

# Courses of Change

## Upcoming Public Forums to Focus on River Issues

The Saco River twists and winds through two states, slowly losing elevation, stretching over 80 miles in Maine on its way to the ocean. For the purposes of managing a river of this length, we divide it into regions represented by the varied uses we find along its course. The upper reaches of the river are rural with healthy agricultural and forestry roots. Central sections of the river where the Ossipee and Little Ossipee flow from our western neighbors in New Hampshire are rural but with a strong lean toward rural residential use. The southern most stretch of river gets deep and lethargic but recalls industry and commercial ties that bring out the urban flavor of the area. Each particular region or segment of the river has its own issues that are reflective of the land use patterns that have developed over time.

In a region this size, a dynamic, and multi variable resource like a river system poses many complex challenges that can be difficult to balance. Biological, physical and chemical parameters need to be considered, along with a shifting balance of needs represented by river users and landowners. In the case of the Saco, Ossipee and Little Ossipee Rivers, that balance reflects a variety of seemingly competing issues. These include drinking water, recreation, water withdrawal, irrigation, power generation, residential and

commercial uses on the shore and the flora and fauna that populate and cover the area. A quick check on the interests and the diversity of people that represent those interests makes it clear that common ground must be established if the resource is to be managed wisely. Stakeholder is the term commonly used by planners and managers to symbolize people or groups that have a direct interest in the issues being discussed. People with an interest in the resource and how it is managed typically find a voice to express their concerns. In an effort to start a dialogue about river issues and bring stakeholders and their voices together, the Saco River Corridor Commission (SRCC) is partnering with the United States Environmental Protection Agency (USEPA) to hold three workshops later this summer to discuss relevant river topics. Topics are likely to include water quality, source water assessment, recreational impacts, land conservation, local government perspective, water withdrawal impacts and how these topics all relate to the user.

Through discussion and dialogue, common goals may become more obvious for advocates and resources alike. Discussing similarities and outlining priorities can help to blur the edges and soften the boundaries of issue areas. Common threads and not differences emerge from such discussion. Science, education and

regulation can and should work together for the benefit of the river and for all the people that use and enjoy the Saco.

Workshop #1  
Friday, August 26, 2005  
American Legion Hall  
Bridgton Road, Fryeburg, ME

Workshop #2  
Thursday, September 22, 2005  
Cornish Fire Barn  
School Street, Cornish, ME

Workshop #3  
Friday, September 23, 2005  
Biddeford City Hall  
Main Street, Biddeford, ME

All workshops are scheduled  
from 9:00 a.m. to 1:30 p.m.  
Agendas to be posted on the web.

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*Courses of Change* is a quarterly publication of the Saco River Corridor Commission. We encourage our readers to submit ideas for publication in future issues. The deadline for submission in our Winter 2005 edition is December 1, 2005.

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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...

We endured and complained about the cool wet weather all spring. Without hesitation, summer was launched and now we endure the heat and humidity. Along with these conditions came an endless supply of activity at the Commission Office.

The water quality season is now just over halfway behind us. To date, results have all been within acceptable ranges, including bacteria levels at select popular swimming holes. Our website has recently undergone a complete renovation with a new look that is more user friendly and information packed. The final touches are still in progress but it has been uploaded now so that our water quality data to date is available for all of you to view.

Our regulatory agenda has been loaded with many interesting projects. Recently approved projects have included a) a new water main, proposed by the Biddeford & Saco Water Company, to be installed underneath the Saco River using a directional drilling method, b) a new middle school in Hiram located in the Maine School Administrative District #55, c) a state-of-the-art inflatable rubber dam system at the Cataract dam in Biddeford; and d) a new 3,500 foot "River Walk Trail" to be located in the City of Saco along the Saco River. In addition to these highlighted projects, there have been over 70 applications for either new residences, accessory structures, or an amendment to a previously approved project.

As we discussed in our cover story,

the SRCC is very excited about the three upcoming public forums to be held in conjunction with the US Environmental Protection Agency. We have been working with USEPA staff for several weeks in order to put together a series of workshops that will most benefit the people of the area. A list of speakers and topic discussions will be posted on our website as the dates near. Please contact us for more information.

In addition, as we look towards fall, we have tentatively invited Colleen Ryan, the Project Manager of the Beginning With Habitat Program in Augusta, Maine to attend one of our fall Commission Meetings. We will keep our website updated with more information as we enter the cooler season. The mission of this program is to offer guidance to towns to help them maintain a sufficient habitat in order to support all native plant and animal species within the State. The means for achieving this goal is to provide each Maine community with a collection of maps and accompanying information depicting and describing various habitats of state and national significance found within each individual town. For more information about their program please visit their website: [www.beginningwithhabitat.org](http://www.beginningwithhabitat.org).

