Planning Center of Expertise for Inland Navigation and Risk-Informed Economics Division (PCXIN-RED)

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Topics

- Background
  - PCXIN-RED Area of Concern
  - PCXIN-RED History
- Organizational Structure
- Organizational Chart
- Civil Works Transformation
- Accomplishments – Issues – Next Steps/Challenges
- Current Work Efforts
**Background**

**PCXIN-RED Area of Concern**

**Inland Waterways**
- **5 Corps MSCs** with Inland Navigation projects
- 12,000 miles; 9’ – 14’ draft
- 240 Lock Chambers
- 630 million tons annually; ~50% coal & petroleum
- Includes Great Lakes

**U.S. Inland Waterway System**
Background

PCXIN-RED - History

- Two ORD Navigation Centers in FY 82
  - LRH - System Models/Data & LRP
  - LRL - Capacity/Environmental & LRN

- FY 92 - One Navigation Center in LRH
  - System Funding Plan Started

- FY 99 - LRD Navigation Planning Center
  - Great Lakes and the Ohio River Systems

- August 2003 - Planning Center of Expertise for Inland Navigation (PCXIN) included the Great Lakes (1 of 7 Planning Centers)

- September 2013 – PCXIN and Risk-Informed Economics Division named and realignment
Planning Center of Expertise for Inland Navigation (PCXIN)

1. Technical services → LRH-PX-NC
2. Peer Review → LRH-PX-SR
3. R&D → LRH-PX-NC
4. Training → LRH-PX-NC
5. Model Certification → LRH-PX-SR
6. Policy Development Support → LRH-PX-NC
7. Process Improvement
8. Lessons Learned
9. Outreach → LRH-PX-SR
Institute for Water Resources (IWR)

- Waterborne Commerce Statistics Center
  - 1985 – LRD vessel operators
  - Census – collect & code vessel moves (500K)
  - Vessel inventory

- Research
  - Panama Canal modernization
  - Drought 2012 - low water impacts
  - Lockage fee analysis
  - Development of system simulation model (IPAT/IMTS)
  - Recons Harbor
- Dam & levee safety programs – director in Vicksburg; LRH-PX has one of three MMC branch chiefs (Omaha & Kansas City the other two)

- Consequence Team estimates
  - Physical damages
    - Inundation depth at the structure
    - Apply the appropriate depth-damage curves by structure type
    - Economic Consequences
  - Life loss
    - Was population warned and mobilized?
    - Assign a fatality rate for remaining population based on inundation depth and structure type
Dam Safety Modification Mandatory Center of Expertise (DSMMCX)

- National center supporting all aspects of dam modification projects across USACE

- Economics Lead
  - Advice and guidance on interpretation of national economic policy
  - SME in Dam Safety Consequences and modeling
  - Support drafting of new national policy
  - Develops and advises on consequence assessment, both human safety and economic
  - Performs and coordinates ATR of DSM studies, focusing on Consequences
  - Develops and evaluates methodologies and technical processes for inclusion in Dam Safety Modification analyses
  - Develops and advises on appropriate consequence analyses as needed to apply to unique situations
  - Trains and mentors District and DSPC economists in consequence assessment
Inland Nav Design Center

- INDC – Rock Island and Pittsburgh leads
- MOU Scope
  - Evaluation of efficiency of navigation alternatives
    - Reliability
    - Lockage processing times
    - Screening criteria
  - Engineering reliability & risk analysis
  - Quality management
    - Develop cadre of inland SME’s (engineers and economists)
  - Guidance update
    - SMART planning
    - WRDA 2007 – RMO’s
### PCXIN-RED – Civil Works Transformation

#### Best Practices/Successes
- Succession plan implementation
- Participation with Columbia River Treaty (CRT) Team – Lead for Navigation Impacts to system
- Initiated conversations with U.S. Coast Guard and MARAD
- IMTS/Invest. Program Action Team presentation to IWUB – National Forecasts
- Signed MOU with Inland Navigation Design Center (INDC)
- Planning Associates course owner’s meeting

#### Lessons Learned
- Management strategies to support customer service
- Project information readily available for upward reporting data calls
- MIPR/cross-charge labor policy changes
- Early acquisition planning and contract execution - Lack of IDIQ contract

#### Challenges
- Model certification challenge (NaSS, NIM, SCC)
- Complete IDIQ Contract Award
- Implement action plan for NavEcon Research & Development
- Completion of Succession Plan
- Need for process to maintain updated national forecasts
- Establish Peer to Peer partnerships with Industry and Public Sector

#### Way Ahead
- Continue to socialize NIM, NaSS, SCC
- Participate in IDIQ panel selection to ensure navigation needs are met
- Monthly Navigation Action Report (NAR) (workload to workforce, data calls, and scheduling)
- Hire GS-13 Economist and Statistics and Review Section Chief
- Develop SOW and Estimate for routine IMTS national forecast updates
- Conference attendance limitations
Accomplishments – Next Steps – Issues/Challenges

**Accomplishments**
- Began as regional center in 1981; designated National Center in 2003
- Primary mission is Navigation Economics (Models, Projections, Data)
- Asset Management (NPP, IPAT, TRE (SCC), LRD Watershed Group)
- Hiring/Personnel Actions (Chief, Management Analyst, Operations Research Analyst, 2 Pathways Students, conversion of DA Intern to Economist/GS-11, conversion of student to DA Intern)
- Initiated Columbia River Treaty (CRT) Team
- Initiated conversations with U.S. Coast Guard and MARAD
- Green & Barren CWB
- Upper Ohio IEPR for CWB
- ATRs - 2, MMC - 11, review plan endorsements (RP) - 2
- Roll-out of outreach site/website
- Signed MOU with Inland Navigation Design Center (INDC)

**Next Steps**
- Succession planning – building the bench (S&R to Assistant Chief, Hire S&R, Programmer, Project Management Specialist, GS-13 Economist)
- Progression on Navigation Investment Model (NIM) – network analyzer
- Nashville reconnaissance
- Industrial Harbor Navigation Channel (IHNC) Study
- Maritime Administration (MARAD)/USDOT
- U.S. Coast Guard/HLS

**Issues / Challenges**
- Management strategies to support customer service (Navigation Action Report)
- IDIQ Contract
- MIPR/cross-charge labor
- Model certification challenge (NaSS, NIM, SCC)
- Standard Line of Accounting (SLOA)
- National forecast resourcing
- Improve virtual team communications
Current Work Efforts

* Lock and Dam 25 – NAS
* Brandon Road – GLIMRS/NAS
* Inner Harbor Navigation Canal
* Missouri River
* Columbia River Treaty
* Upper Ohio
* Chickamauga
* Lockage Fee
* Potential work from Coast Guard
* Potential work from MARAD
* IPAT Modeling
* Soo Locks
* Waterside Facility
* Ohio River Dam Study
* New Savannah Bluff L/D ATR
* Planning Guidance Update Team
* Contract – lock closure impact on electricity
* Marmet Major Rehabilitation Report
* NavBook and Closure Reports
* NESP

* Outreach Website
* Industry Profiles
* LPMS Lead
* Navigation Project Profiles
* Ohio River System Forecast
* WARP Contract
* A/E Contract
* Bayou Sorrell/Calcasieu
* State Profiles
* Lock Profiles
* Rate Extrapolation
* Contract – NaSS
* MMC Projects
* BCR Updates
* Cleveland Harbor DMMP IEPR
* Planning Associates Course
* Navigation Environmental Sustainability Program (NESP)
* Greenup