



BRASSnews

Newsletter of the Boquet River Association, Inc. FALL 2023

President's Report



By Vic Putman

Our entire region has seen record precipitation in 2023 – which has been a positive development if you're a salmon negotiating the cascades in Willsboro. But it's a bit less convenient if you're an angler trying your luck at the base of the falls where fish have had an easier climb and escape. But that is OK! If it were easy, it wouldn't be salmon fishing!

A fish was reported below the Cascades in August and another in Reber by mid-September indicating that the hydrology may have affected salmon behavior. We're optimistic about spawning conditions as we wait for the results of netting and redd (salmon spawning site) counts from the US Fish & Wildlife Service. If you are not an angler, the high rates of runoff have resulted in flooding, erosion and subsequent siltation contributing to large plumes of chocolate-colored water into Lake Champlain.

Here are a few fast facts about what else is new at BRASS:

- A great outpouring of financial support from our members and an influx of very talented individuals have bolstered our Board of Directors' capabilities. We're moving toward more efficient governance and with new momentum to increase our partnerships and develop priority projects. The level of energy and talent exhibited by our growing board makes me quite proud to serve as president!
- BRASS participated in the World Water Day at the Pyramid Mall in Plattsburgh and at the Adirondack Harvest celebration in Westport. Both events improved our public education and outreach to residents.
- Chris Fuller has summarized our Annual Water Testing results from the water samples taken in August which indicate consistently high water quality for residents and ecosystems. While water quality remains good in most of the 250 square mile watershed there are numerous challenges to keep soil from washing away and contaminants from mobilizing.
- Essex, Elizabethtown, Westport, and Willsboro are on the verge of major water, sewer, and salt storage upgrades and a host of other capital-intensive projects to help maintain water quality for humans and healthy ecosystems. BRASS is working with our partners to support infrastructure projects which improve water quality, remove abandoned dams, and increase the size and function of culverts.

(Continued on page 2)

Board of Directors

Vic Putman, *President**
Bob McGoldrick, *Vice President*
Schell McKinley, *Treasurer*
Lukas McNally, *Secretary*
Anita Deming
Tom Doolittle
Matt Foley
Chris Fuller
Jess Grant
Kathy Linker
Bruce Misarski
Laura Newmark
Colin Powers
Charlotte Staats

Town Representatives

(Appointed)

Anita Deming - Elizabethtown
Vacant - Essex
Lukas McNally - Lewis
Colin Powers - Westport
Vic Putman - Willsboro

Our Mission

BRASS is dedicated to enhancing the quality of water and life in the Boquet River watershed.

BRASS Board Meetings are held on the first Monday of the month at 7:00 pm at the Wadhams Free Library. All members of the public are welcome to attend. Email to confirm date, time and location monthly.

**Boquet River Association,
Inc. 5 Farrell Road
Willsboro, NY 12996**

info@boquet-river.org

The newsletter was prepared by Jess Grant, edited by Colin Powers and Lukas McNally, with written contributions from the Board. All pictures were taken by BRASS or are public domain unless otherwise noted.

(President's Report continued from page 1)

Water Quality

BRASS is working with our many partners to address fish passage, stabilize highly erodible soils and restore equilibrium to complex sediment transport regimes. Peter Paine and Shaun Gilliland are to be commended for their efforts in creating river access and buffer areas to protect the Boquet River habitats that are home to aquatic organisms. A lot of pollution is not readily seen in the Boquet and the sparkling clean water in many tributaries and sections of the main branch are indicative of healthy conditions. However, non-point source pollution is mostly invisible and enters the waterway through groundwater or ditch runoff providing added nutrients, contaminants or chemicals that are dissolved in water.

The Boquet river does have one major pollution problem, which is sediment. Despite the fact that sediment transport is a natural process, excessive sedimentation impacts regional water supplies with many ecological consequences. For instance, sediment is literally the vehicle by which phosphorous loading accumulates in Lake Champlain – which leads directly to harmful algae blooms. Water quality has been the historic focus of BRASS and we are committed to maintaining this focus alongside new initiatives to restore ecosystem function and increase resiliency within the watershed.

