

Sustainability and the Missions of the US Army Corps of Engineers (USACE)

Michael G. Enschede,
USACE Sustainability Lead (Acting)
10 May 2011



US Army Corps of Engineers
BUILDING STRONG®



Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 10 MAY 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Sustainability and the Missions of the US Army Corps of Engineers (USACE)				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Corps of Engineers,Sustainability,441 G Street NW,Washington,DC,20314-1000				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES Presented at the NDIA Environment, Energy Security & Sustainability (E2S2) Symposium & Exhibition held 9-12 May 2011 in New Orleans, LA.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 15	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Overview

- USACE Lines of Operation
- USACE Missions
- Mission-oriented perspective on Sustainability in USACE
- Water Resources and Sustainability Challenges



USACE Lines of Operation

1. Internal Operations and Infrastructure - Ensure USACE shows substantial progress towards federal sustainability goals and targets within its internal operations and infrastructure.
2. Service to Customers - Improve USACE's ability to support its customers in meeting their sustainability goals and targets.



<http://www.usace.army.mil/sustainability>

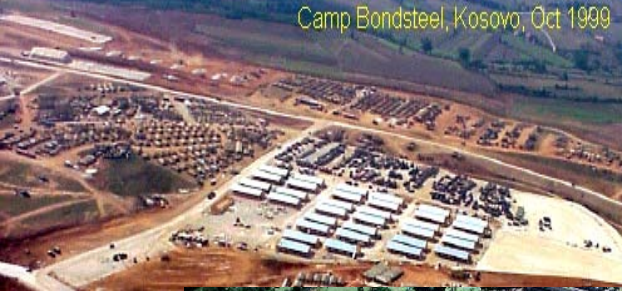


USACE Missions

Military Programs

- Military Construction
- Base Operations
- Environmental Restoration
- Geospatial Engineering

Camp Bondsteel, Kosovo, Oct 1999



Homeland Security



- Critical Infrastructure
- Antiterrorism Planner
- The Infrastructure Security Partnership

Research & Development

- Military Engineering
- Terrain & Geospatial
- Structures
- Environment
- Water Resources



Real Estate

- Acquire, Manage, and Dispose
- DOD Recruiting Facilities
- Contingency Operations



Interagency and International

Support

Federal
State
Local
International



Civil Works



- Navigation, Hydropower
- Flood Control, Shore Protection
- Water Supply, Regulatory
- Recreation, Disaster Response
- Environmental Restoration

BUILDING STRONG®

USACE Civil Works Program



Lock and Dam 15 (Mississippi River)



Flood Wall (Williamson, KY)



Everglades

Deliver enduring, comprehensive, sustainable, and integrated solutions to the Nation's water resources and related challenges through collaboration with our stakeholders: Regions, States, localities, Tribes, and other Federal agencies.

- Flood Risk Management, \$1.865B* (34%)
- Navigation, \$1.746B* (32%)
- Ecosystem Restoration & Infrastructure, \$940M* (18%)
- Recreation & Natural Resource Management, \$284M* (5%)
- Hydropower, \$211M* (4%)
- Regulatory Program: Wetlands & Waterways, \$190M* (3%)
- Disaster Preparedness & Response, \$14M* (<1%)
- Water Supply , \$5M* (<1%)

* FY10 Appropriation



Dredge ESSAYONS (Coos Bay, OR)



Lake Seminole (Mobile District)



Bonneville II Powerhouse (Washington)

Contributions to the Economy and the Environment

Recreation areas:
370 M Visitors/yr
Generate \$18B in
economic activity,
500,000 jobs



¼ of Nation's
Hydropower:
\$800M + in
power sales



12,000 miles of
Commercial Inland
Waterways transport
goods at
½ the cost of rail or
1/10 the cost of trucks

