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Protecting and Restoring Rivers and their Watersheds

25 Lessons from 25 Years

by Todd Ambs River Network www.rivernetwork.org

uch as a river springs from a trickle and gathers momentum, rushing around boulders and over falls, the movement to protect our rivers has overcome many obstacles to become

a force of—and for—nature. A quarter-century ago, when River Network was founded, there were perhaps 200 state or local groups whose primary purpose was to protect our freshwater resources. Today, there are more than 2,000.

River Network has played a central role in building this momentum, but we are just one player. Tens of thousands of passionate, dedicated grassroots leaders have all contributed in their own way—and together we have forged a thriving and dynamic movement.

As we celebrate River Network's 25th anniversary this year, we want to take this opportunity to share 25 inspiring stories of what some of our friends have accomplished. Of course, this is just a sampling—for every story told here, there are a hundred more.

Our intention isn't necessarily to share the best or biggest successes but rather to provide a portrait in time of the diversity and richness of the watershed

protection movement. From the Atlantic to the Pacific and from the Great Lakes to the Gulf of Mexico, the watershed groups highlighted here have found success in many arenas—dam removal, river cleanups, habitat restoration, water quality monitoring and numerous strategies to reduce water pollution. As the hub of a national network, we are helping them share and replicate those successes in many other watersheds.

In fact, our sole purpose is to help state and local freshwater protection groups become more effective. We help them learn how to raise more money, plan more strategically, adapt to the impacts of climate change, and use tools like the federal Clean Water Act.

The truth is, River Network has never had a success we can truly call our own. Because we don't want one. What matters most to us is providing people with the skills, resources and means to protect their local rivers now and for future generations.

As you read these remarkable stories, we hope you'll share our sense of accomplishment for our flowing waters—and our belief that the next 25 years will give us even more to celebrate!

Celebrating River Network's Silver Anniversary





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Water Quality Shall be Maintained and Protected

ave you ever wished that you could ensure that people and fish could splash, dive and enjoy clean water without worrying about pollution from some new development or industry? Outstanding National Resource Waters (ONRW) designations provide these protections. The Clean Water Act describes

by Rachel Conn Amigos Bravos www.amigosbravos.org

ONRWs as "waters of exceptional recreational or ecological significance" and protects these waters by stating "water quality [in ONRWs] shall be maintained and protected".

Amigos Bravos has advocated, with assistance from the Western Environmental Law Center, for three successful ONRW designation efforts in New Mexico. As a result, over 700 miles of rivers and streams, 31 lakes, and approximately 600 acres of wetlands are protected as ONRWs.

1. Rio Santa Barbara: Amigos Bravos nominated and successfully advocated for the designation of the Río Santa Barbara as New Mexico's first ONRW after it was identified as a treasured New Mexico river by people attending an Amigos Bravos and River Network sponsored Clean Water Act Workshop in 2003.



Comanche Point, NM

- 2. Valle Vidal: In 2005 Amigos Bravos met with Governor Richardson and successfully advocated for the state to spearhead an effort to nominate all the waters of the Valle Vidal, a beloved 100,000-acre unit of the Carson National Forest, which at the time was threatened by oil and gas development, as ONRWs. Amigos Bravos assisted the State by conducting research, engaging the public, and providing technical testimony in support of the nomination.
- 3. Wilderness Waters: In 2010 Amigos Bravos again worked closely with the State and other conservation groups to successfully advocate for a widespread ONRW designation of all waters in USFS wilderness areas in New Mexico. In December 2012, after a lengthy legal battle due to a challenge by the New Mexico Cattle Growers Association, Amigos Bravos and clean water prevailed when the New Mexico Court of Appeals ruled in favor of maintaining these wilderness ONRW designations.

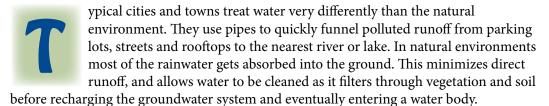
Since 2004 Amigos Bravos has appeared numerous times before the state decision making body to defend the specific language that outlines how ONRWs will be protected in New Mexico. As is the case in most things, the strength of any protection or designation lies in the specific language of the law or regulation. Amigos Bravos has successfully fought back efforts to weaken ONRW protections.

Work surrounding ONRW protections has been a keystone in Amigos Bravos' efforts to promote clean water and raise awareness about rivers. The greatest lesson learned during the efforts to protect special waters in New Mexico was the importance and power of coalitions and relationships. Through this work, the strong relationships we have built have turned into one of our greatest strengths.

Lesson: Strong relationships can become one of your greatest strengths.

Building Blue

by Pallavi Mande Charles River Watershed Association www.crwa.org



At the Charles River Watershed Association (CRWA), we developed an approach called Blue Cities® that aims to replicate pre-development hydrology, primarily with the use of "green" infrastructure. For example, rain gardens collect rainwater in shallow depressions and use soil and vegetation to filter it into the ground. Tree pits can capture, store and treat the stormwater running off from streets and parking lots. In doing so, these features also green neighborhoods by incorporating trees and plantings.



In the last six years, CRWA's interdisciplinary team has partnered with cities, environmental organizations, and community groups within the Charles River Watershed and neighboring watersheds to turn the Blue Cities* vision into practice via demonstration projects, restoration plans and new policy approaches.

In late 2010, we began a partnership with River Network and others to expand Blue Cities® to other regions of the country—including Louisville, Kentucky and suburban Detroit. Using our work in the Charles as a model, CRWA identified potential areas for restoring natural hydrologic function; provided data assessment, planning and design; and worked with the team to help local organizations with outreach and capacity.

Rain gardens are islands of green in urban landscapes that catch polluted runoff that would otherwise flow into rivers.

Coming from outside the watershed, it took time to become familiar with previous work and the local environment and stakeholders. We quickly realized the importance of clearly and concisely communicating our goals, our role, and our data needs to individuals at all levels of the partnership, with all levels of technical background and experience in stormwater management. We had to continually redefine our role in the project to areas where we could add value, rather than undoing work that had already been completed. We found that the most valuable resources are personal relationships, an understanding of local conditions, a flexible approach and the ability to act quickly when opportunities arise.

Despite these constraints, it has been exciting to share ideas and collaborate with others across the country who share our belief that cities can be redesigned to improve the environment, the economy and our quality of life.

Lesson: The most valuable resources are personal relationships, an understanding of local conditions, a flexible approach and the ability to act quickly when opportunities arise.

The 50-Year Fight for the Yadkin River

n 2013, Yadkin Riverkeeper (YRK), local county commissioners, citizen interest groups and North Carolina law makers enter the fifth year of legal challenges to prevent aluminum giant Alcoa from receiving a 50-year license from the Federal Energy Regulatory Commission (FERC) to control four hydro-power dams on the Yadkin River. According to proponents of local control for the river, Alcoa is a multinational corporation that presently monopolizes and exploits the Yadkin River's hydroelectric capacity for its bottom line, with little in return to the people of North Carolina.

by Dean Najouks
Yadkin Riverkeeper
www.yadkinriverkeeper.org

When the license came up for renewal in 2008, Alcoa's aluminum smelter had been closed since 2002, no longer requiring Yadkin hydroelectric power. All the electricity was being sold out of state. The Yadkin Hydroelectric Project was violating state water quality standards for dissolved oxygen for over a decade. Yet, Alcoa proceeded to try to renew a 50-year license for the project and obtained the needed 401 Water Quality Certification from the North Carolina Department of Environment and Natural Resources (NCDENR).

Yadkin Riverkeeper and Stanly County Commissioners challenged Alcoa's Water Quality Certification. In a stunning

reversal, NCDENR revoked Alcoa's 401 Water Quality Certification when internal Alcoa documents were uncovered and presented into evidence, detailing Alcoa's intentions to withhold information in the company's 401 application regarding non-compliance for dam upgrades to meet dissolved oxygen standards—critical to the river's health. Alcoa appealed, but in October 2012, the company finally dropped its appeal, allowing proponents to continue the fight for public recapture. Alcoa must now reapply for another 401 Water Quality Certification.

The legal victory reversing Alcoa's Water Quality Certification has not only kept YRK alive in this important fight for public recapture but is critical to addressing major environmental and public health issues linked to Alcoa. To help improve water quality on the lower Yadkin-Pee Dee River, the 401 Water Quality Certification should require upgrades to the four dams to fully comply with dissolved oxygen standards. As a result of the legal challenge, we learned about serious public health threats (linked to the aluminum smelter) from PCB contamination in Yadkin River and identified 44 hazardous waste sites. YRK has been successful in exposing Alcoa's legacy of contamination and the health risk it poses throughout the entire region.

As a result, Alcoa will remediate PCB contamination in Badin Lake and we have expanded our partnerships in this campaign to include environmental justice organizations, economic development groups and lawmakers from both sides of the political aisle. Win or lose, YRK has generated state and national media attention for the Yadkin River, engaged famed environmentalists like Erin Brockovich and Robert F. Kennedy, Jr., leveraged additional scientific research for the river and made substantial improvements in water quality. Perhaps most importantly, we involved citizens and communities to stand up and defend this important public resource—the Yadkin River!

