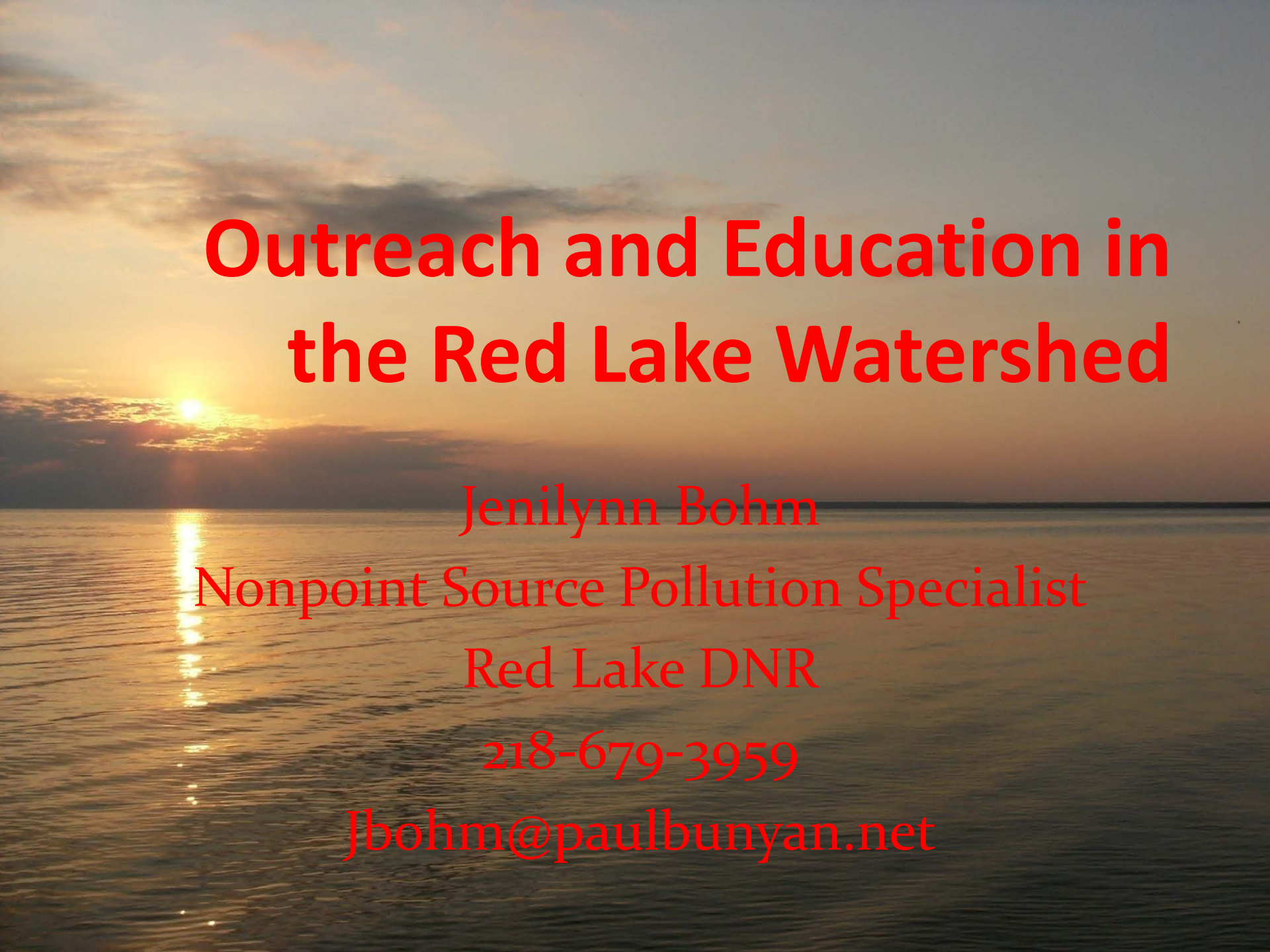


Outreach and Education in the Red Lake Watershed

Jenilynn Bohm
Nonpoint Source Pollution Specialist
Red Lake DNR
218-679-3959
Jbohm@paulbunyan.net

US EPA Region 5

Total Land Holdings 835,000 acres.

- Upper and Lower Red Lake comprise 235,388 acres
  - 6th largest freshwater lake in the U.S.