Resiliency

What does Resilient Infrastructure really mean? Consider for a moment the transportation corridors you use every day, located along existing rivers throughout our region. Roads were built alongside rivers, in many cases, virtually on top of rivers. Or in such a fashion as to force rivers to one side of the valley, and blocking up the natural floodplain with road-fill and rock. Think about your favorite mountain pass and imagine where the river might have meandered before the road was built! In the future, travel corridors will need to be maintained in new and innovative ways to protect safety and commerce in an increasingly “flashy” future.

Road runoff and salt use on and around infrastructure in our region is responsible for higher sodium and chloride levels in drinking water with some groundwater resources contaminated to unsafe levels. And all of the runoff which enters our streams ends up in Lake Champlain, with recent data showing the Lake's levels of salt are continuing to increase.

A new educational website is currently under development at <https://data.lcbp.org/> to view real time information on the Lake and tributary conditions.

Beaver Brook



By Tom Doolittle

“Rain, rain, go away Come again some other day.” But it didn't!!! It just kept on raining!! According to the USGS gauge in the Boquet River in Willsboro, the Boquet had over the past year, 18 1000 cfs (cubic feet per second) rain events, making Noah quite happy. Two of the torrents, one about May 1st 2023 and the other October 8th, were over 6,000 cfs, a true Irene like gully washer. Normal summer flows in the Boquet are under 100 cfs!

Being a lover of the Boquet and avid River Watcher, I was quite dismayed to note with each 1000 cfs rain event, the Boquet turned a muddy brown (photo #1) at the Morehouse bridge in Willsboro. Also a brown plume (photo #2) in Lake Champlain was noted, 4 miles south of the Boquet River mouth, in the hamlet of Essex. Could that strong May 1st north wind have blown the Boquet mud that far south?? Could the Boquet mud effect the Essex Village water supply??

So, where was this much mud being produced? What was creating this incredibly muddy Boquet? The Ausable and the Saranac Rivers didn't seem to get muddied up like the Boquet River.



Photo 1: The Boquet River at Morehouse bridge.



Photo 2: Sediment plume in Lake Champlain.

(Beaver Brook continued from page 3)

To answer this mud riddle, required logging many driving miles on multiple days checking the Boquet River and all of its tributaries. Cold Brook, Spruce Mill Brook, the North Branch Boquet, the Black River, the Branch, and the main Boquet River up through Pleasant Valley and others were all checked, OCD-like, at least 20 times over 6 months of our very rainy 2023.



Photo 3: Undersized culvert on Angier Hill Rd.



Photo 4: Culvert outlet into the Boquet River.

The major mud culprit was -“drum roll”- finally found surging under the Angier Hill Rd (photo #3) just 1 mile south from Whallonsburg, in an inadequate culvert. From this Angier Hill Rd culvert gushed dark brown water to merge (photo #4) with a relatively clear Boquet River only one hundred feet from the Angier Hill Rd culvert. Angier Hill Rd actually acted like a dam creating a small pond due to the small diameter of the culvert.

An examination of the Willsboro and Westport USGS Quadrangle maps quickly placed a name on the mud producer: Beaver Book!! This brook drains a marvelous terrain with over 50% devoted to agriculture. Two or three tributaries of the Beaver come off of the Split Rock Mountain, famous for its population of Eastern Timber Rattlesnakes. Another Beaver Book tributary drains a magnificent swamp: the Webb Royce, known as an ornithologist's delight. Webb Royce and all the land bounded by Clark Rd, Cross Rd, and Lakeshore Rd is called the Magic Triangle, due to the splendid ecological qualities of this mysterious tract of land.

So what exactly is making Beaver Brook so loaded with muddy sediment??? Most likely the answer lies in the extensive agriculture usage of much of the Brooks drainage. With a careful examination and analysis of Beaver Brook, it's half dozen culverts and surrounding farm land, the professionals of DEC, USFWS, Soil and Water Conservation, Cornell Cooperative Extension, the Towns of Essex and Westport (since the watershed straddles the town lines) should be able to plan a mitigation of this awful sedimentation problem. Essential would be landowner – farmer input and cooperation to make long term rehab of the Brook's drainage a success.

