mitigation of noise effects? The current noise contour maps only present average decibels, which would suggest that there are additional noise contour lines that have not yet been drawn/determined which would include residences that will experience 65 decibels as part of an average noise load less than 65 decibels. That would mean that many more residences are going to be effected by noise than just those meeting the 65 decibel average. | **W 008-03** The noise contours shown in the Draft EIS are the final noise contours that will be prepared. Noise has been modeled for this EIS, as is done for every EIS where noise is an issue. The use of computer noise modeling to implement noise compatibility programs is accepted by the scientific community, and is the methodology used by the DoD, DOT, FAA, and the Department of Housing and Urban Development. The two computer models most used are the FAA's INM and the USAF's NOISEMAP. Both models are based on extensive empirical data gathered from engine manufacturers and overflights conducted under controlled conditions on acoustically-instrumented ranges. In the case of a civil airport (e.g., Westfield-Barnes), governing directives are contained in the CFR and FAR. |
| | **W 008-04** Additionally, I would like to see the same noise contour maps produced with the FAA noise model for comparison to the results produced by the Air National Guard noise model. How do these results compare? Since all of these estimated "results" are produced on the basis of simulation or forecasts of these models, it would seem most prudent to include the larger group of effected residences and property, not the most conservative estimate, wouldn't it? | **W 008-04** The FAA is preparing the noise maps using the USAF-approved noise model (NOISEMAP). There are some differences in input parameters of the two models, but in general, they would result in very similar noise contours.<br>When we say "…to provide a conservative estimate…" anywhere in this document, what is meant is that a "worst case scenario" is being developed so that the eventual likely impacts are actually *less* than those described. |
| | **W 008-05** Additional Issue 2: The draft EIS does not present analysis of the cumulative effects of noise at such high intensity and duration. The assessment lacks actual F-15 recorded noise data. The analysis falls short of an in depth analysis that would include anticipated long-term effects (and what the plan is for mitigating these effects). In my opinion, the EIS should be validated by an objective party that has a genuine, technical noise expert (with demonstrable academic and field experience and publications on the topic of the effect of noise for non-commercial planes). | **W 008-05** The EIS presents cumulative impacts associated with noise in Section 5.11.2. Noise is not analyzed based on single events. The noise analysis was conducted according to accepted and approved federal guidelines by qualified technical experts. |
| | **W 008-06** Additional Issue 3: It is not clear if the FAA Part 150 Study has been initiated, is completed, or is underway – what is the status of this FAA-controlled study? What is the relationship of the results that will be produced using FAA noise model vis a vis the results SAIC produced using the Air National Guard noise model? | **W 008-06** As stated during both the Public Scoping Meeting (August 2006) and at the Public Hearing (May 2007), the Westfield-Barnes Airport Part 150 Study is underway. The results regarding noise exposure will be the same from both studies. FAA is using the USAF model (NOISEMAP) for the Part 150 Study, but even if they did not, the results would be expected to be quite similar. |

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| | **W 008-07** The relationship of the FAA's findings to the military-funded and controlled findings are unclear. Which would take precedence and why? I do not understand how a FAA study would take precedence over the BRAC; my guess is that the FAA Part 150 Study will have little or no effect. | **W 008-07** The USAF (Air National Guard [ANG]) does not have the authority to provide financial mitigation for noise impacts off military installations. The FAA-directed Part 150 Study is the mechanism for provision of financial mitigation. The City of Westfield has an actively engaged Airport Director (Mr. Willenborg) and FAA Environmental Protection Specialist (Mr. Doucette) who are being extremely proactive by having initiated the Part 150 Study, thereby securing mitigation measures for the noise impacts to the community. The Proposed Action was selected as such because of its capacity to minimize the noise impacts associated with the F-15 aircraft. |
| | **W 008-08** As a member of the interested public, I would like a comparison of the parameter, assumptions, and results of each of these different noise models. | **W 008-08** There is a great deal of information regarding noise modeling on the internet. Two selected websites that may assist in understanding the modeling parameters are:<br>http://chppm-www.apgea.army.mil/dehe/morenoise/aircraft_noise.aspx<br>http://www.wylelabs.com/content/global/documents/internoise2001.pdf |
| | **W 008-09** Additional Issue 4: I would like to point out that soundproofing – even if provided very freely and to a wide swathe of residences – is only a partial solution . Does the Air National Guard intend that all public citizens will only live within their residences, never free to garden or be outside, or have any peaceful, recreational time on the lakes, ponds, and other waterways in the area? I would like an outline of the rest of the noise mitigation plan, including ensuring that children can play outdoors throughout the affected area (not just effects at the immediate airport). | **W 008-09** Please reference Appendix C in the EIS; however, to summarize: "Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency) suggests a time-average sound level of 70 dB over a 24-hour period." Non-auditory health effects of long-term noise exposure, where noise may act as a risk factor, have not been found to occur at levels below those protective against noise-induced hearing loss. |
| | **W 008-10** Additional Issue 5: I would like to know what technical experts in noise conducted and wrote the draft EIS within SAIC. | **W 008-10** The consultant is highly qualified and has prepared hundreds of NEPA documents related to aircraft noise. See list of preparers, Section 8.0. |
| | **W 008-11** Additional Issue 6: What is the specific process by which (before or after the Part 150 Study?) the communities can have input into the "proposed actions" described in the draft EIS? I would like to register serious dismay and concern that there are only two proposed actions, presented again without the scientific evidence that would explain why these are: a) appropriate; b) the only alternatives (!); and c) assurance that the priority proposed action is the least detrimental to the surrounding communities (not only the most appropriate from the perspective of the military tactic). | **W 008-11** Under NEPA, only reasonable alternatives need to be evaluated and carried forward for detailed analysis. A new runway, as suggested previously, falls outside the realm of "reasonable", and would place potential impacts upon other persons. During the development of the EIS, the team looked at the way the 104 FW currently flies, and determined that impacts would be minimized if they changed their take-off pattern to the extent practicable. More alternatives such as 80 percent north/20 percent south; 70 percent north/30 percent south, etc. could have been evaluated, but would have gained nothing in terms of improving potential impacts. Reduced operations were considered (Section 2.5); however, the number of operations would have had to be reduced to such an extent that the 104 FW would not have been able to maintain combat readiness. |
| | **W 008-12** I am concerned by Captain Mutti's statement: "F-15 flight operations will be based on training requirements and more importantly national security." Where is the community component in these considerations? How will/can | **W 008-12** This is a military installation and they have requirements to maintain their combat readiness. The 'community component' is the 104 FW being aware that there is a noise issue and are making attempts to |

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| | the community be involved in an active and ongoing basis with the expected long-term noise abatement and community benefits programs that will be needed?<br><br>**W 008-13** Additional Issue 7: The issuance of the draft EIS and the invitation for agency and public comment have not been sufficient. Captain Mutti states that: "The availability of the draft EIS along with the date, place, and time for the public hearing was published in the Federal Register, national and local media including the Republican, Reminder, and Gazette, as well as every major local television station, and multiple radio stations, including clear channel stations and National Public Radio."<br>While I did not see or hear any of these advertisements (and question how frequently they were advertised and for what duration), what is more important is that most of the agencies and offices I have contacted also did not know about the availability of the draft EIS, the public hearing, or the entire process for comment. It is not sufficient to simply advertise via the media. The Air National Guard should have directly contacted relevant town officials, relevant citizens groups (like the Hampton Pond Association), and local offices of state agencies that oversee the state park, etc. None of this was done, for none of these folks knew about the EIS and the process for comment, discussion, and influence has not been accomplished.<br><br>**W 008-14** Additional Issue 8: The relocation of the 18 F-15s raises significant concerns and possibilities that the Westfield-Barnes airport and surrounding area could be a target for nuclear ("dirty bombs") and/or non-nuclear attack or terrorist threat. The draft EIS omits assessment of these safety concerns and potential impact on the surrounding towns and area. The draft EIS should be amended to include this assessment and a resulting detailed nuclear and non-nuclear safety precaution and evacuation plan that includes both military families and civilian families in surrounding communities. | minimize those potential impacts, while still maintaining their training requirements.<br><br>**W 008-13** Both the public scoping meeting (August 15, 2006) and the public hearing (May 9, 2007) were advertised in numerous local newspapers, including:<br>• The Republican<br>• Westfield Evening News<br>• The Pennysaver<br>• The Daily Hampshire Gazette<br>The meetings were also advertised on the local radio and television stations, including:<br>• TV Channel 22 (NBC)<br>• TV Channel 3 (CBS)<br>• TV Channel 40 (ABC)<br>• Radio Station WHYN (AM)<br>• Radio Station WMAS (FM)<br>• Radio Station WFCE (NPR)<br>Additionally, copies of the EIS were sent directly to all relevant local, state, and federal agencies for review and comment.<br><br>**W 008-14** The relocation of the F-15s to Westfield-Barnes Airport does not pose any significant terrorist concerns. Any fighter aircraft could be used to combat terrorist attacks, including the A-10 which already resides at Barnes, thus the threat from terrorists should not change as a result of the aircraft conversion. Additionally, in the post 9/11 world of Homeland Security, there is a substantial interagency network in place for the protection of both government and non-government assets from terrorist activity, including those in Westfield and the surrounding area. This network currently exists (under the existing condition), and serves to protect all assets of the United States (U.S.). Information is shared among these agencies on a real time basis as a part of the Homeland Security network. This network will not change as a result of the Proposed Action. Civil authorities have the responsibility for contingency plans to protect citizens, usually through their emergency management directors. Section 4.6.1.2 has been amended to include this discussion. |
| **W 009**<br>Comment letter from Thomas Ripa<br><br>May 11, 2007 | **W 009-01** | **W 009-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |

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| **W 010**<br>Comment letter from Marge Slinski<br><br>May 16, 2007 | **W 010-01** The increase in the numbers of children and families negatively affected by the noise of the F-16s since the 80's is enormous. If this study has been developed accurately (in the 80's there was much confusion…) you will see that noise levels of the F16s have not decreased in the twenty years, yet the number of homes, schools, elderly facilities and day care sites affected by the noise levels has increased dramatically since the 80's. The values of the homes range from $80,000 to $750,000. The availability of sound scientific studies documenting the damage of high noise levels has also increased dramatically. We now know that a team of children playing regularly on a nearby field within high noise contours would slowly lose their hearing – forever – if they were subject to the damage of F16 noise on a regular basis. Many new recreational fields have been developed within the noise contours of the Barnes study over the past 20 years. | **W 010-01** Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency, 4,000 Hertz [Hz], after a 40-year exposure) suggests a time-average sound level of 70 dB over a 24-hour period. Since it is unlikely that airport neighbors will remain outside their homes 24 hours a day for extended periods of time, there is little possibility of hearing loss below a Day-Night Average Sound Level ($L^{dn}$) of 75 dB, and this is considered to be extremely conservative (See Appendix C of the EIS for more information). |
| **W 011**<br>Comment letter from Quentin Sizer<br><br>May 19, 2007 | **W 011-01** (1) Would you please show by side view (elevation, cross section) of approach and departure at both ends of the main runway (F-15, A-10, and the F-100) with power settings used (speed, direction, altitudes) at a distance of 4 miles (more if required) from the end of each runway to and from cruising altitudes and along the length of the runway. This data would also be incorporated in a plan view (looking down at the airport and vicinity). Decibel ratings would be indicated on both views. Also indicated emergency procedures in case of aircraft failures relating to the previous material. | **W 011-01** This request is outside the scope of this analysis. |
| | **W 011-02** (2) What is the volume of Commercial, general aviation and military aircraft and all their related activity (speed, direction, altitude) have at the existing 102 FW at Otis AFB and the new area of operations surrounding Barnes Airport, Westover ARB, and Bradley Field operations in Connecticut for a distance of 200 miles north, east, and south and 180 miles west form the above areas of base operations. This would include the tracks (flight paths) of aircraft as mentioned above. | **W 011-02** The operations at Otis ANGB are replacing those at Barnes with a net decrease of operations in the "region" as a result of the Proposed Action. Additionally, this is not a substantive comment relative to this EIS because it is outside the region of influence. |
| | **W 011-03** (3) What additional costs are involved if the 102 FW is kept where it is? Is there a cost saving in either case. What are the variations in both cases? | **W 011-03** Keeping the F-15s at Otis ANGB is not a viable alternative and therefore was not evaluated in this analysis. |
| | **W 011-04** (4) What are the strategic vulnerabilities of each location? What are the positive aspects in each case? | **W 011-04** Keeping the F-15s at Otis ANGB is not an option and therefore was not evaluated in this analysis. |
| **W 012**<br>Comment form from Bill House<br><br>May 21, 2007 | **W 012-01** First, when you say "…approximately 90% of take-offs to the north…" what does approximately mean, in more precise terms (eg, 72-93% +/- 16%) | **W 012-01** Based on prevailing winds and other conditions, it is likely that the 104 FW will be able to achieve 90 percent take-offs to the north. Due to lack of previous data under this situation (attempting to achieve 90 percent take-offs to the north with the F-15 aircraft at Westfield-Barnes Airport), no confidence interval can be attributed to the distribution of the data. |
| | **W 012-02** Second, the decibel map seems limited to 1 mile of the airstrip. What is the map for areas 1-5 miles? 5-10 miles from the base? Will sound levels be less than 65 dB? Would you please give us a map showing the current decibel map for up to 10 miles away for comparison? | **W 012-02** The objective of the noise analysis is to portray noise levels of 65 dB and greater surrounding the airport. Noise levels that are not depicted on the maps can be assumed to be less than 65 dB as a result of aircraft noise. |
| | **W 012-03** PS – why not allow comments via e-mail? | **W 012-03** This will be considered for future USAF NEPA documents. |

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| **W 013**<br>Comment form from Sally Layman<br><br>May 9, 1007 | **W 013-01** We live on the edge of the white 65 dB area. The Wart Hogs come over now and they are very close to the house we can see the men inside. The noise is loud it reverberates off the hills.<br>I'm very concerned that when you did your noise study you did not take this into the equation. | **W 013-01** The approved noise model (NOISEMAP) does not take topography into account when generating noise contours. |
| **W 014**<br>Comment form from Heather L. Pighetti<br><br>May 9, 2007 | **W 014-01** I am under the impression that my street is not on those included for noise mitigation/buffering, though my street is located in the close proximity to the airport runways. | **W 014-01** The Part 150 Study is currently underway and will guide any noise mitigation that will occur. Westfield-Barnes Airport will contact those residences that qualify for noise mitigation. Additionally, there will likely be a "humanizing factor" used in identifying those residences that qualify for mitigation. This will ensure that neighbors are treated in a similar manner to each other. For instance, if a residence is just outside the 65 dB contour, while the vast majority of that residence's neighbors are within (and therefore qualify for mitigation), the neighbor outside the contour may receive similar mitigation for their home. |
| | **W 014-02** I am concerned that the noise level will negatively impact the quality of my home environment, and also that I will not be eligible for any benefits, such as sound buffering or tax breaks. | **W 014-02** It is unlikely that the noise level will negatively impact the quality of the environment of homes that are outside the 65 dB contour. Please refer to Appendix C for more detailed information regarding noise analysis. |
| | **W 014-03** I support the mission of the 104th Fighter Wing, but I am concerned about my home decreasing in value and the noise that I will have to endure as a result of the F-15s. | **W 014-03** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L^{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| **W 015**<br>Comment form from Mark Easkalka<br><br>May 9, 1007 | **W 015-01** Please provide information regarding sound proofing my home in preparation for F-15 arrival. | **W 015-01** The FAA Part 150 Study is currently underway and will guide any noise mitigation that will occur. Please contact the airport for information regarding this. |