Narrows Dam, Yadkin River; the largest concrete structure on the planet until the Hoover Dam was built

3 Lesson:

No matter how daunting, don't be afraid to stand up for clean water.

A River Re-Created:

The Saw Mill River Daylighting Story

by Ann-Marie Mitroff Groundwork Hudson Valley/Saw Mill River Coalition

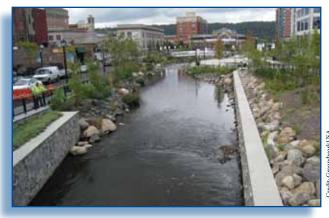
www.groundworkhv.org

n 1609, Henry Hudson sailed into the mouth of the Nepperhan River, where he found a tidal bay—a "fishing trap"—known to the Lenape as rich with oysters, clams and fish. Harnessing the river's power, some of the first saw mills were built (1784), and the "Saw Mill" River now powered one of the earliest industrial cities. Cliffs surrounding the river's bay were torn down to fill it in so the railroad could run along the Hudson shoreline. The river became the sewer for industrial and human waste. With the nation fearing water-borne diseases, the

to fill it in so the railroad could run along the Hudson shoreline. The river became the sewer for industrial and human waste. With the nation fearing water-borne diseases, the river was deemed a health threat and in the 1920s, the U.S. Army Corps of Engineers covered the river with a flume and paved it for a parking lot. The river was banished to the underground.



In 2000, Groundwork Hudson Valley identified the uncovering or "daylighting" of the Saw Mill River in downtown Yonkers as a priority project. "A pipe dream," most said. The City of Yonkers, Groundwork, and their many partners persevered and in 2012 the \$18 million river park was opened as the centerpiece of the city's revitalization. The newly re-created river path enhances American eel passage and, for the first time, will allow for river herring (alewife) passage. The design included a tidal basin (low and high tides from The Hudson River), two freshwater pools, and a series of riffles.



The Sawmill River: Past & Present

The key to success, you ask? Involve the community and partners (including youth), give the project vision, and provide good solid information to decision-makers. You have to have a vision for people to get excited. Groundwork hired a landscape architect to develop initial renderings (2000). Grants from New York State and the U.S. EPA allowed Groundwork to hire a river coordinator to focus on daylighting, conduct a series of community charrettes (2004-2011), carry out important fish and water quality studies (2002-2012), and provide technical assistance to the City's engineering team on habitat design and "fish engineering" (2009-2011).

What lessons are there in our saga?

- [] Keep talking about the project—*you* have to believe.
- Ensure that it *enhances* the habitat—this is NOT a given on public projects. Get separate funding for habitat work otherwise "low bids" rule and may not incorporate habitat concerns. Work tirelessly *with* the project engineers.
- ☐ If you build it—people won't necessarily come unless you have involved the community from the start. Keep the energy alive during construction through events.
- Provide a strong educational component: we designed and constructed the "American Eel Outdoor Classroom" in the park with educational mosaic.

Lesson: Work collaboratively, remove the ego and have patience.

Bringing "Dead" Waters Back to Life

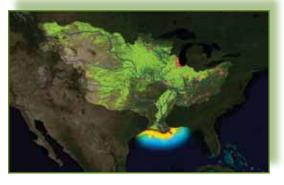


orty years after passage of the federal Clean Water Act, we've made amazing progress, but need to redouble our efforts in areas such as controlling pollution that doesn't come out of a pipe. Fertilizers and manure that are washed off of farms are especially vexing, causing "dead zones" and algae blooms in waters from the Great Lakes to the Gulf of Mexico.

by Melissa Malott Clean Wisconsin www.cleanwisconsin.org

Across the nation, efforts to curb agricultural pollution usually fail; it is more difficult to predict, track, and monitor than pollution that comes out of a pipe at factory. Adequate resources to address agricultural pollution are scarce. The agricultural lobby is powerful and often undercuts the political will to establish regulations or uphold existing regulations. Consequently, there hasn't been a legal framework in which to regulate agriculture.

While the situation sounds dire, Wisconsin may have developed a solution. In 2010, at the urging of Clean Wisconsin and many other groups, the state adopted a new rule to limit phosphorus pollution from farms. Instead of directly regulating farmers, it allows Clean Water Act permit holders (such as wastewater treatment plants or factories) to choose a compliance strategy called the Watershed Adaptive Management Option (WAMO), wherein they can work with farmers to reduce pollution levels upstream. Permittees that choose this option may avoid high-cost technology upgrades, but are still legally liable for achieving overall pollution reduction goals.



Expectations are that wastewater utilities will lead WAMO efforts in various watersheds. They have the data, financial, and staffing resources to coordinate these efforts, and the influence at the state and local level to be able to work constructively with the agricultural sector. In addition, the WAMO process is designed to focus the efforts in any particular watershed on the health of the waters where pollutants flow, rather than on the amount of pollutants that come from a pipe, regardless of the actual health of the waterway. In short, when permittees like wastewater utilities drive clean water efforts under WAMO, we expect they will be able to overcome the barriers that typically obstruct clean water restoration efforts. By putting the point source community in the driver's seat for phosphorus pollution, this new rule may put in place the elements critical to successful watershed restoration projects.

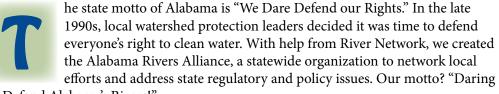
Phosphorus pollution from cities (pink) and farms (green) in the upper Midwest and other points north is contributing to an aquatic "dead" zone (red, yellow and blue) downstream in the Gulf of Mexico—but an innovative program in Wisconsin promises to help bring those waters back to life.

Two years since the passage of this rule, we're in the thick of developing some of the first WAMO plans in partnership with permittees and other stakeholders. One of the frustrations of this process is the general failure of state agencies to lead outreach and education efforts on this rule, which is both a byproduct of anemically funded government agencies and the state administration's resistance to regulate. Fortunately, nonprofits, permittees, and other stakeholder groups are stepping up to raise awareness of this cost-effective opportunity to clean up our waters, but we don't have the access to information to make this a smooth process. If I could pass a bit of advice on to others contemplating such a policy strategy, I'd suggest they include an outreach and implementation plan for the state regulators with measurable goals in the rule.

Lesson: Passing a law or adopting an agency rule is not enough. State regulators need resources and an outreach plan to education stakeholders about those policies.

Daring to Defend Alabama's Rivers

by Cindy Lowry Alabama Rivers Alliance www.alabamarivers.org



to Defend Alabama's Rivers!"

A focus of our early work was ensuring that the Alabama Department of Environmental Management (ADEM) was properly implementing and enforcing the Clean Water Act. We quickly realized that a critical first step was the reform of the agency itself. With key partner groups like the Alabama Environmental Council, Mobile Baykeeper, Black Warrior Riverkeeper, and others, we forged the ADEM Reform Coalition, which grew

to 42 member organizations—one of the most diverse coalitions in Alabama's environmental history.

Early successes included securing a public comment time at the meetings of the Environmental Management Commission (EMC), diversifying Commission membership and getting an Environmental Justice Ombudsmen hired at ADEM.

While not all of these successes held on over time, the Coalition still has a consistent presence at EMC meetings, and meets with the ADEM Director on a regular basis to discuss important issues.



Members of the Alabama Rivers Alliance at a Lobby Day for the state's rivers.

Today, our Alliance also works together to achieve goals laid out in the Alabama Water Agenda, a multi-year policy strategy for protecting Alabama's waterways.

The key lessons I have learned from being the leader of an alliance and working in statewide coalition are:

- Never take anything personally;
- Keep your eye on the goal, not worrying about who gets credit for it;
- Evaluate and plan together, at least once a year;
- Don't get too caught up on structure, but make sure that decision-making methods are clear;
- Celebrate your successes no matter how small;
- Be flexible enough to adapt when new approaches are needed; and
- A neutral, outside facilitator for planning meetings can make sure that everyone is heard, and can often see weaknesses, strengths, and reveal insights that those within may not have noticed.

Environmental protection and enforcement in Alabama still has a long way to go, but the river movement is stronger than ever, with over 50 local organizations working to protect rivers and streams across the state. The Alabama Rivers Alliance remains committed to supporting a strong river movement and working in collaboration with environmental partners to move our important work forward.

6 Lesson:

Keep your eye on the goal, not worrying about who gets credit for it.

Freeing the Rogue

he Rogue River in southern Oregon is one of the nation's most beloved waterways. People travel from all over the world to experience this amazing place, one of the original eight "charter" rivers designated by Congress when they signed the Wild and Scenic Rivers act in 1968. The Rogue Basin historically produced the most wild salmon and steelhead in Oregon outside the Columbia

by John Devoe WaterWatch of Oregon www.waterwatch.org

Basin. However, Coho salmon are now listed as threatened under the Endangered Species Act, and spring Chinook and steelhead numbers are declining.

