



BRASSnews

Newsletter of the Boquet River Association, Inc.

Spring 2023

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by Vic Putman, Acting Board President

ANNUAL MEETING

The Boquet River Association Board of Directors has announced the Annual Meeting of members and prospective members to be held on Monday, April 24, 2023, at the Whallonsburg Grange Hall from 6:00 PM to 8:00 PM. The Grange Hall is located at 1610 NYS Route 22 in Whallonsburg, NY. The purpose of the meeting will be to approve revised bylaws regarding quorum requirements, meeting virtually, voting remotely, financial procedures, and BOD voluntary withdrawal procedures. In addition, members of the Board of Directors and officers shall be authorized, an annual budget presented, and additional information will also be available on prospective projects in the Boquet Watershed and adjacent areas of the Lake Champlain Basin. Refreshments will be served.

To highlight the evening event BRASS arranged a presentation by Laurie Earley, Fish Biologist at the US Fish and Wildlife Service. Her presentation will provide insight into the multi-state and federal Lake Champlain Salmon Restoration Program as well as the continued partnership efforts with BRASS.

RECENT ACTIVITY

The Boquet River Association was incorporated nearly 35 years ago (May 12, 1987) following four years of public meetings and discussions with help from the National Park Service and the Essex County Planning Office, local landowners, public officials, and residents of the watershed urged the formation of a membership based river association to improve water quality and help improve the lives of watershed communities. Over the years BRASS has been very prolific completing literally hundreds of projects and programs dam removals, tree plantings, river access, supporting municipal wastewater improvements, flood prevention, erosion control, river clean-ups, improving aquatic habitat and educational forums for residents and visitors alike.

As a membership organization, Officers and Directors are elected at the Annual Meeting and authorized subsequently by the selected Board of Directors. On February 6, 2023 I was elected by a vote of the Board of Directors to be the Acting President, Anita Deming was elected Secretary while Bob McGoldrick remains Vice President and Schell McKinley remains Treasurer. In addition, some Directors have asked to step down including Matt Foley, Kathy Linker, Laura Newmark, Betsy Tisdale, and Jessica Tyson. Our current BODs include Bruce Misarski, Lucas McNally, and Alice Halloran. New BOD candidates are Colin Powers, Jessica Grant, Tom Doolittle, and Ben Breckenridge. Ex officio members are Anna Reynolds and Elizabeth Lee. A major focus of the BRASS Board of Directors has been to increase diversity, inclusion, and equity in the organization and expand our ability to implement science-based research and river community improvement projects with assistance from local, state, federal, and Not-for-Profit groups who share our commitment to improving water quality as well as the lives of our residents.

POOL DIGGERS

A pool digger is a small dam. They were believed to have been installed by NYS DEC (many DEC records have been misplaced following several office relocations) to create habitat for fish in the 60's. The thinking, at that time, was that the water turbulence would oxygenate the water and create a "pool" on the downstream side of the river/brook/stream where fish could hide and breathe easier. Unfortunately, this practice is now frowned upon because it creates an obstruction to river function. Spreading across the entire width of the river, the pool digger widens the river by spreading out the current upstream and downstream width, reducing its capacity (energy) to transport the sediment and robbing the river of its ability to move sediment downhill efficiently (which is the rivers' job).

The pool digger dam in Elizabethtown is located 100 to 200 feet downstream of the abandoned Forge Lane Bridge on the Elizabethtown-Wadhams Road (County Route 8) and creates a small waterfall in the river. BRASS actually helped to rebuild this structure around 1988-89 and a similar one downstream of New Russia. They are both associated with Public Fishing Right (PFR), areas previously purchased by the state for fishing access. You can see the damage the pool digger dam is doing, blocking the sediment transport downstream, and expanding the width of the river by eroding the banks on either side where tree roots are exposed, and telephone poles and trees are leaning into the river. The river channel no longer exists in those areas affected by the dam and sediment is deposited where the water slows down along outside curves both upstream and downstream.

One can see examples of how rivers and streams are supposed to function in other areas of the Boquet where there are no dams or other interventions. Most natural water courses have a meandering pattern that is created by slight changes in direction of flow and the slope is gradual. If you look to the east on this section of the road you can see where the old river channel used to be. The road was straightened, and the river moved away from the steep banks on the east.

There is a whole new science devoted to river function and processes called Geomorphology. The AuSable River Association has developed regional expertise in helping the DPW and other contractors develop new techniques that work with river function and design projects that improve flooding resilience while avoiding adverse impacts from flooding and improving aquatic habitat. We are all trying to learn basic concepts and follow protocols that reduce future investments in corrective and costly mistakes. There are professionals who focus on this work and one can see an example in Willsboro on-river, left below the cascades. This severely eroded streambank required intervention because of several factors which pushed flow toward the streambank eliminating a channel for sediment transport. The solution was the installation of engineered log jams on the toe of the bank spaced in such a way as to direct the flow more toward the center of the river re-creating a channel. The engineered log jams provide diversion, pushing water flow away from the bank. They look somewhat haphazard but function to capture more logs and tree debris during high water to help sustain the structure. They have been in place for 6 to 7 years now and one can observe how they will transform river function away from a severely eroding embankment.

Other regional examples include the removal of the pool digger on the East Branch of the AuSable River north of Keene Valley along Route 73 where boulders placed across the river create a partial dam but with enough space to create more flow toward the center of the river, creating a channel.