$50,000 319 base funding

Outreach and Education

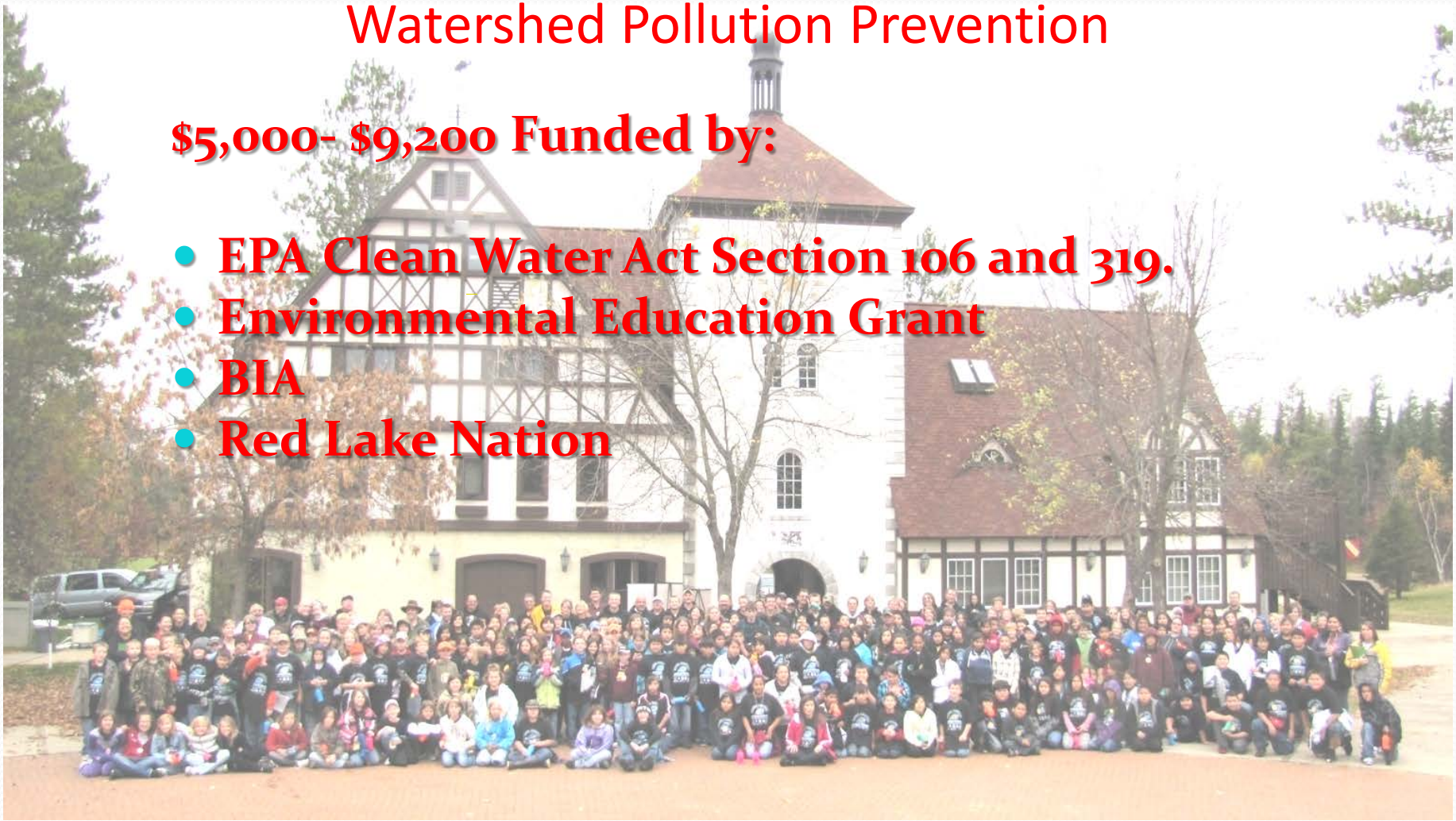
- Section 106 or 319?
- Water Festival

Water Festival Tradition (2001)

Watershed Pollution Prevention

Water Festival Tradition (2001)

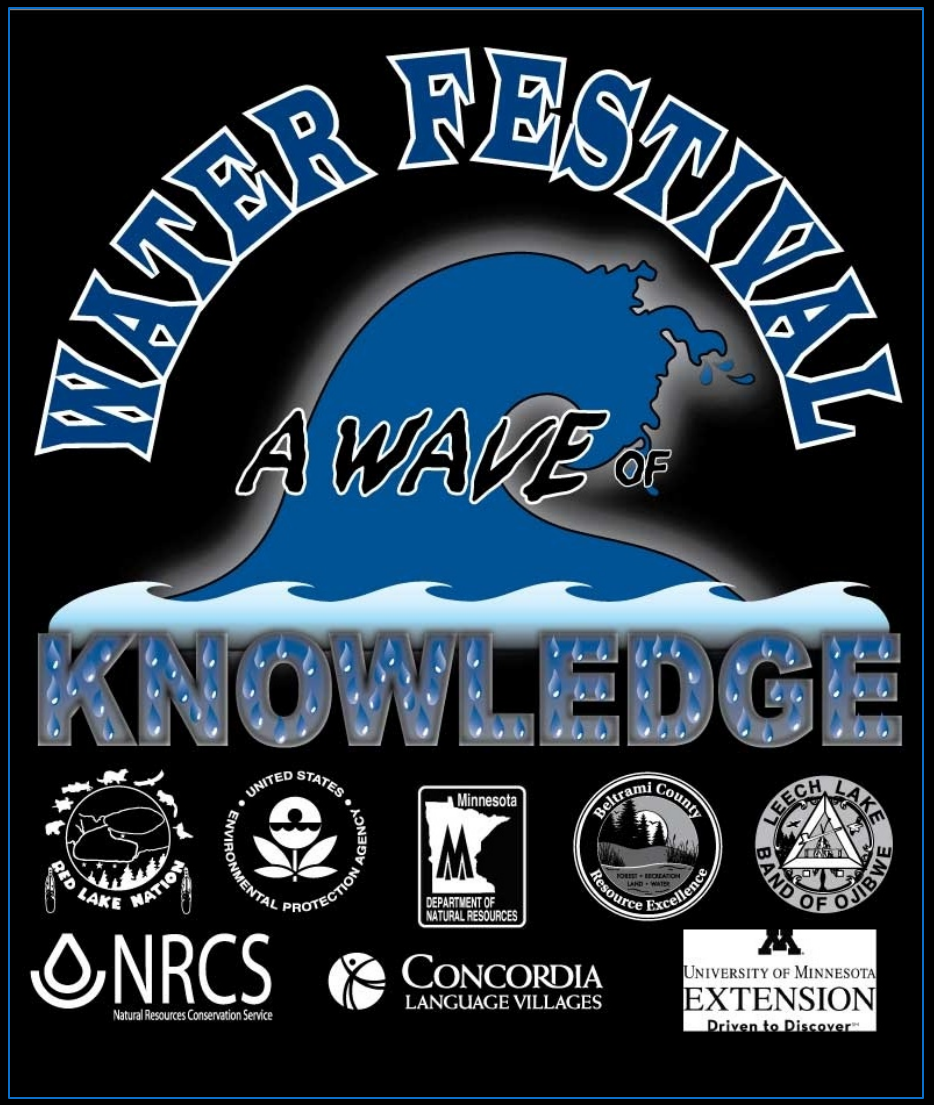
Watershed Pollution Prevention



$5,000- $9,200 Funded by:

- **EPA Clean Water Act Section 106 and 319.**
- **Environmental Education Grant**
- **BIA**
- **Red Lake Nation**

