



Photo: Martin Neptune

Penobscot Indian Nation  
Department of Natural Resources

Spring 2005 ~ Issue 2

# Pəskehtək<sup>w</sup>ok

## Joining of the Branches

### Welcome Our New Biologist!

Phone Extensions	
David Almenas, Forest	7335
Ron Bear, Forest Technician	7335
John Banks, DNR Director	7330
Rhonda Daigle, Water Quality Monitoring Program Coordinator	7326
Kristin Dilworth, Big Game Biologist	7363
Clem Fay, Fisheries Manager	7362
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Tim Gould, Game Warden Supervisor	7395
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The Department of Natural Resources is

thrilled to announce our new arrival - Kristin Dilworth! Kristin has been hired as our Big Game Biologist and will be working to develop a management strategy that will help ensure the continuation of healthy populations of deer and moose within Penobscot Nation Trust Lands. In addition to the ecological importance of protecting these wildlife populations, their presence will continue to provide tribal members with harvest opportunities.

The Nation's Forest Management Plan calls for practices that enhance habitat characteristics for deer and moose, with stumpage income being a lower priority. However, more data is needed in order to better understand whether PIN forestry practices are accomplishing their objectives.

Over the next two years Kristin's work will include the following:

1. Determine whether the current deer and moose populations and harvest rates on each tribal territory are sustainable.
2. Identify, map, and evaluate the quantity and quality of deer wintering habitat located on or

adjacent to PIN territories.

3. Identify, map and evaluate the availability and condition of highly utilized moose cover types and wetlands.

4. Determine the overall health of the deer and moose herds on PIN territories.

5. Identify PIN's population, harvest rate, and use goals for deer and moose.

6. Develop 10-year white-tail deer and moose management strategies for PIN lands that will guide the PIN Fish and Game Committee with harvest and regulation decisions and the PIN DNR with forest management planning activities.



Kristin graduated from the University of Maine in 2003 with a Bachelor of Science in Wildlife Ecology and a minor in Zoology. Prior to joining our staff she worked with Jim Gilbert, a professor at UMO, on capturing baby seal pups and fitting them with radio transmitters to study their population dynamics.

Kristin is originally from Pennsylvania, but lived in Olamon for 6 years when she was young. She is looking forward to spending more time in the area!



## **APPLY NOW to become a BEACCON for Positive Action!**

**A**re you up for the challenge to be trained and led by expert organizers, activists and politicians to master the political and leadership skills needed to protect our environment and communities? Is anyone you know? If so, sign up with the Center for Environmental Citizenship to join fifty diverse and amazing college students of color from across the country to for one week. You will be working and learning to:

- B**reak-down racism in special trainings
- E**nergize your group through recruitment sessions
- A**ccess great jobs and resources through the EnviroCitizen Alumni Future
- C**ommunicate your message through the media
- C**hange the world by empowering yourself as a leader
- O**rganize campaigns with strategy and planning skills
- N**etwork with students, professional activists, and experts on the issues

Keynote speakers will share their inspirational stories and charge us with a call to action. At night, teams of students will participate in rigorous campaign simulations to reinforce the skills acquired each day. Participants will experience the disparate, negative impact of unsound environmental policies and practices on communities with high populations of

people of color and low-income residents. Together, you will work across traditional, cultural, and racial boundaries to build political capacity, professional networks, and personal relationships.

**WHERE:** Washington, DC

**WHEN:** July 20 - 25, 2005

**COST:** \$55 (due upon acceptance) for all food, training, and housing. Travel scholarships are available.

**REGISTRATION DEADLINE:** May 13, 2005

**REGISTRATION FORM FOUND AT:**

[www.envirocitizen.org/sta/2005/app.asp](http://www.envirocitizen.org/sta/2005/app.asp)

Once you fill out this application you will be contacted and asked to fill out one short answer question, two short essay questions and submit a resume.

If you would like more information please contact Brian Cabezas at (202) 986-1650, x15 or [bcabezas@envirocitizen.org](mailto:bcabezas@envirocitizen.org)



## **REQUEST FOR BIDS**

The Water Resources Program is requesting bids for a river-bank restoration project on Indian Island. The project will involve rip-rapping and shaping approximately 112 feet of river bank.

**For more information or to submit a bid please contact Jason Mitchell at 817-7381**

All contractors must have liability insurance and workman's compensation insurance.