To reverse this trend, WaterWatch has worked for almost three decades to remove significant fish passage barriers and improve streamflows to benefit the Rogue's fish populations while enhancing fishing and recreational opportunities. Initially, WaterWatch faced considerable resistance, but used the power of Oregon water law and the federal Endangered Species Act to persuade stakeholders to address the Rogue's most significant problems. For example, after WaterWatch challenged excessive water diversions at Savage Rapids Dam, our attorneys negotiated a deal requiring the dam owner to study ways to conserve water

and solve the dam's fish passage problems. Eventually, studies showed that replacing the dam with pumps and removing the outdated, fish-killing structure was the best solution.

157 miles of Oregon's Rogue River are now free of dams thanks to the persistent efforts of WaterWatch of Oregon and others.

WaterWatch has played a key role in achieving the removal or notching of four Rogue Basin dams: Savage Rapids, Gold Ray and Gold Hill on the Rogue and Elk Creek on an important tributary. The three mainstem removals re-established one of the longest free flowing reaches of river in the West—157 miles from upstream of the city of Medford, Oregon to the Pacific Ocean—opening up hundreds of miles of habitat for fish. In addition, the agreement to remove Savage Rapids Dam included what is likely the largest instream water transfer (800 cfs) in the history of the West. This transfer—which essentially created a measurable, enforceable water right for fish and recreation within the river itself—will permanently protect Rogue streamflows for future generations.

WaterWatch learned some significant lessons in the Rogue. The most important: be tenacious in pursuing your goals, as they may take a long time to achieve. The unprecedented wave of dam removals that occurred in the Rogue Basin a few short years following the end of the two-decade struggle to remove Savage Rapids Dam provides another important lesson: be prepared to use the momentum from your achievements to create new opportunities in your region.

Combined, the achievements on the Rogue River represent one of the most substantial dam removal and river restoration efforts undertaken in the United States. But even after so much has been achieved, much work remains to protect this incredible resource, and WaterWatch remains a leader in this effort.

Lesson: Be tenacious in pursuing your goals, as they may take a long time to achieve.

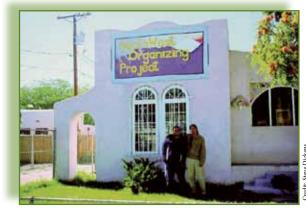
Environmental Health Assessments

by Steve Dickens River Network www.rivernetwork.org



ust north of Albuquerque, New Mexico lies a large Intel manufacturing plant. After Intel expanded operations, residents in nearby Corrales began to experience a variety of serious health problems, including respiratory problems, neurological disorders, birth defects, miscarriages, seizures, abnormal irritations of the nose, throat and lungs, and severe headaches.

River Network worked with Southwest Organizing Project to assist the Corrales Residents for Clean Air and Water to conduct an environmental health assessment. We first researched the types of chemicals used by Intel, the quantities released into the air and water, and the health problems known to be associated with exposure to those chemicals. We then helped the community conduct a health survey to assess links between toxic exposures and disease.



Michael Guerrero and Robbie Rodriguez, both past Executive Directors of the Southwest Organizing Project

Our research revealed that Intel did indeed discharge thousands of pounds of known toxic substances into the air and water annually. We learned that all of these chemicals are known to be irritants to the eyes, lungs, nose and throat, and in higher concentrations can cause reproductive disorders, brain, liver and kidney damage, pulmonary edema, and birth defects. This established that the known potential health effects of chemicals coming from Intel were commensurate with many of the health complaints of residents.

The health survey results provided both qualitative and quantitative information. For example, a comment provided by a resident included:

"Since moving to Corrales I have suffered from intestinal, nose, eye and throat problems. When I leave all disappear and start with [sic] 24 hours of arriving home..."

Most importantly, the survey results demonstrated a statistical relationship between exposure to chemicals from Intel and numerous health problems experienced by residents. The analysis used multiple logistical regression, a statistical procedure that helped ensure that the results were indeed due to local toxic exposures and *not* other "confounding" factors, such as smoking behavior, or working elsewhere at a place that exposed the person to toxic chemicals.

Lesson:
A properly designed study can render incredibly useful data.

The results of this research produced data that helped the community substantiate its concerns. This data was presented in hearings sponsored by the New Mexico Environment Department to review Intel's air quality permit, and likely led to concessions made by Intel to reduce their emissions.

Conducting an epidemiological study is complex; much that can go wrong if not done correctly. It is essential for persons familiar with epidemiology to be consulted each step of the way. Most importantly, we learned that a properly designed study can render incredibly useful data. Demonstrating links between exposure to contaminants and ill health effects is challenging, but certainly possible.

Increasing Participation and Data Quality While Reducing Costs

n 1989, a group of five fly fishers started the first Stream Team on Roubidoux Creek. Three years later, then Missouri Governor John Ashcroft visited the small town of Waynesville to attend

the second of many major Stream Team events. Addressing a crowd of nearly 200 eager volunteers he said, "You'll know that your program is successful when tens of thousands follow in your footsteps." That day volunteers removed 17.7 tons of trash from 1.5 miles of stream. Today, Governor Ashcroft's prophetic words ring true with literally tens of thousands now following in those first footsteps. What began with a handful of concerned individuals has grown to over 4,000 active Teams, consisting of approximately 77,000 active members statewide.



Chris Kennedy, trained volunteer, takes a water sample.

Missouri Stream Team Program www.mostreamteam.org

by Chris Riggert

& Mark Van Patten

The program, sponsored by the Missouri Conservation Federation, Missouri Department

of Conservation and Missouri Department of Natural Resources, has evolved to include myriad activities to improve, enhance and protect Missouri's 110,000 miles of streams. After removing trash from our streams, many volunteers were eager to learn more about water quality. In response, the Volunteer Water Quality Monitoring (VWQM) portion of the Program was initiated in 1993, in partnership with the Missouri Department of Natural Resources. So began the statewide, multi-tiered, ambient stream monitoring effort.

Volunteers are trained to collect physical, chemical and biological data; required monitoring equipment is loaned. In the nearly 20 years since, the quantity of data submitted to the VWQM Program is staggering, with 8,375 trained volunteers providing over 32,000 data submissions. These data are used in many ways by local governments, state agencies, drinking water and wastewater operators, grant-seekers, etc. When asked if the VWQM Program is about education or data collection, we smile and say, "Yes!" Tiered training levels address both goals.

To increase volunteer confidence and retention, decrease the cost of training, and increase data submission we have made several course corrections within the VWQM portion of the Program. These include:

- Developing an "introductory" workshop as the entry level of training;
- ☐ Requiring data submission to receive equipment;
- ☐ Validation trainings for increased data quality; and
- Revising the material covered in workshops.

Even minor course corrections to a well-established program can cause major ripples and growing pains. Providing adequate communication well in advance, along with the justifications and benefits of these changes, will go a long way in reducing future confusion. If your plan is sound, have patience. You will soon reap the rewards of increased volunteer participation and better data!

9 Lesson:

Properly trained volunteers are a valuable resource.

Missing: 7 Million Pounds of Trash

by Tammy Becker Living Lands & Waters www. livinglandsandwaters.org

Chad Pregracke

had Pregracke grew up with the Mississippi River 30 steps from his back door. He spent his free time fishing, waterskiing, boating and exploring the river, and as a teenager, began working on the river as a deckhand on barges and as a commercial shell diver and fisherman. Through these experiences, Chad became appalled by the amount of debris dumped into the river. At age 17, Chad began

calling state offices, informing them of the problem and encouraging them to clean it up. Four years passed and nothing happened. So, he decided that if no one else would clean it up, he would.



Living Lands & Waters fleet of garbage barges and floating headquarters.

After watching a NASCAR race, Chad was inspired to seek out a company who would sponsor his river cleanup efforts. In 1997, at the age of 22, he received an \$8,400 grant from the local Alcoa facility and within months, singlehandedly removed over 45,000 pounds of refuse from the Mississippi. Local boaters began to take notice and one called the local paper to do a story on Chad's efforts. The story ran locally, then went to the Associated Press. Then came features on CNN, Fox News, Time magazine and more. The added coverage not only gave him credibility and made fundraising a little easier, but it also brought with it an outpouring of public support, with hundreds of groups and individuals wanting to help and join his cause.

In 1998, Chad formed the nonprofit Living Lands & Waters. What started as a young guy and his boat has grown into a national organization with eleven full-time employees and an equipment base of four barges, two towboats, six workboats, five trucks, a semi, a crane and two skid loaders, working not only on the Mississippi River but also the Illinois, Ohio, Potomac, Missouri and many of their tributaries.

Chad and his crew live on a house barge, traveling port to port up to nine months a year hosting river-stewardship events. Over the last 15 years, Living Lands & Waters and nearly 70,000 volunteers have worked to remove over seven million pounds of debris and have planted 500,000 native hardwood trees. Aboard their new floating classroom, over 3,000 students and teachers have learned about the value and importance of clean water and the need to preserve America's rivers.

Chad is quick to attribute his success to his crew, the thousands of volunteers, and generous donors who help him reach and exceed his goals, year after year. However, he admits that if cleaning the river was easy, it would have been done a long time ago.

