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UNITED
STATES
DEPARTMENT
OF AGRICULTURE

FINAL REPORT

MAINE AMERICORPS WATER QUALITY TEAM

MAINE
AMERICORPS
TEAM USDA

1. Number of members enrolled at the time of the launch: 20
2. Number of members enrolled at the end of the first quarter: 20

Number of members enrolled at the end of the second quarter: 19

The one member was hired specifically because of the skills he had received through his AmeriCorps experience.

Number of members enrolled at the end of the third quarter: 18

3. Total number of hours of direct service performed: 32,043.25.
 4. Total number of hours in training: 1594
 5. Progress towards meeting community service objectives: See attached reports.
 6. Primary accomplishments: See attached reports.
 7. Primary Challenges: See attached reports.
 8. Our project had adequate resources available for training and technical assistance this year.
 9. Some report list coverage has occurred. attached are copies of some of the press releases about Maine USDA AmeriCorps.
 10. Estimated (conservative) direct costs (personnel time, mileage, phone/fax, mail and training): 110,000
- Financial support contributed by others is estimated at 200,000.

IN ADDITION, 422 VOLUNTEERS DONATED 24,339 HOURS TO THE MAINE USDA PROGRAM.

**WATER QUALITY MONITORING DIRECTORY AND INFORMATION
SOURCES FOR THE CASCO BAY WATERSHED AND BEYOND**



1ST EDITION 1995

PRODUCED BY
LISA TAYLOR USDA/AMERICORPS 1995
NATURAL RESOURCES CONSERVATION SERVICE
381 MAIN STREET SUITE 3
GORHAM ME 04038



WANT TO HELP OUT?

- ♣ Give permission for MGS & PWD staff to access your land for the study.
- ♣ Volunteer for beach profiling duty.
- ♣ Keep an eye out for erosion and tell us about it.

See You This Summer!

For more information about this study, contact Jody Smith, PWD (207-774-5961) or Bob Johnston, MGS (207-287-2801).

Beach Profiling: PWD, MGS, and volunteers from Friends of Sebago Lake (FOSL) continue their beach profiling monitoring around Sebago Lake to try and evaluate sand/sediment movement on the lake. The information we gather will be analyzed in the 2-year study.

Algae Key: Portland Water District has hired Ken Wagner of Fugro-McClelland to prepare an algae key specific to Sebago Lake. An algae key is a pictorial atlas of the algae which form the base of the ecology of the lake. Dr. Wagner is also carrying out an analysis of algae data collected since 1926 by the PWD. By studying the types and number of algae species, you can often reveal if there are changes occurring and get an idea of what is causing these changes.

Nearshore Secchi

Disk Sampling (see Jan-May issue): PWD and volunteers from Friends of Sebago Lake (FOSL) will continue their sampling program to document variations in lake transparency at about 34 sites around Sebago.

Economic Study: The Sebago Lake Association is applying for a grant to evaluate "how much Sebago Lake is worth." The study will estimate the economic and cultural values of the lake to the region. The study can be used to aid municipal and state officials in making better decisions for protecting Sebago Lake.

Point Sebago

Archaeology: Dr. Nate Hamilton, archaeologist with the University of Southern Maine, recently unearthed an archaeological treasure of paleo-Indian artifacts at Point Sebago, dating from about 9000 BC. The site has subsequently been used as a university field school for the archaeology program.

Crooked River Study: Americorps volunteers from the Natural Resources Conservation Service will be field surveying areas of the Crooked River to help determine sources of phosphorus pollution that may be impacting Sebago Lake. PWD lab staff will be supplementing their efforts with stepped up chemical analyses along this Sebago Lake tributary.

PUMPED YOUR SEPTIC TANK LATELY?

Do You Remember When you last pumped your septic tank? If it was about 3 years ago, you may want to do it again this summer. The Casco Bay Estuary Project is offering \$10 discounts to get your tank pumped. Call the PWD Lake Office to get a coupon and a list of participating septic tank pumpers.



Use Your Head. Pump It Out.

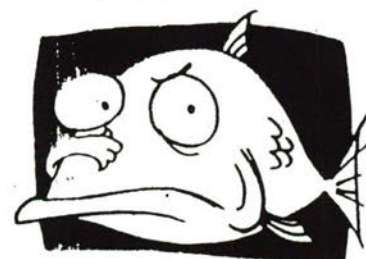
**Maine Pump-out Stations
Sebago Lake Area**

Standish: Richardson's Marina (207) 892-4913

Raymond: Jordan Bay Marina (207) 655-3845

Naples: Causeway Marina (207) 693-6832

Casco: Kettle Cove Marina (207) 655-4775



Maine Dept. of Economic & Community Development & Casco Bay Estuary Project

Watershed Conference for Teachers

The Maine Geographic Alliance is sponsoring a summer training program from August 13th - 19th at Wolfe's Neck Institute. The most comprehensive teacher workshop in the state on this topic, the program will include information about lakes, streams, aquifers, and estuaries, as well as field trips to bring the topic to life. For more information, contact Pam Wilson at The Maine Geographic Alliance, 780-5598 or 780-5224.

CUMBERLAND COUNTY SOIL & WATER CONSERVATION DISTRICT

Phone: 839-7839

DISTRICT BOARD OF SUPERVISORS

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Phone: 829-5977
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Phone: 688-4191
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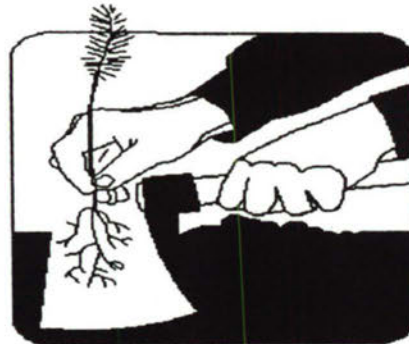
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Forrest Bell - 381 Main Street Suite 3, Gorham 04038
Phone: 839-7839
Edwin Springer - 581 Pleasant Hill Road, Brunswick 04011
Phone: 729-5590
John Malley - Lot 18-2, 9801 South Ocean Drive, Jensen Beach, Florida
34957

DISTRICT STAFF

Betty L. Farley - Office Manager
Ross Cudlitz - Engineer
Forrest Bell - Project Coordinator
Alison Kisch - Project Assistant
Sandra Deschaine - District Clerk

NRCS TECHNICAL STAFF

Wayne Munroe - District Conservationist
David Chiappetta - Soil Conservationist
Scott McLaren - Soil Technician



**CUMBERLAND COUNTY SWCD
381 MAIN STREET, SUITE 3
GORHAM, ME 04038**

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To: Mary Alice Crofton Fax # 207-624-6023

From: Lisa Taylor, AmeriCorps Member, Gorham ME Fax # 207-839-7834

NUMBER OF PAGES = 7

To: Mary Alice Crofton, MACC

From: Lisa Taylor, AmeriCorps Member, Gorham ME

Here is the information that you requested for the press release package for National Service Day April 25th. If you have any other questions or need anything else please call me at 207-839-7842. Thank You.

Sincerely,

Lisa Taylor

Lisa Taylor
Casco Bay Watershed Coordinator
Natural Resource Conservation Service
381 Main St. Suite 3
Gorham ME 04038
Phone#207-839-7842
Fax#207-836-7834

Jack Elementary School, Grade 1,

April 25, Macworth Island

Agenda

9:15 - 10:00	Group 1	Group 2
	Water	Forest
10:00 - 10:30	Hike around the island to the next site	
10:30 - 11:15	Group 1	Group 2
	Forest	Water
11:15 - 11:45	Hiking	
11:45 - 12:00	Group Game	

Water Lesson:

1. Identify animals that live in the salt water ecosystem
2. Food web
3. Scavenger Hunt
4. Collect aquatic life with a sein and strainers
5. Show and tell

Forest Lesson:

1. Hug - a -tree (a sensory awareness and a trust/cooperation activity)
2. Birds and worms (introduces the concept of camouflage in prey/predator relationships)
3. Camera (teaches observation and appreciation of nature)
4. Animal Charades (students act out forest animals)

Note: Students should be wearing **BOOTS!**



Cumberland County Soil and Water Conservation District
381 Main St., Suite 3 * Gorham, Me 04038 * (207) 839 - 7839

For Immediate Release

Contact: Holly Sheehan

CAPISIC BROOK CLEANUP

On Tuesday, April 25, *National Service Day*, at 3:30, a Capisic Brook cleannup will take place, at Capisic Pond Park. The community is invited to participate in the cleanup efforts. A total of 40 volunteers are expected.

The project is sponsored by the Cumberland County Soil and Water Conservation District, the Greater Portland YMCA, and several other groups, including, the City of Portland, the Natural Resource Conservation Service, the Earth Team Volunteer Program and the Training Resource Center.

Members of the United States Department of Agriculture's (USDA) AmeriCorps Program, and Longfellow School Elementary students from the Greater Portland YMCA are leading the stream cleanup at the Capisic Pond Park. The event is part of a year long "Adopt -A -Stream" project. USDA AmeriCorps member, Holly Sheehan, working for the Soil and Water Conservation District, has been teaching the YMCA after school group about water quality issues and the Capisic Brook. The project aims to help improve public awareness of water quality issues and problems in the Capisic Brook Watershed in Portland, ME.

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COMM-ASSISTANCE --- MAINE

0002/002

USDA/AMERICORPS NATIONAL DAY OF SERVICE RESPONSE FORM

Location and state where National Day of Service project will be performed:

Capisic Brook Watershed, Portland, Maine

USDA agency or agencies from which AmeriCorps Members will be participating:

Natural Resource Conservation Service & Cumberland County Soil
and Water Conservation District

Number of USDA AmeriCorps Members expected to participate: 3

Counties of the duty stations of USDA AmeriCorps Members expected to participate:

Cumberland County, Maine

Name of any non-USDA AmeriCorps projects expected to participate: _____

We are involving the YMCA and the Training Resource Center

Estimated number of community volunteers also expected to participate: 40

Any elected officials confirmed to attend NO

Brief description of the type of service to be performed: Cleaning the

trash out of a creek in the City of Portland, Maine.

Name and number of contact person for day's project: Holly Sheehan @ 207-839-7839

MAINE ASSOCIATION OF CONSERVATION DISTRICTS
c/o Cumberland County Soil and Water Conservation District
381 Main Street Suite 3
Gorham, Maine

June 6, 1995

Dear Lisa,

On behalf of the Maine Association of Conservation Districts, State Envirothon Committee, we want to thank you for all your help in making the 1995 Envirothon successful. The time and effort you spent is greatly appreciated by the committee, teams and advisors. Without the assistance of professional volunteers, the Envirothon could not take place.

To improve next year's Envirothon, we would appreciate your comments on the enclosed evaluation form. Your advice and suggestions will help us to make some adjustments and changes. Hearing about those aspects of the process that should remain the same are useful to us too.

Thank you again for your contribution to the environmental education of Maine's youth.

Yours truly,

A handwritten signature in cursive script that reads "Forrest Bell".

Forrest Bell, Coordinator
State Envirothon Committee

The goal of the Casco Bay project is to improve water quality through the planning and application of resource management systems, the coordination of conservation efforts in the watershed and the carrying out of an information and education program.

Resource management systems for both urban and agricultural land include erosion and sediment control, management of stormwater, irrigation and livestock water, hayland, pastures, woodlots and solid wastes, streambank, shoreland and wetlands protection and clay and gravel pit reclamation.

The development of resource management plans and the resulting "best management practices" (BMP) are aimed at preventing water quality degradation from sediments, nutrients, pesticides and agricultural wastes.

Last year, SCS planned management systems on 8,975 acres of agricultural land and 3,597 acres of urban/suburban land. Fifty-nine sediment and erosion control practices were applied on 5,737 acres, pre-

The goal of the Casco Bay project is to improve water quality through the planning and application of resource management systems, the coordination of conservation efforts in the watershed and the carrying out of an information and education program.

venting the loss of an estimated 34,436 tons of soil.

Springbrook Farm A Good Example

Wherever land is used by people, whether on farms, along streets, roads and rivers or in urban or suburban communities, there is a potential for non-point source pollutants that will eventually end up in some water body.

Soil, remains of pesticides, herbicides and fertilizers can wash off the land unless farmers plan and apply appropriate best

management practices. Greg and Kay Fowler, fifth-generation owners and operators of Springbrook Farm, are an outstanding example of farmers who follow good conservation and water quality programs. Greg is one of the Supervisors of Cumberland County SWCD.

Wayne Munroe, SCS District Conservationist, who helped Greg develop his resource management plan, says, "The Springbrook Farm is an excellent example of good soil and water stewardship."

Manure from the herd of 220 dairy cows was a potential source of trouble.

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UNITED
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Karen Bert - Chandler - Indian River Watershed Coordinator
Washington County Soil & Water Conservation District
Final Report
June 16, 1995

Progress Towards Meeting Community Service Objectives:

1. Community Education

A.

I coordinated a series of workshops for blueberry growers on Best Management Practices for the use of the herbicide hexazinone (Velpar). I requested and recieved funding from the Maine Wild Blueberry Commission and worked with the Extension Blueberry Specialist Dr. David Yarborough, area District Conservationists and the Department of Agriculture in planning and implementing these workshops. I also cooperated with the Maine Board of Pesticide Control which awarded workshop participants points towards their pesticide applicators license. 124 growers attended the workshops which were held in Machias, Ellsworth, South Paris and Union.

Project Outcome - A informed group of growers who will be more responsible in their use of agricultural chemicals resulting in cleaner groundwater in Downeast Maine.

B.

Jane Lamson of the Beals Island Regional Shellfish Hatchery and I planned and implemented a environmental newsletter written by area high school students. I sought and recieved funding via a small grant from earthpreserv, a manufacturer of environmentally-friendly personal care products, and from Georgia-Pacific, which donated paper for printing the newsletter. Jane and I contacted every secondary school in the county and met with both students and faculty. We coordinated three issues of the newsletter (800 copies per issue) and distributed them throughout each participating school. Free issues were also available for the public at grocery stores located throughout Washington County. I also wrote several news articles about the newsletter and judged two writing contests we ran to increase participation.

Project Outcome was twofold:

1. To increase the basic awareness of environmental issues affecting Washington County and
2. To give students some "real-life" experience researching and writing on various environmental topics.

designed and put together an informational packet containing data sheets for growers to complete. These data sheets will be returned to the S&WCD office in the fall and be used to establish some basic management recommendations for growing these berries. We have 27 participants so far and the project has recieved much attention. I also handled all the publicity for this project including newspaper articles and a radio interview.

Project Outcome- A low-input source of income for County residents that does not threaten the health of groundwater through pesticide contamination.

C.

I have assisted the District with their Integrated Crop Management program for blueberries. I publicized the program through newspaper articles and through letters to past participants. I planned an annual banquet for last years' growers, composed and mailed out letters to growers whose fields were at risk for disease this year, gathered a mailing list of every grower in the Chandler-Indian River Watershed, and assisted with the organization of ICM files. I also learned scouting techniques in the field.

Project Outcome - ICM aids farmers in reducing their use of agricultural chemicals resulting in a healthier environment and cleaner water.

D.

I assisted a local blueberry Cooperative with marketing by writing a "Wild Blueberry Story" and helping design a placemat for use in local restaurants featuring wild blueberries.

Project Outcome - Fostering of small growers who generally use less chemicals and pose less of a threat to groundwater health.

E.

I wrote approximately 10 articles on various aspects of water quality which were published in local newspapers. Topics ranged from alternatives to harmful gardening chemicals to care and maintenance of home septic systems.

Project Outcome - An educated public, aware of issues and alternatives.

bibliography listing materials available at the National Agricultural Library at Beltsville MD., University of Maine (Orono), and area libraries. The AmeriCorps Cranberry Resource Library may be expanded in the future by including a weed library. In addition, a grant from the Maine Community Foundation could be pursued to further expand the educational materials available to cranberry growers in this area.

Work with the Down East RC&D Cranberry Committee: during my AmeriCorps term I have been involved in committee agenda development and coordination of activities such as grower workshops, trips to Massachusetts Cranberry School, and participation in the Agricultural Trade Show. In addition, I have written reports and articles for the "Maine Cranberry News" Letter to promote attendance at informative committee meetings.

Future Needs:

Fertilization recommendations: there is a need for work done one-on-one with growers for proper fertilizer applications. For many, farming is a new endeavor. Assistance is needed in the taking of soil and plant tissue samples as well as following through on specific fertilizer recommendations and application schedules.

Water Quality Monitoring: water quality monitoring at the research bed needs to be done to help qualify the degree of containment an upland cranberry bed provides to insure preservation of water quality.

THANK
YOU!



Keep the
word clean
for many
generations.



Sebago Elem.
East Sebago M.E.
December 9, 1984

Dear Mrs. Sheehan,
Thank you for coming in.
I like the part when
we made the towns see
we could see where the
carnivals.

Sincerely,
Chris Jensen

Thank

YOU

Segago Elem.
East segago, ME
December 12, 1994

Dear Mrs. Holly,

Thank you for coming
in to our class.
I liked it when you
made a water shed.

Sincerely,
Amanda Thompson

under a rock somewhere. I came back and it wasn't the stipend, some would begrudge the AmeriCorps volunteers that brought me back. Financially I could have done without the AmeriCorps money. Why I came back is because I truly care about the projects and people I have been fortunate to be involved with. The AmeriCorps stipend frees you to be able to do service but caring is what keeps you going. I'm a little surprised I came back. I think I've learned what volunteering really means; caring about people. I know I will carry this feeling of what it means to volunteer with me for a long time to come.

was launched this season. Cooperative Extension Service personnel and the State Entomologist (MDOA) stated that this would not have been possible if it were not for the AmeriCorps program. Funding, as yet, does not allow for Cooperative Extension cranberry scouts due to the present, relatively low, cranberry acreage in Maine. But it is agreed that this service is vital in order for this new industry to become established with sustainable pest management practices. Scouting materials, made available by U.M. Cooperative Extension Service, will be available for next year's program include: sweep net, pheromone traps and lures, worker protection equipment, hand-held sprayer to prevent spread of disease from field to field, and 15x-20x magnifier.

Continuation of the AmeriCorps Cranberry Water Quality position at the Down East RC&D office will insure this vital educational service until Cooperative Extension or a growers cooperative can take over this program.

Weed identification: The establishment of a weed library for weed identification for the proper control of weeds could be a helpful tool for cranberry growers. A weed press has been acquired for the collection and preservation of weeds that could be categorized ranging from opportunistic weeds which establish in new beds and later are out-competed by the cranberry vine to more severe weeds that spread by underground rhizomes and will deter profitable yields. The weed press was donated by U.M. Cooperative Extension Service but was received late in my AmeriCorps term.

7-13-95

Dear Gary,

Congratulations on a job well done with the trails this year! As the Trails Coordinator you have been invaluable to the future of recreation trails in Aroostook County. Many people will reap the benefits of your hard work and dedication.

I wish you the best of luck in future endeavors.

Kathy Gurdeman
DC, NRCS



TRAIL RIDE — Horseback riders rode the newly developed 18.5 mile Aroostook Valley Trail from Washburn to Caribou during the Caribou Parks and Recreation Department's celebration Saturday of the trail which covers wooded areas between Caribou, Woodland New Sweden and Washburn. (Ketch photo)



BIRD WATCHERS — An introduction to bird watching was led by Bill Sheehan of Woodland, left, at the Aroostook Valley Trail crossing on the Woodland Center Road Saturday morning. Sheehan identified about two dozen bird species during the walk. The activity was part of the Caribou Parks and Recreation Department's celebration of its newly developed 18.5 mile trail. (Ketch photo)

beaver dams, these two problems have been corrected over the summer.

I have also been going to many public speaking events;

Snowmobile Safety Course (Landowner relations with snowmobile clubs). January 14-15, 1995

Environmental workshop at Lakeview (My presentation was what I am doing for Americorps) January 25, 1995

Van Buren town council meeting (spoke to them about the benefits of the Bangor and Aroostook trail) February 27, 1995

Aroostook Centre Mall (public display of the trails that I am working on) April 8-9, 1995

ATV public meeting at the Caribou Motor Inn, April 21, 1995

New Sweden School (public display of the trails that I am working on) April 24, 1995

Northern Maine Trails Association (I did a slide presentation on both the Aroostook Valley Trail and the Bangor and Aroostook trails) May 2, 1995

Gave a tour for Mike Tardie of the Aroostook Valley Trail, May 18, 1995

Caribou Rotary (I did a slide presentation of before and after pictures of the Aroostook Valley Trail) June 21, 1995

Maine Trails Coalition meeting in Augusta (slide presentation of before and after pictures of the Aroostook Valley Trail) June 22, 1995

Joel Berg USDA Americorps boss (showed him slides and took him on a tour of the Aroostook Valley Trail) June 30, 1995

Ribbon Cutting Ceremony July 15, 1995

Diane Gelberd Northeast RC&D director (went on a bike ride with her on the Aroostook Valley Trail, then did a slide presentation of the Aroostook Valley Trail for the Steering committee of the St. John Aroostook RC&D.) July 19, 1995

CORPORATION FOR NATIONAL SERVICE

FINAL REPORT

Cumberland County Natural Resources Conservation Service

Casco Bay Watershed Coordinators
Lisa A. Taylor / Gregory R. Lord

TOTAL NUMBER OF TRAINING HOURS:

The Casco Bay Watershed Coordinators have attended a combined total of 427 hours of formal training.

COMMUNITY SERVICE OBJECTIVE PROGRESS:

The community service objective of the Casco Bay Watershed Coordinators is to coordinate water quality and nonpoint source treatment, education and information on monitoring, technical assistance and planning programs to communities, groups and individuals in the Casco Bay Watershed (CBWS).

We have assisted CCSWCD and NRCS in resource inventorying and participated in committee meetings for the development of the Royal River PL-566 Watershed Plan.

This year 234 Clean Water packets will be distributed to 78 schools in the CBWS. These packets contain information and education material on clean water for students in the CBWS. To date, 25 schools have been visited.

A Water Quality Monitoring/Education workshop was held with the Bowdoin College in Brunswick, Maine. There were 10 participants in the workshop. Another workshop was given to the NCCC and MCCC and 15 participated. The final workshop was held on July 17th at the Lovell Grange with Holly Sheehan, Cumberland County AmeriCorps Circuit Rider. There were 60 participants at this workshop.

Of the sixty-five questionnaires sent out, for the water quality monitoring directory, forty have returned and I have put them together in a notebook, along with other information on water quality monitoring groups in the Casco Bay Watershed. It will be here at the Gorham field office to use as a reference and hopefully the work on it will continue to complete and distribute it next year.

Two informational fact sheets have been developed. Greg's fact sheet is on Riparian Tree Management and Lisa's is on Water Quality Monitoring.

A reconnaissance study of a section of the Crooked River, a main tributary into Sebago Lake (City of Portland's drinking water supply), for Portland Water District was completed. It was done to identify potential nonpoint source pollution site along the river. Water samples were taken at 20 different sites to test levels of phosphorus, fecal coliform, and nitrate and ammonia.

AmeriCorps Cranberry Water
Quality Coordinator's
Final Report
by Karen Mushra11 9/94 - 8/95

Things Done and Need for Continuation:

Soil Erosion Control: Area stabilization during cranberry bed construction as well as permanent stabilization is a vital issue that needs to be addressed for Maine cranberry beds. During my AmeriCorps term, I worked with the Washington County District Conservationist and an agronomist from the Natural Resource Conservation Service to develop a "Maine Cranberry Bed Establishment Time-Line." This time-line highlights soil erosion control both temporary (during construction) and permanent. Funding and distribution of the Time-Line will be handled by the Ag. Food and Rural Resource office in Augusta, Maine. In addition, I initiated and helped coordinate a bank stabilization demonstration at the EPA-sponsored Cranberry bed in Columbia Falls, which will compare the economics and effectiveness of three mulch materials. This project will be publicized by an area newspaper and will serve as a model of possible options for area stabilization surrounding Maine's upland cranberry beds. Follow through in the next 2-3 years will be necessary to evaluate these materials and to determine the extent growers adopt recommendations of these two projects.

Integrated Pest Management (IPM): a pilot cranberry IPM program

The effect of weeds is controversial among some growers but seem to be a major constraint in Maine cranberry beds. It is the opinion of some growers that early weeds may be beneficial in shading the young vine. Others feel that competition for light, nutrients, and water, deters vine establishment and is reason to diligently hand pull weeds all season. This controversy should be explored further to identify the weeds in Maine beds that pose a real threat to successful vine establishment as well as making sure cranberry growers receive accurate information on weed control and its importance.

Information Exchange: At present there is no full time Cranberry Cooperative Extension Specialist. Information sources regarding cranberries are in Orono, Augusta, and out-of-state. Over 100 + miles from most cranberry growers in the Down East area. Accurate as well as readily available information on sustainable farming methods is needed. The AmeriCorps office in Cherryfield is accessible and serves as a cranberry growers connection to the available information sources such as the Maine Department of Agriculture (Augusta), the Diagnostic Lab., Cooperative Extension personnel, researchers (Orono), and the NRCS. Continuation of the AmeriCorps Cranberry Water Quality Coordinator position will mean aid in keeping the lines of communication open between accurate sources of information and the potential cranberry growers and growers in Down East Maine. It will also mean the continuation of the Resource Library at the Down East RC&D AmeriCorps office which includes educational videos, books, and publications and a

My future plans and the affect of my AmeriCorps experience: The AmeriCorps experience has allowed me to realize, early in my career a long-term goal of assisting farmers in Maine and to find focus for the future. I will be entering graduate school Fall 1995 in the Department of Applied Ecology and Environmental Science. This graduate opportunity is a direct result of my AmeriCorps experience. I will be continuing research at the EPA-sponsored upland cranberry research/demonstration bed in Columbia Falls as a graduate student. I expect my future employment opportunities will also be greatly enhanced by recommendations from people I have worked with such as the Down East RC&D Coordinator, the State Entomologist (MDOA), the U.M. Coop. Ext. Small Fruit Specialist, and the Director of Product and Market Development (AFRR).

Regarding Volunteerism: I am 33 years old and a mother of two children (ages 9 and 13). I drive an hour and a half to get to the AmeriCorps office where I work. I took on this job because I could find no other opportunity available in my field of interest. I recently graduated from the University of Maine with a BS degree Maine in Sustainable Agriculture. I figured I would buy some time, meet some people in the agricultural field (professional as well as farmers), and besides, I could stand the commute for a year.

As it turns out this was the most difficult year of my life. My husband died unexpectedly in March. I thought of quitting; hiding

**HOLLY SHEEHAN
ENVIRONMENTAL EDUCATION CIRCUIT RIDER
MAY REPORT**

ENVIROTHON

The southern regional Envirothon at Wells Reserve was a big success. I assisted as a test runner, and learned a lot about the Envirothon competition in preparation for the state meet. The last few days of May were devoted to preparing for the state meet at Sebago Lake State Park, on June 2nd. It went wonderfully! Smooth as ice cream. The winners were from Mt. Blue High School in Farmington. Everyone involved (including students, advisors, volunteers and resource people) seemed to have a rewarding experience.

OUTDOOR CLASSROOM

My focus this month was on the Jordan Acres School project. On May 15 eight AmeriCorps members from the National Civilian Community Corps, from Aberdeen Maryland arrived in Maine. They joined myself and ten AmeriCorps members from the Maine College Conservation Corps, at the Jordan Acres Elementary School for an environmental education project.

I served as the project coordinator.

The first week of the project AmeriCorps members put in a trail in the forest behind the school. This included erosion control, bog bridges, wood chips over exposed roots, benches, and observation decks over wetlands.

During the second week I trained the AmeriCorps members in aspects of environmental education. They then developed lesson plans and lead classes in the outdoor classroom. Every student and teacher was involved (about 700 students and 40 teachers).

Channels 13, 6 and the *Times Record* reported on the project.

COUNTY WIDE OUTREACH

<u>School</u>	<u>Town</u>	<u>Topic</u>
The Environmental Schools	Bridgton	Water quality testing
Narragansett School	Gorham	Forest Ecology

OTHER

I have been helping Alison with the *Lake Ecology Book*, which is nearing its completion.

I met with four teachers from the Jack School in Portland and committed to working with them next year on my watershed curricula.

JUNE REPORT
HOLLY SEEHAN
ENVIRONMENTAL EDUCATION CIRCUIT RIDER

Note: Because my AmeriCorps hours are winding to a close I am working fewer hours. I hope to extend my stay with the District to the end of the summer I have been working about 25 hours per week since the first of June.

ENVIROTHON

The 1995 Envirothon Program came to a close for me on June 2nd with the state competition. It was a wonderful day. Everything went smoothly. Mount Blue High School from Farmington took the state title.

ADOPT-A STREAM

I concluded the Royal River-Keepers program on June 15th. The kids and I had planned a clean-up and a stream side planting, however it rained and we were stuck inside.. I closed the program by distributing environmental awards to the students and brought four of their posters on "how to prevent water pollution" to the Yarmouth Public Library for display.

OUTREACH

<u>SCHOOL</u>	<u>TOWN</u>	<u>PROGRAM</u>
Jack Elementary, Portland		Salmon Migration, grade 4
Jordan Acres, Brunswick		Salt Marsh Ecology, grade 2 Androscoggin River, grade 5
Blue Point, Scarborough		Salt Marsh Ecology, grades K-2
College Conservation Corps AmeriCorps		General Ecology, ages 14-22

TRAINING

I attended a 3.5 day AmeriCorps training in Princeton. It was very productive. We focused on analysis and reflection on our AmeriCorps experiences and career development.

LAKE BOOK

I have nearly completed a two page fact sheet for adults to be included with the Lake Ecology Book. I have been haggling Seth, my friend and graphic artist to get moving on the art work. Its coming along, slowly but surely.

**HOLLY SHEEHAN
ENVIRONMENTAL EDUCATION CIRCUIT RIDER
JULY REPORT**

Note: Due to dwindling AmeriCorps hours and a desire to continue on with the District for a longer period of time I worked about 25 hrs. per week this month.

Presentations

Long Island Community Camp - I met twice with the staff and campers at Long Island to help them incorporate environmental education as a regular part of their week.

Kezar Lake Association/N. Lovell Library - I led an interactive lake awareness presentation at the N. Lovell Grange Hall reaching about 40 people of all ages.

Natural Resource Institute - Liz Fredric and I presented to 25 teachers about biological water quality monitoring.

Meetings/planning

Girl Scout Lakes Awareness Week - I was asked by Jodi Smith from the Portland Water District and Roberta Hill Berdete of the Lakes Environmental Association to co-lead a lakes awareness week for the girl scouts in Bridgeton. Roberta and I have met three times to plan for this event which is in August.

Fore River Water Quality Monitoring Project - I met with Linda Woodard of the Audubon Society to plan for joining their efforts in helping students to monitor the Fore River this Fall. I will be working with 4th and 5th graders from the Jack School in Portland.

Development

Casco Bay Watershed Curricula - I have begun to promote the watershed curricula which I wrote most of this winter. I sent information about it the Casco Bay Estuary Project and to COLA.

A Future for the Circuit Rider? I have begun writing a grant proposal to fund the Circuit Rider position on a more permanent basis.

Training

I am attending the MACD's Natural Resource Institute in Farmington as a participant. Topics are on fresh water resources, agriculture, soils, marine resources, and forestry. It is a week long beginning July 31st.

Sebago Elem.
East Sebago, ME
December 8, 1994

Dear Holly Sheeham,

Thank you for coming
in and talking about our water
shed. I liked when we put
together the river. That was fun.

Thanks again,

Delaina Burndt ☺

Thank you Holly
for coming. You helped
us learn about nature.
You and your group
were great! We thank
you so much for
helping us on our
trail.

Thank
you

Ted

Dear Holly,
Thank you
for coming. I really
enjoyed it. I liked
walking the river. I
learned most of
people want to
help not make the
river polluted.

Thanks
again
Jessica
Smith

Dear. Holly,

Thank-you for the memorable memories!

Like: the games, Human, Fox, Rabbit
And the changes ^{you helped}
make in the outdoor Lab ^{Butt}
And the game where you ^{moth}
are one Atlantic Salmon, "Oh Deer

- We had a wonderful

Time,

Andrea - Dany

Miscellaneous Activities:

A.

The Quebec Labrador Foundation sponsored an exchange student from the Gaza Strip to visit Washington County and I, along with fellow Americorps participant Barbara Coffey, scheduled his activities and basically took him around to various points of interest in the area. We were responsible for a week of his visit to the United States, including his lodging and food.

Project Outcome - Educational enhancement for an environmental science student from another country as well as an opportunity to experience another culture.

B.

As our office is without a secretary, each staff member does their part to answer phones, take messages, assist the public with inquiries, mail out information, etc.

C.

I attended monthly meetings of our Board of Supervisors where I presented an oral and written update of my work.

D.

I attended various Americorps functions including training sessions, "cluster meetings" (gatherings of USDA Americorps participants in this area), and publicity opportunities. I also attended several non- Americorps training sessions including:

- Environmental Education workshop, Greenland Point, Princeton, Maine
- Water testing workshop, Rockland Cooperative Extension
- Shoreline survey classroom training, Department of Marine Resources
- Blueberry cultivation workshops, University of Maine Cooperative Extension
- Wetlands regulations workshop, University of Maine, Machias
- Student Journalism workshop, University of Maine, Orono

C.

I assisted the Hancock County Soil & Water Conservation District with their Envirothon event. I worked in the groundwater area and helped grade tests, shepherd students, etc.

2. Community Outreach

A.

In the fall of 1994, I assisted the Department of Marine Resources in completing a sanitary survey of the communities of Beals Island and Great Wass Island. This survey pinpointed each failing or inadequate septic system within 500 feet of the shore. Failing septic systems are a major water pollution problem in this area and have resulted in massive closures of shellfish habitat due to fecal coliform contamination. I became interested in helping these communities find a possible solution to their problems. The area is classified as low-income and many people live with no indoor plumbing whatever, so I began to look for a source of funding as the towns can't pay for new systems through taxation or private means. I contacted the Department of Environmental Protection and set up a meeting to discuss the Small Community Grants program. Jane Lamson and I assisted the selectmen of the towns of Beals, which includes Great Wass Island, and Jonesport in obtaining these grants. We worked with the Department of Marine Resources to establish 11 new water monitoring sites in the two areas selected to target this year. Samples from these sites are collected weekly and tested at the DMR lab in Lamoine. The data from these samples will be used to judge the improvement in fecal coliform counts after construction of new septic systems. We also coordinated two clam surveys to establish baseline data on clam population counts. Funds for septic repair/replacement have been allocated (approximately \$15,000 for Beals and \$25,000 for Jonesport) and construction will begin this summer. We hope this project will be continued in the future as the problem is too severe to be corrected overnight.

Project Outcome - Cleaner water, opened clam flats, and another resource-based source of income for area residents.

B.

I worked with Reinald Nielson, WCS&WCD supervisor, to begin a research project on native cranberries. These berries, which we dubbed "Wild Mountain Cranberries", are extremely hardy and pest-free, and may be an alternative to the chemically dependent bog cranberry as a source of income for Washington County residents. We planned and held a meeting to introduce the project to the public, then

Runoff could carry manure water off the farm to later pollute offsite water bodies.

Greg solved this problem with a complete manure storage and handling system. A lagoon stores up to eight months of manure from the cows and "dirty" water from the lots and milking area. During the summer, Greg fills tank spreaders with liquid from the lagoon and spreads it on pastures and hay fields.

This system and other soil conserving practices are going a long way towards improving the quality of water flowing off his farm into the Presumpscot River and eventually into Casco Bay.

People Working Together

Many individuals, groups and organizations, both public and private, and their many conservation activities are involved in the wide-ranging Casco Bay Regional Water Quality Project.

The Cumberland County Soil and Water Conservation District (CCSWCD) and the Sebago Chapter of Trout

Unlimited conduct an annual riverbank restoration project on the Pleasant River. Such diverse groups as the Maine Outdoor Adventures Club, Bahia Youth Group, Boy Scouts and students from the Windham Junior and High Schools plant willows to stabilize eroding stream banks.

The Riverkeepers produced a video and an easy-to-understand motivational booklet, "Saving a Natural Resource, The Pleasant River Watershed."

Volunteers with the Little Sebago Lake Association take periodic samples as a part of an ongoing water quality monitoring program.

The Cumberland County SWCD joined local agencies and the Maine Department of Environmental Protection to help county municipalities implement land use ordi-

nances and educate the public about the benefits of conservation practices.

Citizens of the Royal River watershed adopted Chandler Brook for their contribution towards improving water quality. They

stewardship of the Bay. This includes a quarterly newsletter, a poster with a map and description of the watershed and three fact sheets.

One of the fact sheets is entitled, "The Bay Boys and the Casco Kid Explore Non-point Source Pollution". While attractively illustrated to appeal especially to younger readers, it gives easily understood answers to questions about pollution for readers of all ages. The fact sheet was authored by Jean Dyer, resident of Chebeague Island and a member of the Citizens Advisory Committee of the Casco Bay Estuary Project.

