

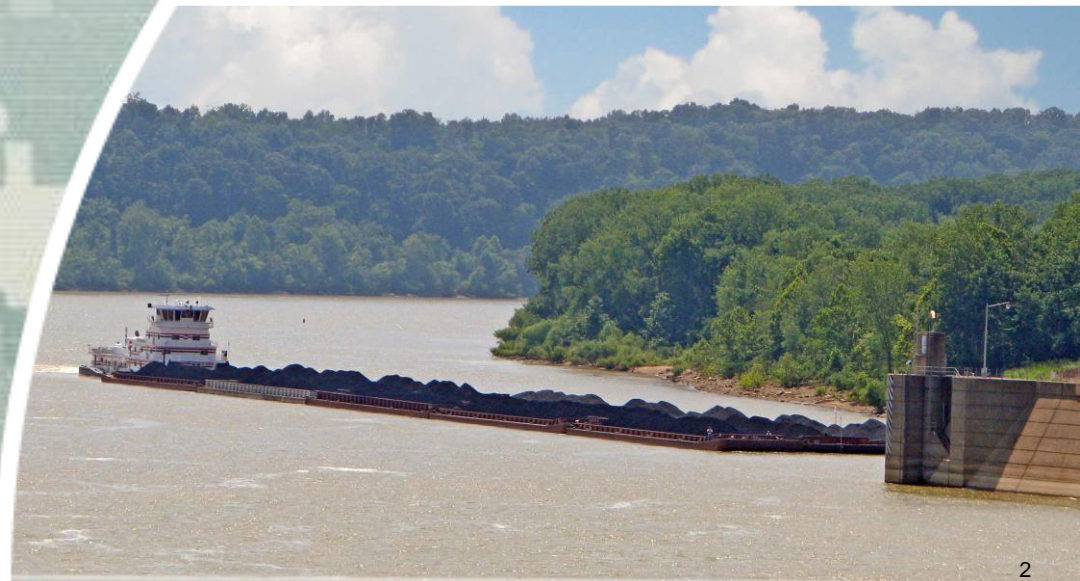
Planning Center of Expertise for Inland Navigation and Risk-Informed Economics Division (PCXIN-RED)

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Topics

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 - PCXIN-RED History
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- Civil Works Transformation
- Accomplishments – Issues –
Next Steps/Challenges
- Current Work Efforts



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US Army Corps of Engineers
BUILDING STRONG®

