

## Abstracts

Thursday, May 1

### Session J7: Using Volunteer Data to Meet State Clean Water Act Goals

8:00 – 9:30 am | Room 231

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#### ***Monitoring Rhode Island's Waters***

**Elizabeth Herron and Linda Green**

*University of Rhode Island, Kingston, R.I.*

##### **Abstract**

Volunteer monitors are an integral component of the Rhode Island (RI) water quality monitoring data system. Engaging volunteers not only expands the scope and magnitude of available data, but also enhances the understanding and support of water quality monitoring. The URI Watershed Watch (URIWW) program is the largest volunteer water quality monitoring program in RI with over 350 trained volunteers monitoring more than 250 lake, pond, river, stream, salt pond and marine sites throughout RI and into southeastern Connecticut. Having started with fourteen lakes in the Wood-Pawcatuck watershed in 1988, we now have over 25 years of comprehensive water quality data on a dozen sites, and more than three years data for hundreds more. This presentation will provide a brief overview of URIWW and highlight some of the diverse ways the data have been used, including in the development of total daily maximum loads, and in assessing the effectiveness of restoration activities, the impact of watershed development and the susceptibility of a lake to invasion by invasive species. Trends, impacts from climate change and emerging concerns for Rhode Island's waters, in particular cyanobacteria (blue-green algae) blooms and the proliferation of non-native species, will also be addressed.

#### ***Citizen Monitoring Programs Helping to Keep Tahoe Blue: Locating Aquatic Invasive Species and Prioritizing Storm Water Point Sources***

**Jesse Patterson**

*League to Save Lake Tahoe, South Lake Tahoe, Calif.*

##### **Abstract**

Lake Tahoe is one of the largest and clearest lakes in the nation and because of its ease of accessibility is also one of the most visited. With these millions of annual visitors come environmental impacts such as increased fine sediment runoff and the introduction of aquatic invasive species. These impacts have led to an almost one foot per year loss in average deep water clarity since it was first recorded in the 1960s and nearshore conditions are markedly worse. Although work is being done to address these impacts and curb clarity loss there is still a lack of resources to adequately monitor, prioritize and implement the needed solutions to restore and increase deep water clarity as well as tackle declining nearshore conditions. This is where the uniquely large number of Tahoe community members (residents and visitors) can help be part of the solution to Keep Tahoe Blue.

The League to Save Lake Tahoe, an environmental nonprofit, has recently introduced two new citizen monitoring programs in collaboration with local, state and federal agencies working in the Tahoe Basin. Pipe Keepers began in October 2012 and trains community members on how to collect water samples and visual observations at many of the nearly 100 pipes and outfalls that drain directly into Lake Tahoe and its surrounding tributaries. This data is made available to the public and other agencies on our website and can be used to prioritize the most polluting point sources that should be addressed. A steering committee made up of storm water management agency staff help guide the program to ensure effectiveness. Eyes on the Lake engages water recreationists at Tahoe to educate them on how to identify and report on the locations of aquatic invasive plant species currently infesting Lake Tahoe as well as keep an eye out for any new introductions. This monitoring program is part of the Lake Tahoe Aquatic Invasive Species Program made up of 40 agencies and organizations in the area. Data is used to

locate new infestations and implement rapid response to more effectively treat them before they can become established and spread.

### ***Using Biological Monitoring Data for Assessment-Our “A-Ha” Moment***

**Danielle Donkersloot**

*New Jersey Dept. of Environmental Protection, Trenton, N.J.*

#### **Abstract**

Most of the volunteer monitoring community in New Jersey collects macroinvertebrate biological monitoring data. This type of data is easy for the volunteers to collect and cost effective for watershed associations. Watershed associations identify the organisms to the order, family or genus/species level depending on their program’s own needs. In the past, the Department of Environmental Protection would only consider data collected at the genus/species level until we had our “A-Ha” moment, when we realized we could consider data at the order or family level for assessment purposes as well. The associations with quality assurance project plans, well documented field procedures, and trained volunteers can also submit data for consideration for the assessment process. Using a list of 20+ organisms, we determined when a stream is healthy certain organisms will always be there and when a stream is in poor condition, certain organisms will always be absent from the sample. Using this presence/absence approach we can classify a stream as healthy/excellent condition or unhealthy/poor condition when there is no other available biological data.

### ***Utilizing Volunteer Monitoring to Meet Local Stormwater Program Objectives***

**James Beckley<sup>1,2</sup> and Chris French<sup>2,3</sup>**

<sup>1</sup>*Virginia Dept. of Environmental Quality, Richmond, Va.,* <sup>2</sup>*Virginia Water Monitoring Council, Blacksburg, Va.,*

<sup>3</sup>*Filterra Bioretention Systems, Ashland, Va.*

#### **Abstract**

The Commonwealth of Virginia has a large and diverse number of water quality monitoring organizations consisting of soil and water conservation districts, colleges and universities, and citizen volunteer organizations. This wealth of volunteer based monitoring groups is due in part to the Virginia Department of Environmental Quality (VADEQ) recognizing volunteer generated data can be of sufficient quality to provide accurate and reliable information to state and local resource managers. This has resulted in Virginia including a significant amount of ‘non-agency’ data as part of the 305(b)/303(d) Water Quality Integrated Report and supplemental data to support the development and implementation of TMDLs.

A number of Virginia localities have been partnering with volunteer groups to assist with local water quality monitoring efforts, which a growing focus on stormwater management and TMDL issues,. Volunteer monitoring has been successful at identifying illicit discharges, identify broken sewer and potable water lines, as well as track the impact of stormwater to local streams and rivers. This presentation will cover several examples where localities have partnered with volunteer monitors to provide a low cost, and effective water quality monitoring program.