

Inside: Undamming Rome - Dam Photos - Lower West Branch Runs Free





Gallery Edition

Documenting Our Past

Welcome to this special gallery edition of Voice of the River. We're excited to partner with the photographer and writer Stephen Longmire and the Tahawus Cultural Center to present Undamming Rome, an exhibit of photographs, old and new, of the Rome Dam.

Built in 1893-94, and rebuilt in 1936, the dam provided process water and power for the J. & J. Rogers Company pulp and paper mills. It was large by Ausable standards: 103 feet wide and 38 feet tall. After the closing of the last of these mills in 1971, the dam deteriorated and was, years later, deemed unsound. After the extreme flooding of Tropical Storm Irene, an engineering study recommended the dam's removal. The Governor's Office of Storm Recovery (GOSR) funded that study and allowed the Town of Jay to move forward with the dam's deconstruction. In the autumn of 2018, the dam was removed after 125 years on the West Branch.

GOSR commissioned Stephen to document the dam, which he did over the last few years it stood. His fascination with the dam led to an exploration of the substantial operations of the Rogers industry, which fueled the late 19th and early 20th century economy of the Ausable watershed. Some of that history is shared via this show – some of it through the photographs of Elsa Voelcker, grand-daughter of Henry Geer Rogers.

We hope the images and the artifacts, paper and steel, revive memories. We hope some of those memories might be captured by our partners at North Country Public Radio, who will record personal stories and scan images during the show's run for their North Country at Work program. Stay tuned for announcements of this and other special events connected to the show.

Our thanks to Rebecca Kelly and Craig Brashear for providing gallery space so appropriately along the banks of the Ausable River. A Decentralization grant from the New York State Council on the Arts, through the Adirondack Lakes Center for the Arts, assisted in the printing of the large-format images. The Wells Memorial Library in Upper Jay kindly lent the hanging system that allowed Stephen's prints to be displayed.

Thanks for joining us. Enjoy the show.

Kelley Tucker
Executive Director





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∖ I ot long after my wife and I moved to the Town of Jay, ten years ago, we began to hear talk of the Rome dam. It was a safety hazard that should be repaired or removed, we heard in the aftermath of Tropical Storm Irene, when the Dam Safety Division of the State's Department of Environmental Conservation finally got serious about fines it had been levying against owners of the structure since 1994. That was the year the dam turned 100, and the year it was first deemed "unsound," having seen no maintenance for several decades. Since 2004, the dam had been owned by the Town—which declined an offer from the U.S. Fish and Wildlife Service to remove it a few years before Irene flooded the Ausable River valley in 2011. A future flood might be far worse if the dam failed, releasing the contents of its impoundment—acres upon acres of sand and rock, as well as water—a mile upstream of Au Sable Forks.

Yet, even after Irene, there were those in

the Forks who wanted to keep the dam. There was a recurrent hope that it might someday generate hydroelectric power, though several investigations of this possibility over the half-century it stood idle found otherwise. There was also a feeling, widely shared, that the dam protected the community from ice jams. Not living in the Forks, but at the other end of town, we lived amongst people who had never seen the dam and could tell us nothing about it—where it was, why it was there.

As a landscape photographer and historian, I have been drawn to contested spaces, where communities argue over the significance of landmarks. Some might call these sacred sites. My last book concerned a 13-acre cemetery in eastern lowa that had been used for burials since the 1830s—around the time Au Sable Forks was also settled. Rochester Cemetery is a time capsule of lowa history, charting the history of its plants and people. An island



of biodiversity amidst a sea of corn and soybeans, it is one of the most unusual prairie remnants around. Botanists consider it one of the wonders of the world. Yet many local people, when I first saw it nearly 20 years ago, wanted to mow it down to show respect for their dead.

How to show respect for the dead is a big subject among the living, those who remember at least. As I began to explore the story of the Rome dam—or the J. & J. Rogers Co. pulp and paper mill dam, as it is more properly called—it became apparent what was at stake. Au Sable Forks was a company town, developed by the Rogers Co. in the mid-19th century when it was in the iron business and workers were paid in scrip that could only be used at the company store. When iron ceased to be profitable here in the late 1880s, James Rogers Jr. had the bright idea to build a pulp mill and harvest the remaining timber on the company's vast land holdings (roughly 100,000 acres) to make paper from wood. This was a relatively new process at the time. He rehired and retrained men from the iron industry, and put the community back to work.