Helping landowners save their valuable topsoil and protect farmers property can only be a plus for Beaver Brook, the Boquet River, it's spawning salmon and all watershed end users. Let's hope that BRASS and All are successful to this end!!!

Boquet Watershed Monitoring Summer 2023

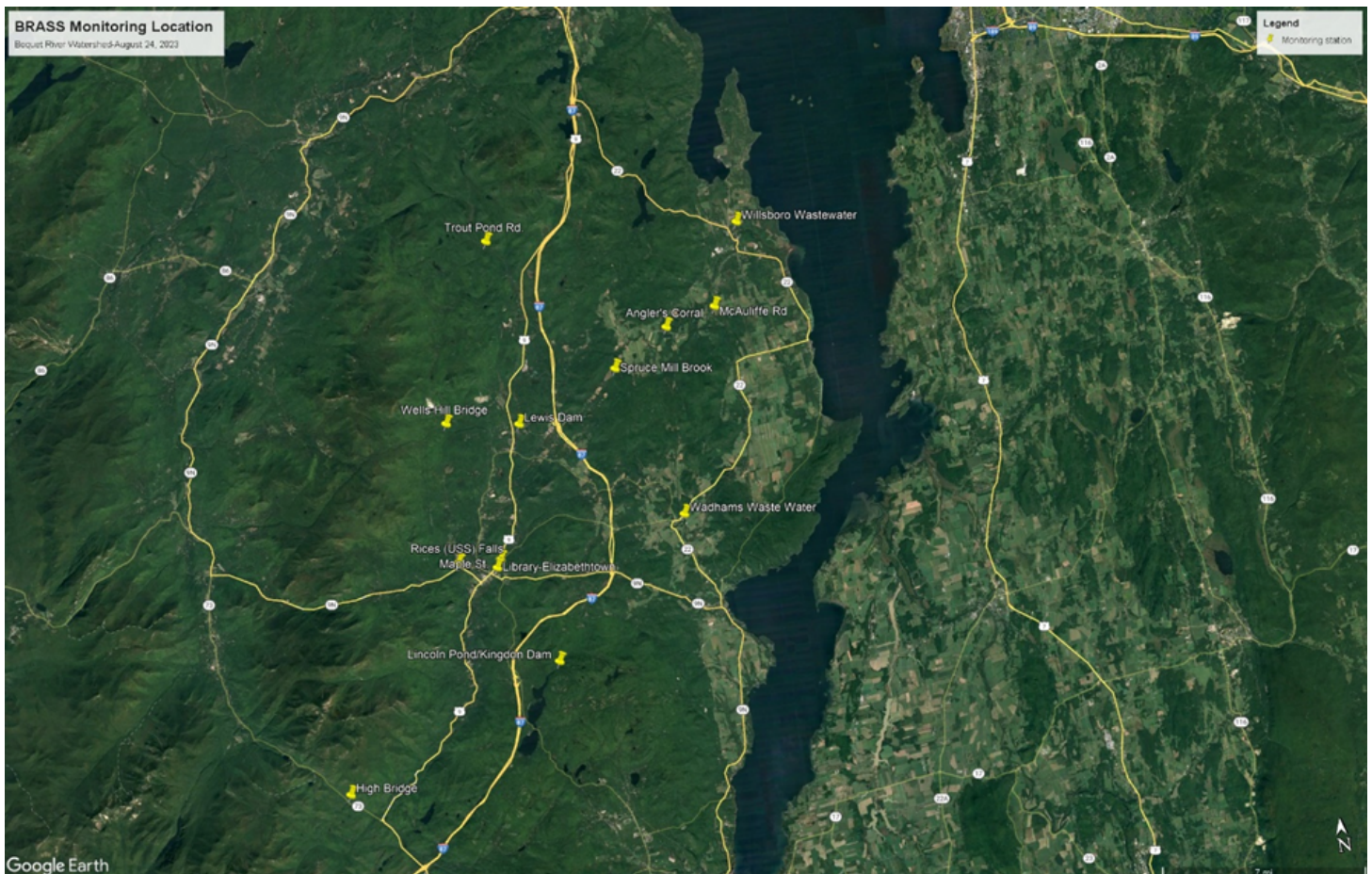


By Chris Fuller

On August 24, 2023, Anita Deming, BRASS volunteers and technicians from Essex County Soil and Water District conducted our annual water quality monitoring at 13 locations along the upper, mid, and lower reaches of the Boquet including the Boquet North Branch, Spruce Mill Brook, and The Branch Rivers (see pins in the

