



Courses of Change

The Future of the Saco River

By Dennis Finn

A study designed to examine future needs for water supplies in Western Maine offered, what was to some, a surprising conclusion. The Saco River and Sebago Lake were the only two water bodies available as drinking water sources for future generations. Taken together, the Saco River and Sebago Lake have significant water capacity to service large areas west and south of the river and well beyond the normal service area of the Portland Water District.

As it turns out, the Saco River Corridor Commission (SRCC) isn't the only group interested in preserving and maintaining the quality of the water in the Saco. The consortium of water suppliers who commissioned the study and are known collectively as the Southern Maine Regional Water Council (SMRWC) which includes the Biddeford - Saco Water District, the Kennebunk, Kennebunkport and Wells Water District, the Portland Water District, the Kittery Water District, Sanford, South Berwick and York Water Districts all have a shared vision of protecting water supplies for their clients and future clients. Protection of our water supplies requires constant vigilance with an emphasis on the triad of resources protection. This triad is made up of education, conservation and regulation. Ideally, education and the planning that goes along with conservation are sufficient to forge a protection scheme. In the case of the Saco River, education and conservation are not enough.

The diversity of land ownership along the river, any river in Maine, makes for interesting ideas for how land can be used, and how water can be protected. Often,

owners of property along the river are absentee owners; second home owners who visit their property for vacations or for recreational reasons. Usually, this pattern of ownership is manifested in the construction of the single family home and all the land use developments that accompany this type of use. Septic systems, lush lawns, beaches, cleared land and paved, impervious surfaces are all part of the new landscape when riverfront property is developed. There is nothing inherently wrong or even abnormal about these desires. They actually go with the territory. The problem is that cumulatively, the individual parts that make the whole have their impacts. Septic systems need maintenance to work effectively, lawns need fertilizer to stay lush, beaches and cleared land provide views and places to recreate, but present erosion problems. Those impervious surfaces used for driving and walking either let too much water into the system as overland flow or they deprive the aquifer of groundwater. In a very real sense, these individual issues become sources of non-point source pollution that can add up to become very real problems.

In speaking with members of the SMRWC it is clear that the districts that owned the most land around their water source were the envy of the other districts. Along with ownership comes control, of course, which means that education and conservation can work very effectively. With the Saco, however, ownership is a patchwork of many different people and many different attitudes about how to protect water and this is where regulation becomes necessary. What is clear in all of this discussion is that ultimately, the Saco River is a drinking water source for the present. It is also a

fantastic source of recreation, income and beauty. The SRCC is in place so that the Saco River's present functions and esthetics transcend the present and stretch well into the future.

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Courses of Change is an annual publication of the Saco River Corridor Commission. We encourage our readers to submit ideas for publication in future issues.

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Mission Statement

The Saco River Corridor Commission is committed to protect public health, safety, and the quality of life for the State of Maine through the regulation of land and water uses, protection and conservation of the region's unique and exceptional natural resources, and through the prevention of impacts caused by incompatible development.



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Executive Director's Column...

Another water quality monitoring season is bearing down on the staff as surely as the hot weather of summer will soon be here. The program has been a wonderful edition to the Commission's work, complementing the regulatory program and the educational work we do with school groups. Considering the budget hearings in Augusta and the general state of the economy, I must admit that we were quite concerned about having the budget to continue the program. Volunteer and staff time was not a problem. Neither was the willingness or motivation. The real sticking point was whether or not our ageing and somewhat brittle equipment could continue doing the job.

Just about the time Corey and Joy were running out of duct tape and the band aids that they typically use to keep the equipment together, we were saved by benefactors. During the winter, we searched high and low for money that we could apply toward the purchase of new equipment. The original monitors and probes purchased from Hach Company had a field life expectancy of about five years. Field work is rough on delicate equipment and when you add the unpredictability of handling - trekking up and down river banks, out in the water and in all kinds of weather, five years is not entirely unreasonable. As I said earlier, duct tape, lots of duct tape and TLC allowed us to keep that equipment going for nearly 11 years.

Last year, however, we had a series of weird and unlikely data

sets show up. It could have been operator error, but it seemed more likely that the equipment was acting up. We had reached the end and we knew it. We have always had an ally in The Nature Conservancy, both philosophically and materially. TNC had provided us with the first grant to start the program over 10 years ago and they came to our aid once again. The funds they provided to us were exactly what we needed to purchase new equipment and supplies and the help could not have come a moment too soon.

