

# Challenges of Planning and Integrating Data Reporting, Verification, and Storage, for a Large Scale Sediment Remediation Program

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## Workshop Overview



### Standardizing Data Reporting, Review and Storage: Examples from the Front Lines

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## Presentation Overview



- Background on Great Lakes Legacy Act (GLLA)
- Challenges in managing data and meeting quality system goals under the GLLA
- Data Management procedures under the GLLA
- Lessons learned
- Recommendations

*The data management challenges that GLNPO is facing are similar to those that the Agency will face in the event of a national emergency.*

## Great Lakes Legacy Act of 2002



...a new “tool” in  
the Great Lakes  
sediment  
remediation toolbox

## History



- "Great Lakes and Lake Champlain Act of 2002" passed by Congress on November 12, 2002
- Signed into law by President Bush on November 27, 2002 (Public Law No: 107-303)
- Authorizes \$50M per year from FY2004 through FY2008 for contaminated sediment projects in the Great Lakes

## Appropriations to date



- FY2004 \$9.9 Million
- FY2005 \$22.3 Million
- FY2006 \$29.3 Million
- FY2007 \$30 Million
- FY2008 \$34.5 Million

## Areas of Concern



- Currently 42 Areas of Concern (AOCs) throughout the Great Lakes
- Contaminated sediments can be found in many of these AOCs, resulting in various beneficial use impairments
- Since 1997, approximately 3.3 million cubic yards of contaminated sediments have been remediated in the Great Lakes AOCs

## Cost-sharing



- Non-Federal cost share must be at least 35% of total project costs and 100% of operations and maintenance costs, and:
  - May include in-kind services,
  - May include monies and in-kind services under an administrative order on consent or judicial consent decree,
  - May NOT include any funds pursuant to a unilateral administrative order or court order.

## GLLA Project Agreement

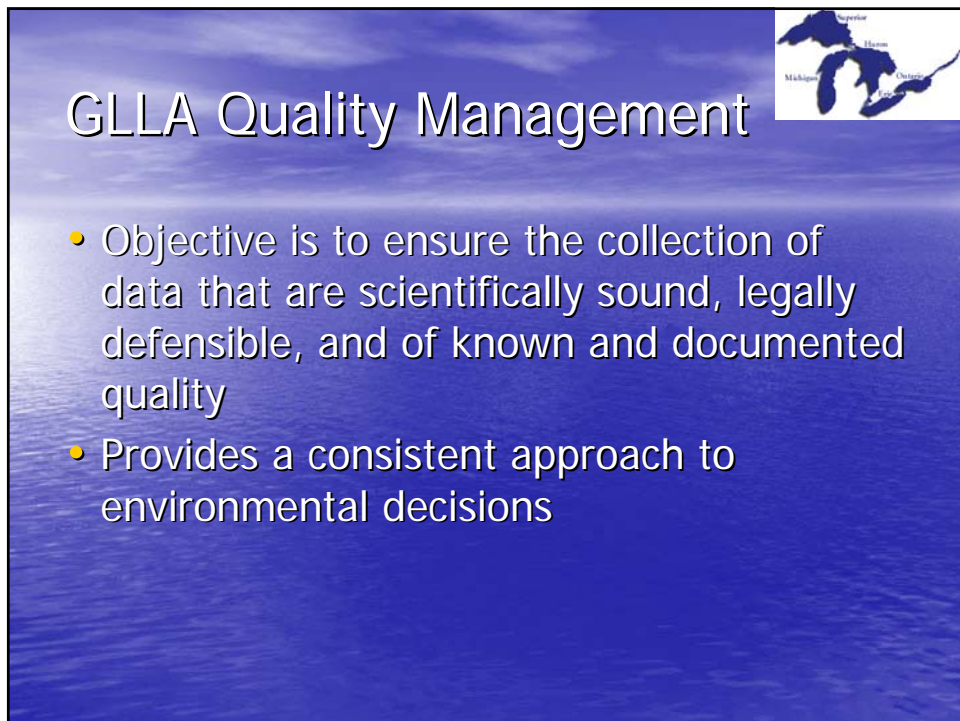


- Not a grant; not a contract
- Project Agreement (PA)
- A negotiated agreement between EPA and the non-Federal Sponsor
- Outlines roles and responsibilities of each party

## GLLA Partners



- Non-Federal Sponsors
  - States
  - Potentially responsible parties (PRPs)
  - Local consortiums
- Contractors
  - Remedial Action Contracts (RACs)
  - Emergency and Rapid Response Services (ERRS)
  - Superfund Technical Assessment & Response Team (START)
- Cooperators
  - US Army Corps of Engineers
  - Department of Energy, Battelle
  - EPA Regions



## GLLA Quality Management



- Data Management must be “cradle to grave”
  - Project is not truly completed until project information is compiled and available to stakeholders and the public
  - Project information must be transparent and reproducible
  - Completion of project reports are driving the process

## GLLA Data Management



- GLLA QMP stipulates that
  - sufficient documentation be provided with submission of a data set to assist data users when evaluating the utility of the data set for their purposes
    - includes the original information on data quality associated with the data
    - supplementary information including data verification narratives
  - quality documentation for each project addresses data management issues including collection, reporting, verification, storage, and usability



# What are we getting?

## GLLA Data Management Challenges



- Initial data reporting is lacking quality control (QC) information
- Geographic coordinates of various sampling locations had limited QC
  - Field data submitted in numerous formats and often lacked reference points
  - When plotting sample coordinates observed numerous errors
- Lack of QC information for engineering aspects of projects such as volume estimates

## GLLA Data Management Challenges



- Lack of statistical sampling design
  - Often stratified dots on a map
- Rationale of sampling design is not documented for historic monitoring
- Data usability assessment impossible without proper documentation of basis of original sampling design
- Lack data quality assessment in the context of project goals
  - Emphasis is on QC for an individual sample
  - Did data as a whole meet project requirements?

## GLLA Quality Management Challenges



- The logistics of sediment remediation projects and the complex array of roles, responsibilities, and funding sources complicate the quality management process thus:
  - Participation of Quality Manager as a true member of the Project Team
  - Quality program is built on regular communication among stakeholders

## GLLA Data Management Challenges



- Dealing with multiple entities with distinct lines of authority
- Must work within existing vehicles and contract requirements
- Final project decisions and products must meet Information Quality Guidelines (IQGs)
  - ensure and maximize the quality of information
  - provide a transparent process, and products that are clear, consistent, and reasonable

## GLLA Data Management Challenges



- Existing site assessment data
  - Incomplete field information
    - Geographic referencing
  - Analytical Data of known and documented quality
    - Understanding level of verification often impossible
  - Sensitivity of methods
    - Reporting of non-detect data
  - Reproducibility of data
    - Method differences

## GLLA Data Management Challenges



- Remedial projects
  - Evaluating achievement of clean up goals must happen real time
    - Requires quick turnaround data generation
    - Short term verification
      - Summary data initially
      - Can't independently verify or reproduce results
      - Not consistent with IQG

## GLLA Data Management Challenges



- Quick turnaround data review does not give you the full data quality picture
  - Review as much of the quality information up front as possible
  - Standardized reporting facilitates this review
    - Moving toward Staged Electronic Data Deliverable (SEDD) for GLLA projects
- Independent review of all data and supporting information still needs to happen
  - Completeness checks
  - Review of data usability in the context of project goals















































