



WILD AND SCENIC River Currents

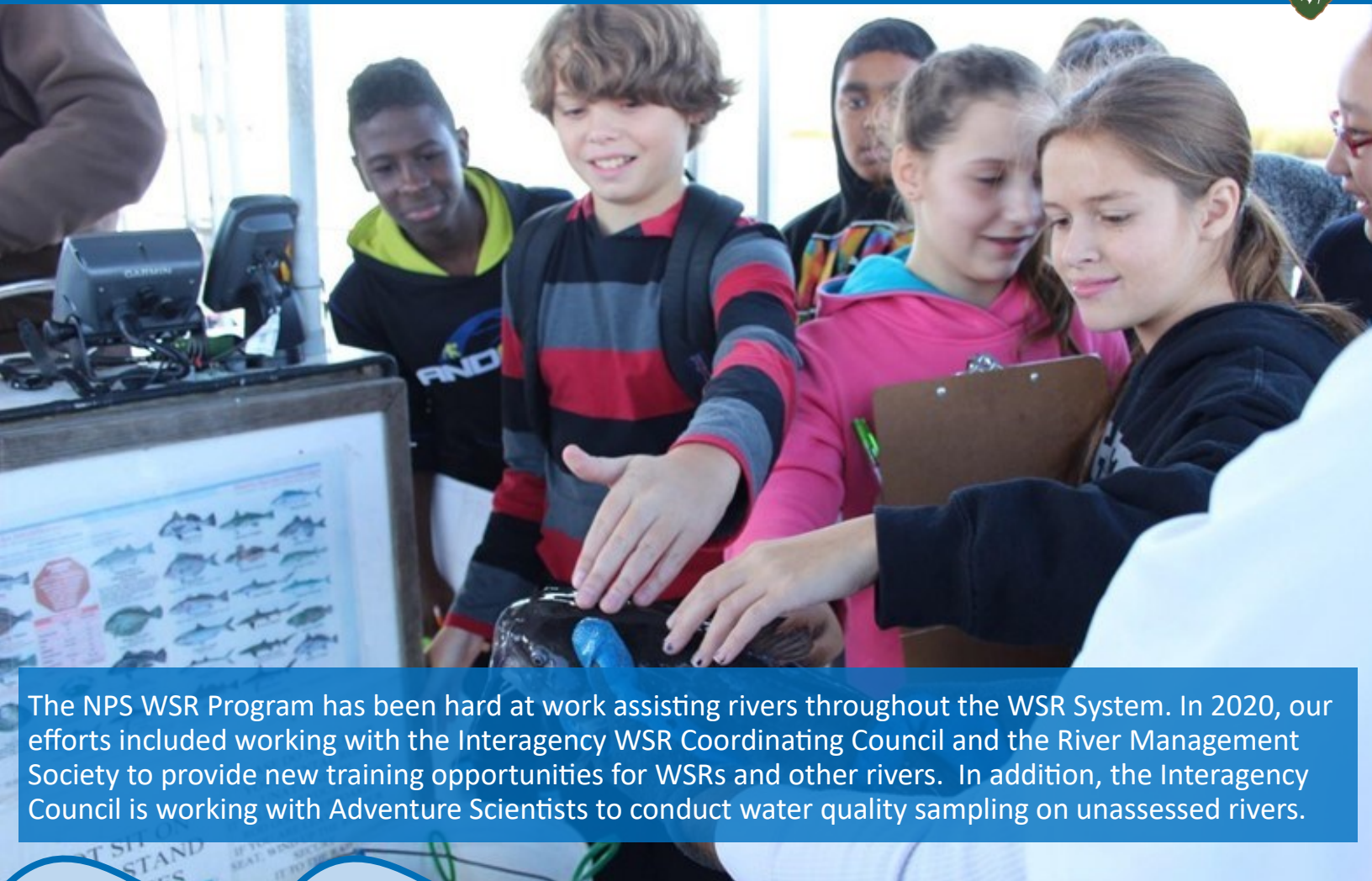
Photo by RH Lord

Welcome to the third volume of *Wild and Scenic River Currents*, an annual newsletter designed to share stories about National Park Service (NPS) wild and scenic rivers and the community of people working to protect and enhance them. This volume of *Wild and Scenic River Currents* highlights the activities and accomplishments of volunteers and staff working on NPS Partnership Rivers, a collection of nationally designated wild and scenic rivers that are managed locally with assistance from NPS. Included within these pages are stories that reflect the dedication and enthusiasm of so many wild and scenic river (WSR) friends. We hope you enjoy reading this year’s volume, seeing our collective impact, and looking back at the accomplishments of our river community. We appreciate your contributions to *Wild and Scenic River Currents* and look forward to many more years of clean, healthy, and free-flowing rivers!

Jennifer Back and Corita Waters, Co-Leaders of the NPS WSR Program

Inside this Volume

NPS WSR Program Highlights.....	2
Connection and Protection.....	6
Improvements to Recreation.....	6
Stewardship and Science.....	8
Land Additions.....	15
People and Resources.....	16



The NPS WSR Program has been hard at work assisting rivers throughout the WSR System. In 2020, our efforts included working with the Interagency WSR Coordinating Council and the River Management Society to provide new training opportunities for WSRs and other rivers. In addition, the Interagency Council is working with Adventure Scientists to conduct water quality sampling on unassessed rivers.