A water quality monitoring program is being carried on at more than 60 stations around the Bay by Friends of Casco Bay volunteers.

A year-long study of Capisic Brook is now underway to develop a stormwater management plan that will provide opportunities for aesthetic, educational, environmental and recreational enhancements. The 3.5 mile Brook runs

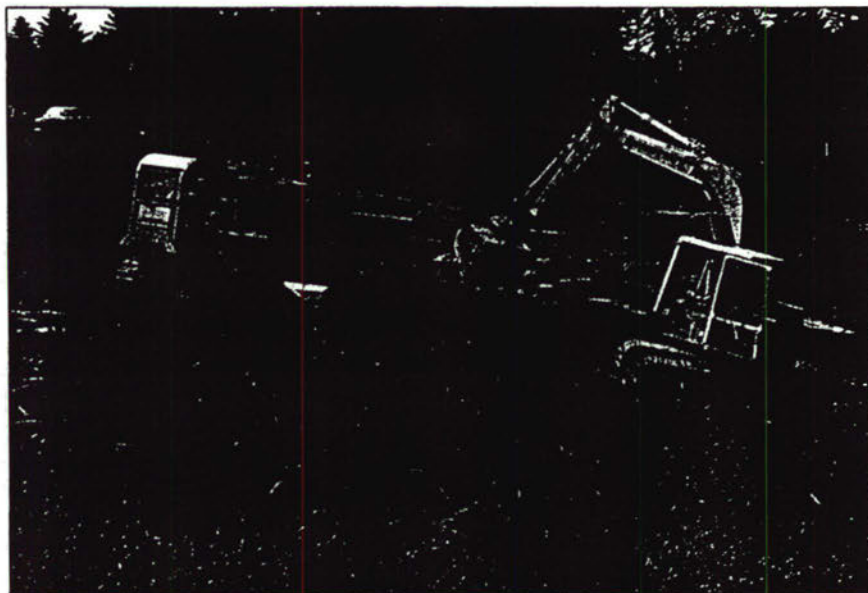
through a residential section of southwest Portland, Maine's largest city.

"It is really incredible how many different things are going on, and how many people are involved," says Wayne Munroe.

Many more water studies, plans and activities are still ahead. How well the many projects can be planned and carried out will ultimately determine the success of the Bay Project. For now, enthusiasm and the concerted community drive portends cleaner water in the future for the Casco Bay Estuary. **L&W**

For more information, contact Wayne Munroe, SCS, 381 Main Street, Suite 3, Gorham, Maine 04038.

Wherever land is used by people, whether on farms, along streets, roads and rivers or in urban or suburban communities, there is a potential for non-point source pollutants that will eventually end up in some water body.



Excavation for liquid animal waste storage facility on Springbrook Farm.

plan a volunteer cleanup day, a full stream channel survey, a fish and wildlife study, building an interpretive trail and stream-bank stabilization practices.

Earth team volunteers, coming from many backgrounds and with wide-ranging areas of expertise, have given thousands of hours service to Cumberland County SWCD and NRCS and to Friends of the Royal River-Adopt a Stream project, Friends of the Presumpscot River and the Presumpscot River Watch group.

The Cumberland County and the Oxford County SWCD's developed a 175 page "Goal Oriented Curriculum for Soil, Water and Natural Resource Management" in June, 1993.

The Casco Bay Estuary Project has an outreach program aimed at fostering the

Cleaning Up Casco Bay Estuary



Creek bank that was revegetated by "Riverkeepers", a volunteer group dedicated to cleaning up non-point source pollution in Casco Bay Estuary.

by Bob Oertel, Contributing Writer

CASCO Bay is literally the dumping ground for 982 square miles of land and water and a quarter-million people living in southwestern Maine.

All kinds of "stuff" (called, "non-point source pollutants" in scientific and polite

circles) wash into feeder streams like the Presumpscot River (that drains over 645 square miles of land), and into the Bay itself. Things like oil, pesticides, toxic hydrocarbons, dioxin, nitrogen, phosphorus, soil sediments, throw-away tires and just plain junk.

There are about 80 points of potential

combined stormwater and sewage overflow discharges into the Bay.

An estimated 1,400 tons of nitrogen are washed into the Bay each year. About 408 tons of this total amount comes from sewage treatment plants.

Pollutants come from farmlands, forests, malfunctioning septic systems, petroleum products, land development, resource mining, lakeshores, streambanks, roads, ditches, and stormwater runoff.

So, why get all steamed up just because all this "stuff" washes off the land and into the Bay? "Good riddance", some say. "Why? Because it's ruining the water, that's why!"

People, lots of people, both in Maine and out-of-state, want to enjoy that water. Water-based recreation is big business and enjoyed by most folks.

Mussels, flounder and bottom-dwelling animals have been contaminated by the pollutants. In 1988, massive numbers of shellfish and other animals died as a result of a phytoplankton bloom.

At times, high levels of pathogens have forced the closing of Casco Bay beaches and swimming areas. As of October, 1992, some 43% of the Bay's 11,112 acres of clam flats were closed.

Enter The Casco Bay Regional Water Quality Project

Casco Bay was designated an estuary of national significance and approved for the Environmental Protection Agency's (EPA) National Estuary Program in April, 1990.

The Natural Resources Conservation Service (NRCS), formerly the Soil Conservation Service (SCS), in Maine is implementing a watershed plan that provides assistance to individuals, groups and units of government in their efforts to improve the quality of water in Casco Bay.

Many groups will be involved in carrying out the plan. Included are the Cumberland, York and Oxford County Soil and Water Conservation Districts (SWCD), Androscoggin Valley SWCD, the Agricultural Stabilization and Conservation Service (ASCS), the Cooperative Extension Service (CES), the Threshold to Maine Resource Conservation and Development (RC&D) and the 41 towns in the watershed drainage area.



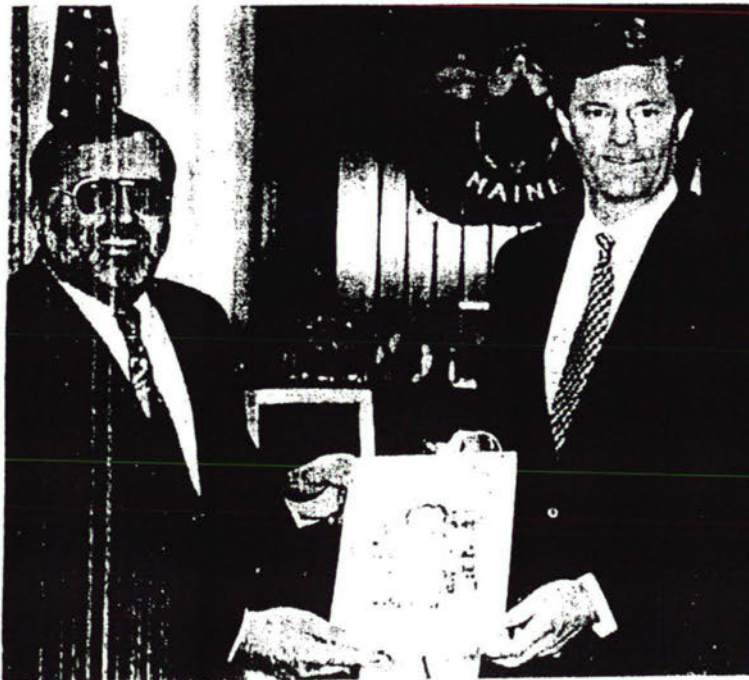
3rd CLASS
BULK RATE
PERMIT #22
Newcastle,
Maine 04553

The Maine Granger

VOL. 2, NO. 9

DECEMBER 15, 1994

Governor receives History



Stanley Howe presents a copy of the State Grange History to Governor John McKernan.

National Master's Letter Clarifies Grange Purpose

National Grange Highlights

The National Grange Session held at the Holiday Inn City Center in Peoria was well attended and the hospitality was great from the folks in Illinois. Maine was pleased to receive many honors and recognitions of our departments head and the articles that were judged and people that attended for National competition.

Sister Sherry Harriman, State Junior Director, was named National Junior Director of the Nation for states with under 20 Junior Granges. She also received recognition for her notebook in the areas of Ritual and Communication. Sister Roberta Meserve, Junior Leader of Sabbathday Lake Junior Grange, received honorable mention on her Community Service notebook and she received first place for her "Help Save Our Earth Notebook". The Junior department also received many other awards in the art and photo contest, CWA contest and the Junior contests held at National.

Sister Sue Hackett received recognition and an award of Merit for her work as State Youth Director. We were very proud of our Youth Ambassadors Kristy Farnum and Thaniel Smith as they represented us at National.



Patricia Brown performing her second place talent entry at National Grange. Patti is a member of Willow Grange of Jefferson.

THE WHITE HOUSE
WASHINGTON

March 27, 1995

Lisa Taylor
22 Rivershade Drive
Scarborough, Maine 04074

Dear Lisa:

It is an honor to welcome you as a Member of the inaugural class of AmeriCorps. AmeriCorps is built on the tradition of national service established by programs such as the Peace Corps and the Civilian Conservation Corps. Like these programs, AmeriCorps provides opportunity while demanding responsibility and a commitment to confront and solve our nation's most pressing problems. I commend you for responding to this bold challenge.

You and more than 20,000 other AmeriCorps Members are making a difference by bringing emergency care to areas that have suffered from natural disaster, revitalizing inner-city neighborhoods, walking the beat with police, teaching in crowded classrooms, building homes for working families, and restoring our country's natural resources. You have accepted the responsibility to get things done on a local level and to learn from people of all different backgrounds. And you are creating common ground that all of us -- as a nation -- can build upon.

I am committed to making AmeriCorps a long-term success, and your input will help to achieve this goal. I want to know about the challenges you are facing and how you are meeting them; about how you are affecting the people and the communities you serve; and about how your work with AmeriCorps has changed you as an individual and as a citizen. Please take a moment to write to me at The White House, The AmeriCorps Program, 1600 Pennsylvania Avenue, Washington, D.C. 20502.

When we launched AmeriCorps in September, I asked three basic questions: What is right? What is wrong? And what are we going to do about it? As an AmeriCorps Member, you are doing what is right. You have shouldered enormous responsibility for yourself, for your neighbors, and for our nation. You represent what is best about America, and I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Clinton", with a long, sweeping horizontal line extending to the right.

MRS. HENRY LEWIS
ONE SPARWELL LANE
BRUNSWICK, MAINE 04011

July 10, 1995

Ms Lisa Taylor, NRCs/Americorps
381 Main Street, Suite 3
Gorham ME 04038

Dear Lisa,

Thank you so much for the report
from you and Candi Dykeman. I
appreciate it ^{and} all of the materials
you sent.

I made copies of the report and lists
of plants for George Schuake and also
for Steve Currie who takes care of
my landscaping.

Again - thank you.

Sincerely

Betty Lewis

03/28/95 10:14 2028800039

COMM-ASSISTANCE --- MAINE

002/002

USDA/AMERICORPS NATIONAL DAY OF SERVICE RESPONSE FORM

Location and state where National Day of Service project will be performed:

Mackworth Island, Falmouth, Maine

USDA agency or agencies from which AmeriCorps Members will be participating:

Natural Resources Conservation Service & Cumberland County
Soil & Water Conservation District

Number of USDA AmeriCorps Members expected to participate: 3

Counties of the duty stations of USDA AmeriCorps Members expected to participate:

Cumberland County, Maine

Name of any non-USDA AmeriCorps projects expected to participate: Jack

Elementary School Grades 1&2 - 30 students & two teachers

Estimated number of community volunteers also expected to participate: 10

Any elected officials confirmed to attend: NO

Brief description of the type of service to be performed: Will host a Watershed
and Estuary education ecology workshop for students and demonstrate
various habitat collection techniques, siene, macroinvertebrate screen, etc.

Name and number of contact person for day's project: Holly Sheehan @ 207-839-7842

Cumberland County Soil and Water Conservation District and
The Greater Portland YMCA Present:

CAPSIC BROOK CLEANUP DAY

When?

Tuesday, April 25, 2:00 PM. The YMCA kids will arrive at 3:30.
(In case of bad weather call 839-7839 for rain date).

Where?

Meet at the Capisic Pond Park (Directions: take Congress St. west to Stevens Ave., take your third right onto Frost St. which immediately turns into Capisic St., shortly you will take a right onto Macy St., park your car, and follow the path to Capisic Pond!).

Why?

Capisic Brook is a valuable resource for the residents of Portland and is polluted by, among other things-garbage! And lots of it! The YMCA after school group from Longfellow Elementary School, has adopted the Capisic Brook, with assistance from an AmeriCorps volunteer, from the Soil and Water Conservation District. All year the young river-keepers have been learning about ecology, pollution, and our water resources. It is now time to take action, and get the garbage out of the brook!

What Do You Need To Bring?

Just bring yourself and appropriate clothing (old boots, long pants, long sleeve shirt, and gloves). We will provide trash bags, and cleanup tools. If you are under age 14, you must bring an adult!

Who?

The event is being coordinated by Holly Sheehan from the Cumberland County Soil and Water Conservation District. Other groups involved are the Natural Resource Conservation Service, the City of Portland Parks and Public Works, the Training Resource Center, the Maine Department of Environmental Protection, and the Greater Portland YMCA River-keepers!

Important:

If you would like to participate please call Holly Sheehan, Cumberland County SWCD Environmental Education Coordinator, at (207) 839 - 7839.

The Cumberland County Soil and Water Conservation District prohibits discrimination on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and martial or family status.

Holly Sheehan
Environmental Education Circuit Rider
Cumberland County Soil and Water Conservation District
AmeriCorps member

Holly is originally from Martha's Vineyard Island, in Massachusetts. She received a B.A. in Environmental Science, from Antioch College, in Ohio. She has been living in Maine for two years and currently resides in Portland. She has taught students at the Environmental Schools in Ocean Park, ME; and directed the Environmental Education Program for the Greater Portland YMCA. Currently, her job involves working with teachers and students throughout Cumberland County on environmental education curriculum, specifically water quality.

Gregory R. Lord / Lisa A. Taylor
Casco Bay Watershed Coordinators
Natural Resources Conservation Service
AmeriCorps Members

Greg Lord grew up in Hallowell, Maine. He graduated with a B.S. in Environmental Science with an emphases on Wildlife from Unity College in 1992 and a Master of Forestry degree from the University of Maine, Orono in 1994. He is now living in Ocean Park, Maine.

Lisa Taylor is originally from Burlington Vermont. She graduated with a B.S. in Environmental Technology from Florida Institute of Technology in Melbourne Florida in 1991. She now resides in Scarborough Maine.

Our mission as Casco Bay Watershed (CBWS) Coordinators is to serve as an AmeriCorps team as a comprehensive resource, education, planning and treatment team operating in the 985 square mile region of the CBWS in order to conserve natural resources, improve water quality, protect the environment and get things done with and for the communities.

Casco Bay Watershed Land Use Inventory Fact Sheet
Natural Resources Conservation Service, USDA

Purpose:

The Natural Resources Conservation Service has focused on a special project, a land use inventory of the Casco Bay Watershed. Initiated to support the Casco Bay Estuary Project's (CBEP) study of the bay, the inventory evaluates the complex pattern of land uses affecting the ecology of Casco Bay.

Watershed Composition:

- 44 cities and towns
- 985 square mile watershed
- five major subwatersheds including:
 - Coastal Fore River**
 - Sebago Lake**
 - Presumpscot River**
 - Royal River**
- population (1990): 304,270

Inventory Details:

- Watershed reports include:
 - * actual acreage for developed, managed open, agricultural, and forest land
 - * cities' and towns' populations
 - * numbers of livestock, sand and gravel pits, and aquifers
 - * and much, much, much more!!!!!!
- Source List of Water Quality Organizations
- 16 Geographic Information System (GIS) maps by Tom Burns of CBEP
 - * 5 black-and-white maps showing subwatersheds in context of whole Casco Bay Watershed.
 - * 5 black-and-white maps showing town and watershed boundaries.
 - * 6 color theme maps including:
 - Coastal - **Casco Bay Closed Clam Flats**
 - Fore River - **Soils and Hydrography**
 - Presumpscot River - **Wetlands**
 - Royal River - **Drainage Patterns**
 - Sebago Lake - **Land Use Patterns**
 - Appendix A - **Casco Bay Watershed Political Boundaries**
- 10 Conservation Practice Photographs including:
 - Coastal - **Dune Stabilization and Conservation Cropping System**
 - Fore River - **Stormwater Management**
 - Presumpscot River - **Streambank and Shoreline Protection**
 - Royal River - **Fencing and Waste Storage Structure**
 - Sebago Lake - **Buffer Strip and Roadside Erosion**

Conservation Courier



Cumberland County Soil and Water Conservation District News

Envirothon

Cumberland County SWCD, in cooperation with Maine Association of Conservation Districts (MACD), is coordinating the Maine State Envirothon Program. CCSWCD Supervisor Bill Michaud, volunteered to chair the State Envirothon Committee which organizes and oversees the event. Forrest Bell is the acting coordinator and is assisted by Americorps members Liz Frederic and Holly Sheehan.

There were five regional competitions held in May with 77 environmental teams representing 50 high schools throughout Maine. Each team consisted of five high school students who were challenged to solve hands-on environmental problems. Topics covered included soils, aquatics, forestry, wildlife, and this year's special topic: groundwater.

The top three teams from each regional event will go on to compete in the Maine State Finals which will take place on June 2nd at Sebago Lake State Park. The winning Maine State team will go on to compete in the National competition to be held the first week of August in Idaho.



Beef and Dairy Demonstration Day Friday, June 9, 1995

The University of Maine Cooperative Extension, the Cumberland County Soil and Water Conservation District, and the Natural Resources

Conservation Service are holding a field day in the Gray - New Gloucester area for interested beef and dairy producers. The field day, which starts and ends at the Cole Farms restaurant in Gray, will run from 8:30 am to 3:00 pm. Featured topics will include rotational grazing, pasture management, livestock watering systems, erosion prevention, and manure storage facilities. Short talks will be given by Extension Beef, Sustainable Agriculture, Water Quality Specialists, NRCS, and SWCD personnel. The public will also have a chance to speak with the cooperating producers. Coffee and doughnuts will be served at the Cole Farms restaurant before the bus tour and a box lunch will be provided. This event is FREE!! Please contact Dave Lytle or John Jemison in the Extension Water Quality Program at 1-800-287-0274 if you plan on attending.

AmeriCorps National Service Members Provide Assistance to CCSWCD and NRCS

AmeriCorps members Lisa Taylor and Greg Lord are Casco Bay Watershed Coordinators for NRCS. These two work as a team providing comprehensive resource educational programs, assisting communities in natural resources conservation and improving water quality in the Casco Bay Watershed Region. They also are providing ongoing assistance on SWCD and NRCS projects. Lisa is currently developing a directory of all the water quality monitoring groups in the Casco Bay Watershed. Lisa, originally from Burlington, Vt., holds a Bachelors Degree in Environmental Technology from Florida Institute of Technology. Greg Lord is presently developing a workshop and fact sheet combining forestry and water quality. Greg holds a Bachelor's of Science in Environmental Science specializing in wildlife, and a Masters Degree in Forestry, specializing in forest management from University of Maine Orono.

Dissolved oxygen, conductivity, and temperature readings were also taken. The report of the reconnaissance study was completed and copies were distributed to Portland Water District on July 31, 1995.

PRIMARY ACCOMPLISHMENTS:

A seminar on forest management opportunities for landowners was given on May 9th. The Casco Bay Watershed Water Quality Monitoring Directory has been put together, in a useful format and has set the ground work for the completion of this project next year.

Resource education files have been created to assist NRCS and CCSWCD on many topics, including water quality, forestry, and D.E.P. rules and regulations. Contacts, tips and other miscellaneous information on projects that are on-going have been set up for next year.

In this last quarter of service we have developed more personal skills including dealing with policy and job interviewing and exiting a job/project of this sort, while leaving behind the relationships we have established this year. Hopefully also leaving behind some of the knowledge that has been gained this year for the next person to come in and have a head start for next year.

As part of the final report, the following was requested:

1. VOLUNTER HOURS OF MEMBERS IN THE COMMUNITY OUTSIDE THE PROGRAM
50 HOURS
2. COMMUNITY MEMBER VOLUNTEER HOURS TO PROGRAM 82 HOURS

* See the attached Casco Bay Watershed Coordinators Annual Plan of Operations for the 1994-1995 AmeriCorps term.

**Greg completing his contracted AmeriCorps time on July 24, 1995 and I have completed my AmeriCorps community service hours as of August 11, 1995.

FILE COPY

**CROOKED RIVER
WATER QUALITY RECONNAISSANCE REPORT**



MAINE
AMERICORPS
TEAM USDA

Prepared for
PORTLAND WATER DISTRICT
225 Douglass Drive
Portland, Maine 04104-3553

Prepared by
Lisa A. Taylor & Gregory R. Lord
Casco Bay Watershed Coordinators

USDA AmeriCorps
Natural Resources Conservation Service
Cumberland County Field Office
381 Main Street, Suite 3
Gorham, Maine 04038

July 1995

AMERICORPS

FINAL REPORT

08/02/95

TRAILS COORDINATOR: GARY MARQUIS

Total number of Hours in Training

66 hours of training were completed during the course of the year. Some of the subjects we were trained on were team building activities, conflict resolution, mediation, career development, fund raising activities, gis programming, grant writing, first aid, and CPR.

Progress Towards Meeting Community Service Objectives

During the course of the year I was in charge of developing 18.5 miles of the Aroostook Valley Trail. There were numerous water quality questions along the trail that needed to be addressed, such as ties in the ditches, bridges abutments that had been eroding for a number of years into the many streams along our trail. Culverts that had been installed improperly, and had caused the trail to erode. These were just a few problems that I was faced with when I began my Americorps tour in September of 94. Now that the Aroostook Valley Trail is completed and opened to the public for use, the work does not stop there. The beaver issue is another problem we are faced with, they have caused the trail to erode into the streams, we are currently working with our local game warden to find a new home for the beavers.

A few weeks ago myself and Kathy Mazzuchelli organized a ribbon cutting ceremony to officially open the Aroostook Valley Trail. Some of the activities that we planned were a nature walk, flora interpretation session, bird watching, biking, horseback riding, and an ATV ride. Our main goal for this trail is to teach the public that different activities can be done at the same time, such as horseback riding and four-wheeling.

I have also been very busy in writing the plan of works for the development of the Bangor and Aroostook Trail which is 53 miles long, and is in many different communities. Our biggest water quality issue on this trail was improperly installed culverts and

Presque Isle Rotary Club (slide presentation on the Aroostook Valley Trail) July 24, 1995

Media Coverage

WAGM-TV interviewed me on January 25, 1995, the story was about the Northern Maine Trails Association Meeting. I was asked what the trails association ment to the local people.

WAGM-TV interviewed me on June 30, 1995, the story was about the Americorps program, the educational award, and how the Americorps program has helped me.

Summary

During my first year as an Americorps participant, I have learned many different and interesting subjects, from first aid and CPR to be a supervisor of an IT man crew. I have learned how to be calm when doing public presentations, and I have put conflict resolutions training to work. I really enjoyed my work and hope to do it again for a second time.

County committee prepares to manage abandoned rails

Group tackles plan to provide 53 miles of recreational trails

By Gloria Flannery
Of the NEWS Staff

NEW SWEDEN — About a dozen people met here Wednesday to discuss issues surrounding management, liability and costs for maintaining 53 miles of an abandoned railroad bed to be converted into a four-season recreational trail.

Last December, the state's Land for Maine's Future Board paid \$410,000 to the Bangor and Aroostook Railroad for the 750 acres of railroad corridor in Washburn, Woodland, New Sweden, Stockholm, Van Buren, Perham, Westmanland, Caribou and Township 17 Range 3.

"Primarily, the Aroostook Coun-

ty people had petitioned the state to buy it, with hundreds and hundreds of signatures on petitions and support from communities involved," said Scott Ramsey, supervisor of the Maine Bureau of Parks and Recreation.

The purchase represented the second "rails to trails" project by the state in Aroostook County as part of a \$35 million bond issue approved in 1987.

Some of the residents commented on the increased number of snowmobilers and all-terrain vehicles on local trails as enthusiasts discovered the county's well-kept system.

Kathy Mazzuchelli, Caribou's recreation director, suggested that

several agencies, including those promoting the tourism aspects of the trail, create a fund to hire a manager who would check on the trails, watch for trouble spots and report violators.

"The state has made a significant investment in the property and if our new administration is investigating ways for better cooperation between state and private agencies, this is the ideal arena to start that type of project," said Mazzuchelli. "We can't just walk away from it. We are talking about nearly a half million dollar purchase, and other monies will be spent to make it useable. It would be a shame not to have an ongoing management plan and an individual to cover the management."

Objective for promoting tourism in the County

by Cathie Saucier

ST. JOHN VALLEY- Inquiries for this 1995 snowmobiling season were up 166% as of March 22, according to reports from the Aroostook County Tourism, Inc.

There were several factors that contributed to this great season, said the report; a lot of snow early on in the season, well maintained trails, and aggressive advertising.

Aroostook County trail riding was rated the highest in New England and third in the nation's snowbelt by *Snow Goer* magazines March issue.

Recently, a survey was taken from lodging establishments in Northern, Southern and Central Aroostook shows that rates of occupancy have increased by more than 15% in comparison to the 1993 season.

Milt Smith, the director and past president of ACT, stated, "On the minimum, when you see a snowmobile being hauled into Aroostook County, you can bet that the owner will spend no less than \$100 a day."

Smith said, "We are indeed grateful to the over 40 snowmobile clubs who enable us to achieve a top snowmobile rat-

ing by keeping our trail system in top notch condition. The members of these clubs have so graciously volunteered their time to grooming, cutting brush, building bridges, maintaining signage, and the general upkeep for such a great trail system."

A campaign was launched in the 1993-94 season, by the ACT, to promote the area as a tourist destination. This was possible due to the receipt of a \$32,000 grant from the Office of Tourism Maine Tourism Partnership Program and \$8,000 from ACT. This represents the largest promotional campaign for promoting Aroostook County as a tourist destination.

ACT has since then applied for and received a second grant from the Office of Tourism Maine Tourism Partnership Program, in the amount of \$12,000, with matching funds of \$6,000 from ACT. This will allow them to conduct another snowmobile Aroostook campaign.

ACT is a volunteer organization which includes members from private and public sectors.

Formed in 1992, with a main

objective of promoting tourism in the county.

"The results of the past two snowmobiling campaigns are

only one example of what can be done to promote tourism in the county. We strongly encourage area businesses to get

involved so that we can continue our efforts during other seasons of the year," stated Smith.

Introduction

The St. John River would not exist without its surrounding watershed; the brooks that feed the mainstem are as important as the river itself. What happens to them, in terms of erosion, contamination, and habitat degradation, directly affects the health and well-being of the St. John River. With this in mind, the Atlantic Salmon Association for the Upper St. John has created this booklet to inform St. John Valley residents of the extensive network of streams that make up, in part, the St. John River watershed.

From Hamlin, Maine to Allagash, Maine, approximately sixty-five brooks run directly into the St. John River. Some of these are seasonal drainages that dry up by July. Others are fast-flowing, large brooks, ideal as habitat for salmonids and other wildlife, and for recreational use such as fishing and bird watching. This booklet contains data on twenty of these larger brooks, chosen because of their easy accessibility, excellent water quality, and overall size and impact. Information provided includes water chemistry, salmonid habitat availability, ownership of adjacent land, and physical features such as access sites and culvert placement. The Valley, from Hamlin to Allagash, has been broken down into four sections: Section 1 covers the area from Hamlin to Keegan, Section 2, from Keegan to Pelletier Rd. in Madawaska, Section 3, from Pelletier Rd., Madawaska to St. Francis, and Section 4, from St. Francis to Allagash. Streams are listed in terms of distance from Point 0.00, which is the intersection of Rt. 1A and Rt. 218 in Hamlin. In the upper righthand corner of each page, each stream's section number and distance in miles from Point 0.00 is listed. This distance applies only to travel on Routes 1A, 1, and 161, and does not imply that these sites are necessarily the most convenient; better access, water quality, and areas for recreational use can often be found by exploring farther upstream.

This information was first gathered in order to determine potential sites for streamside incubation boxes. The sites chosen are also mentioned in this booklet, in hopes that community stocking efforts will, in the near future, support the development of a well-managed recreational fishery in the St. John and its tributaries. In the event of spawning Atlantic salmon being allowed passage into the Upper St. John, such local hatching and stocking efforts will be crucial, and will allow Valley residents to develop and maintain a healthy population of sea-run salmon in their river.

For more information concerning streamside incubation of salmonids, or Atlantic salmon in general, please contact your AmeriCorps Salmonid Coordinator at 764-4126. For information on the Atlantic Salmon Association for the Upper St. John, please write to the following address:

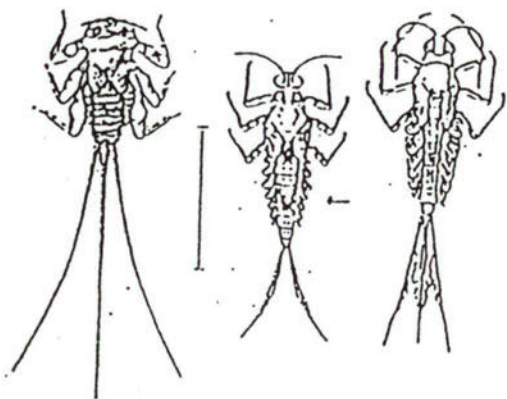
Atlantic Salmon Association for the Upper St. John
P.O. Box 569
Madawaska, Maine 04756

Dissolved oxygen: Water contains oxygen, just as the air we breathe does.

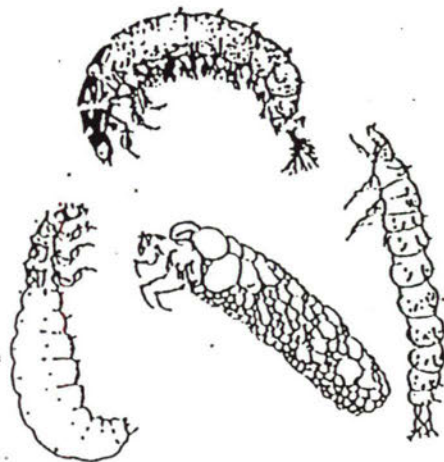
And, just as this gas is vital to us land-dwellers, aquatic life also requires a ready supply. In this respect, fast-running, cold streams with a gravel substrate are one of the most oxygen-rich ecosystems. The water is constantly being aerated as it churns over the rocks, and its low temperature allows it to hold higher amounts of oxygen than warmer water would.

Valuable species such as trout and salmon demand water with high dissolved oxygen content, whereas "trash" fish such as carp can make do with very low amounts. Each of the streams included in this booklet met, it seemed at first glance, all the requirements for high oxygen content. However, if banks have been stripped of vegetation somewhere upstream, allowing the water to fill with silt and be warmed by the sun, or if there was a stagnant section along a stretch, the water's oxygen could be depleted, though it appeared to be fast-running and cold at the test site. This, in fact, proved to be the case with Thibodeau Brook. Travelling farther upstream, I found a slow-moving swamp where the water was being held back by culverts and beaver activity. The dissolved oxygen test was performed with a Lamotte test kit, donated through AmeriCorps.

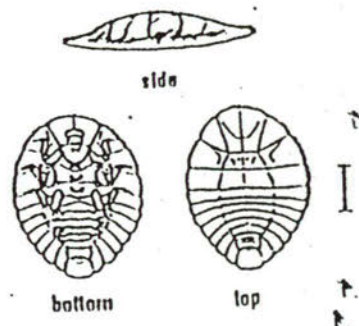
Presence of pollution-sensitive organisms: The benthic life of a stream is a vital indicator of the health of the ecosystem. In fact, biological inventories of benthic, or bottom-dwelling, species are considered the most reliable way to measure the quality of a stream—more reliable even than sophisticated chemical analysis. This is because certain species, namely the larva of the stonefly, caddisfly, and mayfly, are intolerant to pollution. They cannot be found in a contaminated waterway. Other forms of life, such as various species of aquatic worms and snails, are highly tolerant, and make up the bulk of biomass in a polluted stream. Therefore, simply conducting an inventory on a segment of stream will provide a relatively trust-worthy test of water quality. Diagrams of various benthic species are shown below.



Mayfly: Order Ephemeroptera. 1/4" - 1", brown, moving, plate-like or leathery gills on sides of lower body (see arrow), 6 large hooked legs, antennae, 2 or 3 long, hair-like tails. Tails may be webbed together.

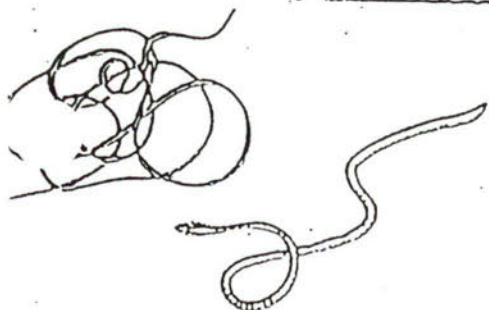


Caddisfly: Order Trichoptera. Up to 1", 6 hooked legs on upper third of body, 2 hooks at back end. May be in a stick, rock or leaf case with its head sticking out. May have fluffy gill tufts on lower half.



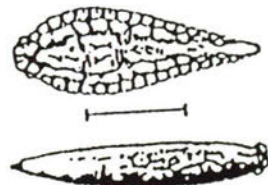
Water Penny: Order Coleoptera. 1/4", flat saucer-shaped body with a raised bump on one side and 6 long legs on the other side. Immature beetle.

Pollution sensitive organisms found in good quality water.



Pollution tolerant organisms can be in any quality water.

Aquatic Worm: Class Oligochaeta. 1/4" - 2", can be very slimy, thin worm-like body.



Leech: Order Hirudinea. 1/4" - 2", brown slimy body, ends with suction pads.

Name	miles (north) from border crossing	comments
*Boney Brook	000.8	good flow, slope, no convenient access
*Martin Brook	001.4	excellent potential access via Rt. 1A
Unnamed #1	003.7	
Unnamed #2	004.6	
Unnamed #3	005.5	#3 & #4 share mouth
Unnamed #4	006.3	
*Hammond Brook	007.9	excellent potential access via Rt. 1A
*Violette Brook via	009.5	excellent potential residential; access Violette St.
Unnamed #5	015.0	road construction
Unnamed #6	017.3	parallels St. J.
Unnamed #7 (Notre Dame)	019.1	residential
Unnamed #8 (La Grande I.)	approx. 019.8	multiple tribs.
Unnamed #9 (La Grande I.)	020.8	nearby farm
Unnamed #10 (Lille)		mouth w/ #11
Unnamed #11 (Lille)		seasonal flow
Unnamed #12	021.9	
Unnamed #13 (Thibodeau I.)	022.4	
Unnamed #14	approx. 023.4	dammed
Unnamed #15	023.7	residential

eroded at mouth

*Audibert Brook	051.1	excellent potential access off of Rt.1
Unnamed #29		residential
Fish River	053.3	no stocking planned
Unnamed #30	054.2	residential
Unnamed #31		
Unnamed #32	055.0	
Camel Brook	056.3	narrow, shallow
Unnamed #33	058.8	brush-filled
Unnamed #34		
Sinclair Brook	061.2	r.r. embankment
Unnamed #35	062.5	dammed pond
*Wheelock Brook	062.6	excellent potential
Factory Brook	063.3	
Kelly Brook	064.5	road, rails meet
*Thibideau Brook	065.3	good flow, slope, narrow
Petite Brook		
Unnamed #36		
Unnamed #37		
Unnamed #38		
Unnamed #39		
McLean Brook		
Unnamed #40		
Wiggins Brook		
Wyles Brook		
Wesley Brook		

Brook:

**Boney Brook
Hamlin, Maine**

Section, Distance:

1-.08

Water Quality:

pH: 8.0

water temp.: April--6 C

May--8.7 C

June--10 C

Substrate: large gravel

Turbidity: clear

Average width: 4-6'

Average depth: 5-10"

Rate of flow: 1.2'/sec.

Dissolved oxygen: 11 ppm

Pollution-sensitive

organisms: present

Salmonid Habitat Availability:

Large culvert running under Rt.

1A, 4 ft. drop into splash pool.