Maintenance of
~200 Shallow &
Deep Draft
Harbors



Water-based Recreation
54,879 Miles Of Shoreline
at USACE Lakes



557 Dams and 11,750
Miles of Levees



Stewardship of
11.7 Million Acres
Public Lands



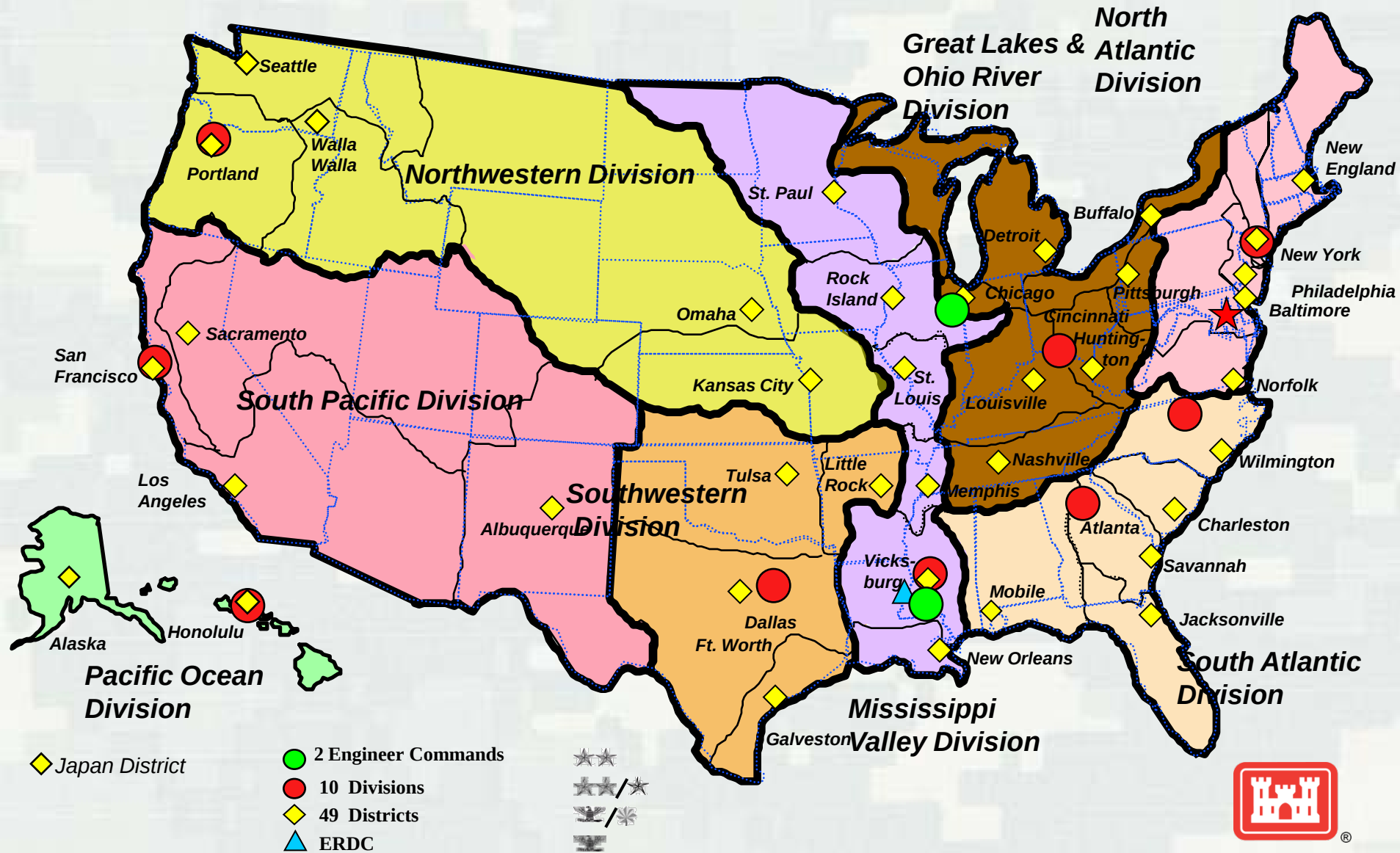
137 Major Environmental
Restoration Projects



