

Headquarters U.S. Air Force

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Integrating LEED concepts and EMS into Air Force Performance Measures



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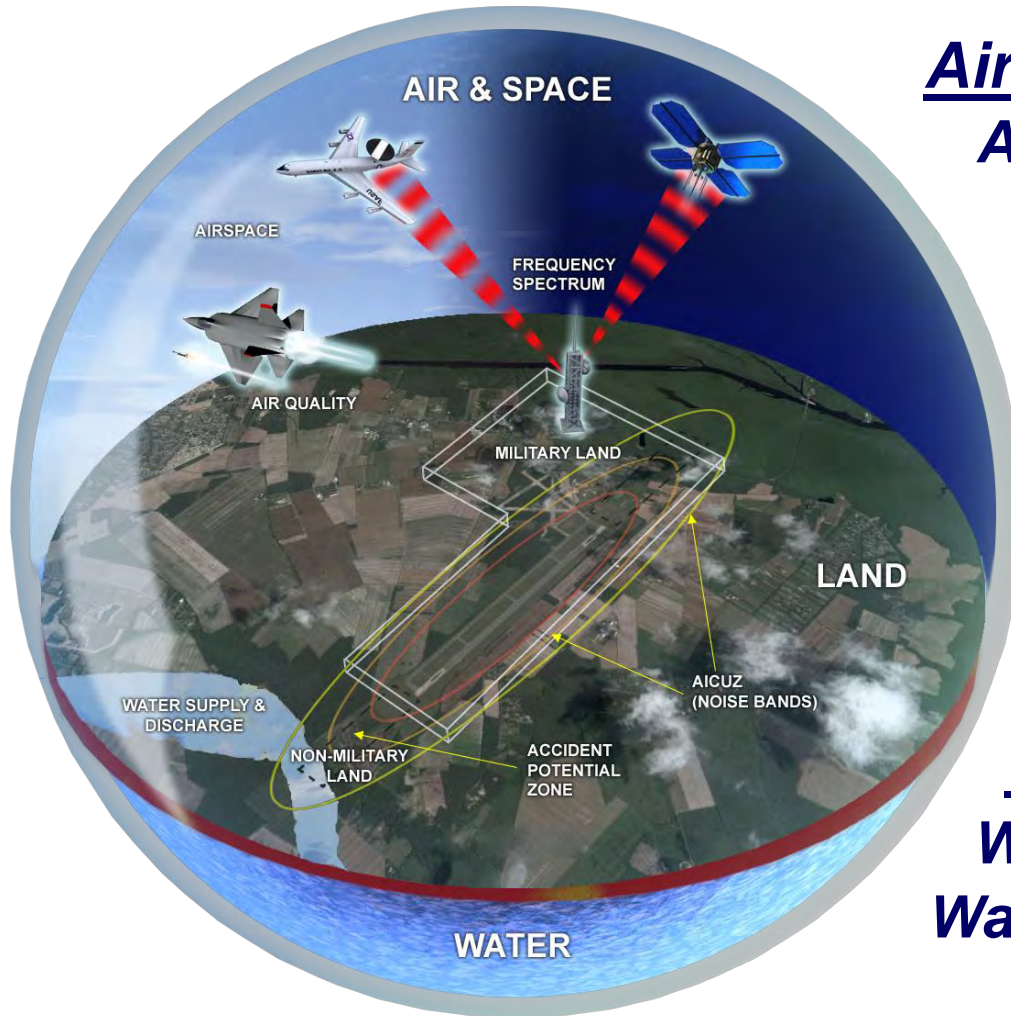
Overview

- **Natural Infrastructure Management**
- **EO 13423**
- **LEED Concept**
- **Environmental Programs**
- **Environmental Management System Structure**
- **Data Output**
- **Consolidation**