The dam first powered and provided process water to the Rogers pulp mill, which began operating in 1894; a decade later, a paper mill was built on the opposite bank of the river and downstream, also taking water from the dam via a long penstock. After the J. & J. Rogers Co. was sold out of the family in the 1950s (a sore point for family members who remain in the area), the pulp mill was promptly ruined and closed. The paper mill ran until 1971; some say it ran into the ground. Others blame environmental regulations for its closure. It is true that the State demanded a water treatment plant the failing company could not afford; it also offered to contribute a significant part of the cost. Many remember how the river downstream of the Forks turned colors depending what color paper was being made.

It seemed clear to me the Forks felt protected not by its dam, but by the history it contained. If the impoundment were drained, would that also slip away? So when the Town, with help from the State, decided to remove the dam in 2017—after an exhaustive engineering study showed this was the only affordable option—I was asked to document the structure before its removal a year later. I took this to mean recording the impoundment as well. A popular swimming hole, it concealed key features of the

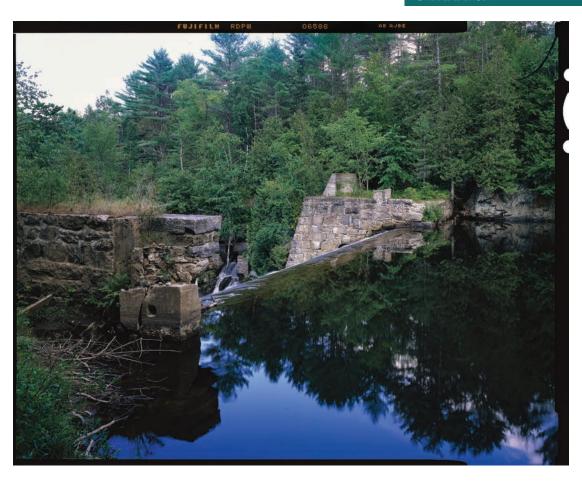
wood-sorting operation that once happened there, when quantities of four-foot spruce logs were herded to the pulp mill each spring on the annual log drives. (These continued until 1923, when the supply of local wood ran low, and the mill began trucking in much of its wood from Canada.)

Many people helped along the way. Roy Schiff, of Milone & MacBroom engineering, understood the importance of recording this story. Archivists at several local institutions—named in the gallery, alongside the objects they lent to this exhibition gave me valuable assistance along the way. My greatest debt goes to two members of the Rogers family, Jim Rogers (James III) and his cousin Elsa Voelcker, whose photos of the mills I am pleased to display alongside my own pictures of the dam. Elsa also shared the family archive of photos of the mills in action, and Jim shared memories of the business he and another cousin were raised to run. Elsa recorded vital parts of this story in two publications in the 1970s; Philip Hardy wrote an excellent dissertation on the Rogers Co. in the 80s. (All these books are available for perusal in the gallery.)

Rebecca Kelly and Craig Brashear, whose Tahawus Cultural Center works to maintain the cultural life of Au Sable Forks, kindly provided a space for this show. Although not part of my commission, it was the obvious culmination of the work I had taken on. Funds to print the pictures came from the NY State Council on the Arts and the Essex County Arts Council. The Ausable River Association supported this project throughout. They provided the vision of a healthy stream flowing though the gorge concealed by the dam—which breaks ice naturally—allowing sediment to move downstream without threatening the community downstream. The prints—like those from my last book, Life and Death on the Prairie were made by Mark Sarazen, of Sarazen Editions, an Adirondack native living in the Hudson valley.