NEW SEAMLESS NHDPlus v2 DATASET FOR WSR SYSTEM AND NRI AVAILABLE

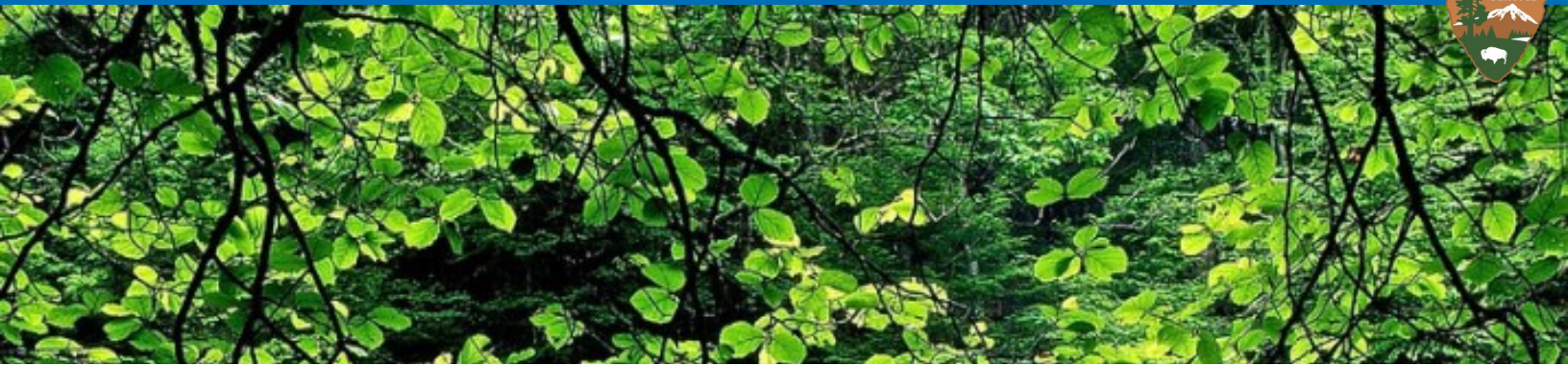
The Free-Flowing Rivers Lab at Northern Arizona University has merged the WSR and NRI datasets with the National Hydrography Dataset version 2 and revised it for errors. This merge offers users the most extensive spatial information related to WSR and NRI segments. The datasets are publicly available for download at [CUAHSI HYDROSHARE](https://www.cuahsi.org/hydroshare).

Annual NPS Steering Committee Meeting

The annual Steering Committee meeting was originally planned to be hosted by Mary Riddle at Glacier National Park, but due to Covid-19 their plans were changed and the meeting was held virtually. Committee members updated the group on ongoing projects, accomplishments, and challenges faced by NPS WSRs. Topics discussed included an assessment of planning needs at both the regional and local river level. Among the planning needs identified by Steering Committee members were assistance in developing outstandingly remarkable value statements and Comprehensive River Management Plans for new rivers, as well as updates to plans for existing rivers. Additional topics included ongoing work to improve the process for performing Section 7(a) requirements and improving technical assistance. Lisa Ronald, a spokesperson for the newly-formed WSR Coalition, also joined the meeting to update the Committee on the Coalition's progress in 2020.



Photo by Tim Palmer



Partnership WSR Newsletter

Amit Kalantri says, “a river doesn’t just carry water, it carries life.” Rivers have been called the heartbeat of the Earth. They can pull together communities and inspire remarkable partnerships and stories. The Partnership Wild and Scenic Rivers (PWSR) are a perfect example of this. The sixteen river systems that make up the PWSRs are filled with community members who have passion for these rivers and the places in which they meander. These outstanding waterways are protected and managed through partnerships between committees, councils, NPS, state and local governments, watershed organizations and local landowners and volunteers in a collaborative format. Without their continued work and devotion, the waterways and watersheds would not be as preserved and protected as they are today.

As a way of connecting, celebrating, and sharing their stories, the PWSR News was created, and produced every few years since the early 2000s. This summer with the assistance of NPS Communications Fellow Cassidy Quistorff, the Partnership Wild and Scenic Rivers program launched a new style of virtual newsletter. For each partnership river, the newsletter highlights their success stories within their designation month. Connecticut’s Farmington River, which was designated in August of 1994, was the first river to be highlighted. The following months focused on nine additional Partnership rivers, with locations from Florida up to the Canadian border in Vermont.

August 2020 marked the anniversary month for the Farmington River (CT). See the NPS News for [August’s stories](#).

October 2020 marked the anniversary month for three Partnership Wild and Scenic Rivers: Great Egg Harbor (NJ), White Clay Creek (DE/PA), and Wekiva (FL) Rivers. See the NPS News for [October’s stories](#).

November 2020 marked the anniversary month for three Partnership Wild and Scenic Rivers: Lamprey (NH), Lower Delaware (NJ/PA) and Westfield (MA) Rivers. See the NPS News for [November’s stories](#).

December 2020 marked the anniversary month for three Partnership Wild and Scenic Rivers: Maurice (NJ), Musconetcong (NJ) and Upper Missisquoi and Trout (VT) Rivers. See the NPS News for [December’s stories](#).

The expanse of these rivers and their stories are more than just geographical. Through the PWSR News, we’ve been able to share experiences of recreation, organization and safety in a pandemic, preservation achievements, initiatives that protect water quality, and the remarkable people who make up these unique communities.

Each person involved in the Partnership Rivers program plays a special role in their river’s story. Whether as a recreator, board member, staff, landowner or volunteer, there are many ways to leave a positive impact on a river and its community. It is our hope with the newsletter that we not only celebrate these places and people, but also share resources and knowledge from different regions to inspire you.

As we continue to highlight the remaining rivers, we hope you will join us in participating in these shared communities. To learn more about Partnership rivers and their designation process, you can visit the [PWSR Toolkit](#).



Photo by Tim Palmer



Calling All Adventurers!

The [Interagency Wild and Scenic Rivers Council](#) has teamed with [Adventure Scientists](#) to survey water quality on WSRs across the country, particularly rivers that are unassessed by their state water quality programs. Framed by the five-year window between the 50th anniversaries of the Wild and Scenic Rivers Act and the Clean Water Act, this monitoring effort is contributing information on the condition of our country’s most protected rivers. In 2020, volunteers collected water quality data on four NPS WSR segments including Surprise Canyon Creek, the Snake River, the Gros Ventre, and the Buffalo Fork.