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| **W 016**<br>Comment form from Cary Layman<br><br>May 9, 2007 | **W 016-01** | **W 016-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **W 017**<br>Comment form from Gregg and Ann D'Angelo<br><br>May 14, 2007 | **W 017-01** While we have no problem with the conversion to F-15s. We feel that your noise mitigation study is not taking into consideration those that live at the end of the runway.<br>We live 4/10ths of a mile from the end of the runway north side. We are close enough to see the pilots when they land, yet we are not being considered for any noise suppression issues. People who live further away do qualify. This we feel is unfair and needs to be reconsidered. | **W 017-01** The Part 150 Study will look at all those residences affected by the 65 dB contour or greater, regardless of the direction from the runway. |
| **W 018**<br>Comment form from Rosalie Bruneau<br><br>May 18, 2007 | **W 018-01** I am concerned with the increase of lot fees if people move and I plan to stay.<br>Also concerned with wear on the mobile home do the F-15s (cracked walls, broken windows).<br>Also concerned with the noise for the F-15s and vibrations.<br>Because of the F-15s. I have no resale value on my home.<br>What is going to happen to me? I will relocate if the airport will assist in getting another home without a mortgage like I have now or a home with a very small mortgage like the amount of my lot fees and sewer. I can not afford to do anything more. Also, I would need assistance in relocating costs. | **W 018-01** These issues will be sorted out through the Part 150 Study process. It is likely that financial compensation will be made available through the Part 150 process to assist in moving your mobile home to a new local location. Should you decline that assistance, it would be incumbent upon you to manage the impacts of increased lot fees. |
| **W 019**<br>Comment form from Linda A. Forauer and Lisa M. Tinney<br><br>May 17, 2007 | **W 019-01** We would like to know if we could get any assistance from you or the city of Westfield (owner of the airport) in making our transition? | **W 019-01** Westfield-Barnes Airport is currently preparing a Part 150 Study which will evaluate potential noise mitigation procedures, including financial assistance for relocating mobile homes that are currently located within the Arbor Mobile Home Park on a voluntary basis. |
| | **W 019-02** What would the time frame be for us to get any assistance and what documentation will we need to show to receive any assistance? | **W 019-02** It is likely that the Part 150 Study will continue through this year and into next year. Once it is final, it will take some time for funding to be made available. The Airport will let you know if you need to present and documentation at that time. |
| | **W 019-03** Could we be eligible for compensation for future profits on the sale of our home? | **W 019-03** No. |
| | **W 019-04** Will there be any future meeting for us to ask any more questions? | **W 019-04** There will be future meetings regarding the Part 150 Study; however there are no more planned meetings regarding the EIS. Please contact the airport for future Part 150 Study meetings. |
| | **W 019-05** Will we be notified when the person comes around to evaluate our homes, can we be present when this happens? | **W 019-05** Yes, all appraisals are based on individual visits to each home. Home owners are informed in writing and should be there when the appraiser is present. |
| | **W 019-06** Will we be able to move our appliances with us? | **W 019-06** This would be up to the discretion of the owner. |
| | **W 019-07** What will happen to our home once we are gone? | **W 019-07** A home that is in such condition that it can be moved, will be moved to a new location. A home that is not in condition to be moved, would be acquired and demolished. |

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| | **W 019-08** What part does the City of Westfield play in our displacement? | **W 019-08** There is no displacement proposed under the Proposed Action. The City of Westfield manages Westfield-Barnes Airport. |
| | **W 019-09** Where can we get more information? | **W 019-09** For the Part 150 Study: http://www.faa.gov/about/office_org/headquarters offices/aep/planning_toolkit/ |
| **W 020**<br>Comment form from Alan and Mary Ellen Columbe<br><br>May 18, 2007 | **W 020-01** As a resident at Arbor Mobile Home Park I am concerned about relocating some place else.<br>We hope it will remain our option to stay here. | **W 020-01** No landowners would be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation. |
| **W 021**<br>Comment form from William and Mary Covell<br><br>May 16, 2007 | **W 021-01** To whom it may con concern: We live in Arbor Mobile Home Park, we like living in the park and do not want to move. | **W 021-01** Landowners would not be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation. |
| | **W 021-02** We would like to see if the Government could help us (the tenants of Arbor) do something to Grandfather this property to keep us a living mobile home community and maybe even help us be considered Affordable Living? | **W 021-02** You are encouraged to continue to stay involved in the Part 150 Study process. Please contact the airport for details regarding this. |
| **W 022**<br>Comment form from Stephen D. Cass<br><br>May 23, 2007 | **W 022-01** As a home owner her for 19 years, I'm very concerned about what is really going to happen to our park. I would like to stay here. | **W 022-01** Landowners would not be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation. |
| | **W 022-02** If some homes are sold, what will the landlord (James Buratti) then do with the land. | **W 022-02** This is the Arbor Mobile Home Park owner's decision. |
| | **W 022-03** If I were forced to sell (or relocate) I doubt I would be paid the value for my location and my outdoor amenities (Fences, Decks, Patios, Sheds, Flowers, Shrubs, Trees, Paved Driveway, beautiful lawns, woods behind me, etc.) | **W 022-03** Property owners would be paid fair market value for their property. |

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| | **W 022-04** Why would we not be eligible for doors, windows, etc.<br><br>**W 022-05** Very concerned about loss of value of my home and all of the conflicting stories and statements I'm hearing.<br><br>Who to believe should I continue to improve my home. | **W 022-04** Mobile homes cannot be effectively insulated for sound by replacing doors and windows.<br><br>**W 022-05** You are encouraged to continue to stay involved in the Part 150 Study process. Please contact the airport for details regarding this. |
| **W 023**<br>Comment letter from Henry Fries<br><br>May 31, 2007 | **W 023-01** (1) What assurance does the community have that the proposed plan will be followed with 90% of the sorties taking off to the north? Can the number of sorties and runway used during take off be posted on a monthly basis to all monitoring of actual activity as compared to the Environmental Impact Study?<br><br>**W 023-02** (2) Other than the Arbor Mobile Home Park, it appears that the greatest environmental impact is noise to the south of the airport. With all of the planned construction projects, none involved noise mitigation. A heavy growth of trees in combination with solid barrier on the airports property south of the Massachusetts Turnpike would not interfere with flight operations and should help this. Why is this not a part of the Massachusetts Air National Guard's construction plans?<br><br>**W 023-03** (3) The Flight Tracts for Aircraft Arrivals at Westfield-Barnes Airport (Figure 2.2-1) illustrates low altitude patterns that the A-10s use to circle the airport prior to landing. Will the F-15s also follow this pattern, circling prior to landing? If so, what contribution to the noise contours is attributed to this? | **W 023-01** Based on prevailing winds and other conditions, it is likely that the 104 FW will be able to achieve 90 percent take-offs to the north. Of course, the safety of the aircraft, pilot, and those on the ground must be of primary concern. This information is not typically posted for the public.<br><br>**W 023-02** Trees can serve as a noise barrier; however they can also interfere with flight safety. Trees are often cut down around airports to comply with the Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design Criteria*.<br><br>Additionally, noise impacts experienced by residents south of Route 90 would be primarily from aircraft overflights. Trees or sound barriers would provide little sound mitigation in this case, as these measures are only effective in mitigating ground-based noise.<br><br>**W 023-03** It is anticipated that the F-15s will fly the same flight tracks that the A-10s currently do surrounding the airport; however the F-15s will take off at a steeper angle and climb faster than the A-10s, and will also take off from a different direction. These patterns have been accounted for in the noise modeling. |
| **W 024**<br>Comment Letter From Molly Goodwin<br><br>May 30, 2007 | **W 024-01** My whole house rattles every year on the weekends of the Air Show at Barnes. Several years ago, larger jets were housed briefly at Barnes and the noise level at my home was really unbearable.<br><br>**W 024-02** Please think deeply about the impact that the addition of these jets will have on the area. If they have to come, please consider the flight patterns and the hours of operation so that they will have impact on the smallest number of people. | **W 024-01** The air show is not representative of the noise level that will be experienced under the conversion to the F-15 aircraft. The profiles flown during the airshow are not representative of flight tracks flown on a normal basis at Westfield-Barnes (or any other airport). The flight profiles are such that performance capabilities of the various aircraft are shown (i.e., flying low and fast).<br><br>**W 024-02** The 104 FW is very concerned with the potential noise impacts to the community and this is why they developed the proposal to focus take-offs to the north, thereby minimizing impacts to as many people as possible. Additionally, they are planning to take off at a steeper angle than the A-10's did so that they rise higher faster, also minimizing noise impacts. There are no planned training flights between 10 p.m. and 7 a.m. |
| **W 025**<br>Comment Letter From Alison Rogers<br><br>May 24, 2007 | **W 025-01** Flying 18 F-15 Fighter Jets 15 hours a day 7 days a week over the homes of resident is likely to destroy the quality of life for people and wildlife. That level of noise in a highly populated area will have profound effects on the health and behavior of all in the inhabitants who already live with noise level above acceptable standards. It is hard to imagine that it is absolutely necessary to fly that jets that much. | **W 025-01** 18 F-15s will not be flying over Westfield 15 hours a day, 7 days a week. As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. |

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| | **W 025-02** It will use enormous amounts of fossil fuels and create and unfair air pollution load, adding to the existing respirator problems. | **W 025-02** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually), it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this.<br>The emissions projected as a result of the proposal have been analyzed and it has been determined that air quality in Hampden County and the Hartford-New Haven-Springfield Interstate Air Quality Control Region (AQCR) will not be significantly affected as a result of the Proposed Action. |
| | **W 025-03** I am requesting that the flight schedule be dramatically reduced, that an extensive noise abatement program be created that we could all have a say in. This should be done by creating a community advisory board with oversight over the proposed changes at Barnes and their impact. | **W 025-03** The number of flights described above is not accurate. See comment 025-001 above. |
| **W 026**<br>Comment Form From Bruce Krupa and Lisa MacFarlane<br><br>May 18, 2007 | **W 026-01** | **W 026-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **W 027**<br>Comment Letter From Dorothy Cresswell<br><br>May 26, 2007 | **W 027-01** The article said that F-15s are 10 times louder than A-10s. I am not certain which plane that is, but I'm definitely worried if there will be planes louder than the C5As. | **W 027-01** Section 3.1.1.1 of the EIS presents several different aircraft and the maximum sound levels associated with them during both take-off and landing at various distances. At 1,000 feet there is approximately 10 dB difference between the two aircraft during take-off and approximately 3 dB difference during landing. Please refer to this table for more details. |
| | **W 027-02** The article also says that there will be 14 take-offs a day, every day of the year, from 7 a.m. to 10 p.m. | **W 027-02** As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. |
| | **W 027-03** If there is anyway to re-direct the flights so that they don't fly over the water, it would be greatly appreciated. Better yet, fly fewer, less noisy planes. | **W 027-03** The Proposed Action alternative has been designed to impact the fewest people possible. |

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| **W 028**<br>Comment Form From Kenneth Boucher<br><br>May 28, 2007 | **W 028-01** (2) Page 3-5, Day-Night Average Sound Level. I haven't been able to understand totally how Ldn is calculated. Could someone give me more detail with a representative example? It would be very helpful. | **W 028-01** This noise metric takes all noise events that occur throughout the day at a given location and spreads the noise energy evenly across the 24 hour period; thereby reducing the peaks and valleys of noise, but also making the noise environment something that can be compared across locations. This metric also adds a 10 dB penalty for any noise events that occur between the hours of 10 p.m. and 7 a.m. Please refer to Appendix C of the EIS for more detailed information. |
| **W 029**<br>Comment Letter From Kenneth W. Samonds<br><br>Postmarked<br>May 22, 2007 | **W 029-01** | **W 029-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **W 030**<br>Comment Letter From Marcea Rundquist<br><br>May 22, 2007 | **W 030-01** We cannot stand more aircraft noise. Please find a way to reduce the impact of moving the F-15s to Westfield. This area is rural, beautiful, and otherwise quiet. There are dense areas of people such as here in Northampton that should be protected. Also, there are important wildlife habitats. | **W 030-01** The 104 FW has proposed to fly the F-15s in a manner that minimizes noise impacts to the community. |
| **W 031**<br>Comment Form From Patricia Pelletier<br><br>Postmarked<br>May 25, 2007 | **W 031-01** I would like to know if your going to force us to move to another mobile home park such as our "wonderful" landlord suggested? His other park should be condemned.<br><br>**W 031-02** We all need to work with the government and I hope there is fairness and a fair price for our homes. | **W 031-01** Landowners would not be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation.<br><br>**W 31-02** Property owners would be paid fair market value for their property. |
| **W 032**<br>Comment Form From Richard and Joan Crockwell<br><br>Postmarked<br>May 22, 2007 | **W 032-01** We don't want to lose our home, we've been here going on twenty years. If there's a way to keep it we would do all we could to keep it, we don't want to move.<br><br>**W 032-02** There must be another airport that these planes can go beside here. | **W 032-01** Landowners would not be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation.<br><br>**W 032-02** The aircraft conversion at Westfield-Barnes is necessary because the final recommendations of the Base Realignment and Closure (BRAC) Commission are required by law to be implemented. |

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| **W 033**<br>Comment Letter From Renee and Scott Hetu<br><br>May 29, 2007 | **W 033-01** (1) High noise pollution during take offs and landings.<br>(2) High noise pollution during maintenance testing of engines. | **W 033-01** The noise analysis determined that an additional 1,307 acres (678 acres off airport property) would be newly exposed to noise levels above 65 A-weighted decibels (dBA). Westfield-Barnes Airport, in coordination with the FAA, is preparing a Part 150 Study that will address this issue and will determine what, if any mitigation will be afforded to residences that are affected by the increased noise levels. |
| | **W 033-02** (3) Environmental pollution during operation of the engines in the air and on the ground. | **W 033-02** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this. |
| | **W 033-03** (4) Environmental pollution through spillage of fuel and solvents during maintenance and de-icing of aircrafts during the winter time. | **W 033-03** Please refer to 033-02 above. |
| | **W 033-04** (5) Pollution of the pure water aquifer which runs under the Westfield-Barnes Airport, through seepage of fuel and industrial chemical. The aquifer is a major source of drinking water for residences and communities north of Barnes Airport. A previous application for the construction of a gas station in the aquifer area was denied by the DEP, even though the plans were based on California earthquake proof concept. How does the military guarantee to exceed the California standards? | **W 033-04** Please refer to 033-02 above. |
| | **W 033-05** (6) Emotional stress due to the high frequency of operation at elevated noise levels. | **W 033-05** As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. Additionally, as indicated in Appendix C (page C-13): Non-auditory health effects (i.e. stress) of long-term noise exposure, have not been found to occur at levels below those protective against noise-induced hearing loss (i.e. 70 $L_{dn}$).non-auditory health effects (i.e. stress) of long-term noise exposure, have not been found to occur at levels below those protective against noise-induced hearing loss (i.e., 70 $L_{dn}$). |
| | **W 033-06** (7) Loss of real estate resale value due the aforementioned factors. | **W 033-06** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an |

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| | | effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 033-07** (8) Loss of quality of life and recreational pleasure at the State Park facility and the local communities affected by the noise pollution. | **W 033-07** The F-15s will not likely have much (if any) impact on the State Park. Due to the planned steep angle of take-off, the aircraft will likely be much higher than necessary to have an impact on users at the State Park. |
| | **W 033-08** (9) Loss of the singing bird population which has returned again since the departure of the F100 aircrafts. | **W 033-08** Studies are cited throughout the biological resources section of the Draft EIS (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al*. 1988, Weisenberger *et al*. 1996, Anderson *et al*. 1989, Trimper *et al.* 1998, Conomy *et al*. 1998, etc.) These studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The USFWS has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the proposed action will have no significant adverse affects to protected species. |
| | **W 033-09** I ask, what steps are being taken by the authorities in charge of the transition to protect its citizens, in the affected areas and how do they plan to compensate people for their financial losses and possible emotional and medical consequences? | **W 033-09** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| **W 034**<br>Comment Letter From Robert A. Rundquist<br><br>May 22, 2007 | **W 034-01** But if you must put them near us, find ways to mitigate the noise – soon (not in 10 to 20 years). | **W 034-01** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| **W 035**<br>Comment Letter From Lulu and James Fanion<br><br>May 24, 2007 | **W 035-01** Will we be able to stay hear after the planes arrive? Will we be allowed to? | **W 035-01** Landowners would not be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their |

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| | | mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation. |
| | **W 035-02** If I accept a Government offer to buy my home where will I go? | **W 035-02** The Part 150 Study will identify potential relocation options for those who do relocate. |
| | **W 035-03** How can my life style not change when I now live in my own home, but a house is beyond my means? Equitable housing for me would be a private home, not a condo, not an apartment. Will we receive assistance finding a home to buy with the amount given as fair market value of our mobile home? | **W 035-03** These issues will all be addressed by the Part 150 Study. |
| | **W 035-04** If we choose not to leave and many houses in the park are sold, will the owner be forced to close the park due to loss of income? And will I then be left with no government funds and still having to move? | **W 035-04** Owners generally have 60 days to respond to a written offer. There is no guarantee that federal funds will be available two years in the future. But the new aircraft should be in place, and new noise levels will be experienced before any offers are made. |
| **W 036**<br>Comment Letter From William Breyer<br><br>May 30, 2007 | **W 036-01** My appeal is that every possible effort be made to control the noise that we are subjected to. | **W 036-01** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| | **W 036-02** Can take-off and landing route be varied? Typically Middle Road has been the route for take-off and landings. | **W 036-02** In general, take-offs will occur to the north (90 percent of the time) in an effort to minimize impacts to the greatest number of people in the community. |
| | **W 036-03** What other steps can be taken to minimize noise? | **W 036-03** Please refer to 036-01 above. |
| **W 037**<br>Comment Form From Frank J. Folta Jr.<br><br>May 29, 2007 | **W 037-01** We are very concerned with our home being right across the street on Southampton Road West next to the school's. We are concerned about the 65 DB noise volume which could go even higher. | **W 037-01** There is no indication that those homes located within the 65 $L_{dn}$ noise contour would be subject to noise levels higher than that. |
| | **W 037-02** We have worked our whole life for our home. Our home is valued at 343,400 by the City of Westfield. We are sure this will effect the resale value of our home. | **W 037-02** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify. |

