ENVIRONMENTAL LAW INSTITUTE®

AN INDEPENDENT, NON-PARTISAN ENVIRONMENTAL EDUCATION AND POLICY RESEARCH CENTER.

2023 NATIONAL TRAINING WORKSHOP ON WATER QUALITY DATA, ASSESSMENT, AND PLANS

COLLABORATING AND INNOVATING TOGETHER

National Conservation Training Center
Shepherdstown, West Virginia
June 21-23, 2023

TRAINING WORKSHOP AGENDA

This project is made possible through cooperative agreements with the United States Environmental Protection Agency

PURPOSE OF THE TRAINING WORKSHOP

To provide state, tribal, and territorial water quality and data program staff with an opportunity to continue to learn about and develop collaboration, coordination, and communication approaches that improve programmatic understanding, processes, and outcomes

WORKSHOP OBJECTIVES

- Re-establish connections and build new ones among state, tribal, and territorial staff and with EPA Regional and Headquarters staff, enhancing the network of water quality data management, listing, and TMDL professionals
- Improve the coordination between water quality data management efforts and CWA 303(d) Program activities
- Learn about and contribute to approaches to the Focus Areas of the 2022-2032 CWA 303(d) Vision
- Learn about and share approaches to collaboratively prioritizing waterbodies for plan development
- Develop technical skills and programmatic acumen
- Learn about and contribute to the ideas and methods for better incorporating environmental justice and climate change considerations into water quality data management, assessment, and restoration and protection activities
- Learn about and contribute to approaches to communicating with and collaborating with a wide range of partners
- Receive updates on research, materials, tools, and legal developments relevant to the CWA 303(d) Program

OUTPUTS

- A final report summarizing the proceedings of the training workshop, to serve as a reference and assist program personnel in achieving programmatic requirements
- A companion website for this training workshop that contains the materials, presentation slides, and participant list for use during the event and as a reference afterwards

AGENDA

(All Times Eastern Daylight)

Tuesday, June 20 ***Arrival, Check-In, and Registration***

2:00 pm – 8:00 pm	NCTC Check-In and Training Workshop Registration Main Lodge
5:30 pm – 7:30 pm	Dinner (Open) Commons Dining Room
8:00 pm – 9:00 pm	Informal Welcome Rachel Carson & Ding Darling Lodges, Lounge Area

Wednesday, June 21 ***Training Workshop Day 1***

6:30 am – 9:00 am	Breakfast (Open) Commons Dining Room [From 8:00am to 8:30am in the back of the Dining Room, there is an opportunity for participants to ask questions about getting around NCTC, the agenda, and making the most of the week.]
9:00 am – 10:00 am	**Welcome** Auditorium Greeting *Adam Schempp, ELI* Introduction *Jim Havard, EPA HQ* *Stacey Yonce, EPA HQ* Clean Water Pod *Jeff Berckes, Flip the Field* Overview of the Agenda *Adam Schempp, ELI*
10:00 am – 10:30 am	Morning Break

10:30 am – 12:00 pm **Session #1**
Breakouts I
Breakout Rooms, Various Locations

This session consists of six breakouts, each focusing on a different topic. In-person participants are registered for specific breakouts based on their topic preferences expressed prior to the training workshop.

- How to Assess/List Waters and Develop TMDLs with Narrative Nutrient Criteria
  Auditorium
- Environmental Justice: Achieving Meaningful Involvement
  107 Instructional East
- Advance Restoration Plans/5R and 4B Plans: Examples and EPA's Expectations
  201 Instructional East
- Evaluating TMDL Effectiveness: Getting the Necessary Data through Existing Means
  154 Instructional West
- ATTAINS: A Secret Sauce Training (intermediate to advanced)
  105 Instructional East
- Continuous Data Management Options and Tools
  111 Instructional East

12:00 pm – 1:00 pm Lunch
Commons Dining Room

1:00 pm – 1:30 pm **Keynote Address**
Auditorium
Bruno Pigott, EPA HQ

1:30 pm – 3:00 pm **Session #2**
Interagency Collaboration
Auditorium

This session brings together staff of multiple federal agencies and a tribe to share lessons learned from cooperation, including keys to building and maintaining relationships, how to identify opportunities for collaboration, and effective means of sharing data.