map below). Water quality parameters measured included: pH, total dissolved solids, water temperature, specific conductance, coliforms and E. coli, nutrients, and suspended solids. Laboratory analyses of water samples for Total Coliforms, E. Coli, Nitrate, Nitrite, TKN (Total Nitrogen), Ortho-Phosphorus, Total-Phosphorus, and Total Suspended Solids were performed by Enydne Labs in Plattsburg, NY.

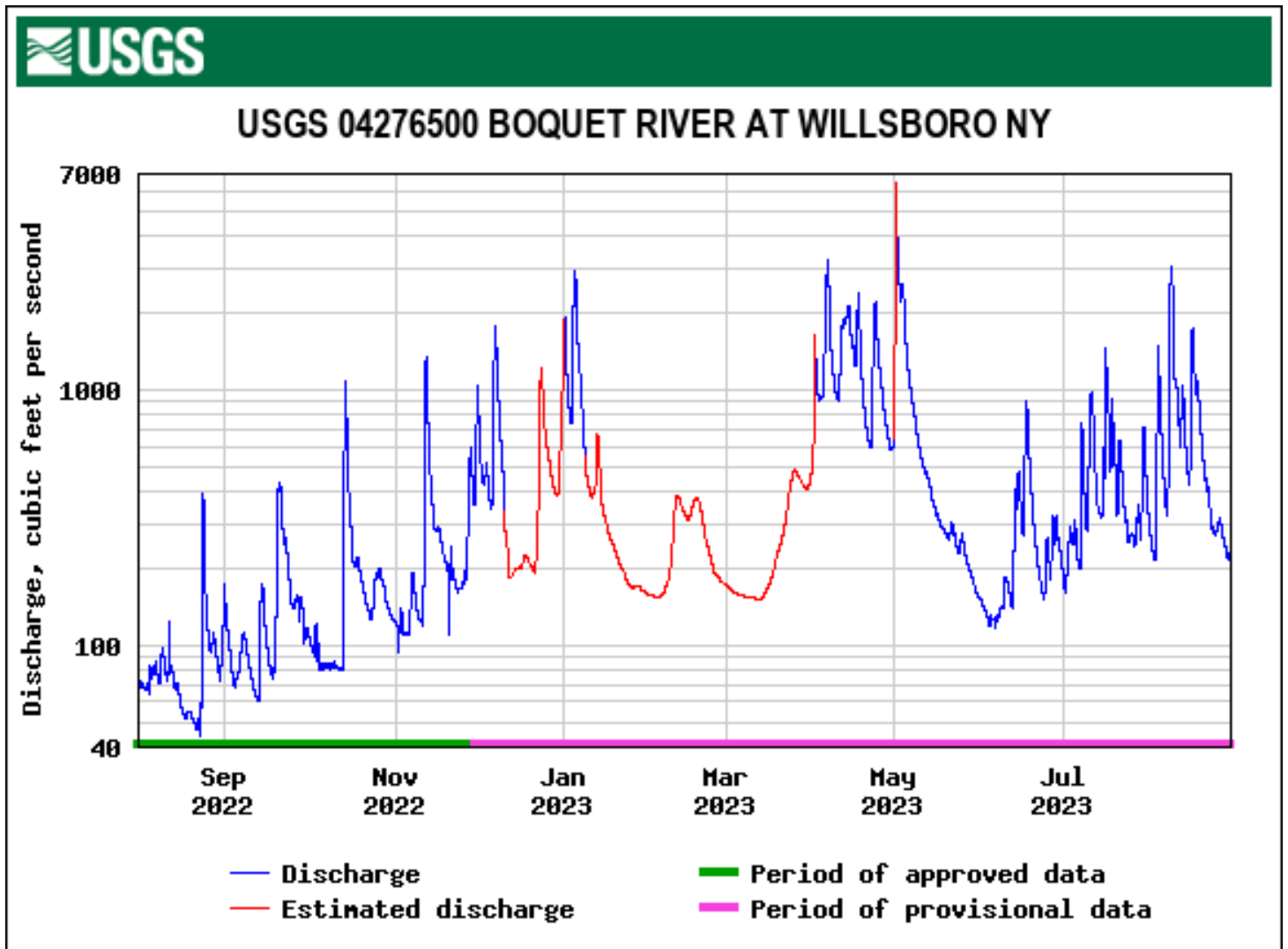
Both field measurements and laboratory analyses showed good water quality conditions at all sampling locations. Water temperatures ranging between 13.1-20.6° C (55.6 – 69.1° F) were within the recommended temperature range for trout waters. Measured concentrations of fecal coliforms, E. coli, nitrogen, and phosphorus met NYSDEC water quality standards for Class A or Class AA surface waters, both of which are suitable as sources of water for drinking and food processing; and for