Natural Infrastructure Elements

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Air and Space

Air Quality

Airspace

Frequency Spectrum

Land

Military

Non-Military

Water

Water Supply

Water Discharge



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NIM - Objectives

- **Support the installation mission**
 - Quantify adequacy of natural resources to support mission
 - Include resource readiness ratings in reporting systems to provide visibility to leadership
 - Mitigate resource deficiencies through programming and budgeting process – “sustain, restore and modernize” just like the built infrastructure
 - Create and manage natural assets for current or future use
- **Influence Air Force & DoD strategic planning processes**
 - Use resource readiness to support basing decisions





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Executive Order 13423

Strengthening Federal Environmental, Energy, and Transportation Management

(Signed Jan 24, 2007)

- **Replaces several executive orders**
- **Mandates Objectives & Targets (O&Ts) at the Agency level**



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Executive Order 13423

Mandates the use of an EMS:

*... implement within the agency environmental management systems (EMS) at all appropriate organizational levels to ensure [the] use of **EMS as the primary management approach** for addressing environmental aspects of:*

- *Internal agency operations*
- *Agency activities (including energy and transportation functions)*

EO 13423 requires the EMS to be the primary management approach for addressing environmental aspects.



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Executive Order 13423

Implies Significant Environmental Aspects:

- Procurement
- Transportation (fuel use)
- Energy Consumption
- Chemical Use
- Purchase and Use of Electronic Products
- Waste Generation
- Building Construction, Major Renovation or Improvement (incorporating sustainable development, green building and LEED principles)



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LEED Program Elements

- **Sustainable Sites**
- **Materials and Resources**
- **Energy and Atmosphere**
- **Water Conservation and Management**
- **Indoor Air Quality**
- **Innovation and Design**



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LEED Building

What Is Green Building?