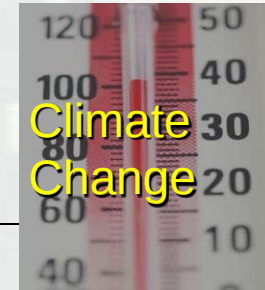
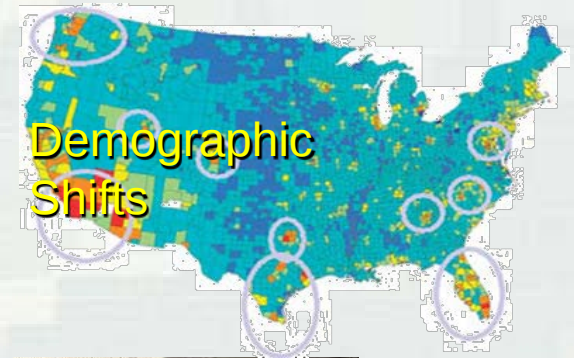
BUILDING STRONG®

US Ports & Waterways Convey > 2.2 billion Tons Commerce
Corps Maintained Ports Provide Strategic Deployment Capability
HMTF collects \$1.3 billion revenue

USACE Civil Works Boundaries



National Water Resource Challenges



BUILDING STRONG®

Regional Water Resources Challenges

- Asian Carp (Great Lakes/Mississippi River)
- Vegetation on Levees (CA, TX)
- ACT/ACF Basins (GA, AL, FL)
- Everglades Restoration
- Great Lakes - Lake Levels
- Chesapeake Bay
- Bay Delta, CA
- Columbia Fish Program (OR, WA, ID)
- Columbia River Treaty
- Missouri River BiOps
- Ohio River Basin