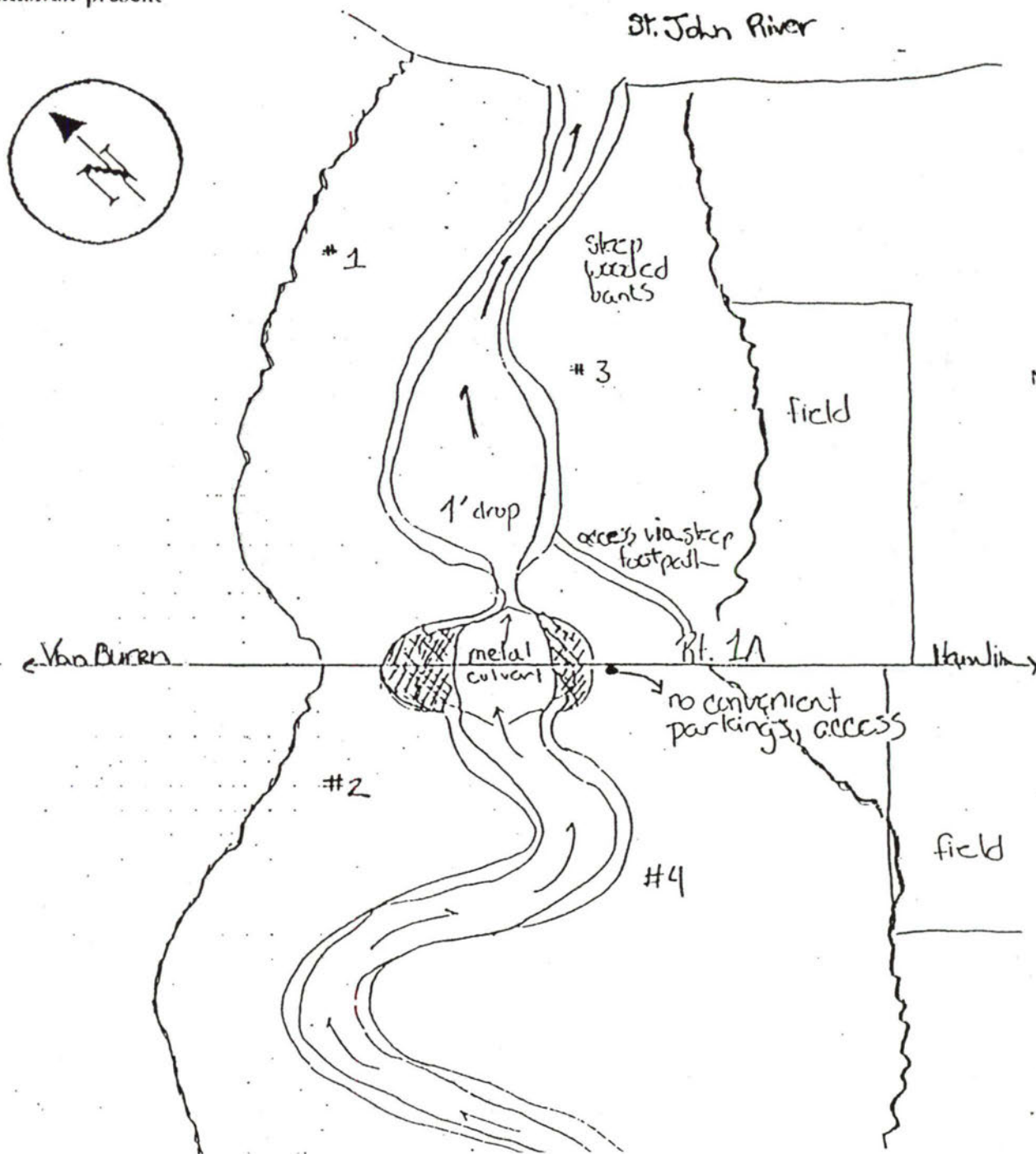
Inhibits upstream passage to
all fish.

Some erosion on streambank
upstream, no development.

Good spawning habitat.

Access, Ownership:

Access from Rt. 1A, over
culvert. Very steep banks,
difficult access



Brook:

Hammond Brook
Hamlin, Maine

Section, Distance:

1-07.9

Water Quality:

pH: 7.0

water temp.: April-- 6.9 C

May-- 8.7 C

June-- 10 C

Substrate: Medium gravel

Turbidity: Clear

Average width: 8-10'

Average depth: 1.5-2.5'

Rate of flow: 4.2 ft./sec.

Dissolved oxygen content: 10.2 ppm

Pollution-sensitive organisms:

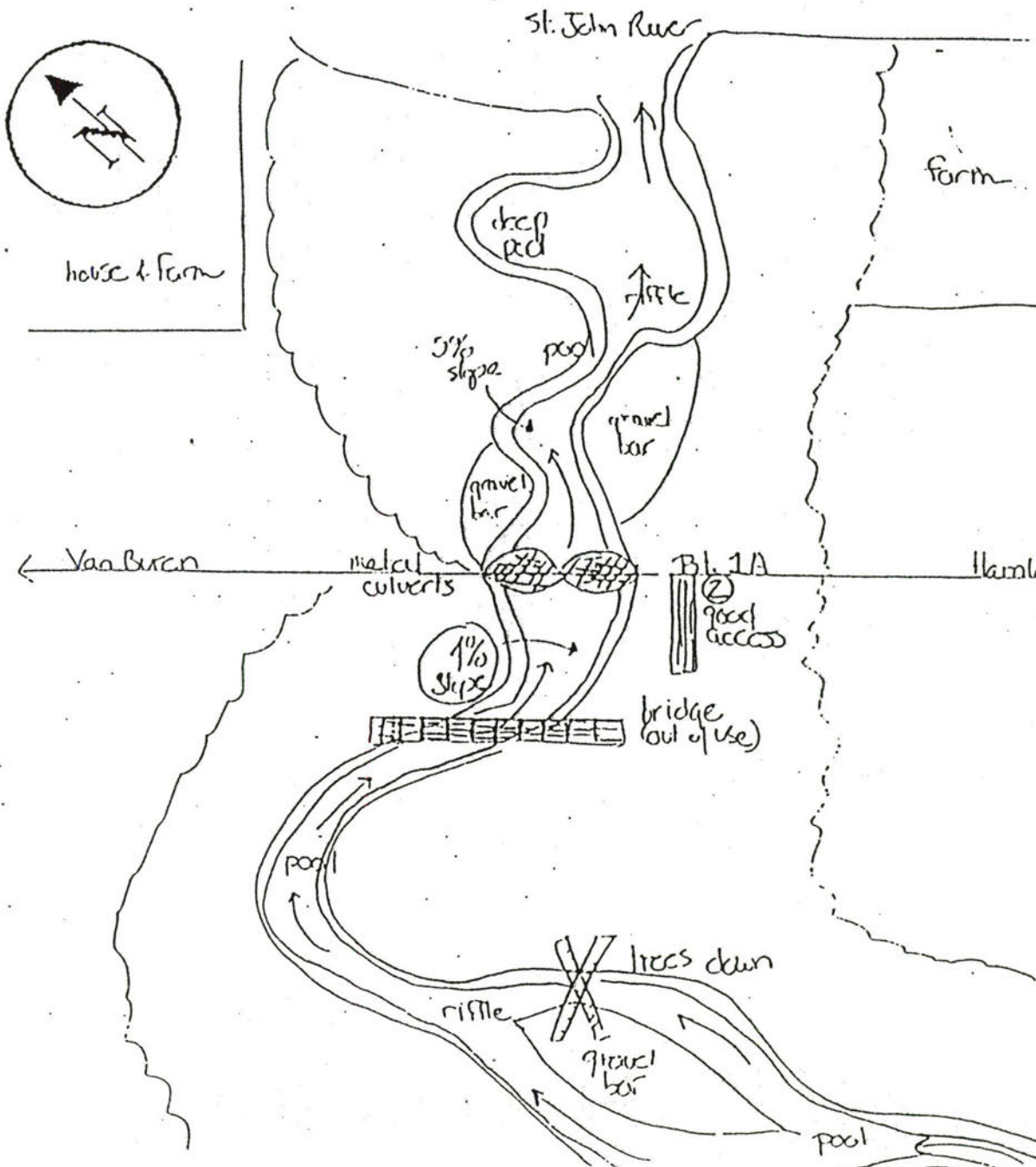
present

Salmonid Habitat Availability:

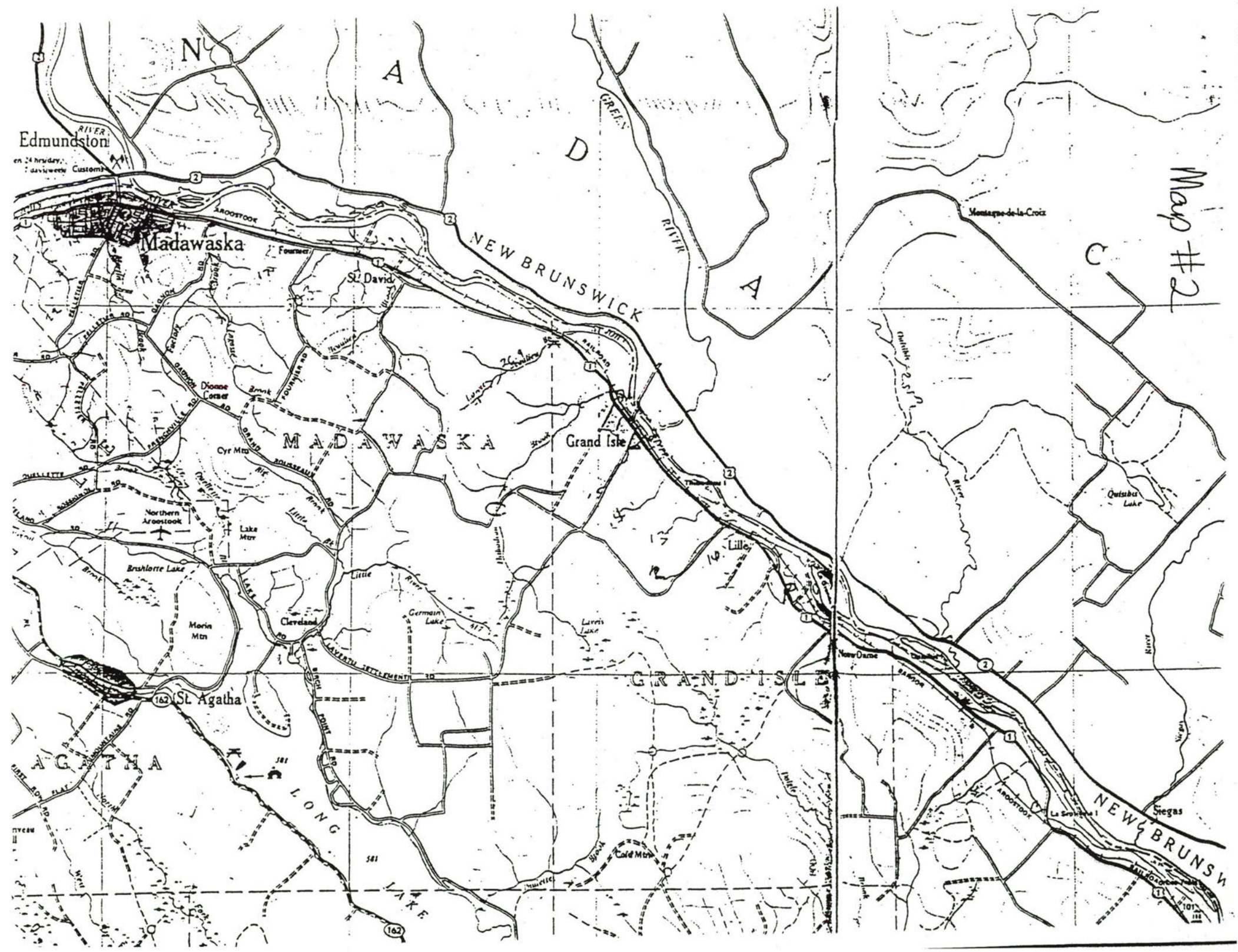
Excellent salmonid habitat;
culverts are flat on creek bed

Access, Ownership:

Good access from Rt. 1A-



Map #2



1994 SINCLAIR WATER QUALITY IMPROVEMENT PROJECT UPDATE

*Written by Dave Cyr, Arnostook County
Public Works Director*

The summer of 1994 saw renewed construction efforts in T17R4. In early June, bids were received and opened to construct the wastewater treatment facility to serve the built-up section of Sinclair and the thoroughfare between Long and Mud Lakes. Ed Pelletier & Sons Construction of Madawaska submitted the combined low bid of \$2,365,000 to construct the wastewater treatment plant and the associated piping and pumping stations required to collect the wastewater from Sinclair and pump it to the treatment plant.

Groundbreaking was held on June 10, 1994, and construction continued until early December. At this time, the entire project is approximately 80% complete, with all underground work essentially complete. Also during this time period, 8,000 feet of 8" gravity fed sewer line and 1,500 feet of 6" force main pipe was installed to pump wastewater from the village to the treatment plant site. Efforts will resume in June to complete the work remaining by July, 1995.

The construction of the treatment plant site involved the construction of 2 stabilization ponds, each with a capacity of 2.16 million gallons of wastewater, and a storage lagoon capable of storing 14.3 million gallons of treated wastewater and accumulated precipitation. Seven million gallons of water were pumped from Mud Lake in November '94 to partially fill all

three storage areas. Quantities of materials used in the construction of the site included moving 70,000 cubic yards of soil to construct the embankments of the stabilization ponds and storage lagoon. An additional 34,000 cubic yards of till material was installed to construct an impervious liner to prevent leaching of wastewater into the surrounding soils. Silt fences used at the site to prevent runoff during construction totalled 7,600 feet. 12,000 feet of irrigation piping was installed through which treated wastewater was to be sprayed over approximately 28 acres at the site for disposal.

Engineering work is continuing at this time to explore the feasibility of extending the area served by the treatment facility beyond McLean Brook to the area of the Long Lake Campground on Route 162. Another area being looked at is that area beyond the Sinclair cemetery on Lake Drive to the beginning of Barn Brook Road. The cost for both of these system extensions is currently projected at \$350,000. This work could, upon approval, get underway during the summer of '95 and be completed by the end of the construction season.



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A LEAF FALLS INTO THE STREAM...

By: Michael J. Caduto

By watching what happens to a leaf falling into a stream, one can see how dynamic a stream really is...

An aspen leaf, a food preferred by many stream insects over other leaves, flutters into the current and lodges in the midst of a clump of other aspen leaves stuck in the crotch of a submerged log. Immediately, the nutrients begin to leach from the leaf and it is colonized by fungus and bacteria. Within one week the leaf weighs less than one fourth of its original weight. But the lightened leaf is now more suitable for insect food, and the bacteria and fungi colonizing the leaf provide proteins and carbohydrates for hungry insects. Blackfly larvae appear, as do some grazing species of mayfly: *Ephemerella* and *Stenonema*. By the end of the fourth week, very few *Baetis* are found here, but great numbers of *Ephemerella* are present. Barely a skeleton of the original leaf exists when the sixth week arrives and *Ephemerella* are the only insects remaining. The leaf has become a part of the living stream community.



SPECIAL THANKS....

Special thanks to those campowners, towns (Madawaska, Frenchville, and Van Buren), and other interested groups who have already renewed their membership for the year of 1995. Your continued support is greatly appreciated and allows us to further pursue our efforts of educating the public about water quality.

Special thanks also go to Brian Ross, Graphic Arts Instructor of Presque Isle High School who has been a GREAT help in the production of our quarterly newsletters.

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BOATING LAW CHANGES..

*Effective May 1, 1995, children 10 years of age or younger **MUST** wear life jackets at all times in all watercraft.

*Effective May 1, 1995, watercraft less than 16' in length must carry a type I, II, or III (wearable) personal flotation device for each person on board in coastal or tidal waters within U.S. Coast Guard jurisdiction.

*Effective May 1, 1995, watercraft less than 16' in length (including canoes, & kayaks regardless of length), must carry a type I, II, or III (wearable) PFD for each person on all inland Maine waters.

*Watercraft 16' or longer must still carry a type I, II, or III for each person on board **PLUS** one type IV (throwable).

YOUR ACTIONS AFFECT THE LAKES!

Boating activities can threaten the health of our lakes unless boat operators understand the effects of their actions. As the size of boats and motors has increased along with the frequency of boating on our lakes, boating-related problems have also increased.

DO make sure your boat's engine runs efficiently and that it complements your boat. (Don't buy a motor too large for the boat.)

DO use lead free gas and the correct gasoline/oil mixture.

DO avoid oil spills when using petroleum products around water. Even in minute quantities the oil can be toxic to aquatic life.

DO dispose of used motor boat oil as you would regular motor oil; recycle it at a collection service station.

DO limit your use of motorized craft by using rowboats, canoes, and sailboats whenever possible. This allows you to truly enjoy the lake's beauty without disturbing its serene nature or wildlife habitats.

DO use your boat's holding tank to store sewage and waste water until it can be pumped out at an appropriate facility. The law prohibits operation of a watercraft with plumbing facilities unless waste is piped into a holding tank.

DO use phosphate free soaps when washing your boat. Avoid using products with warning labels: they can kill or contaminate aquatic life if washed overboard.



Type I



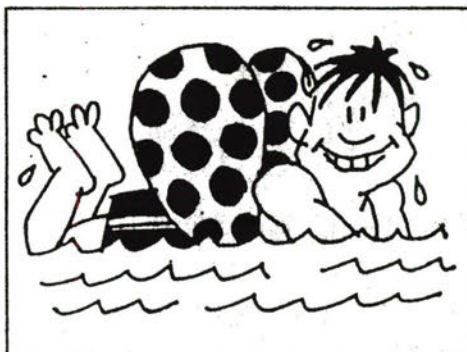
Type II



Type III



Type IV
Throwable



DO clean your boat's hull, propeller and trailer if you're using it in different bodies of water. This removes plant fragments and avoids carrying non-native plants from one body of water to another.

DON'T operate motorized watercraft in shallow waters. Boat propellers churn up lake bottom vegetation and sediments.

DON'T operate watercraft at greater than headway speed (except when hauling water-skiers or actively fishing) when within 200 feet of any shoreline. It's the law. Obey it and shore wave erosion will be reduced.

ARE THESE BUGS MISSING FROM A STREAM NEAR YOU?

The following bugs are known to be Intolerant to pollution. Thus, if they don't appear in local streams, it could be indicative of a pollution problem!



Stonefly



Mayfly



side



bottom



top

Water Penny

SUMMER'S ITCH

Many bathers complain of an itchy rash that appears after they had gone swimming. This rash, commonly known as swimmer's itch, is the reaction of your body after being penetrated by the tiny larvae of a freshwater organism called *Schistosoma*. as human beings repeatedly come in contact with water, swimmers itch is likely to become a nuisance. During years with warm weather the conditions for these organisms to thrive and reproduce are met. Larvae also tend to congregate in areas of shallow, warm water where most people swim. These larvae penetrate the skin and cause a prickly sensation. Shortly after, an itchy rash will appear. Sometimes, considerable swelling can accompany these symptoms. In most cases, the condition will subside in about one week.

To help prevent swimmer's itch, liberally apply suntan oil or baby oil before entering the water. This makes the skin slippery and discourages the attachment of the fluke. Also, once the swimmer's itch is detected in one area, try another area. Swimmer's itch can be very localized and the other side of the cove or beach may not be infected. Outbreaks of swimmer's itch usually occurs for a two week period in late July. For more information about swimmer's itch you should contact your family doctor.



A GREAT WAY TO LEARN ABOUT THE ENVIRONMENT..

There is much to learn about our natural surroundings, especially about pond, stream, or lake habitats. One doesn't need expensive equipment or a college degree to explore the outdoors, the only tool necessary is a healthy sense of curiosity. A book I highly recommend to help in such an adventure is called "Pond and Brook- A Guide To Nature In Freshwater Environments" by Michael J. Caduto (Published by Prentice Hall in 1985). This book takes you through lakes, ponds, and streams and describes their formation, living organisms, (insects and microbial life) and also gives activities for exploring the outdoors.

Shoreland Zoning...

land zoning ordinances. Those new guidelines extended the buffer strip in areas adjacent to great ponds to 100 feet, eliminated the allowance for a thirty foot cleared opening to the water and set limitations on all vegetative removal, not just larger trees.

The more restrictive standards are designed to reduce the amount of surface water runoff from directly entering waterbodies. The removal of trees over four inches in diameter at 4 1/2 feet above the ground is limited to no more than 40% of the existing volume of trees in a ten year period. In addition, the removal of trees over 2 inches in diameter at 4 1/2 feet above ground level are regulated according to a formula which is designed to ensure that an adequate density of both large and smaller diameter trees are maintained. Through those clearing limitations a canopy is present to break the fall of precipitation and to maintain a forest floor of leaf litter to absorb runoff and slow its horizontal movement. Larger trees are also available to remove significant amounts of water from the near-surface.

Adjacent to great ponds, the Department's new buffer strip standards also require vegetation less than three feet in height to be maintained, except for the allowance of a winding footpath no more than six feet in width. The shrub and herbaceous layer further breaks the fall of precipitation and its root systems do an excellent job in holding soils in place.

By maintaining the natural physical features of the buffer area, the natural organic duff layer is maintained. This duff layer serves as a sponge to absorb and hold larger amounts of water. In addition, the forest's natural surface depressions are maintained so that surface water will be puddled and penetrate the ground slowly, rather than flowing directly across the surface as occurs on smooth lawn areas.

The new standards, if adhered to, do not permit the removal of the herbaceous litter referred to above. Nor is one permitted to fill the natural depressions within the buffer area, except if necessary for the creation of the above referenced footpath to the water. If the vegetative buffer strip concept is to be effective in protecting water quality, all of its components must be incorporated as a system. Maintaining larger vegetation while eliminating lesser plants and filling all of the natural surface depressions, does little more to protect water quality than does a lawn with its smooth flat surface. Both provide unabated overland flow of stormwater runoff, with its supply of phosphorus, to surface waters.

This article was written by Richard Baker of Maine DEP and appeared in the Publication titled Nonpoint Source Times.

THE BOARD OF DIRECTORS NEEDS YOU!

The Fish River Lakes Water Quality Association Board of Directors consists of between 9-16 members. Any member of the Association (having paid dues of \$25) is eligible to be elected to the board. the board is especially interested in seeking representation from the Fish, Portage, St. Froid, Eagle, and Square Lakes, and could use more representation from Long, Mud, and Cross Lakes. If you are interested contact Philip Soucy, President, 112 West Main Street, Fort Kent, ME 04743 or 834-3777.

NEW WATER QUALITY MONITORS!

Many thanks to the following new volunteers who will dedicate their time and efforts to monitor the Fish River Chain of Lakes:

John Kaleta, Fort Kent, for Eagle Lake
Todd Collins, Fort Kent, for Daigle Pond
Chad Bourgoin, Fort Kent, for Daigle Pond, Square and Cross Lake
Arnold Scott, Presque Isle, for Square and Cross Lake
Tom Daigle, Madawaska, St. John River

REMINDER TO ALL WATER QUALITY MONITORS:

There will be a water quality monitoring training session on Saturday, May 20th, which will be presented by Roy Bouchard of the Department of Environmental Protection. The approximate time and location for the session will be announced at a later date. If you are unable to attend or have any questions, please call Nicky Violette at 764-4126 or write at PO Box 745, Presque Isle ME 04769.



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THE QUALITY OF MAINE WATERS

The designated uses under Maine State law and Federal regulations are: fish consumption, aquatic life support, swimming, secondary con-drinking water supply, and agriculture. Maine State law also sets forth additional designated uses: industrial process and cooling water, hydroelectric power generation, navigation, and, only for lakes and ponds, trophic stability.

- * **Rivers and streams:** The total length of rivers, streams and brooks in the State of Maine is estimated as 31,672 miles. Designated uses are fully supported in 98.7% of the total length of Maine Streams, Partially supported in 0.1% and not supported in 1.2%. The old "fishable" and "swimmable" goals of the Clean Water Act are fully supported in 98.8% and 99.1% respectively, of the length of Maine rivers and streams. The uses not fully supported are Fish consumption-0.7%, Aquatic Life Support-0.5%, Swimming and Secondary Contact-0.3%.
- * **Lakes and ponds:** The total area of "significant" Maine Lakes and Ponds is estimated as 958,886 acres. Of this area, 70.3% of Maine Lakes fully support designated uses, 5.3% fully support those uses but are threatened and 24.4% partially support the uses. There are no Maine lakes assessed as not supporting designated uses. GPA classification requirements established by State law are met in 75.6% of the total acreage of Maine Lakes. The uses not fully supported are: Aquatic Life Support-18.6%, Swimming-5.4%, and Trophic Stability-0.9%.
- * **Groundwater:** No estimate exists for the percentage of groundwater not attaining its designated uses. Costs, technical requirements, and Maine's complex hydrogeologic setting make statewide assessments difficult to obtain.
- * According to the US Fish & Wildlife Service, Maine is estimated to have lost about 20% of its wetlands since colonial times. New regulations have been adopted to better protect wetlands. A system to track wetlands losses has been developed and is in the beginning stages of implementation.
- * The greatest threat to Maine ground water is leaking underground storage tanks. Maine requires that all underground tanks be registered, and those tanks not sufficiently protective be removed according to a set schedule.

The following are water bodies in No. Maine not meeting state water quality standards even after implementation of tech-based controls for both point-source and non-point source pollution.

	<u>Class</u>	<u>Town</u>	<u>Size (mi.)</u>	<u>Priority</u>
Dickey Brook	B	St. Agatha	12.0	
Daigle Brook	B	St. Agatha	7.0	
N. Br. Presque Isle Stream	B	Mapleton	5.0	X
Presque Isle Stream	B	Presque Isle	1.0	
Everett Brook	B	Fort Fairfield	4.0	
Little Madawaska River	B	Caribou	4.0	
Meduxnekeag River	C	TA R7 WELS	6.0	X

The following are water quality limited lakes in No. Maine:

	<u>Town</u>	<u>Acres</u>	<u>TMDL Reason</u>
Long Lake	T17 R04 WELS	6000	Blooms
Daigle Pond	New Canada	36	Blooms
Black Lake	Fort Kent	51	Blooms
Cross Lake	T17 R05 WELS	2515	Blooms
Square Lake	T16 R05 WELS	8150	Blooms
Arnold Brook Lake	Presque Isle	395	Other
Echo Lake	Presque Isle	90	Blooms
Hanson Brook Lake	Mapleton	118	Blooms
Fischer Lake	Fort Fairfield	10	Blooms
Monson Pond	Fort Fairfield	160	Blooms
Madawaska Lake	T16 R04 WELS	1526	Blooms
Trafton Lake	Limestone	85	Blooms

This information was excerpted from the "State of Maine 1994 Water Quality Assessment" which was prepared by the Maine Department of Environmental Protection Bureau of Land and Water Quality.

Plan 1: Full Sun, Level Site

In this plan we assume the lawn area is retained and is allowed to grow fairly high to help protect the lake. A buffer is located between the lawn area and the lake with a modest footpath through it.

Leave lake edge to grow naturally. Small shrubs & groundcovers may be added.

Small shrubs & groundcovers edge winding path of grass, mulch, stone, or flagstones.

Evergreens frame views and provide background for shrubs and small trees.

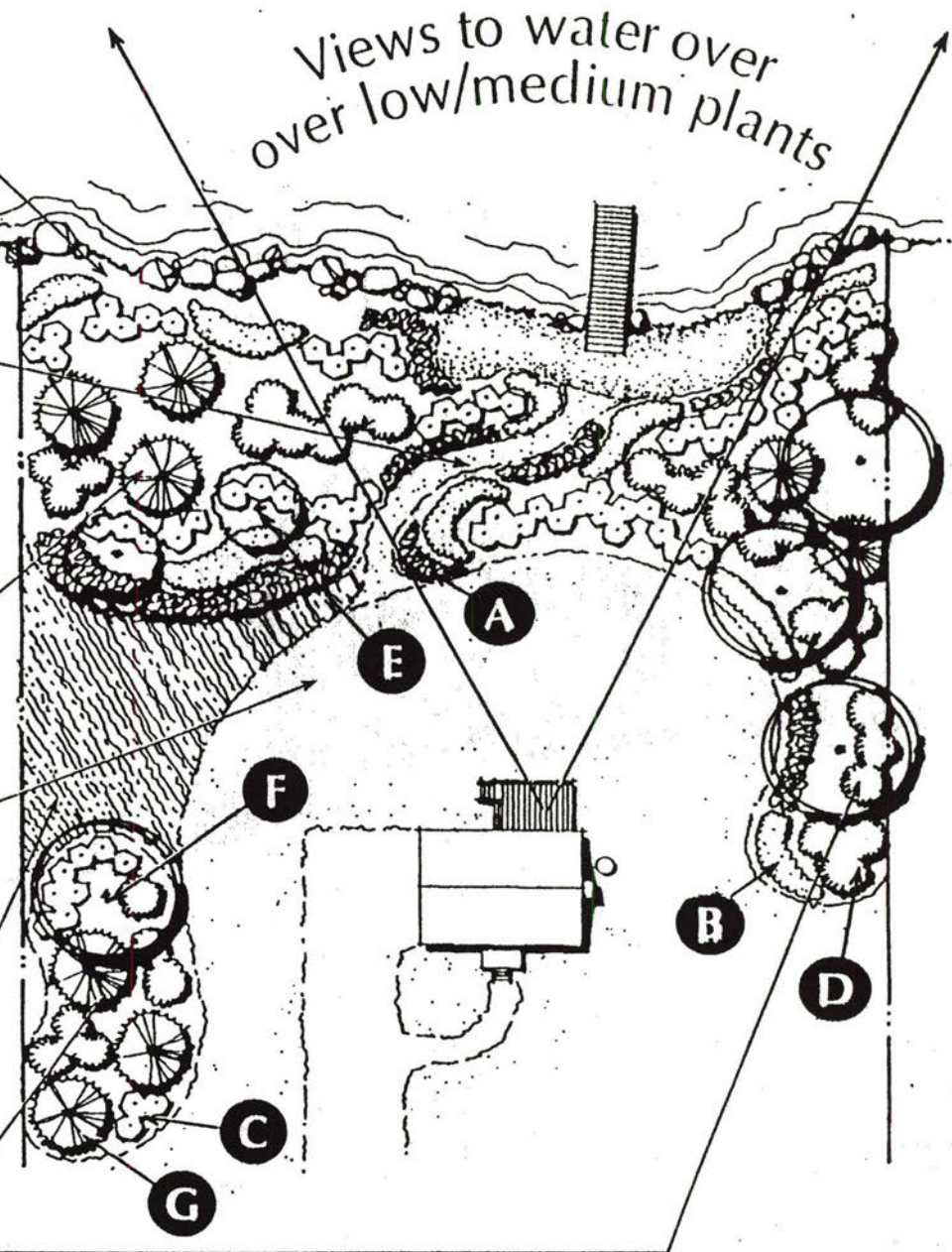
Minimize mowed lawn area. Keep it cut high.

Open areas can be allowed to grow with the possible addition of wildflowers.

Plants for screening

Plants for shade and privacy

Views to water over over low/medium plants



Legend For Plantings

A GROUNDCOVERS

B SMALL SHRUBS

C MEDIUM SHRUBS

D LARGE SHRUBS

E SMALL/MEDIUM TREES

F LARGE TREES



G EVERGREEN TREES



CAMPOWNERS, YOU MAY BE INTERESTED...

Are you concerned about the quality of water on the lake/pond you reside on? Are you willing to make a change to improve the environment?

A local engineer has displayed an interest in taking the time to evaluate campowner property to see whether improvements can be made (driveway, lawn, beach, etc.) to preserve the beauty of our natural resources.

This offer is not for regulation purposes. Meaning, we will not force you to make changes, nor fine you for breach of regulations. In addition, because of limited time, the lake with most interest will take precedence over others. Thus, if you, a neighbor, or a friend are interested, call Nicky Violette at (207) 764-4126 or write for more information at PO Box 745, Presque Isle ME 04769.

OPPORTUNITIES FOR STUDENTS AND TEACHERS

Natural Resources Institute: Teachers can learn how to implement environmental education into their science curriculum. Also open to youth leaders. Will take place at the University of ME at Farmington in August of 1995. Most participants are provided with sponsorships which cover all expenses.

Maine Conservation School: Located at Bryant Pond, this program will run for two weeks and is open to students ages 10-14. The event will highlight aquatic studies and lake lessons from canoes. The cost is \$175 and there is some chance for sponsorship. If you would like more information on either opportunity, call Nicky Violette at 764-4126, or write at PO Box 745, Presque Isle ME 04769.

CANOE TRIP



The FRLWQA is still in the process of trying to plan a canoe trip to be held in June. The trip would run from Eagle Lake along the Fish River. It will be a great opportunity to learn about water quality and to have fun at the same time. We need to know how many people will be interested before making final arrangements. Call Nicky Violette for more information at 764-4126 or write at PO Box 745 Presque Isle, ME 04769.

LAKES LIKE LESS LAWN!

(Or Environmental Landscaping for Water Quality)

The following information has been excerpted (with permission) from the Sebago Lake Watershed News Vol. 5, No. 3 July-August 1994.



If you live or summer on one of Maine's lakes, you may be surprised to discover that traditional landscaping ideas have no place there. Manicured lawns extending to the water's edge, along with the fertilizer and pesticide applications required to maintain them, can have serious negative impacts on lake water quality.

More surprising still—it turns out that you don't have to live at the water's edge to impact water quality. Homes and camps that are many feet back from a lake can drain chemicals downslope.

Negative impacts from both shoreline and uphill residences can be minimized with a landscaping plan that places less emphasis on lawns and incorporates a variety of plants adapted to conditions near the water's edge. Lawns can be redesigned to allow a buffer zone along the lake. Careful landscape design can actually increase the value of your property as well as keep the lake water you enjoy clear and clean.

Here are some suggestions for getting started:

LANDSCAPING FOR ESTABLISHED YARDS

STEP 1: RELAX AND STOP MOWING

Stop mowing down to the water. Let the existing grass grow long—it will help filter pollutants from rainwater while you're working on your other plantings. The grasses will grow 12-24 inches tall before going to seed. Carefully preserve any and all existing natural vegetation at the edge of the lake.

STEP 2: UNDERSTAND YOUR YARD

Before doing any planting, take time to understand the different things that make each yard unique and sketch them out.

SUN: The direction your yard faces and the location of existing trees and buildings determines how much sun or shade there is. On a sunny day, watch what spots stay in the sun, shade or get some of both.

SOILS: Some plant types prefer more moisture than others. These will do better in low spots or nearer the shoreline. Higher spots away from the water will need plants that prefer drier soils. Areas that are bare, worn or eroded, especially on a slope, should be mulched heavily and planted with plants that will quickly spread.

ACTIVITIES: What areas of your yard get used for what purpose? An area for sitting and relaxing may be better for ornamental plantings that give way to native species towards the lake shore. Plants for shade and screening may be used as well. Leave enough open areas for lawn games. Plan for the best way to get down to the water.

STEP 3: GET OUT YOUR SHOVEL

Begin planting ground covers, shrubs and trees into the lawn area near the water's edge. You can work up the soil in small sections at a time, to reduce the danger of causing an erosion problem. Use mulch around the new plantings to reduce competition from the grasses. If you see any areas where bare soil is exposed near the lake, make them your first priority for planting or mulching.

WHAT DO I PLANT?

Choose plants that are naturally adapted to the soil and sunlight conditions along your shoreline. You should also plant a variety of species of different heights including shrubs and trees. A careful selection of plants will give you color and seasonal diversity for your view of the water.

The Salmon Times

Acadia Elementary, Madawaska

No.2

Vol. 1

May, 1995

Big Fish Exhibit

On May third, Mr. Cyr came into our classroom with the second biggest Landlocked salmon ever caught, from Long Lake here in Aroostook County. It was 23 inches long. The weight was twenty-one and a half pounds. It was caught in 1941.

Mr. Cyr was twenty years old when he caught it, and the fish was nineteen years old, he thinks. Mr. Cyr is seventy-three years old now, so the fish he thinks should be seventy-two years old.

--Bryan Daigle

Acadia Elementary Hosts Fly Fishing Event

Fly Fishing is a very interesting sport. When Mike and Mr. Stacy came they showed us how to tie flies and how to cast. I'd like to thank them very much. So thank you, Mike and Mr. Stacy.