Water Festival Partners



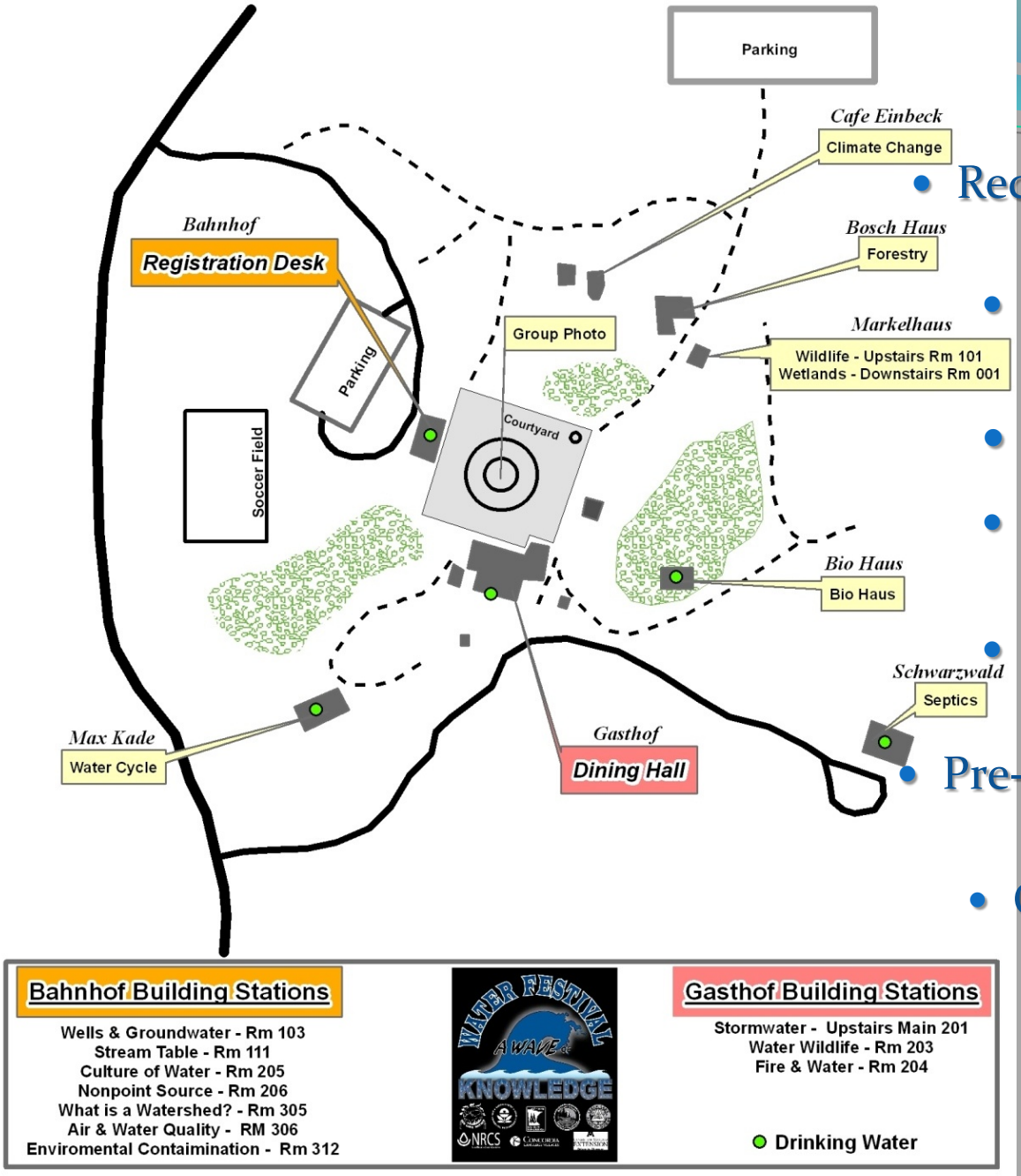
Watershed Awareness

Red Lake DNR Staff

- Accounting
- Administrative
- Air Quality
- Brownsfield
- Environmental
- Fisheries
- Fire Prevention
- Forestry
- Water Resources
- Wildlife

Educating our youth about the role of water and the prevention of pollution in the Red Lake Watershed that we all share is an important lesson for everyone.

Water Festival Planning



- Reconciling schedules: > 6 months
- Site Reservation: > 6 months
- School Invites: > 3 months
- Station Topics: > 2 months
- T-shirt Quotes: >2 months
- Pre-water festival meeting: 1 month
- Order station supplies: 1 month
- Stuff take-home bags, purchase supplies, make station, presenter, school leader folders: 2 days prior