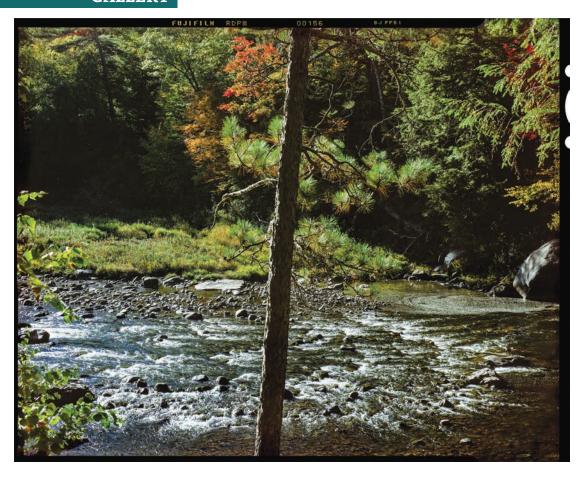
I think of the images as visual archaeology, peeling back the strata of settlement history, showing that each layer has value, adding to the story of how people make place. This is part of an ongoing effort to record the management history of the Ausable River, a chapter in its biography. The river flows by outside the gallery windows, depositing debris from the dam and cobble from the shoulders of Mount Marcy. It is the medium for all our stories of this place. \square





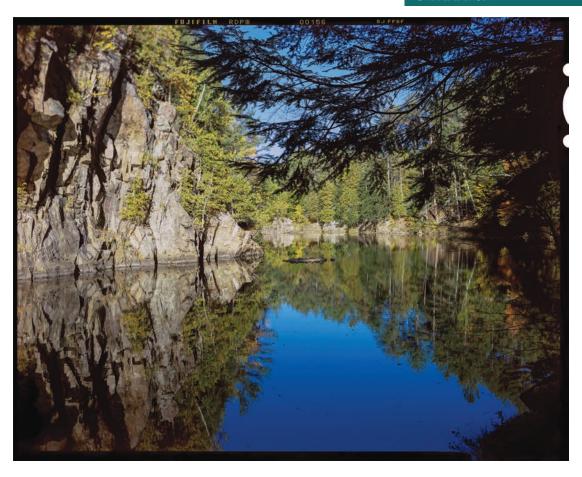
















This piece originally appeared in the Fall 2017 edition of Voice of the River.

Plans to remove the Rome Dam will soon be complete, and work could begin as soon as next year. The deconstruction process could take three to four months, from mid-summer into fall, when water flow on the Ausable River is typically at its lowest. The cost will be paid by federal funds awarded to the Town of Jay by the Governor's Office of Storm Recovery, part of the Community Rising process designed to ensure greater flood resiliency after Tropical Storm Irene.

The dam's removal will be a major engineering project, as was its construction, yet many residents of the Ausable valley who don't live in Au Sable Forks have never seen it. They may wonder where this Rome is, and why it's dammed? When I first asked. several years ago, a neighbor in Upper Jay assured me it was once the Italian district of the Forks. I now suspect he was pulling my leg. The name turns out to be a WASP joke, since a family named Pope (no relation) lived up that way, way back when, at the western edge of the Forks, and the road to their house—now Church Lane—was dubbed the Appian Way. From its beginning on Main Street, alongside the Catholic church, Church Lane parallels the West Branch of the Ausable upstream; it turns into Ausable Drive at the last cluster of houses in the hamlet, then

winds through AuSable Acres.

Soon after Church Lane becomes Ausable Drive, in a bedrock gorge tucked in the woods, sits a stone and concrete dam, nearly 40 feet tall and just over 100 feet wide, built in 1893 (and rebuilt in 1936) to power the J. & J. Rogers Company's pulp mill, the first phase in its papermaking process. The pulp mill stood just downstream on the right bank, as one looks downstream; only a pile of rubble remains, on private land, to mark the site. The dam also sent water to a paper mill, built across the river and farther downstream in 1902. This mill still stands, albeit in ruins. Portions of the steel penstock pipes, over seven feet wide, that carried water to these mills still line the river on either side.