(Boquet Watershed Monitoring, continued from page 4)

primary and secondary contact recreation like boating, swimming and fishing. The waters are also fit for the propagation and survival of fish, shellfish and wildlife. Although the BRASS data collection program does not include flow measurements at sampling locations, a review of the flow data observed at the USGS gage (04276500) on the Boquet River at Willsboro shows a flow of ~290 cubic feet per second

exceeded the median flow over the past 79 years by a factor of ~4 and is indicative of the wet conditions experienced over the watershed this past summer. These data reinforce the Boquet's reputation for cleanliness, recreation, and outstanding fishing. BRASS is proud to work with the watershed's landowners, municipalities, and organizations to maintain and improve the river's condition every year.



USGS stream gauge data for the Boquet River at Willsboro, NY. Note that discharge per cubic feet per second is shown on a logarithmic scale.

To learn more and view our testing results, visit our website at www.Boquet-River.org

To Beaver or Not to Beaver, That is the Question!

By Lukas McNally and Vic Putman

The Boquet River at one time had numerous beaver dams throughout the watershed. It was not unique, in fact, prior to European arrival, the lower 48 states had between 150-200 million beavers. Today that population is estimated at around 15 million. Despite their destructive reputation, most beaver activity actually enhances ecosystems and flood attenuation, just not always in places convenient for farmers and highway departments. We appreciate that working people may need to manage ornery beavers from time to time, yet in the right place at the right time, natural beaver infrastructure solves many ecological problems. Their dams help retain water upstream, trapping sediment, cooling water temperatures, deepening pools, and creating shrubland and riparian habitats for a plethora of birds, terrestrial mammals and aquatic organisms!

Water retention behind beaver dams offers multiple benefits. The first is flood mitigation: the dams retain water in steeper upstream reaches - creating a slower moving stream and dissipating the energy of flooding water. Retained water also infiltrates soil in the vicinity of a beaver complex – recharging parched aquifers. This natural recharge of groundwater helps landowners who rely on underground water resources. Today,



many western ranchers are now promoting beavers on their property to preserve their aquifers. In the Boquet River Valley many of the residents and Community Water Systems have dug or drilled wells that are nourished by groundwater recharge. Beavers may be able to play a critical role in maintaining and replenishing those in the future.

We realize that beavers can be very destructive. Some areas will never be appropriate for beavers, and we respect public and private managers' need to protect their infrastructure. However, headwater streams, forested mountain meadows and some agricultural landscapes can be ideal locations for beavers to store water, uplift ecological integrity, and mitigate flood risks.



Beaver dam and hydrological engineering within a birch forest. Stock image.

