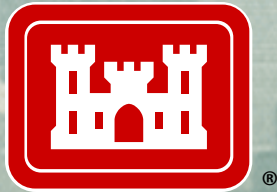


A DUAL CASE STUDY OF TWO APPROVED INLAND DREDGING REQUESTS PURSUANT TO SECTION 408:

A Comparative Processing and Procedural Analysis of Review Level, Requirements and Lessons Learned.

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SECTION 408

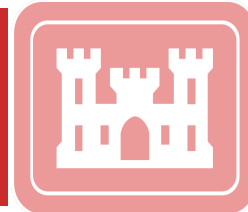


AUTHORITY

Section 14 of the Rivers and Harbors Act of 1899 and codified in 33 USC 408, commonly referred to as “Section 408”, authorizes the Secretary of the Army on recommendation of the Chief of Engineers, USACE,

to grant permission for the alteration, occupation or use of a USACE civil works project if determined that the activity will not be injurious to the public interest and will not impair the usefulness of the project.

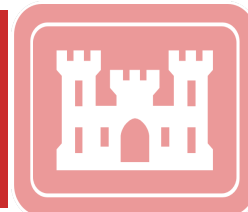
SECTION 408



NON-FEDERAL INTERESTS

- Since 1824 dredging has played significant role in achieving the USACE mission
- Crux of the Section 408 program centers on dredging as the primary alteration sought
- Non-federal dredging plays pivotal role in improving our nation's water systems
- Primary factor in our nation's competitive rank in the global economy

SECTION 408



POLICY/PROCEDURAL GUIDANCE

- USACE issued Engineer Circular 1165-2-216 (EC) in July 2014 establishing policy and procedural guidance for processing of non-federal Section 408 requests
- Establishes level of policy review and decision required to grant permission for proposed alterations
- Contains procedural guidance to address real property interests, environmental compliance, alterations for dams and reservoirs, non-federal hydropower development, navigation, flood risk management, hydrology and hydraulics, and post approval oversight

SECTION 408



POLICY/PROCEDURAL GUIDANCE

- Improves consistency and transparency in the way USACE considers, processes and documents decisions
- EC contains policy applicable to all types of Civil Works projects and an overall step-by-step procedural guide to be tailored by the District for the appropriate level of review
- Applicable for all Civil Works projects and includes any alteration/action that builds upon, alters, improves, moves, occupies or otherwise could affect a USACE project
- EC contains 9 step-by-step procedural processes

