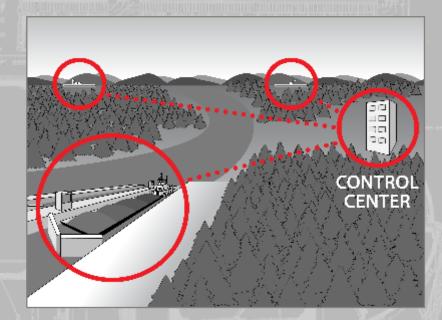
REMOTE LOCK OPERATIONS ASSESSMENT UPDATE

INLAND WATERWAYS USERS BOARD MEETING NO. 99

David Frantz Inland Navigation Program Manager U.S. Army Corps of Engineers HQUSACE 13 April 2023

World-Class Delivery... Real-World Impact!









BUSINESS CASE: BOTTOM LINE UP FRONT









Yesterday

Today

Tomorrow

Benefits

- Modernize USACE locks
- Increase resiliency
- Continuity of operations
- Common components
- Workplace safety
- Reduce operating costs

Challenges

- Organizational implementation
- USACE staff & stakeholder acceptance
- Recreational lockages
- Cost (initial and recurring)
- Portfolio diversity
- Dam gate operations
- Cyber & physical security
- Internet connectivity

Opportunities

- System based operations
- Traffic coordination
- Align with AIS initiatives

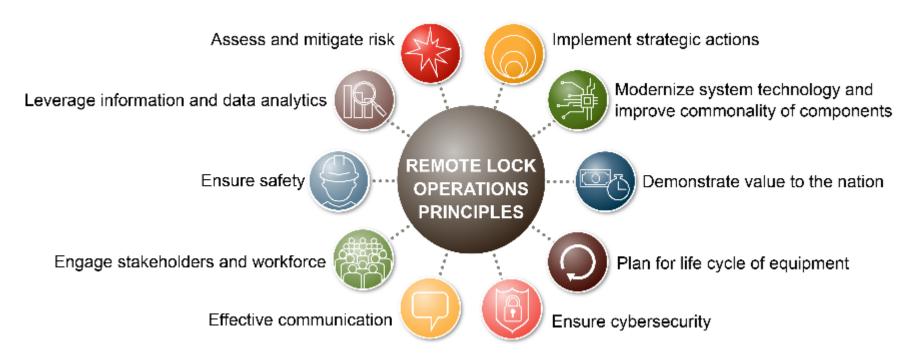
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PRINCIPLES FOR REMOTE LOCK OPERATIONS



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USACE commitment:

- Safety is essential!
- Reliable & consistent commercial locking operations
- Maintain public access & assistance during recreational locking
- Protect system ensure physical & cybersecurity
- Committed to Corps workforce orderly & deliberate transition while providing additional opportunities



PERSONNEL MANAGEMENT KEY TENETS

Command commitment: FOCUS ON PEOPLE

- No reduction in force (RIF)
- Cooperation & involvement of all employees
- Future staffing study will inform the planning and execution of any workforce transition strategy
 - Achieve efficiencies without involuntary separations or involuntary geographic moves
 - Follow previous successful workforce shaping efforts and tools
 - Voluntary workforce shaping tools are effective but need time to work; the longer the time, the better the results
- Close collaboration with unions



Lock operations today

February 2023

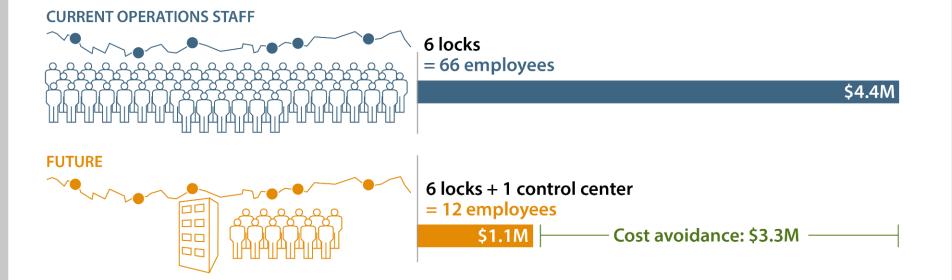


WORKFORCE CHANGES AND COST AVOIDANCE



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- Addresses potential future labor shortages
- Reduces operating expenses to allow for increased maintenance
- Highest return on investment is at IMTS Level of Service 1 (LOS1) sites



Current maintenance staffing unchanged.