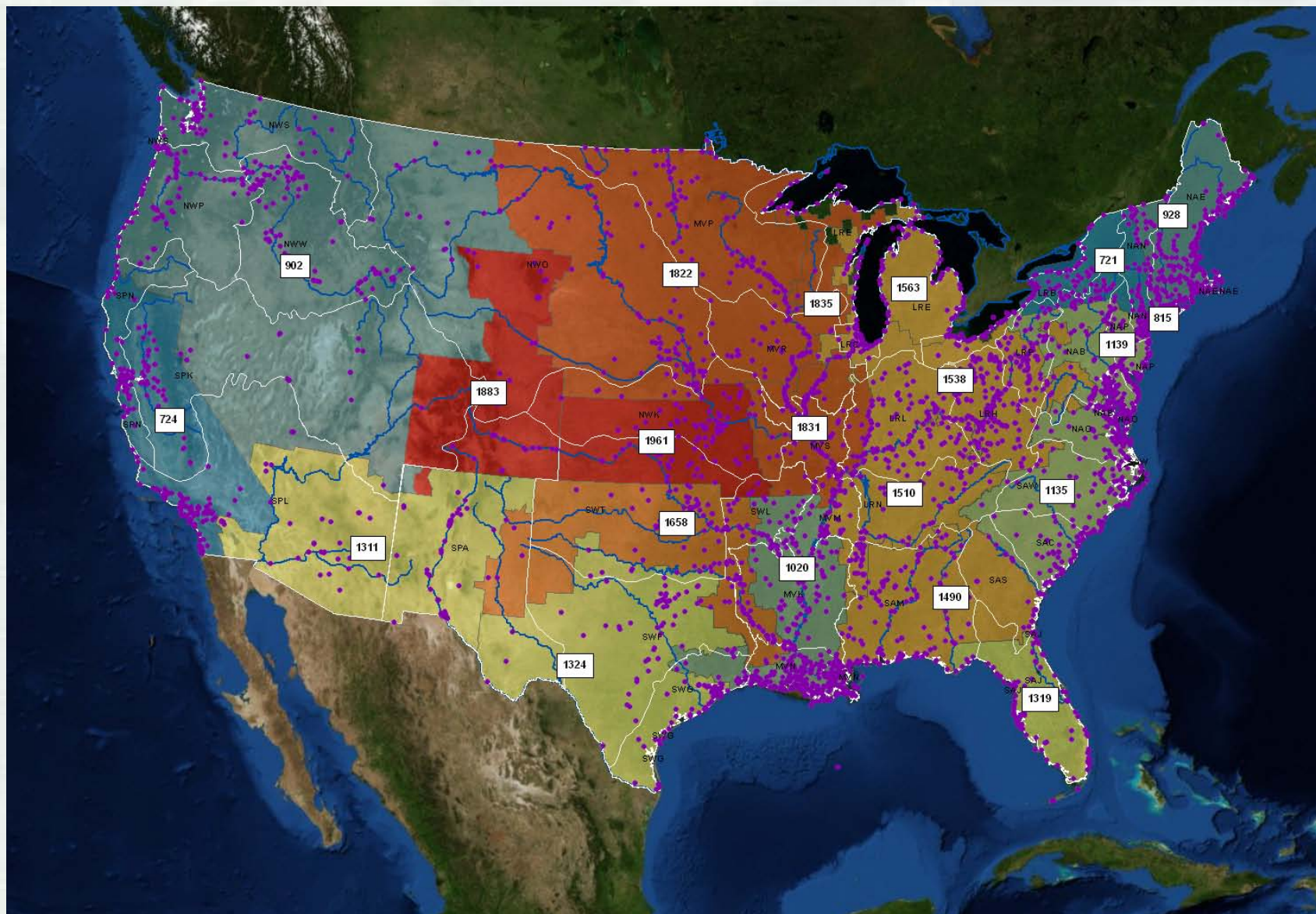


Sustainability Challenges

- Climate Change Mitigation --
 - ▶ Catching up with Federal (EO13514) goal timelines
 - ▶ Meeting statutory requirements, e.g. EISA 432
 - ▶ Protect and restore America's lands while also supporting Public-Private Energy Partnerships
 - Climate Change Adaptation --
 - ▶ Develop knowledge base to enable adaptation planning and engineering for water resources facilities
 - ▶ Evaluate vulnerabilities
 - ▶ Manage CW Assets & Infrastructure
- Recapitalization with sustainability in mind



USACE Facility Locations Plotted by GHG “e-Grid” Regions



Federal Sustainability Priorities

OMB Sustainability/Energy Scorecard Metrics

1. **GHG Scope 1 & 2:** 23% reduction by FY20 (FY08 baseline)
2. **GHG Scope 3:** 5% reduction by FY20 (FY08 baseline)
3. **Facility energy intensity:** 30% reduction by FY15 (FY03 baseline)
4. **Renewable electricity:** 7.5% of total electricity by FY13; half from “new” sources
5. **Potable water intensity:** 26% reduction by FY20 (FY07 baseline)
6. **Vehicle fleet petroleum:** 30% reduction by FY20 (FY05 baseline)
7. **Green buildings:** 15% of existing and leased buildings >5,000 GSF in compliance with the “Guiding Principles” by FY15