Along with some 19 acre feet of water (acres filled one foot deep), the dam currently impounds 30 acre feet of sediment (more than 3,000 dump truck loads), according to the water resource engineers from the firm of Milone & MacBroom who studied the site last year and are now designing the dam's removal. They believe this represents roughly five years of sediment, from sand to boulders, blocked from moving downstream. That rivers move sediment, as well as water, is a basic fact of hydrology demonstrated by the unmistakeable sound of a flood on a steep mountain stream: beneath the roar of rushing water, the clack of boulders rolling, a grand



game of pool. Some sediment goes over the ogee-curved spillway in heavy floods, but immediately downstream the river is starved of sediment—"bony," in the language of anglers and river scientists.

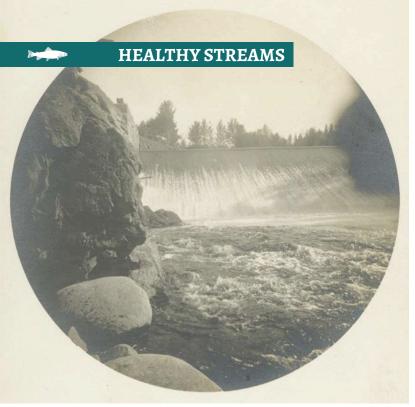
Roughly a year's worth of sediment will be allowed to move downstream during the dam's removal, which will help to restore the channel. One goal of the planned removal is to avoid a sudden release of all the sediment, which could fill the channel and force the river to move sideways, endangering houses and other buildings. Another basic lesson of river science is that rivers move, snake-like, and it is only human infrastructure, or topography, that pins them in place, or tries to.

The State of New York—through the dam safety arm of its Department of Environmental Conservation—has deemed the Rome Dam a "high hazard," meaning that its failure could result in the loss of life. The dam is also rated as structurally unsound, meaning the integrity of its deteriorating foundation is unknown. These determinations required the Town of Jay, which owns the dam, to remove or repair it, or else face stiff fines. One side of the dam is pulling away from the rock wall of the gorge into which it is built, and it has been decades since the gates designed to release water into the penstocks opened. Buildings that once stood on either abutment are long gone, as is the cable bridge

that allowed workers to cross back and forth. The dam has probably seen no maintenance since the Rogers Company went out of business in 1971—perhaps not since the pulp mill closed some fifteen years earlier, soon after the company was sold out of the family.

There has been concern in the Forks about whether the dam's removal might increase flooding, since some residents believe it protects them from flood waters and ice jams, breaking up ice as it cascades over the spillway. The engineers believe bedrock drops currently submerged in the gorge will break ice naturally, and the amount of water passing downstream will not change, after the dam's removal. What everyone wants to avoid is an unplanned breach of the dam. As Roy Schiff, the lead engineer on the project, put it, "The dam's coming down, it's just a question of when." He recently helped to engineer the removal of a smaller timber dam in Willsboro, which also powered a pulp mill.

Jay's Town Board voted to remove the Rome Dam this spring. Bids for the process will soon be solicited from contractors. AsRA is helping to obtain the necessary permits from the Adirondack Park Agency and the Department of Environmental Conservation and working to make sure the result is a free-flowing river, safe for trout and people.



Top: James Rogers Jr.'s photo of his new dam, made with an early Kodak soon after it was built in 1893. Previous Page: Rome Dam in 1936, after its original timber spillway was washed out by a spring flood. The dam was rebuilt with a concrete ogee spillway that summer.

The J. & J. Rogers Company put Au Sable Forks on the map and employed the community for over a century. Making paper from wood pulp was its second business; iron was its first. The company was formed in 1870, though the partnership between the brothers James and John Rogers began in the 1830s and became one of the largest of several businesses extracting and processing iron ore in the Ausable valley. The company owned land throughout the valley, since forging iron required vast quantities of hardwood timber to produce charcoal. A forge might deforest 1,000 acres in a year, and the company ran ten forges in its prime.

The Rogers Company owned and cut mountainsides in Keene Valley and Wilmington (they owned much of Whiteface Mountain and lumbered it twice before selling it to the State); its vast land holdings also included Fern Lake, Silver Lake, and Taylor Pond. AuSable Acres was developed on former Rogers Company land. The company ran logs down both branches of the Ausable, controlling the flow of water with dams at the headwaters of each branch, at Lower Ausable Lake and South Meadows, as well as Marcy dam. "The J. & J. Rogers Company was a big part of why we have an Adirondack Park," acknowledges Jim Rogers (James Rogers III), a

descendant of one of the company's founders who lives in Lake Placid.