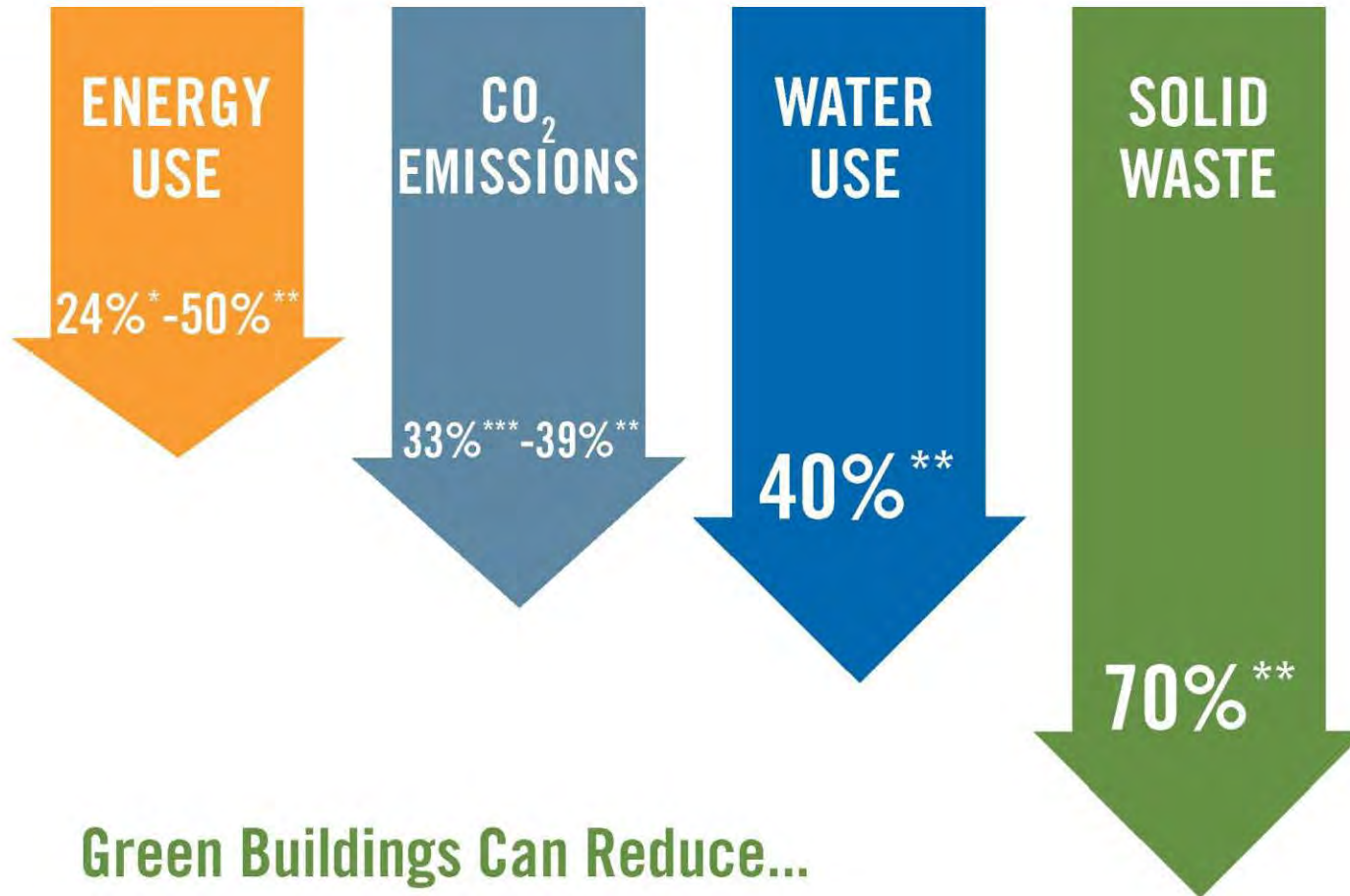
© U.S. Green Building Council, 2008

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LEED BUILDINGS CONT.

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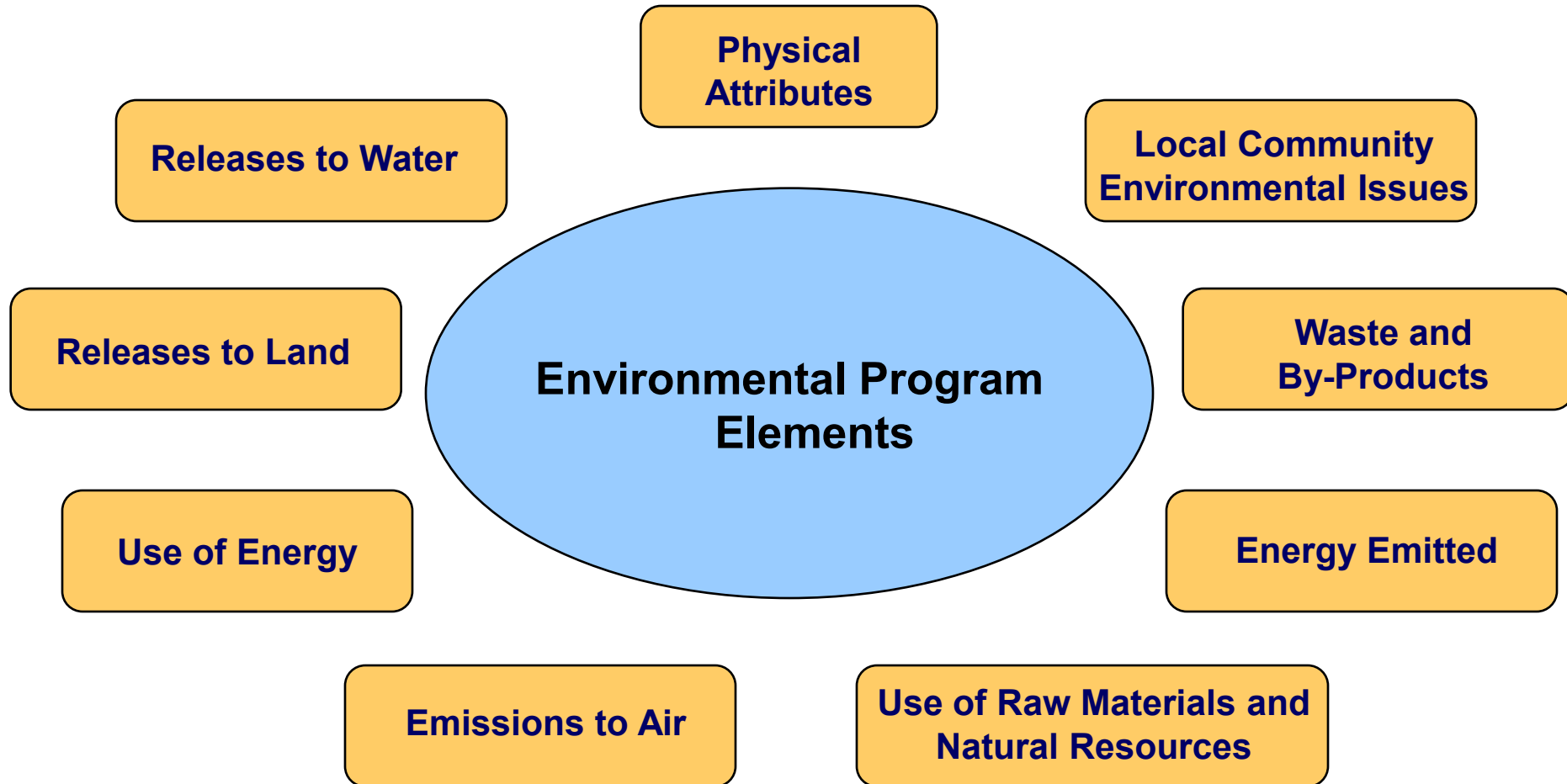
Green Buildings Can Reduce...