--James Beaupre

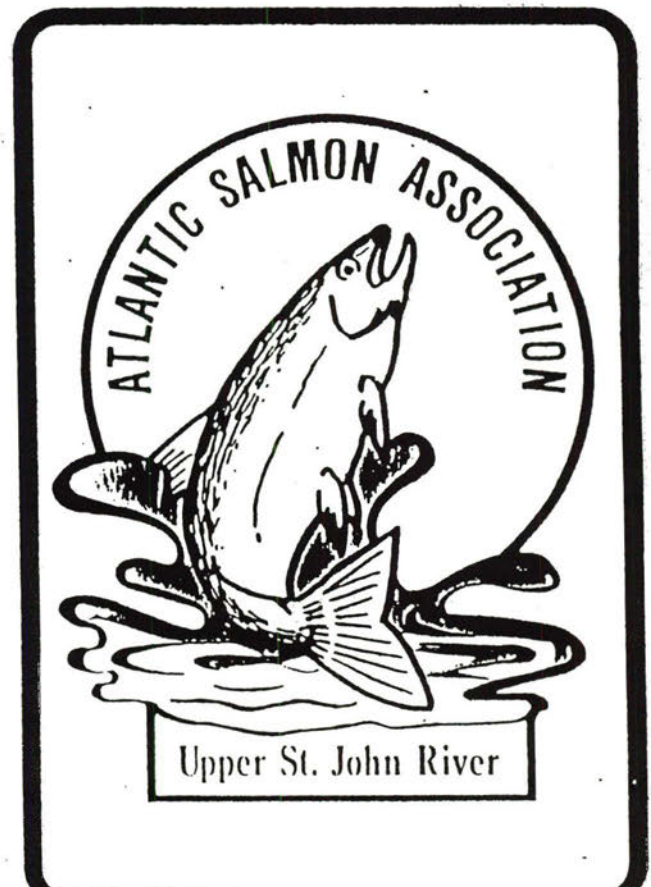
Q. What's the difference between land-locked Atlantic salmon and sea-run Atlantic salmon?

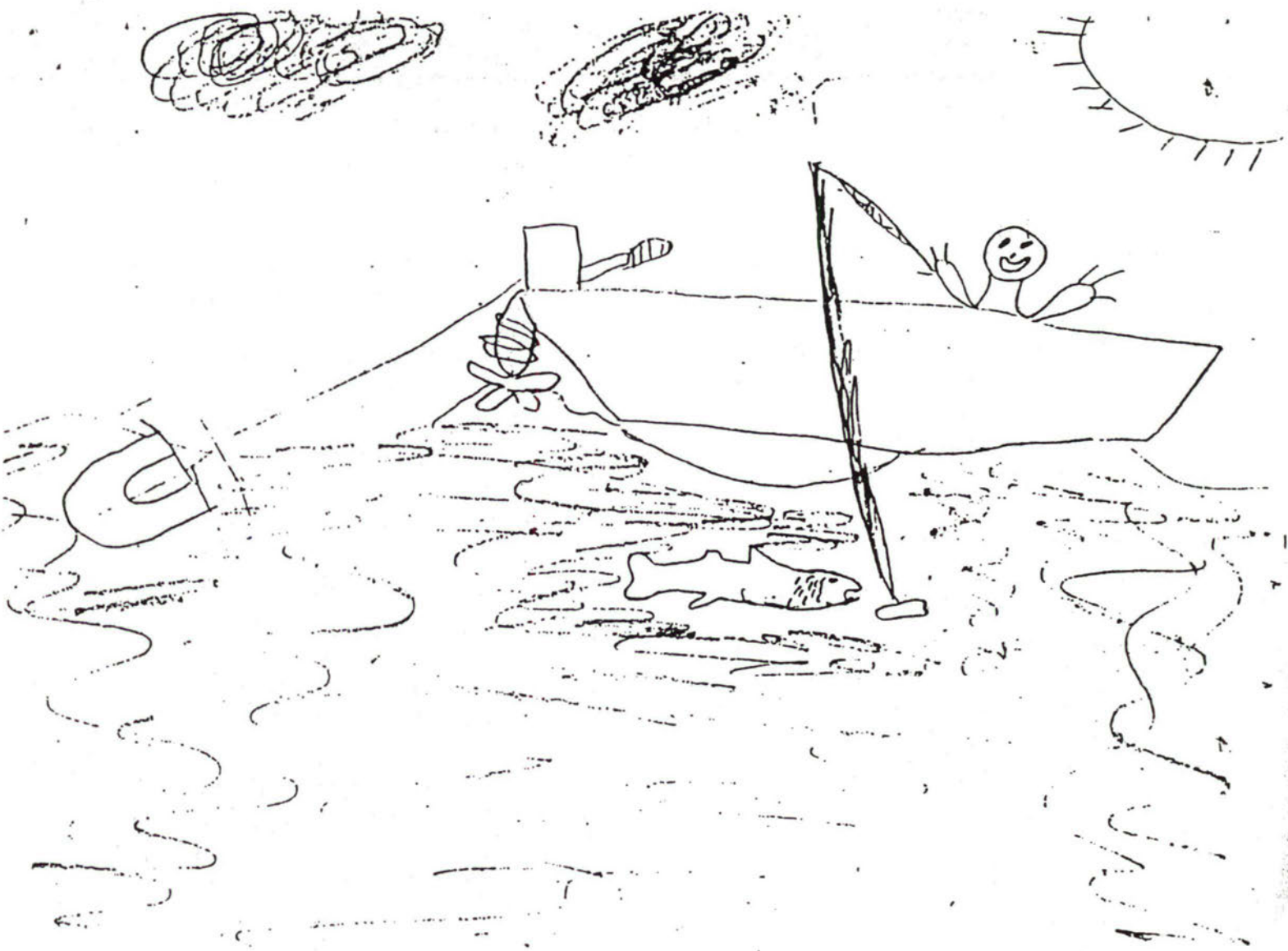
A. Sea-run Atlantic salmon migrate to the sea; land-locked Atlantic salmon never leave the lakes and rivers.

Fish Friends Update

When the fish first came here they were just eyed eggs. Then a few weeks after they hatched. They were eating out of a pouch on their stomach. They were called sac fry or alevins at this stage. About two weeks after, we fed them some food that Mike Hill of the Atlantic Salmon Federation gave us. They would go right to the top of the tank and eat. A few of the baby fish have died, but not alot. In a couple of weeks we will be putting them in the St. John River.

--Sam





ST. JOHN VALLEY TIMES, Madawaska, Maine 04756

March 8, 1995

Acadia School fourth graders babysitting 400 fry

by Angela K. Lagasse
MADAWASKA - Gina Jandreau of Madawaska is the mother of a 1-year old son, Alex, is expecting her second child soon and has just become the proud mother of another 400 babies.
 Jandreau is a fourth grade science teacher at Acadia School in Madawaska where 100 Atlantic landlock salmon eggs have recently been delivered. The eggs are in an incubation tank which was donated by Fraser Paper Ltd. in Madawaska.
 Jandreau is the Coordinator of the project. She delivered the eggs to

Jandreau's classroom last week. Smith is employed by Ameri-Corps. The sponsors of this project are the Atlantic Salmon Association, SALEN and the St. John Aroostook R. C and D.
 A number of tanks are currently up and running in New Brunswick, said Smith. This is the first one to be placed this far north on the American side of the border.
 According to Smith projects of this type are ongoing in southern Maine, however, Acadia School is the first school north of Woodland to agree to participate in the project. She added, "We hope to have a

tank in each school along the river in the near future."
 The incubation tank is a large aquarium with circulating water and insulation surrounding the tank. The eggs are sensitive to light, so in order for the students to watch the development of the eggs, a small hinged window was placed in the front of the tank for the students to take a quick peek.
 Jandreau said she got involved in this project when Smith asked her about it. Jandreau said she was glad to take part. The project is being taken care of by two science classes at Acadia School.
 Jandreau received much

direction on the care of the eggs and sac fry. She also had to prepare in advance by finding pebbles and boiling them to prepare the tank. She added, "The night before the tank was delivered to us. I sent my husband outside to try and dig through the snow for a few more pebbles to be sure. I had enough."
 The eggs should become sac fry in the next three weeks. When they become "pinkie length" they will be released into local brooks, said Smith. This should take place in early June.
 President of SALEN Philip Soucy said Friday, "We are delighted to bring the project of introducing salmon in the Upper St. John, to school children." Soucy said that Fraser made the project possible for Madawaska and he hopes to

be able to get a local sponsor in the Fort Kent area soon. "We would like to see a tank at the Fort Kent Elementary School but we do need a sponsor first," he added.
 Smith said it is definitely a community project and a community effort. She added, "We hope to have an increase in the nearby communities by next year."
 The students are excited about the project. They are able to witness the project of releasing Atlantic landlock salmon into the brooks where the salmon can be enjoyed by families and tourists in the area.
 Danielle Ouellette, a fourth grade student, announced while stepping up to the tank for a quick look, "Coming soon to a brook near you."

Protecting Maine's Lakes

Lakes can be especially susceptible to the effects of pollutants because they occupy a finite area. Human activities such as land clearing, development, farming, recreational activities, and sewage discharge lead to degradation of lake quality. Pollution can come from acid rain (from coal burning power plants), chemical pesticides used in farming and forestry, or from bacteria growth (due to the presence of sewage). One of the most serious forms of lake pollution results from significant increases in the phosphorus content of the water. Phosphorus is a natural element of soil, but also is found in concentrated form in some detergents, and in fertilizer, manure, and sewage. It is carried into the lake by rainwater runoff from streets and developed areas in the watershed (the area surrounding and draining into a lake).

High levels of phosphorus in a lake nourish algae and encourage its rapid growth. An algae bloom occurs when these small plants proliferate too rapidly. When they die they sink to the bottom. As they decompose, the oxygen content of the water is depleted. This process is called eutrophication. Eutrophication in a lake can cause salmon, deep-water trout, and other fish to die. It may also cause the water to become cloudy, turn green, and smell bad. It may not be very appealing to swimmers.

It can cost hundreds of thousands of dollars to restore a lake after it has become polluted. The restoration of a large and heavily polluted lake would cost much more. Obviously, it is much more preferable to protect the lake in the first place. The Maine Department of Environmental Protection (DEP) has developed a program to help communities protect against damage to water resources from phosphorus and other sources of pollution. The DEP offers assistance by providing manuals, holding informational workshops, and direct technical assistance to help communities to manage development in watershed regions by:

- *Designing wet ponds that allow phosphorus to settle out and to be absorbed through biological activity.

- *Managing construction methods, setting limits on land clearing, and including protections against erosion.

- *Modifying septic system design to account for variations in soil types.

- *Building infiltration trenches that catch stormwater runoff and allow it to filter into soil.

- *Creating natural buffers that filter phosphorus from stormwater runoff.

Call the Maine Department of Environmental Protection for more information.

--Chemicals in the Environment Information Center, University of Maine, Orono



Maine's Hidden Resource: Groundwater

Groundwater, one of the most important elements in our lives, is mostly hidden from sight and out of our minds. Yet, 90% of the people in rural Maine are dependent upon groundwater. For the state as a whole, approximately 50% of our people get their domestic water from groundwater sources--either from private wells or from water districts that rely primarily upon groundwater for their supply. Even those of us who get our water from lakes and streams are indirectly dependent upon groundwater, for groundwater discharges help maintain lake levels and stream flows throughout the year. There are other dimensions to our good fortune:

- Groundwater is so abundant and, in many places, so easy to tap that it is almost as inexpensive as the air we breathe (only a few cents for 100 glasses of water.)

- It is, for the most part, uncontaminated by human pollution.

- It is continually being replenished by precipitation that filters through the soil.

Groundwater is not only essential to the maintenance of Maine's rural way of life; it is also essential to its economy. Consider, for example, recreation and tourism: there are some 68,000 seasonal homes in the state, the majority of which rely upon individual wells or wells serving a small number of cottages. Many commercial establishments serving travelers and vacationers--as well as local residents--also depend upon private wells. These include inns, motels, sporting camps, children's camps, restaurants, service stations, and a wide range of other stores and services.

Industrial use of groundwater is substantial in Maine. Agricultural use of groundwater is minimal, however, compared to other sections of the country. However, there are proposals for expansion of agricultural irrigation in the farming areas here in northern Maine. Such expansion of irrigation could place new demands upon groundwater in certain locations. Indeed, there is a trend throughout the United States toward expanded groundwater use, and Maine may be expected to participate in this trend. The state's groundwater resources are, in most places, more than sufficient to accommodate expanded use. The 80 or so million gallons a day of groundwater currently being used in Maine constitute a very small proportion of the state's 100 trillion gallons of groundwater reserve. (In fact, much of the water used is returned to groundwater after it is used.) However, the geographic distribution of groundwater is quite uneven. There are places in Maine where demand, at present rates of development and especially in the summer, will exceed the recharge rate of local groundwater resources. However, for the state as a whole, the key issues of the future will likely have more to do with groundwater quality than quantity.

--The Land and Water Resources Center, U. of Me., Orono

Assessing the Economic Benefits and Impacts of a River Fishery

Northwest recreational salmon fishing jobs decline by 43% over a 6-year period! Northwest workers lose \$500 million in wages from recreational salmon fishing declines! These and similar headlines have been conspicuously absent from media reports as salmon, steelhead, trout, and a host of marine fish stocks have declined to historic lows around the country. While we have seen similar information from the commercial fishing, timber and agricultural industries and other river resource users, why has there been a noticeable absence of economic information of the river-dependent recreation industry? In many communities, fishing, hiking, river floating, wind surfing, boating and other activities provide vital economic activity throughout the year.

Resource managers and politicians have been giving increasing consideration to the economic effects of their decisions and policies. Further, users of public resources such as water and timber have effectively used economic arguments for decades to gain increased timber cuts, water for irrigation, and to justify the construction of yet another dam. The general absence of economic information on the river recreation side has left river and fisheries conservation advocates without a full set of tools to work with.

Recent fisheries issues such as the precipitous decline of Pacific Northwest salmon and steelhead stocks, particularly in the Columbia River basin, and numerous hydropower facility relicensing projects across the country, have stimulated economic analyses which have brought these other river benefits to the forefront.

With credible economic analyses in hand, some fisheries advocates are having success at capturing the attention of decision-makers. Other river and fisheries advocates have yet to utilize this potentially powerful river conservation tool.

Economic Benefits and Impacts

Expenditures by recreational anglers measure the value of fisheries resources to local, state, and national economies. Changes in regional economic output, income, and employment associated with changes in expenditures by recreational anglers do not measure the benefits of a recreational fishery. Instead, they represent accounting measures of transactions and income payments which give an indication of the economic activity generated in a local area or region that is related to fishing. Expenditures represent costs to the angler, not benefits. They do not measure the loss of value to an angler that would result should fishing opportunities be diminished or eliminated, or the gain in value resulting from expanded or new fishing opportunities. Recreational anglers purchase things such as tackle boxes, boats, rods and reels, and numerous other items

for their fishing activity. Angler surveys can be used to estimate the amount of expenditures made by anglers and also ascertain where those expenditures were made so they can be assigned the proper location (local, state or national level). Once angler expenditures are measured, then economic impacts can be calculated.

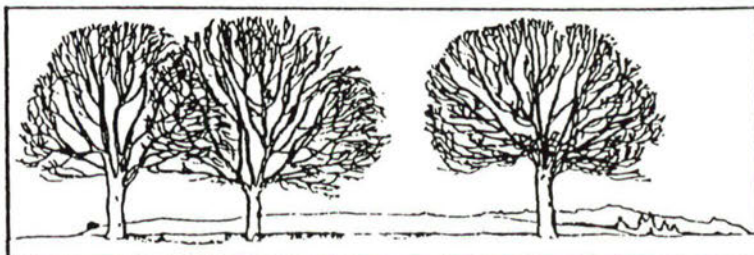
Types of Economic Impacts

There are basically three types of economic impacts: 1) **Direct impacts**, which are the initial purchases made by anglers; 2) **Indirect impacts**, which are the purchases made by businesses to produce the goods or services demanded by anglers; and 3) **Induced impacts**, which are purchases of goods and services by households receiving wages from businesses producing direct or indirect goods and services. The purchase of a fishing rod provides a good example of a direct impact. The associated indirect impact would include the purchases by the rod manufacturer of graphite, paint, guides, reel seats, and other items. Further indirect impacts might include the purchase of pigments by the paint supplier and aluminum by the guide supplier. Induced impacts would include all purchases by households with the wages paid to employees of the retailer, and rod, paint, graphite, guides, pigment and aluminum manufacturers in the proportion they contributed to the final product.

Total economic impact is the summation of these three levels of impact. The total economic impact divided by the direct impact is called the multiplier and reflects the number of times the initial expenditure circulated through the regional economy. The economic effect of any activity may seem infinite as initial expenditures are spent and respent by suppliers and households. However, there are several limiting factors. Expenditures are only impacts on a specific region if they take place in that region.

In the case of the fishing rod, the suppliers of paint, graphite, and aluminum are probably not located in the same region as the rod manufacturer. Households, which are the source of the induced impacts, save part of their wages and have part withheld in taxes. Also, businesses do not spend a dollar in inputs for every dollar they take in. These and other reductions provide a finite limit to the effects of the initial expenditure.

--by Tony Fedler, printed in "River Voices", the River Network's quarterly newsletter (Vol.6, No.1, Spring 1995)



Whirling Disease

Whirling disease, a parasitic infection so named because of the erratic, whirling swimming motion of diseased fish, was introduced to the United States from Europe thirty-five years ago. At first found only in hatchery stock, it was discovered in the wild in Colorado during the late 1980s. Since then, the disease has been reported in nineteen states: California, Colorado, Connecticut, Idaho, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Virginia, West Virginia, and Wyoming. All Salmonids are susceptible to the whirling disease parasite, which infects its hosts by invading the gills, or when a fish eats infected tubifex worms. Tubifex worms are the parasite's intermediate host, and become infectious when they consume spores from an infected fish. Fish cannot contract the disease directly from other fish, nor can humans contract it. The disease results in pinched nerves and severe skeletal deformities; at the present time, there is no known cure. Infected salmonids develop a black tail, and show whirling behavior--a direct result of the pinched nerves--at 1 to 1.5 months.

--Fact Sheet, Trout Unlimited



There are two whitefish species in Maine and both are members of the salmon family (Salmonidae, subfamily coregonidae). One, the round whitefish, grows only 8 to 14 inches and is not classified as a gamefish. The other, the lake whitefish, has this distinction.

Lake whitefish are closely associated with the trout/salmon populations in our deep, cold northern lakes, and a few southern ones. Statewide, some 76 lakes harbor populations, with waters in northern Piscataquis County containing the heaviest concentrations. In many lakes where whitefish are found, they constitute the largest group (exclusive of smelt) of gamefish, sometimes up to 70% of the lake's populations.

Fisheries biologists have estimated that the lake whitefish population in Maine at something over 3 million fish, with 10% dwarfed due to crowding. Of these millions of fish, only about 14,000 are taken annually. Since 40% of the population is catchable size-wise, and since they tend to displace trout and salmon, it appears we have a vast, untapped fisheries resource which should be utilized.

While whitefish may never again be a household word, in the 1800's in northern Maine it was. In fact, whitefish were commercially caught across northern New England, the Great Lakes Basin, Canada, and Scandinavia, where this species is still economically important.

In appearance, whitefish have a salmonesque profile, a satiny white color with a greenish-olive cast to the back, a pointed snout, a tender, toothless mouth, and larger scales than their salmon cousins. They run 12 to 20 inches, occasionally 30 inches., in length. Adult weights average 3 to 4 pounds. This species may live 10 years in the wild.

Males mature during their third or fourth fall, females in their fifth. They are fall spawners, seeking shoal waters or inlet tributaries. In late November, breeding activity reaches its peak, and paired fish put on a frenzied surface display. No nest is constructed, and eggs are broadcast at mid-depth. They settle to the bottom where they hatch in early spring. When small, whitefish depend on plankton, insects, and crustaceans. As adults they feed on minnows, smelt, and other small fish. This species is relatively parasite-free, though tapeworms do occur.

In Aroostook County, whitefish can be found in the following lakes:

- Beaver Pond
- Carr Pond
- Cunliffe Lake
- Glazier Lake
- Musquacook Lake

Video tapes of a "Bill's World" program, featuring the Grand Falls fishway project, and a ten-minute spot of Atlantic salmon leaping, again at Grand Falls, will be made available to anyone interested at the next Association meeting.

JIGGING GROWS IN POPULARITY IN MAINE

Traditional winter baits for Maine trout and salmon have invariably included smelts or shiners. Most north-country ice anglers, however, will reserve at least one hole in the ice for jigging, to ensure that at least one bait is actually doing something to attract a hungry trout, salmon or togue to the hook.

Until recently, the most popular bait for jigging was "cut bait," a common angling term loosely meaning any dead, cut up or split fish (smelt, shiner or sucker) or a chunk of bait such as pork rind, cubed meat or fish, or belly strips from any of a variety of common bait species. In the last decade or so, more Maine anglers have turned to artificial jigging lures, fished either alone or tipped with cut bait. Part of the reason for this shift in bait preferences is the ever-tightening circle of regulations governing bag and length limits. Many undersized fish taken on traditional cut baits while jigging die as a result of the trauma induced by hooking, playing, landing and releasing a fish taken at extreme depths. With artificial lures, especially those with the barbs crimped down or filed off, releasing undersized fish is a benefit to the resource as well as to the angler looking for trophy-quality fish. Care must be taken, however, not to let the fish flop around on the ice. Eyeballs, gills and skin can freeze in a few seconds; it's better to leave the fish in the hole and flick the hook off with a pair of needle-nosed pliers.

Lures suitable for Maine jigging situations include spoons, lead jigs, and small, weighted plugs. The new crop of specially-designed jigging minnows which "swim" more or less naturally and feature hooks in each end of the lure as well as a special underside eyelet for attaching additional weight, are becoming the rage among winter trout and salmon anglers. A 1/2-ounce sinker on 12 inches of monofilament line attached to the bottom eyelet of these lures will get them to the bottom in a hurry, yet the extra weight won't interfere with the wounded-minnow action of the lure.

Salmon and trout jiggers often use shorter, faster movements with baits in the 3- to 4-inch range, as these fish generally respond well to increased action and smaller baits than do their bottom-hugging cousins. Also, because salmon and brook trout are often found at varying depths in winter, jig fishermen should begin working their lures just beneath the ice, then drop down in 6-foot increments until the lure is just off the bottom.

--Stephen Carpenteri, The Maine Sportsman 12/94

MEETINGS, CONFERENCES CON'T

--Mike Hill on affiliates and volunteers

--John Anderson on research and development

--Danny Bird on fundraising by volunteers

For information on either of these meetings, please contact Amanda Smith, at 764-4126, or Ed LeBlanc, at 506-735-5995

The next Atlantic Salmon Association for the Upper St. John meeting will be Wednesday, Dec. 21, at 6:30 pm. We will be meeting at the Madawaska Safety Building. Please make an effort to be there, as we'll be discussing activities planned for the coming year.

IN THE FIELD: NEW TAG SYSTEM TESTED

The problem with stocking programs is that after you release the fish nobody knows exactly which ones survive and why. A new tagging technique, which involves implanting strips of encoded tape in the eyes of fish, could not only help answer questions about the habits of reared fish but could also lead to knowledge about salmon populations all over the world.

In an international first, an Atlantic Salmon Federation research team is using experimental visual implants, designed by Northwest Marine Technologies, to tag small fish on Upsalquitch River. Dr. Fred Whoriskey of McGill University and his research team spent much of the fall at Boland Brook Camp on the Upsalquitch in a mobile surgical theatre. Through needle-sized incisions, they inserted strips of millimetre-wide tape, stamped with alpha-numeric codes, into, as Whoriskey says, "the adipose tissue on the opercula" of satellite-reared and wild fish.

The research will reveal what's happening to the reared salmon, and maybe point to ways to improve stocking results. "Maybe we'll discover the Upsalquitch (satellite-reared) fish have cognitive abilities which allow them to copy the actions of wild salmon," Whoriskey says. "We want to discover what the Upsalquitch fish are doing to survive. Then we can figure out what we should be doing. It could be as simple as putting gravel in tanks, or installing a raceway, where fish swim in a gravel channel and practice before they enter the stream. Then they'd be fast enough to get away from predators. They'd learn to use their pectoral fins to grab the rocks on the bottom of swift streams to wait for food."

The team has also been observing the way fish use their habitat, in order to discover how long it takes reared salmon to occupy sites favored by wild salmon, and to find out how the wild accept the introduced.

-Annabel Bruce: SALAR Vol.13, No.4, November 1994

***** UPPER ST. JOHN SALMON STOCKING:

In 1994, SALEN, Inc. stocked 550,000 fry, 200,000 fall fingerlings, and 75 adult Atlantic Salmon above Grand Falls, NB.

This is the first issue of a monthly newsletter that will be coming to all Atlantic Salmon Association members. If you have any information you'd like included, please contact Amanda Smith before the 20th of each month.



HJWS SW
NOV 1971
THANK YOU



Robert E. Brown

Travis Washington

Kenley Fox

James J. Gaudin

John J. Gaudin

Sally McCafferty

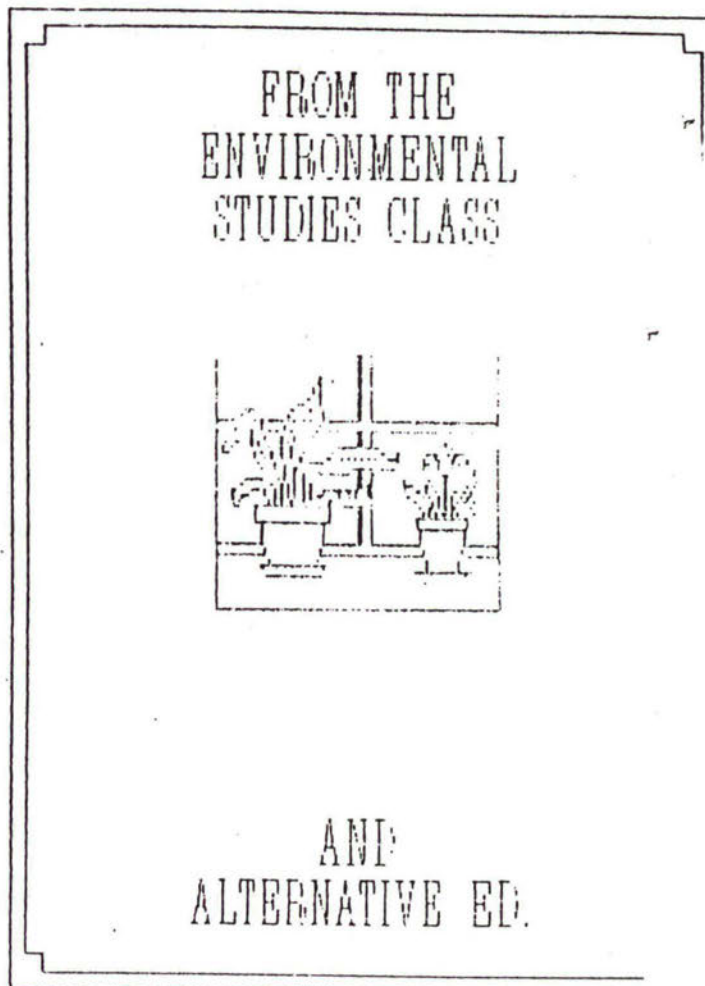
Dana Cameron

Nicholas Briault

Christina Berthiaume

Billy (Jung)

Kate Thompson



FROM THE
ENVIRONMENTAL
STUDIES CLASS



AND
ALTERNATIVE ED.

Volume IXXL

Number 4

Fall 1994

**Attention Steering Committee
Members and Guests:**

Our next Steering Committee meeting will be held on Thursday, December 8th, 1994, at Yusef's Restaurant in Caribou, and will begin at 11:45 a.m. The four AmeriCorps employees who recently came on board (see feature article below) will be giving a summary of their accomplishments so far, and their plans for the rest of the year. This is the annual Christmas program, complete with a "Yankee Swap", so don't forget to bring a gift (between \$5.00 and \$10.00).

Please contact Coleen Churchill for reservations (764-4126).

THANK YOU!

We would like to thank the following county and towns that have contributed their dues since our last newsletter.

Aroostook County
Bridgewater
Eagle Lake
Easton
Fort Kent
Frenchville
Grand Isle
Orient
Perham
Portage Lake

AMERICORPS:

The President's National
Service Program

Similar in style to the Peace Corps, AmeriCorps' mission is the "recruitment of citizens to address critical educational, human service, public safety, and environmental problems the country is currently facing." Through this program, Americans 17 and older of all backgrounds can earn education awards for college or vocational training.

Services rendered by the development of such government programs include: combating hunger in inner cities, establishing farmers' markets, and creating micro-enterprise projects. In addition, the rural development program acts to promote overall economic development, boost sustainable agriculture, improve rural housing, support youth volunteer programs, respond to disasters and improve participation in existing government programs.

How will AmeriCorps serve you?

The rural development program "will help Aroostook communities conserve, restore and sustain the natural habitat." This program will include projects designed to promote the natural beauty of public lands such as forests, rivers, and lakes, all of which Aroostook is abundant in. AmeriCorps volunteers coming to Aroostook include new Lakes, Trails, Water Quality and Salmonoid Coordinators.

New Salmonoid Coordinator:
Amanda Smith-Hatch

Having grown up in northern New York state, I have a special affinity for the forest and fresh water resources which the northeast corner of the U.S. is so rich in. My work in the environmental field has allowed me to live in a number of beautiful areas--the southwest, the Rocky Mountains, the Gulf of Mexico--but nowhere have I found the natural resources of an area as highly valued and appreciated as in the Northeast, and especially in Maine. My position as Salmonoid Coordinator will give me the opportunity to work with one such resource, and will also allow me to work firsthand with the communities which stand to be affected by an Atlantic Salmon stocking program and fishway. I accept the challenge this position offers because projects such as this have the potential to redefine current concepts of habitat and resource management.

Please contact any of the new coordinators with your ideas at Box 745, Presque Isle, Maine 04769 or call at 207-764-4126.

International Urban Forestry/Turf Management Field Day

On August 11, 1994 the St. John Aroostook RC & D held an International Forestry/Turf Management Field Day with tours attended by more than 100. A week long art exhibit at the Pullen Art Gallery, University of Maine at Presque Isle, entitled "Trees and Turf" was also held. Entries were received from as far south as Boston and throughout Maine. The

exhibit was designed to give both professional and amateur artists an opportunity to show and sell their work. Pieces were accepted on the basis of quality and imagination as well as the requirement that trees and/or grass figured strongly in the subject matter. Pen-and-ink drawings, pencil drawings, photographs, paintings, woodburnings and sculpture--over thirty works in all--were shown.

Forest Council Releases Final Recommendations to Conserve the North Woods

AUGUSTA, ME--The Northern Forest Lands Council (NFLC) released its final recommendations, in a report titled "Finding Common Ground: Conserving the Northern Forest" on September 19, 1994. The Council's recommendations aim at conserving the region's forest lands through improved public policies. The release of the report culminates six years of study by the Council and its predecessors, the Northern Forest Lands Study and Governors' Task Force on Northern Forest Lands.

The council's report discusses the current pressures on forest resources and the region's natural resource based economy. The Council makes 37 recommendations in four broad subject areas: "Fostering Stewardship of Private Lands," "Protecting Exceptional Resources," "Strengthening Economies of Rural Communities," and "Promoting More Informed Decisions."

St. John-Aroostook Steering Committee Newsletter

Volume XXL

Number 2

Spring 1995

Thank you!

We would like to thank the following towns and districts for their timely contribution of dues.

Wade

St. John Valley Soil and Water Conservation District

Southern Aroostook Soil and Water Conservation District

Presque Isle

Fort Fairfield

Houlton

Littleton

Hamlin

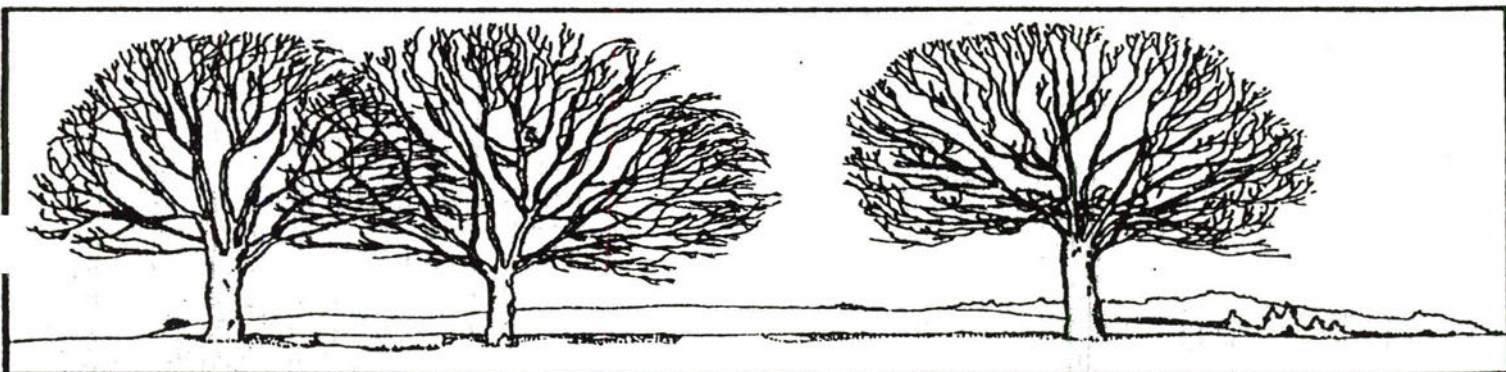
Attention Steering Committee Members and Guests

Next Steering Committee meeting will be held on **Thursday, May 18, 1995** at the **Caribou Recreation Center** in Caribou, ME. Pizza will be served at **11:45 am**. The business meeting will follow. Please contact Coleen Churchill at (207) 764-4126 for reservations.

Regional Round Table Meetings Hosted by RC&Ds

The National Association of Resource Conservation and Development Councils (NARC&DC) sponsored a series of round table meetings to solicit input regarding how the Resource Conservation and Development (RC&D) program best fits into the reorganized USDA. The feedback gathered from RC&D members, sponsors and customers will be compiled and utilized by a special task force established by Natural Resources Conservation Service Chief Paul Johnson to help the RC&D program gear up for the future. Six meetings were held in all, one in each of the RC&D national regions, with the final meeting taking place in the North Central Region on March 5th. Feedback from these meetings was due in by March 1st, with the exception of the North Central region.

-The District Leader, The National Assc. of Conservation Districts Jan. 1995



STAR CITY ARBOR COUNCIL
City of Presque Isle
P.O. Box 1148
Presque Isle, ME 04769-1148

**TREES AND
LANDSCAPING:
"EVERYTHING YOU
EVER WANTED
TO KNOW "**



*Saturday,
April 29, 1995
Presented By:
Star City Arbor Council
In Cooperation With:
Recreation & Leisure
Services,
University of Maine
at Presque Isle
and WAGM-TV*

You are cordially invited to attend a workshop entitled **Trees and Landscaping: "Everything You Ever Wanted To Know"** on Saturday, April 29, 1995 from 10:00 a.m. to 3:00p.m. for a minimal fee of \$10.00 (includes lunch). The workshop will be presented in the Wieden Auditorium at the University of Maine at Presque Isle, located at 181 Main Street.

If You Are:

- * Tree Board Members
- * Garden Club Members
- * New Property Owners
- * Homeowners
- * Agriscience Students
- * Building Contractors
- * Architects
- * General Public
- * Municipal Highway Depts.
- * Municipal Rec. Depts.

**THIS WORKSHOP MAY
BE OF INTEREST TO YOU!**

If you need additional information, please do not hesitate to contact Nancy Gervais at 764-2506.

meet with Governor

The concept of an internationally-planned and managed Atlantic salmon fishway at Grand Falls, New Brunswick is not new; it was first mentioned as a possible project back in the 1950's. During the last decade, the idea has been actively supported by local Atlantic salmon conservation and sportsmen's groups, as well as the St. John valley communities. With the approval of the federal governments of Canada and the United States, and with provincial support in place, all that is needed to make this project a reality is a show of support by Governor Angus King.

On Saturday, February 25, Governor King sat down with representatives of Maine and New Brunswick Atlantic Salmon conservation organizations, and was presented with the "Fishway Facts". The proposed fishway would allow sea-run Atlantic Salmon to migrate to the upper reaches of the St. John River. At this point in time, the fish are blocked by not only the dam situated at Grand Falls, but also the falls themselves. By implementing a free-swim migration of these fish above the falls, a large expanse of currently under-utilized salmonid habitat could become an important rearing and spawning ground for the Atlantic salmon, as well as provide a natural resource for the St. John River Valley--a natural resource that could provide a solid economic base through ecotourism for riverside communities.

Ed LeBlanc, executive director of SALEN (Salmon Enhancement) Inc., gave the opening presentation, explaining to King the biological history of the St. John River. The Governor responded with questions concerning the presence of sea-run Atlantic salmon above Grand Falls. The concept of introducing a technically "exotic" species into the Upper St. John watershed seemed to be King's strongest point of contention throughout the meeting. The question of "will other, undesirable species use the fishway" was also raised by King, and LeBlanc explained the design of the fishway would make this a highly unlikely occurrence, and that there would be a trap and hold mechanism at the top for sorting fish and collecting broodstock. A list of rivers that have been stocked with Atlantic salmon, with no detrimental effects to the existing fisheries, was requested by King. King ended the meeting by saying he'd be prepared to give an answer on this project by March 31.