By 1889, iron had ceased to be profitable in the Ausable valley. This happened suddenly, for several reasons, including the discovery of iron in the northern Midwest, the development of cheaper manufacturing processes that allowed the use of lower grade ore (most Ausable valley iron was quite pure), and the relaxing of tariffs that prevented the importation of iron from other countries. Unable to make money, the Rogers Company shut down, and Au Sable Forks, a company town, was out of work.

At the time, James Rogers Jr. controlled roughly 75,000 acres of timberland on which much of the hardwood had been cut. He had a willing workforce in the community his family helped to establish at the confluence of the river's two branches, and felt an obligation to employ these men. A business opportunity occurred to him: harvest the remaining softwood, mostly spruce, for wood pulp, the new way of making paper. This initiated a new era of logging in the valley, cutting trees at higher altitudes, along the river's tributary streams, while continuing to use the river as a highway to bring logs downstream. The mills he designed and built, first the pulp mill, then the paper mill, together served as a transformer, turning a prolific raw material into an industrial product, using water power from the river to fuel the process at every turn. This process transformed the landscape as well, as the iron industry had before it.

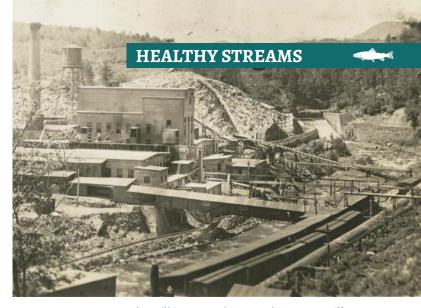
Jim Rogers, who with his cousin John might have taken over the family business—run in their childhoods by their fathers and grandfather (grandsons and son of James Rogers Jr.)—still regrets its sale out of the family in the mid-50s. This occurred when a cousin who had become the majority shareholder sold his shares to an outside buyer, with little concern for the company or the community. The pulp mill was soon ruined, when the new owner, a holding company in New Jersey, tried to convert it from the sulfurous acid process to the ammonia process, blowing the valves that held the cooking liquor under pressure as it reduced wood chips to pulp. The Rogers Company had been buying wood from local suppliers since the last log drive came down the Ausable in 1923; now it had to buy pulp from Canada. Jim Rogers speculates the company's

last owner had less interest in making paper than in what remained of its extensive land holdings. He wishes it had been sold to Hammermill, which came in with a lower bid, believing it might still be in business had this happened.

The Rogers Company shut down in 1971 for several reasons: orders were down, and the State of New York required it to build a water treatment plant it could not afford (the State would have contributed a significant portion of the cost) to avoid the continued dumping of toxic paper byproducts into the river. The main stem of the Ausable, below the Forks, turned different colors depending what color paper was being made. The paper mill also suffered a serious fire, costing the company much of its stock, in the fall of 1970.

Jim Rogers believes the underlying causes of the company's failure were financial mismanagement and poor quality control in its final years. This is a regret, not just because Au Sable Forks has not found a comparable employer in the decades since, but because the J. & J. Rogers Company was in many ways a model business before its sale, innovating in both its process and its products. His father, grandfather, and great-grandfather were all skilled, if largely self-taught, engineers, who designed their mills to maintain their community in a remarkable case of what Philip Hardy, in his history of the Rogers Company, calls "paternalistic capitalism."

Roy Schiff and Brian Cote, the engineers who have studied the site of the dam, probing and modeling the riverbed below the impoundment, believe the dam's removal will reveal a beautiful



J. & J. Rogers Co. pulp mill in 1903, the year the paper mill opened across the river. Note the dam in the background and the massive pile of logs between it and the mill.

