The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.
WHO ARE WE?

- Nation’s Engineers (Civil Works Program)

- Army’s Engineers (Military Programs)
  - Capable of design and construction of any infrastructure in support of the Army or Air Force

- Support to others (International and Interagency Support)
  - Support to any other federal agency to include Environmental Protection Agency, Veterans Affairs, Homeland Security, Food and Drug Administration, National Guard Bureau
USACE DIVISIONS AND DISTRICTS

Northwestern Division
South Pacific Division
Southwestern Division
Mississippi Valley Division
Great Lakes and Ohio River Division
North Atlantic Division


Pacific Ocean Division
Far East
Japan
Alaska

Division HQ
District HQ

32,000 civilian and 700 military personnel serving in 43 Districts within 9 Divisions

US Army Corps of Engineers.
• 6 Governors
• 12 Senators
• 21 Congressional Districts
• 13 million people
• 66,000 square miles
• 6,100 miles of coastline
• 11 deep draft commercial waterways
• 13 major river basins
• 171 Federal harbors
• 5 Military Bases
• 490 Employees
• 31 Dams; 5 Basin Offices
• 3 Hurricane Barriers
• Cape Cod Canal
• 2 Area Engineers
• 5 Resident Engineers
• 2 Regulatory Offices
• ~ 6,000 Permits issued annually
NEW ENGLAND DISTRICT PROGRAM TRENDS

FY09 – FY20

$ Millions

FY 19

MIT/Lincoln Lab
Hanscom AFB
Natick Labs
Devens
Joint Base Cape Cod
Westover ARB
CRREL
FUDS
Support to National Guard
National Army Museum

Military: $300M

Civil Works
$145M

IIS: $150M

EPA – New Bedford Harbor;
Durham Meadows; Elizabeth Mine;
Raymark; Veterans Administration;
FDA – Winchester Engineering Lab

Boston and Portsmouth Harbors,
Numerous Continuing Authorities,
OM program for 31 reservoirs,
Hurricane Barriers and CCC,
Multiple Navigation OM projects

US Army Corps of Engineers.
USACE MISSION AREAS

MILITARY MISSIONS
- Military Construction
- COCOM Support, Overseas Contingency Operations (OCO)
- Installation Support, Environmental, Energy and Sustainability

CIVIL WORKS

REAL ESTATE
- Acquire, Manage and Dispose / DoD Recruiting Facilities / Contingency Operations

CONTINGENCY OPERATIONS
- “Whole of Government” Disaster Response and Recovery
- Life-Cycle Flood Risk Management
- Critical Infrastructure

INTERNATIONAL and INTERAGENCY
- Federal / State / Local “Whole of USACE” Capabilities
- Capacity Development

USACE Has a Diverse Mission Set Driven by Diverse Customers
Civil Works

ENGINEERS ON POINT FOR THE ARMY AND THE NATION!
CIVIL WORKS

Navigation

Flood Risk Management / Recreation

Cape Cod Canal

Environmental Restoration
CIVIL WORKS

US Ports & Waterways convey > 2B Tons Commerce
Foreign Trade alone creates > $160 B Tax Revenues

376M Visitors Annually
$15 B in economic activity
500,000 jobs

1/4 of Nation’s Hydropower
$500 M + in power sales

11,000 miles of Commercial Inland Waterways:
1/2 the cost of rail - 1/10 the cost of trucks

299 Deep Draft Harbors

627 Shallow Draft Harbors

8,500 Miles of Levees

8,500 Miles of Levees

Environmental Restoration

Emergency Operations

Stewardship of 11,700,000 Acres of Public Lands

Regulatory Responsibility

- US Ports & Waterways convey > 2B Tons Commerce
- Foreign Trade alone creates > $160 B Tax Revenues
FLOOD RISK MANAGEMENT PROJECTS

Hodges Village, MA
Colebrook, CT
North Hartland, VT
Hurricane Barrier
New Bedford, MA
Cape Cod Canal is the widest sea-level canal in the world

- 17.5 miles long, with 7.5-mile-long land cut
- Using the canal saves 65 to 150 miles, depending on the point of origin
- Constructed by private interests and opened in 1914
- Commandeered by the U.S. during WWI
- Purchased in 1928
- Three bridges (two highway, one railroad)
FLOOD RISK MANAGEMENT
MUDDY RIVER, BOSTON, MA

- **Flood Damage Reduction**
  - Protects against recurrence of the Oct. 1996 Flood (20-Year Event)
  - Significantly reduces flood stages for all events including tributaries

- **Environmental Restoration**
  - Restores over 40 acres of scarce urban aquatic habitat
  - Restores anadromous fish spawning habitat (Federal Significant Resource)
  - Enhances diversity and productivity of benthic and warm water fish communities
  - Enhances biodiversity by eradicating extensive stands of Phragmites

