

INLAND NAVIGATION DESIGN CENTER- STATUS BRIEF

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US Army Corps of Engineers
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Background

- **2010-National Technical Competency Team**
- **2010-IMTS Capital Projects Business Model Final Report**
- **2011-Civil Works Transformation**
- **2012-Established national INDC PDT**
 - **LRD, NAD, NWD, SAD, POD, MVD, & SWD**
 - **Recommended formation of 1 center-2 locations(MVD and LRD)**



Background

- **Jan 13, LTG Bostick approved PDT recommendation of 1 center-2 locations(MVD and LRD). Additional guidance:**
 - C2 will be through MVD initially
 - INDC will be a MCX
 - Develop inland navigation policy and guidance
 - Input to USACE Infrastructure Strategy
 - Support to the PCX-IN
 - Review of currently completed designs.
 - Leverage inland navigation design expertise throughout the nation
 - Home District retains Project Management, Contracting, and Construction oversight
- **WRRDA Sec 7003 Project Delivery Process Reforms**
 - Directs establishment of 1 or more centers of expertise for the design and review of qualifying projects.



Initial INDC Standup

- **MVD selected MVR to lead INDC; LRD selected LRP to be 2nd location.**
- **INDC Planning Team**
 - **Denny Lundberg** **MVR** **Director**
 - **Andy Harkness** **LRP/RMC** **Deputy Director**
 - **Mark Jones** **LRP**
 - **Steve Stoltz** **LRP**
 - **Jeff Stamper** **MVS**
 - **Fred Joers** **MVR**
- **Produce Draft Engineering Regulation**



INDC MISSION

The mission of the Center is to provide engineering, design, and review services for studies, new locks, new navigation dams, major rehabilitation of inland navigation locks and dams, and select inland navigation lock and dam O&M projects to maintain quality and technical competency.



Goal 1. Develop, Maintain, and Strengthen Technical Competency.

Objectives:

- Lead a coordinated effort to develop, maintain, and strengthen technical competency within the engineering and design community for inland navigation – build an Inland Navigation Engineering Community of Practice.
- Collaborate and coordinate with national and international interests, such as PIANC, in the development of engineering standards and transfer of knowledge for inland navigation projects.
- Support research and update relevant USACE guidance.



Goal 2. Deliver Quality Products and Services.

Objectives:

- Collaborate with inland navigation design customers to ensure delivery of products and services.
- Conduct rigorous, independent and quality reviews in accordance with USACE regulations, policy and guidance.
- Maximize the use of standardized designs.
- Implement risk-informed approaches for design and decision making frameworks.
- Provide dedicated engineering and design (E&D) services to customers and stakeholders through the Center's leadership, subject matter experts (SMEs), standardized processes, etc.
- Provide engineering support to USACE infrastructure strategy, management, and maintenance efforts.



Roles and Responsibilities

- **Lead Inland Navigation Engineering CoP-formally INDT**
- **One door for Inland Navigation Engineering issues**
- **Design and Design Oversight**
 - ▶ **Category 1-New locks, navigation dams, and major rehab**
 - ▶ **Category 2-Review or design of select O&M Projects**
 - ▶ **Category 3-Situational awareness of routine maintenance**
- **Execution**
 - ▶ **Home District has PM and other functional responsibilities.**
 - ▶ **INDC Engineer Lead Responsibilities.**
 - ▶ **National Corps resources will be engaged for surge or if specialties required.**
 - ▶ **ERDC and A/E resources engaged as needed.**



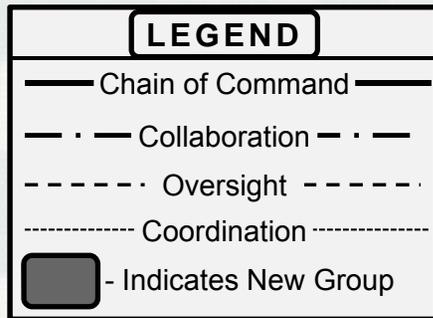
Roles and Responsibilities

- **Inland Navigation Engineering Policy**
- **Knowledge Management**
- **Eng. Support to Infrastructure Management Strategy**
- **Design Guidance**
- **Technical Skill Development**
- **International Support**
- **Research and Development**



