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| *Virtual* National Aquatic Resource Surveys National WorkshopHosted by The Conservation Technology Information Center |
| **April 5-April 7, 2022****All Times are Eastern Time**[**Meeting Registration - Zoom**](https://us02web.zoom.us/meeting/register/tZwoc-yvqDotGdADes1jcJBTgb3Lq-vya9gu) |
| **April 5, 2022** |
| 1:00-1:15 | **Opening and Greetings*** Mike Komp, CTIC Executive Director - Steve Werblow, CTIC Communications Director
* Sarah Lehmann, US EPA Team Leader
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| 1:15-2:00 | **Plenary**Facilitator: Sarah Lehmann, US EPA**NARS within the Broader Clean Water Act Objectives: What is the NARS Mission?** Steve Paulsen, US EPA**Panel Response*** Anne Rogers, Texas
* Kayla Bowe, Red Lake Band of Chippewa
* Jay Silvanima, Florida
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| 2:00 –2:45 | **Continuous Improvement in NARS Part 1: Field Training and Field Work** Facilitator: Kayla Bowe, Red Lake Band of Chippewa**Objective:** Participants learn about efforts to improve field training and discuss further refinements in how NARS field training and field work is implemented.* NARS Training Evolution – Planned and the Unexpected, Brian Hasty, US EPA
* Capturing training using multiple techniques, Steve Werblow, CTIC

**Facilitated Discussion:**  **Questions to Consider*** What changes from NARS have been helpful to you?
* What aspects of the new training regimen would be helpful to keep? What should change, if possible?
* What are some of the biggest obstacles you face in conducting field work for NARS or considering whether to conduct field work? What are ways we could work to reduce these issues?
* For those of who have run multiple surveys (NCCA, NWCA and now NLA) at the same time, what were the biggest benefits? What were the biggest challenges?
* What tools or other approaches should we consider to continue improving implementation of the field work under NARS?

**Link to NARS Improving Training Video**: <https://youtu.be/p29-dEUoM8s> |
| **2:45-3:00** |  **Break** |
| 3:00-4:30 | **Continuous Improvements in NARS – Part 2: Tools, R and the Future** Facilitator- Gregg Serenbetz, US EPA**Objective:** Participants learn about progress on previously identified recommendations for improving implementation of NARS technical support focusing on new/available tools* An Introduction of the Survey Design Tool, Garrett Stillings, US EPA
* Use of the NARS Survey Design Tool to Assess Insecticide Concentrations in Wisconsin Streams, Mike Miller, Wisconsin
* Expansion of a tool to analyze and visualize probabilistic survey data, Karen Blocksom; co-author Garrett Stillings, US EPA
* Updates to the NARS data extraction tool for 2022, Karen Blocksom, US EPA
* The Utility of EPA’s Data Dashboard in Assessing Oregon’s Lake Conditions, Shannon Hubler, Oregon

**Facilitated Discussion: Questions to Consider*** What sort of tools would be helpful to create or expand?
	+ Examples: Tools for site evaluation/GIS, tools for data entry/QC, tools for data analysis, tools for expanding the use of NARS protocols/SP Survey?
* Is there a better platform to distribute the tools? Would it be helpful to have a repository area for all tools?
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| 4:30-5:15 | **Breakouts - Networking** **or One-on-One Time to Learn about New Tools**  |
| **Breakout 1** – Group get-together and opportunity to talk |
| **Breakout 2:** Demo of Population Estimate and Data Extraction Tools, Karen Blocksom, US EPA |
| **Breakout 3:** Designing a Survey: Demo of the Survey Design Tool, Garrett Stillings, US EPA |
| 5:15 | **End for the day** |
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| **April 6, 2022** |
| 1:00-1:30 | **Research and Supplemental Indicators – Leveraging and Enhancing NARS**Facilitator: Richard Mitchell, US EPA**Objective:** Participants will learn about the outcome of various research/supplemental indicators that have been included in NARS over time including their objectives, results and data availability. Information will also be provided on current processes for vetting new or research indicators into surveys to facilitate discussion on what types of questions/processes should be used for future planning purposes.* Richard Mitchell, US EPA

