

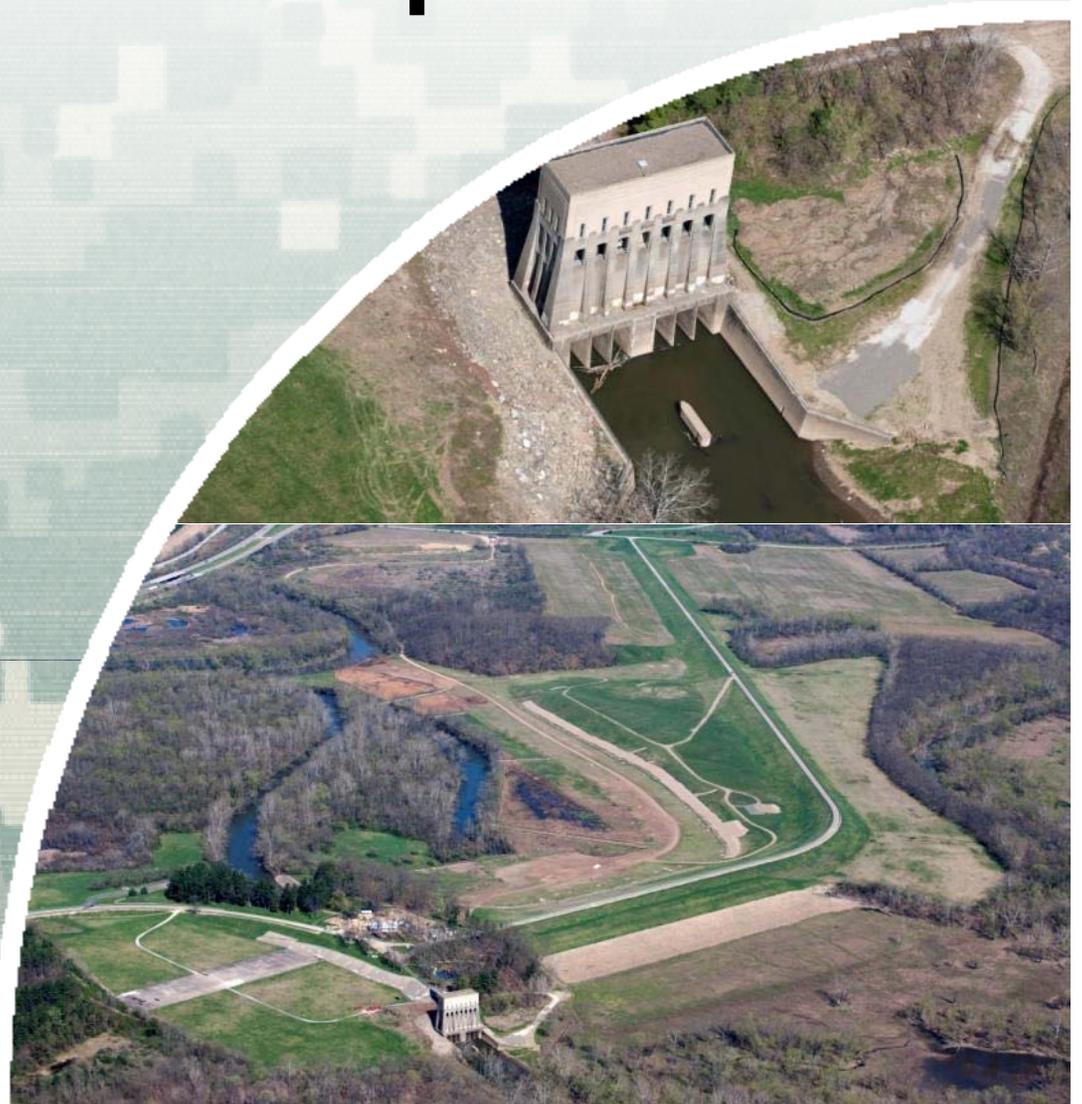
Dam Safety Modification Mandatory Center of Expertise