USACE SP FY13 Targets

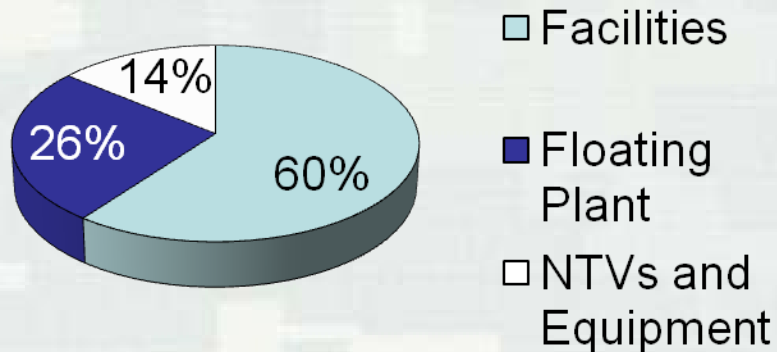
1. **GHG Scope 1 & 2:** 12.8% reduction
2. **GHG Scope 3:** 1.5% reduction
3. **Facility energy intensity:** 18% reduction
4. **Renewable electricity:** 7.5% of total electricity by FY13; half from “new” sources
5. **Potable water intensity:** 9% reduction
6. **a. Vehicle fleet petroleum:** 10% reduction
b. Floating plant petroleum: 4.8% reduction
7. **Green buildings:** 8% of existing and leased buildings >5,000 GSF in compliance with the “Guiding Principles”