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| | | Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 037-03** Is the F15 aircraft right for this heavy residential area?<br>Is the F15 right to be so close to our schools and children? | **W 037-03** The aircraft conversion at Westfield-Barnes is necessary because the final recommendations of the BRAC Commission are required by law to be implemented. |
| **W 038**<br>Comment Letter From Susan McNamara<br><br>May 30, 2007 | **W 038-01** I will begin my comments with an observation. It appears to me that you have done the bare minimum in making the impact of this conversion public knowledge. It also appears that the comment period was intentionally brief to keep people from having adequate time to gather information and organize. | **W 038-01** Both the public scoping meeting (August 15, 2006) and the public hearing (May 9, 2007) were advertised in numerous local newspapers, including:<br>• The Republican<br>• Westfield Evening News<br>• The Pennysaver<br>• The Daily Hampshire Gazette<br>The meetings were also advertised on the local radio and television stations, including:<br>• TV Channel 22 (NBC)<br>• TV Channel 3 (CBS)<br>• TV Channel 40 (ABC)<br>• Radio Station WHYN (AM)<br>• Radio Station WMAS (FM)<br>• Radio Station WFCE (NPR)<br>Additionally, copies of the EIS were sent directly to all relevant local, state, and federal agencies for review and comment.<br>Additionally, the comment period was in excess of the required 45-day minimum period. |
| | **W 038-02** Given that this conversion is legislated, I understand that the arrival of the F-15s is a "done deal." However, it appears that there are many ways that this can unfold.<br>For instance, is it truly necessary that as the planes land they circle in a clover leaf or is this based more in tradition. Changing this procedure would keep some homes from being flown over twice, as wells as saving on fuel and other related costs. | **W 038-02** There are certain training requirements that must be met for the unit to maintain their proficiency and readiness. |
| | **W 038-03** I wonder also of the real necessity of the number of flights being considered. What is truly necessary and how can that number be in balance with the day to day well-being of the citizens you are charged to protect? | **W 038-03** Please refer to 038-02 above. |
| | **W 038-04** Additionally, it seems like it would be prudent to gradually break into increased activity on the base to get a sense of the impact. | **W 038-04** The F-15s will be phased into use and there should be an opportunity for the community to get an impression of the noise associated with the aircraft. |
| | **W 038-05** It is my contention that the public need to be actively involved on an ongoing basis. | **W 038-05** The community has had, and continues to have the ability to be involved in the process. Refer to comment 038-02 above. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |

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| | **W 038-06** What you are proposing has the potential of seriously damaging the health, well-being and quality of life of the citizens in the surrounding communities. | **W 038-06** The Proposed Action is not expected to have health impacts to the community. Please reference Appendix C in the EIS; however, to summarize: "Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency) suggests a time-average sound level of 70 dB over a 24-hour period." Non-auditory health effects of long-term noise exposure, where noise may act as a risk factor, have not been found to occur at levels below those protective against noise-induced hearing loss. |
| | **W 038-07** By virtue of your presence, you endanger our air and water quality, which I consider to be basic civil rights What will be left to protect if the people and the environment are poisoned? | **W 038-07** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this.<br>The emissions projected as a result of the proposal have been analyzed and it has been determined that air quality in Hampden County and the Hartford-New Haven-Springfield Interstate AQCR will not be significantly affected as a result of the Proposed Action. |
| **W 039**<br>Comment Form From Allyn and Kimberly Hall<br><br>May 31, 2007 | **W 039-01** What can be done to lessen the noise level, how can we lessen the effects of noise including vibration on our home? | **W 039-01** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| | **W 039-02** My wife and I have two young children, both in elementary school in need of a full nights sleep. | **W 039-02** There are no planned operations between the hours of 10 p.m. and 7 a.m. |
| | **W 039-03** Are there any programs a homeowner charted at 70 dBA, can use to help lessen the impact of the F-15? | **W 039-03** Please refer to 039-01 above. |
| | **W 039-04** A fact that can't be overlooked is the loss of value on the sale of the home. | **W 039-04** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an |

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| | | effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| **W 040**<br>Comment Form From Michael Cosgriff<br><br>May 31, 2007 | **W 040-01** First, the section dealing with noise pollution is completely inadequate. The study cited in the EIS has been prepared by computer modeling, not through actual scientific experimental design, measurement and observation. In a statement from the preparing firm to the Massachusetts Aeronautics Board, he stated that the Armed Forces do not use noise modeling that is the same as civilian aircraft. This statement in addition to his other statement in the same testimony, that the F15s have a substantially larger noise footprint than the current 104 planes supports the belief that the results are completely erroneous, false and misleading. As a resident who lives directly under the turning area on the landing approach I can anecdotally report that according to published decibel charts the current 104's certainly exceed the less than 65 decibel profile shown on the map. | **W 040-01** The noise analysis was conducted according to accepted and approved federal guidelines. There are many metrics, or measurements, that are used for evaluating noise. However, after years of scientific and sociological research by federal agencies, there is general agreement that the $L_{dn}$ is the best predictor of public annoyance and concern from exposure to elevated noise. The use of computer noise modeling to implement noise compatibility programs is accepted by the scientific community, and is the methodology used by the DoD, DOT, FAA, and the Department of Housing and Urban Development. The two computer models most used are the FAA's INM and the USAF's NOISEMAP. Both models are based on extensive empirical data gathered from engine manufacturers and overflights conducted under controlled conditions on acoustically-instrumented ranges. In the case of a civil airport (e.g., Westfield-Barnes), governing directives are contained in the CFR and FAR. |
| | **W 040-02** Secondly, the comments that there will be little impact on wildlife. The takeoff and landing pattern is directly over Pequot (Hampton) Pond. As recently as May 22, 2007 four American Bald Eagles were observed feeding from the fish in the pond. Additionally, a nesting pair of blue herons were observed on the pond throughout the entire summer and fall of 2005 and the National Fish and Wildlife Services in Yellowstone National Park demonstrated substantial behavior changes due to noise in wildlife that let to changes in eating and reproductive behavior. | **W 040-02** Studies are cited throughout the biological resources section (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al*. 1988, Weisenberger *et al*. 1996, Anderson *et al*. 1989, Trimper *et al*. 1998, Conomy *et al*. 1998, etc.) These studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The USFWS has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the proposed action will have no significant adverse affects to protected species. |
| | **W 040-03** The firm who has prepared this report has not considered endangered species within the effected area. | **W 040-03** Please refer to comment 040-02 above. |
| | **W 040-04** Third, the EIS report has not adequately addressed the issue of potential water pollution. | **W 040-04** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to |

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| | | contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this. |
| | **W 040-05** With the substantially increased number of daily and annual flights there will be a dramatic increase in the opportunities for spilling jet fuel, the lack of containment of de-icing solutions with a very real potential of serious contamination to the aquifer lying directly under Barnes Air Base. | **W 040-05** Please refer to comment 040-04 above. |
| | **W 040-06** No where in the EIS report was the issue of containment of fuel spillage or de-icing or maintenance related solutions dealt with. To simply assume that it won't be an issue given present flight frequency and procedures is a huge leap of faith which the historical evidence of ground water pollution surrounding military bases does not support. The study simply is incomplete without dealing with this issue. | **W 040-06** Please refer to comment 040-04 above. |
| | **W 040-07** Finally, there is very little in the way of real scientific information dealing with the issue of air quality. Moving from a very low frequency of flights to many daily and many more days per year can only adversely effect the levels of pollutants in the local environment. To simply state that it won't exceed the minimum is dodging the issue. | **W 040-07** Appendix D presents the scientific air emissions calculations. The *de minimis* levels are the regulatory driver, and these would not be exceeded. |
| | **W 040-08** Report the actual current levels of recognized pollutants identified by the Federal Clean Air Act and the expected levels of those same pollutants with the arrival of the F15's and their expected useage pattern. | **W 040-08** This information is presented in Section 3.4.2 (for existing conditions) and Section 4.4.2.1 (for expected emissions under the Proposed Action). Additional information regarding the air quality analysis can be found in Appendix D, which presents the scientific air emissions calculations. |
| | **W 040-09** It is apparent that this EIS report was hastily prepared and done without scientific rigor. | **W 040-09** This report was prepared by an interdisciplinary team comprised of resource specialists with expertise and training in their field of study. |
| | **W 040-10** The timeline presented fastracks the report and the comment period so that local residents hardly had time to even study the issue prior to the June 1 deadline. | **W 040-10** Both the public scoping meeting (August 15, 2006) and the public hearing (May 9, 2007) were advertised in numerous local newspapers, including:<br>• The Republican<br>• Westfield Evening News<br>• The Pennysaver<br>• The Daily Hampshire Gazette<br>The meetings were also advertised on the local radio and television stations, including:<br>• TV Channel 22 (NBC)<br>• TV Channel 3 (CBS)<br>• TV Channel 40 (ABC)<br>• Radio Station WHYN (AM)<br>• Radio Station WMAS (FM)<br>• Radio Station WFCE (NPR)<br>The comment period was in excess of the required 45-day minimum period. |
| | **W 040-11** Finally, the website says that it is possible to respond directly to the EIS report through the website. I found no such link or button. The only way was to download a document, fill it in and then mail or fax it. | **W 040-11** The website has been tested and was functioning properly. The website has since been discontinued. |

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| **W 041**<br>Comment Form From Vladimir Tverdokhlebov<br><br>May 29, 2007 | **W 041-01** We would like to know what options do we have before we start the construction of new home for our family with four little children. We already made a big investment in the construction project and would like to know what can you do so we could still finish construction, and live there comfortably. | **W 041-01** The address provided is outside the 65 dB noise contour under the Proposed Action; therefore, it is unlikely that the location would qualify for any government assistance in terms of noise mitigation. However, implementing noise mitigation such as additional insulation and multi-paned windows before your home construction is complete would be less costly than installing after construction is complete, and would be consistent with the types of mitigation that would be applied to existing homes within the 65 dB noise contour. |
| **W 042**<br>Comment Form From Alexander Tverdokhlebov<br><br>May 29, 2007 | **W 042-01** I also heard that you are offering to install insulation for soundproofing and other types of help. Please let me know what do you plan to do for residents in the area to resolve the problem of noise and disturbance. | **W 042-01** Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. In general, this mitigation would be available to those residences that are located within the 65 dB noise contour only. Contact the airport for information regarding future meetings and information. |
| **W 043**<br>Comment Letter From Laurie Sanders and Fred Morrison<br><br>May 31, 2007 | **W 043-01** Air quality concerns in the Connecticut River Valley are already a serious issue; on many summer days, the region fails to meet certain EPA Air Quality standards. | **W 043-01** The emissions projected as a result of the proposal have been analyzed and it has been determined that air quality in Hampden County and the Hartford-New Haven-Springfield Interstate AQCR will not be significantly affected as a result of the Proposed Action. |
| **W 044**<br>Comment Letter From Karen Kirsch and Claude Borowsky<br><br>June 1, 2007 | **W 044-01** Both my husband and I have very serious concern regarding the impact of the F-15s due to be stationed at Barnes Airport, a mere 2 miles form our home. These concerns are environmental, economic and emotional damages to the community, particularly the pure water aquifer, which runs directly underneath Barnes Airport. This aquifer, which supplies many private wells, including our own, along with being a major source of drinking water for the area. It seems inevitable that pollution of fuel and solvent spillages into the aquifer will contaminate it permanently.<br><br>**W 044-02** The damage to quality of life for local residents, along with damage to real estate values, will be suffered by many innocent people due to the noise levels that accompany the F-15 aircraft. These noise levels will be deafening and extremely stressful to those residents as the noise levels of the F-15 are times are ten times louder than the current A-10s. | **W 044-01** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this. Therefore, it is unlikely that there would be any increase in environmental risk due to pollution as a result of the aircraft/mission change. Potential impacts to the aquifer would be negligible.<br><br>**W 044-02** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify. |

