Can We Obtain Reliable Data when Implementing Ecological Restoration Projects?

National Conference for Ecological Restoration

Louis Blume[1] and Molly Middlebrook Amos[2]

[1]U.S. EPA-Great Lakes National Program Office
[2]CSC Government Solutions, LLC – CSRA

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Great Lakes Restoration Initiative (GLRI)

- Toxic Substances and Areas of Concern
- Invasive Species
- Nonpoint Source Pollution Impacts on Nearshore Health
- Habitat and Species
- Foundations for Future Restoration Actions

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GLRI Impact on Budget for USEPA Great Lakes National Program Office

Drivers of Quality Across Federal Agencies

- **Information Quality Act/OMB Information Quality Guidelines**
  - Requires government-wide standards for "ensuring and maximizing the **quality, objectivity, utility, and integrity** of information"
  - Applies Federal agencies that are subject to Paperwork Reduction Act

EPA Quality System Requirements

EPA's Quality Policy

- American National Standard, ANSI/ASQC E4
- ISO 9001 certification

EPA Organizations – Internal EPA Directives

- EPA Quality Program Policy – CIO 2106.0 (Oct. 2008)
- EPA Procedure – CIO 2106-P-01.0 (Oct. 2008)
- CIO 2105.0 (May 2000)
- CIO 2105-P-01-0 (May 2000)

EPA Quality System Requirements

Non-EPA Organizations

- Federal Acquisition Regulations
  - 48 CFR 46 for contractors
  - 2 CFR 1500.11 for assistance agreements
  - 40 CFR 35 for state and local assistance

- EPA Order 5700.7A1
  - Demonstrate environment results [outcomes] achieved through EPA grants programs

Project-level Quality Documentation

- Sufficient project-level documentation to assure project success and reproducibility
- Provides a clear, concise, and complete plan for environmental data operations and associated quality objectives
- Quality Assurance Project Plan = QAPP
  - Guidance = EPA QA/R-5

QA Challenges for Ecological Restoration Projects in a Large-scale Ecosystem

- Quality objectives
- Estimating uncertainty in collected data
- Establishing quantitative data quality acceptance criteria
- Training & assessments
- Field sampling methods & data collection
- Data management, verification, & analysis

EPA is a young agency

- Started in 1970s = rookie!
- Enforcement-driven agency
  - Not land management
  - Not restoration

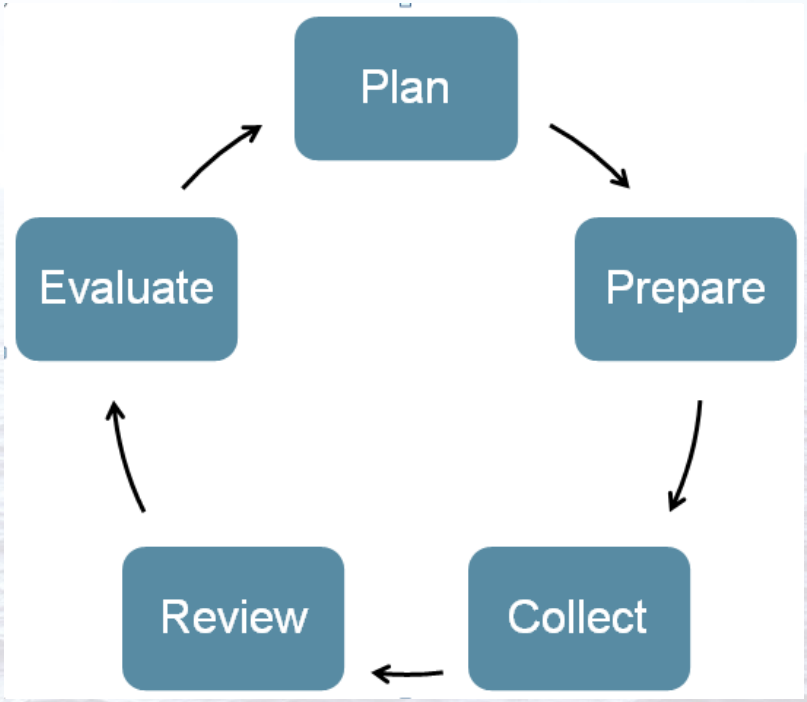
EPA
United States
Environmental Protection
Agency

Interagency Ecological Restoration Quality Committee

- Initiated: June 2012
- Purpose: Share quality concepts, practices, guidance, methods, and tools to improve projects funded by the GLRI

Participating Organizations	
NFWF	NOAA
NPS	USACE
USEPA*	USFS
USFWS	USGS
State agencies	Local and private groups
*USEPA also provides contractor support	

“Application of Quality Assurance and Quality Control Principles to Ecological Restoration Projects”



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Can we obtain reliable data when implementing ecological restoration projects?