Enjoy what remains of a beautiful summer!

*Dennis Finn has been the Commission's Executive Director since 1995.*

## What is Alkalinity?

Our monitoring program tests for several parameters on a bi-weekly basis. Those parameters include, pH, temperature, dissolved oxygen, turbidity, total Kjeldahl nitrogen, total phosphorus, orthophosphate, and alkalinity. In previous issues of our newsletter we have focused on some of those parameters in order to help our readers understand how these tests can indicate current water quality.

The newest parameter added to our program is alkalinity which we started testing for this year at four of our 27 testing locations. A single alkalinity test costs \$12 to run at the lab. Alkalinity measures the buffering capacity of water, or the water's ability to neutralize the acids that it comes in contact with. Water has the ability to do this by the use of a base.

Let's briefly go back to Chemistry 101 for a quick description of what an acid is and what a base is. An acid is a compound substance that when it is mixed with water will break down on the molecular level resulting in the left over single hydrogen ions (H<sup>+</sup>). A base is also a compound substance, but will result in hydroxide ions (OH<sup>-</sup>) when mixed with water. When water comes in contact with more acids than bases there will be more hydrogen ions floating around compared to hydroxide ions resulting in a lower pH. On the other hand, when there are fewer acids, there are less hydrogen ions and more hydroxide ions resulting in a higher pH.

Water uses available bases, such as bicarbonates, carbonates, and hydroxides to combine with the free floating hydrogen ions (acids) that have entered the water. These acids can enter water from several sources including rainfall and wastewater. If water does not have a sufficient supply of base compounds, it will not be able to maintain a steady pH level while being exposed to an acidic substance. Once the buffering capacity of water is used up then you will begin to see drops in the pH value.

We have discussed how acid enters the water, but how does the base get in there? Its all in the rocks. Geology has a significant impact on the alkalinity of water. For example, in areas where the geologic composition contains carbonate (base) rich materials such as limestone the water tends to be more alkaline. By comparison, areas that contain carbonate poor soils, such as granite bedrock, have low alkalinity levels.

When we take an alkalinity sample to the lab, they perform a procedure which includes the addition of hydrochloric acid to the sample until the pH is brought to 4.5 on a standard 0 - 14 unit pH scale. Once that is complete a mathematical formula is used to determine a number which represents the sample's ability to handle a strongly acid substance.

Our test results for alkalinity have ranged from <5 to 28 mg/L this year.

*“When you put your hand in a flowing stream, you touch the last that has gone before and the first of what is still to come.”*