SECTION 408



STEP-BY-STEP PROCEDURES



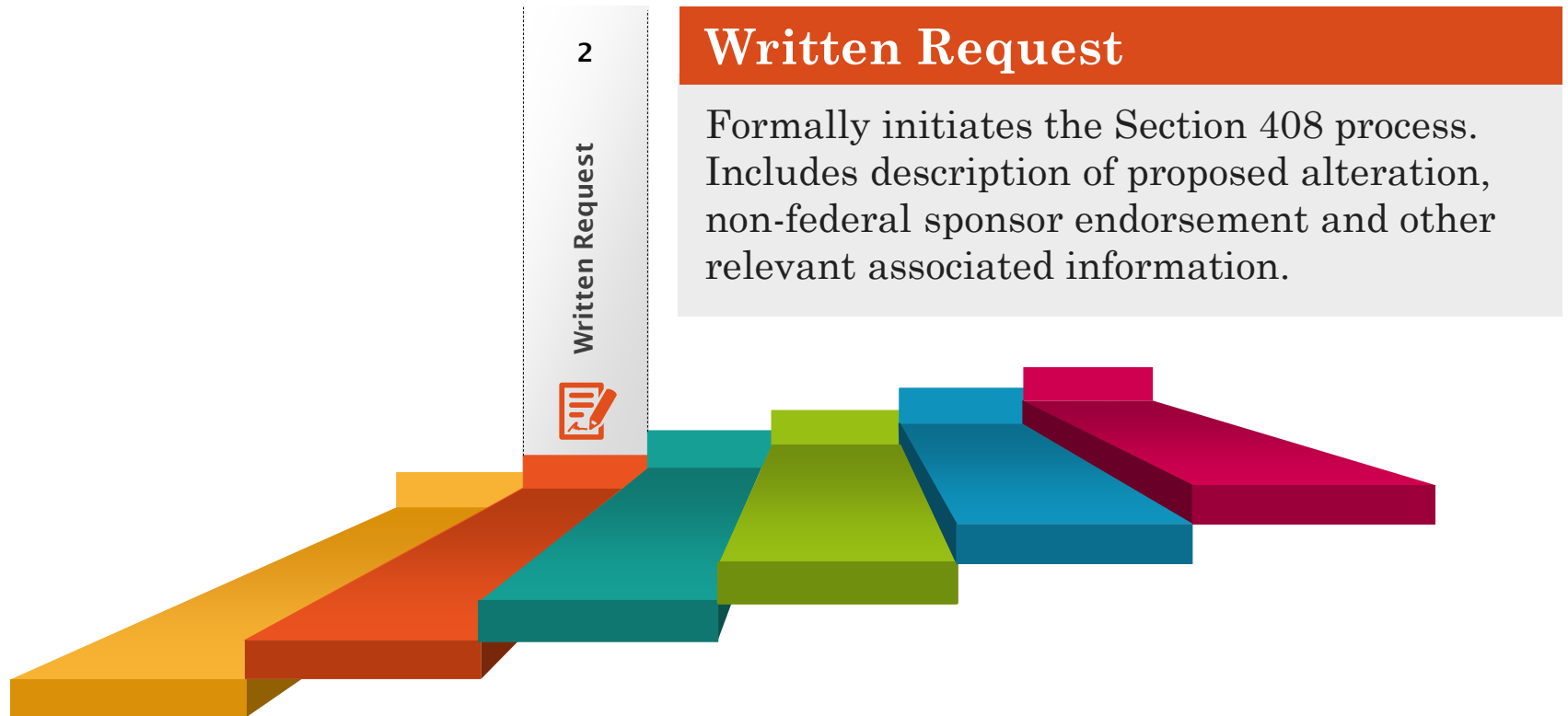
SECTION 408



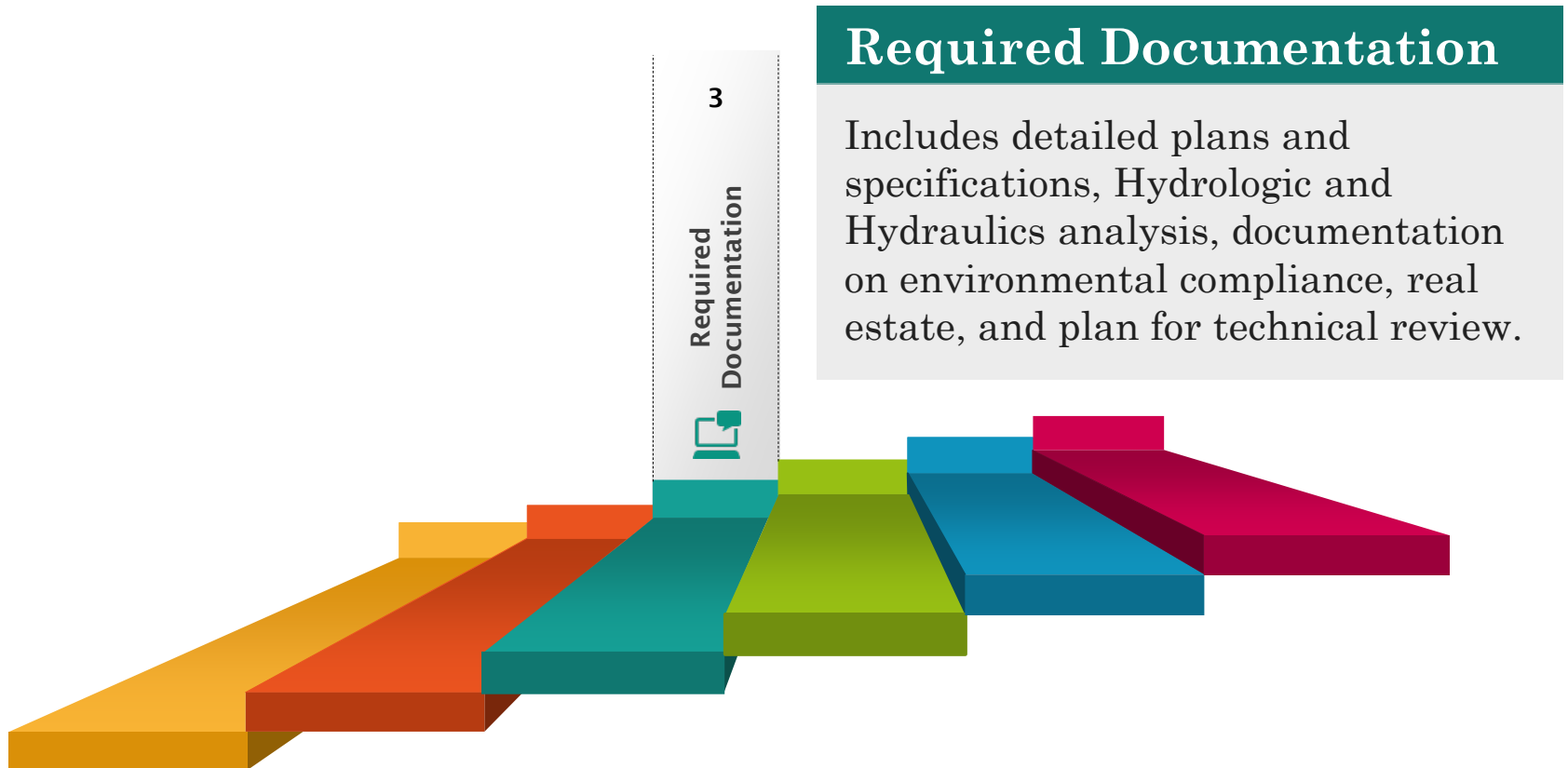
STEP-BY-STEP PROCEDURES



STEP-BY-STEP PROCEDURES



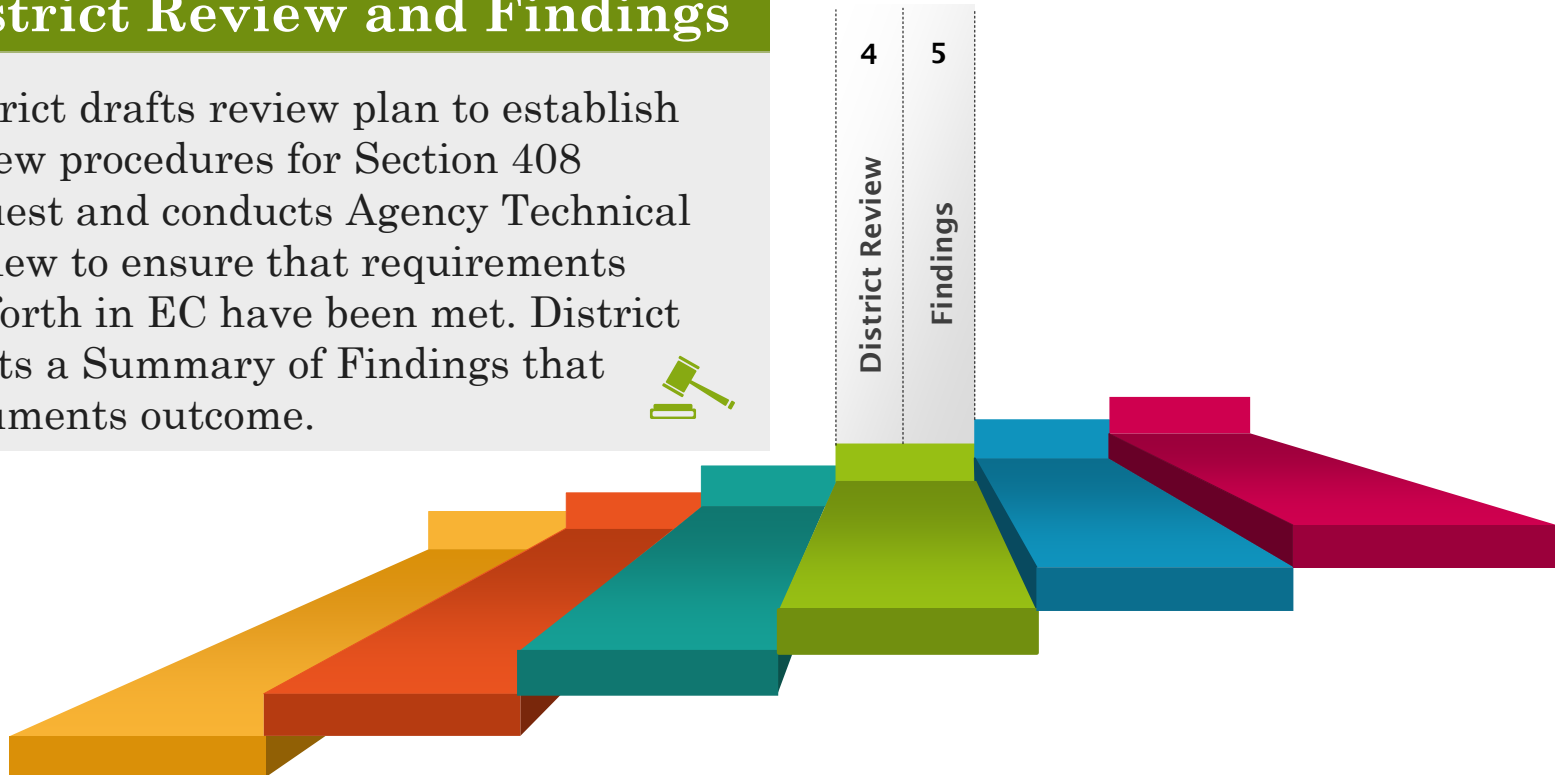
STEP-BY-STEP PROCEDURES



STEP-BY-STEP PROCEDURES

District Review and Findings

District drafts review plan to establish review procedures for Section 408 request and conducts Agency Technical Review to ensure that requirements set forth in EC have been met. District drafts a Summary of Findings that documents outcome.



STEP-BY-STEP PROCEDURES

Division/HQUSACE Reviews

Division and HQUSACE conduct policy compliance and legal sufficiency reviews, confirms quality and completeness, and identifies conflicts. HQUSACE review required if one of the following questions is affirmed:

- **Independent External Peer Review?**
- **EIS?**
- **Change how authorized purpose is met?**
- **Impact study alternatives?**
- **Flood Control Act credit?**
- **Hydropower?**
- **Assuming OM responsibilities?**



6

Division Review

7

HQ USACE Review

STEP-BY-STEP PROCEDURES

Notification and Oversight

District Commander notifies non-federal interests of decision. If approved, final plans and specifications are back-checked and any updates to organizational processes are conducted, including monitoring.