# Tribal Air Programs Work!

*Submitted by Eric Nicolar as an OpEd to Bangor Daily News and printed in their March 16th, 2005 issue*

For the past four years, many of us have been reading in the news of how the Northeast states and environmental groups are suing the Environmental Protection Agency and the Bush administration for their continued weakening of the Clean Air Act rules. Recognizing that improvements in the quality of air in and around our tribal lands are not always a priority of the state or federal governments, the tribes within Maine are either implementing full air programs or are in the early stages of developing them. Here at the Penobscot Nation, the Air Quality Program is in its sixth year of answering the challenge of fighting for better ambient air conditions in this region. The Penobscot Nation has one of the more expansive tribal air monitoring networks located strategically around the tribe's reservation and trust lands. This distribution is done in cooperation with the Maine Air Bureau and the USEPA. We currently monitor many pollutants and toxics from Particulate Matter and Ozone to Sulfur Dioxide and Elemental Carbons.

Our monitors are covering gaps from the Carrabassett Valley-Alder Stream Township area to the Mattagamon-Katahdin and the Down East Lakeville area. While at the nation we use this data primarily for our own concerns, we rightfully share information with other interested groups to meet the challenge of pollution reduction, enforcement, and compliance.

On the policy side of air quality, we compile reports and submit comments that generally parallel the goals of many other groups. We do this from our developing technical capacity to evaluate and analyze the necessary parameters of air quality source emissions, monitors, and impact models. Again, in cooperation with state, federal and environmental group professionals, we make incremental advances by identifying where more pollution controls can be implemented or regulations enforced.

The tribe produces deliverables that are part and parcel of air quality management. We have begun generating our own emissions inventory for future control considerations in economic development. We also plan to implement rules that will control the expansion of emissions from this development.

The nation was recently elected the chair of the Mid-Atlantic Northeast Visibility Union (MANE-VU). MANE-VU is a regional planning organization consisting of 14 states and 2 tribal governments (Penobscot Nation and St. Regis Mohawk) that implement the regional haze rule. This law seeks to upgrade the visibility conditions around the Class I National Parks and Wildlife Refuges in the country. This collaboration is one of mutual respect for the unique abilities that each stakeholder brings to the group to protect our most scenic vistas.

The nation is also involved with national tribal organizations that fulfill needs in air quality around Indian Country. We participate nationally to encourage promulgation of rules that protect tribal

air sheds, comparable to the protections implemented by the states, while striving for parallel enforcement.

Many of the differences about environmental regulatory authority between the tribes and state are left aside while we share the common goal of better air quality. Guided by the Federal Trust Responsibility, tribal environmental programs work with a vision towards the future, for all people and our shared natural resources. If we all look into the future together, we'll all benefit with better air to breathe.

Eric Nicolar is the Air Quality Manager for the Penobscot Indian Nation.

## *Secchi Depth: An Important Estimate of Water Quality*

This very simple measurement can tell us a lot about the health of a water body. Secchi depth is the backbone of all the various measurements for lakes, but we also do it on the river when it is possible. The process requires the use of a "viewscope" to watch a black and white disk as it is lowered down into the water. The view scope serves much like a snorkeling mask, helping you to see what is underwater.



When we conduct this process we have to lower the disk down until it can no longer be seen, then raise it until it can be seen again, and finally lowering it one more time until it can no longer be seen again. Once this is done we record the depth at which the disk is hanging by reading the tape measure to which it is attached.

The greater the depth at which you can see a secchi disk the better the quality is in that water body. If the depth at which you take the reading is shallow that means there is a lot of material in the water making it "cloudy" and hard to see the disk. This material could be, for example, soil or algae. Secchi disk measurements are often taken to predict when high levels of algae growth might occur. A trend in decreasing secchi depths over time indicate a need to look at the amount of nutrients entering a water body. If surrounding land-use practices are changed in time a water body can be saved.