Lesson: One dedicated, persistent person really can make a difference.

Clean-ups: Beyond Trash

he Kalamazoo River drains an extensive area in southwestern Michigan. Its watershed harbors some of the best-preserved examples of midwestern U.S. habitats including headwater streams, wetlands and floodplains, and it contains several large areas of contiguous forests and grasslands that are publicly accessible in state parks and game areas. The river is arguably cleaner than it has been in many decades, yet it does suffer from a legacy of historical industrial pollution.

by Steve Hamilton Kalamazoo River Watershed Council kalamazooriver.org

The watershed council originated in connection with the Superfund Site that was declared in the lower river because of widespread contamination of the river system with PCBs from former paper industries. For the past two decades, as the cleanup of the PCBs has progressed, the council has played a key role as the voice for the river system and the people who live in its watershed. This cleanup is extraordinarily complex and costly, involving riverside factory sites and landfills, multiple dam removals, and cleanup of PCBs in the floodplains as well as in the river channels. The slow pace of cleanup has been frustrating, and thus persistence and patience have been essential for both the council and the public at large to stay engaged in this issue. Nonetheless substantial progress has been made and the PCB levels in fish are falling, although stringent fish consumption advisories remain in effect and cleanup actions are expected to continue for years.



Above: Kalamazoo River in southwest Michigan. Below, left: Aerial view of spill from ruptured pipeline.



The council faced a new and unanticipated challenge in 2010 when an Enbridge-owned pipeline ruptured near the river. The rupture released a massive amount of tar sands crude into the river, upstream of the Superfund reach, creating the largest inland oil spill in North America. The council joined a host of local, state and federal environmental agencies, led by the EPA, to deal with the emergency response, cleanup and remediation. In addition to providing local knowledge and scientific

advice, the council has served as an important information source for the media, and has conducted many educational talks for students and the public. The cleanup has turned out to be unusually protracted and will continue into this year, in large part because of the difficulty in recovering submerged oil, a much bigger problem in a tar sands spill than if it had been conventional crude oil.

The Kalamazoo River Watershed Council will continue to be involved in these river cleanup actions for as long as it takes, while always seeking to improve the public image of the river and get more people to appreciate the wonderful resource that it is.

Lesson: Persistence and patience are essential to remain engaged in our work.

Watson Woods Riparian Preserve:

A Functional Legacy Created

by Michael Byrd Prescott Creeks www.prescottcreeks.org



atershed Address: Granite Creek | Verde River | Salt River | Gila River | Colorado River Basin | Southwest. Elevation: 5,125 feet above sea level.

Annual Precipitation: 19.04". Average daily discharge: 6.47 cfs. Maximum discharge recorded: 6,663 cfs. Average temperature range: 37.2—69.4°F.

Watson Woods Riparian Preserve is a rare Frémont cottonwood/red willow riparian gallery forest located along Granite Creek, a mixed perennial/intermittent creek in the Upper Verde Watershed in central Arizona. The 126-acre Preserve is the remnant of a once 1,000-acre riparian gallery forest near Prescott, Arizona. Historic references indicate both vibrant health and heavy use. Habitat at Watson Woods has been lost or severely degraded to the usual suspects: sand and gravel mining, urbanization, channelization, and pollution (Granite Creek was added to the EPA 303(d) list in 2005).



Community stakeholders, like these Prescott College students, participated in design, implementation and monitoring of the restoration

Community leaders had given up on the area and looked upon it as a wasteland, but Prescott Creeks rallied community support through trash cleanups and tree-planting efforts. Public leaders were provided a legacy-creating opportunity to "save" something of natural value and, in 1995, the Preserve was created with a management lease between the City and Prescott Creeks. Funding was secured from the Arizona Water Protection Fund and Arizona Department of Environmental Quality (319 grants) to draft and implement ecological restoration plans where portions of Granite Creek were restored to feature natural channel sinuosity and banks were stabilized with natural rock, logs and native willows. Floodplains

were reconnected to the channel to distribute flood flows and to allow for recruitment of native vegetation. All physical alterations, along with the flora and fauna, are being monitored.

Final project reports indicate success, but the real story will be told, over time, by the ecological response to our tinkering. Approaching the project from an adaptive management perspective led project managers to set appropriate goals: 1) to enhance and substantially restore the Granite Creek channel function and riparian habitats, and 2) to educate and involve the community in the restoration process. Even so, it quickly became apparent that we needed to stay flexible and adapt plans and timelines to accommodate drought and major flooding, conflicting municipal goals and changing political winds. We also experienced significant and unanticipated growing pains as our annual budget increased overnight by a factor of six. Our dedicated Board, staff, subcontractors (designers, engineers, a bevy of 'ologists, along with "dirt and plant folks") and community volunteers made it all happen. Volunteer hours for this restoration effort number in the tens of thousands. Humility has been a guiding principle and moral of the project as we encounter visitors at the Preserve who have returned to check the progress of "their" trees.

Lesson: Expect the unexpected: create flexible and adaptable plans.

The Story Behind the Waterkeeper Swim Guide

few years ago, a team of staff and volunteers at Lake Ontario Waterkeeper set out to answer our members' most-frequently asked question: "Is it safe to swim in Lake Ontario?"

by Krystyn Tully Lake Ontario Waterkeeper www.waterkeeper.ca

We figured it would be an easy question to answer. All we had to do, we thought, was call up whatever government agency tracks that kind of thing and share the information with our members. But reliable facts and figures about beach water quality are hard to come by. The process of trying to answer one simple question turned into a multi-year research and technology project that now serves millions of people across Canada and the United States, consolidating beach water quality information from hundreds of different sources.

In the early days, our investigation was methodical, but unsophisticated. We phoned monitoring agencies every morning in the summer, noting which beaches were open on scraps of paper that we would later enter into spreadsheets. Every fall, we published a report for the public, adding a few more beaches each time.

Tracking beach water quality was interesting for the researchers, but not helpful for our members. Annual reports don't say whether a beach is open for swimming *right now*. What people really needed was an easy to use tool that could share water quality, narrative, and location information. Lucky for us,

smartphone apps were just becoming popular. We replaced our clunky old spreadsheets with a web-based database and created web, iPhone, and Android interfaces to let people access the Waterkeeper Swim Guide (www.theswimguide.org) whenever and wherever they want it.



Woodbine-Ashbridges Bay, Toronto, ON

As of late 2012, Waterkeeper Swim Guide provided access to 3,000 beaches across Canada and the United States. By summer 2013, it will include every official beach in these two countries, complete with the latest water quality results, descriptions, photos galleries and links to the Waterkeeper Alliance member organizations who protect your right to swim in clean waterways.

When we launched Swim Guide, we learned that there is a *huge* appetite for water quality information. Roughly half of the beachgoers we surveyed wanted to check the water before heading to the beach, but only about a quarter of them were able to find the data. Millions of people get sick after swimming in contaminated waters each year; more are turned off by the "no swimming" signs. Waterkeeper Swim Guide helps people choose clean water for swimming, but it also raises awareness about water quality issues and gives communities a tool for restoring polluted beaches.

Swim Guide will continue to grow in 2013, meaning more beaches, more communities, more users. As it does, we look forward to a chance to connect more and more people to the water in their home communities, to protect public health, and to foster a culture that celebrates its coasts and rivers.

13 Lesson:

The public is hungry for reliable, relevant water quality data.

Dreaming Big on the Bayou

by Trudi Smith Buffalo Bayou Partnership www.buffalobayou.org



elieving that the Millenium was the opportune time to dream and think big, the Buffalo Bayou Partnership (BBP) embarked on a plan to create an active and vibrant waterfront along this historic waterway in the fast-growing city of Houston.

Private-public partnerships can be the key to success.

With a nationally recognized consultant team led by Thompson Design Group-Boston, and guided by the goal of balancing conservation and development with projects that serve multiple purposes—recreation, flood management and erosion control—BBP is now well on its way to transforming the waterfront. We have secured over \$100 million in private and public funding and more than 50 acres of future parks and open spaces, and built four miles of waterfront hiking and biking trails, with more to come. Along the trail network are public art projects, created by local, national and internationally-recognized artists, which enliven the green spaces and often integrate the bayou's history and culture. More than 2,000 volunteers log 7,000 hours annually, adding thousands of trees and native plants, while removing invasive species.

Our award-winning plans and projects have been predicated on a set of overarching principles:



Vision: Through the dynamic leadership of a committed board and staff, BBP has kept the vision for Buffalo Bayou alive. Despite economic downturns, and occasional roadblocks and setbacks, we have persevered and always been focused on the future and our ultimate goal of creating a regional scale amenity.

Collaboration: Private-public partnerships have been key to our success. Working with local, state and federal governments we have leveraged funding and greatly expanded the scope and quality of our projects.



Design Excellence: We are committed to enhancing the public realm with civic landmarks that will endure over time. By working with leading planners, architects and artists, our projects have been recognized with prestigious local, national and international design awards.