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

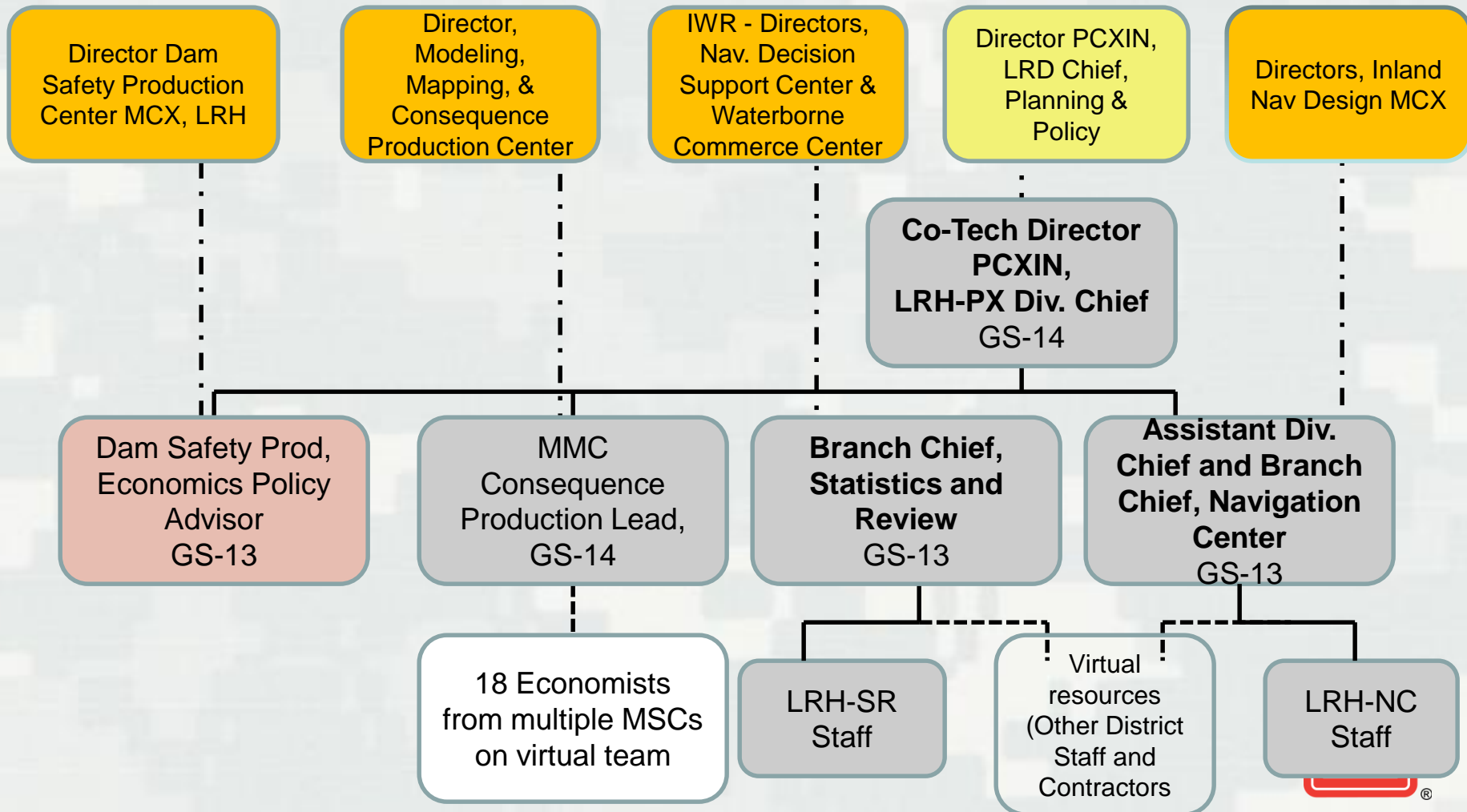
PCXIN-RED - History

- 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



Organizational Structure

PCXIN & Risk-Informed Economics Division



Director PCXIN,
LRD Chief, Planning
& Policy

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



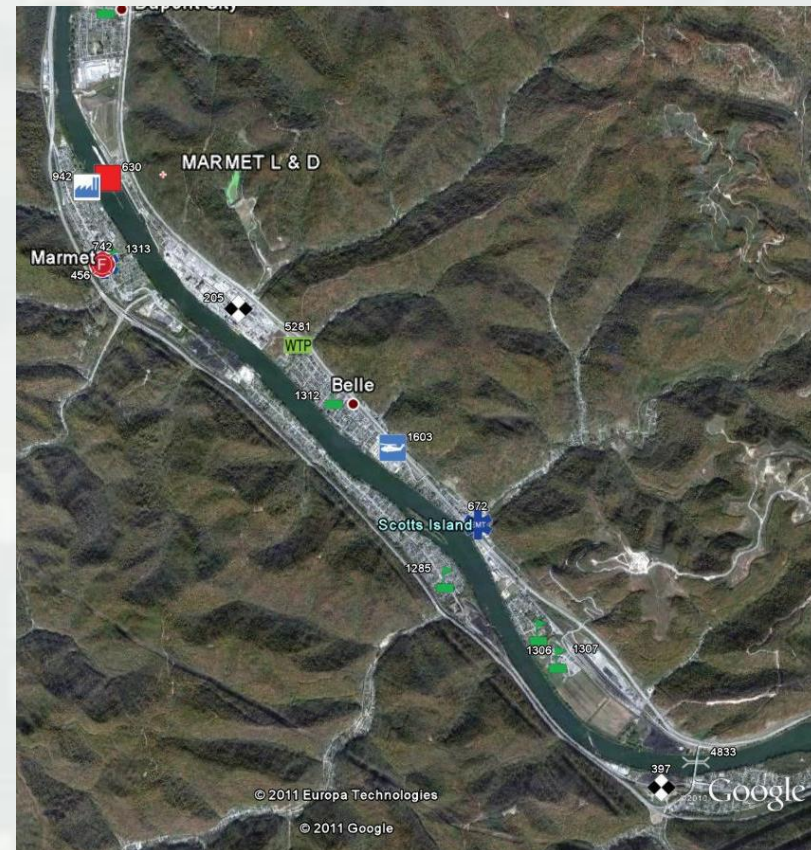
Institute for Water Resources (IWR)