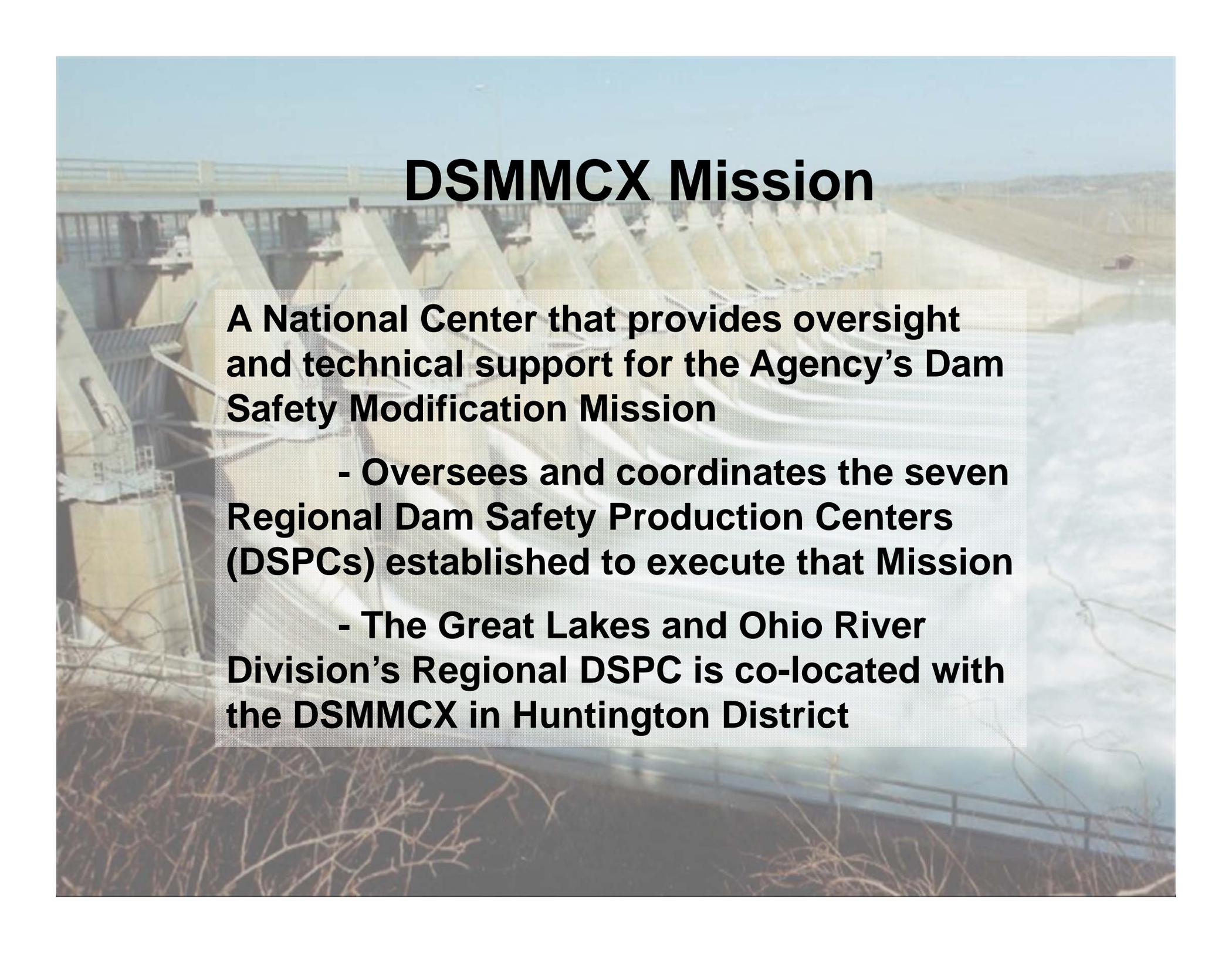
Kimberly Davidson, P.G.
Senior Geologist, DSMMCX