8

Notification

9

Oversight



POLICY OUTCOMES

- Dissemination of clear Section 408 policy is USACE priority
- Clear polices effectively translate proposals into sound decisions
- Informs future policy, ensuring decision-making is centered on careful evaluation of information using transparent methodologies
- Relevant and timely Section 408 guidance is pivotal priority and provides ongoing clarity for a dynamic program
- Revisions to Section 408 procedural guidance continue to streamline EC requirements through each successive iteration

SECTION 408



CASE STUDIES



PURPOSE

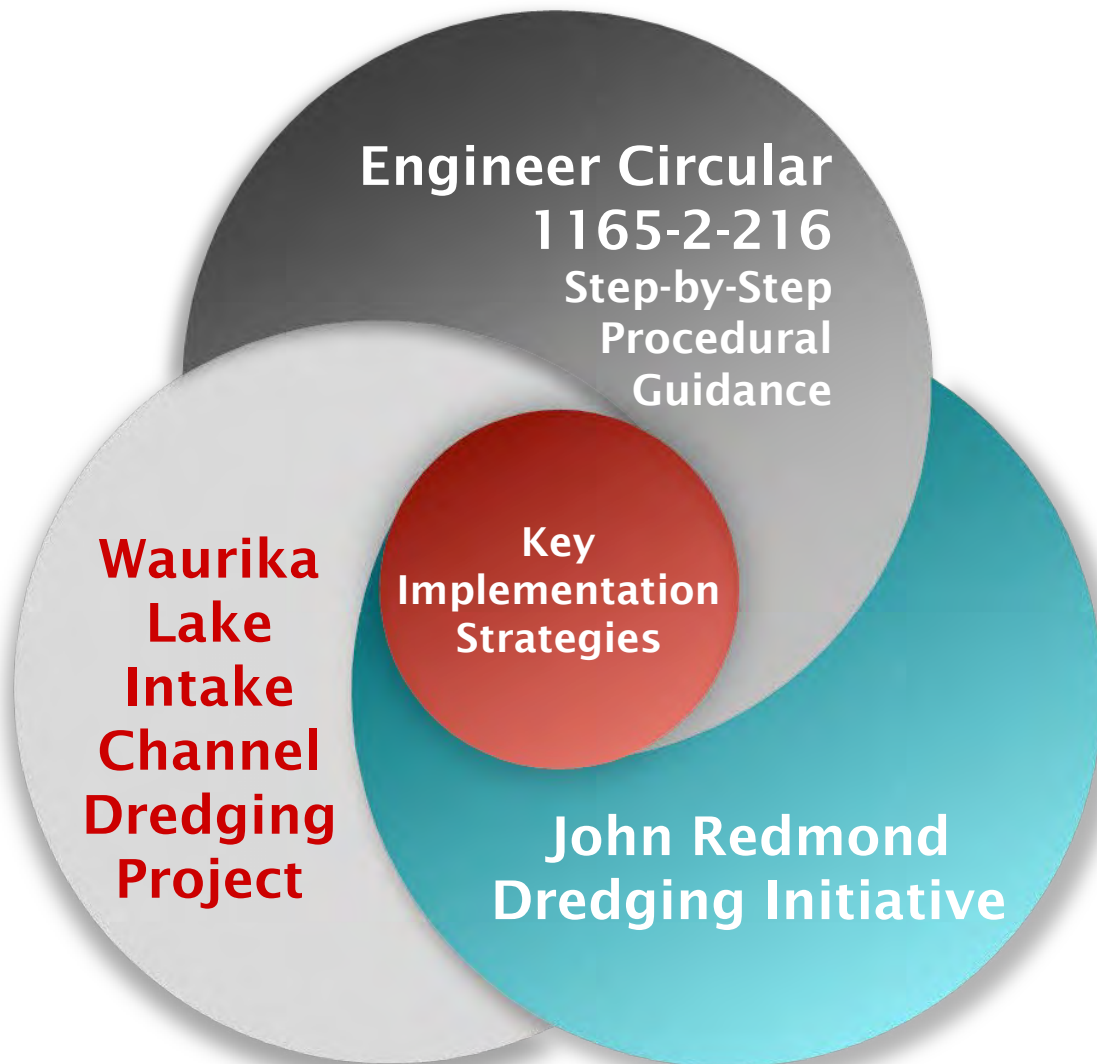
This comparative case study assessment evaluates and analyzes two contrasting dredging projects, that were reviewed, approved and granted permissions under Section 408, in order to synthesize strategies for Section 408 implementation through review, analysis, and

dissection of requirements embedded in the existing Section 408 policy as outlined in the EC. This comparative case study analysis and dissection of the EC will provide non-federal interests with clear strategies for improved implementation of Section 408 guidelines.