http://www.redlakednr.org/water_festival.html

Water Festival Planning

OCTOBER 13TH 2011 Water Festival						Group Photo		Lunch 1				Lunch 2		T= Table, B= Bench, Ch= Chairs, Ea= Easels				
Topic	Presente	Building/ Equipment	9:15-9:35	9:40-10:00	10:05-10:25	10:25-10:35	10:40 -11:00	11:05-11:25	11:30-11:50	11:55-12:15	12:20-12:40	12:45-1:05	1:10-1:30	1:35-1:55	2:00-2:20	2:25-2:45	2:50-3:10	3:15-4:00
Fire and Water	Mike & Michelle	Gasthof:20 4 1T, 2B, 1Ea		K2	K1	K2	R6	SC1	SC2	NH1	NH2	Lunch: Fire and Water		help with lunch				BIOHAUS TOUR & MOVIE FOR STAFF & PRESENTERS
Stormwater	Larry & Patty NRCS	Gasthof:20 1 1T, 2Ch, 1Ea, 4 bins		K1	K2	K1	R3	SC2	SC1	NH2	NH1	Lunch: BD1a,b, stormwater		help with lunch				
Water Vidlife	Sue MNDNR	Gasthof:20 3 2T, 4B, 1Ea		STM 5th, 6th	BD1b	R5	SC2	help with serving lunch	R5	SC1	R4	Lunch: Water Vildlife						
Septic Systems	Brent Beltrami Env.	Schwarzwald 2T, 2Ch, 1Ea		R1	STM 5th, 6th	R1	SC1	help with serving lunch	BD2a	R2	BD1b	Lunch: BD2a,b, Septic Systems						
BioHaus	CLV	Biohaus		R3, R6, R2		R4	STM 5th, 6th, R1, R5		Lunch	K1,K2, P1,P2		R4"NH1", NH2"		SC1, SC2		BD1a,b", BD2a,b"		
Vetlands	Kyle/ Shane	Markel: 001 3T, 5B, 1Ea	BD1a	BD1b	P1	BD1b	BD2B	unch: K1,K2, Vetland		BD2a	R5	R6	R3"					
Bioassessment	Kayla/ Shane	Markel: 101 2T, 8B, 3 Ea	BD1b	BD1a	P2	BD1a	BD2a	Lunch: R3, R6, Bioassessment		BD2B	SC1/SC2	R3	R6					
Forests and Water	Tony & Mitch	Bosch House:100 4T, 8B, 1Ea	BD2a	BD2B	R5	R3	K2	BD1b	BD1a	R6	R3	Lunch: SC1, SC2, Forests and Water		help with lunch				
Climate Change	Dawn MNDNR	Café Einbeck 2T, 20Ch, 1Ea	SC1	NH2	NH1	NH1	R4	Lunch: R4, Climate Change		R1	BD2a	P1"	R2"	BD2B				
Stream Table	Amy MNDNR	Bahnof: 111 1T, 2Ch, 1Ea	BD2B	BD2a	R4	R6	K1	BD1a	BD1b	R3	STM 5th, 6th	Lunch: STM 5th, 6th" Stream Table		help with lunch				
Wells and Groundwater	Marc MDH	Bahnof: 103 1T, 16 Ch, 1Ea		R4	BD1a	R2	P2	help with serving lunch	R1	SC2	help with lunch	Lunch: Wells and Groundwater			BD2B			
What is a Watershed?	Chris Beltrami Env.	Bahnof: 305 1T, 25 Ch, 1Ea		P1 (9:50)	BD2a	BD2B	BD1b	BD2B	STM 5th, 6th	BD1a	R2	Lunch: R1", What is a watershed?						
Air and Water Quality	Jen G./ Cody	Bahnof: 306 1T, 2 Ch, 1Ea		SC2	SC1	P1	NH1	Lunch: Air and Water Quality		R5	help with lunch	K2	K1"	BD1a	BD1b			
Environmental	John/Co	Bahnof: 312 1T, 2 Ch		SC1	SC2	R2	NH2	Lunch: NH1,NH2, Environmental		help with	R6	K1	K2"	BD1b	BD1a			
Culture of Water	Shirley Uof MN	Bahnof: 205 1T, 20 Ch, 1Ea		R5	R1	STM 5th, 6th	R2	BD2a	BD2B	R4	BD1a	Lunch: R5", Culture of Water						
NPS Model	Joel	Bahnof: 206 1T, 2 Ch, 1Ea		P2 (9:50)	BD2B	BD2a	BD1a	Lunch: P1, P2, NPS Model		BD1b	R1	R2			BD2a			
Water Cycle	Hunter LLDRM	Max Kade: 11 T, 2Ch, 1 Ea	SC2	NH1	NH2	NH2	P1	Lunch: R2, Water Cycle		STM 5th, 6th	BD2B	P2"	help with lunch	BD2a				
School Code			Blackduck Classr 1 - BD1A	Blackduck Classr 1 - BD1B	Blackduck Classr 2 - BD2A	Blackduck Classr 2 - BD2B	Kelliher - K1	Kelliher - K2	Northome - NH1	Northome - NH2	Ponemah1 - P1	Ponemah2 - P2	St. Marg's = STM	Red Lake classr 1 - R1	Red Lake classr 2 - R2	Red Lake classr 3 - R3	Red Lake classr 4 - R4	Red Lake classr 5 - R5	Lake class 6= R6	School Craft- SC1	School Craft- SC2
			14	14	14	14	12	12	12	13	13	12	21	15	14	12	13	15	12	11	11

Schedule | Schools | CELL # | Bus helpers | Notes | School Schedules | Lunch 2 | Lu

Qualitative and Quantitative

- Interaction of RLDNR staff and partners will increase natural resource awareness in watershed pollution prevention.
- Becoming aware of environmental issues will promote environmental stewards and raise interest in environmental careers.
- number of partners, participants, and presentations, evaluation results.

Teacher Evaluation

2011 Water Festival Evaluation

Ponemah 2: Terry Belanger's Class

1. *How would you rate this Fall's Water Festival? 1=poor 5= excellent*

   1 2 3 (4) 5

   a. What could we do to improve it? Suggestions/ Comments?

   Possibly hold the Festival on a Friday ???
   maybe hold earlier in the month--- warmer ???

2. *How would you rate the content of the presentations?*

   A= excellent, **B**=good, **C**=fair, **D**= needs improvement, **F**=Needs major improvement, **NA**= didn't attend event

   1. B Nonpoint Source Model → This was the favorite for many (Nice Model)
   2. A Bioassessment – Very Hands-on!
   3. C/B Wells and Groundwater – Too small of a space - Kids lost focus
   4. B Biohaus – Very interesting--- "Cool" to see.
   5. C Water Cycle – Kids enjoyed the beads, but not very informative

3. *What presentations did you enjoy the most?*

   1 = the highest, **10** = the lowest, **NA**= didn't attend event

   1. ✓ Nonpoint Source Model
   2. ✓ Bioassessment
   3. _____ Wells and Groundwater
   4. _____ Biohaus
   5. _____ Water Cycle

   Both of these presentations were very hands-on and engaging!

Teacher Evaluation

4. *Do you already incorporate any of the topics or information from the stations your class attended today in your own classroom?* N/A I primarily teach mathematics, but I have taught Minnesota History before and do cover all of our state's resources – including water, in all its forms.