Equitable Access: A commitment to revitalizing and providing access to all sectors of our city's historic waterway is at the core of our work. We reach out to residents and businesses to meet the desired needs of their respective bayou areas, all which have distinct opportunities and challenges.

Houston's Buffalo Bayou is turning into a gem of an urban waterway thanks to the enthusiam of local volunteers and the leadership of the Buffalo Bayou Partnership.

Risk Taking: We often "think outside the box"—employing unique strategies and not a "one size fits all" approach.

Inspired by our vision, Houston's Kinder Foundation pledged an historic \$30 million catalyst gift in 2010 for a new 160-acre \$55 million Buffalo Bayou Park along a 2.3 mile long bayou stretch. A strong public-private partnership has emerged and in 2011, after significant community input, the park's master plan was completed. As Houston Mayor Annise Parker has said: "Houston owes its very existence to Buffalo Bayou. Today, Buffalo Bayou Partnership is taking a neglected waterway and transforming it into an attractive and inviting gateway into downtown and beyond."

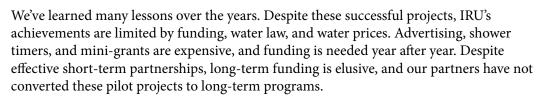
Saving Water in Idaho, Drop by Drop



uch of Idaho is arid, and our rivers and fish suffer from the effects of dams, diversions, and low flows. Making better use of our limited water is an obvious solution, but it's harder than expected to achieve. Idaho Rivers United (IRU) has undertaken many water conservation projects:

by Tom Stuart
Idaho Rivers United
www.iru.org

- IRU awarded xeriscaping mini-grants to landowners in partnership with the local utility, United Water Idaho.
- IRU partnered with businesses and the water utility to produce and run paid ads on TV, radio, and in the newspaper.
- In 2005, IRU convinced the Idaho Public Utilities Commission to require the local water company to educate customers on water conservation. Partnering with IRU in that work, the utility now reports a 22% decline in per capita consumption.
- ☐ IRU teamed with other conservation groups to run a "trout-friendly lawns and landscaping" campaign.
- IRU partnered with two water utilities to produce and distribute hourglass-style five-minute shower timers.
- IRU researched the local link between water conservation and energy conservation and is trying to persuade energy utilities to promote water conservation.
- IRU teamed with irrigators and the Idaho Legislature to allow water rights to be loaned to the river to increase flow and improve river health.



Western water law has stymied many efforts: it's simply not designed to conserve. Further, Idaho domestic water users consume only a tiny portion of the total, so campaigns that target residential users produce small results. Over 90% of water consumption is agricultural—by users protected by water rights under Idaho Constitution and law. These users have been reluctant to conserve, so, ultimately, progress with the largest water consumers will require changes in law and policy.

Idaho's rivers and fish pay a high price for water they don't get, but Idaho water users, both domestic and agricultural, pay a very low price for water. Low prices signal abundant supplies, and conservation appears optional to many. Population growth and climate change will undoubtedly add pressure to conserve, creating new opportunities for IRU. Meanwhile, we'll continue to remind everyone that water must available to support our precious rivers and fishes—that damming, diverting or drying up rivers is not a sensible option.



Xeriscaping is one of several strategies that watershed groups are using in Idaho, reducing per-capita consumption by 22% in one community.

15 Lesson

Progress
with the
largest water
consumers
will require
changes in law
and policy.

Testing the Waters

by Barb Horn Colorado River Watch www.coloradowater.org n 1989, the Colorado Water Quality Control Commission (WQCC) was making decisions regarding allowable pollution in Colorado's 700,000 miles of rivers with no data or with one data point. As a young water quality specialist at Colorado Parks and Wildlife, that was unacceptable to me. So I teamed up with a seasoned educator who had funding to get students on a river to collect real data. That was the birth of the Rivers of Colorado River Watch Network (aka River Watch).

Our goals are to provide a hands-on experience to understand the value and function of river ecosystems and to collect quality aquatic ecosystem data over space and time. The program was designed to generate information of sufficient quality to implement the Colorado Clean Water Act (CCWA). We didn't ask the health department if they would accept volunteer data, we said, "if data had this study design, would you use it?" The response was yes because it met their needs using their methods. And now they routinely defend the data.

Water quality monitoring is a great way to involve kids in river conservation.

The result is a statewide monitoring program that includes 140 groups who monitor monthly at 700 stations on 350 rivers for five field parameters, 26 metals, seven nutrients, macro-invertebrates and physical habitat. River Watch has the largest set of volunteer monitoring data in EPA's STORET database. Our data has been used to develop chemical and biological standards, assess uses and designate high-quality waters, while engaging over 80,000 Coloradans in the past 20 years.

Our biggest lesson was to understand the limits and needs of our volunteers and communicate their value. We learned they will give you 120% for a long time if you do. Collaboration is our motto, so we annually evaluate the changing needs and goals of our partners. Best advice is to PLAN to generate information, not just data, for a specific decision or action. This forces the identification and engagement of target decision-makers and their information needs into your sample, analyses and reporting design. It also forces a plan for data management, a MUST in order to measure success. As a non-regulatory agency, CPW's management of the program provides credibility as an independent data source. Finally, consistent leadership has been essential.

River Watch has benefited from the support of a national network of resources and expertise that began in 1990 with River Network. This prevented us from reinventing the wheel and taught us to value planning at the beginning. Any success River Watch has had belongs also to River Network.

16 Lesson: Understand the limits and needs of your volunteers and communicate their value.

Fighting Back Against Invasive Plants



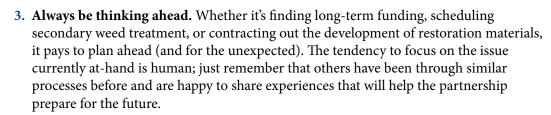
ivers across America have been impacted by an assortment of invasive species, ranging from Asian carp to Russian olive. Many of these invasives have displaced native species and have altered entire ecosystems, from New England to the Great Lakes and the Desert Southwest.

by Shannon Hatch
Tamarisk Coalition
www.tamariskcoalition.org

Over the past several years, the Tamarisk Coalition, a small nonprofit based in Colorado, has participated in or helped to facilitate a number of watershed partnerships throughout the western U.S. that are focused on the management of invasive species, including tamarisk, Russian olive and other weeds. While each collaborative group is distinctive, with unique goals and objectives, common lessons learned include:

- 1. Overarching goals and objectives that unite participants should be agreed upon early on...

 Saving a river from invasive plants may sound great, but what does this really mean, and how can participants feel empowered to help? While the emphasis of a partnership may morph over time, concrete goals should be established such that efforts do not become misdirected. Metrics by which to quantify results may take time to develop, but they are important to consider as projects are planned and implemented.
- 2. ...as should partner roles and responsibilities.
 Although they may sound frightfully dreary, a
 Memorandum of Understanding (MOU) can help
 to delineate roles, responsibilities and expectations
 while depicting a united front to existing and poter
 - while depicting a united front to existing and potential funders. The process of drafting and implementing a MOU encourages partners to examine their motivation for participation and prompts assessment of organizational capacity for future efforts.



4. Getting out on the river is indispensable! There's nothing like a field trip to spur conversation and problem solving amongst peers. Site visits provide partners the opportunity to discuss both challenges and accomplishments on the land and can help collaborators better understand where others may be coming from on seemingly contentious issues.

The après-meeting scene can be equally, and sometimes more, informative than the main event. Aside from field trips, more can be learned about the nuances of a particular collaborative (and its members) sharing a meal (and a bottle of wine or three) after a day of sub-committee updates. The power of a shared meal should not be underestimated!



An enthusiastic crew gets ready to battle with invasive plants like tamarisk, which are wreaking havoc on river ecosystems in the Southwest.

17 Lesson:

Metrics by which to quantify results may take time to develop, but they are important to consider.

Seven Decades of River Conservation

by Dick Sears
Housatonic Valley
Association
www.hvatoday.org

ew watersheds in the U.S. demonstrate the value of long-term investment in protecting rivers than the Housatonic Valley, which runs from western Massachusetts, through Connecticut to the Long Island Sound.

Founded in 1941, the Housatonic Valley Association (HVA) is one of the oldest watershed associations in the U.S. Yale professor Charles Downing Lay created the organization because he believed that caring people could prepare for growth by guiding more intensive development away from sensitive and important natural resources, including wetlands and streams.

He was right. Today, the Housatonic watershed looks and functions far differently than it would have without HVA's visionary leadership on growth and development issues. For the past 35 years, HVA has also persistently kept responsible parties on track with the long-term work to rid the Housatonic River of serious PCB contamination.



One of HVA's most exciting recent accomplishments is the adoption of new statewide streamflow standards and regulations. Over time, the new rules will help solve many of the state's current flow problems and avoid the creation of many new ones. The new Connecticut Streamflow Regulations were the product of years of scientific work and patient coalition-building by HVA; its lead collaborator, the Rivers Alliance of Connecticut; state environmental and public health agencies; water utilities; and many other project partners.

The Housatonic's beauty remains intact thanks to efforts of the local watershed group over the past 70 years!