In addition to TNC help, a plea to Hach Company was also answered. Hach had several sets of reconditioned and refurbished equipment that they were willing to give to us in order to keep the program going. To TNC and to Hach Company, we at the SRCC and ultimately the communities we serve are grateful for their kind and generous support. Alex Mas of TNC was a tremendous help in presenting our plight and problems to the TNC command. Special thanks to Stefan Jackson, former Saco River project manager and TNC's Diversity Coordinator, who has always been a key figure in helping us to keep going, to help keep me on track and to serve as a guide through the often difficult to read wilderness of environmental politics and strategy was also a tremendous help through this difficult year. We offer many thanks for helping to keep the surface waters and the adjacent landscape in the Corridor healthy.

Invasive Insects of the Forest

By Corey Lane

I attended an Invasive Forest Insect Outreach and Survey Training workshop in Fryeburg last fall sponsored by The Maine Department of Agriculture, The Maine Forest Service and The Saco River Recreational Council. This workshop specifically covered 5 invasive insects that could dramatically affect the forests that we know today. You may have heard about the law that was passed which bans all out of state firewood from being transported across the Maine border. This will hopefully slow down the invasion, but insects disregard borders and they very well could make it here (if they haven't already) without any more assistance from humans. See <http://www.maine.gov/doc/mfs/InvasiveThreats.htm> for more information.

There are five invasive species that we should be watching for. The first is the **Asian longhorned beetle** (*Anoplophora glabripennis*). This insect sets up camp in a new location via the movement of firewood. The beetle hails from Asia with the larvae responsible for most of the damages to trees. They girdle and weaken the tree by boring through the heartwood. The beetle will attack healthy hardwood trees (maples are the most often infested) with repeated attacks leading to dieback and eventually the death of the tree.



The **Emerald ash borer** (*Agrilus planipennis*) is also from Asia. This insect is transported by moving firewood as well as nursery stock. It kills all types of North American ash trees and most of the damage is caused by the larvae tunneling below the bark. Since its discovery in Michigan in 2002, over 70 million ash trees have been destroyed in the U.S. The first sign of these insects is the ash tree showing stress in its canopy due to girdling. Upon further inspection you would see D shaped exit holes. This insect is hard to detect but does have a predator that is native to Maine. By locating and monitoring the ground nests of the hunting wasp *Cerceris fumipennis* that is within 400 meters of ash trees, you can collect and identify the beetles that they feed on with hopes that they are not catching any Emerald ash borers. There are two known colonies of these wasps (which do not sting) in Fryeburg.



The **Hemlock Woolly Adelgid** (*Adelges tsugae*) is native to Asia. The underside of twigs will show tiny white woolly masses less than an eighth of an inch. It got its free ride accidentally through ornamental plantings and is spread via eggs, crawlers on wind, vehicles, clothing, birds, and mammals.

The **Elongate Hemlock Scale** (*Fiorinia externa*) was detected in Southern Maine in 2009 and has already made its home in the towns of Kennebunk, Kennebunkport, Cape Elizabeth, Old Orchard Beach, and Kittery (in the forest). Native to Japan, this was accidentally introduced by ornamental plantings and it is spread by live tree material, crawlers on wind, vehicles, clothing, birds and mammals. This will infest hemlock, fir and other conifers excluding pine.

The **Brown Spruce Longhorn Beetle** (*Tetropium fuscum*) is from Europe but so far this beetle has only been identified in North America in Nova Scotia, but that does not mean it is the only place it has made a home. Like the Asian Longhorn and Emerald ash borer, this beetle also causes most of its damage by the tunneling larvae. This beetle prefers stressed trees but is not opposed to making a home in healthy trees.