5. *Do you plan to utilize any of the information in your classroom that you learned today? Please explain.* Biohaus → We are trying to conserve energy and such (recycling) in our classroom.

6. *Was the information in your take-home packets useful?* Yes! My kids couldn't wait to receive their bag of goodies. Many still use the water bottle daily

7. *Is there an additional station topic you would like to see covered?* Invasive Species → Fishing, Trailers, Removal, ETC.

8. *Do you already have an Earth Day activity planned?* Not to my knowledge (New to School)

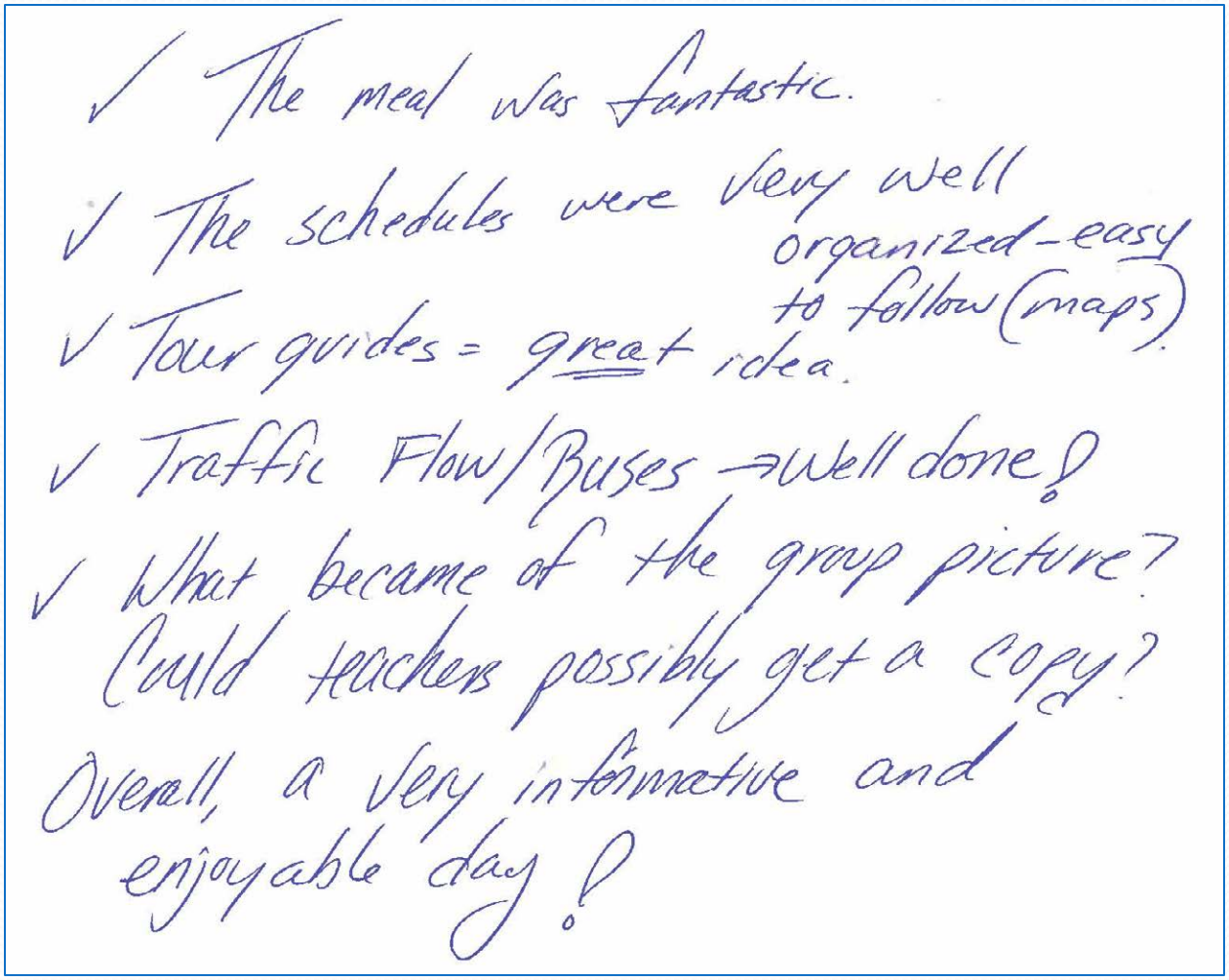
Teacher Evaluation

9. *Did your students find the information in the take-home packets educational or entertaining?* Honestly ... more entertaining, but you have to start somewhere

10. *Did the water festival spark an interest in an environmental career for any of your students?* Several of my students indicated that they want to study bugs (Bioassessment) when they get older

Thank you for taking the time to fill this form out. Please feel free to either email, mail, or fax these and the post-questionnaires back to Jenilynn Bohm at:
Red Lake DNR, 15761 High School Dr., Red Lake, MN. 56671
Fax: 218-679-2830
Email: Jbohm@paulbunyan.net

Teacher Evaluation



Student Evaluation

Water Festival Evaluation

Blackduck 2a Students

Name: Kayvion Rodgers

School Name: Black Duck public schools.

1. Please rate the following statement by checking (X) the most appropriate answer in response to this question:

Today, I learned more about____(Station)_____ than I did before.

Station	Strongly Disagree	Disagree	Agree	Strongly Agree	Didn't attend
Forests and Water				X	
Stream Table				X	
What is a watershed?				X	
Bioassessment				X	
Culture of Water				X	
Septic Systems				X	
Wetlands				X	
Climate Change				X	
Water Cycle				X	
NPS model					X

Student Evaluation

2. What new information or skills did you learn today that was important to you? Why?

I learned that rivers need to miander. If they did not the would be one big current.

3. Based on what you learned today, have you been inspired to take any action in your own life? Please describe.

yes I want to become a forestor like where we counted the rings. I would like to do this because I am an outdoor person.

4. Which station or part of the water festival did you enjoy the most? Why?

I enjoyed the culture of water. I enjoyed it because the talk

Student Evaluation

about maple syriping and my kind of thing, like fishing.