The project is still seeking experienced rafters, canoers, kayakers, and hikers to follow detailed protocols, communicate regularly with the Adventure Scientists team, and follow through on their commitments in a timely matter.

Learn more at: <https://www.adventurescientists.org/wsr-2021-volunteer-info.html>



Photo by Trecia Ehrlich



Photo by Jack Henderson

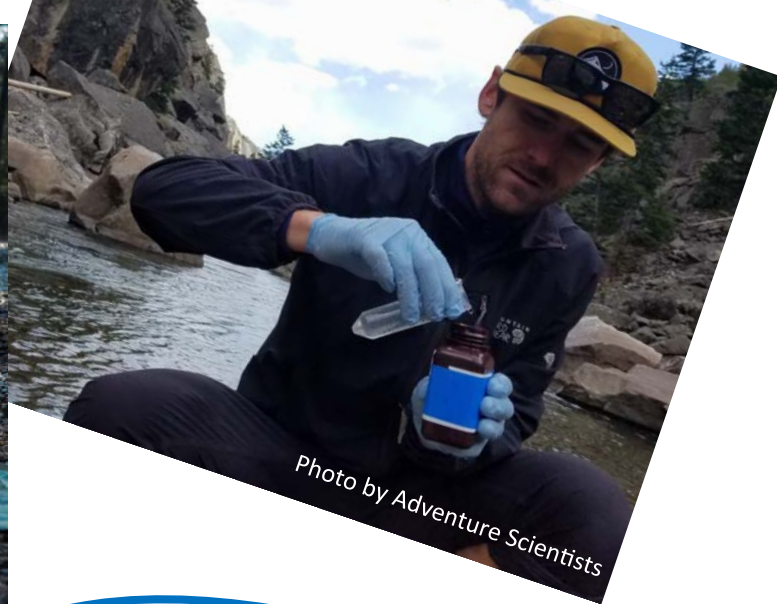


Photo by Adventure Scientists

WATER RESOURCES DIVISION CREATES NEW WSR SCIENCE PROGRAM

The [Water Resources Division \(WRD\)](#) has recently implemented a new organizational and leadership structure to provide better service-wide assistance. As part of this new organizational structure, WRD has established a new program focused on wild and scenic river science. This program is responsible for developing strategies and providing technical assistance to protect the instream flows and river values of wild and scenic rivers. This new program also works collaboratively with the [Conservation and Outdoor Recreation Division](#) to provide guidance on wild and scenic river policy, stewardship, and management. Please contact [Jennifer Back](#), the new program lead, for more information.



River Management Society Updates

The River Management Society’s River Training Center (RTC), established in 2018, supports the effective management and stewardship of North American rivers by providing training for professionals and volunteers who study, protect, and manage them. Online and in-person training workshops on various river-related topics are intended for river managers, river advocates and businesses who conduct work projects in or around rivers. The RTC also has a special emphasis on WSR management for both agency and public audiences. In the last year, the River Training Center completed the following training workshops in-person and remotely in collaboration with NPS and other federal agencies who manage WSRs:

- Alaska Fish and Wildlife Service Wild and Scenic River Values Workshop, Fairbanks, AK, Jan. 22-24, 2020
- Oregon BLM Wild and Scenic Rivers Management Workshop: Implementing the Dingell Act, Springfield, OR, Feb. 11-14, 2020
- Mark Twain National Forest Eleven Point Wild and Scenic River Workshop: Updating the Comprehensive River Management Plan - Remotely, Oct. 5-8, 2020
- River Access Planning Workshop: Focus on the Farmington Wild and Scenic River, Virtual, Oct. 20 & 27, 2020
- Toward Better Bank Protection: For Wild and Scenic and Other Rivers, Virtual, Nov. 4, 2020
- Wild and Scenic River Management Workshop for the Green River in Utah BLM: Implementing the Dingell Act - Remotely, Dec. 1-3, 2020

Look for upcoming training opportunities for river professionals at the [RMS River Training Center website](#).

NPS TEAMS WITH RIVER NETWORK TO PROVIDE SMALL GRANTS FOR WSR WATERSHED SCIENCE

These small grants were a continuation of the 2018 initiative called Swim, Splash, Smile. The purpose of this initiative is to encourage citizen science on WSRs. In 2020, Seven NPS WSR partners received funds to support citizen science in WSR watersheds. Read more about what projects were funded [here!](#)

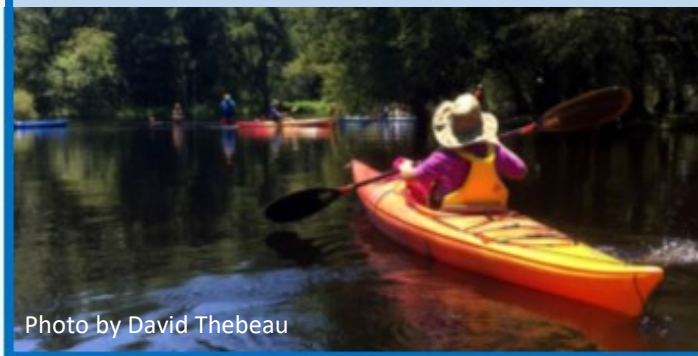


Photo by David Thebeau

Connection and Protection



From improving recreational opportunities to expanding stewardship through community engagement, this section highlights the many unique projects that NPS and its partners carried out in 2020 to connect people to NPS WSRs.



Photo by Kate Wright, SCRA

Improvements to Recreation

Recreation Updates on the Taunton WSR, MA

Content submitted by Bill Napolitano

The Taunton River Stewardship Council (TRSC) continued to work with their partners at The Nature Conservancy and the Town of Bridgewater to remove the High Street Dam, repair the bridge, improve river access and restore the portion of the Town River in Bridgewater.

As part of Boy Scout Evan Kaprelian's Eagle Scout project, they also provided a grant and technical assistance for the completion and installation of a portable docking/access system at historic Pratt's Landing in West Bridgewater.

