

Flow Rates and Fish Passage Remain Unresolved Issues

The Settlement Agreement subcommittee of the DRWA continues working to ensure that the Agreement is observed. In conjunction with the Deerfield Trout Unlimited chapter we have focused on two issues: water volume fluctuation and fish passage.

The flow issue involves interpretation of Article 412 of the Agreement aimed to set some limits on the number of generating peaks which increase flows suddenly below the number two dam. After ignoring the reporting requirements of this article for several years, US Gen New England is now disputing the original intent and is using a method of measurement which we believe seriously underestimates flow fluctuations. We have written a number of letters to Federal Energy Regulatory Commission and will probably have to wait for it to decide the issue (unfortunately it seems in no hurry to do so. It's now close to a year).

The second issue is downstream fish passage, also at the number two dam. The FERC license obliges US Gen to establish adequate passage for migrating fish. This work has been going slowly and not very successfully. After several years' work it is still true that up to 80% of the salmon smoults coming down from the upper Deerfield will die going through the turbines of number two dam. We have urged US Gen to put the project on a tighter schedule and to open the process up to other signatories. It has yet to reply.

A DRWA board member has also worked, in conjunction with a member of the TU board, to send a letter to all our political representatives. The letter calls attention to an unintended negative consequence of utility deregulation:

an upsetting of the balance envisioned in the Settlement Agreement between electricity generation, white water sports and recreational fishing. As a result of utility deregulation, generating schedules have changes and the river is now subject to many more rapid and unpredictable flow changes. We hope to work with interested legislators to reestablish a balance.

**Robert
May**

Mt. Snow Hopes for Snow From Deerfield's Water

The Mount Snow ski resort in Vermont requires more water for snowmaking than its local streams and ponds can provide. For years the company has been eyeing the Deerfield Reservoirs as a logical and convenient source. But it's not just a case of putting in a pump and pipeline – any withdrawals require the approval of all the participants in the Federal relicensing agreement for the dams, plus an OK from a number of Vermont agencies.

Last summer Mt Snow abandoned a 1998 proposal to draw water from the Harriman Reservoir and circulated a new draft proposal to take water from the Somerset Reservoir. After receiving comments, Mt Snow revised its plan and called a meeting of interested parties on May 21 to answer questions and discuss any problems.

Two board members from DRWA attended along with some 30 others. Changes requested were relatively minor, and the DRWA board has advised Mt Snow that their proposal plus changes discussed, appeared to net out to be environmentally beneficial for the watershed so we would not oppose the project.

T. Merrill

In this Issue:

Page

2 Knotweed Survey

3 President's Letter

4 Water Quality

DRWA Wins Two Grants

Results of the first survey of Japanese Knotweed Growth in the Deerfield River Watershed

by Pat Serrentino

Those of you who like to spend time along your favorite river or stream in the Deerfield River watershed may have noticed a large, bamboo-like plant growing on the banks of the stream and even on islands in the stream. It also infests roadsides and yards in our region. This tall, perennial plant is the non-native, invasive species – Japanese Knotweed or Bamboo (*Polygonum cuspidatum*). Japanese Knotweed can grow up to 18 ft tall or more, and has large, broad, dark-green leaves and greenish-white flowers that appear in August and September.

Knotweed is classified as “invasive” - an undesirable non-native plant - because it has several characteristics that allow the plant to out-compete native species and take over large areas. These characteristics include few or no natural enemies and diseases, vigorous growth, and the difficulty getting rid of it once it’s established. The plant reproduces primarily by the rhizomes or roots, which can grow up to 15 – 20 ft in length, but it also reproduces by seeds. Like many invasives, knotweed was introduced as a decorative garden plant.

Japanese Knotweed is especially damaging to rivers and streams because one colony easily establishes new infestations downstream. This occurs when root fragments are washed downriver during floods. With its rapid growth rate, it quickly takes over large swaths of stream bank where it out-competes other plants. This leads to huge areas of stream bank with nothing but dense stands of knotweed.