Wait…

What do you mean by reliable data?

Attributes of Reliable Data

- Applicability and Utility
- Soundness
- Clarity and Completeness
- Uncertainty and Variability
- Evaluation and Review

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Can we obtain reliable data when implementing ecological restoration projects?

Yes! But…you better have a vision for what success looks like!

Purpose

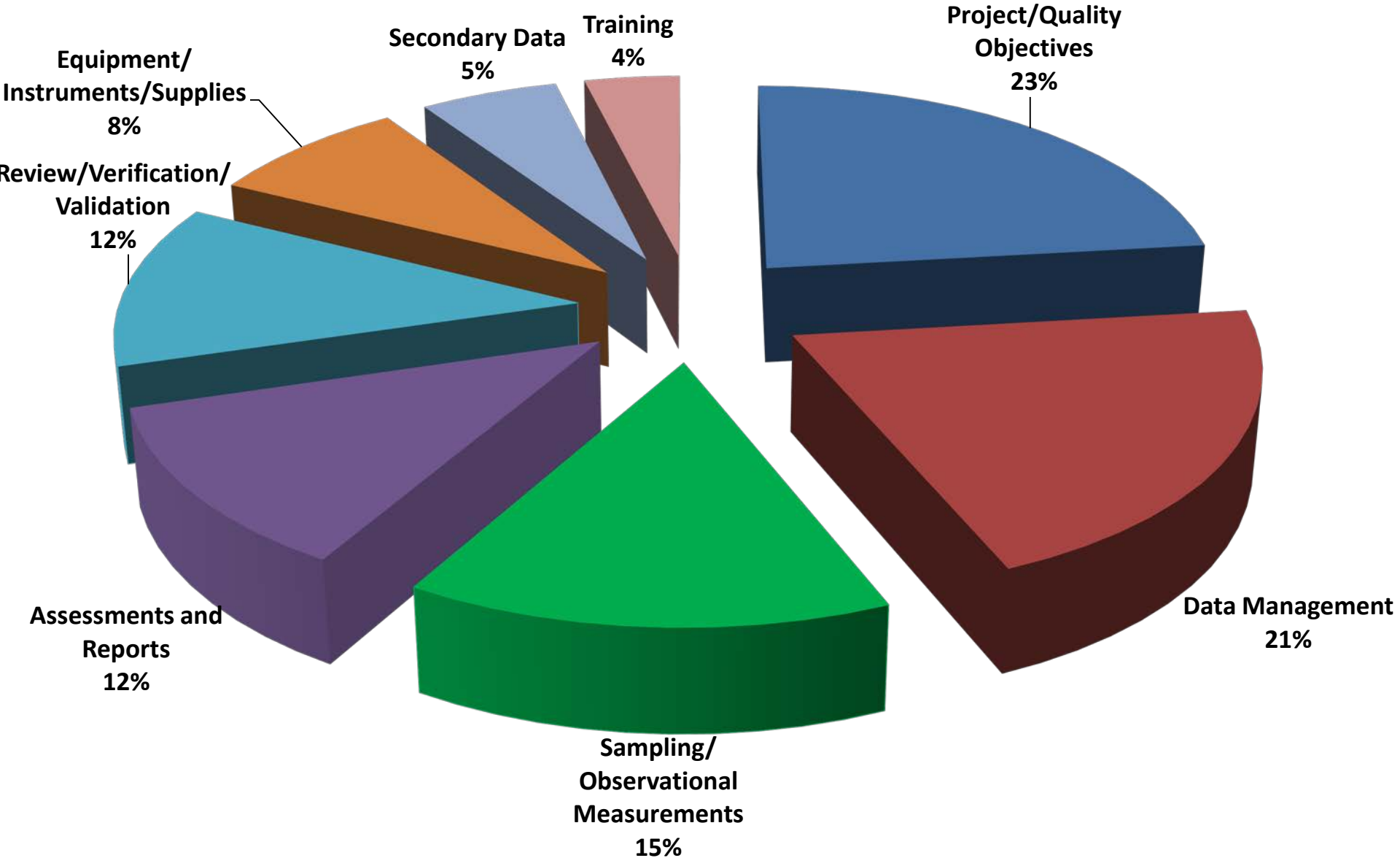
Assess which components in ecological restoration projects are lacking in QA/QC details/practices