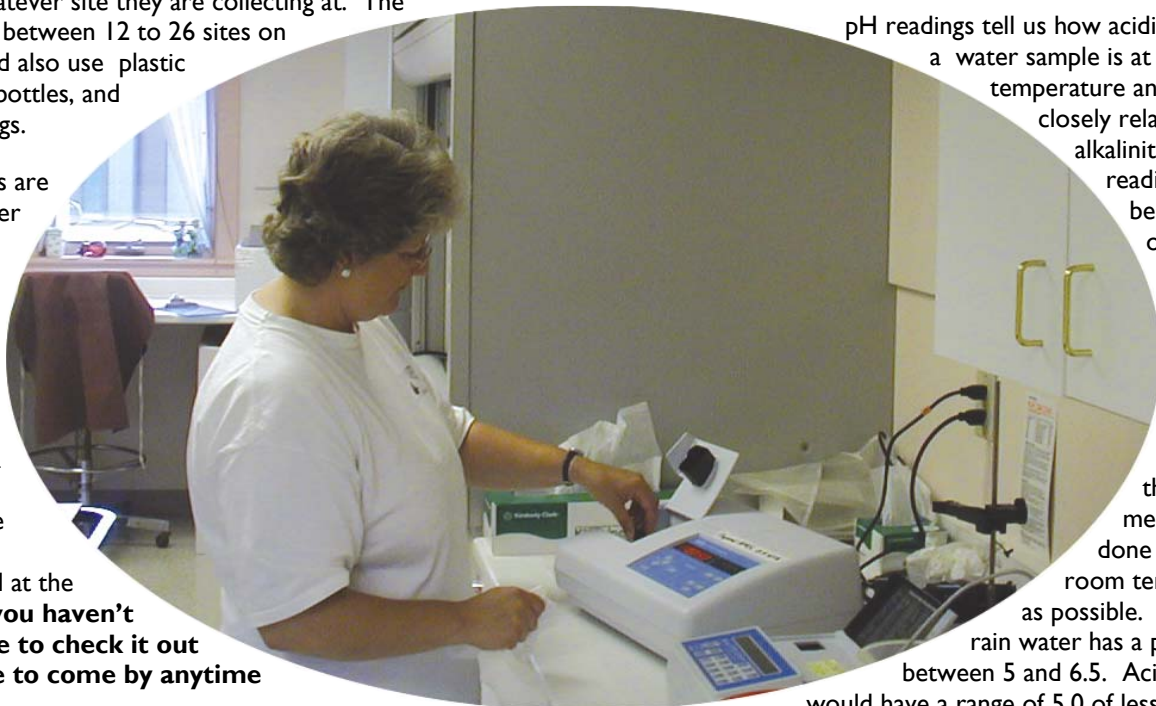


# Life in the Water Resources Laboratory ~ By Rhonda Daigle

Hi, I'm Rhonda Daigle and I've been working for the Water Resources Program going on eleven years, this summer. During the summer the laboratory here at the Department of Natural Resources is a very busy place! I'm the Water Resources Water Quality Monitoring Laboratory Coordinator. I work with the water resources field technicians, coordinator, and Director Dan Kusnierz.

During the summer I need to keep up with two, and sometimes three, teams of field technicians that are out on our tribal waters gathering water samples. In order to gather these water samples, the crew uses a lot of various sampling containers. A large portion of my or my summer student assistant's job is to keep up with maintaining a steady volume of sample containers that are clean and ready for field use. This entails basically four steps: de-labeling, acid rinsing, clear rinsing, and then re-labeling. We use water proof self-sticking labels on each plastic bottle so that the field crew can write on each label whatever site they are collecting at. The crews sample between 12 to 26 sites on a river run and also use plastic bottles, glass bottles, and also plastic bags.

These samples are kept in a cooler until they arrive at the lab for analysis. We have a very nice new laboratory that gives us a lot more working space than our old laboratory did at the log cabin. **If you haven't had a chance to check it out yet, feel free to come by anytime to see it!**



between the two readings is the BOD value. Very polluted waters will have a minimum amount of oxygen remaining - which results in a high BOD.

TSS also requires subtracting an initial reading from an end reading to get the value for a sample. This value is important because it lets us know how much sediment is un-dissolved in the water sample. The crew uses 1,000 ml bottles to collect for TSS. I use filters that are placed in a vacuum pump flask to weigh an initial "blank" filter for each sample. Our weigh scale measures down to the thousandth of a decimal point for accuracy. "Blank" filters are first weighed after an initial hour long drying period in our lab's drying oven. Then, I filter 500 mls to 1000 mls of each sample into it's respective "blank" filter and dry it for a second time for an hour. After cooling these filters in a desiccant machine, I'll weigh these final filters again. The difference in weight will be the amount of un-dissolved solids that a particular sample site had at the moment in time that it was collected.

pH readings tell us how acidic or basic a water sample is at a certain temperature and is closely related to alkalinity. These readings are best done out in the field, but we also do some readings in the lab. All of the samples that I measure are done as close to room temperature as possible. Normal rain water has a pH of between 5 and 6.5. Acid rain would have a range of 5.0 or less. For comparisons, lemon juice or vinegar have a pH between 1 and 2; and milk of magnesia a pH of about 10. The pH of a water body can be affected by spring run-off, acid rain or a host of other external influences.