5. You listened to presentations today from professionals in different environmental fields: *Natural Resources Conservation Service (NRCS), Soil Water Conservation District (SWCD), Minnesota Department of Health (MDH), and Department of Natural Resources (DNR) Programs: Fire Prevention, Water Resources, Wildlife, Forestry, and Environmental*

a. Of these careers, which interests you the most?

The one that interests me the most would be a DNR. I know a lot about it. My dads friend Ron is one.

b. Which would you like to learn more about?

I would like to learn more about the DNR.

6. Do you have any ideas on how to make the water festival better for next year?

No I do not you guys were awsome. you had nothing to change for Next year. Thank you. Xayrion.

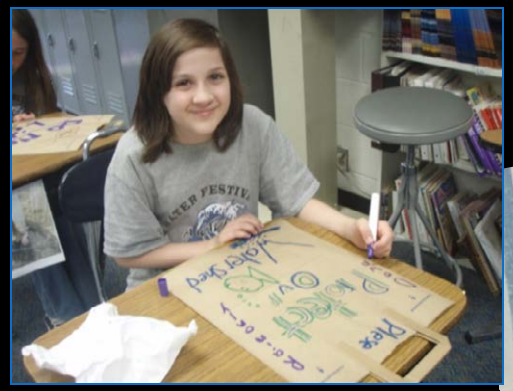
Outreach and Education

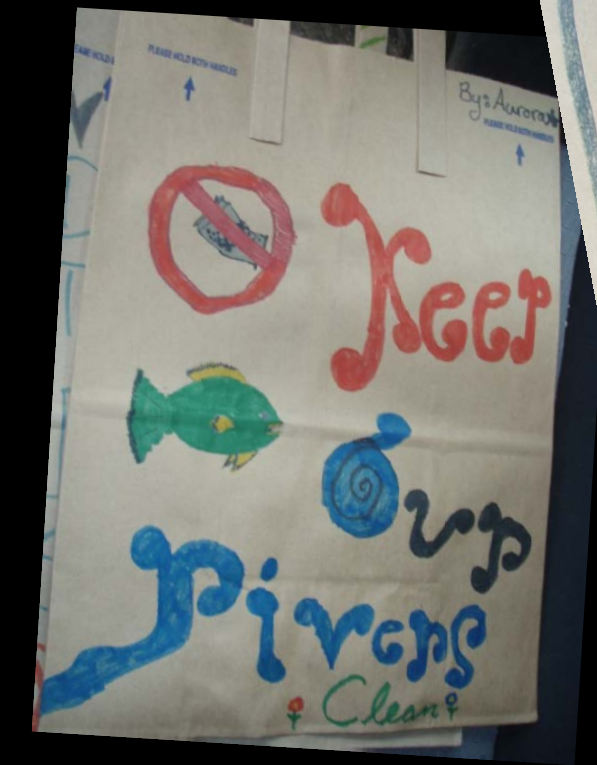
- **Section 106 or 319?**
  - **Water Festival**
- **Where does your water…shed?**

Storm Drain Stenciling

Storm Drain Stenciling

Spreading the Message



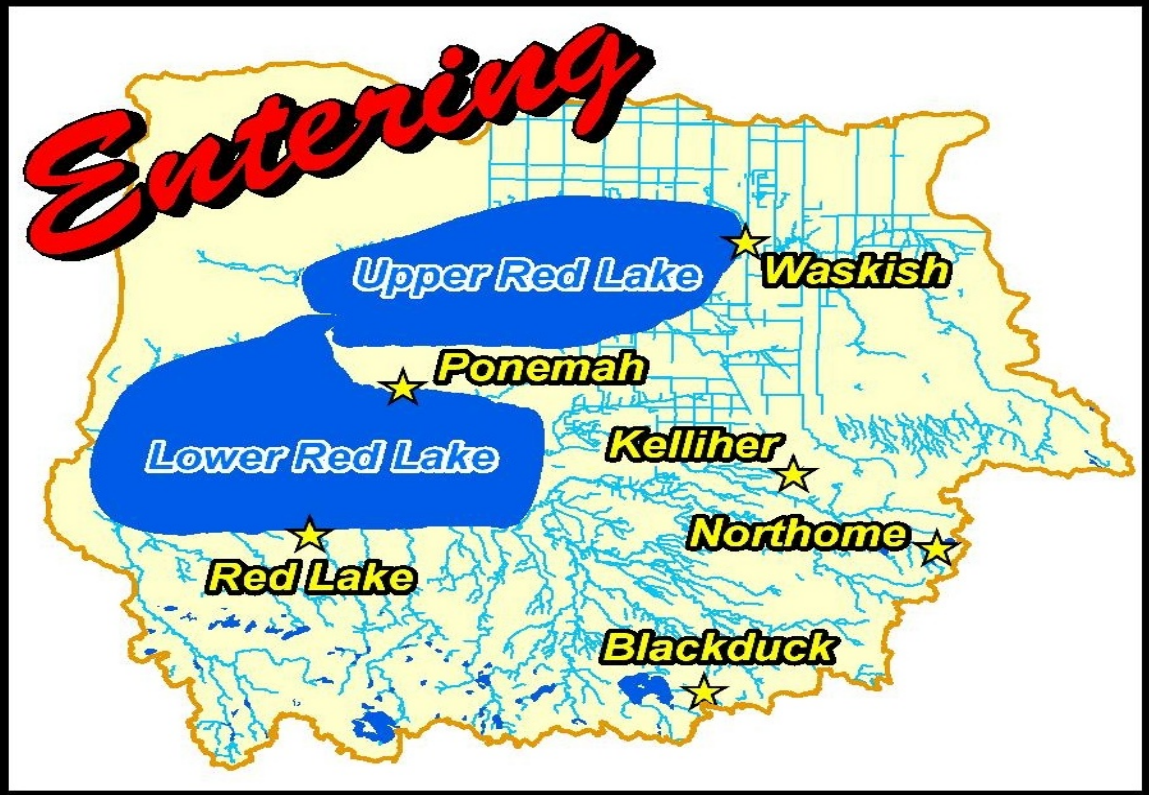


Quantitative and Qualitative

- Storm sewer drain signs will raise awareness of run-off, dumping, and lake health. And foster interest in storm water pollution and prevention

- *Quantitative*: number of stenciled storm drains, and number of participating teachers, students, and staff.