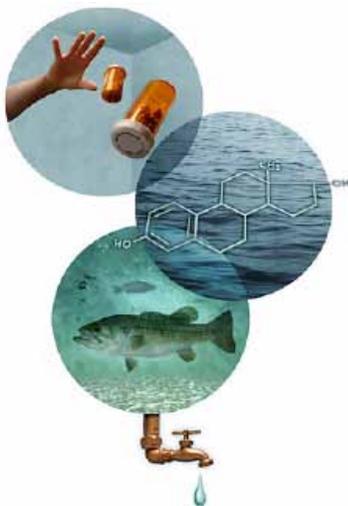
The best defense against these foreign invaders is early detection. If any of these insects become established it can be very expensive and eradication may not be possible. Imagine Maine if there were no hemlocks; no ash trees; no hardwoods. If you see something suspicious or something that looks out of place, please don't ignore it. If you suspect the Asian Longhorn, call 1-866-702-9938; Emerald ash borer, call 1-866-322-4512. If you suspect any of the others please contact Maine's Department of Agriculture at 207-287-3891. Please remember to **buy firewood where you burn it**.

Pharmaceuticals and Our Drinking Water

By Joy Chasse

Last summer the SRCC held its monthly meeting at the University of New England Marine Mammal Center and attended a lecture by Steven Zeeman, Ph.D., Professor and Chair of the Department of Marine Sciences and Director of Land-Sea Interactions related to his research on the Saco River. During this very informative lecture, the topic of pharmaceuticals in the seals being rehabilitated was brought up and discussed. I had never given a lot of thought to drugs ending up in our waterways and drinking water, but have been unable to get it out of my mind ever since. Through he and his staff's studies, it was determined that the rehabilitated seals have high levels of pharmaceuticals in their systems, including antibiotics and other drugs.

There has been a growing concern over pharmaceuticals and personal care products entering our surface and groundwater. Starting in the mid 1980's, studies began to sound the alarm. In the US and in Europe, aspirin, caffeine, nicotine and by-products of soaps, shampoos and other personal care products were showing up in rivers below waste water treatment plants.



Scientists are now finding drugs such as antibiotics, antidepressants, mood stabilizers, sex hormones, birth control related chemicals, seizure medication, cancer treatments, pain killers, tranquilizers, caffeine and cholesterol-lowering compounds. These products are being called "emerging contaminants" and are being found in almost every waterway that has been tested.

Where do these drugs come from? There are many different sources, but a few are industries, hospitals, medical facilities, and households. People take pills. Their bodies absorb some of the medication, but the rest of it passes through and is flushed down the toilet. Improper disposal of unused products is also a factor. People often flush unused drugs down the toilet, which travels to water treatment plants that are not set up to filter these chemicals, so they proceed into waterways, lakes and even aquifers. Many of these drugs and personal care products do not biodegrade and may remain in the water for years. Farm animals kept on feedlots are fed hormones, antibiotics, veterinary medicines, and growth enhancers, which is a major source of surface runoff that can end up in groundwater. Runoff from these feedlots is a huge problem for water quality, not only with drugs but also e-coli, bacteria and nitrates.

The amount of these chemicals released into the environment is also a concern. Personal care products and pharmaceuticals released to the environment is estimated to be about the same as the amount of pesticides used each year. Furthermore, the U.S. accounts for about half of all pharmaceutical use in the world.

Most scientists agree that aquatic life is most at risk. For example, antidepressants have been blamed for altering sperm levels and spawning patterns in marine life. The first things to be affected will be the creatures that live in the water. Fish have been found to be "intersex fish", which are male but carry immature eggs.

The affects of chemicals in the water on humans are unclear. One fear that scientists have is that disease-causing bacteria will become immune to treatment and that drug-resistant diseases will develop. Some scientists believe these drugs will have no effect on humans as they occur at low concentrations in water, but to other scientists, this is a great concern. The good news is, concentrations being found now are relatively low.

Unfortunately, clean up and removal of these pollutants is a difficult task. As previously pointed out, wastewater treatment plants are not designed to remove these chemicals and much of what goes down our drains and toilets finds its way to our streams and groundwater. Prevention is our best hope. We should minimize our use of drugs and dispose of our medications at a sanctioned household hazardous waste collection event. Maine DEP should be able to provide you with times and places. Lets all do our part to keep our waterways chemical free.