The Boquet River Partnership Program

The Boquet Partnership Program (BPP) is focused on landlocked Atlantic Salmon restoration efforts as well as improving Brook Trout habitat. The Boquet River Watershed has been identified as a habitat refuge in these times of warmer climate impacts. BRASS has partnered with The Nature Conservancy, The Adirondack Council, Essex County DPW & Community Resources, Soil and Water Conservation District, US Fish and Wildlife Service, AuSable River Association, NYS DEC, Lake Champlain Basin Program (LCBP) and Trout Unlimited to foster efforts to re-establish Atlantic Salmon by improving spawning habitat in the upper reaches of the Boquet. USFWS has completed the removal of the Dry Hydrant dam

on Cold Brook in Reber at the Reber Fire Department. In exchange, Reber received a new and improved dry-hydrant location. Other activities in the Cold Brook subwatershed include planned culvert and/or bridge replacements on Reber Road and the Northway (I- 87) near Poko Moonshine in Chesterfield. Another project is centered on the North Branch of the Boquet River on Moss Road where the culverts are undersized, and improvements are needed to restore river function. In addition, Spruce Mill Brook has undersized culverts creating barriers to upstream habitat, replacing these will assist fish survival during low flow and higher water temperature stresses. BRASS is proud to be partnering in this impactful work.

Boquet River Association Outreach Events

BRASS volunteers joined more than 20 organizations to celebrate World Water Day at the Champlain Centre Mall in Plattsburgh on Saturday, March 18th. Mall visitors of all ages were introduced to the dynamics of our region's water resources – from salmon to drinking water. BRASS used our EnviroScape watershed model to help folks discover the challenges of filtering runoff from roads, build up areas and farmlands (*image right*). The hands-on demonstration of how water-borne contaminants eventually end up in the lake is a powerful tool for building awareness of watershed issues.



On September 9th, BRASS and the EnviroScape were out again – this time in the sunshine at the Adirondack Harvest Festival in Westport. It was great to talk about our river in one of the towns at the heart of the watershed – the falls in Wadhams being the “end of the line” for salmon migrating up the main branch. That day we heard about a 29” salmon caught on the North Branch and more spotted at the Willsboro Cascades. And, again, the watershed model proved very popular with everyone willing to get their hands wet (and tinted with food coloring) in pursuit of a pollution free environment (*image left*).



MERCH

BRASS Hats and T-shirts are available for \$15 each or \$25 for both when purchased together.

Contact: vicputman@gmail.com

We ship USPS for an additional fee.

Membership reminder: We make an annual appeal for membership of our supporters and friends. Without your help we will not exist.

Our budget covers water testing, liability insurance, contract help, printing our newsletter and office costs, mileage, tree planting, river clean up, public outreach, and our annual meeting. Our towns provide about \$500 annually, but most of our money comes from generous donors like you.

Thank you!



MEMBERSHIP FORM

Select: New member Renewing member Updated info Gift Membership*

Name _____ Address _____

Email _____ City _____ State _____ Zip _____

Check here to receive correspondence by email

Select one of membership tiers below with an optional additional donation:

_____ \$10, Minnow _____ \$100, Full Creel
 _____ \$25, Brook Trout _____ \$500, Life Membership
 _____ \$50, Atlantic Salmon **Additional Donation \$** _____

*If this is a gift membership, please include your note here:

You can join BRASS, renew your membership or donate to BRASS online at www.Boquet-River.org

Please make checks payable to the Boquet River Association

Return form to Boquet River Association, 5 Farrell Road Willsboro, NY 12996

NYS FISHING REGULATIONS FOR BOQUET RIVER

North Branch of Boquet River to Wadhams Falls - Fishing prohibited from October 1 through Dec 31 to protect spawning salmon traveling upstream.

Boquet River – Fishing prohibited from the Route 22 bridge in Willsboro downstream approximately 1500 feet to the marked boundary at the base of the cascades to protect migrating Landlocked Salmon



Species	Length	Daily Limit
Trout	12"	3
Lake Trout	15"	3
Landlocked Salmon	15"	2



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What's Inside This Issue:

Page 1 President's Report

Page 3 Beaver Brook

Page 5 Boquet Watershed Monitoring

Page 6 To Beaver or Not To Beaver

Page 7 Membership and Merch

Page 8 Boquet Partnership Program and
 Outreach Events