Timber Trespass

Timber trespass--the illegal taking of trees--appears to be on the increase in Maine according to Thomas Doak, acting director of the Department of Conservation's Maine Forest Service, who says landowners can avoid being victims of timber theft by clearly marking their property lines, visiting their woodlots regularly, obtaining professional forestry assistance before harvesting and promptly notifying the Forest Service of suspicious activity.

"Timber trespass has long been a problem for Maine landowners. With individual trees of some Maine species now valued in hundreds of dollars, the problem of timber theft appears to be increasing. In fact, forest rangers investigated more than five hundred complaints from angry landowners last year who believed timber had been illegally harvested from their woodlots. Just this past month, we've received nearly fifty complaints," Doak said. Maine law requires landowners who harvest more than ten acres to clearly mark their property lines, and to be sure that logging is contained within these well-defined property boundaries. When this law is not observed, trees may be illegally harvested on adjoining property.

"Maine courts tend to consider these incidents to be civil violations. They may be accidental, involve neighbors and are often settled out of court. Timber trespass incidents of this type are most easily avoided by hiring a licensed, professional forester to help plan the harvest. The state-licensed forester can help hire a reputable logger by written contract, determine the volume and type of trees to be cut in accordance with environmental and forestry regulations, and ensure that the landowner's objectives for the land are achieved. In my experience, professional forestry advice pays for itself by ensuring that landowners receive the best value for their trees," Doak said.

According to State Supervisor Tom Parent, not all timber trespass is accidental.

"Most people who make a living harvesting timber are good, honest people. Unfortunately, timber thieves give the whole industry a black eye, making it difficult for honest loggers to make a living. Timber thieves typically contact a landowner by telephone. They may attempt to convince the owner that their trees have been damaged by insects or disease and will be lost unless they are harvested. Elderly and non resident woodlot owners are often the targets of timber theft because they are less able to keep an eye on their property. Timber thieves can be very convincing, even intimidating, and may ultimately get verbal permission to cut the woodlot. After the landowner has consented, they may receive a small check by mail. Often, this payment is very small compared to what the landowner should have been paid. In some instances, landowners receive nothing for their trees," Parent said.

The Maine Forest Service recommends that landowners protect themselves from timber trespass by taking the following steps.

cont. on following pg.



St. John
Aroostook
RC&D

Resource Conservation and Development

Steering Committee
P.O. Box 745
Presque Isle, Maine 04769

Telephone: (207) 764-4126 • FAX: (207) 764-4128

St. John-Aroostook Steering Committee Newsletter

Number 3

Summer 1995

Thank you!

We would like to thank the following towns and districts for their timely contribution of dues.

Caribou	Westfield
Littleton	Oxbow Plantation
Garfield Plantation	Woodland
Mars Hill	Caswell
Easton	Blaine
Orient	Madawaska

Nashville Plantation

AmeriCorps Participants Wrap Up A Season Of Service

With a little more than a month to go, the four AmeriCorps participants here in Aroostook County are completing projects which they've planned and implemented throughout the 1994-1995 season. From local school classrooms to the extensive network of recreational-use trails that covers the County, the AmeriCorps "Season of Service" has provided the motivation and "people power" necessary to the success of on-going community development plans. Programs such as AmeriCorps are successful because of the results; the AmeriCorps slogan is "Getting Things Done", and that's exactly what the participants have been doing.

Nicky Violette, Fish River Lakes Coordinator, has expanded her plan of work to include an educational program dealing with water quality; it has been a major

semester, having been introduced in seven area schools, and reaching approximately 250 children and educators. Besides this, Nicky has been responsible for the design and mailing of the Fish River Lakes newsletter, finding and training water quality volunteers to monitor the Fish River chain of lakes, as well as acting as a liaison and information resource for the campowners and residents of the Fish River Lakes area.

Gary Marquis, Trails Coordinator, has spent the last ten months monitoring, repairing, and building multi-use recreational trails in the Caribou area. Tourism has become a major economic factor in Aroostook County, due in part to the enormous potential of our snowmobile trail system; Gary has played an important role by improving the trails available, as well as planning new ones, assisting in the grant writing

process, and spreading the word to County residents about the benefits of trail development.

Denise Perry, based in Houlton, has been working with the Shin Pond Association and the Houlton Band of Maliseets on water quality and soil conservation issues. Her latest project involved the installation of fifty lysimeters along the riparian buffer of the Miduxmekeag River, which will measure moisture and nitrate levels.

Amanda Smith, Salmonid Coordinator, is wrapping up the season with a survey of the Upper St. John river; with the support of ACAP and SALEN, Inc., she will map potential salmonid spawning and rearing sites as well as collecting information on water depth and velocity. Also this summer, Amanda will be creating a project plan for three to five public access sites proposed for townships which border the river.

eggs, it is inexpensive to construct, easy to maintain, and adaptable to different sizes of tanks and number of fish. An instruction booklet is being designed to allow various groups and other organizations to create their own incubation unit.

3.) With the cooperation of SALEN, AmeriCorps, and the St. John-Aroostook RC&D, the section of river running between Big Rapids and St. Francis will be monitored in terms of water quality, salmonid habitat availability, and pollution impacts. A creel survey will also be carried out.



UPDATE: 1994 SINCLAIR WATER QUALITY IMPROVEMENT PROJECT

The summer of 1994 saw renewed construction efforts in T17R4 to continue water quality improvements there. In early June, bids were received and opened to construct the wastewater treatment facility to serve the built-up section of Sinclair and the thoroughfare between Long and Mud Lakes. Ed Pelletier and Sons Construction of Madawaska submitted the combined low bid of \$2,365,000 to construct the wastewater treatment plant and the associated piping and pumping stations required to collect the wastewater from Sinclair and pump it to the treatment plant.

Groundbreaking was held on June 10, 1994, and construction continued until early December. At this time the entire project is approximately 80% complete, with all underground work essentially complete. During this time period, 8,000 feet of 8" gravity sewer

line and 1,500 feet of 6' force main pipe was installed to pump wastewater from the village to the treatment plant site. Efforts will resume in June to complete the work remaining by July, 1995.

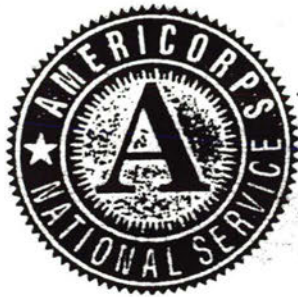
The construction of the treatment plant site involved the construction of two stabilization ponds, each with a capacity of 2.16 million gallons of wastewater, and a storage lagoon capable of storing 14.3 million gallons of treated wastewater and accumulated precipitation. Seven million gallons of water were pumped from Mud Lake in November to partially fill all three storage areas. Quantities of materials used in the construction of the site included moving 70,000 cubic yards of soil to construct the embankments of the stabilization ponds and storage lagoon. An additional 34,000 cubic yards of till material was installed to construct an impervious liner to prevent leaching of wastewater into the surrounding soils. Silt fence used at the site to prevent runoff from the site during construction totalled 7,600 feet. Twelve thousand feet of irrigation piping was installed through which treated wastewater will be sprayed over approximately 28 acres at the site for disposal.

Engineering work is continuing at this time to explore the feasibility of extending the area served by the treatment facility beyond McLean Brook to the area of the Long Lake Campground on Route 162. Another area being looked at is that area beyond the Sinclair cemetery on Lake Drive to the beginning of Barnbrook Road. The cost for both of these system extensions is currently projected at \$350,000. This work could, upon approval, get underway this summer and be completed by the end of this construction season.

With the completion of the central wastewater treatment system and the proposed system extensions, septage waste from over 150 residences in the Sinclair area will be disposed of at the treatment plant.

Construction of additional subsurface wastewater disposal systems, as constructed in 1992 and 1993 with the Jobs Creation Grant Bond funding, is currently on hold for 1995 due to an inability to secure additional funding for these projects this year. Funding sources for 1996 are being pursued at this time.

--Dave Cyr, Public Works Director
for Aroostook County



UNITED
STATES
DEPARTMENT
OF AGRICULTURE



CERTIFICATE OF APPRECIATION

to

Amanda Smith-Hatch

for

Service in Support of Soil and Water Conservation Efforts
in Maine

A handwritten signature in dark ink, appearing to read "Richard B. Baird".

Program Director

A handwritten date "June 13, 1995" written in dark ink.

Date

A handwritten signature in dark ink, appearing to read "David M. Musselwhite".

State Conservationist

PROJECT: Upper St. John River Mapping

This project is on-going and will be completed by October of 1995. Amanda Smith, AmeriCorps participant, will be volunteering as an Earth Team volunteer for the St. John-Aroostook RC&D in order to complete the mapping that was begun in June of 1995. Working with the local YCAP organization, salmonid habitat, bank conditions, and river depths are being recorded. A rough estimate of available habitat, as shown through available pools and runs, has been recorded; the goal is a more meaningful collection of data that takes temperature, depth and bank conditions into account.

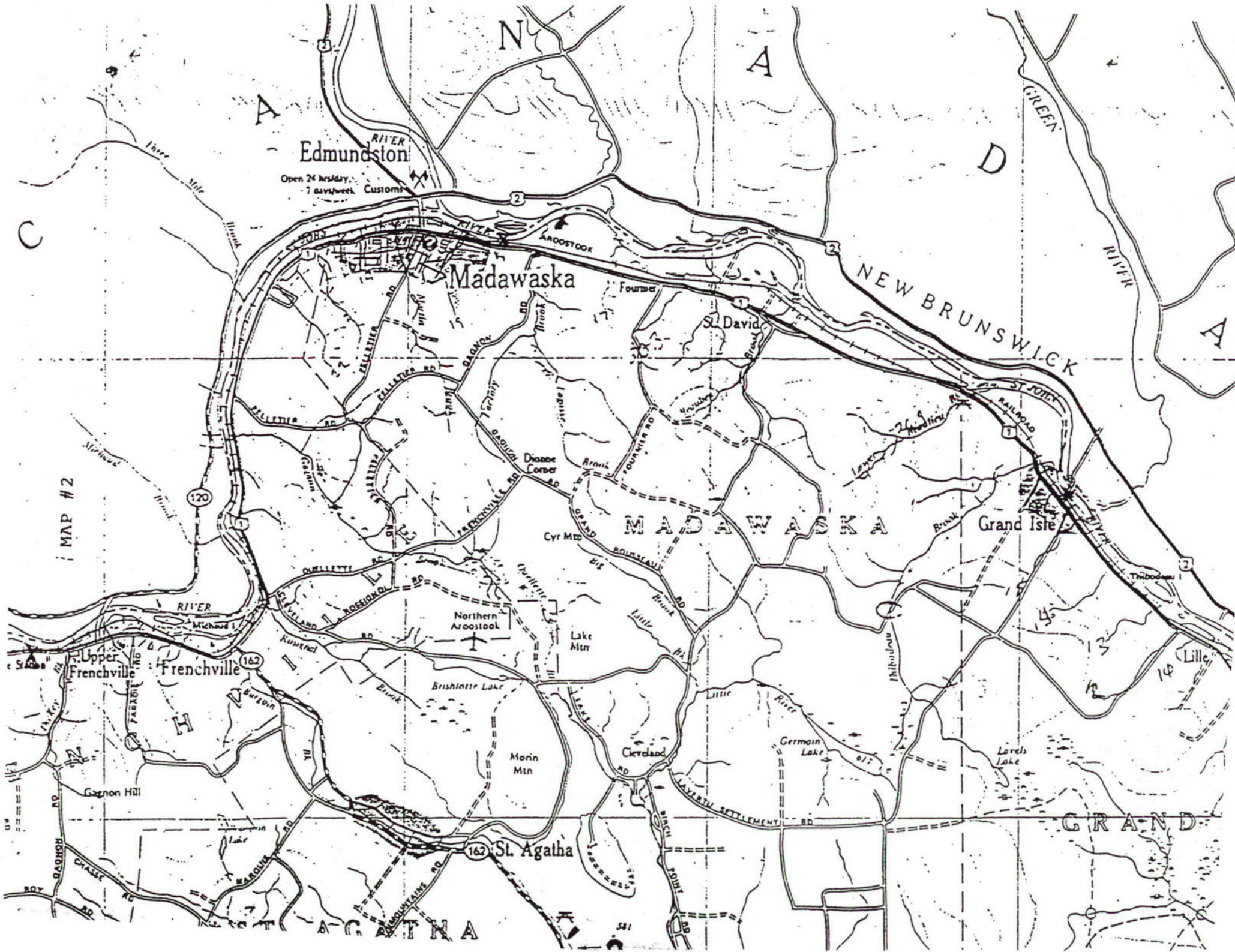
Introduction

As of this writing, the St. John River from Hamlin to Allagash has six access sites, only three of which are readily accessible to vehicles and provide parking space. With the spur towards ecotourism development that the Valley region is currently experiencing, the Atlantic Salmon Association for the Upper St. John and SALEN, Inc. are taking part in a wide-ranging project implementation, of which public access site construction plays a major role. The creation of 4-6 additional sites between Hamlin and Allagash will serve a two-fold purpose; first, they will protect the river and its steep, erosion-prone banks from random and detrimental use, by funneling boaters and other river-users into areas specifically created and maintained to deal with human impact. Secondly, they will make available to the general public and to tourists the mainstem St. John--a natural resource with a rich historical, environmental and economic significance.

Through intelligent design and construction, additional access sites can become a vital link in overall river development, as well as preserving the St. John's scenic beauty. And, when the Grand Falls fishway becomes a reality, these sites will be crucial to the forecasted increase in tourism, fishing, and general river use.

This proposal is a process outline, tracking the steps taken throughout the spring and summer of 1995. A project of this magnitude demands the cooperation and input of a number of state and federal agencies, as well as of the towns involved; therefore, the dates of site visits made by Dept. of Inland Fisheries and Wildlife, Dept. of Conservation; and St. John-Aroostook personnel, as well as their comments concerning each site, are included. The information is recorded in a chart format, followed by sketches of each individual site. Also included are all sources used in the research and planning of the site proposal.

While a number of suggested sites seem, at this point, to be infeasible due to bank conditions that demand expensive alteration because of grade and erosion problems, three areas stand out as prime locations for public access: the Dragon Concrete property in Frenchville, the Dept. of Transportation property in Madawaska, and the un-named parcel owned by the town of Grand Isle. These three sites have been included in a county-wide proposal that was presented to Governor King by the Dept. of Conservation.



Town	Site Name Map Number	USDA/NRCS Viewing	Inland Fisheries & Wildlife Viewing	Dept. of Conservation Viewing	Wetlands	Cultural Resources
gash	#3					Site of old Allagash hotel
John Plantation	#3					Town has to still decide on site
inchville	Dragon Concrete #3	5/10/95		6/27/95		Possible Native American site
adawaska #1	Cross Landing #2	5/10/95		6/27/95		Cross landing site
adawaska #2	DOT prop. #2	5/10/95		6/27/95	Possible	Possible Native American site
rand Isle #1	Private land #2	5/10/95				Possible Native American site
rand Isle #2	Traverse St. boat launch #2	5/10/95		6/27/95		
in Buren	Boat launch #1	5/10/95		6/27/95		
mlin	Schoolhouse site #1					Shares site with renovated schoolhouse

Department of Conservation Site Tour, June 27, 1995

Ft. Kent Public Access Site: While this site is already existing, and is well maintained by the Town of Ft. Kent, certain improvements could be made. The shoreline access is exposed and unprotected from both ice and weather, and human impact. Also, the wooded area that leads to the shore is under severe impact from automobiles; improvements could be made by designing water entry and exit ramps as well as buffering the shoreline. The slope of the bank is the best of any of the sites.

Frenchville Public Access Site: The property that is being considered for public access still needs to be purchased by the town. A new entry and exit to the property will have to be designed, as well as a left-turning lane in Rt. 1. The path to the site crosses the Bangor-Aroostook Railroad. The property is extensive, and offers plenty of room for boat access, picnic areas and historical interpretation signs. The serious erosion on the north west bank restricts the use of that area, but the bank directly at the end of the path seems to offer good potential. The slope of the bank is steep, but there is good water depth and protection from prevailing winds.

Madawaska Public Access Site, #1: The cross landing site offers plenty of acreage for parking and picnic areas. The slope of the water entry way is good for vehicular traffic. The main problem with this site is the shallow water depth and large number of gravel bars in the immediate vicinity. A channel will have to be dredged in order to allow craft larger than a canoe entry to the mainstem. The Town of Madawaska is interested in extracting gravel from this site; this could be accomplished with boat access in mind.

Madawaska Public Access Site, #2: This site also offers considerable acreage. However, the bank is so steep as to make such a project virtually impossible without considerable alteration. The water depth at point of entry is over 5 feet, which would make this site perfect for larger boats. Site development would be costly, but is possible if the town is willing to go the extra mile.

Grand Isle Public Access Site, #1: This site is already in existence, but is really nothing more than a footpath. The slope and narrowness of the path makes it unsuitable for vehicular traffic, and there is little parking space at the top of the path. Also, the path is badly damaged by run-off. This site is not conducive to development.

Grand Isle Public Access Site, #2: This site is not on Town land and would need to be purchased. It crosses the Bangor-Aroostook Railroad. The bank is low here, and not harmed by ice-caused erosion. There is enough room available to develop convenient entry and exit. A small section seems to support a wetlands area.

Van Buren Public Access Site: This site is already in existence. Vegetative buffers need to be planted along shoreline. An AmeriCorps participant could take on this project, with the help of local schoolchildren, and donations from local environmental agencies.

Overall, Richard Skinner, of the Department of Conservation, saw great potential for the development of river access sites. He also commented on the obvious need for them. The Frenchville, Madawaska, and Grand Isle sites were the ones he chose as top priority; he was also interested in improving the Fort Kent site. Though he wasn't able to visit the Allagash site, or the Hartt Landing in St. Francis, he's interested in visiting those areas on his next visit. He will be using the AmeriCorps volunteer as a contact; I suggest whoever fills my position contact him via phone or letter before winter.

1995 Creel and Recreational Use Survey
of the Upper St. John

*Time period of survey: June 7-August 11

*Area of river surveyed: Big Rapids to Hartt landing, St. Francis

<u>DATE</u>	<u>TYPE OF RIVER USE</u>	<u>#, SPECIES OF FISH CAUGHT</u>	<u># OF PEOPLE IN PARTY</u>	<u>SECTION</u>
Wednesday, June 7	Fishing	Nothing caught	1	A
Thursday, June 8	Fishing	1, Brook trout	1	
Friday, June 9	Fishing	Nothing caught	1	A
	Canoeing		2	(mouth of Fish R.) C
Friday, June 16	Fishing	2, suckers	1	A
	Fishing	1, Brook trout	1	(under Dickey B.) B
Tuesday, June 20	Swimming, Canoeing		3 (from Can.)	B (on Gardner Island)
Thursday, June 22	Fishing	3 Brook Trout	1	C (at mouth of McClean Brook)
Friday, June 23	Swimming Canoeing	3 trout (in Allagash R.) 2 perch (?)	5 5 (from PA.)	A A
Friday, July 7	Canoeing, Fishing		2	B
Wednesday, July 12	Fishing	Minnows for bait	3	A (mouth of Negro Brook)
Thursday, July 13	No one seen on river-----			
Friday, July 14	Canoeing		4	C (off of Grew Island)
Thursday, July 20	Canoeing, Walking on gravel bar		3	C (near Hartt landing)

This survey was carried out between June 7 and August 11, and covered the area between the Dickey Bridge and the Hartt landing in St. Francis. In all, nineteen days were spent both walking the river banks and driving the thirteen-mile stretch of Rt. 161 which borders the river. A total of forty-six individuals were observed using this section of river for recreational purposes during this time period. Of those forty-six, thirteen (28%) were fishing and twenty-six (57%) were canoeing. Ten individuals (22%) were using the river for swimming.

The number of individuals fishing dropped off sharply after the first week of July. As the mean temperature of the river water had, by this time, reached 70°F., it is assumed fish had moved up into tributaries and lakes. Also, due to lack of rainfall, water levels had fallen to an extreme low; this would also serve to drive fish out of the mainstem. Canoeing, however, seemed to provide summer-long recreation. The majority of canoes carried two or more individuals (90%), and, while one group was on the mainstem St. John just to reach a landing point after canoeing the Allagash, the others had canoed the St. John before and had enjoyed it enough to return. Twenty-eight (61%) of the individuals encountered were from the immediate area. Eight (17%) were from Canada, five (11%) were from Pennsylvania, four (9%) were from downstate Maine, and one (2%) was from Massachusetts.

Of the forty-six people observed, twenty-four (52%) were approached and talked to. These included all the fishermen but one, and the swimmers, as well as a few canoeers. All of these twenty-four individuals supported the Grand Falls fishway proposal. Sixteen said they had heard of SALEN, and five (from Pennsylvania) said that the fishway sounded like a good idea but care should be taken not to hurt the river ecosystem.

SAVING OUR LAKES

**SERVING
THE FISH RIVER
CHAIN OF LAKES:
●FISH ●PORTAGE
●ST.FROID**



**●LONG ●MUD ●CROSS
●SQUARE ●EAGLE
●SOLDIER POND
●FISH RIVER
●ST. JOHN RIVER**

BOX 745, PRESQUE ISLE, MAINE 04769 • (207) 764-4126

NEWSLETTER

HAPPY HOLIDAYS

DECEMBER, 1994

Next Meeting

Will be held on January 12, 1995 at the Lakeview Restaurant. Starts at 6:00 p.m. Public and guests are welcome.

Canoe Trip

The Fish River Lakes Water Quality Association is in the process of trying to schedule a guided canoe fieldtrip along the Fish River in June of 1995. If you are interested, please call Nicky Violette at 764-4126 or write at PO Box 745, Presque Isle, Me. 04769.

Ideas for Annual Tour?

The FRLWQA is in the process on planning the upcoming Annual Tour, scheduled for Aug. of 1995. Tours are aimed to educate campowners of the importance of water quality. If there are particular issues of water quality you would like to learn more about, contact us at the RC&D office in Presque Isle as addressed above.

AND
OVER
HERE



Health Advisory in Maine: Mercury Contamination of Freshwater Fish Reminder!

Pregnant women, nursing mothers, women who may become pregnant, and children less than 8 years of age should not eat fish from lakes and ponds in the state. Other people should limit consumption (eating) of fish from these waters to 6-22 fish meals per year. People who eat large (old) fish should use the lower limit of 6 fish meals per year. People who limit themselves to eating smaller (younger) fish may use the upper limit of 22 fish meals per year.

Advisory was produced by: Dept. of Human Services, Bureau of Health, Dept. of Environmental protection, and Dept. of Inland Fisheries and Wildlife.

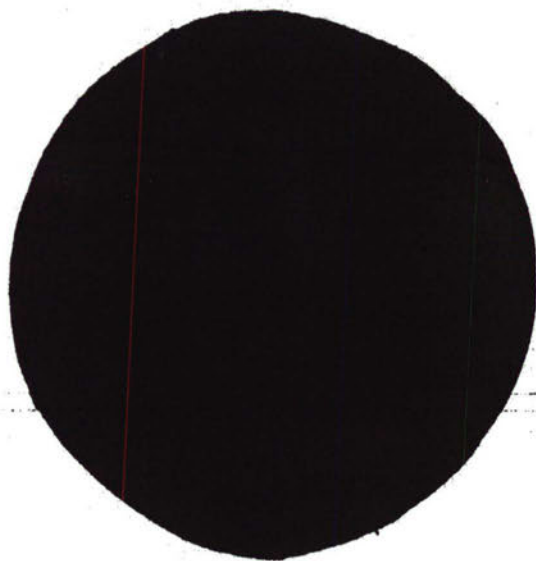
Area Schools Agree to Adopt A Stream

More than ten fourth grade teachers and several middle-high school professors in the Fish River Chain of Lakes have agreed to allow their classes to take part in "Adopt A Stream", "a nation wide project whose aim is to encourage students to gain a sense of stewardship, an environmental ethic and a willingness to take action to improve our environment."

Subject areas covered in the proposed curriculum include the geography and ecology of the specific adopted waterway, and ways in which people have negative and positive influences on Aroostook's watersheds. Students will be introduced to methods of checking water quality to evaluate whether the "adoptee" is as clean and clear as it should be.

It is hoped by implementing such projects in area schools the Fish River Lakes Water Quality Association will promote awareness and emphasize the importance of water quality.

Each of us
has a role to
play in the
healing of our
Earth.



Each of us
has
distinctive
gifts to bring.

FINAL REPORT

For: Raymonde N. Violette, Lakes Coordinator
Fish River Lakes Water Quality Association
Under the Auspices of the St. John Aroostook RC&D

HOURS IN FORMAL TRAINING

Attended all of the AmeriCorps training sessions as required for a total of 60+ hours of workshops and other demonstrations aimed to teach us job-related skills. The subject areas included as part of these sessions include; public speaking, working with communities, AIDS awareness, certification in CPR and First Aid, conflict resolution, fund raising, working with educational resources, resume writing, using the GIS system, and a Myers Briggs personality testing. I have also pursued training outside of the required AmeriCorps program in subject areas including; 319B Grant Writing, Water Quality Monitoring, Using the Universal Soil Loss Equation, Non-profit Board Training, Shoreland Zoning, Solid Waste Management, Septage and Sludge Disposal, and Vermiculture.

PROGRESS TOWARDS MEETING COMMUNITY SERVICE OBJECTIVES

Objective #1: Host two annual tours in August of 1995; (involve towns, county, DEP, LURC, St. John Valley S&WCD, RC&D, and others).

Progress: The said tours were both held on August 4, 1995. The planning process included a committee composed of representatives coming from various agencies, organizations and backgrounds ranging from; a member of the County Board, a biologist from the DEP, a coordinator from the St. John Valley S&WCD and the local RC&D, camp-owners, and other interested parties. Over 2000 camp-owners and more than 300 environmental officials, town representatives, farmers, and others were invited to attend the event which lasted from 9:00 a.m. till 8:00 p.m.. The topics for the workshops/demonstrations entailed subjects as follows:

- * A tour of the newly construct Wastewater Treatment Facility in Sinclair, Maine prepared by the County Public Works Director.
- * A tour of Farm Conservation Practices prepared for by a member of the St. John Valley S&WCD.
- * Displays from several environmental organizations and agencies.
- * A slide show about the dangers of poor watershed management prepared by a member of the Department of Transportation.
- * A demonstration about the latest technologies in Erosion Control.
- * Party Boat Tours of Long Lake with speakers who discussed topics;
 - The Value of Wetlands
 - Fishing, Tourism and the Economy
 - The Daigle Pond Project
 - The Barnbrook Road Project
 - Property Values and Water Quality; How the two are related
- * A cook-out at a camp where awards were presented to people who were recognized for their efforts to maintain water quality.
- * A workshop on Landscaping for Water Quality.
- * A workshop on Camp-owner Responsibilities.

Results: Although the weather was very rainy, 30 people attended the full 11 hours of touring. Feedback from the participants suggested the presentations were very well done and were informative and enjoyed by all. In addition, although up to \$2000 was budgeted for the tours, costs did not exceed \$1000, making the day educational and cost efficient.

Objective #2: Publish 4 newsletters and a biannual report. (The aim for these publications is primarily for educational purposes targeted towards camp-owners within the Fish River Chain of Lakes and other interested parties).

- * We obtained new volunteer monitors for 3 more of the 8 major lakes; Eagle, Cross, Square, and also Daigle Pond.
- * I worked in conjunction with Roy Bouchard from the DEP in Augusta to hold a water monitoring training session for the new volunteers.
- * I have carried this objective to a further degree in an effort to provide citizens of Daigle Pond with some technical assistance as they are working on a restoration project to alleviate the effects of pollution. Through a cooperative effort between myself and Dr. Eberhard Thiele, a UMFK Natural Sciences Professor, two senior environmental studies students were recruited to do work on the pond in return for college credit. I drafted a formal proposal for their work which would include doing a watershed survey, water quality monitoring, depth surveying of the pond, obtaining soil loss equation data and writing a formal report of their findings. Information gathered may be used to calculate the effectiveness of the proposed restoration project on the pond.

Objective #6: Be invited to select person/planning board meetings to give a presentation on the board's accomplishments and encourage continued support to improve the lakes.

Progress: In January I wrote to all of the major towns in the Fish River Chain of Lakes Watershed (8 in all). The purpose of the letter was to inform the public officials about the current workings of the association. In addition, I also emphasized our wish to attend one of their meetings to further relate what the FRLWQA has been doing in the area and what we would like to do in the future. Responses from the towns are indicated as follows:

<u>Have been invited</u>	<u>Status: Attended/Presented</u>
Van Buren Selectpersons	Yes
Frenchville Selectpersons	Yes
Frenchville Representatives	Yes
Fort Kent Select persons	Yes
Portage Planning Board	Drafted a formal letter.
Daigle Pond Citizens	Yes
Madawaska Selectpersons	No

Objective #7: Start an information and educational effort, attempt to develop a pilot demonstration such as Adopt A Landing, involve contractors and encourage friendly competition.

Progress: I, with the help of several volunteers implemented an Adopt A Stream Program in 5 local schools, (reaching up to 100 students). The program entailed four separate and widely spaced sessions; the first taught kids about the concept of a watershed and also showed them a bit of history about their particular adopted waterway. They obtained hands on experience in this session by constructing models of their watershed with topo maps, clay, and other materials. Funding for this activity was obtained through grants applied for and obtained from the Aroostook Beverage Company and also from an educational alliance group entitled "EduServ". The second session was hosted by Amanda Smith Hatch, another AmeriCorps volunteer who taught the students about the Ecology of their streams/and or river. The third session entailed using a DEP model of a watershed to show how pollution can enter a waterway, and how such pollution can be prevented. For the fourth session, the students visited their adopted waterway and learned monitoring techniques as well as how to maintain water quality.

Objective #8: Continue to encourage towns to develop septic disposal sites.

Progress: My involvement in this objective is still in question.

Objective #9: Raise funds to pay for planned activities.

ESTIMATED NUMBER OF VOLUNTEER HOURS

The following is an estimate of the number of volunteer hours of individuals who worked for the association throughout the year.

* Tours:

Approximately 10 people were involved in the planning process which consisted of 4 meetings up to 2 hours/meeting. Thus around 100 hours were donated (this includes travel time) to plan for the tours.

Approximately 15 speakers/ demonstrators were included in the actual tour. The time to prepare for the presentations varied from 1-10 hours with the average of 5 hours (this would include travel time). Thus around 75 hours were donated for speaking engagements at the tours.

Miscellaneous Activities at the tour; I can think of 4 volunteers who contributed a significant amount of time towards transporting attendees, cleaning, doing art-work and other activities. The estimate for their work is about 50 hours combined.

Total # of hours for the Annual Tour Volunteers is estimated at 225 hours.

* Newsletters and Biannual Reports

Various volunteers were involved in correlating newsletters and the biannual report. The estimated total number of donated hours is 4 hours/publication or 4 X 5 publications = 20 hours.

* Regular and Annual Meetings

All attendees of the meetings were volunteers. The average number of attendees/meeting was 10 multiplied by the average number of hours per meeting which is 5.2 (this includes travel time) gives us the estimate for volunteer hours at meetings to equal 52 hours.

* Monitoring for Water Quality

5 lake monitors take samples every 2 weeks during summer months. Estimated volunteer time for these individuals is 75 hours for all volunteers throughout the summer. An additional 30 hours can be cited for training time. Total is 105 hours.

* Adopt A Stream

3 Volunteers were involved in preparing and implementing the Adopt A Stream Program. Estimated # of donated time is 125 hours.

* DFO Model

Several volunteers helped in transporting the models to various locations and a school donated its van for the task. Estimated number of donated time is 50 hours.

* Miscellaneous Activities

Activities not mentioned; estimated volunteer time is 60 hours.

Total number of volunteer time for the AmeriCorps year 94-95 is 737 hours.

AMERICORPS FINAL REPORT
HOULTON FIELD OFFICE
Denise D. Perry, Water Quality Coordinator
August 21, 1995

PROJECTS:

1.) Shin Pond

The sanitary & natural resources survey has been completed and presented to the Shin Pond Association members at their Annual Meeting on August 13th. Please see attached copy of that report.

Scientific data was collected and analyzed by this Americorps participant. Those results are included in the final report.

This participant attended Association Executive Board Meetings and updated the members regarding the survey. There were also frequent contacts between this participant and the Association Board members so that they were kept abreast of the progress of the survey and scientific data.

2.) SOUTHERN AROOSTOOK SOIL & WATER CONSERVATION DISTRICT

During the past quarter I have completed the Resource Directory for the community group Healthy Communities. They have had a change of name which is reflected on the directory as Vital Pathways. The Resource Directory is included in this final report packet.

The District Agricultural Resource Directory has been completed and is in a three-ring binder ready for use by office staff.

I have continued to do computer work as requested for the District.

I am a member of the newly formed Meduxnekeag Watershed Coalition. Its' primary focus is water quality awareness under the direction of the 319 grant. I am also a member of Vital Pathways.

I have continued to be an active participant in office duties such as answering the telephone, assisting walk-in clients that request information and/or maps, etc.

3. HOULTON BAND OF MALISEET INDIANS

During the past quarter I have assisted the Band in the installation of 50 lysimeters near the Meduxnekeag River on the riparian buffers.

The mapping of all Tribal land was completed and the file of maps, calculations, and soils information was given to them in June of 1995. Enclosed is a copy of the information that was included in the file except for the maps and several hundred pages of soil information. The maps

AMERICORPS PARTICIPANT EVALUATION

PROJECTS & TASKS	DATE START	DATE END	DATE REVIEWED/ APPROVED
SHIN POND:			
Determ. camp owner	9/94	9/94	5/23/95
Dev. mailing list	9/94	9/94	5/23/95
Meet w/ Exec. Bd.	9/94	8/95	8/17/95
Formulate survey	9-11/94	11/94	8/17/95
Conduct survey	2/95-7/95	7/95	8/17/95
Compile data & write report	4/95	8/95	8/17/95
Present report to Exec. Bd.		8/13/95	8/17/95
Assist Assoc. in long-term planning	6/95	8/13/95	8/17/95
Did water testing	6/95	8/95	8/17/95
SASWCD			
Assist/Environ.	4/95	4/95	5/95
Assist /fish & shrub	5/95	5/95	5/95
Compile directory for dist. & H.C.	2/95	6/95	8/17/95
HOULTON BAND OF MALISEET INDIANS			
Assist/non-pt. source poll. asses.	(Not completed due to no storm event)		
Assist in resource inventory	1/95	5/95	5/23/95

VOLUNTEER HOURS

MEMBERS IN THE COMMUNITY OUTSIDE THE PROGRAM

1.) Members of Healthy Communities (Vital Pathways). These members are volunteer people from the community. The average number of members at weekly meetings was 20. The meetings were for one hour. I worked with these people from February until the end of June. Approx. number of hours is 300. Typically one-half of the meeting was devoted to the project that I was working on.

2.) Mr. Bill Low is a Healthy Communities member. Mr. Low gave me instruction on how to use the computer so that I became computer literate. I was also taught the Microsoft program so that I could input data for the resource directory for Healthy Communities, NRCS, and SASWCD. Approx. total hours from February through June is 400 hours.

3.) Otis Smith is an Associate Supervisor of the SASWCD. Mr. Smith also assisted the participant during the tour as an advisor both informally and on the Steering Committee. Approx. total hours from Sept. 1994 through August 1995 is 450 hours.

COMMUNITY MEMBER VOLUNTEER HOURS TO PROGRAM

1.) Executive board members of the Shin Pond Area Association. The Board consists of an average of seven members at meetings. The meetings were approx. two hours in length. Three meetings were held between September and August. Total approx. time is 40 hours.

2.) MR. Bud Blumenstock, member of the Shin Pond Association who volunteered many hours beyond his duties as a member of the Association. Numerous visits, phone calls, time spent discussing the direction of the project and his suggestions and advice were invaluable. His assistance was from September 1994 through August 1995. Total approx. time is 350 hours.

3.) Southern Arcostook Soil & Water Conservation District members averaged about 20 at the monthly board meeting. Approx. one hour was utilized for Americorps business. Total approx. time from September through August is 220 hours.