* Turner, C. & Frankel, M. (2008). Energy performance of LEED for New Construction buildings: Final report.
** Kats, G. (2003). The Costs and Financial Benefits of Green Building: A Report to California's Sustainable Building Task Force.
*** GSA Public Buildings Service (2008). Assessing green building performance: A post occupancy evaluation of 12 GSA buildings.



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Environmental Program Elements



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CFT Members

- **Engineers**
- **Building Occupants**
- **Operations and Maintenance Teams**
- **Environmental Team**
- **Safety Team**
- **Human Resources**
- **Purchasing Staff**
- **Faculty**
- **Interior Designers**
- **ETC...**

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Air Force Data Calls

- **Many Programs**
- **Numerous Data Calls**
- **Overlapping Objectives**
- **Need for a Management System with FLEXIBILITY**
- **EMS**



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Need for a Management System

- **Provides the Framework to Achieve Long-term Objectives of Sustaining, Restoring and Modernizing**
- **Key Attributes Include:**
 - **Measuring Ability to Meet Operational Requirements**
 - **Developing Actions and Prioritizing Investment Decisions**
 - **Correcting Deficiencies**
 - **Identifying and Sustaining Resource Opportunities for Mission Growth Via Force Structure Moves**
 - **Teamwork Across the Organization, Inclusive of Operators And Civil Engineers**
 - **Tracking Performance Measures Over Time**



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EMS Overview



- **Identifies and Provides the Planning and Management**
- **Identifies Risks and Creates Focus to Reduce Those Risks**
- **Involves and Integrates Senior Management**
- **Protects the Resource Base for Long Term Planning**

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In Place EMS to Facilitate NIM

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The Environmental Management System provides the mechanism/spring board to ensure natural infrastructure meets operational capacity