**Facilitated Discussion: Questions to Consider*** What have been the benefits of incorporating research indicators into NARS?
* What learning opportunities do research/supplemental indicators provide?
* How could we improve our process for selecting indicators?
* What considerations should we include in selecting them/vetting them?
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| 1:30-2:30 | **Breakouts – Implementing Intensifications of NARS or One-on-One Time to Learn about New Tools**  |
| **Breakout 1** – **Implementing Intensifications/Leveraging NARS**Facilitator: Danielle Grunzke, US EPA**Objective:** Participants will learn about ways to leverage NARS and specific issues to consider when contemplating an intensification to the design or indicators.* What are intensifications, Danielle Grunzke, US EPA
* Pensacola and Perdido Bay Estuary Program Intensification, Whitney Scheffel, PPBE Program
* Arizona’s Approach to Answering State Questions Using a National Design, Jason Jones, Arizona
* A Proposal for Intensified 2022 National Lakes Assessment Monitoring within the Northern Lakes and Forests Ecoregion- A team approach between Minnesota, Wisconsin, Michigan, and the US Forest Service, Jesse Anderson, Minnesota
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| **Breakout 2:** Demo of Population Estimate and Data Extraction Tools, Karen Blocksom, US EPA |
| **Breakout 3:** Designing a Survey: Demo of the Survey Design Tool, Garrett Stillings, US EPA |
| **2:30-2:45** |  **Break** |
| 2:45-5:00 | **Setting Benchmarks: The science of reference condition in NARS and beyond**Facilitator: Kellie Merrell, Vermont**Objective:** Participants will increase understanding of reference condition used for NARS assessments and potential mechanisms for applying in state/tribal programs. Discuss new thinking on reference.* Summary of exploration into reference questions/needs related to NARS, Mike Miller, Wisconsin (2:45-3:00)
* The reference approach in NARS, Alan Herlihy, OSU (3:00-3:45)
* Development of an R Shiny tool to make it easier to visualize and access the reference site data used to set benchmarks, Donny Benkendorf, US EPA (ORISE) (3:45-4:00)
* Regional monitoring networks – Britta Bierwagen, US EPA (4:00-4:15)
* New considerations/approaches- John Stoddard, US EPA (4:15-4:30)

**Facilitated Discussion: Questions to Consider*** How are NARS and state/tribal processes and ultimately thresholds similar or different?
* How can states and tribes leverage the NARS reference information? Are there enhancements to the R shiny tool that would be useful to you?
* How can NARS leverage state/tribal data?
* Should we consider long-term monitoring at a set of reference sites? Working them into RMNs?
* How should we be considering climate change in use of reference condition for benchmark setting?
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| 5:00 | **End for the day** |
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| **April 7, 2022** |
| 1:00-2:00 | **Sample Frames, Target Populations and Site Evaluation** Facilitator: Liz Smith, Kansas**Objective:** Participants will learn about the sample frames and target populations for each survey. Participants will have an opportunity to discuss objectives including national, state, tribal and other considerations related to this topic.* Overview presentation, Mike Dumelle

**Facilitated Discussion** |
| 2:00-3:00 | **Breakouts for Sample Frames, Target Populations and Site Evaluation**  |
| **Breakout 1:** Rivers and Streams. Facilitators Richard Mitchell, US EPA and Liz Smith, Kansas |
| **Breakout 2:** Wetlands. Facilitators Gregg Serenbetz, US EPA and Michael Bourdaghs, Minnesota |
| **3:00-3:15** |  **Break** |
| 3:15-4:15 | **Breakouts for Sample Frames, Target Populations and Site Evaluation, continued** |
| **Breakout 1:** Estuaries. Facilitators. Hugh Sullivan, US EPA and Laura Yarbro, Florida |
| **Breakout 2:** Great Lakes. Facilitators. Mari Nord, US EPA and Tim Asplund, Wisconsin |
| **Breakout 3:** Lakes and Reservoirs. Facilitators. Lareina Guenzel, US EPA and Kellie Merrell, Vermont |
| 4:15-4:30 | Return to main room for closing remarks |
| 4:30-5:00 | Closing Remarks* John Goodin, US EPA Director, Office of Wetlands, Oceans and Watersheds
* Steve Werblow, CTIC Communications Director,
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| 5:00 | Workshop Concludes |
| For additional NARS info, updates and recordings, be sure to check CTIC’s website [**www.ctic.org**](http://www.ctic.org)**CTIC Website** **Navigation tips:** *Projects, CTIC Projects, Training, NARS National 2022* |