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| | | Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 044-03** Since they will be flying significantly more flights – 14 take-offs every day, from 7 am until 10 pm, and considering these horrible noise levels, it makes no sense to relocate the high noise F-15 aircraft in the highly populated Westfield and the surrounding towns of Southampton, Westhampton, Holyoke and Easthampton. Why not in the countryside? | **W 044-03** As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. |
| | **W 044-04** Can the flight patterns be altered to minimize the noise levels? Can the flight patterns, take-offs and landings be altered to give maximum consideration to the local communities? | **W 044-04** The take-off direction and pattern has been optimized for minimizing impacts to the community. |
| | **W 044-05** Can the F-15s be located to another airport, more isolated from highly populated communities? | **W 044-05** No. The aircraft conversion at Westfield-Barnes is necessary because the final recommendations of the BRAC Commission are required by law to be implemented. |
| | **W 044-06** Can the schedule of flights (from 7 am until 10 pm) be reduced? | **W 044-06** The document does not indicate that flights will occur exactly at 7 a.m. and end exactly at 10 p.m.. Flights can occur between these hours. A reduction in the number of flights was evaluated and determined that a reduction that would have any real impact on the noise contours would not allow the 104 FW to conduct adequate training to maintain the necessary level of readiness. |
| | **W 044-07** Can you create a more extensive noise abatement program that everyone has input into? | **W 044-07** Westfield-Barnes Airport, in coordination with the FAA, are the entities responsible for preparation of the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| | **W 044-08** Can you create a community advisory board to provide oversight on behalf of the affected communities? We appreciate you consideration of these matters. | **W 044-08** Although the Community Advisory Board was disbanded in June, 2007, a new group, the 104th Fighter Wing Military-Civilian Community Council (104 FW MC3) was formed in its place.<br>The 104 FW MC3 is an advisory board to promote communication between the Massachusetts Air National Guard (MAANG), located at Westfield-Barnes Airport, and local and regional communities, organizations, and individuals.<br>The objectives of 104 FW MC3 are to: (i) establish a mutually beneficial process that will ensure timely and consistent notification between the military and civilian tenants of the installation and the local and regional communities, organizations, and individuals, on projects, policies, and activities of mutual interest; and (ii) foster cooperative discussions of local plans, programs, and projects of mutual interest. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
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| **W 045**<br>Comment Letter From Jean Carpenter<br><br>May 30, 2007 | **W 045-01** We have several schools off Southampton Road and a day care center. What health problems will these children have in the near future, if they don't already have some? | **W 045-01** None of the schools fall within the 65 dB noise contour under any alternative. While aircraft may be heard within the classrooms at times, they should not be disruptive to the students. |
| | **W 045-02** Who is monitoring this? | **W 045-02** There is no known entity that monitors noise. |
| | **W 045-03** The air quality here is extremely poor, on the North Side of Westfield. | **W 045-03** The region is designated as a moderate nonattainment area for the Federal 8-hour ozone standard and is in attainment for all other criteria pollutants. |
| | **W 045-04** Has there been any increase of heart incidents (from all the pollution and noise), asthma, or a rise in cancer rates of any sort? | **W 045-04** There is no known documentation specific to this comment. |
| | **W 045-05** Have any studies been done to check the effect of noise on hearing? | **W 045-05** Studies are cited in the noise analysis sections (Sections 3.1 and 4.1), as well as in the Noise Appendix (Appendix C). |
| | **W 045-06** Probably most important, what effect will the planes, and their emissions have on the aquifer and our water supply? | **W 045-06** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this. Therefore, it is unlikely that there would be any increase in environmental risk to the aquifer due to pollution as a result of the aircraft/mission change. |
| **W 046**<br>Comment Form From Mary E. Cotnoir<br><br>May 31, 2007 | **W 046-01** We then received a package in the mail last week with another map and we're fairly certain that my home is within the approved zone; however it is important to me to make my statement to you now that I wish for my home to be included in the zone if it is not already. | **W 046-01** The Part 150 Study is currently underway and will guide any noise mitigation that will occur. Westfield-Barnes Airport and/or the FAA will contact those residences that qualify for noise mitigation. Additionally, there will likely be a "humanizing factor" used in identifying those residences that qualify for mitigation. This will ensure that neighbors are treated in a similar manner to each other. For instance, if a residence is just outside the 65 dB contour, while that residence's neighbors are within (and therefore qualify for mitigation), the neighbor outside the contour will likely receive similar mitigation for their home. Contact the airport for information regarding future meetings and information. |
| | **W 046-02** If we will be considered in the zone, what is the timeline for home improvements? | **W 046-02** Contact the airport for details about the Part 150 Study and their schedule. |
| | **W 046-03** If the planes are arriving by fall, is it safe to assume that there is a plan in place to get all the homes that are affected taken care of before that occurs? | **W 046-03** No. Mitigation that may result from the Part 150 Study will not be in place by the time the first F-15s arrive. |
| | **W 046-04** I am also concerned about how long it will actually take to do the improvements and can they be done while we are still living in the house or would we have to temporarily relocate? If so, who will pick up that cost? | **W 046-04** It is unlikely that relocation would be necessary during any improvements to residences. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| **W 047**<br>Comment Letter From Mr. A. R. LaPalme<br><br>May 24, 2007 | **W 047-01** | **W 047-01** This comment has been reviewed and it was determined that no specific response or change to the document was required as a result of the information provided. |
| **W 048**<br>Comment Letter From Carl and Joy Gagliano<br><br>Postmarked<br>May 24, 2007 | **W 048-01** So I see from the newspaper…that 14 flights will be happening…7 days a week…from 7 in the morning…to10 pm at night. | **W 048-01** As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. |
| | **W 048-02** I understand…my property value will be going down, my hearing…which is failing…may be affected…and my property may get rezoned…and useless for re-sale. My husband works nights…sleeps days…and will now…not be able to get consistent sleep in. We suffer enough with sleep deprivation. | **W 048-02** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield.<br>It is unlikely that anyone would suffer permanent hearing loss as a result of the Proposed Action. Please refer to Sections 3.1, 4.1, and Appendix C; however, to summarize, "Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion suggests a time-average sound level of 70 dB over a 24-hour period."<br>There are no planned operations between the hours of 10 p.m. and 7 a.m.; therefore, sleep should not be substantially affected. |
| | **W 048-03** Is there any way…to change the flight patterns? Perhaps direct them over an already noisy city? Or use another airport to do this in? Or group the take-offs and landings into a much shorter space of time…and get it over with? And perhaps have some fly free days? | **W 048-03** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| | **W 048-04** I understand…that…the noise levels…haven't been measured…only guessed at…I only know what previous fly over's sounded like…and they were nasty…you wouldn't want your office or home here…it would be impossible to conduct business. | **W 048-04** The noise modeling was completed by competent professionals who know and understand both military and general aviation aircraft. Additionally, the noise analysis was conducted according to accepted and approved federal guidelines. |
| **W 049**<br>Comment Letter From Deborah Burkhalter<br><br>May 23, 2007 | **W 049-01** I am deeply concerned to hear of the proposed changes at Westover Air Base, regarding the arrival of the F-15's and the noise that this will bring.<br><br>**W 049-02** I call on you for a more extensive noise abatement program that includes all citizens in the effected communities to offer their input.<br><br>**W 049-03** I am requesting that a community advisory board be established to provide oversight on behalf of our communities. | **W 049-01** The proposed changes are not for Westover Air Base; rather, they are for the 104 FW at Westfield-Barnes Airport.<br><br>**W 049-02** Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information.<br><br>**W 049-03** Although the Community Advisory Board was disbanded in June, 2007, a new group, the 104 FW MC3 was formed in its place.<br>The 104 FW MC3 is an advisory board to promote communication between the MAANG, located at Westfield-Barnes Airport, and local and regional communities, organizations, and individuals.<br>The objectives of 104 FW MC3 are to: (i) establish a mutually beneficial process that will ensure timely and consistent notification between the military and civilian tenants of the installation and the local and regional communities, organizations, and individuals, on projects, policies, and activities of mutual interest; and (ii) foster cooperative discussions of local plans, programs, and projects of mutual interest. |
| **W 050**<br>Comment Letter From Leo and Mary-Claire Demelbauer<br><br>May 23, 2007 | **W 050-01** As a former member of the 104 Tac Fighter group and as a pilot, I am certainly approving of the validity of their mission. However I question the wisdom to move high noise F15 aircrafts and environmental polluters from a low population density area at Cape Cod to the highly populated community of Westfield and its surrounding towns of Southampton, Easthampton and West Holyoke.<br>I have all these following concerns because they were not adequately addressed in the draft EIS.<br><br>**W 050-02** A) High noise pollution during take off and landings<br>B) High noise pollution testing engines during maintenance<br><br>**W 050-03** C) Environmental pollution during operation of the engines in the air and on the ground | **W 050-01** The aircraft conversion at Westfield-Barnes is necessary because the final recommendations of the BRAC Commission are required by law to be implemented.<br><br>**W 050-02** The noise analysis was conducted according to accepted and approved federal guidelines.<br>The use of computer noise modeling to implement noise compatibility programs is accepted by the scientific community, and is the methodology used by the DoD, DOT, FAA, and the Department of Housing and Urban Development. Based on this analysis approximately 1,307 acres (678 acres off airport property) would be newly exposed to noise levels above 65 dBA. Westfield-Barnes Airport, in coordination with the FAA, is preparing a Part 150 Study that will address this issue and determine what, if any, mitigation will be afforded to residences that are affected by the increased noise levels.<br><br>**W 050-03** Although the total flying hours will decrease (i.e., from 4,100 hours to 3,400 hours annually) it is anticipated that the volume of maintenance fluids used and fuel consumed will increase. There will be no additional fuel or maintenance fluids stored at any given time on the installation; however, throughput of these materials would increase. The facilities storing hazardous |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| | | materials and petroleum products are designed to contain all potential spills of hazardous materials and petroleum products in accordance with the Spill Prevention, Control, and Countermeasure Plan. Section 4.7.2.1 of the EIS has been amended to include an additional discussion regarding this. Therefore, it is unlikely that there would be any increase in environmental risk to the aquifer due to pollution as a result of the aircraft/mission change.<br>The emissions projected as a result of the proposal have been analyzed and it has been determined that air quality in Hampden County and the Hartford-New Haven-Springfield Interstate Air Quality Control Region will not be significantly affected as a result of the Proposed Action. |
| | **W 050-04** D) Environmental pollution through spillage of fuel and solvents during maintenance and de-icing of aircrafts during winter time | **W 050-04** Please see comment 050-03 above. |
| | **W 050-05** E) Pollution of the pure water aquifer which runs under the Westfield – Barnes airport, through seepage of fuel and industrial chemical. The aquifer is a major source of drinking water for residences and communities north of Barnes Airport. | **W 050-05** Please see comment 050-03 above. |
| | **W 050-06** F) Emotional stress though the high frequency of operation at high noise level. | **W 050-06** As indicated in Appendix C (page C-13): Non-auditory health effects (i.e., stress) of long-term noise exposure, have not been found to occur at levels below those protective against noise-induced hearing loss (i.e. 70 $L_{dn}$). |
| | **W 050-07** G) Loss of real estate resale value due to above mentioned factors. | **W 050-07** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 050-08** H) Loss of quality of life and recreational pleasure on the State Park facility and the local communities affected by the noise pollution. | **W 050-08** The State Park is outside of the 65 dB noise contour.. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
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| | **W 050-09** I) Loss of singing bird population who has returned again after the departure of the F100 aircrafts. | **W 050-09** Studies are cited throughout the biological resources section (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al*. 1988, Weisenberger *et al*. 1996, Anderson *et al*. 1989, Trimper *et al*. 1998, Conomy *et al*. 1998, etc.) Conclusions are based on relevant studies, and these studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The USFWS has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the proposed action will have no significant adverse affects to protected species. |
| | **W 050-10** What steps are taken by the authorities in charge of the transition to protect its citizens, in the affected areas and how do they plan to compensate people for their financial losses and possible emotional and medical consequences? | **W 050-10** The only noise mitigation authorized by federal regulation is sound insulation or land acquisition, following FAA guidelines. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. However, refer to response 050-06 and 050-07 above. |
| **W 051**<br>Comment Letter From Leo and Mary-Claire Demelbauer<br><br>May 24, 2007 | We are the owners of an office building on North Rd Westfield MA, located at the departure end of the runway 02 at Barnes airport. | |
| | **W 051-01** We are concerned that the financial loss compensation has not been adequately addressed in the EIS draft. | **W 051-01** The airport was established at its current location in 1923. Unless the office building predates the airport, it is likely that the original value of the facility was based on the fact that it is located at the departure end of a runway. Financial loss as a result of increased noise impacts is not likely to be significant.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 051-02** How does the government plan to compensate equitably for financial losses? | **W 051-02** Refer to response 51-01 above. |
| **W 052**<br>Comment Letter From Michael Greenwood and Karen Guzman<br><br>May 23, 2007 | **W 052-01** 1) How loud will the noise levels be? | **W 052-01** It appears that the specific location in question would be outside the 65 dB noise contour. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
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| | **W 052-02** 2) How will this effect property values in the area? | **W 052-02** Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |
| | **W 052-03** 3) What is the Air National Guard doing to minimize the impact this will have on citizens? | **W 052-03** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| | **W 052-04** 4) What are the potential health effects to humans and animals from continued exposure to unnaturally loud noises? | **W 052-04** Please refer to Sections 3.1, 4.1, and Appendix C; however, to summarize, "Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion suggests a time-average sound level of 70 dB over a 24-hour period."<br>Studies are cited throughout the biological resources section (Westman and Walters 1981, Harrington and Veitch 1991, Manci *et al.* 1988, Weisenberger *et al.* 1996, Anderson *et al.* 1989, Trimper *et al.* 1998, Conomy *et al.* 1998, etc.) These studies indicate that many species adapt easily to startling noises, although reactions are both species- and individual-specific. The USFWS has reviewed the Draft EIS and has indicated that they believe there will be no significant impacts to threatened or endangered species. The Commonwealth of Massachusetts Division of Fish and Wildlife has also responded, indicating that they concur with the USFWS in that the proposed action will have no significant adverse affects to protected species. |
| | **W 052-05** We would also like to know the general flight direction of these aircraft. In other words, is there a dedicated flight route, i.e. always due north (over our house) or are other routes taken as well? | **W 052-05** The 104 FW has identified take-off and landing patterns that will minimize the potential impacts to the community. Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
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| **W 053**<br>Comment Letter From Paula Murphy<br><br>May 23, 2007 | **W 053-01** I write as a concerned citizen of Westhampton, MA about the proposed flights of the F-15's out of Westover Air Base. | **W 053-01** The proposed changes are not for Westover Air Base; rather, they are for the 104 FW at Westfield-Barnes Airport. |
| | **W 053-02** I call on you for more extensive noise abatement program that includes all citizens in the effected communities to offer their input. | **W 053-02** Westfield-Barnes Airport, in coordination with the FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |
| | **W 053-03** I am requesting that a community advisory board be established to provide oversight on behalf of our communities. | **W 053-03** Although the Community Advisory Board was disbanded in June 2007, a new group, the 104 FW MC3 was formed in its place.<br>The 104 FW MC3 is an advisory board to promote communication between the MAANG, located at Westfield-Barnes Airport, and local and regional communities, organizations, and individuals.<br>The objectives of 104 FW MC3 are to: (i) establish a mutually beneficial process that will ensure timely and consistent notification between the military and civilian tenants of the installation and the local and regional communities, organizations, and individuals, on projects, policies, and activities of mutual interest; and (ii) foster cooperative discussions of local plans, programs, and projects of mutual interest. |
| | **W 053-04** I am deeply concerned about the flight patterns and hours of operation as they are projected to be frequent throughout the day and 7 days a week. | **W 053-04** As described in the Draft EIS, there would be approximately 7.5 average daily sorties. The aircraft would take-off and fly to training airspace away from the airport, spending very little time in the vicinity of Westfield. |
| **W 054**<br>Comment Letter From William J. Pudlo<br><br>May 30, 2007 | **W 054-01** The basis of our clients' complaint is that the proposed realignment of the Air National Guard contingent at Barnes Airfield will substantially increase the noise pollution in the areas of his property, particularly in the vicinity of the mountain peak. | **W 054-01** This location appears to be outside the projected 65 dB noise contour. |
| | **W 054-02** The impact of this significant and substantial change resulting from the assignment of the 104th Fighter Wing to Barnes Airfield will negatively impact the value of our clients' property, by as much as one half. Further, the impact of the proposed realignment will negatively impact the value of any subdivisions of their property by decreasing the value as the property is in a "fly over" area of the regular activities of the Air National Guard activities. | **W 054-02** Please note that these areas are well outside the 65 dB noise contour. Additionally, Section 4.3.2.1 has been amended to include the following discussion:<br>Results of several studies that have evaluated the impact of aircraft noise on property value suggest a slight negative impact on residential property value related as it relates directly to aircraft noise. At noise levels above 50 to 60 $L_{dn}$, the anticipated noise depreciation was about 0.5 percent of the property value for each increased decibel. Other studies show that aircraft noise is not a useful predictor of sale prices of residential property. Researchers concluded that aircraft noise is only one of many factors that can potentially affect property values. However such an effect (if any) is likely to be much smaller than the effect of many other factors on the sale price of your property that it is very difficult to isolate and verify.<br>Additionally, it is important to take into account the positive effect the presence the base has on surrounding property values. While there may be minor negative effects associated with increased noise related to military aircraft operations, it is likely that there is an even larger, more substantial, positive impact on property values as a result of the economic contribution of military bases, particularly in small communities, such as Westfield. |

| *Comment Number, Type, and Commenter Name* | *Comment* | *Response* |
|---|---|---|
| **W 055**<br>Comment Form From Patricia Sampson<br><br>Postmarked<br>May 23, 2007 | **W 055-01** I don't want to leave Arbor Mobile Home Park. I would like this to stay a mobile home park and not get sold. | **W 055-01** No landowners would be required to sell their property as a result of the Proposed Action; however, those persons who own mobile homes on rented property (such as the Arbor Mobile Home Park) may be required to move depending on the actions of the owner of the land. If the owner of the Mobile Home Park voluntarily decided to sell the property to the City of Westfield, it would be likely that all residents of the park would be required to relocate their mobile homes to a new location. The Part 150 Study will determine what assistance may be provided to those individuals in terms of relocation. If this occurs, the City of Westfield would work with the residents of the park to identify suitable property for relocation. Westfield-Barnes Airport, in coordination with FAA, is conducting the Part 150 Noise Study that will determine what, if any, noise mitigation actions will be implemented. Contact the airport for information regarding future meetings and information. |

# APPENDIX F
# ORAL PUBLIC COMMENTS ON THE DRAFT EIS

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INTRODUCTION

This appendix presents all oral public comments received by the Air National Guard (ANG) on the *Draft Environmental Impact Statement for Proposed Implementation of the Base Realignment and Closure (BRAC) final Recommendations and Associated Activities for the 104th Fighter Wing, Massachusetts Air National Guard, at Westfield-Barnes Airport, Westfield, Massachusetts* during the public hearing that was held on May 9, 2007 at the Westfield North Middle School.

This appendix contains all oral comments received during the hearing. The comments received during the hearing can be found in the hearing transcript using Table F-1 on the following page. Individual comments were then incorporated into a table that follows the original commenter, with specific comments identified and responded to in the right-hand column of the table. Comments that only offered opinions or information are included, but no specific response, other than "comment noted" was provided. All substantive, relevant comments will be considered by the decision-maker.

Table F-1 lists all those who provided oral comments during the public hearing, alphabetically by last name. The table provides the page number where their original comment can be found, as well as the page number where the responses to each specific comment can be found.

The ANG thanks all commenters for participating in the National Environmental Policy Act (NEPA) process and for providing input.