Small Business Conference
11 May 2016



US Army Corps of Engineers
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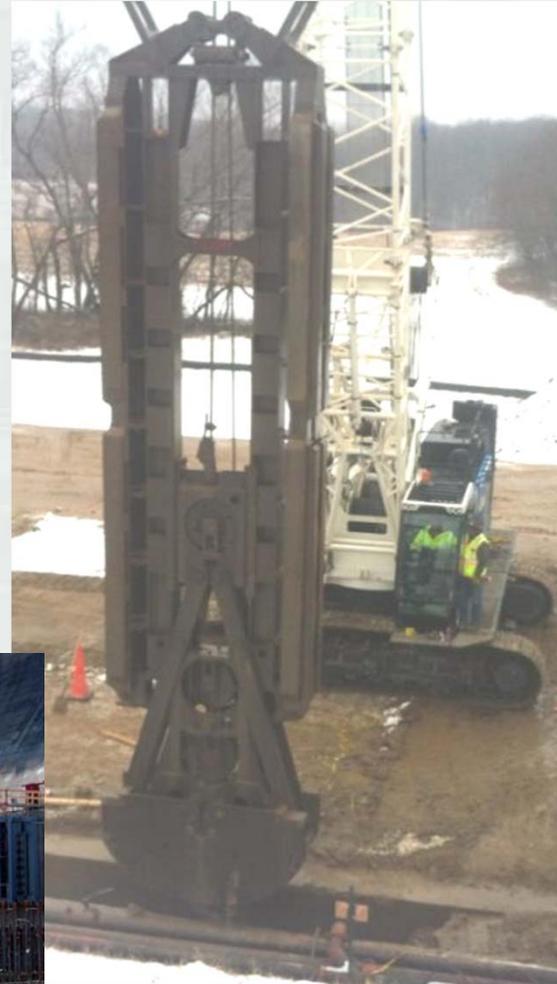
DSMMCX Mission

A National Center that provides oversight and technical support for the Agency's Dam Safety Modification Mission

- Oversees and coordinates the seven Regional Dam Safety Production Centers (DSPCs) established to execute that Mission**
- The Great Lakes and Ohio River Division's Regional DSPC is co-located with the DSMMCX in Huntington District**

Dam Safety Production Centers

- Huntington, WV (w/MCX)
- Concord, MA
- Sacramento, CA
- Omaha, NE
- Vicksburg, MS
- Atlanta, GA
- Tulsa, OK



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Why Develop Centers to Execute the DS Mission?

\$26B of DS modifications needed to reduce risk on USACE DSAC I, II and III dams to tolerable limits (about \$500M/year over a 53 year period)

- Dam Safety Investment Plan (DSIP)
- Projects unevenly distributed across the nation
- Some Divisions have no work for ten years – can't sustain competencies

- Centers provide for consistency, efficiency, effectiveness, quality, and sustained technical competence



DSPC Roles

Primary organization responsible for the preparation of engineering products and activities associated with Dam Safety Modifications:

- **Dam Safety Modification Report (decision document)**
- **Design documentation**
- **Plans and Specifications**
- **Engineering support during construction**
- **Construction Liaison**

DSMMCX Roles

Responsible for oversight of the above activities in addition to:

- **Ensure consistency and lessons learned across DSPCs**
- **Facilitate coordination of resources across DSPCs**
- **Provide oversight to DSPCs & perform Agency Technical Review**
- **Develop and conduct Dam Safety related training**
- **Administer national level A-E contracts for Dam Safety Modifications**