In the Deerfield River watershed, knotweed grows on islands in the streams and even appears able to colonize stream channels that dry out during low flow periods. Because of concern over the amount of habitat being lost to knotweed, the Deerfield River Watershed Team suggested an inventory of the tributaries of the Deerfield River with the hope that the spread of knotweed could be slowed or arrested in some areas. The project was funded by the Massachusetts Watershed Initiative, overseen by the Department of Environmental Management (DEM)



Typical knotweed infestation along a backyard ditch in the village of Shelburne Falls. The patch (at right in the photo) displaced all of the pre-existing vegetation.

and conducted by Pat Serrentino of the DRWA.

Fourteen volunteers were trained to conduct surveys on eight rivers and streams. Two biologists supervised: Jen Strules and Pat. Surveys were conducted on Avery Brook, Bear River, Chickley River, Clesson Brook, Green River, Sanders Brook, South River, and Tannery Brook.

Most surveys were conducted by walking along the stream bank and noting the location of knotweed patches using Global Positioning System (GPS) receivers which pinpointed the location within a few tens of feet. Surveyors recorded the exact location of each plant or patch, providing a record of the distribution and abundance of knotweed in these streams, making it possible to go back to the site to remove it, if feasible. Surveyors noted other characteristics of knotweed patches: the approximate area covered by plants, the habitat type, and amount of sunlight that reached the plants.

Approximately 64 km of stream banks were surveyed by the end of the project. Here’s a short summary of what we found at each river:

Avery Brook: Most of the entire length of this stream was surveyed. Patches were confined to two locations: (1) just south of where Burrington Road enters Avery Road, and (2) at the confluence of Avery Brook and the Deerfield River.

Bear River: Approximately 3.4 km of the Bear River was inventoried. Patches of knotweed were found in both areas that were surveyed - from the portion that flows between Pfersick Road and Shelburne Falls

Road, and where the Bear flows into the Deerfield River. However, most of the Bear was not surveyed.

Chickley River: About one-third of the Chickley River was surveyed. Unfortunately, knotweed was abundant and well-distributed along the portion that flows between West Hawley and southwest of Forge Hill. No knotweed was found in the section upstream of West Hawley. The headwater area (upstream of where Brown Brook enters) was not surveyed.

Clesson Brook: Approximately 70% of the Clesson’s 19.6 km length was surveyed by foot, car, and bicycle. Very little knotweed was found between Cox Ponds and where Cooley Brook enters the Clesson. Knotweed was growing in an almost continuous patch between Buckland Four Corners and the Clesson’s confluence with the Deerfield River.

Green River: The Massachusetts section of the Green River, at almost 32.5 km, was the longest river surveyed.

About 50% of the River's length was inventoried. The distribution of knotweed varied with location. In general, upstream of West Leyden knotweed was found in small patches and single plants. Downstream of where Workman Brook entered the Green, knotweed patches increased in both number and density. Similar to what was observed on the banks of Clesson Brook, knotweed patches were almost continuous between the Rte. 2A bridge and where the Green enters the Deerfield River.

Sanders Brook: Most of this brook is located in H.O. Cook State Forest in Heath. About 50% of this beautiful, high velocity stream was surveyed and one patch was found – where it enters the West Branch of the North River at Adamsville Road. Most of the lower end of the brook was not surveyed because it is on private property.

South River: Approximately 40% of the South River was surveyed. Because this river is close to 30 km long, it was difficult to survey the entire reach. Very little knotweed was found from between where the river exits Ashfield Lake to the Bullitt Road crossing. However, just upstream of where the South empties into the Deerfield River (in the South River State Forest) huge patches of knotweed were found.

Tannery Brook: This brook flows from Tannery Falls in Savoy Mountain State Forest, to Gulf Brook. For 1.3 km it flows through heavily forested, steep terrain. Happily, no knotweed was found along the banks of this brook.

TheNext Step?

Because Japanese Knotweed poses a great threat to natural communities wherever it's found, we'd like to start removing it at several sites. We are currently collecting information on methods of eliminating and decreasing knotweed in natural areas. Organizations such as The Nature Conservancy and Massachusetts Audubon Society have been working on this problem for several years. We have posted an article on invasive plants on our website (www.deerfieldriver.org).