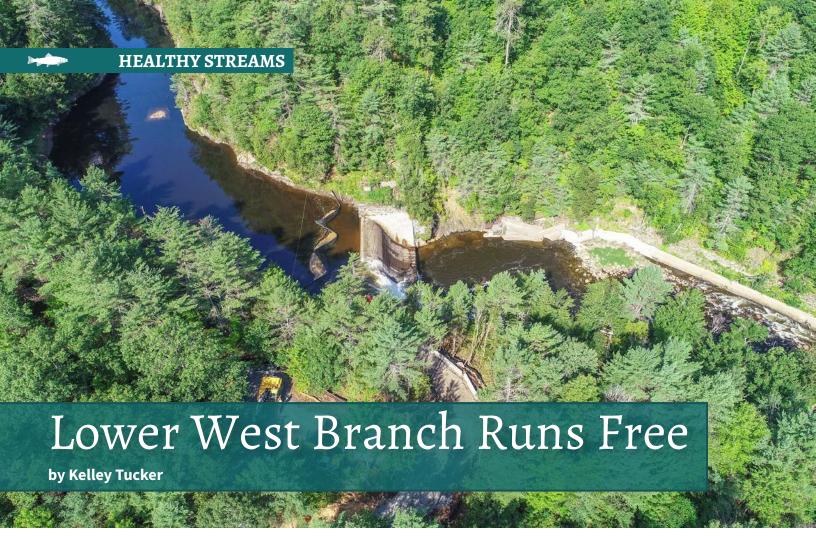
natural gorge. The water level will drop inside the impoundment, exposing land no one alive has ever seen.

Documenting the site before this happens, and researching its history, are important steps in the removal process so that evidence of this business which shaped the local landscape and community survives. The photographs accompanying this story are from the Rogers family archive. Together with contemporary photographs of the site, some of these extraordinary images will be exhibited in Au Sable Forks in the near future. Those with memories of the Rogers Company they would like to share are encouraged to contact the author in care of AsRA.

Stephen Longmire is a landscape photographer and historian who lives in Upper Jay. He is documenting the Rome Dam prior to its removal.

Left: J. & J. Rogers Co. pulp mill, seen from Rome Dam, the year it opened, 1893. Note penstock pipe carrying water to mill. Right: Wood room, inside pulp mill, where logs were prepared for chipping, ca. 1894.



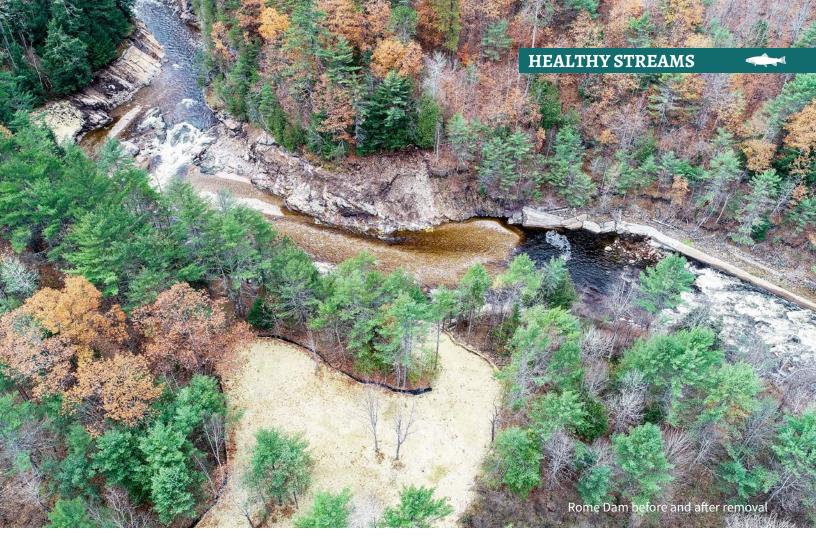


fter years of effort, the 125-year-old dam on Athe lower West Branch Ausable River has been demolished. The decaying dam and the still waters of its massive impoundment are gone. In their place, the river tumbles freely through a magnificent gorge of steep bedrock. Multiple cascades oxygenate flowing water as it sorts the river's natural sediment and reestablishes its structure of alternating riffles and pools, rebuilding habitat. Fish move freely upstream and down, able to discover cooler, sheltered waters and sources of food previously denied them. The Rome Gorge is a stunning natural phenomenon and an important addition to the health of the wider Ausable River system. It's an example of AsRA's persistent, quiet, and successful advocacy for the river and the communities that love and rely on it.