**Table F-1. Individuals that Provided Oral Comments on the Draft EIS**

| *Comment Number* | *Name of Commenter* | *Date of Comment* | *Comment Page Number* | *Response Page Number* |
|---|---|---|---|---|
| **T-011** | Bergeron, Paul | May 9, 2007 | F-98 | F-111 |
| **T-010** | Brier, William | May 9, 2007 | F-95 | F-110 |
| **T-004** | Buratti, James | May 9, 2007 | F-88 | F-108 |
| **T-002** | Canty, Martin | May 9, 2007 | F-86 | F-108 |
| **T-007** | Cupak, Darryl | May 9, 2007 | F-92 | F-110 |
| **T-006** | Fanion, Lulu | May 9, 2007 | F-90 | F-109 |
| **T-009** | Hohenberger. Gail | May 9, 2007 | F-94 | F-110 |
| | Jolin, Henry | May 9, 2007 | F-93 | F-110 |
| **T-012** | Moran, John | May 9, 2007 | F-103 | F-112 |
| **T-003** | Morris, Charles | May 9, 2007 | F-86 | F-108 |
| **T-005** | Piripa, Michael | May 9, 2007 | F-90 | F-109 |
| **T-001** | Trant, Joe | May 9, 2007 | F-80 | F-108 |

COMMONWEALTH OF MASSACHUSETTS

MASSACHUSETTS NATIONAL GUARD
PUBLIC MEETING
Westfield North Middle School
350 Southampton, Road
Westfield, Massachusetts
May 9, 2007 5:30 P.M.

Sharon Waskiewicz
Court Reporter

INDEX

In Attendance: Judge Hartsell

PAGE:

EXHIBIT:

Exhibit No. 1, Masciadrelli written comments.....104

Attached power point presentation

CAPTAIN MATTHEW MUTTI: Good evening. We are here to make statements on the information in the Draft EIS. I do ask that when you do make a statement, that you be very articulate. We have a court reporter down below me, and she will be typing in your names, so speak very clearly and distinctly.

Now, the Draft EIS is available, via CD and executive summary, after the conclusion of this final hearing. To begin tonight's hearing, members from the Barnes Municipal Airport team will discuss the associated FAA Part 150 study; this study, the FAA program, which works to determine the potential actions pertaining to the noise mitigation and abatement in conjunction with the proposed actions of the EIS.

The Part 150 study is a separate study from the EIS but is related to the overall actions that may impact the Westfield community. Chris Willenborg and the members of the airport staff --

UNIDENTIFIED SPEAKER: We can't hear.

CAPTAIN MUTTI: I will try and speak up.

Now, let me introduce Chris Willenborg the airport manager from the Westfield Municipal Airport.

MR. WILLENBORG: Good evening, and thank you, Captain Mutti for the introduction.

As you know, my name is Chris Willenborg and I am the airport manager for Westfield Barnes Airport. On behalf of the Westfield Airport Commission, I would like to welcome you to the public hearing this evening.

As Captain Mutti stated earlier, the purpose of the meeting is to encourage your work participation regarding the potential environmental impact addressed in the Draft EIS document.

One particular environmental impact

addressed in the EIS is aircraft noise. Recognizing this issue early in the environmental process of the EIS, the airport and the City of Westfield applied for and received a FAA grant to conduct an FAA Part 150 noise compatibility study.

This evening we would like to take the opportunity to briefly explain to you the FAA Part 150 noise compatibility study which addresses the aircraft noise and noise mitigation measures. We are in the early stages of this study. In the near future, you will have more opportunity to participate as we progress through the study, including access to a new web site.

I'd like to introduce a few members of our airport team that are here this evening. I am the airport manager from Westfield Barnes; we have Richard Doucette, who is an environmental protection specialist from the FAA; we have Donna Witte from the FAA, who is the realty program specialist; we have Matt DeSorbo from the Mass Aeronautics

Commission who is an environmental planner. From the consulting side we have Barbara Jean Crane from Gayle and Associates, who is involved with our airport Mass -- (applause, speech inaudible) We also have Royce Bassarab from Wyle Labs, who is the noise specialist.

At this time I would like to share with you the background information regarding Wyle labs and introduce Royce Bassarab.

Wiley Labs is an acoustical research and consulting firm, which is one of the most technical aviation noise consulting firms in the country. Royce Bassarab, our project manager, brings over seven years of technical experience in noise modeling, experience as project manager, to our team.

Mr. Bassarab has worked at a wide range of airports across the country including: Columbus, Nashville, Toledo, Boston, Louisville, Philadelphia and

Rickenbacker.

So at this time I would like to turn the mike over to Royce, and he will address and go through the power point presentation regarding the Part 150 program. Thank you.

MR. BASSARAB: Thank you, Chris, for that introduction, and thank you all for giving us the opportunity to talk with you about the Part 150 study. If you can't hear me in the back, just raise your hand and I will try to make sure I am speaking louder.

Rather than reintroduce everybody that Chris just introduced, I would like to start out by saying that the Part 150 study is being managed, and ultimately, its content is the responsibility of the Westfield Airport Commission. Managing that project is going to be Chris Willenborg.

As Chris mentioned, myself and other members of the consulting team will be

performing the technical work. We are very fortunate to have both Donna Witte and Richard Doucette working with us to address technical matters that may arise, and also Matt DeSorbo, environmental planner from the Massachusetts Aeronautics Commission, to assist with technical issues.

(slide presentation begins)

So what is a Part 150 noise compatibility study? It is what its name implies, a study about the noise compatibility around an airport.

A Part 150 is a voluntary study undertaken by an airport to reduce the impact of airport noise in surrounding neighborhoods by way of noise abatement, noise mitigation, and methods to reduce future incompatibilities around an airport.

The Part 150 study, which is named for the Federal Aviation Regulation,

provides an airport with guidelines for noise compatibility range.

There are two components to a Part 150 study. The first component is a noise exposure map, there are noise exposure maps for the existing and for the future noise conditions at an airport.

The second component is a noise compatibility program. The noise compatibility program outlines abatement methods and mitigation methods that are designed to reduce the impact of air traffic noise.

So why is the airport doing a Part 150 study? As Chris mentioned earlier, we know that the impact of F-15 operations is going to significantly change the noise environment around the airport.

This isn't the first Part 150 study that the airport has gone through. There was one completed in 1990. That had its own set of recommendations and strategy, and those we will be evaluated as well. Our goals here are to accurately

characterize what is existing as noise and what is expected to be the noise condition in the future, and also to identify those strategies that we think we might be able to abate, mitigate, and prevent future incompatibilities around the airport.

The Part 150 process, which we are in the very beginning of right now, first consists of the development and the identification of the noise exposure maps. Once those conditions have been identified, we will begin to evaluate potential strategies.

Those strategies will go through a number of different screening processes. They will be screened for its impact on safety, its impact on operations around the airport and, most importantly, we will be looking at whether or not each one of the alternatives has a noise benefit.

Following the Westfield Airport Commissions review and approval of the study, it will be forwarded on to the FAA for their review.

The FAA will review the noise exposure map and the methodology that was used to create them, and we will also then begin a 180 day review of the elements of the noise compatibility program.

So let's look at the noise environment today. This is based on the type and the frequency of operations that are occurring at the airport right now. That would include the A-10 and any of the other general aviation operations.

We can see that the 65 noise exposure contour is this line. That is reflective of operations today.

What is DNL? DNL is the day/night levels of noise metrics. It evaluates all the operations that occur within a given year and it looks at the average number and it serves as the threshold of the types of land uses that are identified as either compatible or noncompatible with aircraft operations.

We are seeing into the future. We can see that, first and foremost, you know

that the F-15s will be likely be operating here. Looking at the different noise exposure -- can you go to the next slide please?

Looking at the noise contour we can see that, in fact, it does increase in size. These changes may include the number of operations they may be performing, changes in the type of aircraft and also other factors that may be there.

Can you see the noise contours on this map at all? Are these evident or should I point them out?

Right now, today, we are sitting in the Westfield North Middle School here and this is the future noise 65 DNL exposure contour. This is the Massachusetts turnpike, Eastern Mountain Road is here and Southampton Road is on the left-hand side of the map here.

So these are the elements of the noise exposure map portion of the project. Once these are identified, we move into

the noise compatibility program component. The noise compatibility program is made up of three different types of alternatives. The first type of alternatives are noise abatement alternatives. Those include looking at where aircraft fly, how they fly, and whether any of those factors can be changed to reduce the impact of noise on the ground.

Secondarily, we look at land views, mitigation alternatives. Those are alternatives such as sound insulation programs or acquisition programs that are designed to benefit those -- but we can't change where the noise exposure contour lies.

The third type of alternatives are program management, or implementation alternatives, which are those that are simply designed to assist and implement other alternatives.

So where do these alternatives actually come from? As I mentioned earlier, this is not the first study that

has occurred here at Barnes. We will look at each of the measures that were recommended in 1990 and evaluate those to determine whether they are feasible and practical to look at today.

This may include noise barriers, sound insulation, avigation easement, land acquisition and so on. Our schedule for the project, as I mentioned right now, we are at the very beginning of the project. We are looking at the existing and the future noise exposure maps that have been designed through EIS process and we are evaluating those on our own.

Once we complete that evaluation, we will begin the process of looking at alternatives. Those screening processes will likely take six to eight months, and we expect to hopefully submit the study to the FAA for its review by approximately June of next year.

Just a couple of other notes. We are at the very beginning of the study, as I mentioned. Some of the questions that I

have addressed before -- and we will talk in much more detail -- any details about a sound insulation program, or any other types, will certainly come out in the process of this study, that would include that information that will be available on the City website. And with that, I turn back over to Captain Mutti. Thank you.

CAPTAIN MUTTI: Thank you for walking us through that Part 150 study. I apologize to those of you that couldn't hear me in the back. I didn't realize that the speakers weren't working.

What is very important to realize is that the FAA Part 150 study is a different process from what we have gone through so far with the EIS, and that is why we are here today.

In order to start today's proceedings off, I would like to introduce the Wing Commander of the 104th Fighter Wing, Marcel Kerdavid.

MR. KERDAVID: Can everybody hear me out there?

As Matt said, my name is Marcel Kerdavid, and I am the Wing Commander for the Massachusetts Air National Guard's 104th Fighter Wing here at Westfield Barnes Airport.

On behalf of the Massachusetts Air National Guard, I want to welcome all of you to this important public hearing regarding the Draft Environmental Impact Statement about the proposed mission change and aircraft conversion for the 104th Fighter Wing.

It is our goal this evening to provide you with accurate information about the proposed mission change and the National Environmental Policy Act or NEPA process to ensure your maximum participation and understanding of both activities.

It is my duty to inform you that under the Privacy Act of 1974, your name, address and comments, if provided during

this NEPA process, will be used to compile mailing lists for sending project reports, brochures, and other information concerning the EIS, to those individuals and groups who might be interested. It will also be forwarded to federal, state and local agencies and elected officials.

The addresses of private individuals submitting comments will not, and I repeat that, they will not be published in documents released to the public.

Failure to provide the information requested would prevent the delivery of documents and notification of further developments. However, documents are available on the project website, in local public areas such as libraries, with locations published in local newspapers.

I would like to introduce you to a couple of individual who are here this evening to assist you in answering questions about the project and to facilitate your participation in commenting on the findings of the Draft

Environmental Impact Statement.

First we have, over to my left, Lieutenant John Hartsell, Deputy Chief Trial Judge from Bolling Air force Base, District of Columbia. He will be presiding over this evenings hearing.

On my right hand of the table is Mr. John Richardson, the 104th Fighter Wing's environmental manager, and he will be explaining some key considerations regarding the National Environmental Policy Act and the NEPA process. He will provide you with an overview of proposed actions and alternatives.

We also have a number of other individuals who have been involved in the development of the Environmental Impact Statement. They are from the Massachusetts Air National Guard, the National Guard Bureau's Air National Guard Readiness Center, and our contractor.

They will be available after the current formal session to answer questions and to help facilitate this process.

You will find that any member in uniform or with an EIS name tag can answer your questions or direct you to the right individual to answer your questions.

Again, I would like to thank you for your attendance and your interest this evening. Please let me know if there is any way that I can be of further assistance either during or after tonight's formal proceedings conclude.

With that, I will turn over the hearing to Lieutenant Colonel Hartsell.

JUDGE HARTSELL: Good evening. Thank you, Colonel Kerdavid.

I am Judge John E. Hartsell and I am the Deputy Chief Trial Judge of the United States Air Force from Bolling Air Force Base, Washington D.C.

I would like to make clear from the outset that I'm here in my capacity as a federal judge solely to act as a moderator in this hearing. The United States Trial Judiciary is an independent organization.

I do not work for, or with, anyone in this room.

I am not a member of this command or assigned to this installation. I report directly to the Chief Trial Judge of the United States Air Force and to the Judge Advocate General of the United States Air Force.

I have had no involvement with the preparation of this proposed action or the environmental impact statement. I have not rendered legal advice or assistance with respect to this action. I am here tonight to serve as an independent public hearing officer regarding the Draft Environmental Impact Statement.

I am responsible for providing everyone an opportunity to comment tonight on the proposed action, alternatives, and associated environmental analysis.

This public hearing provides you with the formal opportunity for comment. I do not make any recommendation or decision on whether the proposed project

should be continued, modified, or abandoned, or how the Environmental Impact Statement should be prepared.

Therefore, during the public comment portion of this hearing, I urge you to direct your comments to those folks that need to hear it, and that is the folks over here. (indicating)

The purpose of this public hearing is to provide you with an opportunity to comment on the findings of the Draft Environmental Impact Statement, and more importantly, this hearing is a formal opportunity for you to get involved in the NEPA process.

This hearing is scheduled to conclude at 9:00 p.m.; however, we will continue until all comments have been received. This formal session may end before 9:00 this evening, if there are no more comments; however, the overall hearing, including materials to be viewed and discussion with team members, individually, will continue until 9:00

p.m.

To insure that this hearing runs smoothly, I am going to explain the sequence of events and give basic ground rules for the hearing.

Mr. John Richardson, the 104th Fighter Wing's environmental manager, will provide a brief presentation to you. Members of the audience may then ask questions for clarification of any of the points he made to you which weren't clear or which you may not have understood. Then we will take a ten-minute break and allow Colonel Kerdavid, 104th Fighter Wing staff, National Guard Bureau staff, and the contractor staff, to gather information to provide answers to your questions.

Once those questions have been answered, members of the audience who checked a box on their registration card, that indicated a desire to provide oral comments, will then be asked to come forward to one of these two microphones in

the front of the auditorium.

The registration cards were at the registration table as you came in. If you have not filled out a card or indicated your desire to speak and you wish to do so, please raise your hand and someone will bring a card down to you.

Is there anyone here that didn't get a card? Please keep your hand up, and we will get a card down to you.

In addition, there are materials at the door describing the official Air National Guard proposal, the description of the proposed action and alternatives, and information on locations where you can review the Draft EIS this evening.

To ensure that all interested citizens have an opportunity to speak, I will limit the comments to ten minutes per person. You will only be allowed to comment when your name is called. Elected officials and individuals representing organizations will be called to comment first.

And once again, we have a court reporter who is taking down everything verbatim. We will take a break approximately every hour, about a ten-minute break, to give her the opportunity to get the correct spellings and give her a break to collect information.

At this time I would like to introduce and recognize any public officials that would like to speak.

Mr. Mutti?

CAPTAIN MUTTI: I did not get any comment cards back from public officials that indicated they wanted to speak at this time.

JUDGE HARTSELL: Very well.

I understand there are refreshments out in the hallway and in terms of amenities, there are restrooms out in the hallway as well.

As a reminder, the purpose of

tonight's hearing is not to debate or vote on the proposed actions. Only brief clarifications to questions will be provided during the hearing. If you would like to discuss the findings of this Draft Environmental Impact Statement in greater detail, you may do so with the staff from the 104th, Fighter Wing, National Guard Bureau, cooperating agencies and contractor technical representatives at the conclusion of the hearing.

If you do not wish to provide oral comments, written comments will be accepted and will be given equal consideration. Even if you do make an oral statement, it would be very helpful if you would also provide a written statement to reaffirm the comments you made and any additional comments you would like to make.

So if you don't get all your comments out in this time frame, you can still submit written comments, as many as you would like. Written comments should

be sent to the National Guard Bureau at the address printed on the registration card that you filled out. The address is also provided on the comment sheets.

You may write to the National Guard Bureau. Substantive comments will be addressed and included in the final Environmental Impact Statement. The formal comment period for the Draft EIS ends on the 1st of June, 2007.

It is very important for you to realize that the Massachusetts Air National Guard and the National Guard Bureau will be open and responsive to your comments.

Now, before we proceed with the presentations, if you have not received a copy of the Draft Environmental Impact Statement, copies are available for you to review while in attendance at this hearing at each of the information booths. There is also a list of locations where the Environmental Impact Statement is provided for public review after this meeting in

the informational handouts.

If you did not receive other information materials that were available at the entrance, you can raise your hand and someone will provide this information to you.

We have a hand up, and we will provide you with the additional materials. Now, before I turn this over to Mr. John Richardson, I would like to acknowledge that you have other officials here this evening, and I would like to acknowledge Mr. Rick Sullivan, who is the mayor.