4.) Houlton Band of Maliseet Indians ; three staff people directly involved with the Americorps project. From September 1994 through August 1995, total approx. time is 400 hours for the staff members and another 50 hours for the members of the Tribal Council that was not directly involved

Barbara Coffey
St. Croix River Watershed Coordinator
Final Report

**Progress Towards Meeting Community Service Objective : Water Quality
Improvement Within St. Croix River Watershed.**

- A. Providing public education to Loggers within the watershed.
 - 1. Assisted the Maine Forest Service in holding three education workshops addressing the issues of:
 - * The importance of maintaining water quality
 - * How poor logging practices affect water quality
 - * Providing BMP alternatives to common negative practices.
 - 2. Worked with local logging supply companies and logging supply manufacturers in gathering information and samples of new technologies that may assist local loggers.
 - 3. Established a working dialog with loggers in the watershed area to assist in meeting loggers educational needs.
 - 4. Provided assistance with follow up workshop for road building crew.
- B. Provided outreach education to teachers within the watershed.
 - 1. Successfully applied for \$4,875.00 grant to run Sustainable Resource Institute.
 - 2. Coordinated 5 day Sustainable Resource Institute for County teachers, with hands on experience with the natural resources found within Washington County.
 - 3. Collected and distributed free natural resource education material to county teachers.
 - 4. Provided networking opportunity for teachers and resource professionals within the county.
 - 5. Coordinated Envirothon Coaching session for county schools participating in the Envirothon competition.
- C. Assisted St. Croix International Waterway Commission and Environment Canada with mapping project of the St. Croix River Estuary .
- D. Assist with general daily needs of Washington County Soil and Water Conservation District Office.
- E. Developed education agenda for 1995-96 Americorp position.
 - 1. Successfully applied for Urban Forestry Grant incorporating water quality education with urban forestry program in Princeton Maine to be implemented in 1995-96. (program to include outdoor classroom, arboretum development, tree planting program, municipal zoning workshops for selectmen, water quality monitoring program, lakes curriculum.)
 - 2. Agreed to assist St. Croix International Waterway Commission in the implementation of a Lakes curriculum for Northern part of the watershed.
 - 3. Developed plan for implementation of Envirothon program for fall of 1995.
 - 4. Developed plan to implement interactive education programs in watershed schools focussing on water quality issues, and gathered educational material and resources..

SHIN POND AREA ASSOCIATION
SURVEY

FINAL REPORT

Denise D. Perry
USDA-Americorps
August 1995

REPORT TO SHIN POND AREA ASSOCIATION
SANITARY & NATURAL RESOURCE SURVEY

Submitted by Denise D. Perry
USDA
Americorps

Date: August 8, 1995

INTRODUCTION:

In September of 1994 the Shin Pond Area Association and the USDA-AmeriCorps entered into an agreement for Ms. Perry to develop a sanitary survey for Shin Pond. This would include conducting the survey over the following months of 1994-95.

After intermittent discussions with Association members, it was decided that a natural resources inventory would also be useful to the residents for the purpose of obtaining a baseline knowledge of the local natural resources. The natural resources were separated into three categories: wild flowers, wild animals, and wild birds including water fowl and raptors.

The sanitary survey was initiated by the Association so that basic information could be obtained. At the point of the agreement, it was not decided whether the natural resources part would be included. It was included at a later date after discussions with Mr. Bud Blumenstock. He graciously gave some insight as to the kind of information that would be most informative and helpful to the residents of Shin Pond in their pursuit of long-term planning for the pond.

The sanitary and natural resources survey is a compilation of a Department of Environmental Protection survey that is generic; the remaining questions are those that were included by Ms. Perry.

Because the questions are not "closed" as is desired in order to do a statistically significant survey, the actual numbers cannot be analyzed with a degree of mathematical accuracy. However it seems premature to do so until the Association has made a decision as to their long-term goals and objectives. In order for a survey to be analyzed, the sample number should be much greater than the current number so that there is a more representative sample. Also the samples should be randomly selected.

The questionnaire was mailed to residents in February 1995. Initially the completed surveys were returned at a

thank-you to Craig and Terri Hill for their graciousness while I spent time at their place of business as a meeting place, and to Cindy McAlister for introducing me to those that were closely involved in the project and giving me a tour of the area. And finally, thanks to those residents who have come forward and completed the survey. Without their valuable information this survey would not exist.

SCIENTIFIC DATA COLLECTED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY:

LOWER SHIN POND:

Maximum Depth: 25' Mean Depth : Undetermined

Surface Area: 647.4 ac (262 ha.)

Flushing Rate: 4.29 flushes/yr.

Volume: 6498 ac. or 8010000.0 cu.m.

Direct Drainage Area: 4.66 sq. mi.

1993 Secchi Disk Transparency Data:

Min: 3.0 m Mean: 4.3 m Max: 5.6 MV

Last Dissolved Oxygen Profile: 1976 (prior to 1995 tests)

UPPER SHIN POND

Maximum Depth: 64'

Mean Depth: 19'

Surface Area: 543.6 ac. (220.0 ha)

Flushing Rate: 2.05 flushes/yr.

Volume: 9978 ac.ft. or 12300000.0 cu.m.

Direct Drainage Area: 14.63 sq.mi.

P.5

month of August after several warm days and limited rainfall. The ~~phosphorus~~ that is at the bottom of the pond is the nutrient source for the algae.

Cesspool	18	27.2
DATA	ACTUAL NUMBER	PERCENT
Outhouse	23	34.8
Straight pipe	0	0.0

DATE SEWER SYSTEM INSTALLED:

one year to five years	7	10.6
> 5 years but <10 years	4	6.0
10 or more years	6	9.0
20 or more years	8	12.1
30 or more years	2	3.0
40 or more years	8	12.1

Number of systems that never have been pumped	22	33.3
---	----	------

Number that indicate problems with system	3	4.5
---	---	-----

Number that fertilize lawn	4	6.0
----------------------------	---	-----

Number of year around occupancy	8	12.1
---------------------------------	---	------

TYPE OF LOT:

Open (>60%)	10	15.1
Wooded (>60%)	42	63.6
Mixed (50-50%)	11	16.6

SOURCE OF DRINKING WATER:

Spring	33	50.0
Drilled well	12	18.2
Dug well	8	12.1
Point well	1	1.5
Bottled	16	24.2

Residents unemployed:

2

P.9

3.0

RECOMMENDATIONS TO
SHIN POND ASSOCIATION

1. Education/dissemination of information concerning pollution, erosion, lake or pond eutrophication, and other issues via Education Committee. This could be accomplished by the use of:

- * Speakers with expertise at Association meetings
- * brochures
- * monthly newsletter
- * purchase of educational videos that can be lent or rented to residents for a small fee.
- * persistence and commitment toward the goal of helping residents fully understand water quality issues regarding Shin Pond.

2. Grant request for replacement of septic systems that are not functioning properly. Request must be made by the end of November in order to be included in 1996 allocation of money from the state.

3. Request for technical assistance from NRCS for roadways, ditches, and waterways improvements.

Need to discuss this with LURC and MT. Chase for areas that are public.

4. Owners can request technical assistance from NRCS for improvements in driveways, ditches, or slopes on their property to prevent runoff.

5. Owners can request assistance from their Cooperative Extension Service for suggestions for vegetation for a buffer zone between their camp and lake frontage.

6. A low-medium intensity water quality schedule to include bi-weekly secchi disk readings and temperature and D.O. profiles. These should begin in March and continue through October/November.

7. A higher intensity water quality study should include #6 as well as monthly summer phosphorus profiles (May-Sept) with a baseline in March before the ice goes out of the pond. Another test should be done in the late fall after the pond has had a chance to flush. Chlorophyll samples should also be taken at the same time that the phosphorus samples are taken.

8. Storm event sampling of tributaries and direct discharges to determine non-point source pollution.

SUGGESTIONS TO EDUCATION COMMITTEE FOR BROCHURES
REGARDING WATER QUALITY
(BROCHURES AVAILABLE FROM DEP)
(207)287-2811

1. Lake Phosphorus Control Program
2. Camp Road Maintenance Manual
3. Stabilization of Disturbed Soil Areas by Permanent Seedings of Grass
4. Nonpoint Source Pollution Management Plan
5. Phosphorus Control in Lake Watersheds
6. Protecting Maine Lakes From Phosphorus Pollution
7. Managing the Impact of Development on Lakes
8. Measures of Lake Water Quality
9. Swimmer's Itch
10. Zooplankton-The Critical Link

WASHINGTON COUNTY**Sustainable Resource Institute Scheduled**

Come be a part of the first Environmental Resource Education program tailored to fit the needs and environment of the Downeast community. This hands-on, field-based program has been specifically designed for educators from the Downeast area. The five day symposium will target the natural resources that are crucial for both our economic sustainability and long-term environmental health, and will be completed almost completely in the field. Participants will receive 4.5 CEU's, Project Learning Tree's curriculum book, and topic-specific curriculum designed to enhance the material covered each day.

This unique workshop will provide networking opportunities for teachers and area resource specialists, who could then act as information liaisons in the classroom. This program has been designed to not only include resource people from the field, but to introduce teachers to other local teachers who have incorporated natural resource education into their everyday curriculum.

The Goals of this institute are to:

- Provide teachers with basic environmental education..

- Put teachers in contact with local resource people who could assist teachers in the future.

- Educate teachers as to the natural resources to be found in the county.

- Aid teachers in bringing environmental education into their own classrooms.

- Provide teachers with free and ready to use, environmental resource education curriculum.

July 10th, **WATER RESOURCES** - UMM, Lead Mountain Water Quality Research Station, Machias River and Gardner Lake.

July 11th, **FORESTRY** - Maine Forest Service Tour of woodlots covering the different forestry management practices used in our county.

July 12th, **MARINE RESOURCES** - Beals Island Regional Shellfish Hatchery, E. Machias Fish Hatchery, Boat trip tour of Aquaculture sites in Eastport, Tour of Jim's Smoked Fish, WCTC Marine Trade Center. **LOBSTER AND SMOKED SALMON DINNER INCLUDED!**

July 13th, **AGRICULTURE and SOILS** - Traditional Farm, Organic Farm, Blueberry Barrens, Cranberry Bog, Dairy Farm, Pesticide container recycling project.

July 14th, **BRINGING the OUTSIDE into the CLASSROOM** - Tour of Demonstration Projects where Local Teachers have developed programs in their classrooms; including fish and clam hatcheries, water quality monitoring projects and outdoor classrooms.

Costs to Participants: Commuters: \$50.00 for the week; includes lunch each day, and 4.5 CEU's. Overnights: \$110.00 for the week; includes lunch and lodging each day, and 4.5 CEU's.

For a registration form and additional information contact: SRI c/o Barbara Coffey or Karen Bert at WC S&WCD PBX 121, Machias, ME 04654 (207) 255-3995.



Post-It™ Fax Note 7671		Date 9/19/95	# of pages 1
To # Karen Mallory	From Brian Beal		
Co./Dept.	Co. UMM		
Phone #	Phone # (807) 255-3313		
Fax # (207) 866-7262	Fax # (207) 255-4864		

MARINE EDUCATION CENTER COORDINATORS FINAL QUARTERLY REPORT AUGUST 2, 1995

In the past eleven months, AmeriCorps members have made great progress for the Beals Island Regional Shellfish Hatchery (BIRSH). Foremost, the members spawned and raised an estimated twenty-four million soft-shell clams, seventeen million more than the average for the past eight years. Assuming 60% survivorship and a threefold economic increase, this will eventually have an estimated indirect economic impact of \$3 million. This impact will have the largest effect on an estimated 4000 harvesters, shellfish dealers, and their families. Also through educational outreach developed by the AmeriCorps members, an additional 550 people were educated.

Furthermore, AmeriCorps members have participated in water quality monitoring, water quality education, clam surveys, and training of 20 new water quality volunteers. The members also wrote and received a grant to produce a water quality video which was made in conjunction with the Jonesport-Beals High School. Finally, participants' efforts assisted in opening 6 square miles of shellfish harvesting area. An estimated 400 people were impacted by these activities.

More recently, on July 21, 40 adult scallops were spawned resulting in an estimated 10 million larvae. Past efforts to raise scallop larvae to a seedable size have been largely unsuccessful, therefore an accurate economic impact cannot be calculated. In other new business, Americorps participants organized a Ben & Jerry's ice cream fundraiser at the Machias Blueberry Festival. However, AmeriCorps members will not be participating in the actual sale.

Throughout their tour of duty and in addition to their AmeriCorps service hours at BIRSH, members have volunteered a total of 182 hours to other organizations in the surrounding communities. Members have also recruited 131 volunteers who have together served approximately 3130 hours towards the AmeriCorps goals. Given that there are five AmeriCorps volunteers at BIRSH, this is a twenty-sixfold increase in volunteer efforts.

In conclusion, all of the BIRSH AmeriCorps volunteers would like to express their gratitude for the opportunity to serve in AmeriCorps at BIRSH. It has been an educational and fun experience and one they look forward to repeating in the future.

TO: Richard Baird c/o Elaine Tremble
FROM: Elizabeth A. Frederic, MACD Conservation Education Coordinator,
AMERICORP
RE: Third Quarterly Report

ITEM 4. Total Number of Hours in Training

May 25	Jordan Acres School, Brunswick/Wolf's Neck State Park	
	Outdoor Classroom Demonstrations/Water Quality Testing	7
June 12-14	Greenland Point Center, Princeton	20
June 28	Gorham SWCD Americorp Meeting/Brunswick school tour	
		<u>4</u>
Total		31

ITEM 5. Progress Toward Meeting Community Service Objectives

Objective 1: Assist with the Natural Resources Institute (NRI) program and encourage Conservation Districts to recruit teachers

As co-coordinator of the Natural Resources Institute, a week-long environmental education institute for teachers, the member had direct and indirect contact with local and state businesses, professional organizations, state government employees, Soil and Water Conservation District offices, R C & D's, teachers, newspaper reporters, and many others. NRI program information was prepared and mailed by the member to over 350 Maine teachers, newspapers and organizations state-wide. Twenty-five teachers registered for the NRI from almost every county in the state. Over \$5,000 in grants and sponsorships were obtained by the member to pay for the teachers expenses at the NRI. Community resource specialists who the member helped invite to the institute include college professors, foresters working for International Paper Company, staff from the Maine Departments of Agriculture and Marine Resources, Cooperative Extension, farmers, environmental education teachers, Americorp volunteers, municipal officials, biologists, NRCS Conservationists, aqua-culture businessmen, and others. The Natural Resources Institute Program was prepared by the member and printed for distribution. It includes five days devoted to: water quality, agriculture/mining, forestry/wildlife, marine resources, recycling, and environmental education.

Objective 2: Assist the Envirothon Committee and the 1994 coordinators with the statewide Envirothon program for high school students

The member assisted the State Envirothon Committee in encouraging 77 high school teams (approximately 462 students) representing 50 Maine high schools to participate in 5 regional environmental competitions. In addition to completing responsibilities involved with the organization of the State competition where 15 teams participated, the member helped organize and conduct two Envirothon workshops for 9 high school teams representing 54

forestry, wildlife, marine resources and education.

ITEM 7. PROJECTED OUTCOMES FOR NEXT QUARTER

In the next quarter, responsibilities involving the Natural Resources Institute will be completed. Recommendations for next year's NRI will be prepared.

ITEM 8. CHALLENGES

The greatest challenge for the member during the last quarter will be to prepare a water quality lesson which she will present at the NRI and to help make the week's institute a valuable experience for the 25 participating educators.

Problems:

Problems remain the same as the last quarter. There just isn't enough time in the day to complete all the tasks that the member wants to complete. It is impossible to keep up with all the educational materials that cross the member's desk. Not knowing if the Americorp program will be refunded is a serious problem because it makes decisions regarding other employment opportunities difficult.

ITEM 9. PRIMARY TRAINING

Training on the use of Internet and E-mail would be most useful because it is not a wave of the future but already here. Having an opportunity to visit the sites where other Americorp volunteers worked would be helpful as we all try to spread the word to the public relative to Americorp accomplishments.

ITEM 10. MEDIA COVERAGE. See enclosed release.

Winthrop students place 3rd in western regional 'Envirothon'

By ALAN KEAYS
Staff Writer

WINTHROP — A team of students from Winthrop High School who recently finished third in the Western Maine Regional Envirothon will now be going on to the statewide competition.

In the Western Regional Maine competition held Wednesday at Twitchell Farm in South Paris, the team of five students came in third place out of 19 teams, according to Steve Knight, the team's coach and chemistry teacher at the school.

Team members include Kevin Sousa, Erin Rosell, Lisa Ravis, Jacob Berry and Melissa Beesley.

"Envirothon is a national competition dealing with environmental issues," Knight said. "It was a real learning experience for the students."

This is the first year the school has fielded a team, Knight said.

"I started it to try to boost interest in

"I started it to try to boost interest in environmental work."

Steve Knight,
chemistry teacher

environmental work," he said.

During the regional competition, students were quizzed on many different environmental areas, such as wildlife, soils, forestry, water and current issues.

Questions tested vocabulary as well as knowledge of state regulations and endangered species, Knight said.

The top three teams in each of Maine's

four regions will now compete in the statewide finals June 2 at Sebago Lake Park, he said. Finishing ahead of Winthrop High School were teams from Mt. Blue High School and Hebron Academy.

The winner of the statewide competition will represent Maine in the national competition later this year in Idaho, Knight said.

Knight said in preparation for the statewide competition, team members will review their regional results and continue to read articles and material dealing with environmental issues.

Sousa, the only senior on the team, will be attending Unity College next year, majoring in wildlife biology.

"The competition was a lot of fun," Sousa said. "They had many different kinds of fur there and we had to identify what kind of animal it was from."

The team had to identify many different types of trees, soils and plants, he said.



Oxford County Soil and Water Conservation District Manager James Chandler, right, presents the first place envirothon trophy to Mt. Blue team members Joanna Sewall, Nate Gould, Kristen Bogardus, Virginia Beauregard, and Niilo Silanpaa.

Mt. Blue students win state envirothon contest

FARMINGTON — Mt. Blue High School's envirothon team earned first place Sunday at the state envirothon competition and hopes to go to the nationals in Idaho in July.

Fourteen teams from across the state competed at Sebago Lake State Park for top honors in environmental problem-solving.

The Mt. Blue team has made it to the state competition four years out of the five years that the Maine State Envirothon has been run. This year's team included Niilo Silanpaa, Nathan Gould, Kristen Bogardus, Joanna Sewall and Virginia Beauregard.

The team scored 371.5 out a possible 500 points at the state compe-

tion.

Members will go to Ricks College in Rexburg, Idaho, July 31 for the national competition if they are able to raise the approximately \$4,500 for airfare.

The envirothon program is designed to develop and test student's knowledge of natural resources including the areas of soils, water resources, forestry, wildlife and current environmental issues. This year the topic was groundwater.

The competition provides students with hands-on problem-solving experiences in environmentally-oriented activities to enable them to become environmentally aware, action-oriented adults.

Environmental teachers take instructional class

Natural Resources Institute notes its 10th anniversary

By BARBARA N. YEATON
Special to the Sun-Journal

FARMINGTON — Natural Resources Institute organizers are anticipating one of the best seasons since the environmental program for teachers was organized 10 years ago.

Working under the umbrella of the Maine Association of Conservation Districts, a new volunteer program called Americorps is organizing this year's program which goes from July 31 to Aug. 4.

The program includes field trips to dairy farms, the coast, a tree farm, a woodlot and recycling plants to get participants to learn about the environment.

The sponsors are the Maine Association of Conservation Districts, Soil and Water Conservation Districts, and the University of Maine at Farmington, with the assistance of Natural Resources Conservation Service.

The speakers on the first day will include Vance Wells of Wilton, a professor of biology at UMF; Jean Doty, professor of geology at UMF; Paul B. Frederic, a professor of geography at UMF; John Jemison, water quality specialist at the Cooperative Extension; in the morning and Dan Buckley, professor of aquatic biology at UMF; Friends of Wilson Lake; and Russ Mathers, Wilton Municipal Treatment Plant manager in the afternoon.

On the second day, the presenters will be Perry Lamb of New Sharon, a woodlot owner; Rod Kennedy of Dover-Foxcroft and John Starrett, a forester at International Paper.

On day three, the speakers will be Marine Agriculture Specialist



Natural Resource Institute staff are preparing for the 10th Annual Institute in Farmington. Holly Sheehan, left, environmental education coordinator for Cumberland County, shows water testing equipment to Elizabeth Frederic, education coordinator for the state. Both women are with the Americorps volunteer program and will be speakers the first day of the institute on water resources.

BARBARA N. YEATON PHOTO

Sam Chapman; Dr. Bernie McAllice, a marine biologist; and Elaine Jones, an education director for the Maine Department of Marine Resources.

On the fourth day, presenters will be dairy farmer L. Herbert York; Paul Hersey and Lisa Krail, soils resource specialists; Richard Baird, deputy state conservationist; Dr. Archie "Bill" Berry, professor of geology at UMF; Jay farmer

Thayden Farrington; and Cooperative Extension educator Ric Barr.

Day five includes Jay recycling coordinator Rhonda Irish; Roy Taylor, Jay High School teacher (1995 MACO High School Teacher of the Year); Dr. John Mudge, professor (retired) of biology at UMF; and Stuart Duncan, supervisor of the Somerset County Soil and Water Conservation District.

**Maine Americorps
Midcoast Fisheries and Water Quality Final Report
Lee Humphreys, Charles Parker, Hollis Tedford**

1. Training

Training sessions provided us with the opportunity to broaden our knowledge in areas of conflict management, health related issues, environmental issues, and computer skills. We were able to utilize these and many other skills in our daily operations as Americorps volunteers. The Midcoast team conducted an all day water quality training session for eleven Americorps volunteers.

2. Progress Towards Meeting Community Service Objectives

Objective #1 was to provide assistance to twelve coastal communities who are concerned with fisheries resources and wish to maintain and improve water quality.

We provided water quality assistance to 26 communities in the area of water quality this year. Assistance was provided to these towns to identify point and non-point pollution sources, conduct sanitary shoreline surveys, research various community water quality monitoring programs, pursue federal and state assistance for repair or removal of unacceptable sewage systems within the community, and prioritize sampling sites to coincide with efforts by various government environmental agencies, i.e. Dept. of Marine Resources and Dept. of Environmental Protection.

Objective #2 is to provide training and technical assistance in the area of water quality to 12 coastal communities and local high schools.

The number of communities served exceeded our goal number of twelve. We presented and implemented water quality curriculum in 15 consolidated high schools, which represent 29 towns and townships. These high schools are partnered with community groups in their respective districts to monitor water quality. Training was given in various methods of field and laboratory sampling techniques. Technical training was provided by the Midcoast Team in sampling parameters such as:

- Fecal Coliform Membrane Filtration
- Dissolved Oxygen (Winkler Titration Method and DO meter)
- Salinity (Refractometer and Hydrometer)
- pH (Colorimeter and hand-held meter)
- Temperature
- Data management and interpretation
- As well as other variables specific to the needs of the individual groups

The Midcoast Team also was called upon by the Maine Department of Marine Resources to assist in training of volunteers to sample for their labs in Lamoine and Boothbay Harbor. Community members, through our training and technical assistance, are better able to understand the dynamics of federally mandated water quality monitoring programs, and have acquired the scientific expertise to collect and analyze data which is vital to protecting water

with new techniques and keep sampling procedures parallel on a state and national level. Quality assurance and control plans need to be devised and followed under certain guidelines. More work needs to be done to carry through with remediation efforts. Communities need the support to solve their own problems and in the process educate young and old alike.

5. Results of Tabulations per July 27, 1995 Memo

- Volunteer hours of Americorps members outside the program 400 hrs.
- Community member volunteer hours to program 6000 hrs.

A. Total Hours of AmeriCorps-Sponsored Training to Date: 80 (including final training session)

B. Progress Towards Meeting Community Service Objectives:

1.) Quantify and qualify potential salmonid spawning, rearing and staging habitats in the Upper St. John Watershed (200 hrs.):

- *6/7-Toured Allagash area, looking for canoe pull-out sites.
- *6/8-Began creel survey, toured area.
- *6/9-Trained in canoe work, data collection with YCAP crew.
- *6/16-Walked river banks, explored area, met with Allagash Town Manager to discuss project, and possible public access sites.
- *6/20-Spent day in Allagash, collecting river data.
- *6/23-Canoed section of St. John with YCAP crew.
- *7/7-Canoed section of St. John with YCAP crew.
- *7/12-Spent day on river banks, mapping.
- *7/13-Spent day on river banks, mapping.
- *7/14-Canoed section of St. John with YCAP crew.
- *7/20-Walked banks of river, mapping.
- *7/21-Walked banks of river, mapping.
- *7/28-Canoed section of St. John with YCAP crew.
- *8/3-8/11: Designed habitat map

2.) Conduct a creel survey to assess the biological, social and economic impacts of proposed fisheries initiatives on existing recreational fisheries of the Upper St. John (200 hrs.).

- *Began creel survey, 6/7, at Big Rapids
- *6/8, 6/9: spent 3 hours each day walking river banks looking for fishermen.
- *6/16: 2 hours spent on creel survey
- *6/20: Decided to enlarge survey to include individuals using the river for any reason (canoeing, hiking, etc.)
- *6/23, 6/26, 7/7, 7/12, 7/13, 7/14, 7/26, & 7/28, 8/1, 8/2, 8/10, 8/11: Public use survey

3.) Work cooperatively with State, Provincial and Federal agencies, as well as private sector recreational fisheries groups, in support of ongoing management planning and development initiatives (150 hrs.)

- *6/4: Attended SALEN Board of Directors meeting.
- *6/5-9: Designed St. John-Aroostook RC&D summer newsletter.
- *7/12-7/18: Designed and mailed newsletter for Atlantic Salmon Association.

C. Primary Accomplishments:

1. Tour of potential public access sites with personnel from the Dept. of Conservation.
2. River work with local YCAP team.
3. Completion of plan of work by 7/31.

E. Primary Challenges:

The organization for which I worked, SALEN, Inc., became inactive in terms of field projects after the Governor's ruling. Therefore, I was left to myself, and without the assistance and support of the St. John-Aroostook RC&D, and Aubrey Raus's YCAP crew, I would have accomplished very little. I suggest that new AmeriCorps positions not be developed for politically-based projects, in which the success or failure of the projected year of service is based solely on the success or failure of that year's political events.

SAVING OUR LAKES

**SERVING
THE FISH RIVER
CHAIN OF LAKES:
●FISH ●PORTAGE
●ST.FROID**



**●LONG ●MUD ●CROSS
●SQUARE ●EAGLE
●SOLDIER POND
●FISH RIVER
●ST. JOHN RIVER**

BOX 745, PRESQUE ISLE, MAINE 04769 • (207) 764-4126

NEWSLETTER

HAPPY HOLIDAYS

DECEMBER, 1994

Next Meeting

Will be held on January 12, 1995 at the Lakeview Restaurant. Starts at 6:00 p.m. Public and guests are welcome.

Canoe Trip

The Fish River Lakes Water Quality Association is in the process of trying to schedule a guided canoe fieldtrip along the Fish River in June of 1995. If you are interested, please call Nicky Violette at 764-4126 or write at PO Box 745, Presque Isle, Me. 04769.

Ideas for Annual Tour?

The FRLWQA is in the process on planning the upcoming Annual Tour, scheduled for Aug. of 1995. Tours are aimed to educate campowners of the importance of water quality. If there are particular issues of water quality you would like to learn more about, contact us at the RC&D office in Presque Isle as addressed above.



Health Advisory in Maine: Mercury Contamination of Freshwater Fish Reminder!

Pregnant women, nursing mothers, women who may become pregnant, and children less than 8 years of age should not eat fish from lakes and ponds in the state. Other people should limit consumption (eating) of fish from these waters to 6-22 fish meals per year. People who eat large (old) fish should use the lower limit of 6 fish meals per year. People who limit themselves to eating smaller (younger) fish may use the upper limit of 22 fish meals per year.

Advisory was produced by: Dept. of Human Services, Bureau of Health, Dept. of Environmental protection, and Dept. of Inland Fisheries and Wildlife.

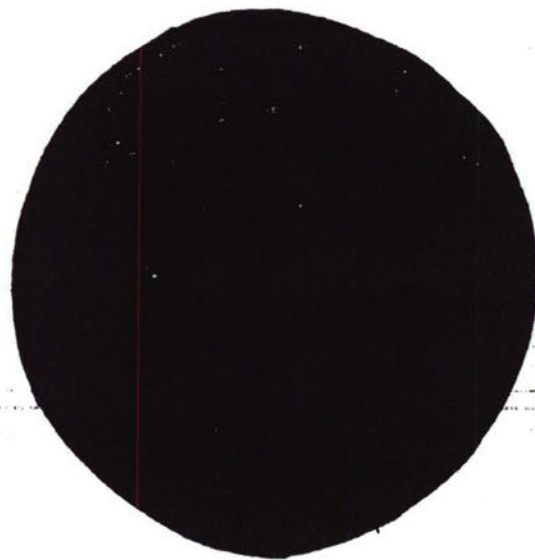
Area Schools Agree to Adopt A Stream

More than ten fourth grade teachers and several middle-high school professors in the Fish River Chain of Lakes have agreed to allow their classes to take part in "Adopt A Stream," a nation wide project whose aim is to encourage students to gain a sense of stewardship, an environmental ethic and a willingness to take action to improve our environment."

Subject areas covered in the proposed curriculum include the geography and ecology of the specific adopted waterway, and ways in which people have negative and positive influences on Aroostook's watersheds. Students will be introduced to methods of checking water quality to evaluate whether the "adoptee" is as clean and clear as it should be.

It is hoped by implementing such projects in area schools the Fish River Lakes Water Quality Association will promote awareness and emphasize the importance of water quality.

Each of us
has a role to
play in the
healing of our
Earth.



Each of us
has
distinctive
gifts to bring.

FINAL REPORT

For: Raymonde N. Violette, Lakes Coordinator
Fish River Lakes Water Quality Association
Under the Auspices of the St. John Aroostook RC&D

HOURS IN FORMAL TRAINING

Attended all of the AmeriCorps training sessions as required for a total of 60+ hours of workshops and other demonstrations aimed to teach us job-related skills. The subject areas included as part of these sessions include; public speaking, working with communities, AIDS awareness, certification in CPR and First Aid, conflict resolution, fund raising, working with educational resources, resume writing, using the GIS system, and a Myers Briggs personality testing. I have also pursued training outside of the required AmeriCorps program in subject areas including; 319B Grant Writing, Water Quality Monitoring, Using the Universal Soil Loss Equation, Non-profit Board Training, Shoreland Zoning, Solid Waste Management, Septage and Sludge Disposal, and Vermiculture.

PROGRESS TOWARDS MEETING COMMUNITY SERVICE OBJECTIVES

Objective #1: Host two annual tours in August of 1995; (involve towns, county, DEP, LURC, St. John Valley S&WCD, RC&D, and others).

Progress: The said tours were both held on August 4, 1995. The planning process included a committee composed of representatives coming from various agencies, organizations and backgrounds ranging from; a member of the County Board, a biologist from the DEP, a coordinator from the St. John Valley S&WCD and the local RC&D, camp-owners, and other interested parties. Over 2000 camp-owners and more than 300 environmental officials, town representatives, farmers, and others were invited to attend the event which lasted from 9:00 a.m. till 8:00 p.m.. The topics for the workshops/demonstrations entailed subjects as follows:

- * A tour of the newly construct Wastewater Treatment Facility in Sinclair, Maine prepared by the County Public Works Director.
- * A tour of Farm Conservation Practices prepared for by a member of the St. John Valley S&WCD.
- * Displays from several environmental organizations and agencies.
- * A slide show about the dangers of poor watershed management prepared by a member of the Department of Transportation.
- * A demonstration about the latest technologies in Erosion Control.
- * Party Boat Tours of Long Lake with speakers who discussed topics;
 - The Value of Wetlands
 - Fishing, Tourism and the Economy
 - The Daigle Pond Project
 - The Barnbrook Road Project
 - Property Values and Water Quality; How the two are related
- * A cook-out at a camp where awards were presented to people who were recognized for their efforts to maintain water quality.
- * A workshop on Landscaping for Water Quality.
- * A workshop on Camp-owner Responsibilities.

Results: Although the weather was very rainy, 30 people attended the full 11 hours of touring. Feedback from the participants suggested the presentations were very well done and were informative and enjoyed by all. In addition, although up to \$2000 was budgeted for the tours, costs did not exceed \$1000, making the day educational and cost efficient.

Objective #2: Publish 4 newsletters and a biannual report. (The aim for these publications is primarily for educational purposes targeted towards camp-owners within the Fish River Chain of Lakes and other interested parties).

- * We obtained new volunteer monitors for 3 more of the 8 major lakes; Eagle, Cross, Square, and also Daigle Pond.
- * I worked in conjunction with Roy Bouchard from the DEP in Augusta to hold a water monitoring training session for the new volunteers.
- * I have carried this objective to a further degree in an effort to provide citizens of Daigle Pond with some technical assistance as they are working on a restoration project to alleviate the effects of pollution. Through a cooperative effort between myself and Dr. Eberhard Thiele, a UMFK Natural Sciences Professor, two senior environmental studies students were recruited to do work on the pond in return for college credit. I drafted a formal proposal for their work which would include doing a watershed survey, water quality monitoring, depth surveying of the pond, obtaining soil loss equation data and writing a formal report of their findings. Information gathered may be used to calculate the effectiveness of the proposed restoration project on the pond.

Objective #6: Be invited to select person/planning board meetings to give a presentation on the board's accomplishments and encourage continued support to improve the lakes.

Progress: In January I wrote to all of the major towns in the Fish River Chain of Lakes Watershed (8 in all). The purpose of the letter was to inform the public officials about the current workings of the association. In addition, I also emphasized our wish to attend one of their meetings to further relate what the FRLWQA has been doing in the area and what we would like to do in the future. Responses from the towns are indicated as follows:

<u>Have been invited</u>	<u>Status: Attended/Presented</u>
Van Buren Selectpersons	Yes
Frenchville Selectpersons	Yes
Frenchville Representatives	Yes
Fort Kent Select persons	Yes
Portage Planning Board	Drafted a formal letter.
Daigle Pond Citizens	Yes
Madawaska Selectpersons	No

Objective #7: Start an information and educational effort, attempt to develop a pilot demonstration such as Adopt A Landing, involve contractors and encourage friendly competition.

Progress: I, with the help of several volunteers implemented an Adopt A Stream Program in 5 local schools, (reaching up to 100 students). The program entailed four separate and widely spaced sessions; the first taught kids about the concept of a watershed and also showed them a bit of history about their particular adopted waterway. They obtained hands on experience in this session by constructing models of their watershed with topo maps, clay, and other materials. Funding for this activity was obtained through grants applied for and obtained from the Aroostook Beverage Company and also from an educational alliance group entitled "EduServ". The second session was hosted by Amanda Smith Hatch, another AmeriCorps volunteer who taught the students about the Ecology of their streams/and or river. The third session entailed using a DEP model of a watershed to show how pollution can enter a waterway, and how such pollution can be prevented. For the fourth session, the students visited their adopted waterway and learned monitoring techniques as well as how to maintain water quality.

Objective #8: Continue to encourage towns to develop septic disposal sites.

Progress: My involvement in this objective is still in question.

Objective #9: Raise funds to pay for planned activities.

ESTIMATED NUMBER OF VOLUNTEER HOURS

The following is an estimate of the number of volunteer hours of individuals who worked for the association throughout the year.

* Tours:

Approximately 10 people were involved in the planning process which consisted of 4 meetings up to 2 hours/meeting. Thus around 100 hours were donated (this includes travel time) to plan for the tours.

Approximately 15 speakers/ demonstrators were included in the actual tour. The time to prepare for the presentations varied from 1-10 hours with the average of 5 hours (this would include travel time). Thus around 75 hours were donated for speaking engagements at the tours.

Miscellaneous Activities at the tour; I can think of 4 volunteers who contributed a significant amount of time towards transporting attendees, cleaning, doing art-work and other activities. The estimate for their work is about 50 hours combined.

Total # of hours for the Annual Tour Volunteers is estimated at 225 hours.

* Newsletters and Biannual Reports

Various volunteers were involved in correlating newsletters and the biannual report. The estimated total number of donated hours is 4 hours/publication or 4 X 5 publications = 20 hours.

* Regular and Annual Meetings

All attendees of the meetings were volunteers. The average number of attendees/meeting was 10 multiplied by the average number of hours per meeting which is 5.2 (this includes travel time) gives us the estimate for volunteer hours at meetings to equal 52 hours.

* Monitoring for Water Quality

5 lake monitors take samples every 2 weeks during summer months. Estimated volunteer time for these individuals is 75 hours for all volunteers throughout the summer. An additional 30 hours can be cited for training time. Total is 105 hours.

* Adopt A Stream

3 Volunteers were involved in preparing and implementing the Adopt A Stream Program. Estimated # of donated time is 125 hours.

* DFO Model

Several volunteers helped in transporting the models to various locations and a school donated its van for the task. Estimated number of donated time is 50 hours.

* Miscellaneous Activities

Activities not mentioned; estimated volunteer time is 60 hours.

Total number of volunteer time for the AmeriCorps year 94-95 is 737 hours.

AMERICORPS FINAL REPORT
HOULTON FIELD OFFICE
Denise D. Perry, Water Quality Coordinator
August 21, 1995

PROJECTS:

1.) Shin Pond

The sanitary & natural resources survey has been completed and presented to the Shin Pond Association members at their Annual Meeting on August 13th. Please see attached copy of that report.