- *Bonita Johnson, EPA Region 4* (moderator)
- *Allison Odell, U.S. Bureau of Reclamation*
- *Jeffrey Lerner, EPA Chesapeake Bay Program*
- *Bradley Dean, Federal Emergency Management Agency*
- *Nancy Schuldt, Fond du Lac Band*
- *Joan Carlson, U.S. Forest Service*
- *Martin Lowenfish, Natural Resources Conservation Service*

3:00 pm – 3:30 pm Afternoon Break

3:30 pm – 5:00 pm **Session #3**
Data Resources and Communication Tools
Auditorium

What's New with How's My Waterway
Kiki Schneider, EPA HQ

The Internet of Water at EPA
Alex Porteous, EPA HQ

Data and Tools to Support Efficient & Reproducible Water Quality Assessments
Cristina Mullin, EPA HQ

Mapping Tools: Leaflet and My Maps
Alan Ochoa Rodriguez, UT

5:30 pm – 7:00 pm Dinner (Open)
Commons Dining Room

7:00 pm – 10:00 pm Bonfire and Scavenger Hunt

Thursday, June 22 *Training Workshop Day 2*

6:30 am – 8:30 am Breakfast (Open)
Commons Dining Room

8:30 am – 10:00 am **Office Hours and Mentorship Groups Period (Open)**

Recovery Potential Screening Tool Office Hours
Drop in for help from EPA staff on using the RPS tool, including for prioritization purposes.
111 Instructional East

Office Hours: Clean Water Act and Environmental Justice Modules
Drop in to learn about and discuss with EPA staff the CWA 303(d) content for the forthcoming *CWA Through an Environmental Justice Lens* online learning modules for the Watershed Academy. These modules (one for practitioners and one catered to the general public) will highlight water equity challenges and opportunities in watershed management.
103 Instructional East

Continued on the next page

Data Tools Office Hours

Drop in for help from EPA staff on a wide range of data tools:

- ATTAINS: Assessment Total Maximum Daily Load (TMDL) Tracking and Implementation System
- GRTS: Section 319 Nonpoint Source Grants Reporting and Tracking System
- HMW: How's My Waterway
- IoW: Internet of Water
- NHD/NHDPlus/Geospatial: National Hydrography Dataset or NHDPlus or geospatial data related to one of the programs listed here
- TADA: Tools for Automated Data Analysis
- WQX/WQP: Water Quality eXchange/Water Quality Portal

G24 and G30 Instructional East

Clean Water Pod Conversations

Meet with Jeff Berckes to discuss the podcast and share success stories about nutrients as well as broader themes like Vision Goals and Focus Areas that could appear on the next season.

108 Instructional East

Mentorship Roundtables (9:00 am – 10:00 am)

105 and 107 Instructional East

10:00 am – 10:30 am Morning Break

10:30 am – 12:00 pm **Session #4**
Incorporating Climate Change and Environmental Justice Considerations into Program Activities
Auditorium

Climate Change and the 303(d) Program Updates
Dylan Laird, EPA HQ

Thinking About Climate Change (Extending the Service Life of Our TMDLs)
Mike Kruse, MO

Climate Preppers: Michigan Edition
Molly Rippke, MI

Environmental Justice and the 303(d) Program Updates
Sara Schwartz, EPA HQ

12:00 pm – 1:30 pm Lunch
Commons Dining Room

1:30 pm – 3:00 pm **Session #5**
Breakouts II
Breakout Rooms, Various Locations

This session consists of eight breakouts, each focusing on a different topic. In-person participants are registered for specific breakouts based on their topic preferences expressed prior to the training workshop.

- Litigation on Assessment/Listing and TMDLs
  161 Instructional West
- Treatment in the Same Manner as a State (TAS) Authority for CWA 303(d): Adoption and Implementation
  107 Instructional East
- Examples of Water Quality Assessment Tools
  111 Instructional East
- Integrating Protection with Watershed-based Planning
  201 Instructional East
- Automation and the Use of R for TMDL Development
  105 Instructional East
- Introduction to Using Open Source R Tools for Automated Data Analysis (TADA) to Retrieve, Wrangle, and Clean WQP Data (Beginner R User)
  G24 Instructional East
- Introduction to Using Open Source R Tools for Automated Data Analysis (TADA) to Retrieve, Wrangle, and Clean WQP Data (Intermediate+ R User)
  G30 Instructional East
- How to Answer Common Questions with Available Data Tools
  156 Instructional West

3:00 pm – 3:30 pm Afternoon Break

3:30 pm – 5:00 pm **Regional Meetings**
Breakout Rooms, Various Locations

This session consists of ten regional meetings, one for each EPA Region, each including the state, tribal, territorial, and EPA participants from that region.