Meanwhile, the Taunton Pathways Committee worked with the state's consultant to complete the engineering and design of another 2-mile segment of the planned, TRSC led, 22-mile Taunton River Trail blueway/greenway.



Photo courtesy of Bill Napolitano



The National Rivers Project Now Includes New WSRs in the Northeast

Content Submitted by James Major

The River Management Society, in collaboration with NPS, added Partnership WSRs in three northeastern states to the National River Recreation Database, which fuels the National Rivers Project (NRP). The NRP is the US's ever-growing comprehensive, authoritative database and interactive map that records and shares paddling information for nearly 2,000 segments of WSRs, water trails and select whitewater rivers.

The NRP makes it easier than ever for outdoor and paddlesport enthusiasts to explore newly designated rivers, including 21 new boatable river segments and 46 new access points. The new NRP additions are located on 16 rivers in MA, CT, and RI. This information is sourced and vetted by local managers and is available to the public online at www.nationalriversproject.com.

Contact [James Major](#) for more information.



Photo by Elise Torello

New Maps of the Eightmile WSR Watershed, CT

Content submitted by Riley Doherty

With Connecticut State Parks experiencing record use, and the Connecticut Trail Census reporting an average 53% increase in trail use across the state compared to the previous year, it was obvious that people were looking for an outdoor escape in 2020. Coordinating with local land managers, the Eightmile WSR created an 18x24" foldable map of all 44 preserves, parks, and state properties open to the public within the Eightmile WSR's watershed. The back of the map describes all allowed activities at each park, including hiking, biking, horseback riding, cross-country skiing, and more. It was mailed to all local residents and businesses with the purpose of promoting the less known and less used preserves in the area. The map proved to be very popular, with many community members reaching out to express their excitement and gratitude for this new resource.

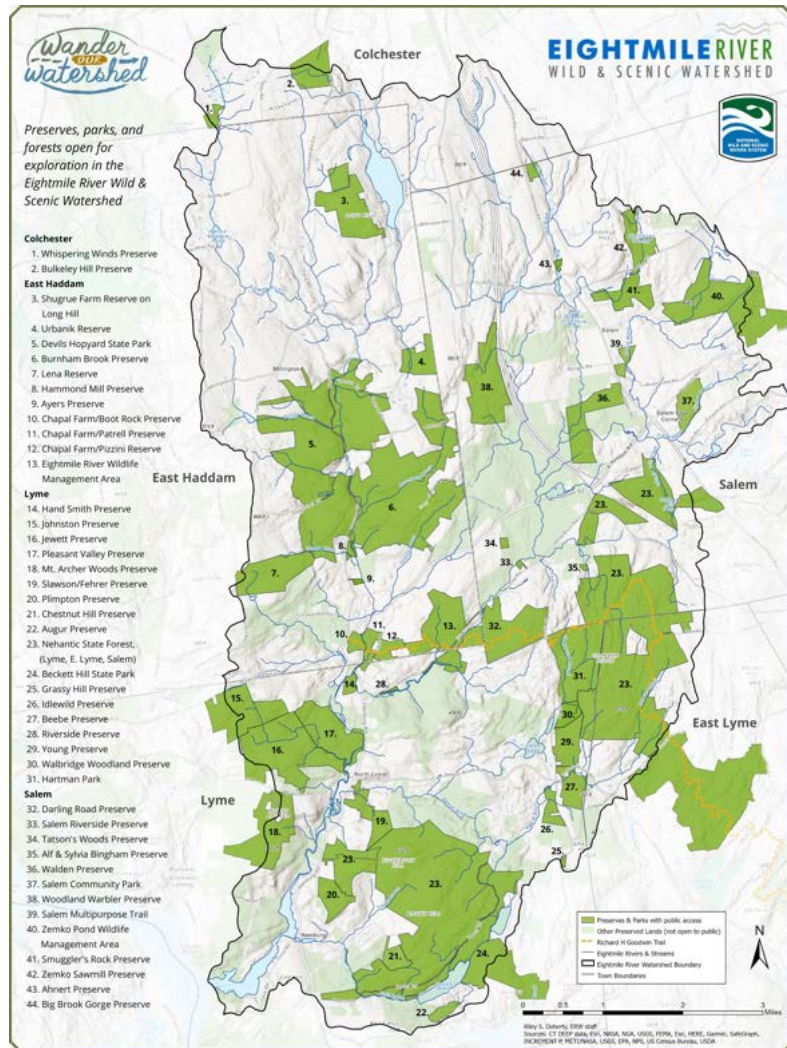




Photo courtesy of Riley Doherty



Stewardship and Science

Eightmile WSR, CT

Content Submitted by Riley Doherty

Outdoor Challenges and Cool Stickers. Every July, the community is invited to the Eightmile WSR Watershed’s family programs in the local state park. Rather than cancelling, they wanted to come up with something different to engage the community. Webinars were getting old and kids had just gotten out of online schooling, so they were hesitant to do something virtual. They decided to host socially distant outdoor family challenges each week of July. The most popular challenge was to pick up trash in the participant’s local community. Participant responses were collected through the Epicollect5 app, often used for citizen science projects. They asked several questions related to the challenge and families could opt to upload photos or videos of their experience. Everyone that completed challenges received our brand-new wildlife stickers in the mail.

Rethinking In-Person Programs. With the help of a NPS WSR grant, the Eightmile WSR Watershed successfully began a new community riffle bioassessment program, where the data collected is sent to the CT Department of Energy and Environmental Protection for further analysis and statewide reporting. Event registration was required, with limited attendance allowed. Although their normal in school programs were not an option in 2020, the new program

offered the larger community an opportunity to get outdoors, explore a preserve with a guide, and become citizen scientists. All three events filled up quickly and two newly homeschooling families were able to use the program as part of their science curriculum. The feedback received was incredibly positive among the kids and adults alike.