WHERE DOES YOUR WATER...SHED?



RED LAKE WATERSHED

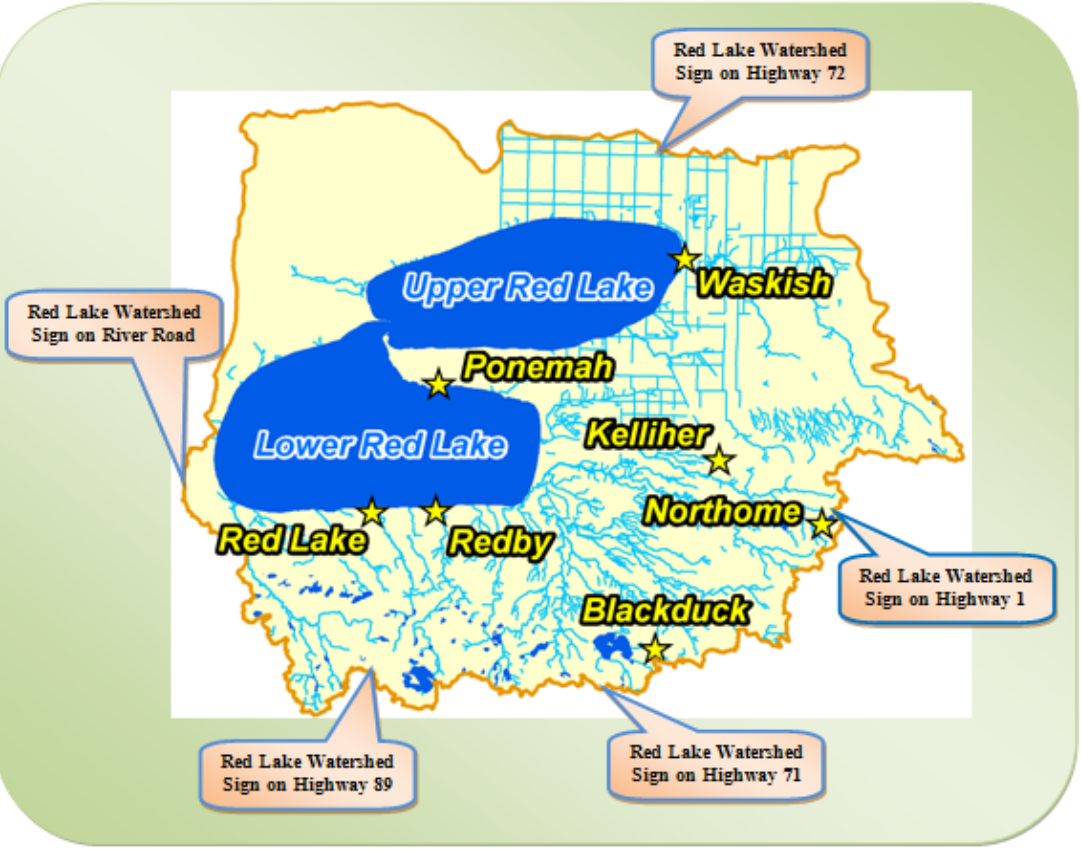
FUNDING PROVIDED BY THE ENVIRONMENTAL PROTECTION AGENCY THROUGH THE ENVIRONMENTAL EDUCATION GRANT

RLDNR's Nonpoint Source Pollution Prevention Article:

"WHERE DOES YOUR WATER.....SHED?"

By: Jenilynn Bohm

The Red Lake DNR (RLDNR) has begun a Nonpoint Source (NPS) Pollution Program. This program is funded by the Environmental Protection Agency (EPA) to address NPS issues and protect or improve water quality on the Reservation.



The Environmental Education grant activities encompassed the water festival, storm drain stenciling and tour for 5th graders , as well as the GLOBE volunteer monitoring and watershed signs. The upcoming 5th grade water festival for schools within the Red Lake Watershed will be held this fall at Concordia Language Villages. Check the RLDNR Website at http://www.redlakednr.org/ for updates, directions, schedule, and other information.

To enhance public awareness of the Red Lake Watershed, the RLDNR and Natural Resources Conservation Service (NRCS) staff placed five roadway signs along major roads (HWY 89, HWY 71, HWY 72, and River Road) that define the Red Lake watershed boundary. The signs are double sided to inform drivers as to which watershed they are entering and leaving. Special thanks goes to MNDOT, MNDNR, Big Bog State Park, Northome School, and land owners Bob Oelke and Frank Bera for their valuable input and cooperation.

Stay tuned for future NPS articles.

Contact Jeni Bohm at the RLDNR: 218-679-3959x1347 or Jbohm@paulbunyan.net for questions or comments.

Quantitative and Qualitative

- Watershed signs will enable greater understanding and appreciation of watershed size and potential pollutant sources.

- *Quantitative*: number of signs and number of participating teachers, students, and staff.

319 NPS Program Highlights

The Red Lake Band of Chippewa Indians Non-point Source (NPS) Assessment Report, NPS Management Plan, and application for treatment as a state were approved by EPA on October 8, 2008.

ENVIRONMENTAL EDUCATION FOR WATERSHED POLLUTION PREVENTION:

WATER FESTIVAL

TRADITION

Interagency collaboration:
EPA, Red Lake DNR, NRCS, Beltrami County SWCD and Environmental Services, and Leech Lake DRM. The Water Festival allows us to educate over 200 5th graders each year about important aspects of water pollution within the Red Lake Watershed. Students enjoy hands on demonstrations of: Nonpoint source pollution, environmental contamination, water cycle, water wildlife, septic systems, forestry, fire ecology, air quality, wetlands and watersheds.