Built in 1893-94, and rebuilt in 1936, the Rome Dam provided process water and mechanical power for the J. & J. Rogers Company pulp and paper mills. It was large by Ausable standards: 103 feet wide and 38 feet tall. The dam impounded 49 acre feet of water and sediment; three acre feet equals almost a million gallons. For some residents, the dam was a reminder of the days when Au Sable Forks was a prosperous industrial center. The J. & J. Rogers

Company provided the economic foundation for that prosperity for 150 years, starting in the 1830s. But with the closure of the Rogers Company in 1971, the dam fell into disrepair. By 2011, when Tropical Storm Irene unleashed her fury on the Ausable River watershed, the dam was already severely compromised.

Assessing the safety of the Rome Dam, and planning for its removal if the structure was confirmed to be hazardous, was a priority in the Town of Jay's NY Rising Community Reconstruction (NYRCR) plan, a project led by the Governor's Office of Storm Recovery (GOSR) in the aftermath of Tropical Storm Irene. AsRA was a member of the NYRCR planning committee that identified assessment of the dam as essential to community flood resilience. In 2015, with funds from GOSR, the town contracted with the Vermont-based engineering firm Milone & MacBroom, Inc. (MMI) to assess the Rome Dam. That assessment revealed significant deterioration in the structure: cracks in the spillway, seepage undermining the abutments, inoperable and collapsed intake penstocks, and sediment and large woody debris lodged in the intake structure. New York State had listed the dam as structurally unsound for many years. The additional damage after Irene confirmed the risk of dam failure



was high. The evidence was overwhelming. On March 9, 2017, after a thorough review and a public hearing, the Town of Jay Board unanimously passed a resolution to remove the Rome Dam.

Removal was complicated by the dam's location in a steep gorge, making access along the state-designated Wild, Scenic, and Recreational River challenging. MMI engineered the deconstruction, AsRA provided local coordination and permitting support, Reale Construction led the demolition, and Essex County provided coversight. Funding was provided through the Governor's Office of Storm Recovery. Thanks to thorough planning and efficient staging, the dam's deconstruction went smoothly and without significant delays; the time-consuming piece of the puzzle was the removal of years of sediment – sand, cobble, and boulders – that had accumulated in the impoundment behind the dam. Over 30,000 cubic yards of material was removed – half of that to a site established by AsRA so it can be reused in river restoration efforts on both branches of the river.

Work began in mid-August and was completed by mid-November. It will take the river a year or two of high and low flows to re-establish its channel structure fully. AsRA will monitor the progress of the river's adjustments to assess whether further restoration will be needed.

Dams can provide benefits for some people and for some opportunistic wild species, but they are detrimental to a stream's health. They interrupt ecosystems up and downstream, reduce fish and wildlife habitat, and cut populations of aquatic species off from their normal range of movement. In a system such as the Ausable, prized for its water quality and as a destination for anglers, healthy, connected habitat is essential. More fundamentally, dams change the form and function of a stream. They disrupt water flows and block the movement of vital nutrients and sediments. When a dam blocks a stream, its natural alternating sequence of slope-controlling, oxygenating riffles and deep, cool, habitat-rich pools is drowned by an oversized impounded pool where sediment is trapped – more each year. Water quality is degraded. Impounded water, more likely than not, warms one or two degrees more than moving water. Upstream, sediment backs up; over the years, as material accumulates, the channel may begin to braid, creating multiple



low-flow channels where there once was one. Downstream, the remainder of the river is starved of sediment. Without material to build and rebuild its structure, downstream reaches can lose features essential to habitat. The loss of form and function leaves a stream vulnerable. Incapable of efficiently transporting water and sediment, its ability to manage disturbances – flood flows and ice, for example – is diminished. Impaired water quality, lost habitat and connectivity reduce the recreational value of a stream. Removing a dam can be a first step to restoring the form and function of a stream and the ecosystem benefits – clean water, a recreational fishery, resilience in floods – most valued by communities.