Improving Online Engagement. The pandemic pushed the Eightmile to expand the way they interacted with their community. In March they began creating original content for their social media pages. In response, their following on Facebook increased 50% since the pandemic began. Some series they created include an Earth Week series, a preserve “profile” series, and an ongoing science based informational series.



SuAsCo Riverfest 2020

The Eightmile WSR wasn’t the only river whose annual event plans changed. Check out how the Sudbury, Assabet, and Concord WSR celebrated [here!](#)



Investigating Mercury with Dragonflies Across WSRs

Content by Katherine Ko, Colleen Flanagan Pritz, Collin Eagles-Smith, and Sarah J. Nelson

[The Dragonfly Mercury Project \(DMP\)](#) engages hundreds of volunteers each year to monitor mercury (Hg) by collecting dragonfly larvae. The DMP has been fortunate to collaborate with many passionate partners, resulting in a nationwide network of stewards that includes the FL Department of Environmental Protection at the Wekiva WSR (WEKI), Northland College students at St. Croix WSR (SACN), Citizens United to Protect the Maurice River (MAUR) & Its Tributaries, and the Organization for the Assabet, Sudbury, & Concord Rivers (SUAS). The DMP has partnered with 7 WSRs to date, sampling an annual average of 2-3 sites per park with approximately 6 citizen scientists per site. Many WSRs have been sampled multiple years, often with returning volunteer groups!

Based on a synthesis of DMP data from MAUR, SACN, Niobrara (NIOB), Upper Delaware (UPDE), and Rio Grande (RIGR) rivers (data forthcoming from SUAS and WEKI), results show that dragonfly Hg concentrations vary widely both across and within WSR units. At these 5 WSRs, Hg concentrations varied by as much as 14-fold among rivers and 10-fold between sites within a single WSR unit.

In order to make comparisons across sites and time periods, [Eagles-Smith et al. \(2020\)](#) converted each individual sample to an Aeshnid-equivalent concentration, normalizing the concentration to a consistent dragonfly family (Aeshnidae). These Hg concentrations can then be used to assess potential health risks according to existing Hg benchmarks for fish, wildlife, and human health. This work developed 5 risk categories from severe– to sub-impairment to estimate Hg risk based on dragonfly Hg concentrations.

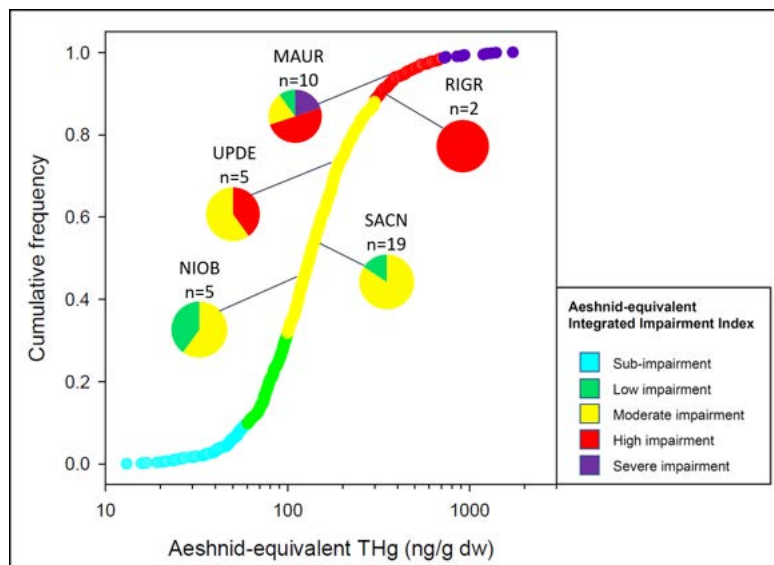
While the majority of WSR sites fell in the low or moderate impairment categories, about 27% had Hg levels that potentially exceed high or severe health benchmarks for fish, wildlife, or humans. In addition, study-wide results show that dragonfly larvae from rivers and streams had higher Hg concentrations than those from ponds and lakes, perhaps highlighting a particular concern for WSRs nationwide, while water bodies surrounded by wetlands had higher Hg concentrations than those without wetland influences.

This foundational, continental-scale research using dragonfly larvae as biosentinels has already revealed a great deal about Hg risk across varied ecosystems, and there is much more to discover moving forward. For instance, the large variation in Hg concentrations among sites, including those near to one another, emphasizes the role that local site characteristics play in facilitating Hg accumulation in the food web. The DMP has found joy and success in partnering with WSRs to move toward our shared mission of engaging young stewards and community members in the protection of the natural resources that surround them. We aim to engage even more partners, communities, and sampling sites in the future, and we hope to work with our WSR partners, old and new, to achieve that goal.

Contact dmp@nps.gov for more information about the DMP.



Photo by Karla Rossini



The line on the graph above depicts the cumulative frequency distribution, or the proportion of sites by sampling year (n=877) that fall into each of the five impairment risk categories. The pie charts next to the distribution curve illustrate the proportion of each WSR sampling site by year (n) that resides in one of the five risk impairment categories, and relative location along the risk distribution of all sites in the DMP study, 2009-2018. ng/g = nanogram per gram; dw = dry weight. Figure adapted from [Eagles-Smith et al. \(2020\)](#).



Photos by Tony Robatzek and Jason Dunning

The Flathead's WSR Rangers

Content Submitted by Brad Blickhan, Wilderness and Wild and Scenic River Coordinator

Glacier National Park in northwest Montana, a portion of Waterton-Glacier International Peace Park, happens to be blessed with portions of the North and Middle Forks of the Flathead Wild and Scenic River as its boundary. Over 100 miles of the North and Middle Forks of the Flathead River frame the western and southern side of the park.

Since designation as a wild and scenic river in 1976, the bulk of the on-river patrols on these stretches of river have been conducted by the US Forest Service-Flathead National Forest, the lead agency and cooperative river managing partner with NPS. Prior to 2020, NPS contributions had been inconsistent at best, with the bulk of the NPS patrols performed by volunteers, and ranger patrols conducted only sporadically as staffing allowed.