**Construction**

$64 Million
STREAMBANK RESTORATION
BREAKWATER RECONSTRUCTION
ECOSYSTEM RESTORATION

Broad Meadows Salt Marsh Restoration
Section 1135 Project in Quincy, MA

Dam Removal and Marsh Restoration, Stamford, CT

Eelgrass Restoration
Charlestown, RI

Town Pond Salt Marsh Restoration
Portsmouth, RI
NAVIGATION

Deep Draft Harbors

Shallow Draft Harbors

Navigation Improvement Dredging

Cape Cod Canal
NEW ENGLAND NAVIGATION

- 13 Deep Draft Commercial Waterways
- 170 Ports Mostly Recreational
  - Maintenance Dredging
  - Improvement Dredging
  - Shallow and Deep Draft
  - Breakwaters and Jetties
  - Offshore Disposal Sites
  - Cape Cod Canal
- Boston Harbor, MA
- New Haven Harbor, CT
- Piscataqua River, NH
BOSTON HARBOR DEEPENING

- Widen and Deepen Lower Main Ship Channel and Lower Reserved Channel, Turning Basin and Anchorage to -48 Feet and to -50 Feet in the North Entrance Channel, Widened in the Bends
- Extend Main Ship Channel Deepening above the Turning Area to the Massport Marine Terminal at -45 Feet by 600 Feet Wide
- Deepen Portion of 35-Foot Area of Mystic River Channel to -40 Feet
- Deepen and Widen 38-Foot Chelsea River Channel to -40 Feet

Boston Harbor, MA
Military Support

ENGINEERS ON POINT FOR THE ARMY AND THE NATION!
2 Active Duty Bases:
- Hanscom Air Force Base
- Natick Soldier Systems Center

Support to other military:
- Westover Air Reserve Base
- Joint Base Cape Cod
- Devens RFTA
- CRREL
ARMED FORCES RESERVE CENTERS

Rutland, VT

• Multi-Service Consolidated Facilities

• Cutting-edge Training and OCO Prep

• Integrated Vehicle Maintenance

White River Junction, VT
MILITARY ENVIRONMENTAL HAZARDOUS TOXIC & RADIOLOGICAL WASTE

- Decommissioned Reactor at Watertown, MA
- Underground Storage Tank Removal at Devens RFTA
- Operation and Maintenance (Environmental)
- Defense Environmental Restoration Program (DERP)
- Formerly Used Defense Sites (FUDS)
- Underground Storage Tank (UST) Removal
- Soil and Groundwater Remediation
- Emergency Response
- Weapons Range Clean-Up
Interagency, International, and Environmental Support

ENGINEERS ON POINT FOR THE ARMY AND THE NATION!
INTERAGENCY, INTERNATIONAL, AND ENVIRONMENTAL SUPPORT

Elizabeth Mine – Strafford, VT

VA Hospital - Providence, RI

Nacala Dam - Mozambique, Africa

Border Patrol Station - Swanton, VT
ELIZABETH MINE SUPERFUND SITE

- One of the largest, most intact historic mining sites in New England
- GPS-controlled heavy machinery with uploaded CAD design
- Over 10M gallons of water treated with lime amendment Rotating Cylinder Treatment System (RCTS)
- Complied with the National Historic Preservation Act
- Overcame Tropical Storm Irene
NEW BEDFORD HARBOR SUPERFUND SITE

- > $250 million to date
- > $300 million remaining
- PCBs in sediments
DISASTER / EMERGENCY RESPONSE AND RECOVERY

Water Team

Breezy Point

Rockaway Beach

Debris SME
Regulatory Program

ENGINEERS ON POINT
FOR THE ARMY AND THE NATION!
REGULATORY PROGRAM

Regulatory Authorities
- Rivers and Harbors Act of 1899.
- Clean Water Act of 1972
- Marine Protection, Research and Sanctuaries Act of 1978
- Dedicated State Teams
- Technical support - wetland delineations and jurisdictional determinations.

Regulatory Actions
- 6,000 +/- Final Actions per Year
  - 5,700 General Permits
  - 100 Individual Permits
  - 100 Enforcement Actions
  - 100 Compliance Actions
- 25 +/- “Hot” Projects:
  - Highways
  - Interstate Pipelines and Cables
  - Wind Farm
  - Golf Courses
  - Subdivisions
  - Large Marinas
  - South Coast Rail…
USACE has a long history in climate change:

- 1950s – present ice core drilling Greenland and Antarctica
- 1970s led White House drought commission
- 1980s addressed changing sea level
- 1990s economics of climate change
- 2000s effects on water resources, updated policy/guidance
- 2010s planning and implementing climate resilience measures
MAKE SUSTAINABILITY & RESILIENCE FACTOR IN RISK-INFORMED DECISIONS