*-- Leonardo da Vinci*

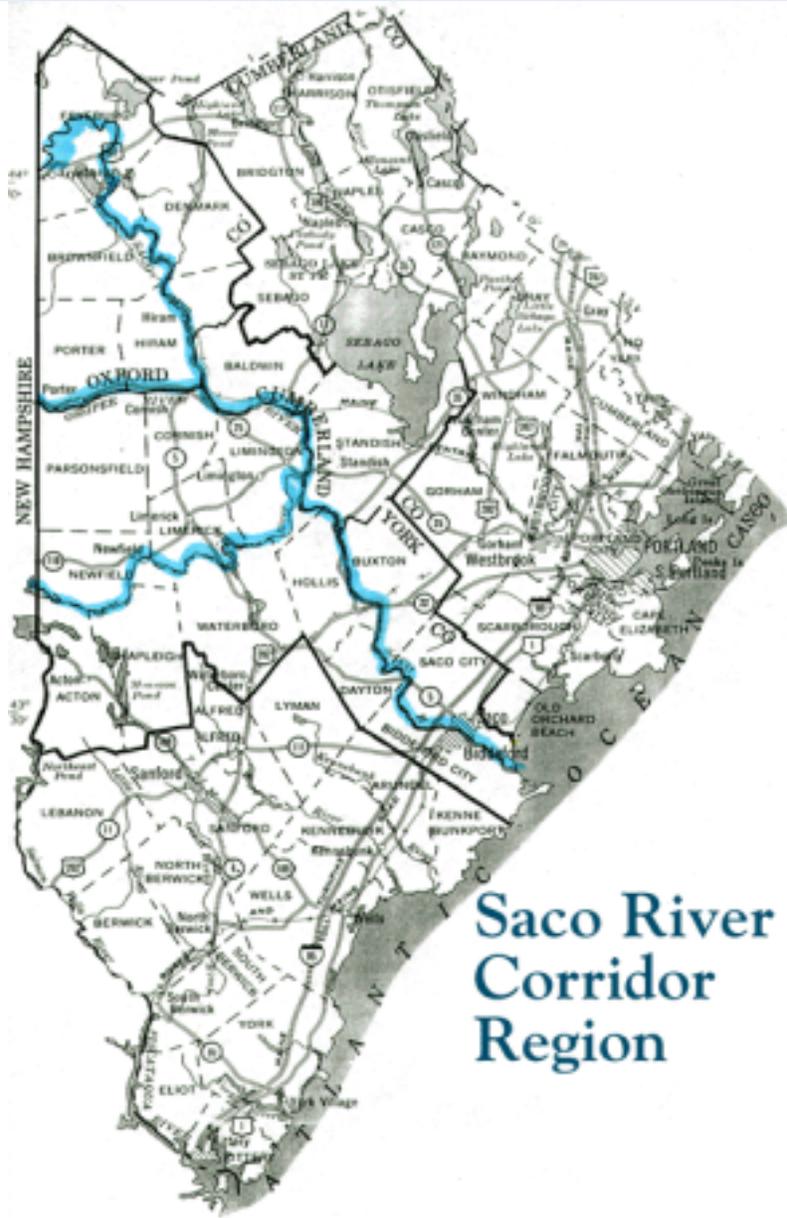
# Regulatory

Any person proposing to develop land within 500 feet of the Saco, Ossipee, and Little Ossipee Rivers, including Balch Lake and Lake Arrowhead, must first obtain a permit from the Saco River Corridor Commission. The average permit fee for new development within the corridor is \$120. That money goes directly towards the support of this agency and our continued commitment to water quality through guided land use and water quality monitoring efforts.

Deadlines to file for an application are the first Wednesday of each month. Our volunteer board of Commissioners come together on the fourth Wednesday of each month in order to consider all applications received for that agenda. Commission meetings are typically held in the evening at the Porter Town Hall located at 71 Main Street in Porter, Maine. Depending on the size of the agenda, meetings can last anywhere from one to five hours. All of our meetings are open to the public.

The members of the SRCC held 12 meetings during 2004. During that time, 129 applications for new construction or amended construction plans were considered by the Commission. The greatest amount of activity was seen in Saco, Waterboro, and Newfield with 21, 20, and 19 applications received respectively.

Following is a listing of the top three municipalities we received development applications from for the previous four years:



**Saco River Corridor Region**

**2000**

Waterboro	29
Saco	20
Biddeford	18

**2001**

Biddeford & Limerick	17 (each)
Saco & Waterboro	14 (each)
Parsonsfield	6

**2002**

Waterboro	28
Saco	25
Limerick	22

**2003**

Waterboro	29
Limerick & Biddeford	25 (each)
Saco	11

# Update

We are looking for persons who may be interested in filling the current vacancies we have on the Commission. There are 20 towns within the corridor. Each of these towns has an opportunity to appoint a member and an alternate to the Saco River Corridor Commission for a total of 40 Commissioners. Each Commissioner is appointed to serve a three year term.

	Member	Alternate
Acton	Occupied	Occupied
Baldwin	Vacant	Vacant
Biddeford	Occupied	Occupied
Brownfield	Occupied	Vacant
Buxton	Vacant	Vacant
Cornish	Vacant	Vacant
Dayton	Vacant	Vacant
Denmark	Occupied	Vacant
Fryeburg	Occupied	Vacant
Hiram	Occupied	Vacant
Hollis	Occupied	Vacant
Limerick	Occupied	Occupied
Limington	Occupied	Occupied
Newfield	Vacant	Vacant
Parsonfield	Occupied	Vacant
Porter	Occupied	Occupied
Saco	Occupied	Occupied
Shapleigh	Occupied	Occupied
Standish	Occupied	Vacant
Waterboro	Occupied	Occupied

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If you are interested, please drop us a note that includes your name, your resident community, and any other questions you may have surrounding the responsibilities of being a Commission Member.

Please mail your inquiry to:  
 Clerk of the Board  
 Saco River Corridor Commission  
 P.O. Box 283  
 Cornish, Maine 04020

Or, you may email us at:  
[srcc@srcc-maine.org](mailto:srcc@srcc-maine.org)

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Currently, there are 21 out of 40 available slots occupied on the Commission. Unfortunately, the towns of Baldwin, Buxton, Cornish, Dayton, and Newfield are completely vacant. These vacancies in essence prevent these towns from having a voice in current and future development patterns throughout the entire corridor. Although a municipality can control much of what occurs within its boundaries, it is what happens outside these boundaries that can potentially have a lasting detrimental impact on the places we call home.