Inland Navigation Design Center

Command and Control,
Collaboration, and Coordination



Commander,
LRD

Commander,
MVD

DCG Civil
and
Emergency
Operations,
HQUSACE

Commander,
LRP

Commander,
MVR

SES - EC and
Operations
HQUSACE

Represented
Offices:

- POD
- SPD
- NWD
- SAD
- MVD
- LRD
- SWD
- NAD
- ERDC

INDC

INDOC

USACE Organizations

- IMTS
- ERDC
- PCXIN
- COST MCX
- Welding and Metallurgy TCX
- CoP Leaders
- RMC

External Organizations

- PIANC
- IWUB
- Universities
- Non-Government Organizations



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Upward Reporting/Metrics

- **Monthly report out at the MVR and LRP PRB's.**
- **Publish periodic reports of significant program activities.**
- **Establish customer service and performance metrics to be overseen by INDOC.**
 - ▶ **Value added/benefit to organization.**
 - ▶ **Capturing of Lessons Learned.**
 - ▶ **Quality improvement.**
 - ▶ **Policy updates completed.**
 - ▶ **Schedule compliance.**
 - ▶ **Cost of doing business / services.**
 - ▶ **Contributions to technical competence.**
 - ▶ **Customer satisfaction / customer survey.**



How is INDC Funded?

- **Reimbursable Project Funds**
- **Task specific funded by USACE**
- **USACE Centralized Funding**
 - ▶ **\$850 K requested in FY14, \$450 K received in June**
 - ▶ **FY15 funds request of \$550 K at USACE**



FY13 Program

- **Draft Engineer Regulation**
- **Middle Miss Lock Study-ATR**
- **MVR Miter Gates-ATR**
- **LRP Upper Ohio Navigation Study (Emsworth, Dashshields, and Montgomery)VE Study**
- **LRN Kentucky Lock-ATR**
- **LRP Charleroi Lock-Design**
- **MVR Bulkhead Slots-ATR**
- **MVN Calcasieu Lock-Design**
- **MVR Marseilles Dam-Risk Assessment and Design**
- **LRP Dashields-Lock Design**



FY14 Program

- Engineer Construction Bulletin, ECB 2014-9, Published
- MVS Roller Gate Bulkheads ATR
- MVR Marseilles VE Study, Risk analysis and ATR
- MVR Lock 19 Lift Gate Design/TR
- MVN Empire Lock Gate ATR
- MVR Dresden Island Tainter Gate Design
- MVS Mel Price Cable Replacement ATR
- MVS L/D 25 Dam Safety Modification Report
- LRP Upper Ohio River Prioritization Study ATR
- MVS Lock 27 Guide cell ATR
- MVS Locks 24 & 25 Tainter/Roller Gate and Service Bridge Repair ATR
- Chickamauga VE Study Support



FY14-15 Program

- Two Navigation Dam Risk Cadres for RMC
- RMC - Lock and Dam 25 Risk Assessment
- RMC/LRE - Soo Locks Risk Assessment and Major Rehab Report
- SWT - Webbers Falls L/D Scour Evaluation
- LRC - Great Lakes and Mississippi River Inter-basin (Transfer) Study(GLMRIS)
- Developing Partnering Agreements
 - ▶ ERDC
 - ▶ IWR-RMC
 - ▶ PCX-IN – Signed 9/2014.
 - ▶ IMTS-Asset and Maintenance Management
 - ▶ DSMMCX
 - ▶ Cost MCX
 - ▶ Welding and Metallurgy TCX



Staffing

- **Director collateral duty with MVR EC Chief position.**
- **Deputy Director collateral duty with RMC Eastern Director, eventually will move to LRP.**
- **INDC has established 2 GS-14 Technical Manager (TM) positions in MVD, Fred Joers (MVR) and Jeff Stamper (MVS).**
- **2 GS-14 TM's also proposed for LRD, one LRP and one to be located virtually within another LRD District.**
- **Trigger points need to be identified for when there will be a need for additional permanent staff.**
- **All other staff will be virtual.**



Next steps

- **Finalize Draft Engineer Regulation**
- **Continue providing design and review services**
- **Develop the Community of Practice**
- **Develop Quality Management Plan**
- **Host educational Webinars**
- **Develop Business Plan with 3 year outlook**
- **Finalize MOU's**



Questions?

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