And I apologize as I am reading someone else's handwriting, and that can be a challenge at times. So Mr. Joe Wynn, of the City Counsel; Ms. Charlene Meadows, of the City Council.

I apologize for that once again, I am reading someone else's prescription bottle here.

And Mr. Don Humason, the state representative. Again, I apologize if I mispronounced. I am going to ask you to

provide the actual spellings to the court reporter.

And with that I turn this over to Mr. John Richardson the environmental manager for the 104th Fighter Wing.

MR. RICHARDSON: Good evening ladies and gentlemen, and welcome to the public hearing for the Draft EIS.

As the Judge indicated, I am John Richardson, and I serve as the environmental manager for the 104th Fighter Wing. As a member of the unit and one of the surrounding communities, I am very interested in what happens here. This is an important occasion in which to discuss this important topic, and I appreciate your interest and your participation.

The Westfield community is very important to the 104th, and community input is valuable to the environmental analyses. Of course, Westfield's Barnes Airport is the current home of the 104th

Fighter Wing. Many of our current, as well as retired members, live here. We are part of this community.

Many of you have been consistently supportive of the military and of the 104th Fighter Wing at Barnes. This community helped foster the development of the Massachusetts Air National Guard as well as the 104th Fighter Wing over the years. This support is and has been deeply appreciated as you, our members, live and work in the community and care deeply about the future. This is home to us all.

This EIS analyzes the environmental effects of the BRAC-directed aircraft and mission conversion. This consists of two primary components:

1. Conversion from A-10 to F-15 aircraft and their respective missions; and.

2. Providing facilities on the existing installation to support the F-15 mission.

The proposed integration of 18, F-15 aircraft and subsequent transfer of 15, A-10 aircraft from the 104th Fighter Wing would take place over the next several years.

All A-10 aircraft would be returned to the Air Force for relocation to other units; therefore, no dual aircraft operations will occur. In fact, there will be a period of time without any military aircraft operating at the airport.

Most construction actions would be upgrades and alterations to existing facilities. Newly proposed construction includes an alert facility, aircraft shelters for the alert aircraft, and additional munitions storage facilities to support the F-15 mission.

Along with the analysis of the aircraft and mission conversion and associated construction, this EIS analyzes three alternatives:

1. The first alternative, which is

the preferred alternative, proposes that the 104th Fighter Wing would focus aircraft takeoffs on Runway 02, which would result in approximately 90 percent of the takeoffs to the north of the airport.

2. The second alternative proposes that the 104th Fighter Wing would focus aircraft takeoff on Runway 20, which would result in approximately 90 percent of the takeoffs to the south.

3. The third alternative is the "No Action" alternative. The Council on Environmental Quality specifically requires the analysis of the "No Action Alternative" in all NEPA documents such as this EIS.

Under this alternative, the 104th Fighter Wing would maintain their existing facilities, would not build new facilities proposed, and would not undergo an aircraft and mission conversion.

The Base Realignment and closure, or BRAC, included the F-15 mission conversion

for the 104th Fighter Wing here at the Westfield-Barnes Airport.

After a lengthy process of public hearings, the BRAC Commission submitted its revised list of recommendations to the President.

The President signaled his approval to Congress. The House of Representatives took up a joint resolution to disapprove the recommendations; however, it failed to pass and the BRAC Commission recommendations subsequently became law. Therefore, the BRAC law overrides the "No Action Alternative" as a viable option.

With regard to local employment levels, implementation of the proposed action would provide an additional 139 full-time jobs to the 104th Fighter Wing. Likewise, the 104 Fighter Wing annual payroll would increase from approximately thirty million per year to approximately forty-two million per year.

In terms of simple summary of aircraft and mission implications, the

104th Fighter Wing would change from a close air support fighter mission with A-10 aircraft to an air superiority/air sovereignty alert mission with F-15 aircraft.

Under the proposed mission change, 104 Fighter Wing would conduct an average of seven sorties per day. A sortie is a takeoff, training mission, and landing. The current A-10 mission involves an average of five sorties per day.

At this point I will briefly summarize the NEPA process. The National Environmental Policy Act, also referred to as NEPA, aids federal agency decision makers in determining the future course of federal actions. It is the objective of NEPA to ensure that decision makers have environmental information and public input to facilitate informed decisions.

NEPA assigns the Council on Environmental Quality the task of ensuring that federal agencies meet their obligations under the Act. The BRAC

legislation process superseded NEPA in the relocation and basing decision. However, the purpose of this EIS is to analyze the environmental impacts and implement bed-down actions with those impacts taken into consideration.

The purpose of this hearing this evening is to provide the public with an opportunity to comment on the findings in the Draft Environmental Impact Statement.

The Draft Environmental Impact Statement, or Draft EIS, which is available for your viewing at a number of public locations, presents the findings and analysis of the proposed action and alternatives on environmental criteria set forth by NEPA. Tonight's public hearing is the second of two public comment forums which provide the public an opportunity to comment on the scope and content of the Environmental Impact Statement.

The first forum, called a scoping meeting, was held at this location in August 2006.

Comments have also been solicited from local, state, and federal agencies. That process began with the release of the Notice of Intent on 21 July, 2006 and continues today with public and agency review of the Draft Environmental Impact Statement.

The hearing gives the community an opportunity to comment on the analyses that have been presented in the Draft EIS.

The formal public comment period ends the 1st of June, 2007. Following this period, oral and written comments received from both the public and agencies will be reviewed by the Air Force and the National Guard Bureau.

We will continue to accept comments throughout the NEPA process. However, it is more difficult to give your comments the consideration they deserve as the process winds down and draws closer to the Final Environmental Impact Statement or Final EIS.

After all comments on the Draft EIS

have been addressed, the Final EIS will be prepared based on changes or modifications to the Draft EIS. The final EIS will be released to the public and a record of decision signed by the Secretary of the Air Force or his designee, and will be followed by a 30-day waiting period.

This concludes the explanation of both the conversion proposal as well as the environmental attributes.

Now, we will collect the cards with your questions. Please hand your card to one of the military members in uniform or one of the staff with an EIS name tag.

We will now take a 10-minute break and Captain Mutti will signal when we are ready to begin.

(Recess taken)

JUDGE HARTSELL: Ladies and gentlemen, thank you for your patience. We are going to reconvene with this hearing.

Before we begin, I want to ask folks in the audience, if you have cell phones or pagers, please turn them off. A number of people approached me during the break because a number of cell phones had gone off, and it was distracting. If you have one, please turn it off.

Also for the record I want to clarify, a number of the members of the community came up and clarified for me the names of their representatives. So the mayor, who is Rick Sullivan, state representative, Mr. Don Humason, city council president is Charlie Medeiros, and city council, Joe Wynn. Thank you again, for that clarification.

I will now turn it over.

CAPTAIN MUTTI: Thank you, Judge Hartsell. Again, we are going to try and get through as many of these questions as we can. There is quite a number of them. We've grouped them in categories. Many of you have similar questions, so we will

start now with the FAA on the noise mitigation study, and also there is some questions on real property values that will follow Richard Doucette.

Richard?

MR. DOUCETTE: My name is Richard Doucette. I am the environmental inspection specialist with the FAA. We have a little confusing project here because we have two projects going at the same time, the EIS and the Part 150 Study.

The biggest impact, I think, we all -- let me just state something. EIS was the -- we started the noise study sooner than we normally would.

We will try and answer some of the noise mitigation questions that are here. I may paraphrase some of these or we may group them together because there are lots of cards about the same question.

There is a card about the impact on the nearby state park and that the noise level appears to be 65 to 70 DB. Has the

state park been involved, and what is the impact on the recreating public?

The FAA does have certain noise levels that it considers are compatible with certain land uses and you will see that 65 to 70 decibel level as one of those thresholds with compatibility with residential land use.

There is also some thresholds for recreational land use. I don't know if the state park may or may not be within the 65 DB, and I don't know if the state park has participated yet. That is something for us to look into and make sure they know about it, and then it is really up to them if they want to participate.

I think we all realize there is very limited opportunity to make the planes go somewhere else, so it is not as if because there is a state park next door, that the planes will go away. But at least the park needs to know, and whatever efforts can be done to have them fly so that it

doesn't impact the park, that it something that will benefit everybody. So that is something we will look into.

How can I go about receiving soundproofing or any other benefits as I live just outside the list of included homes on Skipper Lane, et. cetera.

That is an important question. The FAA, as every other federal agency, has very limited ability as to what they can pay for. The guidelines are very clear so that we don't just start, willy nilly, start giving people new homes or new sound insulation unless they meet certain criteria. So there is not a lot of flexibility built into the noise mitigation program.

We are lucky to have one at all, because this is only the second airport that I know of in the country that has used FAA funds to mitigate noise that is created by military aircraft. Normally, that is not done. I think that it is good that we are using it here.

There is a process -- although the line is a hard line on the map -- and we normally provide funding to acquire homes with the 70 DB and provide funds to the airport to sound insulate within the 65 DB.

There are some airports that have chosen to bump that acquisition line out to 65, and the airport has to make that decision in the Part 150 program, where if the airport wants to -- and this is run by the airport not the FAA -- they provide funding and assistance to the airport.

If the airport, through the Part 150 process, says that they want to offer acquisition to people out to 65, that is something we can consider, but that decision has not been made yet. If your house is just outside the 65, what do I do? That is the nature of the question.

There is a process called "humanizing the contour." So if you are the last house left in the neighborhood and everybody is inside the 65, like you,

and all those houses are bought and they're taken down, people don't move back in; the houses are removed, and you don't want to be the last one left. So we would make that house eligible for acquisition as well.

We don't like to move the contour. We have made homes eligible for soundproofing for acquisition on a whole other street, or a couple of streets, it depends on the boundaries of the neighborhood, so it is different each time. We can't move it out a long way because of a lot of complaits. We can't move it out, unless you have a real specific reason, but in any case, in that part of the same neighborhood. We don't want to just take half a neighborhood and leave the rest of it broken up in pieces. So that is done on a case-by-case basis.

Nobody today can point to your house on a map and say, we are going to buy your house. It doesn't get that detailed until later in the process. But there is a

process where we can say, yes, we need to include these houses because they are impacted as well and they are very close to the 65 or 70 contour.

So if you are one of those people, you should stay in touch with the Part 150 program and be involved in that and express your opinions there.

There is a question about do I have to disclose the noise level to sell my house? I am not a realtor or real estate broker, so I don't know what the disclosure laws are in Massachusetts. It is my understanding that noise levels are something that you do not have to disclose, but you need to ask your realtor that, not us.

When the disclosure map is approved, that is a public document. If anyone goes and finds that map, it is a public document, they will see that according to federal standards, that residential land use is incompatible with noise levels from the airport. So if somebody wants to buy

a house, I would want to go look and see at Town Hall what is going on near the house that I might be buying. And so people are very likely to find out and they should find out when they are buying a house. But I am not aware if the disclosure laws relate to that at all.

There are two questions about dimunition of property values and how that might affect axes. There is some research around the country about how noise impacts property values, but not a lot. That research has only been done at larger metropolitan airports and not smaller airports.

I think common sense will tell you that there could be some dimunition of value. What is very unfortunate though, as I said earlier, the federal standards give us very particular guidelines on what we can pay for. So if you are inside of a certain line or that humanized boundary, the FAA can provide funding to the airport who can then either buy your home or

provide you with sound insulation.

Sound insulation normally includes doors and windows and sometimes insulation inside the walls or the roof. There is no federal program to provide funding because there is a dimunition of value to your home. If there is any process for a tax abatement of some sort, that is nothing to do with the FAA, you would have to talk to a tax assessor about that. So I am not sure what relief there is if there is a dimunition in the value of your home. You should probably talk to your tax assessor.

So those are the questions that I have. I think Donna Witte, our real estate specialist, is going to talk a little bit about how the FAA determines the value of a home.

MS. WITTE: We have several questions regarding value of homes that are established. Under the federal laws we are required to get appraisal and a review of appraisal. That would be paid for by the FAA and be performed by an

independent appraiser that works for the city of Westfield.

There were some other questions on relocation and keeping children within the same school. Initially you will be interviewed by a relocation agent. That agent will take down all the information about your children, where they go to school, what special needs they may have or that you may have, transportation to jobs, churches, all of those factors are considered before we offer you a relocation site. So you don't have to move to one of these other sites if it is going to have an adverse impact on your lifestyle, changes.

Another question was asked whether or not it would be emminent domain if you didn't want to sell your home, and the answer to that question is: No. This is strictly a voluntary program.

There was another question regarding someone who is disabled and has low income. Again, the mobile home will be

appraised. You will be offered current fair market value. You will be offered the opportunity, if it is feasible, to relocate your home to another location if a site is available.

There is another question on whether we offer loan assistance. We do not offer loan assistance. Only if you own a home that currently has a mortgage will we offer some type of assistance if there is a change in the interest rate.

Also, the affordability issue -- the Department of Housing and Urban Development puts together a list, and it goes by towns and counties, what is considered to be low income.

When you are being interviewed, you will be asked your income for that purpose. You don't have to give that information; however, it helps us in determining whether or not the relocation is going to be affordable. If you fall within that low income bracket, for Westfield, for example, if you are below

that income bracket, you cannot pay any more than 30 percent of your income for housing. So we would supplement anything above the difference.

If, in fact, you found a place that was 50 percent of your income, you would be reimbursed that 20 percent for that period of time. I think that is everything.

UNIDENTIFIED SPEAKER: I did get a letter in the mail that I think related to that as well, and people are wondering if this is going to happen tomorrow, or I don't know how noisy it is going to be because it is just a bunch of lines on a map. If I opt out now, can I opt in later? Well, the aircraft are coming later this year.

UNIDENTIFIED SPEAKER: The beginning of next year.

MR. DOUCETTE: The whole relocation and acquisition process takes a long time. There will be plenty of time to see how

noisy it is going to get. We don't have to have to worry about that. The Part 150 Study, we are not going to be done with that until next year, and the relocation process won't start for months after that. So nothing is happening tomorrow, and nobody is going to tell you that you have to move.

So those are two things that I think are important. The Part 150 process will continue after this is done, and if you think you are inside one of those lines, you should come to some of the meetings or review the documents that we are going to issuing as part of that.

JUDGE HARTSELL: Richard, I want to follow up next with Chris Willenborg and Gayle and Associates for the Part 150 study, because I think it is directly related to the questions posed on the FAA.

MR. WILLENBORG: We had a question regarding funding for residents inside the

noise zones. Once the contours have been established, the funding mechanism is through the FAA. There is an Airport Improvement Program and there is a part of that program that is dedicated for noise mitigation and noise compatibility. So we would apply for grants to access those funds and as to the federal government and the FAA.

At what decibel level will purchase of a home be considered?

At this point, it is difficult to answer that question. We are in the early stages of this process. We need to go through the study and determine the number of homes that will be impacted and coordinate with the FAA and our consultants.

It is a cooperative measure between the FAA, the city, our consultants and the community to determine what that decibel level for the purchase of homes to be considered. So it is too early to say, for the actual purchase of property, what

that decibel level will be considered.

How does this action affect the municipal airports financially?

For those of you that don't know, the financial mechanism for the airport regarding the military is called a "Joint Use Agreement". That agreement gets negotiated, typically, every five years. We are actually in the process of negotiating the Air National Guard Joint Use Agreement right now.

There are two parts to that. Once the alert mission comes into play, the Joint Use Agreement will get renegotiated at that point. But yes, it does have a financial impact on the airport; it has a positive impact. Based upon the information that we have from the military, the airport will be eligible for additional funding than what we currently receive.

There is a question here about buying land only up to the Mass Pike; is this true?

There is no program in place at this time that we are buying land up to the Mass Pike.

As Richard answered, there was a question here regarding valuations of property, and that is a question that should be directed towards our tax assessor in the city.

There is a question about power point presentations and availability to the public.

I encourage you, after the meeting, to stop by the airport booth. I have my business card over there. My business card has my e-mail address and phone numbers for the airport management office. Just give us a call and we can e-mail that to you or make a hard copy, whatever is easiest for you. So please contact my office, the airport management office, and that information is out on the table.

And those are the questions. At this point I will turn it over to Royce.

MR. BASSARAB: I have a couple of questions that are asking about why the noise study was done with the computer study?

According to the FAA guidelines, we use a noise model. One is called "the integrated noise model," and one is called a "noise map," for military and civilian operations, in order to evaluate all the operations that occur over the course of a year. The question is: Why don't we use noise monitoring?