The volunteer Commission board is the backbone of this regional agency. Without the continued dedication of our Commissioners over the past thirty years, it is unlikely that the water quality in the basin would be as good as it is today.

# Activity Central

Here is an experiment you can do at home that will help demonstrate just how little that 1% of water actually is. That’s why it is so important to use water wisely!

1) Start with one gallon of water.

This represents all the water available on earth.

2) Pour out one half cup of water.

This represents all the fresh water on earth. This includes, lakes, rivers, ground water, frozen water, and water that is found in all plants, animals, and humans on earth.

3) Use a dropper to remove one drop of water from the half cup.

This represents all the water on earth that is available for us to use. Quite a difference from what you started with don’t you think?



Below is a fun matching game that was taken from the Environmental Protection Agencies website at [www.epa.gov/safewater](http://www.epa.gov/safewater). Draw a line matching the items on the left to the amount of water used on the right. The answers appear in the bottom left hand corner.

- |  |                    |
|--|--------------------|
| 1. Taking a shower                                     | A. 30 gallons      |
| 2. Watering the lawn                                   | B. 180 gallons     |
| 3. Washing the dishes                                  | C. 4 -7 gallons    |
| 4. Washing clothes                                     | D. 1/2 gallon      |
| 5. Flushing the toilet                                 | E. 39,090 gallons  |
| 6. Brushing your teeth                                 | F. 62,600 gallons  |
| 7. Drinking  | G. 15 - 30 gallons |
| 8. Needed to produce one ton of steel                  | H. 9.3 gallons     |
| 9. Needed to process one can of fruit or vegetables    | I. 1 gallon        |
| 10. Needed to manufacture a new car and its four tires | J. 9 - 20 gallons  |

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*Out of all the water on this earth, only 1% is available for humans to use. The salt water in the oceans take up 97% of the water on the earth, and the remaining 2% are frozen as glaciers and ice caps at the North and South Poles.*

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Answers: 1-G, 2-B, 3-I, 4-A, 5-C, 6-I, 7-D, 8-F, 9-H, 10-E

## Notes From Upstream

The fourth year of the Green Mountain Conservation Group's water quality monitoring program began in April this year to obtain spring melt data, and will continue through October to create a broader profile of water quality in the Ossipee Watershed. New meters have been added to collect information on conductivity, which will tell more about the dissolved salts or ions in the water and track any changes in these levels. Thanks to the help of thirty-five dedicated volunteers, a total of eighteen sites will be monitored through the fall, including three new sites. The Ossipee Lake and Tributaries program will continue for the third year with testing of thirteen tributaries flowing into Lake Ossipee. Deep water testing in the lake and bays will also take place in July and August with the help of many local summer camps, campgrounds, and individuals. Volunteers are still needed

to help with the Lake Host program to prevent the spread of variable milfoil and other invasive aquatic species through education and boat inspections. Anyone interested in helping with these programs can contact GMCG at 603-539-1859, or email [gmcg@worldpath.net](mailto:gmcg@worldpath.net). To access water quality monitoring information and data visit: [www.gmcg.org](http://www.gmcg.org).

*Tara Schroeder is the Program Director for the Green Mountain Conservation Group's RIVERS Water Quality Monitoring Program which began four years ago. If you have any questions, Tara can be reached at the GMCG's Freedom Office at 603-539-1859.*

*"Borders?  
I've never seen one, but  
I heard that they exist in  
some people's minds."*

*-- Thor Heyerdahl*

## A Request To Our Readers

The world around us experiences change and progress on a moment to moment basis. On any given day, many of us may be lucky enough to witness one of those moments.

This is a photo of loon chicks who are just four hours old with their proud parents. This moment was witnessed by Ben Tripp who has been a dedicated volunteer with our program since its inception.

### What have you witnessed lately?

We encourage you to send photos, writings, or other submissions to us

at any time throughout the year so that you may share these unique happenings with others.



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Cornish, Maine 04020-0283

## ***COURSES OF CHANGE - SUMMER/FALL, 2005***

- Our newsletter is available on the web at [www.srcc-maine.org](http://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!

### **Images From The Past**



This is a photo taken in the mid 1970's of the hydro dam on the Saco River commonly known as Hiram Falls which is located in the Towns of Hiram and Baldwin. The original station was built in 1917 by Cumberland County Power and Light, and was redeveloped by then owner Central Maine Power in 1984. The dam is now operated by FPL Energy Maine Hydro who took over ownership in 1990.

The sandy, shallow waters just below Hiram Falls are a popular spot for swimmers and campers alike. Our water quality monitoring programs tests for bacteria in relation to swimmability at this site between Memorial and Labor Day.