Scientific data was collected and analyzed by this Americorps participant. Those results are included in the final report.

This participant attended Association Executive Board Meetings and updated the members regarding the survey. There were also frequent contacts between this participant and the Association Board members so that they were kept abreast of the progress of the survey and scientific data.

2.) SOUTHERN AROOSTOOK SOIL & WATER CONSERVATION DISTRICT

During the past quarter I have completed the Resource Directory for the community group Healthy Communities. They have had a change of name which is reflected on the directory as Vital Pathways. The Resource Directory is included in this final report packet.

The District Agricultural Resource Directory has been completed and is in a three-ring binder ready for use by office staff.

I have continued to do computer work as requested for the District.

I am a member of the newly formed Meduxnekeag Watershed Coalition. Its' primary focus is water quality awareness under the direction of the 319 grant. I am also a member of Vital Pathways.

I have continued to be an active participant in office duties such as answering the telephone, assisting walk-in clients that request information and/or maps, etc.

3. HOULTON BAND OF MALISEET INDIANS

During the past quarter I have assisted the Band in the installation of 50 lysimeters near the Meduxnekeag River on the riparian buffers.

The mapping of all Tribal land was completed and the file of maps, calculations, and soils information was given in June of 1995. Enclosed is a copy of the -- included in the file except for the soil information. The maps

AMERICORPS PARTICIPANT EVALUATION

PROJECTS & TASKS	DATE START	DATE END	DATE REVIEWED/ APPROVED
SHIN POND:			
Determ. camp owner	9/94	9/94	5/23/95
Dev. mailing list	9/94	9/94	5/23/95
Meet w/ Exec. Bd.	9/94	8/95	8/17/95
Formulate survey	9-11/94	11/94	8/17/95
Conduct survey	2/95-7/95	7/95	8/17/95
Compile data & write report	4/95	8/95	8/17/95
Present report to Exec. Bd.		8/13/95	8/17/95
Assist Assoc. in long-term planning	6/95	8/13/95	8/17/95
Did water testing	6/95	8/95	8/17/95
SASWCD			
Assist/Environ.	4/95	4/95	5/95
Assist /fish & shrub	5/95	5/95	5/95
Compile directory for dist. & H.C.	2/95	6/95	8/17/95
HOULTON BAND OF MALISEET INDIANS			
Assist/non-pt. source poll. asses.	(Not completed due to no storm event)		
Assist in resource inventory	1/95	5/95	5/23/95

SHIN POND AREA ASSOCIATION
SURVEY

FINAL REPORT

Denise D. Perry
USDA-AmeriCorps
August 1995

REPORT TO SHIN POND AREA ASSOCIATION
SANITARY & NATURAL RESOURCE SURVEY

Submitted by Denise D. Perry
USDA
Americorps

Date: August 8, 1995

INTRODUCTION:

In September of 1994 the Shin Pond Area Association and the USDA-Americorps entered into an agreement for Ms. Perry to develop a sanitary survey for Shin Pond. This would include conducting the survey over the following months of 1994-95.

After intermittent discussions with Association members, it was decided that a natural resources inventory would also be useful to the residents for the purpose of obtaining a baseline knowledge of the local natural resources. The natural resources were separated into three categories: wild flowers, wild animals, and wild birds including water fowl and raptors.

The sanitary survey was initiated by the Association so that basic information could be obtained. At the point of the agreement, it was not decided whether the natural resources part would be included. It was included at a later date after discussions with Mr. Bud Blumenstock. He graciously gave some insight as to the kind of information that would be most informative and helpful to the residents of Shin Pond in their pursuit of long-term planning for the pond.

The sanitary and natural resources survey is a compilation of a Department of Environmental Protection survey that is generic; the remaining questions are those that were included by Ms. Perry.

Because the questions are not "closed" as is desired in order to do a statistically significant survey, the actual numbers cannot be analyzed with a degree of mathematical accuracy. However it seems premature to do so until the Association has made a decision as to their long-term goals and objectives. In order for a survey to be analyzed, the sample number should be much greater than the current number so that there is a more representative sample. Also the samples should be randomly selected.

The questionnaire was mailed to residents in February 1995. Initially, the completed surveys were returned at a

thank-you to Craig and Terri Hill for their graciousness while I spent time at their place of business as a meeting place, and to Cindy McAlister for introducing me to those that were closely involved in the project and giving me a tour of the area. And finally, thanks to those residents who have come forward and completed the survey. Without their valuable information this survey would not exist.

SCIENTIFIC DATA COLLECTED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY:

LOWER SHIN POND:

Maximum Depth: 25' Mean Depth : Undetermined

Surface Area: 647.4 ac (262 ha.)

Flushing Rate: 4.29 flushes/yr.

Volume: 6498 ac. or 8010000.0 cu.m.

Direct Drainage Area: 4.66 sq. mi.

1993 Secchi Disk Transparency Data:

Min: 3.0 m Mean: 4.3 m Max: 5.6 MV

Last Dissolved Oxygen Profile: 1976 (prior to 1995 tests)

UPPER SHIN POND

Maximum Depth: 64'

Mean Depth: 19'

Surface Area: 543.6 ac. (220.0 ha)

Flushing Rate: 2.05 flushes/yr.

Volume: 9978 ac.ft. or 12300000.0 cu.m.

Direct Drainage Area: 14.63 sq.mi.

P.5

month of August after several warm days and limited rainfall. The ~~phosphorus~~ that is at the bottom of the pond is the nutrient source for the algae.

P.7

Cesspool	18	27.2
DATA	ACTUAL NUMBER	PERCENT
Outhouse	23	34.8
Straight pipe	0	0.0

DATE SEWER SYSTEM INSTALLED:

one year to five years	7	10.6
> 5 years but <10 years	4	6.0
10 or more years	6	9.0
20 or more years	8	12.1
30 or more years	2	3.0
40 or more years	8	12.1

Number of systems that never have been pumped	22	33.3
Number that indicate problems with system	3	4.5
Number that fertilize lawn	4	6.0
Number of year around occupancy	8	12.1

TYPE OF LOT:

Open (>60%)	10	15.1
Wooded (>60%)	42	63.6
Mixed (50-50%)	11	16.6

SOURCE OF DRINKING WATER:

Spring	33	50.0
Drilled well	12	18.2
Dug well	8	12.1
Point well	1	1.5
Bottled	16	24.2

Residents unemployed:

2

P.9

3.0

RECOMMENDATIONS TO
SHIN POND ASSOCIATION

1. Education/dissemination of information concerning pollution, erosion, lake or pond eutrophication, and other issues via Education Committee. This could be accomplished by the use of:

- * Speakers with expertise at Association meetings
- * brochures
- * monthly newsletter
- * purchase of educational videos that can be lent or rented to residents for a small fee.
- * persistence and commitment toward the goal of helping residents fully understand water quality issues regarding Shin Pond.

2. Grant request for replacement of septic systems that are not functioning properly. Request must be made by the end of November in order to be included in 1996 allocation of money from the state.

3. Request for technical assistance from NRCS for roadways, ditches, and waterways improvements.

Need to discuss this with LURC and MT. Chase for areas that are public.

4. Owners can request technical assistance from NRCS for improvements in driveways, ditches, or slopes on their property to prevent runoff.

5. Owners can request assistance from their Cooperative Extension Service for suggestions for vegetation for a buffer zone between their camp and lake frontage.

6. A low-medium intensity water quality schedule to include bi-weekly secchi disk readings and temperature and D.O. profiles. These should begin in March and continue through October/November.

7. A higher intensity water quality study should include #6 as well as monthly summer phosphorus profiles (May-Sept) with a baseline in March before the ice goes out of the pond. Another test should be done in the late fall after the pond has had a chance to flush. Chlorophyll samples should also be taken at the same time that the phosphorus samples are taken.

P.13

SUGGESTIONS TO EDUCATION COMMITTEE FOR BROCHURES
REGARDING WATER QUALITY
(BROCHURES AVAILABLE FROM DEP)
(207)287-2811

1. Lake Phosphorus Control Program
2. Camp Road Maintenance Manual
3. Stabilization of Disturbed Soil Areas by Permanent Seedings of Grass
4. Nonpoint Source Pollution Management Plan
5. Phosphorus Control in Lake Watersheds
6. Protecting Maine Lakes From Phosphorus Pollution
7. Managing the Impact of Development on Lakes
8. Measures of Lake Water Quality
9. Swimmer's Itch
10. Zooplankton-The Critical Link

Barbara Coffey
St. Croix River Watershed Coordinator
Final Report

**Progress Towards Meeting Community Service Objective : Water Quality
Improvement Within St. Croix River Watershed.**

- A. Providing public education to Loggers within the watershed.
 - 1. Assisted the Maine Forest Service in holding three education workshops addressing the issues of:
 - * The importance of maintaining water quality
 - * How poor logging practices affect water quality
 - * Providing BMP alternatives to common negative practices.
 - 2. Worked with local logging supply companies and logging supply manufacturers in gathering information and samples of new technologies that may assist local loggers.
 - 3. Established a working dialog with loggers in the watershed area to assist in meeting loggers educational needs.
 - 4. Provided assistance with follow up workshop for road building crew.
- B. Provided outreach education to teachers within the watershed.
 - 1. Successfully applied for \$4,875.00 grant to run Sustainable Resource Institute.
 - 2. Coordinated 5 day Sustainable Resource Institute for County teachers, with hands on experience with the natural resources found within Washington County.
 - 3. Collected and distributed free natural resource education material to county teachers.
 - 4. Provided networking opportunity for teachers and resource professionals within the county.
 - 5. Coordinated Envirothon Coaching session for county schools participating in the Envirothon competition.
- C. Assisted St. Croix International Waterway Commission and Environment Canada with mapping project of the St. Croix River Estuary.
- D. Assist with general daily needs of Washington County Soil and Water Conservation District Office.
- E. Developed education agenda for 1995-96 Americorp position.
 - 1. Successfully applied for Urban Forestry Grant incorporating water quality education with urban forestry program in Princeton Maine to be implemented in 1995-96. (program to include outdoor classroom, arboretum development, tree planting program, municipal zoning workshops for selectmen, water quality monitoring program, lakes curriculum.)
 - 2. Agreed to assist St. Croix International Waterway Commission in the implementation of a Lakes curriculum for Northern part of the watershed.
 - 3. Developed plan for implementation of Envirothon program for fall of 1995.
 - 4. Developed plan to implement interactive education programs in watershed schools focussing on water quality issues, and gathered educational material and resources..

Post-It™ Fax Note	7671	Date	9/19/95	# of pages	1
To	Karen Mallory	From	Brian Beal		
Co./Dept.		Co.	UMM		
Phone #		Phone #	(807) 255-3313		
Fax #	(207) 866-7262	Fax #	(207) 255-4864		

MARINE EDUCATION CENTER COORDINATORS FINAL QUARTERLY REPORT AUGUST 2, 1995

In the past eleven months, AmeriCorps members have made great progress for the Beals Island Regional Shellfish Hatchery (BIRSH). Foremost, the members spawned and raised an estimated twenty-four million soft-shell clams, seventeen million more than the average for the past eight years. Assuming 60% survivorship and a threefold economic increase, this will eventually have an estimated indirect economic impact of \$3 million. This impact will have the largest effect on an estimated 4000 harvesters, shellfish dealers, and their families. Also through educational outreach developed by the AmeriCorps members, an additional 550 people were educated.

Furthermore, AmeriCorps members have participated in water quality monitoring, water quality education, clam surveys, and training of 20 new water quality volunteers. The members also wrote and received a grant to produce a water quality video which was made in conjunction with the Jonesport-Beals High School. Finally, participants' efforts assisted in opening 6 square miles of shellfish harvesting area. An estimated 400 people were impacted by these activities.

More recently, on July 21, 40 adult scallops were spawned resulting in an estimated 10 million larvae. Past efforts to raise scallop larvae to a seedable size have been largely unsuccessful, therefore an accurate economic impact cannot be calculated. In other new business, Americorps participants organized a Ben & Jerry's ice cream fundraiser at the Machias Blueberry Festival. However, AmeriCorps members will not be participating in the actual sale.

Throughout their tour of duty and in addition to their AmeriCorps service hours at BIRSH, members have volunteered a total of 182 hours to other organizations in the surrounding communities. Members have also recruited 131 volunteers who have together served approximately 3130 hours towards the AmeriCorps goals. Given that there are five AmeriCorps volunteers at BIRSH, this is a twenty-sixfold increase in volunteer efforts.

In conclusion, all of the BIRSH AmeriCorps volunteers would like to express their gratitude for the opportunity to serve in AmeriCorps at BIRSH. It has been an educational and fun experience and one they look forward to repeating in the future.

TO: Richard Baird c/o Elaine Tremble
FROM: Elizabeth A. Frederic, MACD Conservation Education Coordinator,
AMERICORP
RE: Third Quarterly Report

ITEM 4. Total Number of Hours in Training

May 25	Jordan Acres School, Brunswick/Wolf's Neck State Park	
	Outdoor Classroom Demonstrations/Water Quality Testing	7
June 12-14	Greenland Point Center, Princeton	20
June 28	Gorham SWCD Americorp Meeting/Brunswick school tour	<u>4</u>
Total		31

ITEM 5. Progress Toward Meeting Community Service Objectives

Objective 1: Assist with the Natural Resources Institute (NRI) program and encourage Conservation Districts to recruit teachers

As co-coordinator of the Natural Resources Institute, a week-long environmental education institute for teachers, the member had direct and indirect contact with local and state businesses, professional organizations, state government employees, Soil and Water Conservation District offices, R C & D's, teachers, newspaper reporters, and many others. NRI program information was prepared and mailed by the member to over 350 Maine teachers, newspapers and organizations state-wide. Twenty-five teachers registered for the NRI from almost every county in the state. Over \$5,000 in grants and sponsorships were obtained by the member to pay for the teachers expenses at the NRI. Community resource specialists who the member helped invite to the institute include college professors, foresters working for International Paper Company, staff from the Maine Departments of Agriculture and Marine Resources, Cooperative Extension, farmers, environmental education teachers, Americorp volunteers, municipal officials, biologists, NRCS Conservationists, aqua-culture businessmen, and others. The Natural Resources Institute Program was prepared by the member and printed for distribution. It includes five days devoted to: water quality, agriculture/mining, forestry/wildlife, marine resources, recycling, and environmental education.

Objective 2: Assist the Envirothon Committee and the 1994 coordinators with the statewide Envirothon program for high school students

The member assisted the State Envirothon Committee in encouraging 77 high school teams (approximately 462 students) representing 50 Maine high schools to participate in 5 regional environmental competitions. In addition to completing responsibilities involved with the organization of the State competition where 15 teams participated, the member helped organize and conduct two Envirothon workshops for 9 high school teams representing 54

forestry, wildlife, marine resources and education.

ITEM 7. PROJECTED OUTCOMES FOR NEXT QUARTER

In the next quarter, responsibilities involving the Natural Resources Institute will be completed. Recommendations for next year's NRI will be prepared.

ITEM 8. CHALLENGES

The greatest challenge for the member during the last quarter will be to prepare a water quality lesson which she will present at the NRI and to help make the week's institute a valuable experience for the 25 participating educators.

Problems:

Problems remain the same as the last quarter. There just isn't enough time in the day to complete all the tasks that the member wants to complete. It is impossible to keep up with all the educational materials that cross the member's desk. Not knowing if the Americorp program will be refunded is a serious problem because it makes decisions regarding other employment opportunities difficult.

ITEM 9. PRIMARY TRAINING

Training on the use of Internet and E-mail would be most useful because it is not a wave of the future but already here. Having an opportunity to visit the sites where other Americorp volunteers worked would be helpful as we all try to spread the word to the public relative to Americorp accomplishments.

ITEM 10. MEDIA COVERAGE. See enclosed release.

Winthrop students place 3rd in western regional 'Envirothon'

By ALAN KEAYS
Staff Writer

WINTHROP — A team of students from Winthrop High School who recently finished third in the Western Maine Regional Envirothon will now be going on to the statewide competition.

In the Western Regional Maine competition held Wednesday at Twitchell Farm in South Paris, the team of five students came in third place out of 19 teams, according to Steve Knight, the team's coach and chemistry teacher at the school.

Team members include Kevin Sousa, Erin Rosell, Lisa Ravis, Jacob Berry and Melissa Beesley.

"Envirothon is a national competition dealing with environmental issues," Knight said. "It was a real learning experience for the students."

This is the first year the school has fielded a team, Knight said.

"I started it to try to boost interest in

"I started it to try to boost interest in environmental work."

Steve Knight,
chemistry teacher

environmental work," he said.

During the regional competition, students were quizzed on many different environmental areas, such as wildlife, soils, forestry, water and current issues.

Questions tested vocabulary as well as knowledge of state regulations and endangered species, Knight said.

The top three teams in each of Maine's

four regions will now compete in the statewide finals June 2 at Sebago Lake Park, he said. Finishing ahead of Winthrop High School were teams from Mt. Blue High School and Hebron Academy.

The winner of the statewide competition will represent Maine in the national competition later this year in Idaho, Knight said.

Knight said in preparation for the statewide competition, team members will review their regional results and continue to read articles and material dealing with environmental issues.

Sousa, the only senior on the team, will be attending Unity College next year, majoring in wildlife biology.

"The competition was a lot of fun," Sousa said. "They had many different kinds of fur there and we had to identify what kind of animal it was from."

The team had to identify many different types of trees, soils and plants, he said.



Oxford County Soil and Water Conservation District Manager James Chandler, right, presents the first place envirothon trophy to Mt. Blue team members Joanna Sewall, Nate Gould, Kristen Bogardus, Virginia Beauregard, and Niilo Silanpaa.

Mt. Blue students win state envirothon contest

FARMINGTON — Mt. Blue High School's envirothon team earned first place Sunday at the state envirothon competition and hopes to go to the nationals in Idaho in July.

Fourteen teams from across the state competed at Sebago Lake State Park for top honors in environmental problem-solving.

The Mt. Blue team has made it to the state competition four years out of the five years that the Maine State Envirothon has been run. This year's team included Niilo Silanpaa, Nathan Gould, Kristen Bogardus, Joanna Sewall and Virginia Beauregard.

The team scored 371.5 out of a possible 500 points at the state compe-

tition.

Members will go to Ricks College in Rexburg, Idaho, July 31 for the national competition if they are able to raise the approximately \$4,500 for airfare.

The envirothon program is designed to develop and test student's knowledge of natural resources including the areas of soils, water resources, forestry, wildlife and current environmental issues. This year the topic was groundwater.

The competition provides students with hands-on problem-solving experiences in environmentally-oriented activities to enable them to become environmentally aware, action-oriented adults.

Environmental teachers take instructional class

Natural Resources Institute notes its 10th anniversary

By BARBARA N. YEATON
Special to the Sun-Journal

FARMINGTON — Natural Resources Institute organizers are anticipating one of the best seasons since the environmental program for teachers was organized 10 years ago.

Working under the umbrella of the Maine Association of Conservation Districts, a new volunteer program called Americorps is organizing this year's program which goes from July 31 to Aug. 4.

The program includes field trips to dairy farms, the coast, a tree farm, a woodlot and recycling plants to get participants to learn about the environment.

The sponsors are the Maine Association of Conservation Districts, Soil and Water Conservation Districts, and the University of Maine at Farmington, with the assistance of Natural Resources Conservation Service.

The speakers on the first day will include Vance Wells of Wilton, a professor of biology at UMF; Jean Doty, professor of geology at UMF; Paul B. Frederic, a professor of geography at UMF; John Jemison, water quality specialist at the Cooperative Extension; in the morning and Dan Buckley, professor of aquatic biology at UMF; Friends of Wilson Lake; and Russ Mathers, Wilton Municipal Treatment Plant manager in the afternoon.

On the second day, the presenters will be Perry Lamb of New Sharon, a woodlot owner; Rod Kennedy of Dover-Foxcroft and John Starrett, a forester at International Paper.

On day three, the speakers will be Marine Agriculture Specialist



Natural Resource Institute staff are preparing for the 10th Annual Institute in Farmington. Holly Sheehan, left, environmental education coordinator for Cumberland County, shows water testing equipment to Elizabeth Frederic, education coordinator for the state. Both women are with the Americorps volunteer program and will be speakers the first day of the institute on water resources.

BARBARA N. YEATON PHOTO

Sam Chapman; Dr. Bernie McAllice, a marine biologist; and Elaine Jones, an education director for the Maine Department of Marine Resources.

On the fourth day, presenters will be dairy farmer L. Herbert York; Paul Hersey and Lisa Krail, soils resource specialists; Richard Baird, deputy state conservationist; Dr. Archie "Bill" Berry, professor of geology at UMF; Jay farmer

Thayden Farrington; and Cooperative Extension educator Ri Barr.

Day five includes Jay recycling coordinator Rhonda Irish; F Taylor, Jay High School teacher (1995 MACO High School Teacher of the Year); Dr. John Mudge, professor (retired) of biology at UMF and Stuart Duncan, supervisor of the Somerset County Soil and Water Conservation District.

**Maine Americorps
Midcoast Fisheries and Water Quality Final Report
Lee Humphreys, Charles Parker, Hollis Tedford**

1. Training

Training sessions provided us with the opportunity to broaden our knowledge in areas of conflict management, health related issues, environmental issues, and computer skills. We were able to utilize these and many other skills in our daily operations as Americorps volunteers. The Midcoast team conducted an all day water quality training session for eleven Americorps volunteers.

2. Progress Towards Meeting Community Service Objectives

Objective #1 was to provide assistance to twelve coastal communities who are concerned with fisheries resources and wish to maintain and improve water quality.

We provided water quality assistance to 26 communities in the area of water quality this year. Assistance was provided to these towns to identify point and non-point pollution sources, conduct sanitary shoreline surveys, research various community water quality monitoring programs, pursue federal and state assistance for repair or removal of unacceptable sewage systems within the community, and prioritize sampling sites to coincide with efforts by various government environmental agencies, i.e. Dept. of Marine Resources and Dept. of Environmental Protection.

Objective #2 is to provide training and technical assistance in the area of water quality to 12 coastal communities and local high schools.

The number of communities served exceeded our goal number of twelve. We presented and implemented water quality curriculum in 15 consolidated high schools, which represent 29 towns and townships. These high schools are partnered with community groups in their respective districts to monitor water quality. Training was given in various methods of field and laboratory sampling techniques. Technical training was provided by the Midcoast Team in sampling parameters such as:

- Fecal Coliform Membrane Filtration
- Dissolved Oxygen (Winkler Titration Method and DO meter)
- Salinity (Refractometer and Hydrometer)
- pH (Colorimeter and hand-held meter)
- Temperature
- Data management and interpretation
- As well as other variables specific to the needs of the individual groups

The Midcoast Team also was called upon by the Maine Department of Marine Resources to assist in training of volunteers to sample for their labs in Lamoine and Boothbay Harbor. Community members, through our training and technical assistance, are better able to understand the dynamics of federally mandated water quality monitoring programs, and have acquired the scientific expertise to collect and analyze data which is vital to protecting water

with new techniques and keep sampling procedures parallel on a state and national level. Quality assurance and control plans need to be devised and followed under certain guidelines. More work needs to be done to carry through with remediation efforts. Communities need the support to solve their own problems and in the process educate young and old alike.

5. Results of Tabulations per July 27, 1995 Memo

- Volunteer hours of Americorps members outside the program 400 hrs.
- Community member volunteer hours to program 6000 hrs.

A. Total Hours of AmeriCorps-Sponsored Training to Date: 80 (including final training session)

B. Progress Towards Meeting Community Service Objectives:

1.) Quantify and qualify potential salmonid spawning, rearing and staging habitats in the Upper St. John Watershed (200 hrs.):

- *6/7-Toured Allagash area, looking for canoe pull-out sites.
- *6/8-Began creel survey, toured area.
- *6/9-Trained in canoe work, data collection with YCAP crew.
- *6/16-Walked river banks, explored area, met with Allagash Town Manager to discuss project, and possible public access sites.
- *6/20-Spent day in Allagash, collecting river data.
- *6/23-Canoed section of St. John with YCAP crew.
- *7/7-Canoed section of St. John with YCAP crew.
- *7/12-Spent day on river banks, mapping.
- *7/13-Spent day on river banks, mapping.
- *7/14-Canoed section of St. John with YCAP crew.
- *7/20-Walked banks of river, mapping.
- *7/21-Walked banks of river, mapping.
- *7/28-Canoed section of St. John with YCAP crew.
- *8/3-8/11: Designed habitat map

2.) Conduct a creel survey to assess the biological, social and economic impacts of proposed fisheries initiatives on existing recreational fisheries of the Upper St. John (200 hrs.).

- *Began creel survey, 6/7, at Big Rapids
- *6/8, 6/9: spent 3 hours each day walking river banks looking for fishermen.
- *6/16: 2 hours spent on creel survey
- *6/20: Decided to enlarge survey to include individuals using the river for any reason (canoeing, hiking, etc.)
- *6/23, 6/26, 7/7, 7/12, 7/13, 7/14, 7/26, & 7/28, 8/1, 8/2, 8/10, 8/11: Public use survey

3.) Work cooperatively with State, Provincial and Federal agencies, as well as private sector recreational fisheries groups, in support of ongoing management planning and development initiatives (150 hrs.)

- *6/4: Attended SALEN Board of Directors meeting.
- *6/5-9: Designed St. John-Aroostook RC&D summer newsletter.
- *7/12-7/18: Designed and mailed newsletter for Atlantic Salmon Association.

C. Primary Accomplishments:

1. Tour of potential public access sites with personnel from the Dept. of Conservation.
2. River work with local YCAP team.

Completion of plan of work by 7/31.

E. Primary Challenges:

The organization for which I worked, SALEN, Inc., became inactive in terms of field projects after the Governor's ruling. Therefore, I was left to myself, and without the assistance and support of the St. John-Aroostook RC&D, and Aubrey Raus's YCAP crew, I would have accomplished very little. I suggest that new AmeriCorps positions not be developed for politically-based projects, in which the success or failure of the projected year of service is based solely on the success or failure of that year's political events.

The Salmon Times

Acadia Elementary, Madawaska
No.2

Vol. 1

May, 1995

Big Fish Exhibit

On May third, Mr. Cyr came into our classroom with the second biggest Landlocked salmon ever caught, from Long Lake here in Aroostook County. It was 23 inches long. The weight was twenty-one and a half pounds. It was caught in 1941.

Mr. Cyr was twenty years old when he caught it, and the fish was nineteen years old, he thinks. Mr. Cyr is seventy-three years old now, so the fish he thinks should be seventy-two years old.

--Bryan Daigle

Acadia Elementary Hosts Fly Fishing Event

Fly Fishing is a very interesting sport. When Mike and Mr. Stacy came they showed us how to tie flies and how to cast. I'd like to thank them very much. So thank you, Mike and Mr. Stacy.

--James Beaupre

Q. What's the difference between land-locked Atlantic salmon and sea-run Atlantic salmon?

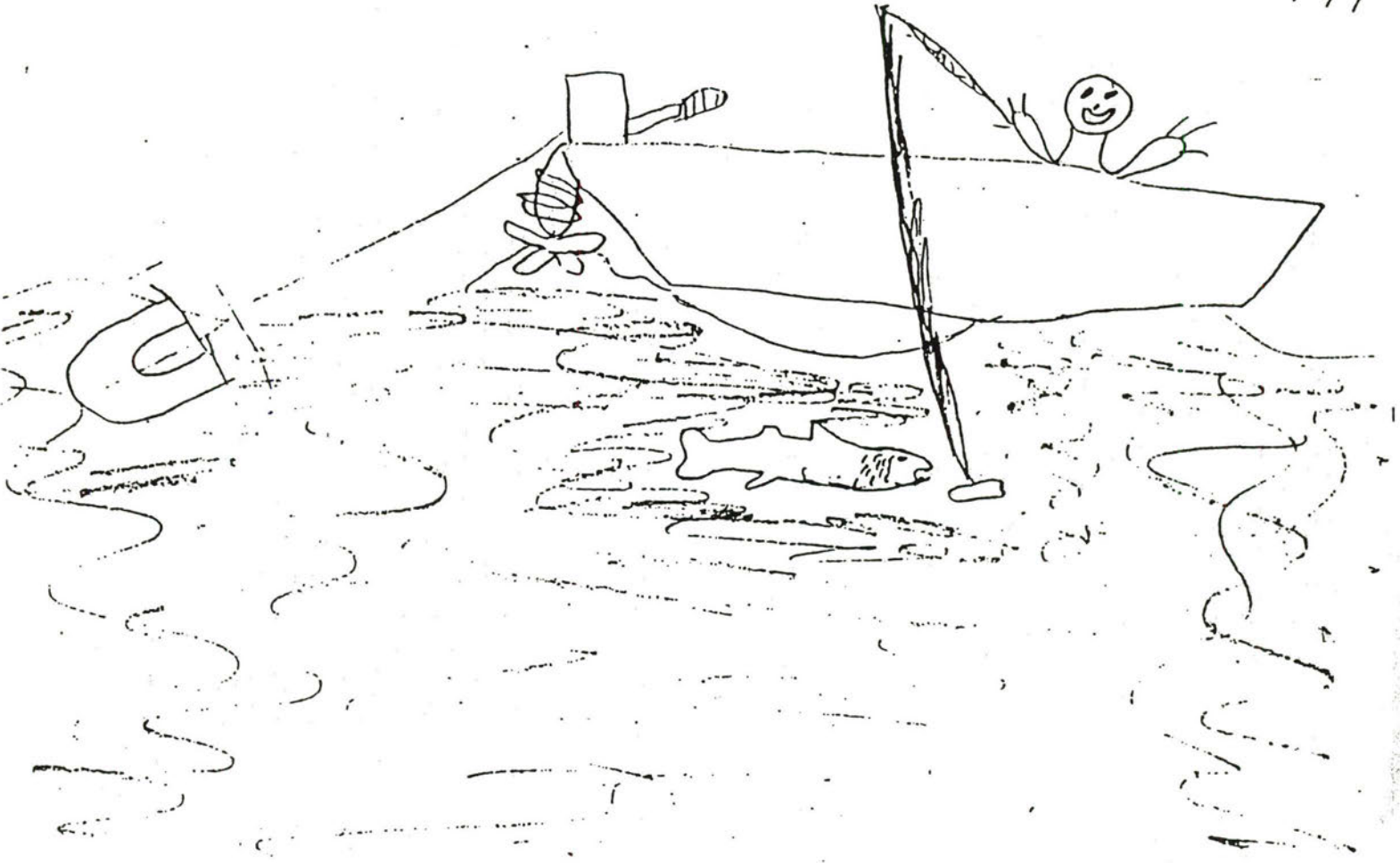
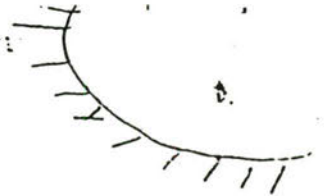
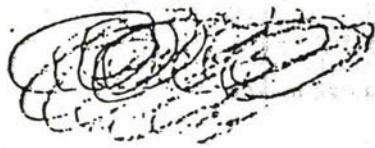
to the sea! land-locked Atlantic salmon never leave the lakes and rivers.

Fish Friends Update

When the fish first came here they were just eyed eggs. Then a few weeks after they hatched. They were eating out of a pouch on their stomach. They were called sac fry or alevins at this stage. About two weeks after, we fed them some food that Mike Hill of the Atlantic Salmon Federation gave us. They would go right to the top of the tank and eat. A few of the baby fish have died, but not alot. In a couple of weeks we will be putting them in the St. John River.

--Sam





Acadia School fourth graders babysitting 400 fry

by Angela K. Lagasse
MADAWASKA - Gina Jandreau of Madawaska is the mother of a 1-year old son, Alex, is expecting her second child soon and has just become the proud mother of another 400 babies.
Jandreau is a fourth grade science teacher at Acadia School in Madawaska where 20 Atlantic landlock salmon eggs have recently been delivered. The eggs are in an incubation tank which was donated by Fraser Paper Ltd, in Madawaska.
Salmonid Coordinator Amanda Smith of Presque Isle delivered the eggs to

Jandreau's classroom last week. Smith is employed by Ameri-Corps. The sponsors of this project are the Atlantic Salmon Association, SALEN and the St. John Aroostook R. C and D.
A number of tanks are currently up and running in New Brunswick, said Smith. This is the first one to be placed this far north on the American side of the border.
According to Smith projects of this type are ongoing in southern Maine, however, Acadia School is the first school north of Woodland to agree to participate in the project. She added, "We hope to have a

tank in each school along the river in the near future."
The incubation tank is a large aquarium with circulating water and insulation surrounding the tank. The eggs are sensitive to light, so in order for the students to watch the development of the eggs, a small hinged window was placed in the front of the tank for the students to take a quick peek.
Jandreau said she got involved in this project when Smith asked her about it. Jandreau said she was glad to take part. The project is being taken care of by two science classes at Acadia School.
Jandreau received much

direction on the care of the eggs and sac fry. She also had to prepare in advance by finding pebbles and boiling them to prepare the tank. She added, "The night before the tank was delivered to us, I sent my husband outside to try and dig through the snow for a few more pebbles to be sure. I had enough."
The eggs should become sac fry in the next three weeks. When they become "pinkie length" they will be released into local brooks, said Smith. This should take place in early June.
President of SALEN Philip Soucy said Friday, "We are delighted to bring the project of introducing salmon in the Upper St. John, to school children," Soucy said that Fraser

be able to get a local sponsor in the Fort Kent area soon. "We would like to see a tank at the Fort Kent Elementary School but we do need a sponsor first," he added.
Smith said it is definitely a community project and a community effort. She added, "We hope to have an increase in the nearby communities by next year."
The students are excited about the project. They are able to witness the project of releasing Atlantic landlock salmon into the brooks where the salmon can be enjoyed by families and tourists in the area.
Danielle Ouellette, a fourth grade student, announced while stepping up to the tank for a quick look, "Coming soon

Protecting Maine's Lakes

Lakes can be especially susceptible to the effects of pollutants because they occupy a finite area. Human activities such as land clearing, development, farming, recreational activities, and sewage discharge lead to degradation of lake quality. Pollution can come from acid rain (from coal burning power plants), chemical pesticides used in farming and forestry, or from bacteria growth (due to the presence of sewage). One of the most serious forms of lake pollution results from significant increases in the phosphorus content of the water.

Phosphorus is a natural element of soil, but also is found in concentrated form in some detergents, and in fertilizer, manure, and sewage. It is carried into the lake by rainwater runoff from streets and developed areas in the watershed (the area surrounding and draining into a lake).

High levels of phosphorus in a lake nourish algae and encourage its rapid growth. An algae bloom occurs when these small plants proliferate too rapidly. When they die they sink to the bottom. As they decompose, the oxygen content of the water is depleted. This process is called eutrophication. Eutrophication in a lake can cause salmon, deep-water trout, and other fish to die. It may also cause the water to become cloudy, turn green, and smell bad. It may not be very appealing swimmers.

It can cost hundreds of thousands of dollars to restore a lake after it has become polluted. The restoration of a large and heavily polluted lake would cost much more. Obviously, it is much more preferable to protect the lake in the first place. The Maine Department of Environmental Protection (DEP) has developed a program to help communities protect against damage to water resources from phosphorus and other sources of pollution. The DEP offers assistance by providing manuals, holding informational workshops, and direct technical assistance to help communities to manage development in watershed regions by:

- *Designing wet ponds that allow phosphorus to settle out and to be absorbed through biological activity.

- *Managing construction methods, setting limits on land clearing, and including protections against erosion.

- *Modifying septic system design to account for variations in soil types.

- *Building infiltration trenches that catch stormwater runoff and allow it to filter into soil.

- *Creating natural buffers that filter phosphorus from stormwater runoff.

Call the Maine Department of Environmental Protection for more information.

--Chemicals in the Environment Information Center, University of Maine, Orono

Maine's Hidden Resource: Groundwater

Groundwater, one of the most important elements in our lives, is mostly hidden from sight and out of our minds. Yet, 90% of the people in rural Maine are dependent upon groundwater. For the state as a whole, approximately 50% of our people get their domestic water from groundwater sources--either from private wells or from water districts that rely primarily upon groundwater for their supply. Even those of us who get our water from lakes and streams are indirectly dependent upon groundwater, for groundwater discharges help maintain lake levels and stream flows throughout the year. There are other dimensions to our good fortune:

- Groundwater is so abundant and, in many places, so easy to tap that it is almost as inexpensive as the air we breathe (only a few cents for 100 glasses of water.)

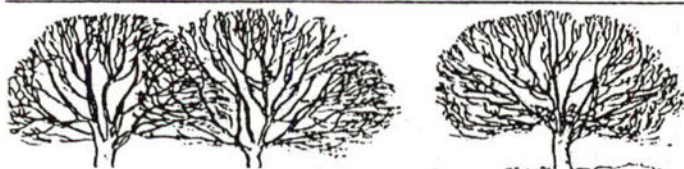
- It is, for the most part, uncontaminated by human pollution.