– Continuous Improvement –

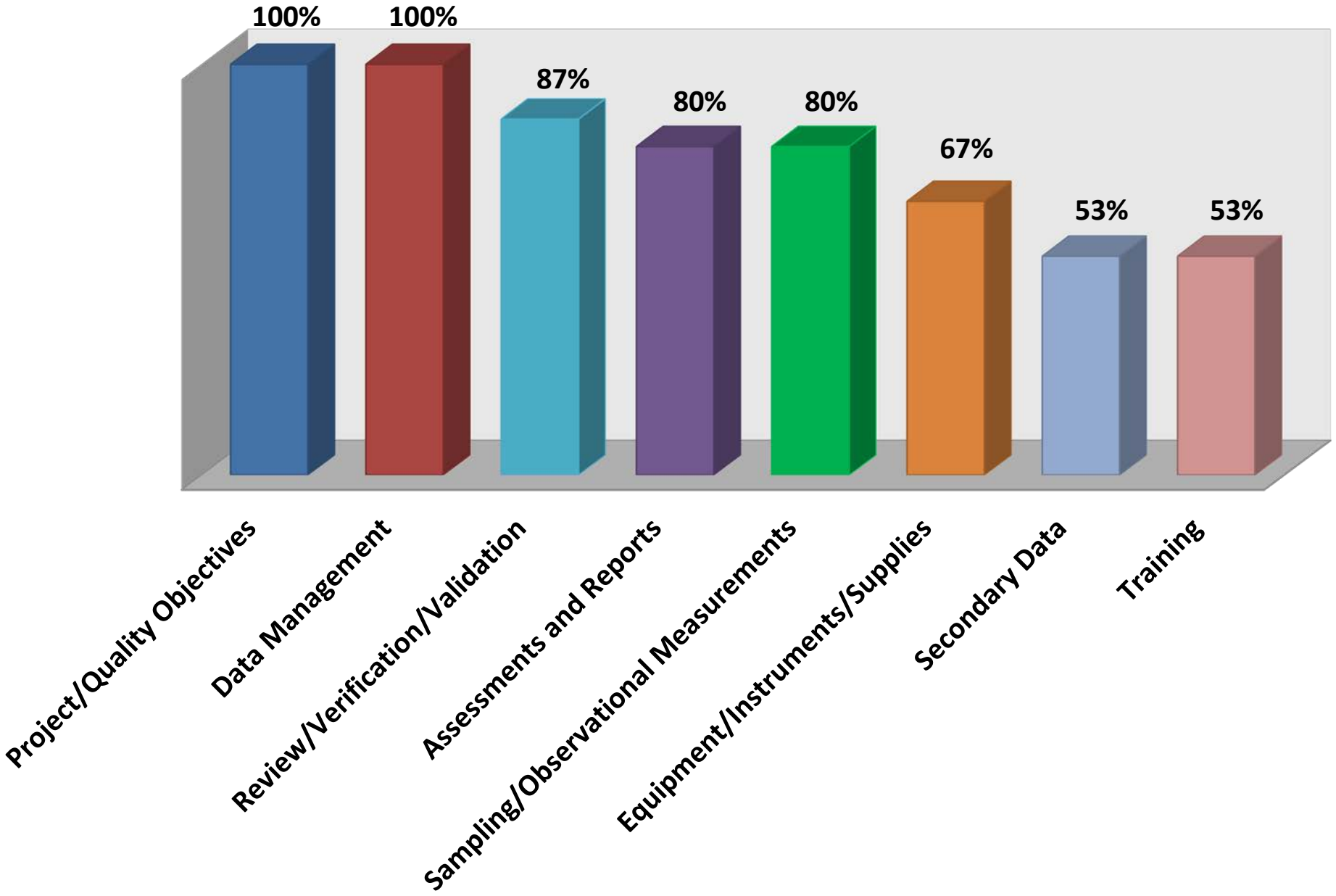
Findings

Methodology and Results	
Total projects analyzed:	15
Total comments:	233
Average comments per project:	16
Lowest number of comments in a project:	6
Highest number of comments in a project:	25

Percent Distribution of Comments by Category



Extent of Deficiencies on all Projects



Outcomes

- Establish realistic project objectives, consider both short and long term
- Define the quality of the data needed to achieve project objectives
- Ensure the guidance document addresses the deficiencies identified by reviewing the project plans

Food for thought: We're paid to think!

- Can you conduct a similar assessment and share your findings?
- Are there commonalities across different programs that we should capture in our guidance document?

After this session, consider joining us for a discussion over lunch in the Flamingo Room

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Questions

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We welcome and encourage feedback.

Louis Blume, USEPA GLNPO
312-353-2317 | Blume.Louis@epa.gov

Molly Amos, CSRA
703-496-7167 | Molly.Middlebrook@csra.com