Well, noise monitoring is effective when you are looking at one particular day and one particular condition, weather conditions, but it would be not be feasible to look at noise monitoring locations at every location in an airport. And also for future conditions, we cannot noise monitor for aircraft that are not here today.

There are a couple of questions that talk about why homes that are just outside of the lines of the noise contours are not

included, and I think that Richard addressed that earlier when discussing the humanizing contour. And also I would like to stress that those noise contours are not quite completed at this time.

There is a question regarding: Can you tell us if any current locations or previous locations have gone through the noise mitigation and how long did that process take?

And I think that Richard answered that question in saying that a number of airports across the country, civilian airports, have undergone noise mitigation such as sound insulation and some of those programs have been going on at larger airports for ten or fifteen years as a continuous process, and some of those programs are relatively small. So there is a very wide variation in the number or actual or the duration of those programs.

There are a couple of questions that refer to what the actual decibel levels are at each individual house.

Again, I would like to stress that the DNL and the noise contour you are looking at on the maps is an average over the course of an average annual day.

The decibel level at any given point in time is going to fluctuate greatly. It depends on the weather; it depends on the flight path of the aircraft, the type of the aircraft, so it could be anywhere from a very high number to a very low number depending on the conditions that are surrounding it.

There is a question about what is sound insulation and are there different types and are special windows necessary?

Some of the different types of sound insulation programs around the country have included different factors. A typical sound insulation programs includes replacing windows and doors with what is called a higher sound insulation class of window or door. Those are doors designed to specifically reduce sound transmission. Other elements that are sometimes looked

at are incorporation of air conditioning or climate control systems, and a lot of that depends on the building types that are around the airport. I think that is it.

JUDGE HARTSELL: We have Gayle and Associates.

MR. DUFRESNE: My name is Armand Dufresne, and I am the airport planning consultant. I have just a couple of questions here, and one of them involves a question about whether or not the vibration effects on East Mountain were studied.

I don't know that they were studied and I don't think the Air Force did or the EIS, at least I didn't read of it.

I also had quite a few questions on how is the value of my home going to be affected.

That is a very, very general question. There really isn't a lot of

data out there. In planning, we usually rely on prior studies to come up with answers if that's feasible or possible. This is a kind of question that is very, very difficult to answer.

There is a not a lot of data out there and the data that is out there is really not very applicable to a place like, for example, Southampton. It is more applicable for Oakland, California, a very different environmental. So we don't really have an answer to that kind of a question.

The last question that we have is regarding mobile homes. I think Donna addressed this very well. If the mobile home, if it is feasible to move it, if it needs to be moved, that is something that can be done. This program does things like that. If it is not feasible, the residents would have to be relocated into some type of suitable dwelling, obviously. That is plausible.

So that ends our portion of it.

Thank you.

MR. DOGAN: I have one question that I am going to answer. Again, it kind of dove tails into this discussion about mitigation.

The question is: The EIS makes references to various mitigation efforts. If the EIS and FAA Part 150 study are separate, why would there be comment about EIS noise mitigation.

The reason for comment about noise mitigation and what drove the EIS is we did recognize there were substantial increases in the noise contours. So that's the only resource area at that time that recognized it to have a potential adverse, significant effect. In light of that it is appropriate to -- it triggered that Part 150 study and it is appropriate to disclose that to the EIS.

Next, I will asking Colonel Kerdavid to -- I'm sorry. This is John Richardson, the environmental manager, and his

responses to some questions.

MR. RICHARDSON: Thank you. Can everybody hear me all right?

One of the first questions is what about the air pollution.

Basically, what I did is, I went into the Environmental Impact Statement and I looked up one of the pages. I was trying to see what the existing air emissions impact versus the air emissions it impacts after the proposed action occurs, referring to the F-15 aircraft.

Basically what it says on Page 4-36 of the Environmental Impact Statement, Table 4.4-3 displayed the calendar year emissions, estimated for the proposed action.

These data show that the annual emissions associated with 310 CMR 7.00. In addition, annual emission increses from the proposed action would remain below the conformity de minimis threshlds and 10 percent of the regional air basin

emissions for the proposed action would not exceed any associated with (inaudible)) Hampden County. However, we will respond to this question in more detail and this is the answer to the proposed (inaudible)) environmental impact.

Okay, the next question is about air emissions for jet fuel.

That is kind of a complicated question because jet fuel combusts, and basically it is measured after it is burned. And I guess there was a concern with somebody's house. Apparently the smell of jet fuel is really, really strong.

No. 1: If there is an incident of that, we will probably try to investigate that and see actually what the cause of it is, and if it is emission from jets, we will respond to that in detail later.

Okay. I have a question about the Blue Herons, to keep those flying in the air. The question is: Would the proposed

alternative (inaudible)) keep up on, and was the EPA consulted on this.

(Inaudible)) Are there are going to be effects on wildlife in the area of the vicinity of the airport where they live and feed.

They will relocate temporarily. As far the effects specifically on Blue Herons, I can't answer that question. We have to look at that in the final EIS and address it in the comments.

They talk about underwater resources in the United States and whether the proposal would include potential or substantial impacts. Please elaborate on the use of the word "generally". We have to elaborate on that a little bit more.

There is a question on water resources, and water resources are addressed in the document starting on Page 460 -- actually Page 4-59. What we are going to do is research that and get back to you. That's it.

JUDGE: HARTSELL: Okay. Thank you, John.

MR. MOTT: My name is Colonel John Mott, and I am in charge of all the pilots and flight operations. And we have got several questions regarding flying late and stuff. I want to thank everyone for coming out. I appreciate it, and I know that it is hot in here. If it makes you feel any better, it is just as hot up here.

To start out, the first question is what is the average length of runway needed for the F-15 at takeoff, with or without the after burner?

The length of runway that is required depends on several issues, how much you weigh, what the winds are, and what the temperature is. But generally the answer is: With the after burner, it is approximately 1,500 feet, and without the after burner it is 2,500 feet. We have about a 9,000 foot runway there, so

there is no problem with taking off or landing on the available runway.

If I don't answer any of these questions good enough, you can flag me down after the meeting and I will be more than happy to elaborate or give you more information.

The next question is: After, after burner take offs, do you routinely go into a curve? That answer is, no. The only time we do after burn takeoffs is for certain configurations of the aircraft.

If we go to certain ranges, we will need that. My guess would be about 20 percent of the time, but also since we are going to have the alert mission here too, all of the alert mission scrambles are going to be after burn takeoffs also.

The next question: How long before the F-15s are expected to be out of service and sent to the bone yard?

I think they are going to be around for a long time. I don't have an answer for you for that, but my guess is they are

going to be here for the next 15 to 20 years, with the information that I have.

The next question deals with: I live in Southampton and I live in the flight path. Will the noise be as bad as during the air show?

Unfortunately, you know, once everybody sees the air show and sees the planes buzzing around as fast as they can go and as low as they can go, because that is what people at an air show want to see. That is not what we are going to be doing over here.

Our primary purpose is to train. In order to train and get to our training areas, which you are well aware are here in Westfield, and to be able to train as long as we can, you have to save as much gas as you can so that when you get out there, you can save every ounce of jet fuel practicing, to be ready in case we need to scramble.

So our normal takeoffs will be taking off significantly higher and faster

than the A-10 could, and even though it is louder, we will get away from the ground sooner, so it will be nothing like the air show. And if it is, I want to know about it, because I will track it down and figure it out.

Another question is: Does any other airport in Massachusetts have 18, F-15s, and if so, where, and how is the noise and emissions handled?

There are no other airports in Massachusetts that have F-18s. The Air National Guard have no other F-18 bases in the local vicinity, the closest one being down in Jacksonville, Florida, New Orleans, or Saint Louis. There are active duty bases down in Virginia and scattered around, but no F-15s, especially in our bases in Massachusetts. So I can't answer how their noise emissions were handled.

Talking about how often and how frequent and what the schedule is going to be like with the F-15s flying versus the A-10.

The current average, throughout the year, the A-10s fly approximately five sorties per day, if you average it out, and the F-15s will average about seven sorties per day. It doesn't have the duration of the A-10s, so we fly a few more sorties to make up for that.

Do they fly over on weekends? That's the standard thing, just like the A-10s, so we, on a drill weekend per month, we fly on the weekend, but other than that, it is the normal schedule that you see with the F-15s. With the A-10s, Excuse me.

As far as flight paths, planes are supposed to fly to the north, and it will alternate as to which way they will take off. And the answer to that is: If the weather allows it and the aircraft configurations allow it, we will take off to the north, and the pilots won't have the discretion to just take off to the south because they feel like it. It will be procedure to take off to the north.

The next question is: Whether the flight patterns will remain the same as the A-10s, and I can give you a general answer on that one.

Because they climb higher and faster, and it has got a higher earth speed, its true range is a little bit bigger, but it travels forward at a greater speed than the A-10 does. So on a certain departure to the northeast, if an A-10 flies over your house right now, I can't guarantee you that that same F-15 won't fly over your house, but if it does, it will be at a higher altitude at that point.

Bill Wuest is the noise expert down there, and if you have specific questions about that you can come down and talk to Bill and myself, and we can try to give you some generalizations about that's going to be like.

There was a question about the noise contour lines and whether that included the landing pattern, and that does. Those

contour lines do incorporate all operations from taxi, takeoff, to landing. It is all incorporated into those contour lines.

The next question is: How long has your National Guard been flying aircraft carriers at Barnes?

The base opened in 1947 and we have been flying fighters out of Barnes since then. That is something not a lot of places can claim.

As far as how much lateral, it is 15 feet. And the F-100s, when they were there, I was not there when the F-100s were, but we do have a guy down front that was there when they had F-100s, and you can talk with him.

It is a significantly different thing because the climb out there, with the F-100, it stayed a lot lower and made a lot of noise compared to the, you know, similar to the A-10, but a lot louder.

The F-15 does not have that problem. Its capability to climb and accelerate

allows it to get away from the ground and towards where it is going, so it will be nothing like when the F-100s were here.

There is a question here: Do the F-10s and A-15s [sic] dump fuel, and if so, do they dump near the base?

The answer is: The F-15s can dump fuel, and it's only done in extreme emergencies. It is done at a specific altitude so as not to affect anybody. Given the controlled situation, the aircraft will go to a place that will effect -- it will affect the minimal amount of people and will dump fuel to save the aircraft and pilot.

In cases of extreme emergencies, I can't guarantee that will happen, but if you have specifics about that, we can address those later.

There is a question about consideration being given to decreasing the number of sortie during the mating and hatching seasons of water foul and other animals, and that is a, yes. We do that

right now in the A-10.

It's not fun to hit a bird no matter what airplane you are in, and especially not fun for the bird, but it can have dior consequences for both the pilot and the aircraft also.

We do track the migratory patterns, and what we do is, we have a series of bird hazards. There is "low," which is pretty much normal, normal operations occur.

There is moderate, and we go out every day and sweep the runway and visually inspect, and other pilots report back if they see a lot of birds. When we go to moderate, we will limit the number of takeoffs and landings. And if it is severe enough that if we would take off we would probably hit some birds, we cancel those missions and try them another day, or we, or we do the most critical missions only, and make sure we stay out of the altitude they fly at. Of course, they fly at all altitudes, but there is some more

concentrated than others.

The next question is about nighttime training.

The nighttime training we will do is approximately the same amount. We will be increasing the number of sorties that we are flying but at the same time frames as the A-10. We shoot for, you know, being down before 10 o'clock. The only thing is a scramble mission. We will go when the mission requires.

Thank you.

MR DOGAN: I would like to start by thanking everybody for this incredible number of questions. They are all excellent, and hopefully we covered everybody's questions. We are paraphrasing some, because we did get more than one in the different areas.

What I wanted to point to everybody is that a lot of the departmental operation questions are answered by the

EIS. These are in the EIS. He wrote that -- John Richardson did quote out of the EIS in a lot of his answers. So if you are not getting your specific questions answered right now, at least in those categories, go ahead and grab the EIS and give that a quick read if we don't have enough time tonight to answer your questions.

A lot of the questions about the length of service, the aircraft, or things like that are really up to the discretion of the United States Air Force and Air National Guard.

The questions that I am going to answer primarily deals with some of those basic questions.

The first one came from a couple of different people, so it is kind of paraphrased.

What was the reason for moving the long-established base from Cape Cod to Westfield?

The very simple answer is that the

Base Closure Commission made the decision and it is followed-up by the action of the President of the United States and by Congress, that turned into law. When it turned into law the action would take place by federal law.

I do feel it is important for everybody to understand that there was two separate actions to make that happen. It wasn't a single action when they decided to move from the Cape or Otis to Barnes.

The first action it was decided to close the flying portion of Otis, to remove the F-15s and close them down in that way.

A second separate action was to convert the 104 Fighter Wing to F-15s. It is also important to note that some of our aircraft were also coming from (inaudible)) also coming from Air Force Base in Japan and a lot of our equipment is also coming from other mostly active duty bases from around the world. So it is not exactly a one to one (inaudible))

aircraft from Otis to Barnes. Why those particular actions were taken, though, we can't answer that. That is something that the Commission took care of.

Another question, and, again, there is two of this one.

Was Westover Air Force Base considered rather than Barnes?

I will assume the question came from two different people. Again, I can't answer that question, but the question that I can answer is the reason why F-15s came to Barnes, and that is, again, for the base closure, the same reasons that we just talked about.

This is a good question. If the F-15 proposal should be denied, will the base lose the A-10s and be closed?

The first one, will it lose the A-10s? The A-10s are already going. Will somebody find additional A-10s to be re-based back here? I don't have the answer to that question, but I would say it is not very likely because of

resources. There is not enough resources. There are not many resources out in the Air Force.

Will the base be closed, is unknown. That's going to a question, again, for the United States Air Force and the Air National Guard if that indeed became the case where F-15s did come to Barnes, but there are no alternative (inaudile) at this time for us to have, so there is a good chance that we could be put on a closure list.

The last question is: The BRAC law ended the possibility of a no-action alternative, and that is basically, yes. Because it was BRAC law that the F-15s were moved here, okay, so the no-action alternative would be the A-10s stay and that falls into this no-action alternative, and again, the possibility of (inaudible)) So again, the basic answer is, no.

Thank you. I will now turn this back over to Judge Hartsell.

JUDGE HARTSELL: Thank you. I was handed a note and I want to recognize another public official with us this evening. Jason Russell from the City Council is with us this evening.

Also I want to announce that we are going to go into the public comment portion of the hearing at this point in time, so if there are individuals that wish to provide verbal comment at this time and have not handed in a speaker registration card, please hold it up so someone in uniform with the EIS name tag will pick it up from you. So if you haven't filled out a card and wish to make a verbal comment, hold up the card.

Now, in the public comment portion, what is going to happen is I will call out the speakers in the order in which they signed up, and then the individuals will have an opportunity the speak.

I am going to ask you to step to one of these two microphones up front and ask

you to speak clearly and pronounce your name clearly so the court reporter can take it down. State your name, but do not provide any other personal information such as your home address or phone number. Your verbal comments will be used to develop a transcript and permanent record of this meeting.

Again, as a courtesy to those that have registered to speak, please limit your comments to ten minutes. This applies to all speakers, and there is certainly a number of them.

Keep in mind you are welcome to submit comments and there are no page limits on read comments. The Air Force shall give people ways to present comments whether they are verbal written or both.

You do not have to speak for the full ten minutes; however, if you chose to speak for the full ten minutes, I will advise you when your ten minutes are almost up. Following your presentation, I will ask that to sit down so I may call up

the next speaker.

If you think you have more comments than you can present in the time allowed, make the most important comments up front during your ten minutes. Also, please realize, again, there is no page limit to written comments so you may feel free to add the omitted comments to a written comment. Equal weight will be given to oral/ written comments or both. They will all become part of an official record and will be included in the final Environmental Impact Statement.

I would like to begin with the verbal comments, and the first speaker is Mr. Joe Trent. Is Mr. Trant present?

MR. TRANT: My name is Joe Trant. For a year before I went into the service I worked at Pratt and Whitney in the machine shop working on the jet engines. On the way to that department, in the hallway, they would have the jet engines running in the glassed-in area and, boy,

they made a lot of noise, and for me, that was a good noise.

After being at Fort (inaudible)) in basic training and maneuvers, I landed -- or rather we had the ship anchor off the coast between Wales and Bristol. And that first night, I was on deck and quite a few German planes came over and were bombing the port. It reminded me of when I was a kid at Whitney playground during the grand finale of the fireworks, only the fireworks were going off on the ground not in the air.