Executive Director Lynn Werner's role was vital in the development of the new streamflow rules. Lynn brought her skilled leadership to the table by understanding the needs of the key stakeholders and building trust and cooperation. She knew the most effective way to make a lasting impact on many environmental issues is by forming working partnerships that honor the concerns and ideas of all participants.

18 Lesson:

The most effective way to make a lasting impact on many environmental issues is by forming working partnerships that honor the concerns and ideas of all participants.

Now HVA is leading a collaborative of 24 area land trusts, helping them to work across town lines to conserve some of the region's largest and most important tracts of remaining forest, farmland and riparian corridors. The effort aims to get ahead of the development curve while the downturn in new development continues throughout southern New England. The organization is also building a new collaboration among local river advocates in the Housatonic Watershed to identify and fix nutrient pollution problems—a major threat to the river—and to improve storm water management in the face of increasing storm frequency and intensity. (Like many eastern rivers, the Housatonic experienced three "100-year" storm events in the last year alone.)

To make lasting progress in river conservation, it takes a great watershed association to address a wide range of issues over a long period of time. Fortunately, the Housatonic Valley Association has risen to that challenge over seven decades, with many more to come.

Saving Wild Rivers

ritics complain that they could support the National Wild & Scenic Rivers Act—if only it didn't prohibit dams. But of course, it was Congress' specific intent when it passed the Act in 1968 to balance building thousands of dams with preserving the free-flowing condition and outstanding values of a very few selected rivers. The Act contains many other provisions which have

by Steve Evans
Friends of the River
www.friendsoftheriver.org

proved immensely helpful in protecting rivers over 44 years, but it's been the prohibition on water projects such as dams that has most distinguished it.

Even Western legislators recognized the need to protect rivers. Idaho Senator Frank Church, underscoring the urgency, said "generations which wait at our threshold may never know the excitement of whitewater, fish in crystal-clear rivers, or leisurely floats down blue streams which meander between tree-covered banks. Even as our wild rivers disappear, our need...escalates."

Perhaps nowhere else in the United States has this dynamic between dams and river protection been better demonstrated than in California, with more than 1,200 dams that are 25 feet or higher. The Middle Fork Feather River was one of the first eight rivers protected when the Act was passed in 1968. Federal protection of the river killed several proposed hydroelectric dams, and as it turned out, saved a local Congressman's favorite fishing hole.

Thanks in good measure to Friends of the River, a statewide advocacy group, the Act's legacy of dam-killing in California continued over the years. Federal designation stopped dam projects proposed on the Eel in 1981, the Tuolumne in 1984, and the Merced and Kings in 1987. In the 1990s, environmental pundits even started claiming that the era of big dam building was over.

This stretch of
California's Merced
River is a Wild and
Scenic River—but
perhaps not for long.

Still, only 2% of rivers nationwide are protected. And global warming's impact on water supplies and other factors have triggered a recent revival in controversial dam proposals. The Bureau of Reclamation wants to build a large dam in the beautiful San Joaquin River Gorge, which was recommended for federal protection by a fellow federal agency. Reclamation also wants to raise the height of Shasta Dam, enlarging the state's largest reservoir to flood a few miles of the McCloud and upper Sacramento; both rivers are eligible for federal protection. More alarmingly, the House of Representatives approved a bill last year that would remove federal protection for a small segment of the Merced Wild River to allow for another reservoir expansion.

In California, we have come full circle and the "dam vs. river" fight continues. Today we are faced with the choice of building more destructive dams, at increasingly higher costs and with fewer benefits, or protecting some of the few remaining free flowing rivers we have left. May we choose wisely.

9 Lesson: Eternal vigilance is the price for free-flowing rivers.

Citizen Action Stops Sewage Overflows and Protects Local Shellfish

by Chris Wilke Puget Soundkeeper www.pugetsoundkeeper.org t's 1992 in Bremerton, Washington. Persistent combined sewer overflows (CSOs) regularly foul shellfish beds in Puget Sound's Dyes Inlet and Sinclair Inlet. Traditional shellfishing grounds of the Suquamish Tribe have been closed for health reasons since the 1960s. Despite a state regulatory standard in place since 1988 requiring sewage overflows to be limited to one (or less) overflow events on average per year, the city's outdated infrastructure is discharging a toxic stew of sewage and stormwater 600-800 times per year at its fifteen outfalls. Flows are in the hundreds of millions of gallons annually. When a local shellfish grower decides he had enough, he contacts Puget Soundkeeper Alliance (Soundkeeper).



Sinclair Inlet and Puget Sound Naval Shipyard (left), Dyes Inlet (middle distance); Manette and Warren Avenue Bridges (left to right) across Port Washington Narrows. Soundkeeper obtained documents showing the city's failures to comply with its discharge permit. After filing a citizen Clean Water Act case in U.S. District court, Soundkeeper met with city officials and worked out a solution. It was the first Clean Water Act settlement for the Soundkeeper program. Under the resulting consent decree, the city agreed to engage in a large scale project to limit the inflow of stormwater, expand the capacity of the system to handle larger flows and construct a new wet-weather treatment facility to provide water treatment when flows are too high.

Eighteen years and \$50 million later, the plan was completed, and it is working. In 2011, the Washington Department of Ecology declared the

City as the first "complex CSO community in Washington to achieve the regulatory goal of one or less overflow events per year, on average". The strategy included expanded use of green infrastructure to create more infiltration, and a downspout disconnect program. Every home and business in the city was contacted to participate in reducing the flow of stormwater into the combined sewer system. Midway through this process something incredible happened: The Department of Health re-opened shellfish beds in Dyes Inlet to harvest. This has been a huge boon for the Suquamish Tribe which is now able to harvest clams, mussels and oysters from their ancestral fishing grounds.

In 2011, at a project completion ceremony the Mayor honored Soundkeeper with an award for its "vision and partnership in the process." "It was a great fulfillment of the Tribe's vision," Suquamish Tribal Chairman Leonard Forsman later said.

This process illustrates the benefit of citizen enforcement under the Clean Water Act. The negotiations between the city and the state had not produced results. But when a federal consent decree forced the city to act, everyone got on board and the city worked hard to meet its goal of ensuring swimmable and fishable waters, allowing the citizens of Bremerton and the Suquamish Tribe to reclaim their lost resources.

20 Lesson: Focused, tenacious citizen enforcement of the Clean Water Act is a powerful strategy.

Standing Up for Streams in Kentucky

n 1999, the Kentucky Division of Water proposed to downgrade 25 streams from cold-water to warm-water habitat streams. The protection criteria for cold-water aquatic habitats are more stringent in order to protect the sensitive flora and fauna found in these habitats. The proposed reclassification would have significantly diminished the protection of those streams under the Clean Water Act. As executive director of Kentucky Waterways Alliance (KWA), I thought that warranted a second look.

by Judy Petersen Kentucky Waterways Alliance www.KWAlliance.org

It just so happened that I lived near one of the streams in question, Lynn Camp Creek. I knew from experience that the creek was, in fact, quite cold and should have epitomized the definition of a cold-water designation. The proposed change obviously puzzled me and started this whole sequence of events.

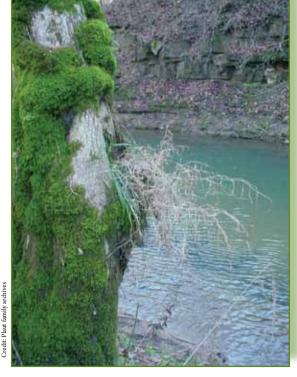
KWA contacted all of their statewide members, encouraging them to voice their concerns for similar creeks near them. Articles were written for local newspapers that inspired residents to share personal stories, explained the issues to pertinent property owners, and motivated local elected officials' involvement.

On every stream where local people protested the change, the state never fought it and the designated use remained cold water. Part of what was so interesting is that people had no data, no 'proof' if you will—they just had the fact that they lived there and that it was a cold stream.

It turns out that the state did not have any proof either, but state biologists were convinced that they were correct about Lynn Camp Creek. The state decided to monitor the stream to provide the necessary proof for redesignation. Once they extended the monitoring, they not only kept Lynn Camp Creek as a cold water stream, they gave it

additional protection as a reference reach stream. They decided it was such high quality that it could be the standard that they use to measure other cold-water aquatic habitats in the region.

Eventually, 16 of the proposed 25 streams retained their cold-water designation due, in large part, to the people who were willing to voice their concerns about potential effects of reclassification. The success of KWA's efforts to protect the cold-water designations of these Kentucky streams underscores the need and power of facilitating public engagement to fight for protection under the Clean Water Act.



Lynn Camp Creek is one of 16 streams in Kentucky that were protected simply because someone in the local community spoke up.

21 Lesson: Public engagement can be powerful: on every stream where local people protested...the state never fought it.

The Gumbo Alliance and Other Coalitions

by Cynthia Sarthou Gulf Restoration Network www.healthygulf.org he Gulf Restoration Network (GRN) was formed in 1994 as a diverse coalition of public interest, environmental and conservation organizations focused on the ecological health of the Gulf of Mexico. Our mission is to unite and empower citizens to protect and restore the natural resources of the Gulf Region. However, even a network like the GRN cannot effectively address all the threats to the Gulf. To protect and restore the Gulf, we've embraced coalition building as

a central tool in our toolbox.