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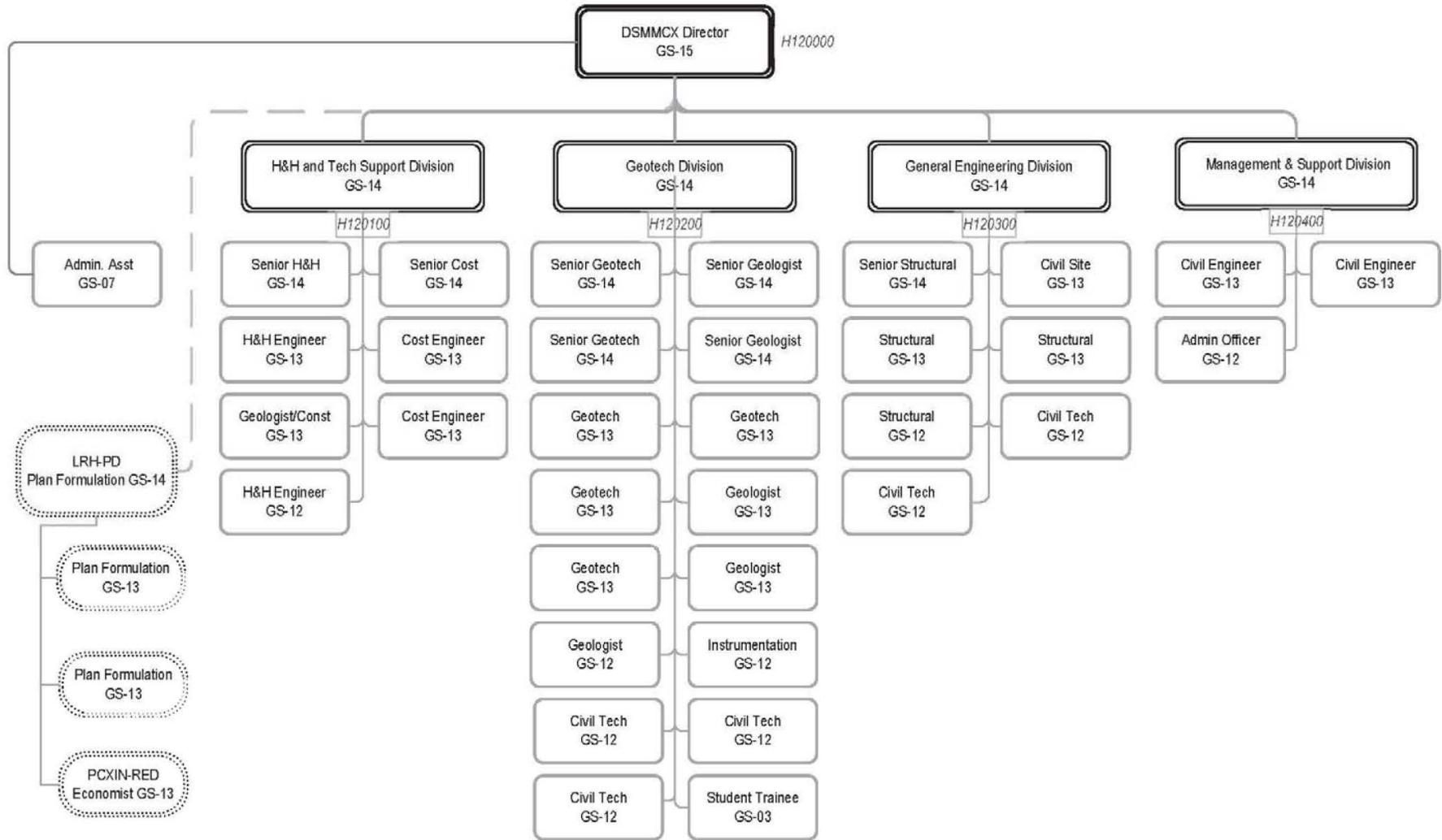
Corporate Goals for DSMMCX & DSPCs

- **Efficiently provide risk reduction across USACE dam inventory**
- **Improve technical quality of products and services**
- **Ensure consistent implementation of engineering methodologies and policies**
- **Enhance, sustain and maintain technical competency capability within USACE**



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USACE Dam Safety Modification Mandatory Center of Expertise & Great Lakes and Ohio River Division Dam Safety Production Center



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Typical Corrective DSM Features