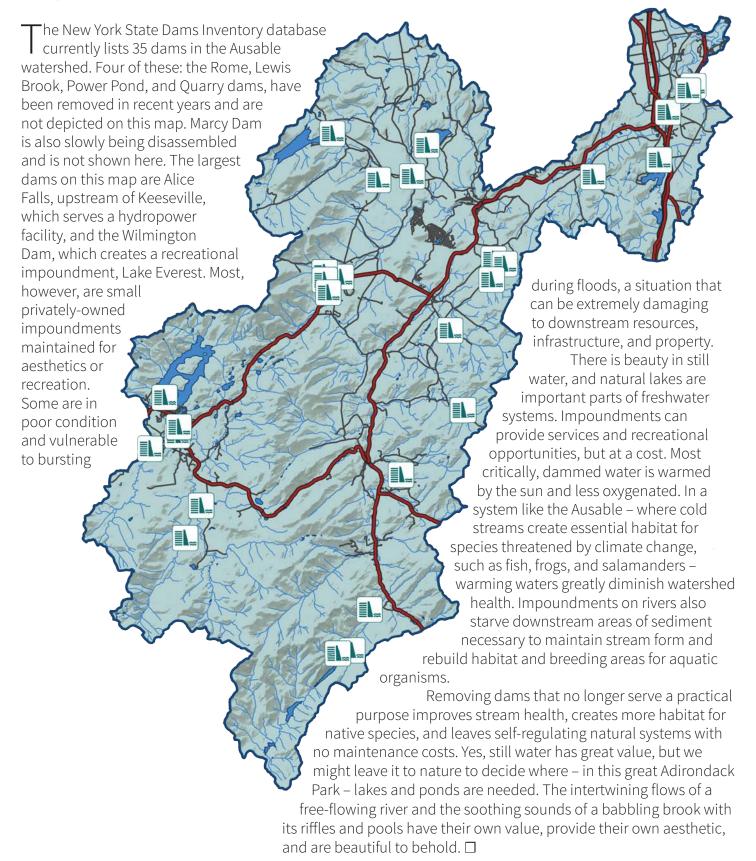
In recent years, dam experts, scientists, and ecologists have explored whether dams can do less damage to ecosystems while offering the human services they provide. Newer structures can allow some sediment passage and fish passage, but, in the end, the goals of dams contradict the goals of ecosystem health. For example, hydropower generation is viewed by many people as a greener option to extraction-based energy sources. And it is true, traditional hydropower – using dams either large or small – avoids some of the high carbon emissions from fossil fuels and some of the human hazards and waste issues associated with oil, gas, coal, and nuclear power. But traditional hydropower has its own costs. Beyond the serious implications for stream health, wildlife habitat, and water quality, dams contribute significantly to climate change through the emission of methane from reservoir surfaces, turbines, and spillways. Also, on a river such as the West Branch Ausable, power generation, while feasible, may not be reliable due to fluctuating flows. especially low summer flows. And the amount of power generated may never justify the expense of a modern hydropower facility.

In the past 20 years, dam removal in the United States has moved from being a fringe notion to a mainstream effort undertaken by communities large and small. Most often dams are removed to protect communities from decaying structures that are no longer operational and, increasingly, to restore rich stream ecosystems and regain passage for native fish. With the deconstruction of the Rome Dam, AsRA and its partners achieved both of these goals. □

Left: © Brendan

Ausable Watershed Dams

Thirty Dams Remain





Our mission - is to help communities protect our streams and lakes.

Supporting AsRA

AsRA helps communities protect our streams and lakes. We work to ensure healthy streams, clean water, and rich habitat for a diversity of native wildlife and our communities. That includes involving you—giving you the tools to make a difference in your own home and backyard.

AsRA's staff provides technical advice and support to residents, towns, and landowners that helps preserve and protect the Ausable streams in your backyard.

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the Ausable River watershed.

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