The Gulf's teeming coastal marshes, vast expanses of bottomland hardwood wetlands, and numerous rivers are unique ecological, economic, cultural and recreational treasures. They shelter and feed thousands of species of fish and wildlife, afford essential habitat for 75% of the nation's migratory waterfowl, protect water quality and improve the quality of life of Gulf residents.

Like so many coastal ecosystems, these irreplaceable resources are in peril. In 2004, we faced an onslaught of 22 proposals for "open-loop" Liquefied Natural Gas (LNG) terminals that used seawater to "regasify" LNG and would have sucked in and killed billions of finfish and crustaceans.

The GRN knew that we alone could not stop this threat; we were simply not politically powerful enough. Our greatest possible allies in the fight to stop open-loop LNG were fishermen—both recreational and commercial. The problem was, our groups had often been on opposite sides of conservation issues.

Ancient bald cypress trees in the river bayous of the Gulf Coast were being indiscriminately cut for mulch until a coalition, including the Gulf Restoration Network, won stronger protections.

Building a coalition with fishermen required us and our conservation allies to mend those relationships. We partnered with both recreational and commercial fishing organizations in two alliances—the "Gumbo Alliance for Safe LNG" and the "Gulf Fisheries Alliance."

As a result of building and effectively working within these diverse alliances, we were able to secure two Gulf Governors' vetoes of further open-loop LNG terminals offshore. Louisiana Governor Kathleen Blanco officially vetoed the Freeport McMoRan—the corporation returned within 24 business hours and agreed to proceed with the project utilizing a fish-friendly, closed-loop alternative technology—and Alabama Governor Bob Riley caused ConocoPhillips to back down soon after. In the end, only two of the 22 offshore facilities were constructed and only one of those was open-loop.

GRN has worked in other successful coalitions over the years to address issues such as the destruction of bald cypress trees for mulch, the BP oil spill, and most recently, a coalition being formed around green infrastructure and global warming adaptation in New Orleans and coastal Louisiana.

Lesson: Putting aside differences between groups and forming alliances or coalitions can bring success that cannot be attained by one interest group alone.

Navigating the Los Angeles River

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nce home to steelhead and grizzlies, the Los Angeles River meandered through wetlands, marshes, willow, alder and sycamore, providing desperately needed water for the region. When the Army Corps of Engineers (ACOE) initiated a flood-control project in the late 1930s, they began the process of paving 80% of the river, creating the world's largest storm drain. With

by Shelly Backlar Friends of the Los Angeles River www.folar.org

the cement came a perceptual shift: the river no longer existed; it became a "flood-control channel," a no-man's land, surrounded by fences and signs.

When Friends of the Los Angeles River (FoLAR) started in 1986, we assumed our primary task was to convince people that the River could be healthier, but we soon realized that we first needed to convince people there even *was* a river. We re-introduced people to the river almost one at a time, with river cleanups, river walks, biking and hiking guides, outdoor education events and even canoe trips for journalists and politicians. As more and more people expressed interest in recreating in and along the Los Angeles River we started advocating for a "swimmable, fishable, boatable river."

The Los Angeles River

In June of 2008, a biologist with the ACOE,

Heather Wylie, contacted the Natural Resource Defense Council (NRDC) and Earth Justice, letting them know that the Corps was about to make a ruling in response to a permit application that could affect water quality and development on and along the river's tributary streams. Friends of the Los Angeles River joined forces with NRDC and several other groups to urge the Corps to rule that the Los Angeles River is a "traditional navigable waterway"—a crucial element in determining discharge permits upstream. Heather also contacted George Wolfe, a kayak enthusiast who pulled a crew together, formed L.A. River Expeditions and spent three days paddling the river's entire length to prove it was navigable.

Our coalition worked with both the U.S. EPA District 9 and with the Los Angeles Regional Water Quality Control Board to make a case for the river. However, the Corps ruled that only four of the river's 51 miles were navigable. Then, on July 7, 2010, U.S. EPA Administrator, Lisa P. Jackson, announced that the EPA determined that the Los Angeles River is a "traditional navigable waterway". The EPA's ruling has put the word "River" back into the Los Angeles River.

In July 2011, the pilot Paddle the L.A. River Program ran tours on Friday through Sunday. The 250 seats offered to the public at \$50 each sold out in just 10 minutes. In 2012, both L.A. River Expeditions and the Paddle the L.A. River received permits to take people out on the river. Between the two tours, over 2,000 people experienced the Los Angeles River by boat. Currently there is a proposal designating the Glendale Narrows section of the river as a recreational zone where the public can kayak without being part of an organized program. Stay tuned.

23 Lesson:

Even our forgotten waterways need a voice.

Leveraging Recreational Streamflows to Restore a River

by Nathan Fey American Whitewater www.americanwhitewater.org

he Dolores River in southwest Colorado contains an impressive diversity of landscapes, from pristine high-altitude headwaters in the Lizard Head Wilderness to red sandstone canyons at the confluence with the Colorado River 230 miles downstream. The basin is home to rare riverside plant communities, outstanding trout and native fish populations and world-class river recreation.

> At the time the Dolores Project and McPhee Dam were proposed by the U.S. Bureau of Reclamation, a joint recommendation was made by the Colorado Department

Agriculture and Interior, to add the Dolores to the National Wild and Scenic Rivers System for, among several values, whitewater boating. Defined as the number of days when streamflows equaled or exceeded 500 cfs, whitewater boating opportunities averaged 54.6 days per year, between April 25-July 1. During the 46-year period of record for the 1975 Wild and Scenic River Study, "boating opportunities occurred in nearly every year." Only two years had none, attributable to

of Natural Resources, and the U.S. Departments of

Since the late 1880s the area's economy has been based primarily upon mining and agricultural operations, the latter of which is dependent on significant diversion and delivery of water supplies out of the Dolores River.



Dolores River, CO

highly variable hydrologic conditions in the watershed. In 2010, American Whitewater launched a comprehensive flow study for the Dolores River below McPhee Reservoir—completed in 1989—to define streamflows that provide recreational value and to assess the frequency of these flow-dependent opportunities. American Whitewater found that postproject, whitewater boating opportunities during the same seasonal period have been reduced to an annual average of 26.8 days. From 1991-2010, boating opportunities were not available 30% of the years—the 500 cfs target was not achieved one out of three years.

Using the results from the study, American Whitewater developed recreational flow guides that prescribe a target number of days at specific flows that can restore the recreational values of the Dolores River while honoring existing Dolores Project obligations. The flow guides have also established quantitative criteria for monitoring and evaluating the frequency, timing and duration of flows provided for river recreation, while also triggering ecosystem functions, such as sediment flushing flows, channel maintenance, and flood conditions critical to riparian health.

In 2012, American Whitewater, local water users, state and federal agencies, and other conservation groups released a draft Flow-Management Plan that seeks to use the new guidelines to restore more natural, reliable and predictable streamflows to the Lower Dolores River, while preserving the traditional economies of the region. While streamflows are the most valuable resource in the watershed, it is the shared values and dedication to collaboration from diverse interests that will be most important to restoring the health of the Dolores River.

Good science, shared values and dedication to collaboration from diverse. interests can protect and restore our flowing rivers.

Connecting People, Saving Rivers

he key to saving rivers isn't technology or laws or money, although those things are all important. The key to saving rivers is connecting people and helping them figure out how to do great things together.

Shortly after River Network began, it launched an ambitious campaign to connect river advocates by establishing statewide river protection groups in more than a dozen states around the country. Wisconsin was one of the early target states. The Badger State has a very strong conservation tradition, more than 84,000 miles of rivers and streams, and an economic base anchored in part by a tourism industry that depends on clean, plentiful water supplies to attract its clientele.

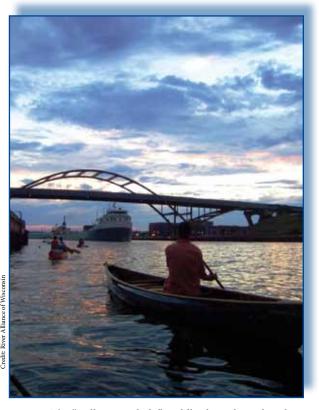
River Network staff began working closely to connect key conservation leaders like University of Wisconsin-Madison Professor Steve Born, state wild rivers advocate Bill Beverly, UW-Stevens Point College of Natural Resources Dean Dan Trainer, and internationally known fly fisherman and professor Gary Borger. Together, they formed the River Alliance of Wisconsin—an organization to protect and restore the flowing waters of the state. In 1993, they hired their first Executive Director, Sara Johnson, right out of graduate school and she worked long hours at low pay to build the group.

In those early years, Sara and the Board made a conscious decision to focus on a few key areas where leadership was needed, but they didn't try to tackle every water-related environmental issue. This clear focus was important and quickly led to several great things, including a nationally recognized hydropower relicensing agreement called the Wilderness Shores Settlement and a successful campaign to remove the last four dams on the Baraboo River.