ENVIRONMENTAL BOND ACT, Bipartisan Infrastructure Legislation, LCBP FUNDING

In the last two years New York State voters, the Federal Government, and multiple partners have authorized new financial opportunities to improve water quality, repair and upgrade wastewater treatment, stormwater and drinking water systems throughout the nation and our region especially. The Lake Champlain Basin Program, NYSDEC, EPA, and Vermont DEC have targeted funding for improving the water quality of Lake Champlain and its tributaries, removing phosphorous, the primary contributor to algae blooms, Invasive species control and prevention. This is a great time to help our river and its communities restore our natural environment, protect against future climate challenges, and contribute to an informed public and sustainable communities.

BRASS has been at the forefront of numerous initiatives that protect water quality, provide access, support natural and cultural resources as well as provide recreational options for residents and visitors alike. New partnerships are increasing our effectiveness and help to support our mission to **"Improve water quality and the lives of people in the watershed"**. The state has and is providing more funding for improved sewer systems, septic systems, water systems, salt storage facilities, boat launch monitoring, dam removal, and water infrastructure replacement of things like culverts and bridges. The US Fish and Wildlife Service is embarking on DNA pairing of salmon for stocking in the Boquet, and elsewhere, that have stronger resilience to alewife consumption (alewife is a non-native fish species in Lake Champlain and contain an enzyme that reduces the absorption of Vitamin B in salmon contributing to poor survival of hatched fry). The Nature Conservancy (TNC) has initiated the Boquet Partnership Program to improve salmon and trout movement to spawning habitat, and replace culverts to allow organisms (fish, amphibians, etc.) passage to improve survival and genetics. Trout Unlimited, NYS DEC, Essex County Soil and Water Conservation District, Cornell Cooperative Extension, and APIPP have all sponsored and supported BRASS with volunteers for tree/shrub plantings to reduce erosion, create shade and improve riparian habitats. The Lake Champlain Basin Program has continued to provide funding for BRASS and TNC projects. The DOT, at the urging of BRASS, has located porta-potties at the swimming hole parking area at Split Rock in St. Huberts.

BRASS has been a dynamic, energized group of volunteers and staff that have achieved so much with town, state, federal and other not-for-profit groups, and the need for more action seems to be ever-increasing as we see the positive impacts we have already accomplished. The work never stops.

Japanese Knotweed continues to expand in certain areas but has been controlled in others. The Lincoln Pond efforts to control Purple Loosestrife with beetles that love to eat it seem to be extremely effective. BRASS and Anita Deming were instrumental in getting that project implemented, but other invasive plants and animals are on Lake Champlain's doorstep. Improving abandoned industrial sites along the river, repairing fishing access sites, river cleanups, right-sizing culverts for bigger storms, removing aquatic organisms' barriers, and promoting erosion control along ditches and streams are all challenges we can and have supported.

We respectfully request your continued support to help our communities thrive and improve our capabilities to make progress toward a sustainable ecosystem. Thank you in advance for your past, present, and future support for this most worthwhile endeavor.

As the steepest river in NYS, the Boquet River and its tributaries, have at times a tranquil mood that can change in a matter of hours to a ferocious beast that humans cannot tame. The river has been straightened, dammed and used as sewers and dumps for hundreds of years. The streams and river were also the highways of commerce and centers for development and prosperity for generations. Over the past 300 plus years we have learned that our Boquet River must be respected in all its beauty and its contrary nature as well as the beneficial relationship it provides our communities, our souls and bodies. The Towns of Elizabethtown, Willsboro, Westport, Chesterfield, Lewis, and Essex all depend on the Boquet Watershed for drinking water supplies captured in the aquifers that feed the rivers and Lake Champlain. More than half the residents within the watershed have individual or community-drilled wells, while 40 percent use water pumped from Lake Champlain. We must recognize that **we all live downstream** of someone else's wastewater or air emissions. We are all responsible for maintaining a healthy and resilient ecosystem so our families and communities can thrive. These are my goals for the Boquet River Association and our Watershed and I hope to further these goals as we improve our relationship with the Boquet River.

BOQUET RIVER PARTNERSHIP PROGRAM

While BRASS has paused in our efforts to implement our mission, enthusiasm has been rekindled by new members and others have provided supporting roles. We acknowledge those partners such as The Nature Conservancy, The Adirondack Council, Essex County Community Resources, Essex County Soil and Water Conservation District and Department of Public Works, US Fish and Wildlife Service, NYS DEC, Lake Champlain Basin Program (LCBP) and Trout Unlimited who have fostered efforts to re-establish Atlantic Salmon in Lake Champlain and the legacy of salmon spawning naturally in tributaries of Lake Champlain. They have completed the removal of the Dry Hydrant dam on Cold Brook in Reber at the Reber Fire Department. Other activities in the vicinity also include planned culvert and bridge replacements as well as livestock fencing and plantings within the Cold Brook sub-watershed.

ENVIRONMENTAL DNA RESEARCH

The AuSable River Association has received funding from the LCBP to initiate eDNA analysis within the North Branch of the Boquet River to ascertain the presence of various aquatics including Atlantic Salmon. Sampling commenced last fall and BRASS is coordinating a Salmon Symposium with the Town of Willsboro for later this year to provide an opportunity for researchers and partners to discuss a multitude of initiatives to improve water quality and promote fisheries' restoration efforts.

The AuSable River Association project incorporating eDNA in the Boquet will also help monitor populations of stocked salmon that are tagged through known DNA of parentage. This experiment by USF&WS includes the stocking of young salmon fry from select parents with recorded DNA that have a higher tolerance to Vitamin B deficiency which affects salmonids' ability to produce viable eggs/fry. This phenomenon is a condition salmon develop from eating alewife, a recent (2004) invasive prey species in Lake Champlain. This strategy is extremely important as successful spawning has now been documented in the Boquet Watershed, as well as monitoring lamprey populations that may have reached upstream areas of the river following the removal of the dam in Willsboro. So far, USF&WS has not documented lamprey reproduction above the cascades.