CASE STUDIES



METHODOLOGY



- A dual case study assessment was used to review, dissect, and provide a streamlined evaluation of EC requirements through synthesis of Section 408 implementation strategies
- **Case Selection:** **John Redmond Dredging Initiative** (first/largest non-federal inland Section 408 request). **Waurika Lake Intake Channel Dredging Project** (streamlined/efficient approval strategy)
- **Case Presentation, Analysis and Dissection of EC:** Modify classical policy process, uses implementation and evaluation phases
- **Implementation Strategies:** Synthesized through comparative analysis using standard qualitative triangulation with EC guidance; case outcomes analyzed through dissection and evaluation of step-by-step procedures

CASES

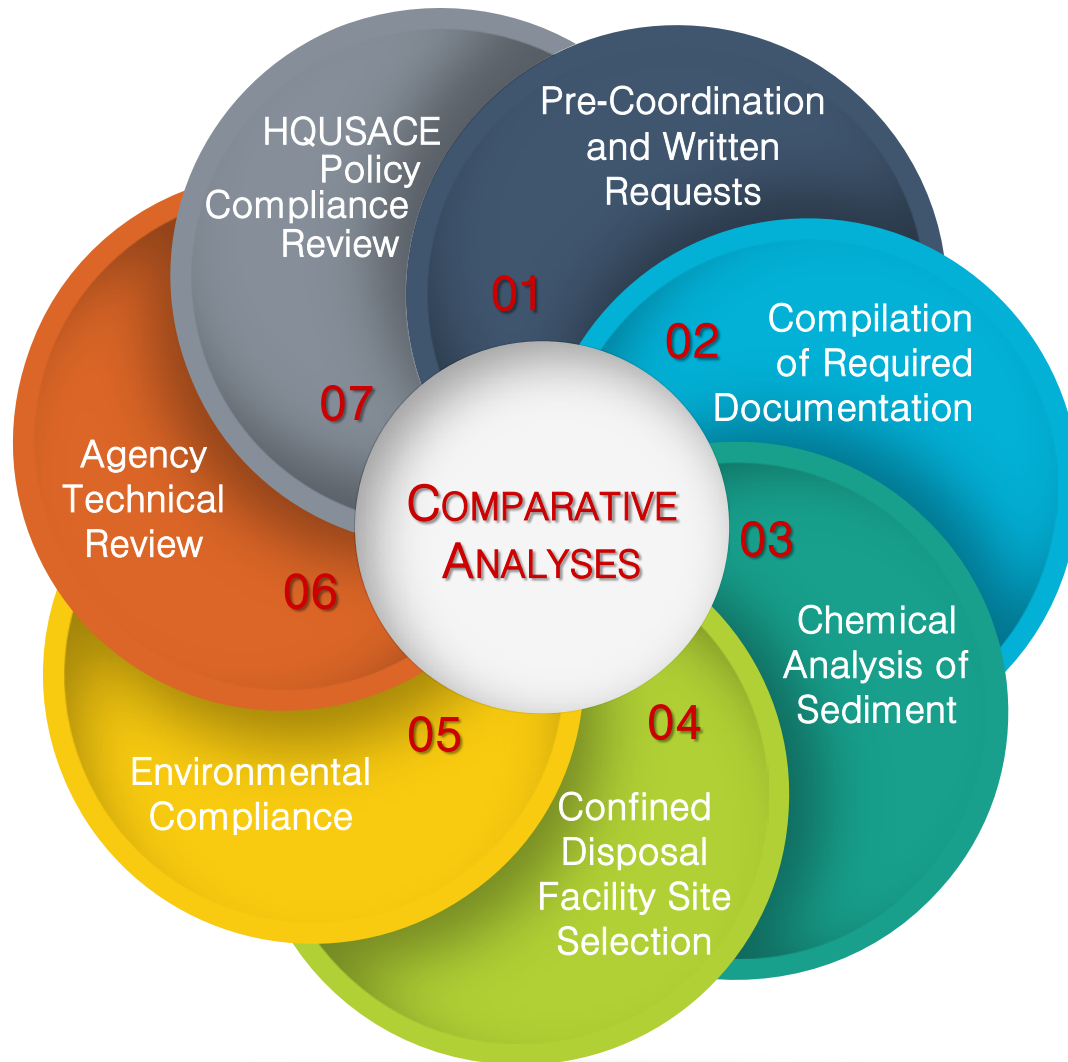
John Redmond Dredging Initiative

- Constructed in 1964 with 50 year design life and surface area of 9,800 acres with water storage capacity of 82,200 Acre Feet (AF)
- Surface area reduced from 8,800 acres with storage capacity of 50,200 AF, and a sedimentation rate per year 80 percent more than estimated
- Section 408 authorization requested for 30 year dredging program with unknown future disposal sites
- 3 phases: Removal of 1) 600,000cys, 2) 2.4million cys, 3) maintain 55,000 AF of storage to ensure availability of 55,000 AF of water supply storage