Seepage Cutoff

- Grouting, concrete/soil cutoff walls, deep soil mixing

Seepage Control

- Relief wells, seepage berms/blankets, toe drains

Concrete Structure Rehabilitation

- Anchoring, Demolition/replacement, foundation drainage

Scour/Erosion Protection

- Stilling basin modifications, channel armoring

Overtopping Protection

- Gate/machinery rehabilitation/replacement, increase discharge capacity

Miscellaneous

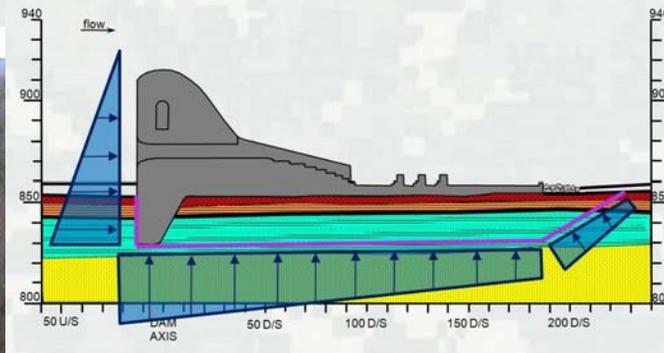
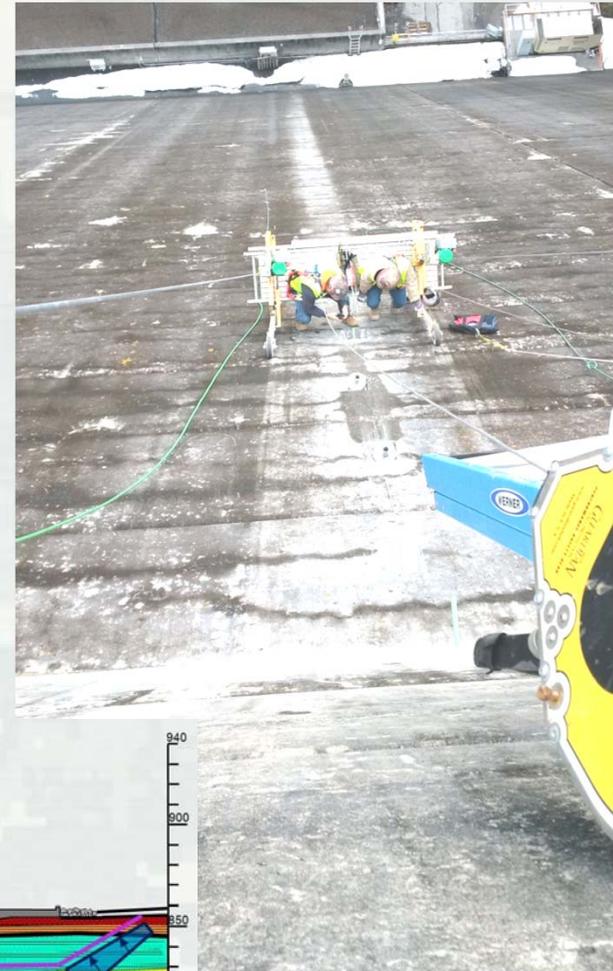
- Instrumentation, data management



General Engineering Division

Specializing in

- Structural analyses
- Design and evaluation of structural alternatives
- Development of construction plans and specifications
- High capacity anchor design
- Engineering support during construction



H&H and Tech Support Division

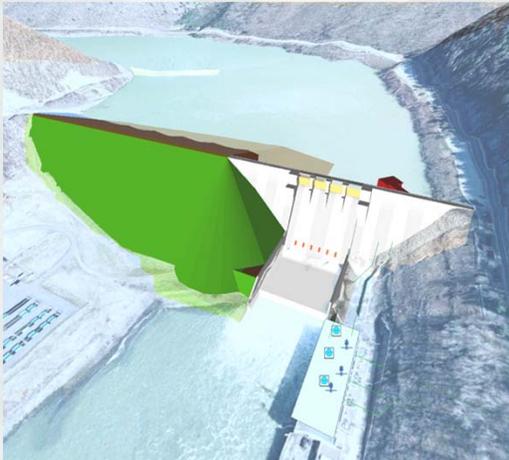
Specializing in

- Hydraulic structure design, hydrologic analyses and construction inspection and oversight
- Development of cost estimates for comparison of design alternatives and construction, and cost and schedule risk analyses