- It is continually being replenished by precipitation that filters through the soil.

Groundwater is not only essential to the maintenance of Maine's rural way of life; it is also essential to its economy. Consider, for example, recreation and tourism: there are some 68,000 seasonal homes in the state, the majority of which rely upon individual wells or wells serving a small number of cottages. Many commercial establishments serving travelers and vacationers--as well as local residents--also depend upon private wells. These include inns, motels, sporting camps, children's camps, restaurants, service stations, and a wide range of other stores and services.

Industrial use of groundwater is substantial in Maine. Agricultural use of groundwater is minimal, however, compared to other sections of the country. However, there are proposals for expansion of agricultural irrigation in the farming areas here in northern Maine. Such expansion of irrigation could place new demands upon groundwater in certain locations. Indeed, there is a trend throughout the United States toward expanded groundwater use, and Maine may be expected to participate in this trend. The state's groundwater resources are, in most places, more than sufficient to accommodate expanded use. The 80 or so million gallons a day of groundwater currently being used in Maine constitute a very small proportion of the state's 100 trillion gallons of groundwater reserve. (In fact, much of the water used is returned to groundwater after it is used.) However, the geographic distribution of groundwater is quite uneven. There are places in Maine where demand, at present rates of development and especially in the summer, will exceed the recharge rate of local groundwater resources. However, for the state as a whole, the key issues of the future will likely have more to do with groundwater quality than quantity.

--The Land and Water Resources Center, U. of Me., Orono



Assessing the Economic Benefits and Impacts of a River Fishery

Northwest recreational salmon fishing jobs decline by 43% over a 6-year period! Northwest workers lose \$500 million in wages from recreational salmon fishing declines! These and similar headlines have been conspicuously absent from media reports as salmon, steelhead, trout, and a host of marine fish stocks have declined to historic lows around the country. While we have seen similar information from the commercial fishing, timber and agricultural industries and other river resource users, why has there been a noticeable absence of economic information of the river-dependent recreation industry? In many communities, fishing, hiking, river floating, wind surfing, boating and other activities provide vital economic activity throughout the year.

Resource managers and politicians have been giving increasing consideration to the economic effects of their decisions and policies. Further, users of public resources such as water and timber have effectively used economic arguments for decades to gain increased timber cuts, water for irrigation, and to justify the construction of yet another dam. The general absence of economic information on the river recreation side has left river and fisheries conservation advocates without a full set of tools to work with.

Recent fisheries issues such as the precipitous decline of Pacific Northwest salmon and steelhead stocks, particularly in the Columbia River basin, and numerous hydropower facility relicensing projects across the country, have stimulated economic analyses which have brought these other river benefits to the forefront.

With credible economic analyses in hand, some fisheries advocates are having success at capturing the attention of decision-makers. Other river and fisheries advocates have yet to utilize this potentially powerful river conservation tool.

Economic Benefits and Impacts

Expenditures by recreational anglers measure the value of fisheries resources to local, state, and national economies. Changes in regional economic output, income, and employment associated with changes in expenditures by recreational anglers do not measure the benefits of a recreational fishery. Instead, they represent accounting measures of transactions and income payments which give an indication of the economic activity generated in a local area or region that is related to fishing. Expenditures represent costs to the angler, not benefits. They do not measure the loss of value to the angler that would result should fishing opportunities be diminished or eliminated, or the gain in value resulting from expanded or new fishing opportunities. Recreational anglers purchase things such as tackle boxes, boats, rods and reels, and numerous other items

for their fishing activity. Angler surveys can be used to estimate the amount of expenditures made by anglers and also ascertain where those expenditures were made so they can be assigned the proper location (local, state or national level). Once angler expenditures are measured, then economic impacts can be calculated.

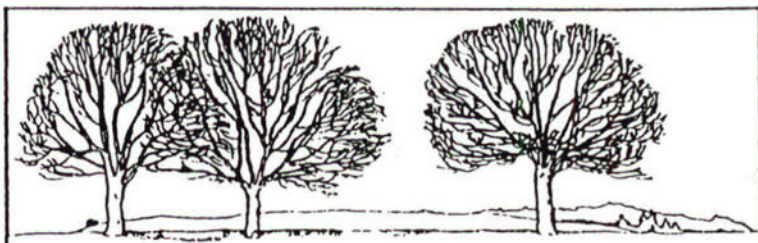
Types of Economic Impacts

There are basically three types of economic impacts: 1) **Direct impacts**, which are the initial purchases made by anglers; 2) **Indirect impacts**, which are the purchases made by businesses to produce the goods or services demanded by anglers; and 3) **Induced impacts**, which are purchases of goods and services by households receiving wages from businesses producing direct or indirect goods and services. The purchase of a fishing rod provides a good example of a direct impact. The associated indirect impact would include the purchases by the rod manufacturer of graphite, paint, guides, reel seats, and other items. Further indirect impacts might include the purchase of pigments by the paint supplier and aluminum by the guide supplier. Induced impacts would include all purchases by households with the wages paid to employees of the retailer, and rod, paint, graphite, guides, pigment and aluminum manufacturers in the proportion they contributed to the final product.

Total economic impact is the summation of these three levels of impact. The total economic impact divided by the direct impact is called the multiplier and reflects the number of times the initial expenditure circulated through the regional economy. The economic effect of any activity may seem infinite as initial expenditures are spent and respend by suppliers and households. However, there are several limiting factors. Expenditures are only impacts on a specific region if they take place in that region.

In the case of the fishing rod, the suppliers of paint, graphite, and aluminum are probably not located in the same region as the rod manufacturer. Households, which are the source of the induced impacts, save part of their wages and have part withheld in taxes. Also, businesses do not spend a dollar in inputs for every dollar they take in. These and other reductions provide a finite limit to the effects of the initial expenditure.

--by Tony Fedler, printed in "River Voices", the River Network's quarterly newsletter (Vol.6, No.1, Spring 1995)



Whitefish

Whirling Disease

Whirling disease, a parasitic infection so named because of the erratic, whirling swimming motion of diseased fish, was introduced to the United States from Europe thirty-five years ago. At first found only in hatchery stock, it was discovered in the wild in Colorado during the late 1980s. Since then, the disease has been reported in nineteen states: California, Colorado, Connecticut, Idaho, Massachusetts, Michigan, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Utah, Virginia, West Virginia, and Wyoming. All Salmonids are susceptible to the whirling disease parasite, which infects its hosts by invading the gills, or when a fish eats infected tubifex worms. Tubifex worms are the parasite's intermediate host, and become infectious when they consume spores from an infected fish. Fish cannot contract the disease directly from other fish, nor can humans contract it. The disease results in pinched nerves and severe skeletal deformities; at the present time, there is no known cure. Infected salmonids develop a black tail, and show whirling behavior--a direct result of the pinched nerves--at 1 to 1.5 months.

--Fact Sheet, Trout Unlimited



There are two whitefish species in Maine and both are members of the salmon family (Salmonidae, subfamily coregonidae). One, the round whitefish, grows only 8 to 14 inches and is not classified as a gamefish. The other, the lake whitefish, has this distinction.

Lake whitefish are closely associated with the trout/salmon populations in our deep, cold northern lakes, and a few southern ones. Statewide, some 76 lakes harbor populations, with waters in northern Piscataquis County containing the heaviest concentrations. In many lakes where whitefish are found, they constitute the largest group (exclusive of smelt) of gamefish, sometimes up to 70% of the lake's populations.

Fisheries biologists have estimated that the lake whitefish population in Maine at something over 3 million fish, with 10% dwarfed due to crowding. Of these millions of fish, only about 14,000 are taken annually. Since 40% of the population is catchable size-wise, and since they tend to displace trout and salmon, it appears we have a vast, untapped fisheries resource which should be utilized.

While whitefish may never again be a household word, in the 1800's in northern Maine it was. In fact, whitefish were commercially caught across northern New England, the Great Lakes Basin, Canada, and Scandinavia, where this species is still economically important.

In appearance, whitefish have a salmonesque profile, a satiny white color with a greenish-olive cast to the back, a pointed snout, a tender, toothless mouth, and larger scales than their salmon cousins. They run 12 to 20 inches, occasionally 30 inches., in length. Adult weights average 3 to 4 pounds. This species may live 10 years in the wild.

Males mature during their third or fourth fall, females in their fifth. They are fall spawners, seeking shoal waters or inlet tributaries. In late November, breeding activity reaches its peak, and paired fish put on a frenzied surface display. No nest is constructed, and eggs are broadcast at mid-depth. They settle to the bottom where they hatch in early spring. When small, whitefish depend on plankton, insects, and crustaceans. As adults they feed on minnows, smelt, and other small fish. This species is relatively parasite-free, though tapeworms do occur.

In Aroostook County, whitefish can be found in the following lakes:

Beaver Pond
Carr Pond
Cunliffe Lake
Glazier Lake
Musquacook Lake

Video tapes of a "Bill's World" program, featuring the Grand Falls fishway project, and a ten-minute spot of Atlantic salmon leaping, again at Grand Falls, will be made available to anyone interested at the next Association meeting.

JIGGING GROWS IN POPULARITY IN MAINE

Traditional winter baits for Maine trout and salmon have invariably included smelts or shiners. Most north-country ice anglers, however, will reserve at least one hole in the ice for jigging, to ensure that at least one bait is actually doing something to attract a hungry trout, salmon or to go to the hook.

Until recently, the most popular bait for jigging was "cut bait," a common angling term loosely meaning any dead, cut up or split fish (smelt, shiner or sucker) or a chunk of bait such as pork rind, cubed meat or fish, or belly strips from any of a variety of common bait species. In the last decade or so, more Maine anglers have turned to artificial jigging lures, fished either alone or tipped with cut bait. Part of the reason for this shift in bait preferences is the ever-tightening circle of regulations governing bag and length limits. Many undersized fish taken on traditional cut baits while jigging die as a result of the trauma induced by hooking, playing, landing and releasing a fish taken at extreme depths. With artificial lures, especially those with the barbs crimped down or filed off, releasing undersized fish is a benefit to the resource as well as to the angler looking for trophy-quality fish. Care must be taken, however, not to let the fish flop around on the ice. Eyeballs, gills and skin can freeze in a few seconds; it's better to leave the fish in the hole and flick the hook off with a pair of needle-nosed pliers.

Lures suitable for Maine jigging situations include spoons, lead jigs, and small, weighted plugs. The new crop of specially-designed jigging minnows which "swim" more or less naturally and feature hooks in each end of the lure as well as a special underside eyelet for attaching additional weight, are becoming the rage among winter trout and salmon anglers. A 1/2-ounce sinker on 12 inches of monofilament line attached to the bottom eyelet of these lures will get them to the bottom in a hurry, yet the extra weight won't interfere with the wounded-minnow action of the lure.

Salmon and trout jiggers often use shorter, faster movements with baits in the 3- to 4-inch range, as these fish generally respond well to increased action and smaller baits than do their bottom-hugging cousins. Also, because salmon and brook trout are often found at varying depths in winter, jig fishermen should begin working their lures just beneath the ice, then drop down in 6-foot increments until the lure is just off the bottom.

--Stephen Carpenteri, The Maine Sportsman 12/94

MEETINGS, CONFERENCES CON'T

--Mike Hill on affiliates and volunteers

--John Anderson on research and development

--Danny Bird on fundraising by volunteers

For information on either of these meetings, please contact Amanda Smith, at 764-4126, or Ed LeBlanc, at 506-735-5995

The next Atlantic Salmon Association for the Upper St. John meeting will be Wednesday, Dec. 21, at 6:30 pm. We will be meeting at the Madawaska Safety Building. Please make an effort to be there, as we'll be discussing activities planned for the coming year.

IN THE FIELD: NEW TAG SYSTEM TESTED

The problem with stocking programs is that after you release the fish nobody knows exactly which ones survive and why. A new tagging technique, which involves implanting strips of encoded tape in the eyes of fish, could not only help answer questions about the habits of reared fish but could also lead to knowledge about salmon populations all over the world.

In an international first, an Atlantic Salmon Federation research team is using experimental visual implants, designed by Northwest Marine Technologies, to tag small fish on Upsalquitch River. Dr. Fred Whoriskey of McGill University and his research team spent much of the fall at Boland Brook Camp on the Upsalquitch in a mobile surgical theatre. Through needle-sized incisions, they inserted strips of millimetre-wide tape, stamped with alpha-numeric codes, into, as Whoriskey says, "the adipose tissue on the opercula" of satellite-reared and wild fish.

The research will reveal what's happening to the reared salmon, and maybe point to ways to improve stocking results. "Maybe we'll discover the Upsalquitch (satellite-reared) fish have cognitive abilities which allow them to copy the actions of wild salmon," Whoriskey says. "We want to discover what the Upsalquitch fish are doing to survive. Then we can figure out what we should be doing. It could be as simple as putting gravel in tanks, or installing a raceway, where fish swim in a gravel channel and practice before they enter the stream. Then they'd be fast enough to get away from predators. They'd learn to use their pectoral fins to grab the rocks on the bottom of swift streams to wait for food."

The team has also been observing the way fish use their habitat, in order to discover how long it takes reared salmon to occupy sites favored by wild salmon, and to find out how the wild accept the introduced.

-Annabel Bruce: SALAR Vol.13, No.4, November 1994

UPPER ST. JOHN SALMON STOCKING:

In 1994, SALEN, Inc. stocked 550,000 fry, 200,000 fall fingerlings, and 75 adult Atlantic Salmon above Grand Falls, NB.

This is the first issue of a monthly newsletter that will be coming to all Atlantic Salmon Association members. If you have any information you'd like included, please contact Amanda Smith before the 20th of each month.



THANK YOU
MS. SMITH

Kevin Edwards

Travis Washington

Franky Fox

Jason J. J. J.

Andre J. J.

Serry McCafferty

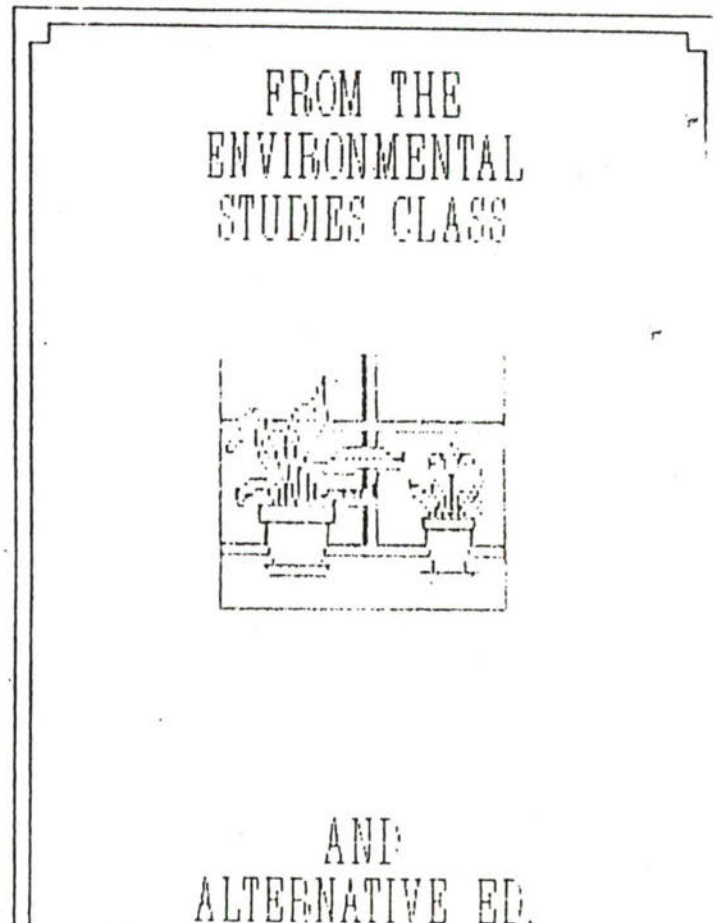
Santa Camacho

Nichelle Briault

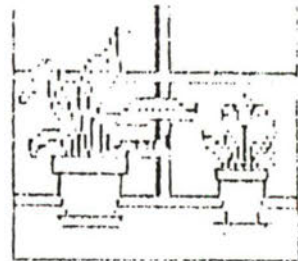
Christina Berthiaume

Billy Dugan

Vance Thompson



FROM THE
ENVIRONMENTAL
STUDIES CLASS



AND
ALTERNATIVE ED.

Acadia School fourth graders babysitting 400 fry

by Angela K. Lagasse

MADAWASKA - Gina Jandreau of Madawaska is the mother of a 1-year old son, Alex, is expecting her second child soon and has just become the proud mother of another 400 babies.

Jandreau is a fourth grade science teacher at Acadia School in Madawaska where 400 Atlantic landlock salmon eggs have recently been delivered. The eggs are in an incubation tank which was donated by Fraser Paper Ltd. in Madawaska.

Salmonid Coordinator Amanda Smith of Presque Isle delivered the eggs to

Jandreau's classroom last week. Smith is employed by Ameri-Corps. The sponsors of this project are the Atlantic Salmon Association, SALEN and the St. John Aroostook R. C and D.

A number of tanks are currently up and running in New Brunswick, said Smith. This is the first one to be placed this far north on the American side of the border.

According to Smith projects of this type are ongoing in southern Maine, however, Acadia School is the first school north of Woodland to agree to participate in the project. She added, "We hope to have a

tank in each school along the river in the near future."

The incubation tank is a large aquarium with circulating water and insulation surrounding the tank. The eggs are sensitive to light, so in order for the students to watch the development of the eggs, a small hinged window was placed in the front of the tank for the students to take a quick peek.

Jandreau said she got involved in this project when Smith asked her about it. Jandreau said she was glad to take part. The project is being taken care of by two science classes at Acadia School.

Jandreau received much

direction on the care of the eggs and sac fry. She also had to prepare in advance by finding pebbles and boiling them to prepare the tank. She added, "The night before the tank was delivered to us, I sent my husband outside to try and dig through the snow for a few more pebbles to be sure I had enough."

The eggs should become sac fry in the next three weeks. When they become "pinkie length" they will be released into local brooks, said Smith. This should take place in early June.

President of SALEN Philip Soucy said Friday, "We are delighted to bring the project of introducing salmon in the Upper St. John, to school children." Soucy said that Fraser made the project possible for Madawaska and he hopes to

be able to get a local sponsor in the Fort Kent area soon. "We would like to see a tank at the Fort Kent Elementary School but we do need a sponsor first," he added.

Smith said it is definitely a community project and a community effort. She added, "We hope to have an increase in the nearby communities by next year."

The students are excited about the project. They are able to witness the project of releasing Atlantic landlock salmon into the brooks where the salmon can be enjoyed by families and tourists in the area.

Danielle Ouellette, a fourth grade student, announced while stepping up to the tank for a quick look, "Coming soon to a brook near you."



Volume IXXL

Number 4

Fall 1994

**Attention Steering Committee
Members and Guests:**

Our next Steering Committee meeting will be held on Thursday, December 8th, 1994, at Yusef's Restaurant in Caribou, and will begin at 11:45 a.m. The four AmeriCorps employees who recently came on board (see feature article below) will be giving a summary of their accomplishments so far, and their plans for the rest of the year. This is the annual Christmas program, complete with a "Yankee Swap", so don't forget to bring a gift (between \$5.00 and \$10.00). Please contact Coleen Churchill for reservations (764-4126).

THANK YOU!

We would like to thank the following county and towns that have contributed their dues since our last newsletter.

Aroostook County
Bridgewater
Eagle Lake
Easton
Fort Kent
Frenchville
Grand Isle
Orient
Perham
Portage Lake

AMERICORPS:

The President's National
Service Program

Similar in style to the Peace Corps, AmeriCorps' mission is the "recruitment of citizens to address critical educational, human service, public safety, and environmental problems the country is currently facing." Through this program, Americans 17 and older of all backgrounds can earn education awards for college or vocational training.

Services rendered by the development of such government programs include: combating hunger in inner cities, establishing farmers' markets, and creating micro-enterprise projects. In addition, the rural development program acts to promote overall economic development, boost sustainable agriculture, improve rural housing, support youth volunteer programs, respond to disasters and improve participation in existing government programs.

How will AmeriCorps serve you?

The rural development program "will help Aroostook communities conserve, restore and sustain the natural habitat." This program will include projects designed to promote the natural beauty of public lands such as forests, rivers, and lakes, all of which Aroostook is abundant in. AmeriCorps volunteers coming to Aroostook include new Lakes, Trails, Water Quality and Salmonoid Coordinators.

New Salmonoid Coordinator:
by Amanda Smith-Hatch

Having grown up in northern New York state, I have a special affinity for the forest and fresh water resources which the northeast corner of the U.S. is so rich in. My work in the environmental field has allowed me to live in a number of beautiful areas--the southwest, the Rocky Mountains, the Gulf of Mexico--but nowhere have I found the natural resources of an area as highly valued and appreciated as in the Northeast, and especially in Maine. My position as Salmonoid Coordinator will give me the opportunity to work with one such resource, and will also allow me to work firsthand with the communities which stand to be affected by an Atlantic Salmon stocking program and fishway. I accept the challenge this position offers because projects such as this have the potential to redefine current concepts of habitat and resource management.

Please contact any of the new coordinators with your ideas at Box 745, Presque Isle, Maine 04769 or call at 207-764-4126.

International Urban Forestry/Turf Management Field Day

On August 11, 1994 the St. John Aroostook RC & D held an International Forestry/Turf Management Field Day with tours attended by more than 100. A week long art exhibit at the Pullen Art Gallery, University of Maine at Presque Isle, entitled "Trees and Turf" was also held. Entries were received from as far south as Boston and throughout Maine. The

exhibit was designed to give both professional and amateur artists an opportunity to show and sell their work. Pieces were accepted on the basis of quality and imagination as well as the requirement that trees and/or grass figured strongly in the subject matter. Pen-and-ink drawings, pencil drawings, photographs, paintings, woodburnings and sculpture--over thirty works in all--were shown.

Forest Council Releases Final Recommendations to Conserve the North Woods

AUGUSTA, ME--The Northern Forest Lands Council (NFLC) released its final recommendations, in a report titled "Finding Common Ground: Conserving the Northern Forest" on September 19, 1994. The Council's recommendations aim at conserving the region's forest lands through improved public policies. The release of the report culminates six years of study by the Council and its predecessors, the Northern Forest Lands Study and Governors' Task Force on Northern Forest Lands.

The council's report discusses the current pressures on forest resources and the region's natural resource based economy. The Council makes 37 recommendations in four broad subject areas: "Fostering Stewardship of Private Lands," "Protecting Exceptional Resources," "Strengthening Economies of Rural Communities," and "Promoting More Informed Decisions."

St. John-Aroostook Steering Committee Newsletter

Volume XXL

Number 2

Spring 1995

Thank you!

We would like to thank the following towns and districts for their timely contribution of dues.

**Wade
St. John Valley Soil and Water Conservation District
Southern Aroostook Soil and Water Conservation District
Presque Isle
Fort Fairfield
Houlton
Littleton
Hamlin**

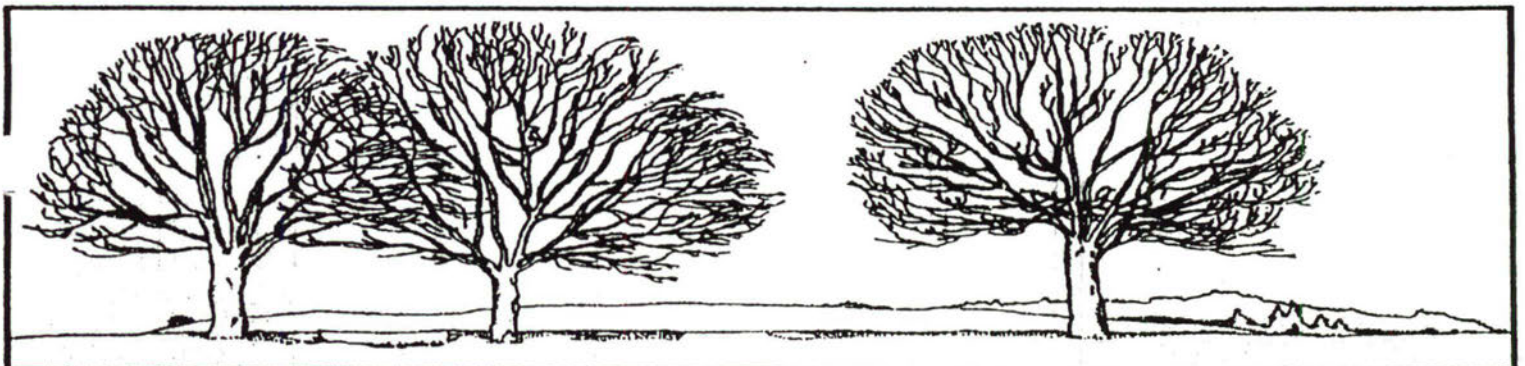
Attention Steering Committee Members and Guests

Our next Steering Committee meeting will be held on **Thursday, May 18, 1995** at the **Caribou Recreation Center** in Caribou. Pizza will be served at **11:45 am**. The business meeting will follow. Please contact Coleen Churchill at (207) 764-4126 for reservations.

Regional Round Table Meetings Hosted by RC&Ds

The National Association of Resource Conservation and Development Councils (NARC&DC) sponsored a series of round table meetings to solicit input regarding how the Resource Conservation and Development (RC&D) program best fits into the reorganized USDA. The feedback gathered from RC&D members, sponsors and customers will be compiled and utilized by a special task force established by Natural Resources Conservation Service Chief Paul Johnson to help the RC&D program gear up for the future. Six meetings were held in all, one in each of the RC&D national regions, with the final meeting taking place in the North Central Region on March 5th. Feedback from these meetings was due in by March 1st, with the exception of the North Central region.

-The District Leader, The National Assc. of Conservation Districts Jan. 1995



STAR CITY ARBOR COUNCIL
City of Presque Isle
P.O. Box 1148
Presque Isle, ME 04769-1148

**TREES AND
LANDSCAPING:
"EVERYTHING YOU
EVER WANTED
TO KNOW "**



*Saturday,
April 29, 1995
Presented By:
Star City Arbor Council
In Cooperation With:
Recreation & Leisure
Services,
University of Maine
at Presque Isle
and WAGM-TV*

You are cordially invited to attend a workshop entitled **Trees and Landscaping: "Everything You Ever Wanted To Know"** on Saturday, April 29, 1995 from 10:00 a.m. to 3:00p.m. for a minimal fee of \$10.00 (includes lunch). The workshop will be presented in the Wieden Auditorium at the University of Maine at Presque Isle, located at 181 Main Street.

If You Are:

- * Tree Board Members
- * Garden Club Members
- * New Property Owners
- * Homeowners
- * Agriscience Students
- * Building Contractors
- * Architects
- * General Public
- * Municipal Highway Depts.
- * Municipal Rec. Depts.

**THIS WORKSHOP MAY
BE OF INTEREST TO YOU!**

If you need additional information, please do not hesitate to contact Nancy Gervais at 764-2506.

Salmon Conservation Groups meet with Governor

The concept of an internationally-planned and managed Atlantic salmon fishway at Grand Falls, New Brunswick is not new; it was first mentioned as a possible project back in the 1950's. During the last decade, the idea has been actively supported by local Atlantic salmon conservation and sportsmen's groups, as well as the St. John Valley communities. With the approval of the federal governments of Canada and the United States, and with Provincial support in place, all that is needed to make this project a reality is a show of support by Governor Angus King.

On Saturday, February 25, Governor King sat down with representatives of Maine and New Brunswick Atlantic Salmon conservation organizations, and was presented with the "Fishway Facts". The proposed fishway would allow sea-run Atlantic Salmon to migrate to the upper reaches of the St. John River. At this point in time, the fish are blocked by not only the dam situated at Grand Falls, but also the falls themselves. By implementing a free-swim migration of these fish above the falls, a large expanse of currently under-utilized salmonid habitat could become an important rearing and spawning ground for the Atlantic salmon, as well as provide a new natural resource for the St. John River Valley--a natural resource that could provide a solid economic base through ecotourism for riverside communities.

Ed LeBlanc, executive director of SALEN (Salmon Enhancement) Inc., gave the opening presentation, explaining to King the biological history of the St. John River. The Governor responded with questions concerning the presence of sea-run Atlantic salmon above Grand Falls. The concept of introducing a technically "exotic" species into the Upper St. John watershed seemed to be King's strongest point of contention throughout the meeting. The question of "will other, undesirable species use the fishway" was also raised by King, and LeBlanc explained the design of the fishway would make this a highly unlikely occurrence, and that there would be a trap and hold mechanism at the top for sorting fish and collecting broodstock. A list of rivers that have been stocked with Atlantic salmon, with no detrimental effects to the existing fisheries, was requested by King. King ended the meeting by saying he'd be prepared to give an answer on this project by March 31.



Timber Trespass

Timber trespass--the illegal taking of trees--appears to be on the increase in Maine according to Thomas Doak, acting director of the Department of Conservation's Maine Forest Service, who says landowners can avoid being victims of timber theft by clearly marking their property lines, visiting their woodlots regularly, obtaining professional forestry assistance before harvesting and promptly notifying the Forest Service of suspicious activity.

"Timber trespass has long been a problem for Maine landowners. With individual trees of some Maine species now valued in hundreds of dollars, the problem of timber theft appears to be increasing. In fact, forest rangers investigated more than five hundred complaints from angry landowners last year who believed timber had been illegally harvested from their woodlots. Just this past month, we've received nearly fifty complaints," Doak said. Maine law requires landowners who harvest more than ten acres to clearly mark their property lines, and to be sure that logging is contained within these well-defined property boundaries. When this law is not observed, trees may be illegally harvested on adjoining property.

"Maine courts tend to consider these incidents to be civil violations. They may be accidental, involve neighbors and are often settled out of court. Timber trespass incidents of this type are most easily avoided by hiring a licensed, professional forester to help plan the harvest. The state-licensed forester can help hire a reputable logger by written contract, determine the volume and type of trees to be cut in accordance with environmental and forestry regulations, and ensure that the landowner's objectives for the land are achieved. In my experience, professional forestry advice pays for itself by ensuring that landowners receive the best value for their trees," Doak said.

According to State Supervisor Tom Parent, not all timber trespass is accidental.

"Most people who make a living harvesting timber are good, honest people. Unfortunately, timber thieves give the whole industry a black eye, making it difficult for honest loggers to make a living. Timber thieves typically contact a landowner by telephone. They may attempt to convince the owner that their trees have been damaged by insects or disease and will be lost unless they are harvested. Elderly and non resident woodlot owners are often the targets of timber theft because they are less able to keep an eye on their property. Timber thieves can be very convincing, even intimidating, and may ultimately get verbal permission to cut the woodlot. After the landowner has consented, they may receive a small check by mail. Often, this payment is very small compared to what the landowner should have been paid. In some instances, landowners receive nothing for their trees," Parent said.

The Maine Forest Service recommends that landowners protect themselves from timber trespass by taking the following steps.

cont. on following pg.



St. John
Aroostook
RC&D

Resource Conservation and Development

Steering Committee
P.O. Box 745
Presque Isle, Maine 04769

Telephone: (207) 764-4126 • FAX: (207) 764-4126

St. John-Aroostook Steering Committee Newsletter

Number 3

Summer 1995

Volume XXI.

Thank you!

We would like to thank the following towns and districts for their timely contribution of dues.

Caribou	Westfield
Littleton	Oxbow Plantation
Garfield Plantation	Woodland
Mars Hill	Caswell
Easton	Blaine
Orient	Madawaska
Nashville Plantation	

AmeriCorps Participants Wrap Up A Season Of Service

With a little more than a month to go, the four AmeriCorps participants here in Aroostook County are completing projects which they've planned and implemented throughout the 1994-1995 season. From local school classrooms to the extensive network of recreational-use trails that covers the County, the AmeriCorps "Season of Service" has provided the motivation and "people power" necessary to the success of on-going community development plans. Programs such as AmeriCorps are successful because of the results; the AmeriCorps slogan is "Getting Things Done", and that's exactly what the participants have been doing.

Nicky Violette, Fish River Lakes Coordinator, has expanded her plan of work to include an educational program dealing with water quality; it has been a major

semester, having been introduced in seven area schools, and reaching approximately 250 children and educators. Besides this, Nicky has been responsible for the design and mailing of the Fish River Lakes newsletter, finding and training water quality volunteers to monitor the Fish River chain of lakes, as well as acting as a liaison and information resource for the campowners and residents of the Fish River Lakes area.

Gary Marquis, Trails Coordinator, has spent the last ten months monitoring, repairing, and building multi-use recreational trails in the Caribou area. Tourism has become a major economic factor in Aroostook County, due in part to the enormous potential of our snowmobile trail system; Gary has played an important role by improving the trails available, as well as planning new ones.

process, and spreading the word to County residents about the benefits of trail development.

Denise Perry, based in Houlton, has been working with the Shin Pond Association and the Houlton Band of Maliseets on water quality and soil conservation issues. Her latest project involved the installation of fifty lysimeters along the riparian buffer of the Miduxmekeag River, which will measure moisture and nitrate levels.

Amanda Smith, Salmonid Coordinator, is wrapping up the season with a survey of the Upper St. John river; with the support of ACAP and SALEN, Inc., she will map potential salmonid spawning and rearing sites as well as collecting information on water depth and velocity. Also this summer, Amanda will be creating a project plan for three to five public access sites proposed for

eggs, it is inexpensive to construct, easy to maintain, adaptable to different sizes of tanks and number of eggs. A instruction booklet is being designed to allow fisheries groups and other organizations to create their own incubation unit.

3.) With the cooperation of SALEN, AmeriCorps, and the St. John-Aroostook RC&D, the section of river running between Big Rapids and St. Francis will be monitored in terms of water quality, salmonid habitat availability, and pollution impacts. A creel survey will also be carried out.



UPDATE: 1994 SINCLAIR WATER QUALITY IMPROVEMENT PROJECT

The summer of 1994 saw renewed construction efforts in T17R4 to continue water quality improvements there. In early June, bids were received and opened to construct the wastewater treatment facility to serve the built-up section of Sinclair and the thoroughfare between Long and Mud Lakes. Ed Pelletier and Sons Construction of Madawaska submitted the combined low bid of \$2,365,000 to construct the wastewater treatment plant and the associated piping and pumping stations required to collect the wastewater from Sinclair and pump it to the treatment plant.

Groundbreaking was held on June 10, 1994, and construction continued until early December. At this time the entire project is approximately 80% complete, with all underground work essentially complete. During this time period, 8,000 feet of 8" gravity sewer

line and 1,500 feet of 6' force main pipe was installed to pump wastewater from the village to the treatment plant site. Efforts will resume in June to complete the work remaining by July, 1995.

The construction of the treatment plant site involved the construction of two stabilization ponds, each with a capacity of 2.16 million gallons of wastewater, and a storage lagoon capable of storing 14.3 million gallons of treated wastewater and accumulated precipitation. Seven million gallons of water were pumped from Mud Lake in November to partially fill all three storage areas. Quantities of materials used in the construction of the site included moving 70,000 cubic yards of soil to construct the embankments of the stabilization ponds and storage lagoon. An additional 34,000 cubic yards of till material was installed to construct an impervious liner to prevent leaching of wastewater into the surrounding soils. Silt fence used at the site to prevent runoff from the site during construction totalled 7,600 feet. Twelve thousand feet of irrigation piping was installed through which treated wastewater will be sprayed over approximately 28 acres at the site for disposal.

Engineering work is continuing at this time to explore the feasibility of extending the area served by the treatment facility beyond McLean Brook to the area of the Long Lake Campground on Route 162. Another area being looked at is that area beyond the Sinclair cemetery on Lake Drive to the beginning of Barnbrook Road. The cost for both of these system extensions is currently projected at \$350,000. This work could, upon approval, get underway this summer and be completed by the end of this construction season.

With the completion of the central wastewater treatment system and the proposed system extensions, septage waste from over 150 residences in the Sinclair area will be disposed of at the treatment plant.

Construction of additional subsurface wastewater disposal systems, as constructed in 1992 and 1993 with the Jobs Creation Grant Bond funding, is currently on hold for 1995 due to an inability to secure additional funding for these projects this year. Funding sources for 1996 are being pursued at this time.

--Dave Cyr, Public Works Director
for Aroostook County



UNITED
STATES
DEPARTMENT
OF AGRICULTURE



CERTIFICATE OF APPRECIATION

to

Amanda Smith-Hatch

for

Service in Support of Soil and Water Conservation Efforts
in Maine

A handwritten signature in cursive script, appearing to read "Richard B. Baird", written over a horizontal line.

Program Director

A handwritten date "June 13, 1995" written in cursive script over a horizontal line.

Date

A handwritten signature in cursive script, appearing to read "David M. Musselman", written over a horizontal line.

State Conservationist