Region 1: *105 Instructional East*
Region 2: *158 Instructional West*
Region 3: *161 Instructional West*
Region 4: *201 Instructional East*
Region 5: *154 Instructional West*
Region 6: *111 Instructional East*
Region 7: *152 Instructional West*
Region 8: *103 Instructional East*
Region 9: *107 Instructional East*
Region 10: *101 Instructional East*

5:30 pm – 7:00 pm Dinner (Open)
Commons Dining Room

7:30 pm – 8:30 pm **Informal Evening Events**

- A Discussion about How to Better Integrate the CWA 303(d) Programs and ATTAINS
  Rachel Carson Lodge, Lounge Area
- How to Shine a Light on Your Work [tips on communications]
  Ding Darling Lodge, Lounge Area
- A Discussion about Prioritization Strategies and Experiences
  Murie Lodge, Lounge Area

Friday, June 23 *Training Workshop Day 3*

6:30 am – 8:30 am Breakfast (Open)
Commons Dining Room

8:30 am – 10:00 am **Session #6**
Breakouts III
Breakout Rooms, Various Locations

This session consists of six breakouts, each focusing on a different topic. In-person participants are registered for specific breakouts based on their topic preferences expressed prior to the training workshop.

- Protection of Downstream Water Quality Standards through TMDLs
  Auditorium
- HABs: Criteria, When to Measure, and How to Tie it Back to a Pollutant
  161 Instructional West
- Stormwater and TMDLs: Examples of Approaches
  107 Instructional East
- Category 4C: Process and Examples of Successful Restoration
  105 Instructional East
- Finding and Using Data from the Water Quality Portal
  G24 Instructional East
- Tracking Changing Assessment Units and Updates on NHD+
  201 Instructional East

10:00 am – 10:30 am Morning Break

10:30 am – 11:30 am	**Session #7** **Prioritization and Planning** Auditorium **Introduction to the Prioritization and Planning Session** *Teagan Rostock, EPA HQ* **How Vision 1.0 Secured Wisconsin's Program and Using Vision 2.0 to Identify Future Priorities** *Ashley Beranek and Kevin Kirsch, WI* **How Cross-Program Coordination and Environmental Justice are Changing the Way Colorado Prioritizes TMDLs for Vision 2.0** *Barbara Bennett, CO*
11:30 am – 12:00 pm	**Training Workshop Wrap-Up** Auditorium **Summary and Next Steps** *Beth MacBlane, NEIWPCC* *Jasper Hobbs, ACWA* *Stacey Yonce, EPA HQ* *Jim Havard, EPA HQ* *Adam Schempp, ELI* **Send-Off Remarks** *Dustin Shull, PA* *Nancy Schuldt, Fond du Lac Band*
12:00 pm	Lunch Commons Dining Room
1:00 pm	Departure of Shuttle Bus I for Dulles Airport
1:15 pm	Departure of Shuttle Bus II for Dulles Airport

The Details of the Session 1 Breakouts (Wednesday, June 21, 10:30am – 12:00pm EDT)

How to Assess/List Waters and Develop TMDLs with Narrative Nutrient Criteria

Description: Through a series of examples from across the country, this breakout will explain some of the ways that states have assessed and listed waters (and in some cases developed TMDLs) using narrative nutrient criteria, including the use of translators, reference watersheds, and a weight of evidence approach.
Structure: Presentations with Q&A
Facilitator: Jasper Hobbs, ACWA
Presenters: Traci Iott, CT; Katie McKone, KY; Meredith Zeigler, NM; Kim Laster, TN

Environmental Justice: Achieving Meaningful Involvement

Description: This prestigious panel will highlight ways of meaningfully involving people and communities in decision-making and implementation. They will relay their experiences and lessons learned and introduce participants to Groundwork USA's resources for equity-centered engagement.
Structure: A panel of presenters with facilitated discussion, followed by Q&A
Moderator: Sara Schwartz, EPA HQ
Panelists: Jalisa Gilmore, Groundwork USA; Queen Quet, Gullah/Geechee Nation; Amin Davis, NC Division of Water Resources and the Walnut Creek Watershed Action Team

Advance Restoration Plans/5R and 4B Plans: Examples and EPA's Expectations

Description: This breakout will provide an overview of Advance Restoration Plans (ARPs, formerly "alternatives")/5R and 4B plans as well as examples and lessons learned regarding ARPs, followed by a discussion about opportunities for using ARPs to restore water quality.
Structure: Presentations followed by Q&A and facilitated discussion
Facilitators/Presenters: Tracy Krueger, ME; Matthew Reardon, MA; Chris Hunter, EPA HQ