Management Support Division

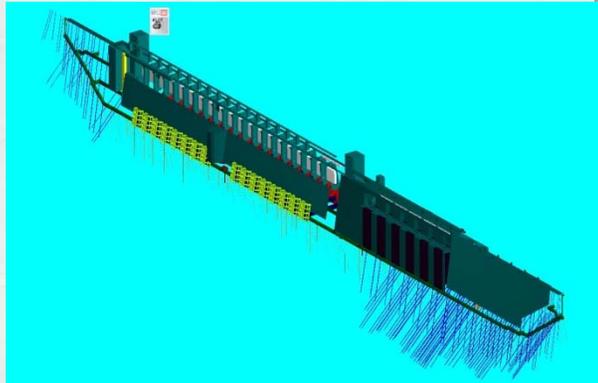
- Development and support of databases for program management
- Development of GIS models for project data management
- Policy development for mineral extraction issues
- Competency management across DSPCs
- Coordination of personnel/technical resources across organizations



Geotechnical Division

Specializing in

- site investigation and characterization
- rock mechanics
- anchor design and installation
- grouting
- concrete materials
- Seepage control and management
- dam and levee instrumentation and monitoring
- geotechnical support during construction



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Recent Project Contributions

- Mosul Dam, Iraq
- Dahla Dam, Afghanistan
- Folsom Dam - California
- Isabella Dam - California
- Amistad Dam - Texas/Mexico
- East Branch Dam - Pennsylvania
- Herbert Hoover Dike - Florida
- Canton Dam - Oklahoma
- Lewisville Dam - Texas
- Center Hill Dam - Tennessee
- Bluestone Dam - West Virginia
- Dover Dam - Ohio
- Bolivar Dam - Ohio
- Zoar Levee – Ohio
- Philpott Dam - Virginia



Other Capabilities - Contracts

Current contract resources:

A-E Design Services
A-E Geotechnical Services
Drilling Services

- Land and floating plant based



Development of contract documents including specs, scopes of work, estimates

All phases of technical contract management



Current Contracts

URS Group, Inc.

A-E, National IDC for Engineering, Design and Related Services

Stantec/Tetra Tech JV

A-E, National IDC for Engineering, Design and Related Services

Stantec Consulting Services

A-E, National IDC for Geotechnical Services, exploratory drilling,
and testing

Stantec Consulting Services

LRD Exploratory Land Drilling usable nationally through the MCX

Terracon Consultants, Inc.

LRD Exploratory Land Drilling usable nationally through the MCX

Stantec Consulting Services

LRD Floating Plant with Land Drilling usable nationally through the
MCX



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Future Contracts

Currently working toward additional national contracts:

**5 - A-E Engineering, Design and Related Services,
Total Capacity \$55M**

3 Large Business @ \$15M ea.

2 Small Business @ \$5M ea.

**1 - National IDC Automated Data Acquisition
System Instrumentation Services, Total Capacity
\$10M – sources sought currently advertised**



Contracted Work

Computational Fluid Dynamics Modeling

Metallurgical Analysis

Anchor Lift-off Testing and Evaluation

Instrumentation Installation

Instrumentation Data Collection

Automated Data Acquisition System Setup

DAMRAE

**Expert Evaluation/Consultation – study, design
and/or construction inspection**



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Questions/Comments?

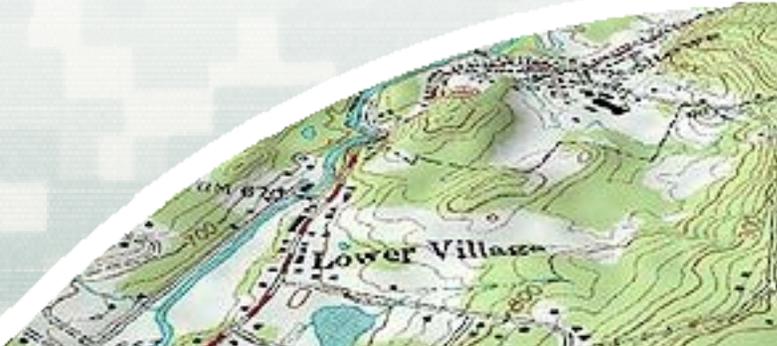


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Huntington District Planning Branch