#1, 3, 4 & 6 contribute to SP Goal 1: Reduce GHG scope 1 & 2 emissions

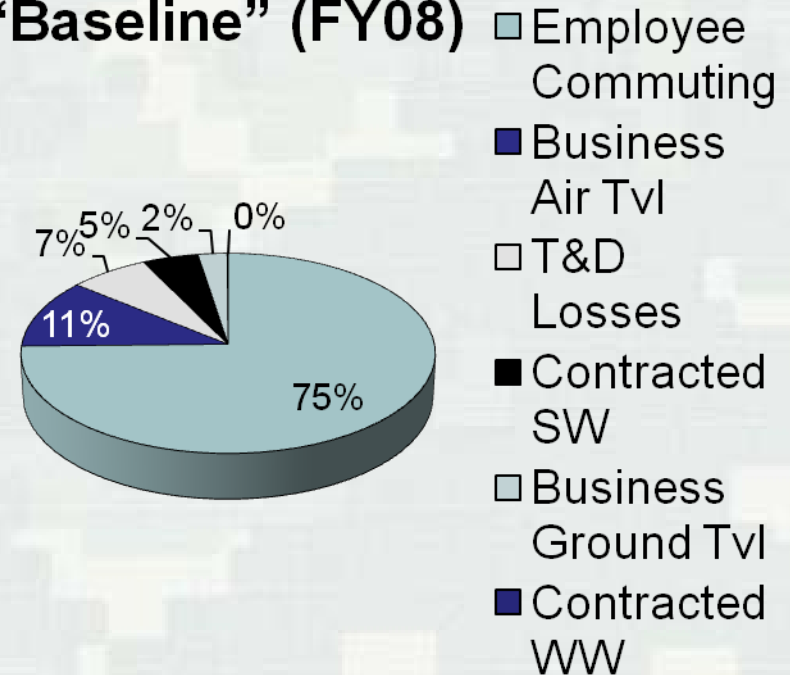


FY08 Baseline Emissions by Source

**Scope 1 & 2
“Baseline” (FY08)**



**GHG Scope 3
“Baseline” (FY08)**

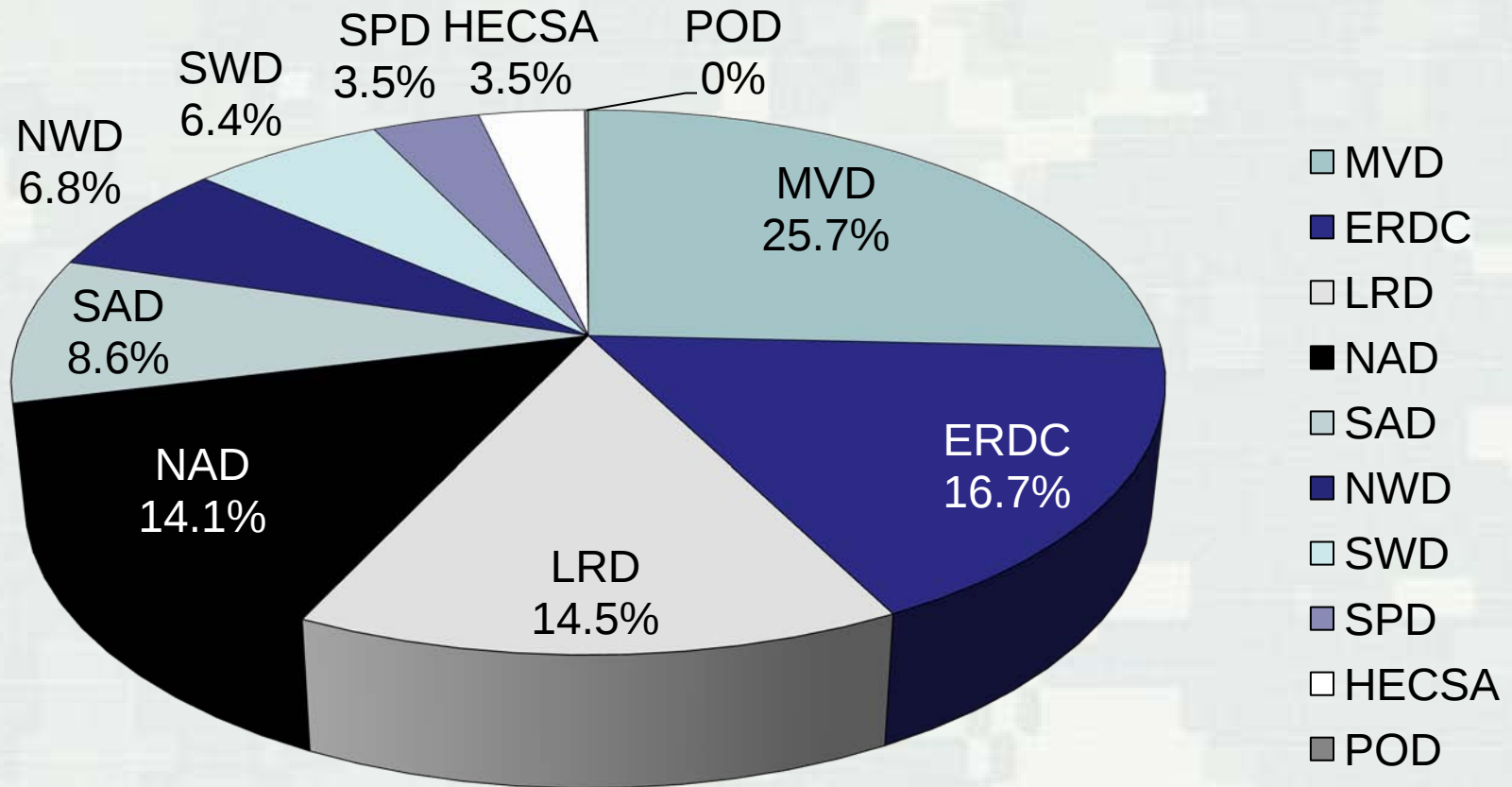


	USACE		DoD	
	FY10 MTCO ₂ e	FY20 Reduction Target	FY08 MTCO ₂ e	FY20 Reduction Target
GHG scope 1 & 2 (FY08)	338,770	23%	27,088,252	34%
GHG scope 3	162,274	5%	7,174,481	13.5%



Scope 1 & 2 GHG Emissions FY10 by Major Subordinate Command

(USACE Facilities, NTVs, and Equipment)



USACE GHG Scope 1 & 2 Baseline (excluding FP): **280,313 MTCO₂e**



Take Aways

- USACE Civil Works and Military Programs support DoD and the Nation
 - ▶ Both functions are integral to the overall vision of the Army in the service it provides to the Nation
- Managing priorities including aging infrastructure
 - ▶ Manage CW Assets & Infrastructure
 - Recapitalization with sustainability in mind
- Committed to accelerating actions to catch-up with OMB/CEQ Sustainability requirements