That all changed in 2020. With a generous grant from the Glacier National Park Conservancy, Glacier National Park was able to hire 2 seasonal law enforcement rangers, whose primary role and function was to patrol the liquid, flowing portion of Glacier's western boundary, and to aid the resource monitoring effort primarily carried by the Flathead National Forest.

Glacier's river rangers, during a very uncertain season dominated by Covid-19 concerns, were able to stand up and expand a program, conduct necessary pre-season river training, and patrol almost 500 miles of river. They contacted hundreds of floaters, cleaned-up numerous fire rings and garbage, and spread the word about leave no trace principals to river users throughout the river corridors bordering the park. They participated in joint patrols with the Flathead National Forest, and aided search and rescue efforts conducted by the Flathead County Sheriff's Office.

It is hoped that this was just a beginning to Glacier's river ranger program, helping protect a portion of the incredible resource that is the 3 Forks of the Flathead WSR.



1st place Landscape: Jeff Parlow

Obed WSR Photo Contest

The annual Obed WSR photo contest received an outpouring of entries this year. During the Covid-19 pandemic, attendance at the Obed WSR has increased and visitors were eager to share their best images with the park. Photographers were invited to submit striking digital images highlighting the spectacular views, dark night skies, historic sites, recreational opportunities, and diversity of life in the Obed.

Photographs were accepted in five categories including Recreation, Dark Skies, Flora & Fauna, Landscapes, and Youth (submissions by photographers under 18 years of age). Entries were judged on technical excellence, originality, creativity, visual impact, and artistic merit.

This year the usual Photo Contest Winners Reveal Celebration event was done a little differently. The park showcased all finalists' entries all day long on the [Obed WSR Facebook page](#) during October 2 and then that evening the winners were announced on Facebook.



1st place Dark Skies: Mark Leckington



Historic Wildfire in the Cache la Poudre WSR Watershed Provides Unique Research Opportunity

Content by Mary Guiden, modified from article in [Colorado State University's SOURCE](#)

A team of scientists at Colorado State University (CSU) has received an award of nearly \$50,000 from the National Science Foundation to study snowpack, streams and sediment in waterways in the areas affected by the largest wildfire in CO history.

Principal investigator Stephanie Kampf said the team came up with the study concept as they watched the Cameron Peak Fire begin to burn northwest of Fort Collins in August 2020. The fire was at 92% containment as of Nov. 18, 2020.



Photo courtesy of Colorado State University

“Given that the fire was burning in our local watershed, everyone is curious about what would happen with our waterways,” she said. “The Cameron Peak Fire has been unique, since it started at and burned a large area at high elevation.”

Kampf said the fire is the fifth largest in a high-elevation persistent snow zone in the Western US since 1984.

“As researchers started looking for examples of other high-elevation fire studies, we realized that not much research has been conducted,” she said.

CSU Assistant Professors Sean Gallen and Ryan Morrison and Professor Sara Rathburn are co-investigators on this project. Kampf said that scientists from the USGS will also collaborate on the research.

Morrison, who will study how stream channels and floodplains in the Poudre River basin are impacted by changes in sediment transport and flow after the fire, agreed that the Cameron Peak Fire had unique aspects to study.

“The Cameron Peak Fire in northern Colorado has burned nearly 20% of the upper Cache la Poudre River basin, which supplies water to meet municipal and agricultural needs in the region,” he said. “The fire has also expanded to lower elevations, burning both transitional and intermittent snow zones.”

Morrison said water providers, including cities in northern Colorado, are concerned about the impacts of erosion on streams and reservoirs. Snowpack is crucial for the water supply in CO.

“This project will collect critical data for the first snow accumulation and melt season after the fire to address how the fire affects snow processes, flow paths and sediment movement,” he said.

Kampf said previous research on the impacts of wildfires on snowpack have been quite variable.

“When there’s a fire, we can see increased snow accumulation, due to fewer trees intercepting the snow,” she said. “But this doesn’t always happen. Sometimes greater exposure of the snow to the sun leads to lower snowpack after fire.”

And while snow melt doesn’t usually create high elevation snow hazards, Kampf said it’s possible that having greater snowpack in the burn area may cause other hazards like debris flows.

The research team only recently received approval to go into the burn area and begin field work. They hope to complete as much research as possible before there’s a lot more snow on the ground.

Additional researchers on this project at CSU include Paul Evangelista and Tony Vorster, Dan McGrath and Ellen Wohl, Peter Nelson, Steven Fassnacht, and Kristen Rasmussen.

2020 FIRES IN WSR WATERSHEDS

The year 2020 was a fiery one: roughly 3,300 square miles in 53 WSR watersheds were burned, with over 245 designated WSR miles directly affected.



Partners Highlight Health of the St. Croix National Scenic Riverway

Content submitted by the St. Croix River Association and the Minnesota Pollution Control Agency

The St. Croix WSR, treasured for its natural features, cultural significance, and exceptional fishing and boating, is heralded by officials in WI and MN as a shining example of successful water protection with one warning: don't stop now. The St. Croix is among the nation's first rivers designated for protection under the WSR Act, and today 90% of its wetlands in the northern areas of the MN portion remain untouched. Two new reports by the St. Croix River Association (SCRA) and the MN Pollution Control Agency (MPCA) summarize water quality, the health of fish and bugs, and strategies for continued protection.

The reports illustrate a need to protect against increasing development that could endanger the St. Croix River, which forms the MN-WI border and is enjoyed by hundreds of thousands of people each year.

"We are blessed with a truly special WSR, a generally healthy and intact riverine system seldom seen elsewhere. But the river is vulnerable," says Deb Ryun, SCRA Executive Director. "From preventing the spread of invasive species to being mindful of everyday actions on water quality, everyone can do something to help preserve the St. Croix."