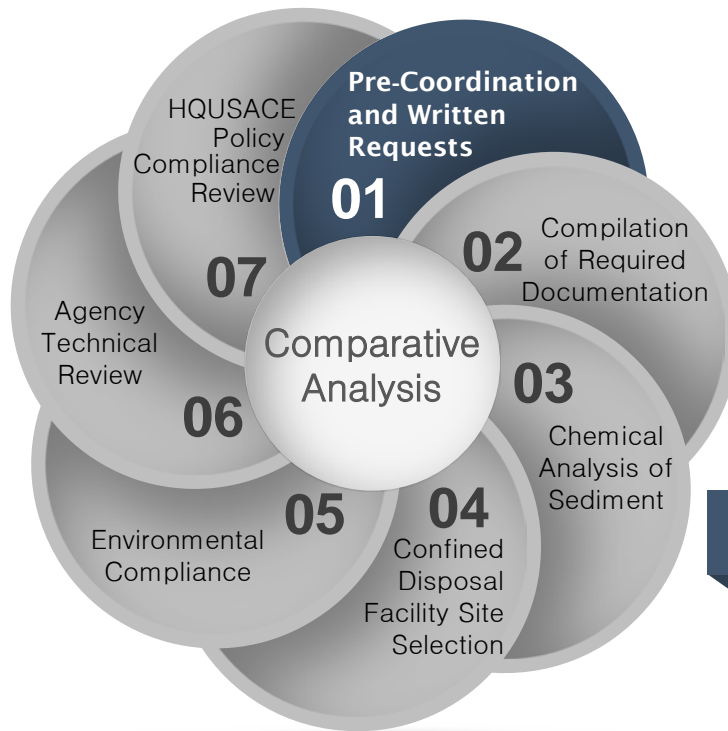
Waurika Lake Channel Dredging Project

- Constructed in 1977 with surface area of 10,100 acres and impacted significantly by sedimentation within intake channel
- Prolonged drought conditions in 2012 degraded dependable yield, availability and water quality
- In 2015, intake structure sediment occurred from elevation 905 to 923ft–NGVD, resulting in 18ft of sediment accumulation reducing water supply quality and quantity for several cities
- Dredging, gate replacement, floating pipeline extension to restore water quality and quantity

COMPARATIVE ANALYSES



PRE-COORDINATION



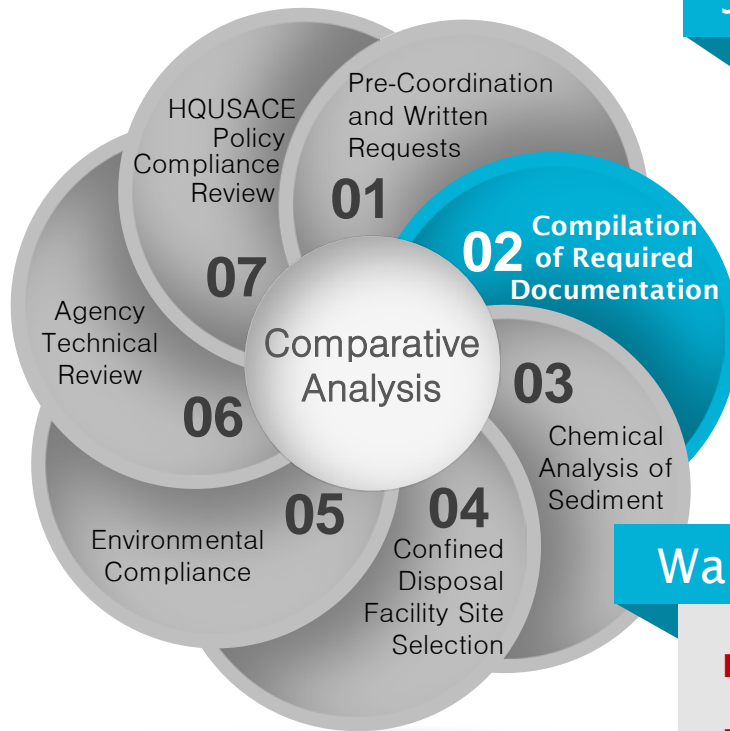
John Redmond Dredging Initiative

- Initial Coordination 1.5 year prior to written request
- Weekly In Progress Reviews to align project delivery team and integrate Vertical Team (Division/HQUSACE)

Waurika Dredging Project

- Initial Coordination 1 year prior to written request
- In Progress Reviews Bi-weekly, monthly and/or as needed
- No Vertical Team integration

REQUIRED DOCUMENTATION



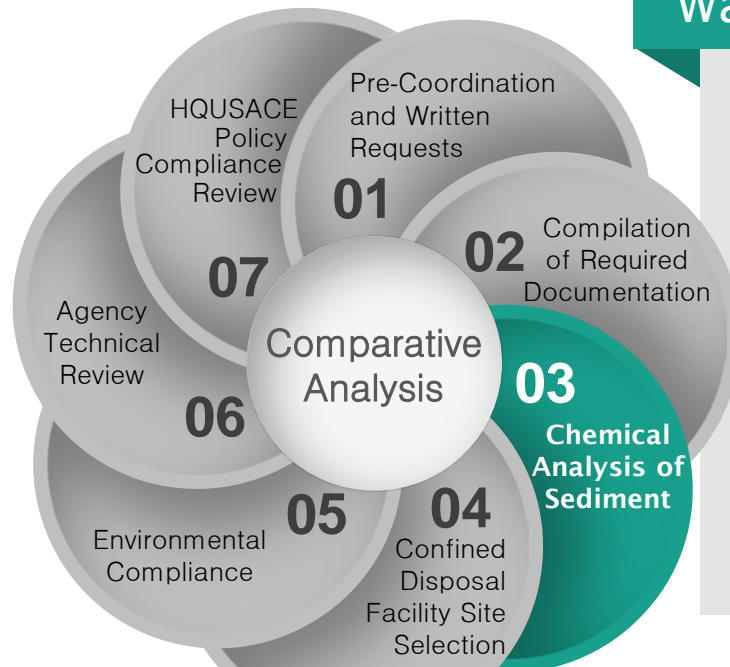
John Redmond Dredging Initiative

- Comprehensive documentation compilation
- Rigorous chemical analysis of sediments
- Development of novel environmental compliance strategy due to complexity of CDF site selection