The tests done on our water samples here include: 5-day BOD (biological oxygen demand), total suspended solids (TSS), pH, alkalinity, conductivity, color, and *E. coli*.

BOD is a measurement of the water's oxygen demand over a number of days. Our samples are incubated in 300 ml glass bottles in a refrigerator for five days, during which oxygen is consumed by microbes within the water. Prior to refrigeration I measure the dissolved oxygen is at 21 degrees centigrade. After five days another reading is taken to measure the remaining oxygen content. The difference

Alkalinity, the measurement of a waters ability to maintain a certain pH, is an important measurement of lake health. In our analyses, we titrate to an end-point of 5.0 pH. The more acidic our waters are the worse it is for the environment. Therefore, we are looking to maintain and improve waters to a pH of 7. A

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pH of 4 would negatively affect fish reproduction.

Conductivity, a general indicator of pollution, is also done out in the field sometimes. It measures the amount of “electronic” activity in a water sample. We use a simple meter that takes a measurement from a probe inserted into the water sample. It is important for both the pH and conductivity readings to have the probe moving in the water sample and not to measure from a “static” pool of water.

Color is a measurement of water clarity. The Penobscot and its tributaries have a lot of natural color attributed to natural organic material. We use a piece of equipment called a spectrophotometer that measures filtered light transmissions. A small amount of sample, about 25 mls is put into a glass container, called a cell. This cell is inserted into the spectrophotometer. The equipment comes with a preprogrammed dial for this color test, so that all we have to do is press a button to get the reading from the cell sample. Between each sample that we are reading, a “blank” cell is read to clear the machine so that the next reading will have no bias. Using distilled or de-ionized water, the machine zeros itself out to a zero reading and is ready for the next sample.

Lastly, *E. coli* bacteria is a measurement that involves a lot of preparation and attention to detail in analysis. Bacteria in our waters can come from natural, human or a combination thereof. Excess bacteria in some waters causes closed beaches and harvesting. We prepare agar dishes that are put in a wet bath overnight with our samples that have been filtered onto a gridded sterile pad.

We use a yellow urea solution that absorbs onto a blank sterile pad. We then transfer the incubated gridded pad to the yellow pad and after fifteen minutes can count the number of yellow/green colonies that are seen. Any unusually high numbers are reported to the Director and then a repeat site visit may be required.



PLEASE NOTE: This advisory has undergone slight changes in content to reflect new information as well as format to make it more understandable!

# Warning!

## Guidelines for eating fish from Penobscot Territory Waters

To prevent possible harm from mercury, dioxins, and PCBs due to eating freshwater fish, we offer this advice:

All children under 8 and women who are nursing, pregnant or could become pregnant,

**the most sensitive population from health effects of mercury,**

should eat **NO FISH** from Penobscot Nation Territory waters and other Maine inland waters.

*If you are eating fish: small trout and salmon are safer choices than large bass and pickerel.*



EVERYONE ELSE who is taking fish from Penobscot Nation Territory Waters



on the Penobscot River below Mattaseunk Dam (Mattawamkeag)

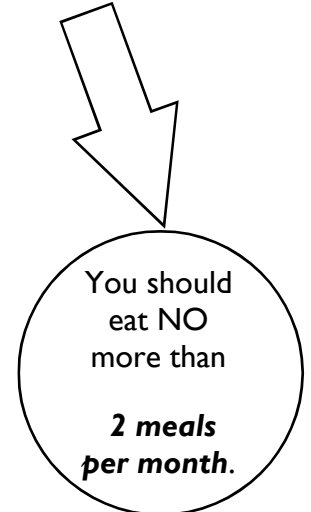
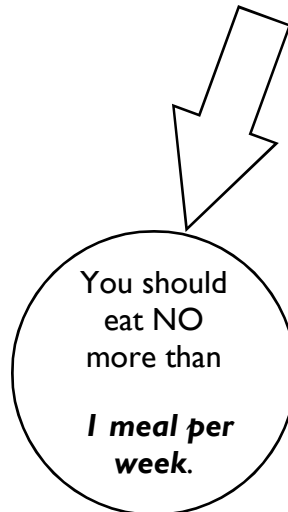
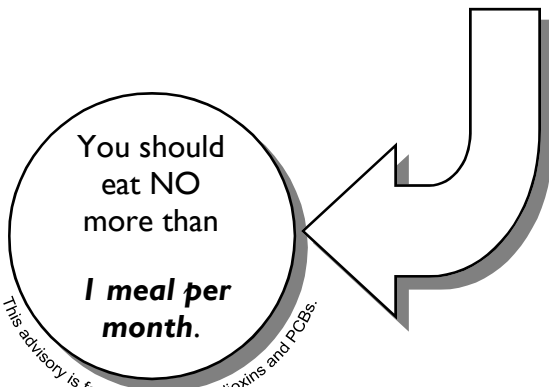
**OR**

anywhere else, where you are taking...