May 2016

Amy K. Frantz
Chief, Planning Branch



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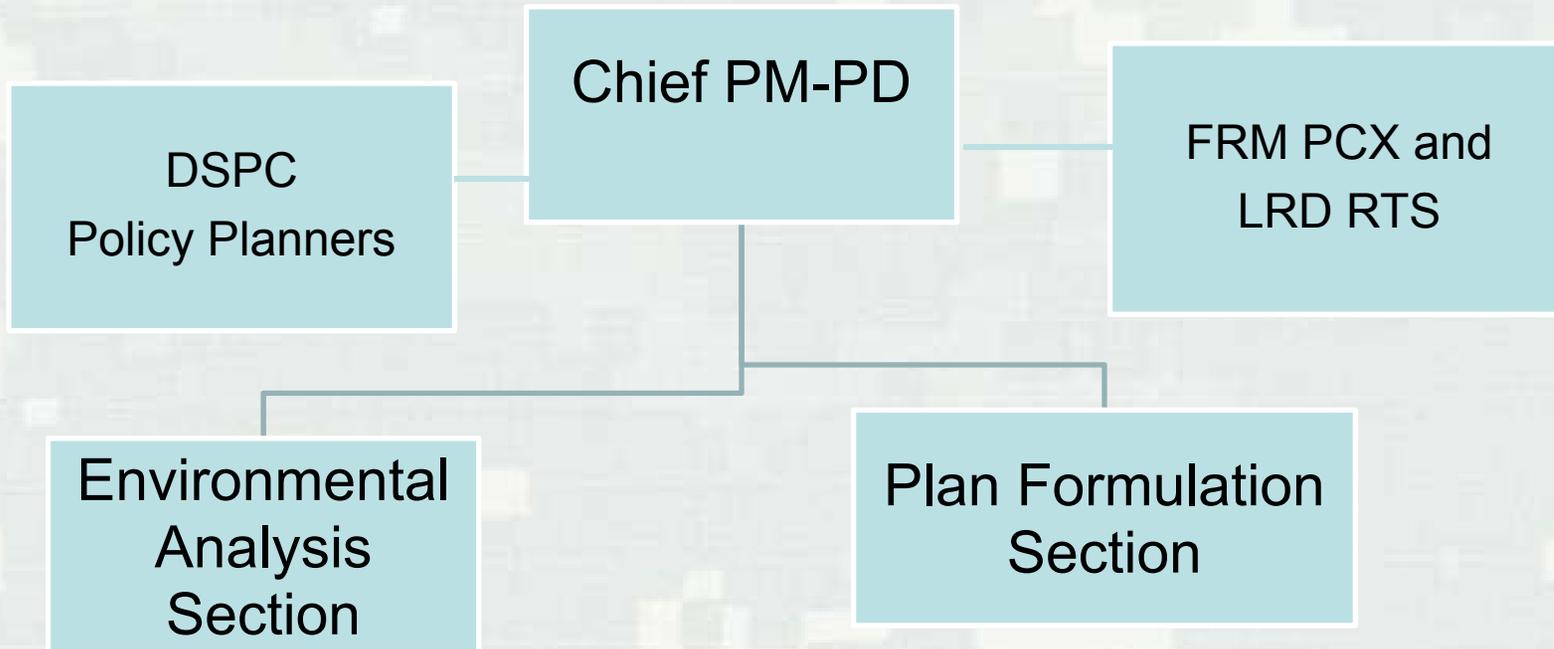
Huntington District

- Organizational Structure
- LRH Planning Program



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Planning Branch



Huntington Planning Program

- Flood Risk Management
 - ▶ Dam Safety Projects
 - ▶ Floodplain Management
 - ▶ Planning Assistance to States
- Ecosystem Restoration
- Water Supply
- NEPA Compliance



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Huntington Planning Program

- NEPA Compliance
 - ▶ Baseline Conditions
 - Wetland delineations
 - Archeological surveys
 - Aquatic surveys
 - ▷ Mussels
 - ▷ Fish
 - Terrestrial surveys
 - ▶ Components of EIS



Huntington Planning Program

- Economic Analyses (flood risk, recreation, ecosystem, etc)
- Structure Inventories
- Recreation Analyses
- GIS support
- Master Planning support