In 1999, the River Alliance also began to focus on helping and connecting local watershed groups. They led the way in establishing a state fund to provide grants and technical assistance, and—with mentoring and training from River Network—launched a Local Groups Assistance program. Those investments, in turn, led to more great things, including a successful 2006 campaign to protect over 1,200 miles of northern Wisconsin rivers by designating them as "Outstanding" or "Exceptional Resource Waters".

From its early days, the River Alliance had an appetite for policy reform and advocacy—supporting good legislation and pushing back on bad legislation, and keeping tabs on how the state's natural resources agency manages water resources. The River Alliance has an urban rivers program, an initiative focusing on the Wisconsin River, and is Wisconsin's leading voice in highlighting the threat of riverine aquatic invasive species.

by Denny Caneff
River Alliance of
Wisconsin
www.wisconsinrivers.org



The "Milky Moonlight" paddle along the Milwaukee River is just one of many ways that the River Alliance of Wisconsin is connecting people to save rivers.

25 Lesson: Focus on a few key areas where leadership is needed but don't try to tackle every water-related environmental issue.

25 Years of River Network

River Network was founded in 1988 to help people save rivers and their watersheds.

At the time, there were about 200 state and local watershed protection groups around the U.S., but thousands of watersheds where there was no group at all. We saw a great need for more groups and the enormous potential of their collective impact. But we also knew that building a movement would take time.

Here are just a few key highlights of the work we've engaged in over the years and the impact we've had. On the next page, you'll find some testimonials from the watershed leaders we've served. To all our Partners, supporters, donors and collaborators—thank you for an amazing 25 years; we're already looking forward to the next 25.

1988 - 1992

THEN: What We Did

Founded our Partnership Program to provide assistance to existing and emerging river groups across the U.S.

NOW: Our Impact

Today, there are nearly 2,000 state and watershed groups across the U.S.—ten times as many as when River Network was founded.

THEN: What We Did

Founded our River Leaders
Program, which sent
experienced conservation
professionals around the U.S. to
train some of the most promising
groups.

NOW: Our Impact

The groups we train—typically in just 3-4 years—see their revenue double, volunteers increase by 50%, and a two-fold increase in their success at making their home waters fishable, drinkable and swimable.

1993 - 1997

THEN: What We Did

Began small annual gatherings of leaders of major river groups for training, networking and planning.

NOW: Our Impact

Our River Rally is now the nation's foremost annual training and networking event for watershed conservation leaders. Last year over 750 participants came to the sold out event!



THEN: What We Did

River Watch Network (which later merged into River Network) expands its water quality monitoring work from Vermont to nationwide.

NOW: Our Impact

Several hundred groups and tens of thousands of citizens throughout the U.S. have been actively engaged in monitoring the quality of their home waters.

1998 - 2002

THEN: What We Did

Launched a Watershed Assistance Grant program and began to engage the business community to provide greater financial assistance to state and local watershed groups.

NOW: Our Impact

Since 1999, we have distributed more than \$2.5 million in re-grants to local watershed groups.

THEN: What We Did

Established new program to help watershed groups better understand the Clean Water Act and ensure it works properly in their state and watershed.

NOW: Our Impact

Hundreds of groups are actively engaged in Clean Water Act implementation, and key watershed group leaders have received special "train the trainer" expertise in how to teach others to use this vital water protection tool.

2003 - 2007

THEN: What We Did

Developed a "Watershed Support Network" by training key state and regional Partners to design and deliver coordinated services to local watershed groups.

NOW: Our Impact

State or regional groups in a dozen states are now delivering capacity building services to hundreds of local groups, multiplying the effectiveness of the movement.

THEN: What We Did

Established field offices around the country to better provide services to organizations nationwide.

NOW: Our Impact

Field offices in six states. River Network staff have greater regional expertise and closer relationships with groups in those regions.





2008 - 2013

THEN: What We Did

Began development of a series of "Learning Labs" across the nation, working on the ground with local Partners on cutting edge river habitat restoration projects that can serve as replicable models for the rest of the watershed movement.

NOW: Our Impact

Learning Labs are now underway in Kentucky, Michigan, Wisconsin, Utah, Oregon and Washington State, producing invaluable handson case studies for our network of river advocates.

THEN: What We Did

Launched "Saving Water, Saving Energy" program to help state and local groups better understand the important linkages between water, energy and a changing climate.

NOW: Our Impact

Nearly two dozen groups around the country have valuable in-depth training on water and energy linkages and hundreds of other groups are better informed about the problem and how to solve it.



Celebrating 25 Years!

You've Read What Our Partners are Doing Now Hear What They are Saying!



We've been a River Network Partner for as long as we've been an organization. River Network's ability to connect us to others has allowed our work and our organization to grow in ways we never thought possible. We are stronger with all of the other

Partners beside us in solidarity, and even more robust with River Network's support behind us. The Spokane River is cleaner now than it was 25 years ago, in part due to our partnership with River Network.

Bart Mihailovich Spokane Riverkeeper **(WA)**

It's hard to describe in just a few sentences the positive impact of being a River Network Partner. The networking alone has been invaluable, and the ability to connect with other nonprofits has provided energy and support when we needed it the most. River Rally has been ground zero for many projects, possibilities and problems solved. The information overload weekend has

brought us everything from our very first Executive Director to incredible resources that help us protect and promote our region.

Brian WilliamsDan River Basin Association (NC/VA)



River Network's support of our efforts to ensure that the cleanup of the Duwamish River benefits and is accepted by the community and protects fish, wildlife and human health has been invaluable. The communities we serve (mainly lowincome, recent immigrants, subsistence fishermen and Tribal nations) have

been neglected for so long; River Network's support has made a meaningful, measurable difference in a very short period of time.

Alberto J. Rodríguez

Duwamish River Cleanup Coalition (WA)

people. River Network brings together and supports an amazing group of people —a true network—working together for a shared vision. This network supports each other through education, inspiration and celebration—all for the benefit of our rivers, lake and waters.

The value of any organization is in the



Lyn Crighton
Tippecanoe Watershed Foundation (IN)



My favorite part of River Network is River Rally. I find the information presented at River Rally can bring a new staff person or new board member up to speed with our work faster than any online class or reading of the Clean Water Act. River

Rally has kept the Tennessee Clean Water Network razor sharp when it comes to new developments in clean water policy.

Renee Hoyos
Tennessee Clean Water Network (TN)



My organization knows, first hand, that River Network is a big reason why people protecting waterways is such a fast-growing part of the environmental

stewardship movement. River Network helps us get started and grow stronger, trains us, gives us tools to succeed, brings innovators together around tough emerging issues, and connects us to support and sustain each other. The Cahaba River is healthier because River Network cares deeply and knows how to help.

Beth StewartCahaba River Society (AL)

River Network is our go-to source for all things river advocacy-related. Our organization is a small nonprofit in Alaska, and we regularly contact River Network for advice on water quality standards and resources, information on nonprofit management practices, and for help in connecting with other groups about their experiences with certain activities.

Kristin CarpenterCopper River Watershed Project (**AK**)



River Network Partnership

A Co-op of River & Watershed Organizations

www.rivernetwork.org/programs/partnership-program

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- Advertise Jobs & Events
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- One-on-One Assistance
- Publications
- Resource Library
- River Rally Conference

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- Quarterly Webinars
- Listserv
- River Network Partner Logo
- Share Success Stories

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Partnership Benefit Highlight

WATERSHED WEDNESDAYS

Share some inspiration, get some inspiration!

We focus on one Partner group's activity, success, milestone event or just plain cool idea and promote it the best that we can nationally. We tweet about it, blog on it, feature it on our website and do whatever other social network bragging that we can about your excellent work.

Send us your story using this page: www.rivernetwork.org/forms/watershed-wednesdays

2013 Annual River Network Partner Dues Nonprofit Organizations & Local, State & Tribal Government Partners Annual Budget **Annual Partner Dues** <\$25.000 \$150 \$25,000 - \$100,000 \$200 \$100,001 - \$250,000 \$275 \$250.001 - \$500.000 \$375 \$500,001 - \$1,000,000 \$1,000,001 - \$2,000,000 >\$2,000,000 Business & Consultant Partners <\$999.999 \$500

To join or renew as a River Network Partner, please mail this form with your
check to River Network (209 SW Oak #300, Portland, Oregon 97204) or pay by
credit card at www.rivernetwork.org/marketplace.

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Sponsor a Partnership for a local group.

If you know of an organization that needs financial assistance to become a River Network Partner, please complete this form and mail your check with the appropriate dues listed above. River Network will contact the organization on your behalf with information on how to access all the great benefits described in the Partner brochure. Thank You!





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Become a *Perennial Patron* of River Network and help support clean, healthy rivers throughout the year.

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Select the Online Donation option and follow the instructions for making a recurring donation. You may choose ongoing monthly or quarterly gifts.

www.rivernetwork.org/donate-form.php