... Brook trout, Landlocked salmon

**OR**

Any other fish



These advisories are for protection from mercury.

For questions or more information: Penobscot DNR 207.827.7776, x. 7361

## SUPPORT DAM REMOVAL ON THE PENOBSCOT RIVER - PLEASE WRITE TO PRESIDENT BUSH NOW!

Penobscot Partners is calling on President Bush to provide funding for the Penobscot River Restoration Project in his next federal budget. Federal funding is needed to make this deal a reality! Federal agencies are already starting work on their budgets for FY 2007 (which begins in October, 2006). A significant line item in that budget for the purchase of the Penobscot dams would allow us to buy the dams quickly and move ahead to removal. We are asking President Bush to put \$20 million for the Penobscot project in his FY2007 budget. We need you to write the President and urge him to make this money available. If enough people write now, it will ensure that the project gets as much attention as possible leading up to the early summer, when agency budgets will begin to take form.

When you write the White House, please either send an e-mail or a faxed letter (mail to the White House is very slow).

You can use the following link to e-mail President Bush: [president@whitehouse.gov](mailto:president@whitehouse.gov), or you can draft a letter and fax it to President Bush at **(202) 456-2461**.

You can use the draft text you will find below, you can edit it, or you can write your own letter. Handwritten letters are the best! If possible, you should include something personal about your interest in the Penobscot River. You should also emphasize that putting this money in the budget would go a long way towards making the project a success, and establishing an environmental legacy for President Bush in New England.

Your support will help make a difference! The Penobscot Partners thank you for your time, effort and support.

**For more information see [www.penobscotriver.org](http://www.penobscotriver.org)**

**BRING YOUR LETTERS TO THE PIN DNR OFFICE TO FAX!**

President George W. Bush  
The White House  
Washington, DC 20500

Dear President Bush:

I am writing to urge you to provide funding for the Penobscot River Restoration Project in Maine. This project is the best hope we have for restoring Atlantic salmon in Maine, and will also provide substantial benefits to other fish species and the overall health of the Penobscot River, Maine's largest watershed. Just as importantly, the project can serve as a national model for cooperative watershed restoration on a large scale. The federal government will have to play an important role in funding the project if it is to succeed.

For more than 100 years, the health of the Penobscot River and its runs of salmon and other anadromous fish have been impaired by the dozens of dams that have been built in the watershed, first for mechanical power and eventually to generate electricity. In recent years, several hydropower dams on the lower Penobscot owned by PPL of Maine have been caught up in difficult relicensing processes, while at the same time the decline in Atlantic salmon populations has only increased. In an historic achievement, a diverse group of parties, including PPL, the State of Maine, the Department of the Interior, the Penobscot Indian Nation, and a coalition of conservation organizations, have negotiated a solution that will deal with both of these intractable situations.

PPL has agreed to sell three of its Penobscot basin dams to a newly created nonprofit corporation. Those dams will be decommissioned, opening up huge portions of the watershed to Atlantic salmon. At the same time, enhancements at other PPL hydropower facilities in the watershed will replace almost all of the 18 megawatts of capacity that will be lost when the three dams are sold. The parties have come up with a way to reconfigure hydropower generation in the watershed in a way that will promote significant fisheries restoration. Collaboratively they have been able to achieve success that would have been impossible in the regulatory process, and through this innovative approach they have created the chance that future generations of New Englanders will be able to fish for Atlantic salmon in the United States.

The project will require significant funding to implement. The dams will cost between 24 and 26 million dollars, and, full implementation of the project, including removal of two the dams and construction of a river-like by-pass at the third, may cost as much as another 30 million dollars. While there will be private and state dollars available, a significant amount of federal money will be needed to make this project happen.

Mr. President, I am urging you to include \$20 million in your 2007 fiscal year budget for the Penobscot Project. That amount of funding would guarantee that the dams will be purchased by 2008, and would allow the project to move forward to implementation. Taking this step would ensure an environmental and recreational legacy for the region that will last for generations.