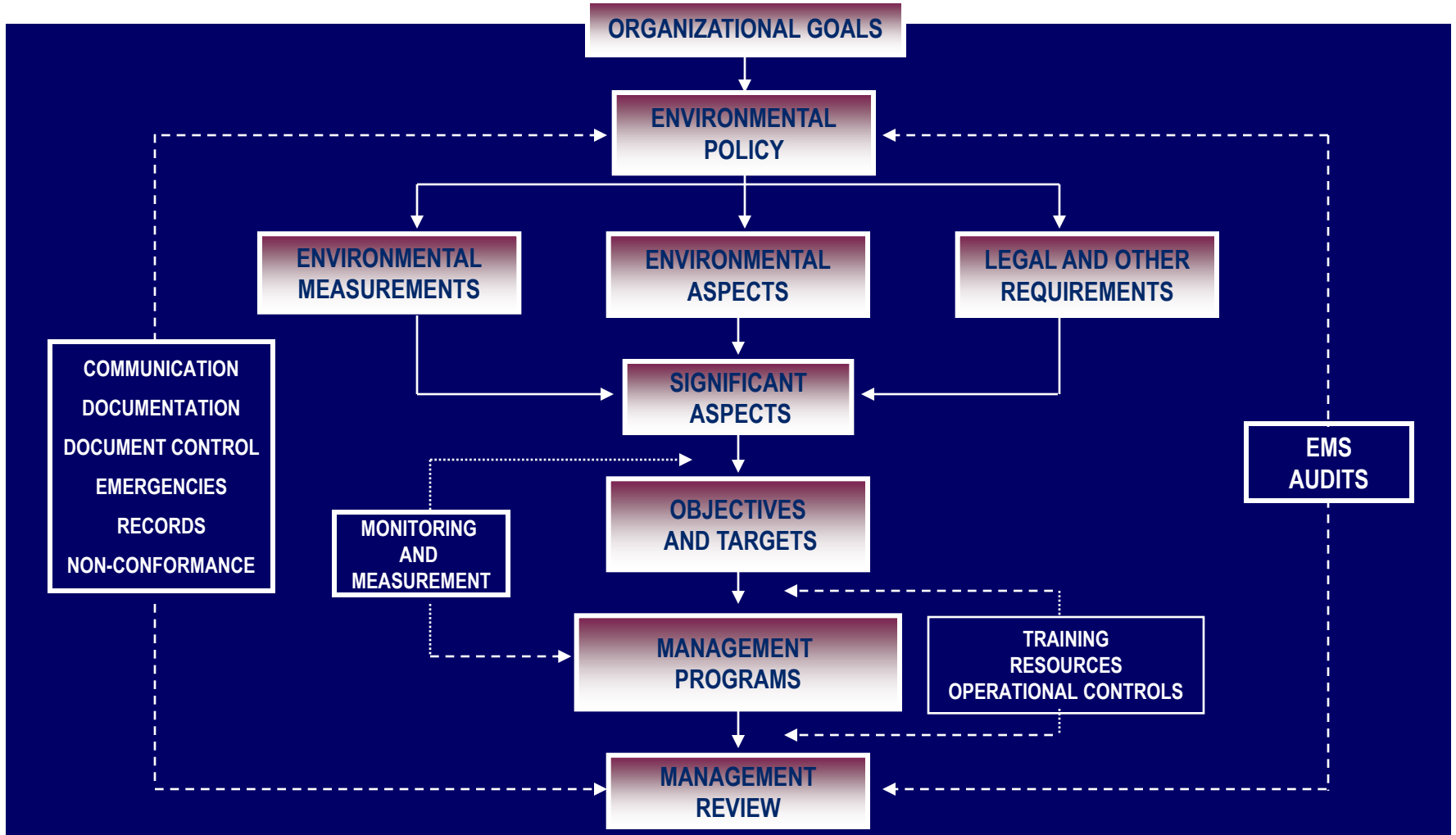


Leverage this proven system and transform it from an EMS to a holistic Management System



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Elements of an EMS



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Performance Roll Up

- **Many programs**
- **Many Data Calls with Overlap**
- **Same Management System Used**
- **Air Force Measurement Tool**
- **Performance Roll-Up**
- **Lessening the Number of Data Calls**
- **Time Savings**



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QUESTIONS



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