I'd like to thank the many people who made this project possible: Christine Duerring, the past Deerfield River Team Leader, and members of the Team, for putting the project together; Mike Gildesgame and Jim Straub at DEM for supporting the project during tough budget times; the landowners who allowed us access to their property; and a special thanks to all the volunteers who tromped and paddled and biked their way along many kilometers of stream bank.

If you have any questions or comments, please contact Pat Serrentino (pserr@crocker.com).

From the President:

The DRWA supports openspace planning in watershed towns. We focused the last DRWA Forum on open space planning. The primary role of the DRWA is encouraging the integration of the town-by-town plans. Just like a watershed, open space plans also follow 'ecological' rather than municipal boundaries.

Open space plans are a treasure of information about our history, water and wildlife, all kinds of statistics, hidden pollution and rare species, favorite vistas and trails, farms and forests. When you think about where you hike, ski, enjoy scenic vistas, picnic or where drive your guests around during foliage season you will rarely think in terms of town lines. But we do cherish our town identities and the town gives us a structure through which we can be active and get involved in open space planning and its implementation. The hard-core work for creating a watershed-wide open space plan is done by the COG's Regional Planning Department and Dodson Associates.

If you haven't been active so far, get involved now and give your town committee a hand and a mind. Make sure your town's open space plan isn't just going 'to sit on the shelf'.

Gisela Walker

Water Quality Stays Good Throughout the Watershed

We're half way through our 14th season of monitoring the water quality of the Deerfield and its tributaries. In May, we sampled 12 sites for dissolved oxygen, pH and alkalinity. Results showed plenty of oxygen at all sites. pHs were in general higher (less acid) this year, but the West Branch of the Deerfield in Readsboro was too low. Alkalinity remains rather constant.

On June 15, June 29, and July 13 we sampled 10 unofficial swimming holes for bacteria. June 15 counts were low at all sites, as though all the rain had already washed out any pollution, or at least diluted it! On June 29, counts were even lower, again well below the allowable limit for swimming. The sites with highest counts seem to be the Potholes and Wilcox Hollow; and the "cleanest" sites so far are the West Branch of the Deerfield in Readsboro and Zoar Gap. See table and more detailed and complete results on our website www.deerfieldriver.org/waterquality.html

Françoise Walk

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The Deerfield River Watershed Association is a volunteer organization dedicated to the preservation, protection and care of the Deerfield River and its tributaries in the interests of its adjacent communities. Its activities include water quality monitoring, educational programs, administration of volunteer programs and participation in regulatory matters.

Officers:

Gisela Walker, *President*

Françoise Walk, *Vice President*

Carrie Banks, *Secretary*;

Board Members:

Polly Bartlett, Peter Buell, Robert May,

Karl Meyer, Ted Merrill, Richards Steinbock

www.deerfieldriver.org

DRWA awarded 2 Grants From Deerfield River Enhancement Fund

DRWA is the recipient of two grants from the first round of awards from the Deerfield River Enhancement Fund, established in 1999 by USGen New England, Inc. for the environmental preservation of the Deerfield River Watershed. One grant for \$2,200 will help support our volunteer water quality monitoring program, and a \$4,000 grant will support the development of educational nature hikes for children and adults interested in learning about the natural environment of the Deerfield River watershed.

2003 Season Deerfield River Fecal Coliforms

Site	Colonies per 100 ml		
	June15	June29	July 13
Cold River	43	NS	41
Deerfield Academy	140	20	33
South River Confluence	134	15	21
Stillwater	136	30	20
Potholes	180	156	NS
Wilcox Hollow	NS	194	24
Zoar Gap	5	20	6
Green R. Covered. Bridge	26	16	29
Sunburn Beach	113	53	62
North River above BBA	79	57	55
West Branch Deerfield R.	12	3	60

NS=Not Sampled

Limit for swimming= 400 colonies per 100 ml

Become a DRWA Member!

Name

Street.....

City.....State.....Zip.....

E-Mail.....

Individual \$15, Family/Business \$25

Contributing \$50, Sustaining \$100,

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