The SCRA's State of the St. Croix River report describes the river's special features that are threatened:

- Native mussels are threatened by the zebra mussel, an invasive species that attaches to other mussels, preventing them from breathing, eating, and reproducing.
- Numerous invasive species threaten the river's native plants and wildlife, including yellow iris, purple loosestrife, and Asian carp.

The MPCA's report, *The St. Croix River: Study of the River's Health*, assesses the river's water quality compared to MN's

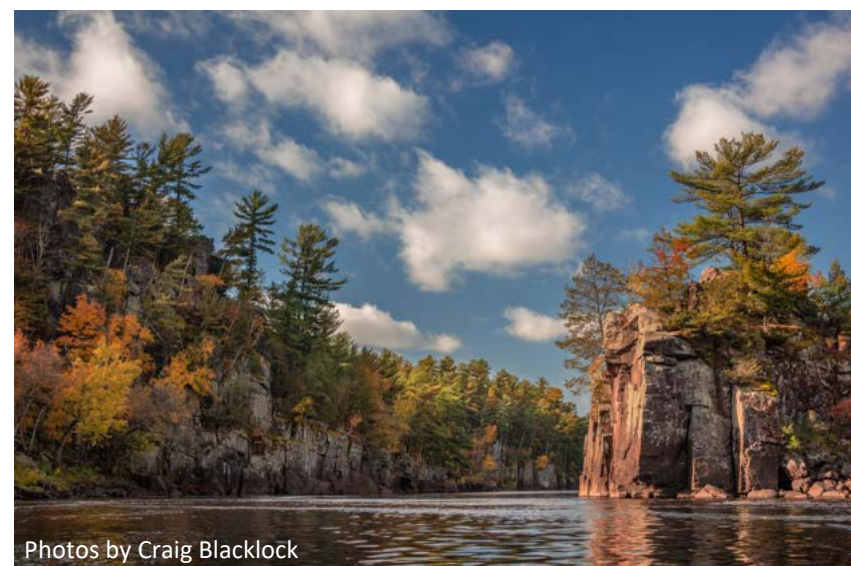
water quality standards, from the point where the river enters MN to its confluence with the Mississippi River. The MPCA report notes:

- Phosphorus concentrations are decreasing, according to long-term monitoring by the Metropolitan Council, evidence that strategies such as fertilizer management and wastewater treatment are working.
- Fish and bugs are in excellent to good condition: MPCA scientists found 63 fish species while sampling, including four considered rare or that need unique habitat to thrive. The diversity is a strong signal that the health of the St. Croix River is in good condition.
- Though the fisheries are in excellent condition, limits remain on how much fish can be consumed safely because of mercury and PCB levels, a common problem throughout the state.
- There is an emerging threat from PFAS, a group of synthetic chemicals used in many consumer products. Some of the chemicals are known to be hazardous to human health.

"This is a great example of federal, state, and local protection policies that work and result in excellent conditions overall. Our job now is to continue working together at all levels in protecting this river, especially with emerging threats to water quality," said Pam Anderson, Manager of Surface Water Monitoring for the MPCA.

The reports note that continuing protection strategies are crucial to safeguarding the river's good water quality and biology, and protecting against climate change.

For more information about these reports, visit the [SCRA website](#) and the [MPCA website](#).



Photos by Craig Blacklock





Photo by OARS

OARS Water Quality Monitoring on the SuAsCo WSR

Content submitted by Emma Lord and Alison Field-Juma

When the pandemic struck, many organizations that work with volunteer citizen scientists to collect water quality data wondered whether they could still pull it off. After over 20 years of uninterrupted water quality monitoring, OARS quickly sought ways to redesign their program to be covid-safe. The mission of OARS, a watershed non-profit and Wild and Scenic River Stewardship Council founding member, is to protect and restore the health of the three rivers. Wild and Scenic Rivers funding has helped support their monitoring program which has provided the data for precedent-setting pollution limits to reduce eutrophication of the river system.

To implement safe social-distancing, OARS' Water Quality Scientist innovated in several ways, including recruiting household-based teams so that they could drive in one car and interact with each other safely; developing a series of training videos to replace much of the in-person training, and developing handing-off protocols to keep shared

equipment and materials sanitized. The new teams of 36 citizen science volunteers successfully completed the 5-month sampling schedule following the approved quality assurance plan as in years past. In addition, OARS was able to grow the water quality monitoring program to include 11 new sites to track sources of nutrient and bacteria pollution in the rivers thanks to two new small grants. Whatever the monitoring season of 2021 will look like, OARS plans to use the new training videos and many of the new protocols in the years to come. These innovations, while necessitated by events beyond their control, resulted in improvements and were well worth the investment. The pride of the volunteers in successfully collecting the data need for science-based decision-making despite all odds is a co-benefit that everyone could appreciate.

INVASIVE MANAGEMENT ALONG THE LOWER DELAWARE WSR

The Hunterdon Land Trust (HLT) remained aggressive in its efforts to combat the invasive Emerald ash borer. It recently completed an inventory of ash trees in high priority areas – roads and hiking trails, for instance – on all its preserves. HLT has also monitored spotted lanternfly infestations and has been diligent about sharing information with NJ officials. Invasive vegetation management via the contracted removal of woody invasives in two woodland areas at the Zega-Lockatong Preserve in Delaware Township has also received much attention.



Nashua, Squannacook, and Nissitissit WSR Shoreline Surveys: Information is Key to Action

Content Submitted by the Nashua, Squannacook, and Nissitissit Wild & Scenic River Stewardship Council

This past summer, at the direction of the Nashua, Squannacook, and Nissitissit Rivers Wild & Scenic (W&SR) Stewardship Council, shoreline surveys were done on nearly all of the W&SR designated sections of the three rivers. Over 52 miles of surveys are being conducted by Al Futterman, who serves both as NRWA Land Programs Director and as Outreach and Project Coordinator for the Stewardship Council. Al was accompanied by other W&SR Stewardship Council participants.