- 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



Modeling Mapping & Consequence Center (MMC)

- 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

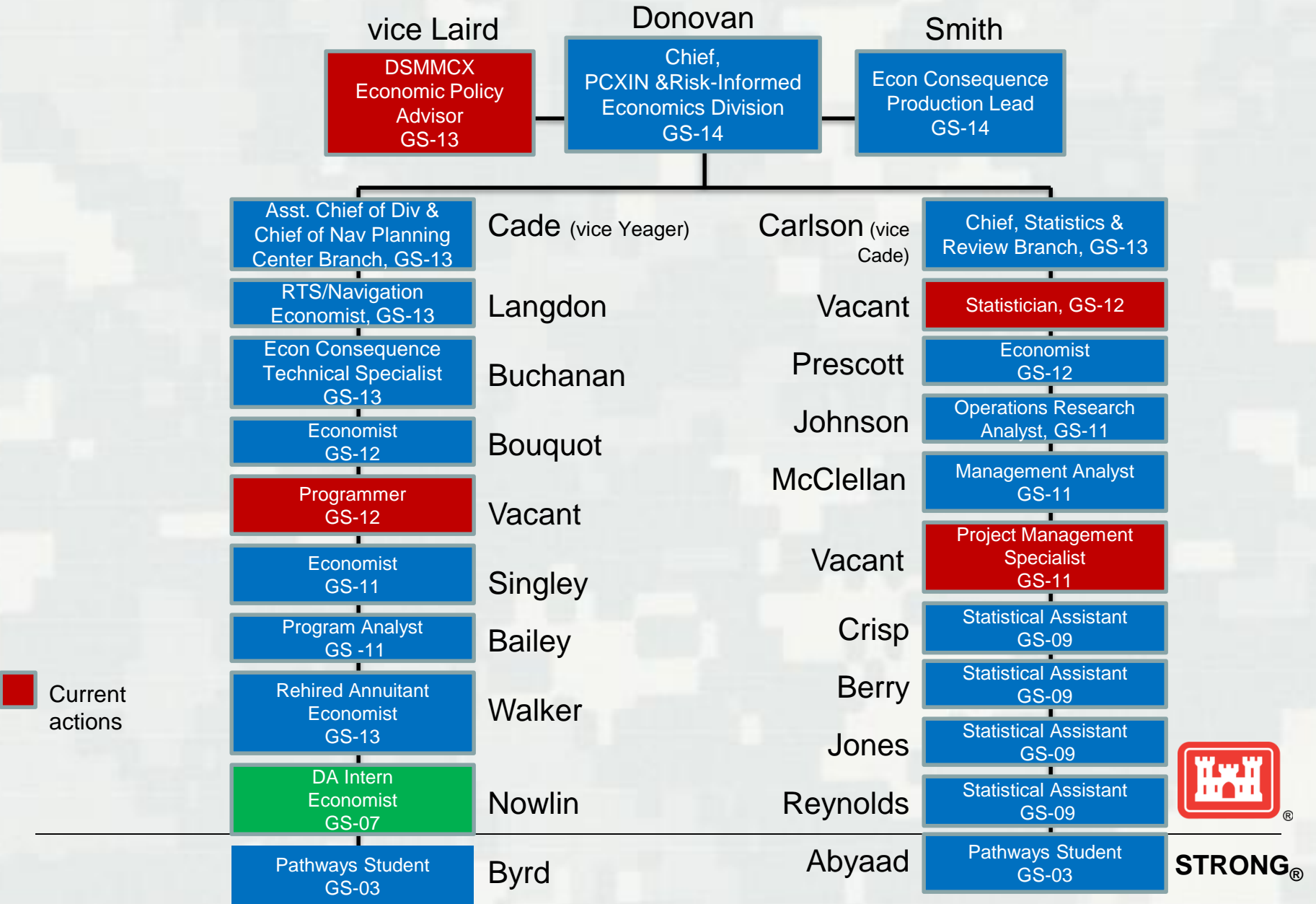


Inland Nav Design Center

- 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



Planning Center of Expertise for Inland Navigation and Risk-Informed Economics Division FY 15



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
- * IMTS/IPAT
- * 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