**Filthy water cannot
be washed.**

West African Proverb

12th Annual Canoe-A-Thon & Saco River Clean-Up

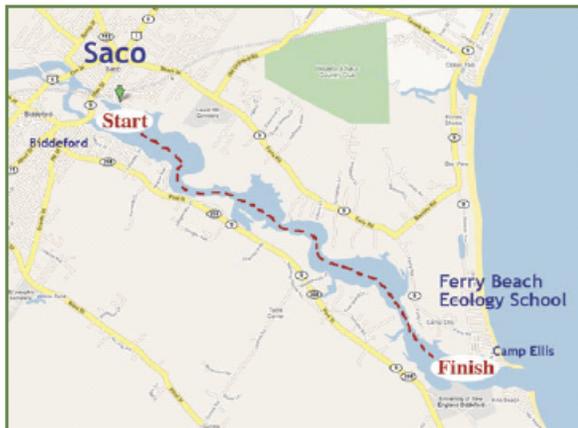
Saturday, June 4, 2011

Rain Date: Sunday, June 5th



1:30 Registration at the Front Street Public Boat Launch | 2pm Canoe Launch and River Clean-Up

Grab your canoe, kayak or skiff and join the staff of Ferry Beach Ecology School to help clean up the Saco River! On Saturday, June 4th, we'll kick off the day at 1:30pm at the Front Street Public Boat Launch* in Saco and paddle with the tide south to Camp Ellis.



*Front Street Public Boat Launch is just south of Pepperell Square, past the train overpass bridge.

The two-hour trip will involve pulling garbage, tires, boots, and other interesting surprises from the river. All trash collected will be hauled out at the boat launch in Camp Ellis. Shuttle service will be available to reunite paddlers with their vehicles. After the clean-up, participants will enjoy a barbeque at the Ferry Beach Ecology School campus on Route 9.

Not only will you be cleaning up the Saco River, but you'll be raising money for the Ferry Beach Ecology School Program Fund.

Register for the event and you'll receive a pledge sheet. The money you collect will provide scholarship opportunities for children and adults to participate in Ferry Beach Ecology School residential environmental education programs.

Prizes will be awarded for the person with the most money collected and for the person who gets the most number of pledges. Colorful costumes and attire are encouraged, but not required. Craziest costume will also be awarded a prize.

Sponsored By:



To register or to become a sponsor, visit www.fbes.org

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Landscaping with Native Species

By Elizabeth Bull

Plants that are native to Maine are uniquely adapted to its climate and soils. They protect biodiversity, sustain wildlife, and restore habitat. Non-native species, on the other hand, can be invasive, disrupt natural balance, and threaten native plants and animals. Choosing nursery-propagated indigenous species is an excellent way to add low-maintenance beauty to your landscape.

Suggested native species

The following plants are pleasing to the eye and thrive with little effort. Most are also a good source of food and shelter for wildlife, including pollinators.

Trees

Red maple (*Acer rubrum*) and sugar maple (*Acer saccharum*) are superior shade trees known for beautiful fall color. Yellow birch (*Betula alleghaniensis*), paper birch (*Betula papyrifera*), and gray birch (*Betula populifolia*) are distinguished by their striking bark and yellow autumn leaves.



The evergreens red pine (*Pinus resinosa*) and white pine (*Pinus strobus*) tolerate poor soils. Northern red oak (*Quercus rubra*) transplants well and turns red with fall.

Shrubs

Sweet viburnum (*Viburnum lentago*), smooth sumac (*Rhus glabra*), and staghorn sumac (*Rhus typhina*) are hardy, ornamental plants that are especially suitable as hedgerows. Birds are grateful for fruiting shrubs such as winterberry (*Ilex verticillata*) and common chokecherry (*Prunus virginiana*), particularly in winter when food isn't plentiful. Butterflies and bees appreciate Allegheny serviceberry (*Amelanchier laevis*).

Groundcover

Choosing an appropriate groundcover for your site will save time and money, end the drudgery of mowing and fertilizing, and benefit the environment.

Creeping juniper (*Juniperus horizontalis*) is a rugged evergreen. Checkerberry (*Gaultheria procumbens*) is a highly ornamental

source of winter nutrition for wildlife. Bunchberry (*Cornus canadensis*) performs well in shade. It displays beautiful white flowers and bears red fruit in autumn.

Edible Fruit

Highbush blueberry (*Vaccinium corymbosum*) thrives in acidic soil. Its height makes it easy to harvest. Highbush cranberry (*Viburnum trilobum*) — not truly a cranberry — bears fruit similar to its namesake in appearance and flavor.

