

Biologist Case Studies

Jim Amrhein

What he does...

Jim works with the Upper Sugar River Watershed Association (USRWA) to help choose monitoring stations for their stream monitoring efforts. Currently, USRWA Level 2 volunteers monitor 16 sites around the basin. In recent years, the impact to streams by agricultural land use has been reduced, but increased urban development may now pose a threat to headwater areas of coldwater streams in the watershed.

The data he uses...

- Help identify long-term trends in the basin
- Include continuous temperature data for the Natural Community Reference Site study

The time he spends...

Jim spends about 3 hours each spring with citizen monitors from USRWA for a monitoring kick-off. The group has good leadership so his role is limited to helping choose sites, analyzing collected data, and showing support for their work.

The benefits...

He adds that, "While the value of this some of this data won't be gained for several years (trends), the temperature data has the most immediate use. I plan on comparing the temperature data collected by the monitors with the model that John Lyons put together which predicts what the stream should be [thermally]." The USRWA, in cooperation with the DNR, is very interested in monitoring the long term health of these streams as well as providing data that will help make important management decisions for the future.

Mark Hazuga

What he does...

Mark works with stream monitoring volunteers at the Beaver Creek Citizen Science Center (BCCSC) to guide the location of their monitoring when it makes sense to tie their activities to his monitoring priorities.

The data he uses include...

- Continuous temperature data for the Natural Community Reference Site study
- Continuous temperature data for DNR special project to determine cold water potential for a stream
- Monthly water chemistry samples in Clark County as part of the annual statewide non-LTT survey

The time he spends...

Mark spends about 3 hours each fall reporting the data results at an informal BCCSC event for volunteers. During FY09, he has devoted about 64 hours to work with volunteers at BCCSC, plus one volunteer monitor on the Big Eau Pleine River. This includes time spent communicating, meeting in the field, and working to reimburse volunteers for expenses.

The benefits...

In 2008, experienced volunteers close to a non-LTT site far from Eau Claire completed monthly water chemistry sampling. This allowed staff to save 200 miles on their travel budget and to adjust their monitoring schedule. The extra day per month (40 hours total) was used by staff to complete other monitoring activities.

Scott Toshner

What he does...

Scott works with the Friends of the St. Croix Headwaters (FotSCH) to help them coordinate temperature monitoring activities within the watershed. He looks for opportunities to supplement data needed to make management decisions for the fisheries within the basin.

The data he uses include...

- Continuous temperature data to assess various streams for their potential to support trout populations. Sampling is done: 1) to fill information gaps in various locations and 2) to replicate data collection at sites to increase understanding of annual variation in temperature.
- Continuous temperature data for the Natural Community Reference Site study
- Continuous temperature data to track trends over time

The time he spends...

Scott spends about 3 days per year to assist citizen monitors with temperature monitoring work. He also attends some of Friends of the St. Croix Headwaters' (FotSCH) meetings each year, and in 2008, he spent about 3 days helping plan and man a pontoon classroom at the group's St. Croix Riverfest.

The benefits...

Simply put, the volunteers help Scott collect much more temperature data than he can without their assistance. From 2006 to 2008, they've collected 54 field-seasons' worth of continuous temperature data at 40 monitoring sites within the St. Croix Headwaters watershed. Ultimately, these data are of interest to both him and FotSCH. Working with volunteers allows him to interact with, earn trust from, and relate biological concepts to the public – all while out in the field.

Pamela Toshner

What she does...

Pamela works with many groups – Friends of the St. Croix Headwaters (FotSCH), the Upper St. Croix Watershed Alliance, and the US Army Corps of Engineers included – on a modeling effort within the St. Croix Basin. She helps coordinate overall monitoring activities and helps ensure that the results of volunteer stream monitoring are connected to the modeling.

How she uses the data...

Volunteer data have helped focus broader monitoring and modeling efforts in areas where anomalies or negative trends were found. She hopes that to better understand the Upper St. Croix watershed all available data will eventually be plugged into the model.

The time she spends...

Over the past two years, Pamela has devoted about 25% of her time, in some capacity or another, to the Upper St. Croix watershed.

The benefits...

Pamela sees citizens and citizen groups as great advocates of natural resources in the St. Croix Basin. Their ability to connect with local communities is partly what enables them to be effective advocates.