

Friday, May 4

## **Session L2: Leveraging State Partners to Assist the National Aquatic Resource Surveys and State Level Data Collection**

Room A105

8:00 – 9:30 am

**0156**

**L2-1**

### **Capitalizing on an Opportunity: An Example of a Multiple Collaborator Endeavor Formed Around the National Wetland Condition Assessment in North Dakota**

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A multiple participant wetland condition assessment project was developed in North Dakota, centered on the National Wetland Condition Assessment (NWCA) initiated by the Environmental Protection Agency (EPA). Several individual participants represented a number of organizations that included the EPA's Office of Water; EPA's Western Ecology Division (EPA-WED); EPA Region 8; Natural Resources Conservation Service (NRCS); North Dakota Department of Health, Division of Water Quality (NDDoH); North Dakota Department of Agriculture (NDDA); and four departments/programs from North Dakota State University (NDSU). The EPA Office of Water provided the foundation for this opportunity with the NWCA, and an intensification of this survey was supported by the NDDoH and EPA Region 8 through funding provided by a Wetland Program Development grant and with Section 106 Supplemental Monitoring funds. Beside the sampling goals outlined by the EPA for 11 NWCA sites in North Dakota, several other samples were collected at 42 additional sites to answer a number of wetland monitoring and assessment questions. During the 2011 field season, water quality samples were collected, including pesticide samples, at all the sites that had water. Soil samples were collected for the EPA-WED at all sites to analyze for nitrogen-15. NDSU Soil Science collected soil samples at all sites for carbon, phosphorus, nitrogen, and mercury analysis; and for a general analysis of a suite of elements and common compounds. Soil samples were collected to complete a multi-elemental fingerprint for every wetland by NDSU Biological Sciences. NDSU Range Science and Natural Resources Management collected additional vegetation, landscape, and hydrology data to aid in biologic and elemental cycling assessment at all sites. The NRCS completed all wetland soil profile descriptions and utilized the field season as an opportunity where senior soil scientists trained newer employees in describing and identifying hydric soils within ND. Overall, five NDSU researchers, one NDSU PhD student, four NDSU MS students, four NDSU undergraduates, two NDSU research specialists, one EPA-WED Post-doc, six NDDoH employees, and ten NRCS employees have participated thus far. These numbers don't include numerous employees at NDSU, EPA, NRCS, and the NDDoH that have aided with laboratory and data analysis.

**0021**

**L2-2**

### **Partnership Opportunities for Statewide Assessments of Lake Condition**

Steven Heiskary

*Minnesota Pollution Control Agency, St. Paul, Minn., USA*

The first National Lakes Assessment (NLA) was conducted by USEPA, states, and Native American bands in 2007. A total of 909 lakes were included in this survey. Minnesota's NLA was led by the Minnesota Pollution Control Agency (MPCA) and the Minnesota Department of Natural Resources (MDNR). Minnesota drew 41 lakes as a part of the initial draw for this statistically-based national survey and added nine lakes to allow for state-based assessment. Communication with various groups around the state led to several enhancements that were added to the base-level program including: collaboration with USFS in the BWCA Wilderness; near-shore assessments that included macrophyte identification and determination of maximum rooting depth of plants (MDNR); sampling in support of lake IBI development; measurement of water Hg (USGS - WI); measurement of water pesticides in conjunction with an ongoing MN Department of Agriculture (MDA) program; measurement of sediment contaminants to provide improved baseline and spatial data; and a region-wide assessment of the Prairie Pothole Region conducted in conjunction with the states of ND, SD, MT, and IA. Collaborative reports, completed to-date, with results from the survey include: microcystin concentrations in Minnesota's lakes (MPCA), Minnesota's fish-based lake IBI (MDNR), aquatic macrophytes in Minnesota's lakes (MDNR), water mercury concentrations in Minnesota's lakes (MPCA), pesticides in Minnesota's lakes (MDA) and water chemistry of Minnesota's lakes (MPCA). All reports and brief fact sheets for each of Minnesota's NLAP lakes may be found at:

<http://www.pca.state.mn.us/water/nlap.html>.

This presentation will relate how partnerships were established, share some results from analyses conducted to-date, and describe future efforts with the data and partners. This will hopefully provide other states with ideas on how they may be able to pursue partnerships within their own state or adjacent states as data from the 2007 survey is being assessed and encourage states to look ahead to potential partnerships for the 2012 NLA survey.

**0495**

**L2-3**

### **Alaska's Statistical Monitoring Surveys – Implementation Through Partnerships**

Terri Lomax

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Alaska is rich in aquatic resources, containing approximately 40% of the total surface waters of the United States. Our near shore marine resources account for over 50% of the total US coastline and contain almost three times the estuarine area of the contiguous 48 states. Freshwater resources include over 15,000 salmon streams - an important resource to Alaskans and the world.

Direct human impact to these resources, such as wastewater discharges, only occur over small percentage of the aquatic resources, but transboundary transport of contaminants and climate change have the potential to effect large segments of Alaska's aquatic resources. Due to Alaska's immense size and great number of water bodies assessing the status of our aquatic resources presents the Alaska Department of Environmental Conservation (DEC) with logistical and budgetary challenges.

DEC's Alaska Monitoring and Assessment Program (AKMAP) is responsible, for implementing Alaska's statistical surveys to assess water quality on a regional and statewide basis. AKMAP accomplished its surveys by forming partnerships with other federal, state, and local agencies and organizations. Capacity building is a crucial aspect of AKMAP's implementation strategy.

This presentation will describe the collaborative effort to implement a statistically valid survey of the Cook Inlet Lakes, Yukon River, Arctic Coastal Plain Wetlands, and near shore surveys. Without these collaborative efforts statistical surveys in Alaska would not have been possible.

**0458**

**L2-4**

### **Sample It Once, Use It Twice. The Integration of NARS Surveys with State and Volunteer Data for Water Resource Management Decisions in Iowa.**

Mary Skopec

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Given the pressure of shrinking budgets and staffing resources, monitoring programs face continued pressure to minimize duplication of efforts between state, federal, local and volunteer programs and to maximize the benefit of using data for multiple purposes. However, significant barriers exist in sharing and using data originating from different sources within resource management agencies, particularly if the monitoring objectives of the monitoring programs were not closely aligned. The Iowa Department of Natural Resources (IDNR) examined the comparability of data collected as part of the National Aquatic Resource Surveys (NARS), the IDNR ambient stream and lake monitoring programs and the IOWATER state volunteer monitoring program. Results from the comparative analysis indicated a convergence on the assessment of lake condition based on NARS, IOWATER and IDNR ambient lake data; however there were significant differences among the programs for stream condition. The divergence in stream assessment was attributed to significant differences in sampling methodology and protocols. Despite the differences in condition assessment, the IDNR sought to find ways to collect water quality data once, but use it multiple times to ensure that resources were used to the maximum extent possible. To accomplish this goal, IDNR began to explore methods of integrating data from these disparate data sets for water resources management programs and decisions, which unlike condition assessment, may be successfully decoupled from the differing underlying sampling methodologies to inform decision makers on large-scale water management policy issues. Examples from this integration effort will be highlighted including 1) the use of NARS and IOWATER data at a screening level to focus more intensive monitoring within watersheds and 2) linking surveys of citizen perceptions of water quality and patterns of recreational use to measures of water quality and the subsequent development of a prioritization scheme for restoration activities.