During that time the Germans had a lot of planes bombing all the different cities in England. They are taking an awful beating. The English had the RAF outfits similar to our unit that is up here at Barnes airport. And they shot down an awful lot of these German planes, so much so, that at the time Churchill made the announcement, "Never have so few down so much for so many."

Back a while ago I had an

opportunity to meet (inaudible)) who played at a golf tournament over in Agawam. I got to talk with her, and she came from England. I was telling her how in the big cities how they would take the children put a tag on them and send them out into the country. She said, my mother was one of those and she suffered not only from all the noise that she didn't like but from not knowing what was happening to her family back in the city.

Of course, at that time the Germans eventually came up with their rockets, the long range missiles. So they were firing them into England at the time, which was not a very nice noise.

It is predicted that perhaps in less than a year they might have been dropping these over in Boston or New York. Boy, what a noise that would be. I don't think I would like that.

Anyway, when I was in England, I went over on D-Day and that night all the planes were going over and there was a

tremendous amount of noise, and that was a noise I liked. I had a brother, Bill who on D-Day was the first one in his outfit to be wounded in the water. He was carrying a radio (inaudible)) and he got hit in the arm and went onto the base to give it to someone else when he got hit again. He was the first one in his outfit to get hit and went back to England.

Before I had a chance to see him in England, I got sent to (inaudible)) and the first thing I did when I got on (inaudible)) we had some German prisoners that were digging ditches and burying our servicemen or parts of them thereof. It was very noisy, I didn't like that.

That afforded me the opportunity, and I got carried away. The 29th division was losing a lot of people and I volunteered to be an infantryman with the 29th division. We fought all the way through, France, Germany and all the way up to the Elk River.

By the time we got to the Elk River,

of the 900 people or so that I started out with in my outfit there were 87 people left, and they didn't like any of the noise they went through on the way there.

One of my biggest problems was at the Rhine River. One time in a fox hole there, I heard this roar go over and I looked up, my buddy took me in a fox hole, and I looked and saw the fire out coming out of the plane and I said, oh, boy. The guy said, what the hell was that? I said, well, I will tell you, that is a jet engine.

Now, I never saw another jet engine until I came home to the United States. I never saw one of our own jet engines over there. But I was able to go back to a rest area and get some warm food and clothes and relax. While I was there, the Germans started sending over these so called there "buzz bombs." As long as we could hear 'em, everything was fine. When we couldn't hear them, we dived for cover, and that was not a very good noise.

We got to the Elk River and between Churchill and the guy from Russia, they decided to let the Russians take Berlin. They took an awful beating, and that was fine with me. We could hear the noise from over there, and a few days before the Russians took Berlin, the German division surrendered to my company on the Elk River.

They didn't want to give their information to the Russians so they surrendered to us.

Anyway, at this point I would like to know that on behalf -- thank God. And Thank God for all of those people that were with me and didn't get home. Thank God for your outfit, and hope and know that you will do the same job for us that the RAF did over in England. I salute you. Thank you.

JUDGE HARTSELL: Thank you, Mr. Trant. The next speaker will be Mr. Martin Canty.

MR. CANTY: Thank you for the opportunity to be here and have my say in the matter. And thank you, Mr. Trent, you are very kind and very encouraging.

I am in favor of the aircraft coming here. I think that the environmental issue is going to be very minimal because the aircraft fly much faster and get out of the range much quicker than the A-10s did, and I know they are going to be a lot quieter than the old ones were.

I just want to say I am in favor for them and I think that environmental issues will be very, very minimal and if we do get them, the economic impacts will be very drastic. Thank you very much.

JUDGE HARTSELL: Thank you, Mr. Canty. The next speaker will be Mr. Peter J. Jez.

MR. MORRIS: Good evening. My name is Mr. Morris, and I live on Ken Grove

Avenue across the way here, and I want some information on these contour lines you have on this brochure that you sent us.

I live on Grove Avenue right under the red contour line that says 65. In this brochure that you sent us, it says if you are within these contours, they will probably insulate your house or do something. But I just want to know, I am in the process of putting new windows in my house in the spring. I just want to know if I should wait and see what happens before I do that, or what?

JUDGE HARTSELL: Mr. Morris, if I can assist you in that regard, at this point in time we are in the public comment portion, not the question and answer portion. I believe that there are going to be officials in the gymnasium that may be able to address your concerns. The gymnasium is right next door.

But, Mr. Morris, you stated your

last name. For the record, would you please state your first name?

MR. MORRIS: Charles Morris.

JUDGE HARTSELL: Thank you very much. I had asked Peter Jez to come down here. Is he not here? Very well.

The next comment may be provided by Mr. James Buratti. And, sir, could you please spell your last name for the court reporter?

MR. BURATTI: Sure. James, B-U-R-A-T-T-I.

Some of you may know me. I am the owner of Henry's Mobile Home Park, and I will have quite an impact with this proposed action. For the record, I want to comment that there is a unique opportunity to avoid the potential impact that this conversion will have on the 58 units of affordable home ownership that are currently at our mobile home park.

The park is a 5.8 acre parcel. The owner of the park, myself and my family, are also coincidentally the owner of Henry's Park, one mile away.

We have in excess 5.8 acres of vacant land with parcels, 16 acres. And with improvements at the entrance off of Service Star Highway, this property could be used for mobile home park purposes. It is served by both sewer and water, municipal. It is my proposal to the Bureau and to the FAA, with the cooperation of the owner, myself, that the land be investigated and invested in a study to explore this option and I end with a question: Will the Bureau consider this proposal. Thank you. That is the only comment that I have.

JUDGE HARTSELL: Thank you, Mr. Buratti.

The next speaker is Ms. Barbara Bodendorf. Is Ms. Bodendorf present? Very well.

The next speaker, then, is Mr. Michael Piripa.

MR. PIRIPA: Michael Piripa. Your honor, my comment was addressed in the question and answer period. Thank you.

JUDGE HARTSELL: Thank you.

The next speaker is Mr. Eric Ouellette. And I apologize if I am mispronouncing some names. If it sounds like it is your name, please come up here. The next speaker is Lulu Fanion.

MS. FANION: Hi. My name is Lulu Fanion, and my comment is directed specifically to the Arbor Mobile Home Park. I have two comments. One, being the map that shows a current level of sound, and then the map that shows the new level of sound.

The map that shows the current level is not at all accurate in terms of what we have experienced at Arbor, and I wonder if

that is set in stone and what is the new map for sound based on what they show on the old map.

The other comment is: I would like to see something specifically addressed to the homeowners at the Arbor as to what would happen if we have to relocate, as to what would be comparable housing? I am not at all clear on what would be considered comparable housing.

And moving, other than Mr. Burratti's offer, there is no place else in Massachusetts, that I am aware of, that you could move a mobile home too.

So I would really like to see the park, itself addressed. It has been said on the news channels and everywhere you read, that we are going to affected the most, and yet there is very little comment directed specifically to mobile homes which cannot be adjusted for sound infringement. So I would really like to see a lot more addressed specifically to those needs. Thank you.

JUDGE HARTSELL: Thank you Mrs. Fanion.

The next speaker is Mr. Darryl Cupak.

MR. CUPAK: My name is Darryl Cupak. What I wanted to say was, have you ever heard a full harmonica orchestra in flight? It is beautiful. It sounds great, especially since the Navy is a little bit better than the Air Force. What I really want to say is hearing planes fly overhead is also beautiful and it gives a safe feeling. But I also want to tell you that hearing planes in a car, for four or five hours -- my kids are all grown up now, but now it is my grandchildren, and to hear them scream, because it irritates them, that was 35 years ago. My kids were younger then. Those planes then were really nice and quiet. I do remember the noise. I would be sitting there and when the engines shut off, it was -- you just didn't realize how

much noise it makes. That was many years ago. With new planes coming, I am sure there must some sort of technology. When they are testing for three or four hours will it be like it was when the other planes were there?

MR. KERDAVID: (Inaudible))) for protection, it is called the "hush house". So we will start testing inside the hush house. It should be quieter.

JUDGE HARTSELL: Thank you for your comments. Bear with me. I am trying to read the penmanship. When I was a kid, we gave the substitute phony names, and I have a feeling I am learning how she suffered.

Mr. Henry Jolin? Please come on down, Mr. Jolin.

MR. JOLIN: Good evening. My comments have already been answered so it is mostly questions. So thank you.

JUDGE HARTSELL: Thank you Mr. Jolin. Ms. Gail Hohenberger. Would you like to provide public comment?

MS. HOHENBERGER: Hi. Thank you. In February our son returned from the Air Force after serving in Iraq and then Korea. And as a family we welcome the F-15s to Westfield. We temper that with saying that we understand there is going to be great impact on many families and I hope there is satisfactory resolution for all of us. Some of us -- (inaudible due to loud technical noise from microphones) Previously I lived in Chicopee and near Westover, and planes flew right over the house. It may not offer much comfort to people tonight who are facing a lot of changes, but we did get used to it. After a period of time, we do adjust to it and it was not problem for us. We anticipate this would be a positive thing for Westfield. Thank you.

JUDGE HARTSELL: Thank you.

The next speaker is Miss Victoria Torres. Ma'am, would you like to make a public comment?

MS. TORRES: No, thank you.

The next speaker will be Mr. William Brier. (Phonetic)

MR. BRIER: My name is Brier, and my comment probably was addressed before. I was tardy, but I guess my hope is since we are on the flight path -- all my life I have lived my 65 years in Southampton, and my hope is the new planes that are coming will have the technology that won't increase noise level, but will hopefully reduce them.

JUDGE HARTSELL: Thank you, Mr. Brier.

I was just advised that Mr. Dogan has a comment.

MR. DUGGAN: First out of all, I would like to say, thank you for coming out. The response has been overwhelming. Periodically the National Guard puts out a statement, the Environmental Impact Statement. I have never been to one that had this kind of response. I think the response is largely supportive of our mission here, and that is the Massachusetts Air National Guard.

Unfortunately, we did not have enough documents that everybody requested. So I would like to make an announcement regarding the Executive Summary. It summarizes the document but also has a compact disk that includes the entire document.

If you did not indicate when you signed in that you wanted a copy, and you do want a copy, please stop by the registration table and give us your contact information and we will mail you a copy of the Executive Summary and the compact disk.

With that I turn it back over to Judge Hartsell.

JUDGE HARTSELL: Thank you. This evening's goal was to provide you with full communication and accurate information to insure your participation in the NEPA process. Let's hope that the folks here have achieved that goal. Please feel free to visit the informational booths and ask any needed questions that you may have regarding this proposed action. You have an opportunity during the formal during the formal comment period until 1 June 2007 to provide written comments.

Before I go any further, I notice we may have one additional comment, so I will allow one more speaker.

MR. BERGERON: I put the card in the box. I don't know what happened.

JUDGE HARTSELL: Please state your

name.

MR. BERGERON: My name is Paul Bergeron, B-E-R-G-E-R-O-N, I am retired from the U.S. Air Force. I am from Chicopee, Massachusetts right now, and from 1971 to 2005, I lived in Westfield. I have a background in the military from 1962 to 1965 in Vietnam. In 1966 to 1993 at Westover. I am also a fellow retiree who did contract administration at Pratt and Whitney for the F-100 engines along with many other types of engines. So I am familiar with the F-100 to (inaudible) I am also familiar with the federal aviation regulations because of the C-17 engine program.

Why am I here? I am here because my daughter lives in the 65 to 70 decibel range off of Holyoke Road. She is currently single-sided deafness due to an acoustic brain tumor and had surgery four years ago. So we are hoping that anything that happens won't impact the one side of

hearing that she still has remaining.

I talk about that I am from Chicopee because of the C-5s. Now, I am sure that a noise mitigation study has been done there and is still being done there. I want to bring out to the folks here tonight something that I call pattern work, what I call punching holes in the sky. Right now at Westover, due to the war, a different type of flying is being done and it seems to me it is breaking the noise lines.

Now, in my home when the C-5 does an invasive maneuver for landing, it breaks the normal flight pattern. It goes right over my house at a 90 degree angle, banks into the runway and scares the hell out of us. It is very low. So my concern and thought is, what will the F-15s do when they are doing their pattern work? Will they come across at an angle to the runway simulating missile avoidance, RPG rockets, or whatever else?

Now, I said for the study and I am

fully aware of the (inaudible) I just want people to be aware down the road, years to come, if we are still at war, and I hope we are not, you want to think about the way that the F-15 might be flown. It might, as it is coming in for its landing or if it is doing pattern work, it might come across the runways at low attitudes, across homes that are not normally in the current 65 decibel line out there.

I am sure these things are going to happen. And when I read the EIS, and I sent for it, I went through it from stem to stern, just the way I did the government contracts at Pratt and Whitney. Most of the information, yes, is in there. You address a lot of the questions in the back. Tonight's presentation brings out a lot more questions that will have to be answered. I have one concern about my daughter's home, that once they do noise mitigation and approach her, and let's say that once she gets a certificate of mitigation so she can prove down the road,

that her house is now up to standards in the noise mitigation process.

I noticed a few things, and maybe I am wrong here, a gentleman asked the question to the Ops colonel about other Massachusetts bases. I think he was referring to Otis. Okay? How did Otis, you know, deal with the F-15s throughout the years and their noise. Maybe that is something that we need to address again and share the comments to it. Yes, once it is gone, the F-15s, there is no other Massachusetts Air National Guard for it here.

I was around here too when the F-100s were here. I was here when one came across the turnpike, unfortunately and someone was killed. I am hoping that the barrier system is -- I think that F-15s have a tailhook. So we hope it won't get snagged and overruns the runway and ends up on the turnpike at 10 and 202 over there. It is going to be a lot of noise. I know what the I know what the

F-100 sounds like.

I am more concerned about the local flying. You know, if you are on a pattern doing those kind of invasive maneuvers. I am familiar with the hush house, and I am concerned about the high power run off pad, which I understand you won't be using.

So I am 63 now. My whole family is military, but I have reservations, like you. I have reservations about the noise for all the people and for the people that are going to be displaced.

Thank you very much.

JUDGE HARTSELL: Is there anybody else that submitted a card that wasn't picked up?

Did you want to make a public comment, sir?

MR. MORAN: Yes, if I could.

JUDGE HARTSELL: If you could state

your name first.

MR. MORAN: My name is John Moran. I just recently arrived, so I apologize if any of my comments have already been addressed by the panel this evening. While I support the military and our troops, I think the F-15s coming to Barnes Airport is a bad idea.

It is an Air National Guard Base, it is not an Air Force Base. This is a residential area. It isn't San Diego. I am very concerned regarding the noise levels to the school, specifically the North Middle School and also (inaudible)) I am looking at the figure here on Page 4-10, and the contour lines for 55 decibels, I am a bit skeptical. They seem awfully convenient how they end almost on Southampton Road, just before the school. On your chart -- I apologize for the delay -- on table, Table 4.13. It says that North Middle School will have a sound level of 52.9 decibels during the F-15s

passage.

I think it is 4 dash 2, you have a statistic here. When subjected to 65 decibels, approximately 12 percent of persons will be, quote, highly annoyed by the noise. Now, for all intents and purposes, I am saying 65 decibels is going to be in the school range.

Twelve percent of kids being annoyed during school, when quite a few students that they already have ADD and other learning disorders. The last thing they need is to be looking up or looking through the window because the F-15s flying around are distracting their learning.

So I don't believe these sound levels. I think it is too convenient. I am also disappointed that the (inaudible))) are taken from Papermill School on Papermill Road. I don't know if that was an oversight or if that was very conveniently forgotten.

We have the helicopters, which I was

against, I heard the vibration more than you actually heard the noise. I will turn to my wife and say, do you have the washing machine going, and she will say, no, it is a helicopter.

I just think for the amount of disruption we are going to cause the citizens, particularly the 261 homes at the mobile home park that according to this book, they are not available to receive soundproofing, the homes have to be purchased. For all intents and purposes, this is an emminent domain taking for the Air National Guard. People's lives are interrupted. We are a residential town. This is just a bad idea. I support the military, but we need this like we need a hole in the head. Thank you.

JUDGE HARTSELL: Thank you. Does anyone else have any further comments? Very well. The staff will be available to discuss with you or answer questions until

fine 9 p.m. please visit the information booths and displays if you have any questions. Thank you and good evening and this hearing is completed.

(Exhibit 1, Masciadrelli comments marked)

(Hearing concluded at 8:25 p.m.)

COMMONWEALTH OF MASSACHUSETTS

I, SHARON WASKIEWICZ, COURT REPORTER, do hereby certify that the foregoing is a true and accurate transcription of my stenographic notes, to the best of my knowledge and ability.

WITNESS MY HAND, this 20th day of May, 2007.

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Sharon Waskiewicz