April 2023



SCHEDULE GOING FORWARD

Phase 1: National Assessment

The national assessment developed the feasibility, requirements, cost, benefits, risks, and business justification for establishing a national program.

Phase 2: Regional Analysis

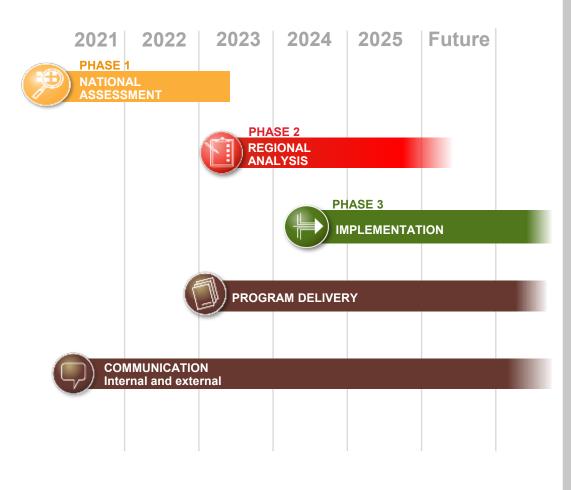
Each site considered for remote lock operation will prepare a detailed, site-specific report with business justification and implementation decision.

Phase 3: Implementation

- Project construction and operation transition
- Site-specific adaptation

Program Delivery

- Establish National Program Management Team (PMT) to guide consistent implementation.
- Develop national standards, policies, and guidance.



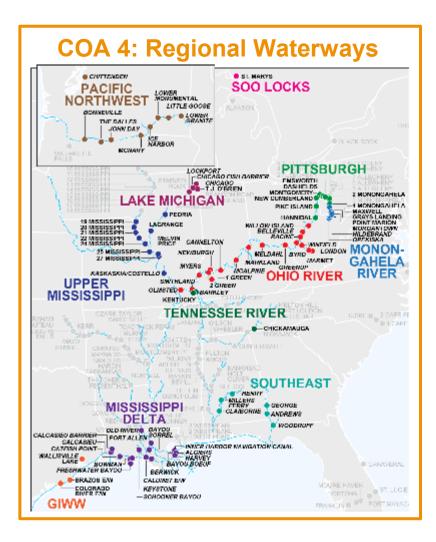




PHASE 1: POTENTIAL IMPLEMENTATION SCENARIOS



- Developed operational and technical framework, costs, and risks for remote lock operation.
- Applied framework and analyzed entire portfolio (192 lock sites).
- Established alternatives and combined alternatives into courses of action (COAs).
- Courses of action range from the status quo (COA1) to the entire portfolio (COA6).
- Courses of action consider authorized construction projects.
- Prepared programmatic cost estimate, potential funding scenarios, and return on investment analysis for each course of action.





PHASE 2: REGIONAL ANALYSIS



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Regional Implementation Reports

- Team developing reports from district, MSC, and national PDT
- Regional, detailed business case
- Solutions for specific operational challenges
- Revised staffing models
- Necessary infrastructure upgrades and site-adapting design standards
- Synergies with other business lines
- Cost estimates
- Implementation schedule with budget requests
- Coordinate with Stakeholders and Navigation Industry
- Include recommendations to implement remote lock operations



April 2023



SUMMARY



- Remote locking will modernize operations and improve resiliency and continuity of operations. Additionally, remote locking will reduce operating costs.
- Any transition to remote lock operations will be based on a sound business case and be a deliberate and thoughtful process with lessons learned incorporated into future projects.
- USACE is committed to ensuring safe, reliable & consistent locking.
- Cyber risks can be addressed. USACE has been implementing remote operations in hydropower with no incidents.
- USACE will continue to communicate with stakeholders.
- Proven technology exists. Other nations are already remotely locking on their waterways.



THANK YOU



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