Evaluating TMDL Effectiveness: Getting the Necessary Data through Existing Means

Description: This breakout will provide an overview, with examples, of ways to evaluate the effectiveness of water quality restoration plans through common processes and data sources.
Structure: Presentations followed by Q&A and facilitated discussion
Facilitator: Adam Schempp, ELI
Presenters: Sophia Grossweiler, MD; Robert Voss, MO; Brian Barnes, NE; Emily Cira, EPA HQ

ATTAINS: A Secret Sauce Training (intermediate to advanced)

Description: This training is meant for individuals responsible for entering and/or reviewing data in ATTAINS; it will cover various tips and tricks for navigating ATTAINS, dealing with common problems, and generally making the life of an ATTAINS user a little easier.
Structure: Demonstration with Q&A
Facilitators/Presenters: Jesse Boorman-Padgett, EPA HQ; Wendy Reid, EPA HQ; Megan Tulloch, RTI

Continuous Data Management Options and Tools

Description: This breakout will share best practices for submitting continuous data to the Water Quality eXchange (WQX) before covering a variety of ways organizations QA/QC, analyze, assess, and visualize continuous datasets. Time will be set aside for a discussion of challenges and sharing of ideas from participants.
Structure: Presentations followed by Q&A and facilitated discussion
Facilitators/Presenters: Adam Griggs, EPA HQ; Cristina Mullin, EPA HQ

The Details of the Session 5 Breakouts (Thursday, June 22, 1:30pm – 3:00pm EDT)

Litigation on Assessment/Listing and TMDLs

Description: This breakout will provide a summary of recent and pending federal TMDL and listing litigation and the potential impacts of recent decisions.
Structure: Presentation with Q&A
Facilitator: Jasper Hobbs, ACWA
Presenters: Chris Creech, EPA HQ; Tom Glazer, EPA HQ; Alec Mullee, EPA HQ; Elise M. O'Dea, EPA HQ; Andrea Priest, EPA HQ

Treatment in the Same Manner as a State (TAS) Authority for CWA 303(d): Adoption and Implementation

Description: This breakout will explain the basics of obtaining CWA 303(d) TAS. It also will discuss the coordination and capacity important for implementing Section 303(d), and the use of ATTAINS.
Structure: Presentation and facilitated discussion
Facilitators/Presenters: Nancy Schuldt, Fond du Lac Band; Jill Fullagar, EPA R10; Dylan Laird, EPA HQ; Adam Schempp, ELI

Examples of Water Quality Assessment Tools

Description: This breakout will detail the purpose, function, and results of tools used in different states for various aspects of water quality assessment and for reporting that information to the public.
Structure: Presentations with Q&A
Facilitator: Emily Cira, EPA HQ
Presenters: Mackenzie Moore, AZ; Skip Feeney, CO; Katie McKone, KY; Matthew Wood, NH; Bongghi Hong, NC

Integrating Protection within Watershed-based Planning

Description: This breakout will build off discussions from the 2022 CWA 303(d)/319 Protection Learning Exchange by highlighting the role that TMDLs and watershed plans can play as critical guides for targeting and implementing both restoration and protection activities to achieve water quality goals. It will feature two watershed planning case studies (Kansas TMDL Program and the Delaware River Watershed Initiative), followed by a facilitated discussion on practical approaches for integrating protection alongside restoration to maintain healthy waters and help ensure restoration success.
Structure: Presentations with Q&A
Facilitator: Sara Schwartz, EPA HQ
Presenters: Dane Boring, KS; Steve Epting, EPA HQ; Abby Weinberg, Open Space Institute

Automation and the Use of R for TMDL Development

Description: This breakout will provide examples of ways that states have been automating different parts of the TMDL development process, from prioritization to data analysis and beyond. It will focus on the role and value of these automations more than the technical details of the R code, Python scripts, etc.
Structure: Presentations with Q&A
Facilitator: Amy Reed, ELI
Presenters: Mikayla Baker, AZ; Traci Iott, CT; Lucas Graunke, NM; Ruth Briland, OH

Continued on the next page

Introduction to Using Open Source R Tools for Automated Data Analysis (TADA) to Retrieve, Wrangle, and Clean WQP Data (Beginner R User)