Waurika Dredging Project

- Routine documentation compilation
- Sample gradation and chemical sampling routine incorporating USACE best practices
- Environmental compliance strategy minimal

ANALYSIS OF SEDIMENT



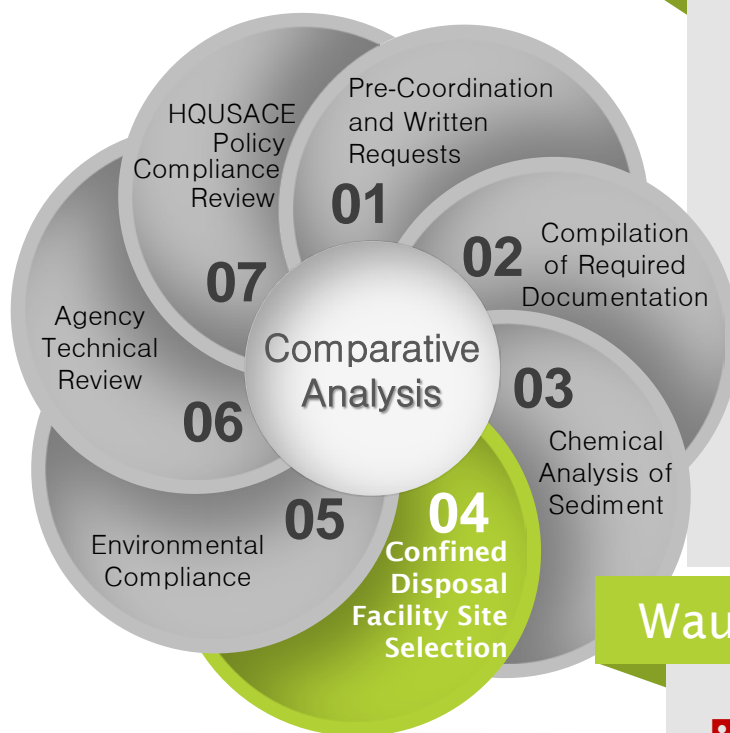
Waurika Dredging Project

- Extensive collaboration with USACE technical services (U.S. Army Engineer Research and Development Center)
- Incorporation of USACE sampling and testing protocols (EM 1110-2-5025)
- Agency review determined that sampling protocols were commensurate with scale which resulted in decreased review time

John Redmond Dredging Initiative

- Additional iterations of sampling and testing due to scale of effort
- USACE Environmental Munitions Center of Expertise technical review
- Schedule for approval significantly impacted by additional analysis

DISPOSAL FACILITIES



John Redmond Dredging Initiative

- Confined disposal facilities for first phase all located on federal property
- Increased federal oversight and review as an alteration under Section 408
- Extensive real estate review, analysis and execution of real estate transaction documents
- Integration of vertical team oversight, including Division and HQUSACE
- Increased scope, schedule and cost

Waurika Dredging Project

- Utilized Automated Dredge Disposal Alternatives Modeling System (ADDAMS) to streamline disposal facility management
- Confined disposal facilities located on non-federal upland property resulting in minimal federal review of associated lands

ENVIRONMENTAL COMPLIANCE

John Redmond Dredging Initiative



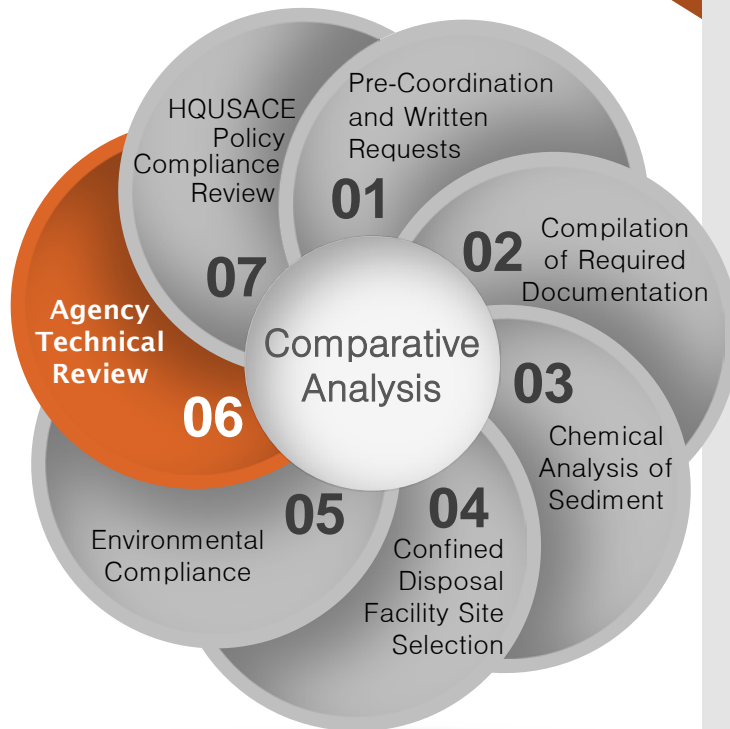
- Programmatic Environmental Impact Statement (PEIS) (24 month process)
- Long-term (through 2045), on-going action with future unknown non-federal dredge disposal sites
- Environmental documentation for future disposal sites tiered from PEIS once identified
- Novel approach for inland projects and first Record of Decision for a PEIS associated with Section 408 authorization