Recommended Reading

Gardening to Conserve Maine's Native Landscape: <http://extension.umaine.edu/publications/2500e/>

Native Plants: A Maine Source List: <http://umaine.edu/publications/2502e/>

Selecting Plants for Pollinators: <http://www.pollinator.org/PDFs/Laurentian.rx9.pdf>



Mike Towns in Memorium

By Dennis Finn

I was lucky enough to be a friend of Mike Towns for the better part of 10 years. I met Mike during a series of meetings about pollution and problems along the Saco River in Buxton. We discussed a lot of topics that day, leading up to Mike stating rhetorically “I wish I could do something good for the river”. I don’t think he knew right then what he was getting himself into, but his devotion to the river and to the outdoors led him into involvement with the SRCC. It was a curious situation really. Mike wasn’t particularly fond of regulations in general. But over the years, he had discovered on his own that there is a small percentage of people that have no respect - no respect for law, or for neighbors or community or for protecting resources that belong to everyone. He had discovered that sometimes it takes an organized effort to keep the wrong thing from happening.

Mike and I often struggled with questions about the law, especially when it seemed that the law and common sense didn’t quite match. But he was as honest and hard working at life as he was at play, and he knew that sometimes the only way to protect something you love is to step into the fray. Mike also had a strong sense of community. He was the first person to point out that each town had an opportunity to appoint a commissioner and therefore, this gave them all a vote and say in what happened to that river. He didn’t whine about things he didn’t like or that didn’t go his way and he wasn’t afraid to speak his mind. But he was also respectful and the first to admit when he was wrong - which wasn’t terribly often.

Mike was a Saco River Corridor Commissioner from the Town of Waterboro, Maine for close to ten years and for some of that time, he was the SRCC Chairman. This past winter, Mike passed away following another fight he couldn’t turn away from. This time, the fight was with cancer, a foe that did not know compromise. It was a loss to me and a loss for all who knew him. Equally sorrowful, Mike’s passing was a loss to the Saco River and to the region he knew well, loved fiercely, and worked to protect. I, for one, will miss his humor, his candor and his willingness to engage in the many fights necessary to protect this river.

SRCC Commissioners

We would like to take this opportunity to welcome some new Commissioners and also thank our long-time Commissioners for their hard work and dedication. We have a wonderful group of Members, who are thoughtful in their decision making, take time to understand the issues put before them and are willing to take time out of their busy lives to study the SRCC Act, review paperwork and attend meetings, on an entirely volunteer basis.

Welcome to:

- *Laurie Downey of Baldwin;
- *Jeremy Miller of Buxton;

- *Michelle Broyer of Fryeburg;
- *Dorothy Mozden of Limington;
- *Richard Jackson of Shapleigh;
- *Shawn Shoemaker of Waterboro;

And thank you to:

- *Roy Trafton of Acton;
- *William Todd of Acton;
- *Donald Isaacs of Baldwin;
- *Donald Furman of Biddeford;
- *Michael Robinson of Buxton;
- *Beth Phelps of Cornish;
- *Sharon Martel of Dayton;
- *Lisa Burns of Denmark;
- *Elbridge Russell of Denmark;
- *Eric Root of Fryeburg;

- *Toni Carros of Limerick;
- *Jane Lougee Bryant of Limerick;
- *Anne Dunbar of Limington;
- *Judy Ingram of Parsonsfield;
- *Doug Hawkins of Parsonsfield;
- *Rob Heard of Porter;
- *Elizabeth Bull of Porter;
- *Mark Johnston of Saco;
- *Margaret Mills of Saco;
- *George McNeil of Standish; and
- *Michael Robinson of Standish.

We, as staff, are very proud to be part of a community with such outstanding Members.

Thank you!

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- Our newsletter is available on the web at www.srcc-maine.org. If you would like to receive this publication electronically, please send us your e-mail address.
- Has your address changed? If so please let us know!

Our next newsletter will include a variety of different photos from all over the Saco River Watershed. We would love to save paper (and funds) by sending our newsletter to you via e-mail. When sent this way, all photos will be in color. If you would like to convert the delivery of Courses of Change to e-mail, please give us a call at 625-8123 or e-mail to srcc@srcc-maine.org. Thank you!