Undertaken by boat, or by walking in the river and on its banks, these surveys are a visual assessment or inventory of the waterway and its adjacent land use. They are meant to assess the health of the waterway and its immediate corridor by noting general characteristics as well as problems and potential opportunities. Establishing a baseline can be a first step toward recognizing actions that need to be taken to maintain or improve the waterway and the land that serves as its buffer.

Of most interest was how varied the rivers are as they fluctuate from mile to mile, from day to day, and from season to season. The upper Nissitissit River in portions of Brookline was nearly unnavigable this summer, and a great many tires were encountered. The upper Squannacook had so many obstacles—logjams, blowdown trees, and snags—as to make for a serious challenge to boating. The water clarity of these two rivers was clearer than the mainstem Nashua. Fish and other wildlife were frequently seen. While invasive plants were encountered on all three rivers,

nowhere were vast monocultures seen. Eroded and undercut banks—mostly naturally occurring—were evidenced on all three rivers, but their impacts have yet to be determined. In a few places, there was a bit of an industrial feel, but in most places a “wild and scenic” atmosphere prevailed. Some highlights were the intact floodplain forests in those long stretches of protected lands like J. Harry Rich State Forest, Oxbow National Wildlife Refuge, and the Squannacook and Nissitissit Wildlife Management Areas.

“It is always such a pleasure to be on the river,” stated Beth Suedmeyer, W&SR Council member from Ayer.

“Participating in the shoreline survey afforded me an opportunity to look at the river— its shoreline, vegetation, banks, floodplains, and confluences with tributaries— in a more comprehensive manner and consider the interplay between the river and the natural and human-induced processes around it.”

“The natural beauty of these rivers is an invaluable asset to the region,” commented Neil Angus, Environmental Planner at Devens Enterprise Commission. “It was great to get out on the Nashua with Al to take part in these surveys to help identify the river’s strengths, vulnerabilities, and opportunities in order to better inform the future actions of the W&SR Council.”

The information collected while doing these surveys will influence immediate, as well as short and long-term, stewardship actions. Such actions could include organizing a river cleanup, restoring an eroded bank, removing invasive plants, or pursuing a riverside walking path. The goal in the end is to maintain and protect a healthy wild and scenic river system that benefits wildlife and humans alike.



Photos by Neil Angus



Photos by Dave Harding

Land Additions

TAUNTON WSR MOVES TOWARDS LAND ACQUISITION

The Taunton River Stewardship Council provided technical assistance, match funding, and worked with the Town of Somerset towards the acquisition of a 2-acre parcel, abutting Somerset Waterfront Park, with 250 feet of river frontage providing direct access to the Taunton WSR.

Lower Delaware WSR

Content submitted by Hunterdon Land Trust

Hunterdon Land Trust (HLT) has worked tirelessly to preserve and care for land within the WSR corridor, fully cognizant of the inherent value of the Delaware River area for clean water, natural plant and wildlife habitats, and for outdoor adventures.

With the help of its partners, Hunterdon Land Trust secured a number of preservation victories in the area. The Goeckeler Farm in Kingwood, just a stone's throw from the Devil's Tea Table, is one such accomplishment. These 47 acres of fertile grassland are perched atop a plateau near the river. The property served as farmland for more than two centuries – it's currently an equine farm – and is "a very special, quiet place in the world that deserves to be protected," as its owner Susan Goeckeler affirms.

HLT was instrumental in preserving two other properties – Pinebrook Farm Associates and Dixon/Fleming – that are also within the Wild and Scenic area and will add 110 acres to Kingwood's Horseshoe Bend Park. The total acreage of the park has jumped to 796.45.

If all goes according to plan, these acquisitions will add a mile to the park's Flagg-Kirkland trail. Nature lovers will appreciate a wide range of trees – including beeches, maples, cedars and old oaks – along with the only vernal pond at Horseshoe Bend.

One additional note: The Pinebrook Farm Associates preservation pushed HLT over its long-term goal of protecting 10,000 acres in the Hunterdon County area by the end of 2020. While celebrating this achievement, HLT continues building upon its successes. It recently obtained two acquisition grants totaling \$588,750 for properties within the Wild and Scenic focus area and is actively working on 12 projects in four different municipalities, which total 897 acres.

Through these, and a variety of other measures, HLT has demonstrated a determined drive to help protect the Wild and Scenic area to ensure its enjoyment for now and forever.



WSR Steward Spotlight

A special welcome to Emma, Andrew, and Lauren who joined the NPS WSR Partnership Program in 2020:

Emma Lord

After working as a WSR fellow with NPS for nearly three years, Emma joined the Partnership WSR staff as a Natural Resource Specialist. Her love for water and rivers began growing up in the foothills of the Catskill Mountains in upstate New York. Emma earned a B.A. in Environmental Studies

from Green Mountain College and an M.S. in Geology from the University of North Dakota, with a concentration in geomorphology.

Andrew Pettdemange

Andrew joined the Partnership WSR staff as the new Natural Resource Specialist. With about a decade of NPS experience, Andrew brings with him a passion for ecological stewardship as well as management expertise. He will be working with NPS Region 1 and will join Liz Lacy in supporting the Eightmile, Upper and Lower Farmington, and Westfield WSRs. Andrew's dedication to NPS is a testament to his belief that our public lands are for everyone; he holds a particular interest in environmental justice.



Lauren Bonatakis

Lauren joined Partnership WSR following her time with NOAA Fisheries as a Sea Grant Knauss Marine Policy Fellow. Lauren received her B.S. in Biology and Environmental Science in 2013 from Simmons College in Boston. Since then, she has gained valuable experience working with

community members and stakeholders in the natural resources sphere through her service with AmeriCorps and her recent graduate research. In December 2019, she earned her M.S. in Renewable Natural Resources with a concentration in Fisheries from Louisiana State University.

If you have questions regarding a specific WSR project or want more information on WSRs, please contact the appropriate WSR coordinator from the following list:

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