Description: Looking for a primer on R scripting to discover, organize, and filter Water Quality Portal data? R is one of many open source tools that can vastly improve shareability, transparency, and repeatability in water quality data analyses. This hands-on session will begin with an overview of R, the TADA R package, and the first in a series of TADA R Shiny applications (which require little to no user interaction with R). Participants will then explore the TADA R package on a dataset of interest. Breakout content will cater to participants with little to no R/programming experience.
Structure: Demonstrations with hands-on learning and Q&A
Facilitator/Presenter: Cristina Mullin, EPA HQ

Introduction to Using Open Source R Tools for Automated Data Analysis (TADA) to Retrieve, Wrangle, and Clean WQP Data (Intermediate+ R User)

Description: Curious how TADA might complement your scripting workflows to discover, organize, and filter Water Quality Portal data? This hands-on session will begin with an overview of the TADA R package and the first in a series of TADA R Shiny applications. Participants will then explore the TADA R package on a dataset of interest. Breakout content will cater to participants comfortable scripting/troubleshooting in a programming console.
Structure: Demonstrations with hands-on learning and Q&A
Facilitator/Presenter: Elise Hinman, ORISE

How to Answer Common Questions with Available Data Tools

Description: This breakout will cover how to use ATTAINS reports, ATTAINS web services, and the geospatial service to answer common questions about the data.
Structure: Demonstration with Q&A
Facilitators/Presenters: Jesse Boorman-Padgett, EPA HQ; Wendy Reid, EPA HQ

The Details of the Session 6 Breakouts (Friday, June 23, 8:30am – 10:00am EDT)

Protection of Downstream Water Quality Standards through TMDLs

Description: This breakout will showcase various approaches to protecting downstream waters, including their designated uses and associated water quality criteria, in the development and implementation of TMDLs.
Structure: Presentations with Q&A
Facilitator: Dave Werbach
Presenters: Elizabeth Booth, GA; Andrea Conine and Cassandra Davis, NY; Jeremy Reiman, WA; Kevin Kirsch, WI

HABs: Criteria, When to Measure, and How to Tie It Back to a Pollutant

Description: This discussion-based breakout will begin with the various criteria that have been used to reflect HABs in listing decisions, followed by conditions such as low DO and impaired biology that could be considerations for HABs, monitoring strategies that are used, and what tools and information are needed moving forward.
Structure: Facilitated discussion
Facilitator: Tina Laidlaw, EPA R8

Stormwater and TMDLs: Examples of Approaches

Description: This breakout will detail various ways that states have considered stormwater in TMDL development and implementation, including the use of different databases, models, tools, and calculations connecting stormwater to a variety of impacts and activities.
Structure: Presentations followed by Q&A and facilitated discussion
Facilitator: Barbara Bennett, CO
Presenters: Traci Iott, CT; Andrea Plevan, MN

Category 4C: Processes and Examples of Successful Restoration

Description: This breakout will highlight different ways that states have used Category 4C of the Integrated Report as well as outcomes to date and lessons learned.
Structure: Presentations with Q&A
Facilitators/Presenters: Blake Towarnicki, MT; Cam McNutt, NC; Lesley Merrick, OR; Dustin Shull, PA; Kristy Fortman, EPA R8

Finding and Using Data from the Water Quality Portal

Description: This hands-on breakout will provide tips and tricks for using the Water Quality Portal (WQP). It will explore how to use the WQP to find and access datasets using a variety of available methods. It will cover building and saving queries that return data, downloading data profiles, and relating those profiles to build rich datasets. It also will highlight the forthcoming WQP data profiles that will fully support WQX 3.0 metadata and discuss what changes you can expect to see. In addition, it will detail how to use the WQP web services to retrieve data and import it directly into data exploration programs such as Excel, googlesheets, R, and ArcGIS Online. Lastly, it will demonstrate how to use the WQP summary services to help you identify where certain data exist.
Structure: Demonstration with hands-on learning and Q&A
Facilitator/Presenter: Adam Griggs, EPA HQ

Tracking Changing Assessment Units and Updates on NHD+

Description: This breakout will start with a couple of examples of how states have tracked changing assessment units (AUs), e.g., merged AUs and split AUs, including what methods were used to do so and what lessons were learned. The second half of the breakout will consist of an overview by EPA Headquarters staff of updates on NHD+.
Structure: Presentations with Q&A
Facilitators/Presenters: Mikayla Baker, AZ; Cleo Baker, VA; Jesse Boorman-Padgett, EPA HQ; Shelly Thawley, EPA HQ