Waurika Dredging Project

- Environmental Assessment (60 days); environmental impacts deemed minor and temporary as scope of analysis and project duration were minimal
- Environmental measures for potential issues accommodated during planning and design; sediment, water and elutriate sampling indicated no contamination

AGENCY TECHNICAL REVIEWS

John Redmond Dredging Initiative

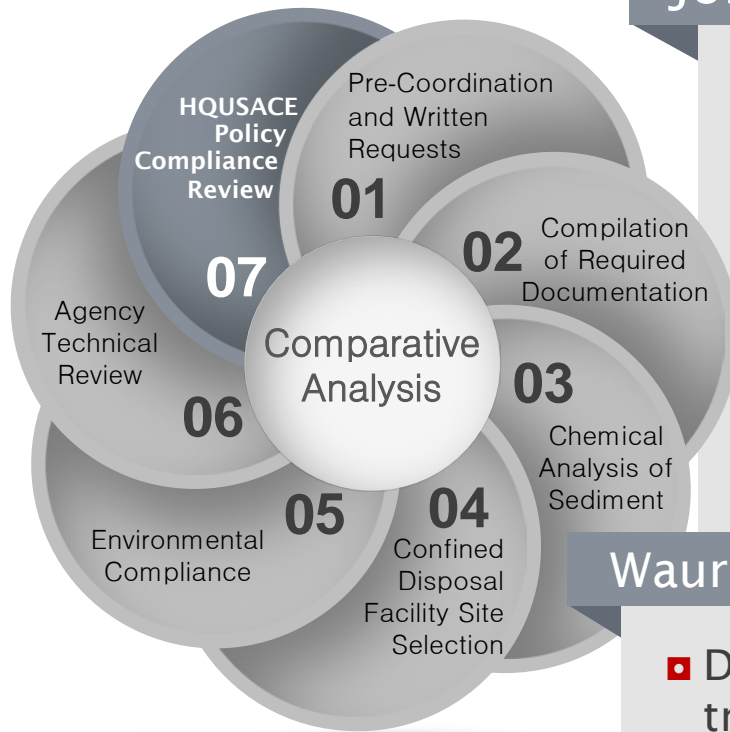


- In Progress Reviews (IPRs) revealed unknowns due to programmatic nature of project, triggering higher level HQUSACE review
- IPRs instrumental in minimization and avoidance of design options that would require Safety Assurance Reviews (i.e., avoiding impacts to dam spillway and tainter gates)
- District prepared Review Plan and carried out agency technical review prior to HQUSACE submittal for policy compliance review and approval

Waurika Dredging Project

- Minimal comments during ATR due to frequency of IPRs and level of pre-coordination with USACE

POLICY COMPLIANCE REVIEW



John Redmond Dredging Initiative

- Met criteria triggering higher level policy compliance Review by HQUSACE due to programmatic nature of project including requirement for completion of a Programmatic Environmental Impact Statement
- Additional review time of 9 months
- Total project schedule: 32 Months

Waurika Dredging Project

- Did not meet criteria triggering HQUSACE review
- District level technical review (90 days)
- Total Project Schedule: 18 Months

IMPLEMENTATION STRATEGIES



Key Implementation Strategies

Implement In Progress Reviews to prevent deficiencies in requirements and give the vertical team an opportunity to guide non-federal interests in completion of a project that fully meets Section 408 requirements.

Consider avoidance and minimization practices when addressing the step-by-step EC procedural requirements.

Engage USACE Centers of Expertise for assistance with complex issues that arise during planning and packaging of Section 408 alteration requests.

Coordinate the environmental compliance process with local, state and federal entities as early as practicable.

Integrate level, type and scale of USACE review requirements, as outlined in the EC, into overall project schedules.

Engineer Circular
1165-2-216
Step-by-Step
Procedural
Guidance

Waurika
Lake Intake
Channel
Dredging
Project

Key
Implementation
Strategies

John Redmond
Dredging Initiative

QUESTIONS?

Grateful acknowledgments are extended to the Kansas Water Office, Waurika Lake Master Conservancy District, Keithline Engineering Group, PLLC and Great Lakes Dredge and Dock, LLC for their extensive coordination and collaboration with USACE in developing and organizing project specific information leveraged for the presented case studies.

Citations for this presentation located in associated manuscript, WODCON XXI Proceedings:

Taylor, B.K. (2016). A Dual Case Study of Two Approved Inland Dredging Requests Pursuant to Section 408: A Comparative Processing and Procedural Analysis of Review Level, Requirements, and Lessons Learned. In *Proceedings, Twenty-First World Dredging Congress (WODCON XXI)*, 13-17 June, Miami, Florida.

