



The Interagency Ecological Restoration Quality Committee (IERQC) Supporting Ecological Restoration Projects in the Great Lakes Region

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THE STRUCTURE AND ROLE OF THE COMMITTEE

Background

The Interagency Ecological Restoration Quality Committee (IERQC) was formed in 2012 to support the Great Lakes Restoration Initiative (GLRI)¹. The central role of the Committee is to serve as a 'think-tank' focused on advancing applications of Quality Assurance (QA) and Quality Control (QC) in ecological restoration monitoring – applications which are essential to evaluate whether project objectives have been achieved in compliance with specified performance criteria². The IERQC is administered by the U.S. Environmental Protection Agency's (EPA) Great Lakes National Program Office (GLNPO) and is currently composed of a members from federal, tribal, and non-governmental organizations.

Mission

To promote the development and application of QA/QC principles and practices to improve data quality (reliability, integrity, and objectivity) and science-based decision making for ecological restoration projects conducted throughout the Great Lakes region.

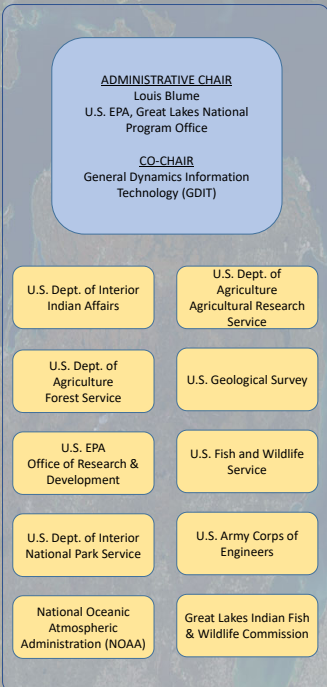
Purpose

This committee provides a collaborative environment to share quality concepts, practices, guidance, methods, and tools to ultimately improve ecological restoration projects funded by GLRI. The committee's principal role involves:

- conducting monthly webinars to provide a forum of information exchange by hearing from experts across the nation on innovative technologies, publicly available data and resources, and real-world projects;
- developing QA/QC guidance and project-level quality tools (e.g., checklists, templates, website to store references) to encourage the adoption of QA principles and approaches during ecological restoration projects;
- developing training to emphasize the key concepts identified in the guidance and project-level quality tools; and
- participating at conferences and meetings to increase exposure to current concepts and general knowledgebase.

Membership

GLNPO administers the IERQC with co-chair and technical support provided by General Dynamics Information Technology (GDIT). Membership includes the following list of agencies and organizations.



Monthly Webinars

The committee hosts a monthly webinar to spotlight the advancement of quality best practices in ecological restoration. Each month an invited speaker shares their knowledge, expertise, and technology on a topic related to environmental mitigation, remediation, ecological restoration, enhancement, among others.

There were **over 1,250 attendees** in total to the 12 monthly webinars in 2023. Over **120 presentations** have been presented since the assembly of the IERQC. [Create an account at login.glnpo.net to access a video archive of all presentations.](#)

KEY GUIDANCE AND RESOURCES

Published Guidance

In collaboration with GLNPO, IERQC published guidance on the application of QA/QC principles to ecological restoration project monitoring. In brief, this guidance provides tools and approaches to improve project efficacy, data reliability, and confidence in decision making through comprehensive planning, implementation, and assessment. The guidance reinforces best practices through use of practical scenarios and examples, and checklists.

Applications of Quality Assurance and Quality Control Principles to Ecological Restoration Project Monitoring.
EPA 905-K-19-001³



<https://nepis.epa.gov/Exe/ZvPURL.cgi?Dockey=P100XC2E.txt>

- Chapter 1.** Introduction
 - Chapter 2.** Fundamental Principles Concerning QA/QC and Ecological Restoration Monitoring
 - Chapter 3.** Planning For Data Collection
 - Chapter 4.** Preparing For Data Collection
 - Chapter 5.** Quality Control During Field Activities
 - Chapter 6.** Data Review
 - Chapter 7.** Data Assessment, Analysis, and Reporting
 - Chapter 8.** Relationship Between Quality Management and Adaptive Management Strategies
- Appendices:**
- A. Data Management Planning
 - B. Data Quality Indicator Assessment
 - C. Quality Assurance Project Plan Template
 - D. Quality Assurance Project Plan Checklist

Additional Publications, Tools, and Resources Developed with Committee Oversight

Adaptive Management Annotated Bibliography

Ecological restoration practitioners can streamline their learning process on the applications, benefits, and costs (i.e., lessons-learned) associated with the integration of quality programs into an adaptive management framework by accessing this annotated bibliography. Each reference is catalogued by organization performance elements based on the Baldrige Performance Excellence Program.

Adaptive Management (AM) Zotero⁴ Web Library



The references contained in adaptive management annotated bibliography are stored in a Zotero, a desktop and cloud-based reference manager software (open-source freeware). Searchable by keyword or category, the Zotero AM library is accessible on-line and open to the public. <https://www.zotero.org/search/?q=IERQC&type=group>

Adaptive Management Tools & Resources

A variety of tools and resources are available to enable managers in the development and implementation of AM. A compilation of these tools and resources is available and are organized according to the following topics:

- Key Guidance Publications
- Standards, Training and Templates
- Searchable Digital Libraries
- Case Studies and Examples
- Decision Support Tools

Data Management Plan Guidance and Template

- Introduction
- Annotated Outline
- Questionnaire
- Checklist
- Template

Guidance on Quality Oversight During Construction and Implementation



In Review

A collaboration by federal, state, tribal, and local agencies and non-profits, informing best practices on Great Lakes ecological restoration since 2012

To learn more about IERQC, please contact the co-chairs:

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Please contact Molly.Middlebrook@gdit.com to obtain a digital copy of this poster or any of the resources it describes.

References:
¹Great Lakes Restoration Initiative: Accelerating efforts to protect and restore the largest system of fresh surface water in the world. <https://www.glr.gov/>
²Stapanian, Martin A., Timothy E. Lewis, Craig J. Palmer, and Molly M. Amos. 2015. Assessing Accuracy and Precision for Field and Laboratory Data: A Perspective in Ecosystem Restoration. *Restoration Ecology* 24 (1): 18-26. doi: 10.1111/rec.12284.
³U.S. Environmental Protection Agency. 2019. Application of Quality Assurance and Quality Control Principles to Ecological Restoration Project Monitoring. Publication No. EPA/905/K-19/001. Chicago, IL: Great Lakes National Program Office.
⁴Zotero 2022. A Desktop and Web-Based Open-Source Reference Manager Freeware. A project of the Corporation for Digital Scholarship created at the Roy Rosenzweig Center for History and New Media at George Mason University.

⁵This presentation includes references to published and unpublished documents and other materials developed as result of collaborations by the U.S. Environmental Protection Agency (EPA) and the Interagency Ecological Restoration Quality Committee (IERQC) – a committee convened to steer the development of Quality Assurance guidance and outreach materials aimed to support contractors and grant awardees funded by the Great Lakes Restoration Initiative. For additional resources relating to EPA's Quality Systems Series documentation, see: www.epa.gov/quality. The views expressed in this presentation are those of the author(s) and do not necessarily represent the views or policies of the U.S. Environmental Protection Agency.

Poster design and content by General Dynamics Information Technology (GDIT).