"WHERE DOES YOUR WATER.....SHED?"

Staff from the NRCS and Red Lake DNR stenciled over 50 storm drains in these communities and placed signage to enhance watershed size and pollution prevention awareness. Students also had the opportunity to tour their hometown storm drains, create their own model watersheds and spread the pollution prevention message through decorating their own storm drains on a paper bags which were distributed at local grocery stores.

GLOBE VOLUNTEER MONITORING

Two Red Lake DNR staff assisted 7 volunteer monitors with collecting data from the four stream sites. Baseline data includes: GPS waypoints, habitat assessment, flow, color, total phosphorus and nitrogen nutrient sampling, and collection of flow, temperature, pH, dissolved oxygen, and conductivity parameters for four stream sites.

Program Goals:

1). Implement BMP's and work towards watershed management to improve water quality.

2). Environmental Education

3). Develop general habitat and environmental protection ordinances.

4). Manage storm water issues through BMPs, rain gardens, sediment basins, and/or detention treatment ponds.

5). Expand baseline monitoring in areas of current or likely future NPS pollution input.

Outreach and Education

- Section 106 or 319?
  - Water Festival
  - Where does your water…shed?
  - Earth Day Fair

AKI-GIIZHIGAD

Ayaabajitoon
Reuse

Bangiiwagitoon
Reduce

Oshki-Aangitoon
Renew

Aanjaabajitoon
Recycle

EARTH DAY

Red Lake Nation Earth Day Fair

"Reduce, Reuse, Recycle, & Renew"

April 21, 2011 • 1:30—5:30 PM

Red Lake Boys & Girls Club • Red Lake, MN

Everyone is invited!

Bring your family, your friends, your plastic bags and your household hazardous waste!

Red Lake Nation Earth Day Fair (2011)

Red Lake Nation Earth Day Fair (2011)

ACTIVITIES

ADULTS

- ***Recycle*** & exchange your plastic bags for a ***reusable*** grocery bag
- Bring your vehicle to get your tire pressure checked to increase your gas mileage and ***reduce*** your gas consumption
- Bring in your Household Hazardous Waste for proper disposal to ***reduce*** risk of pollution

KIDS

- Participate in Bike Safety Camp and ***reduce*** gasoline usage
- ***Renew*** old electronics by making new ones
- Several interactive games such as go fishing, what to recycle, plunko for groundwater, and more!

ALL

- Visit the many booths to learn of Red Lake's great natural resources, programs, projects, gardening tips, energy conservation, and more!
- Get your "Green Mugshot" taken with your environmental stewardship commitment
- Watch the "Red Lake Walleye Recovery" video recently seen on PBS
- Get an Red Lake Nation Earth Day T-Shirt, locally produced snacks, and prize drawings!

FOR MORE INFORMATION ON THE EVENT CONTACT:
Cody Charwood (ccharwood@redlakenation.org) or Jenilynn Bohm (jbohm@paulbunyan.net) at the Red Lake DNR, 679-3959
Event hosted by Red Lake DNR and Red Lake Boys & Girls Club
Event Sponsored by Red Lake Tribal Council, Red Lake DNR, and Youth Recreation

ALSO, participate in your Community's Clean Up Day on April 20th, 2011.
Contact your Community Coordinator or Millie Holthusen (679-3341) for more information.
If you would like to elect an area to be cleaned up, please contact Millie or Candy at 679-3341.

Project Partners

- Red Lake DNR Planning Committee
- Red Lake Nation Committee
- Red Lake Nation Donation Committee $2,500
- Red Lake Humanities $2,000
- Red Lake Boy's and Girl's Club
- NRCS
- Americorps Volunteer
- Beltrami Electric
- Walmart, Target, Local grocery stores.

Outreach and Education

- Section 106 or 319?
  - Water Festival
  - Earth Day Fair
  - Where does your water…shed?
  - Septic System Intertribal Learning
  - Articles: Invasive Species, NPS, Well Decommissioning
  - Participation: River Watch, State of the Band Address, Healthy Homes Summit, Health Fair, Career Fair

Any Questions?

Jenilynn Bohm NPS Specialist

Jbohm@paulbunyan.net

218-679-3959

www.redlakednr.org

Septic Systems and Intertribal Learning

PROTECT

OUR WATER & FAMILIES

Every TWO years

GET PUMPED!

For Septic Maintenance

*Only wash a couple loads of laundry per day
*Don't flush trash or feminine products down the toilet
*Turn off the water when brushing your teeth
*Fix leaking faucets

RED LAKE NATION

UNIVERSITY OF MINNESOTA EXTENSION

For Info: Red Lake Housing (218) 679-3368
Red Lake DNR (218) 679-3959x 1347

RLDNR's Nonpoint Source Pollution Prevention Article:

A Season of Salt

By Jenilynn Bohm

The Red Lake DNR (RLDNR) Has begun a Nonpoint Source (NPS) Program which is funded by the Environmental Protection Agency (EPA) to address NPS issues and protect or improve water quality on the Reservation.

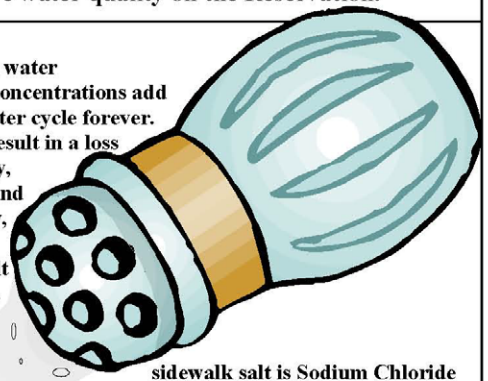
Salt Seasoning

With the lakes and rivers frozen over this may seem an odd time to talk about water quality, but our winter activities also impact our lakes, streams, and rivers when the ice melts. As we shovel, sand, and salt the roads and sidewalks for safety, we must also take into consideration the amount of sand and salt we use.

Winter lasts a long time in Minnesota. A fresh snowfall paints the landscape a serene pure white. As time goes on that pure white becomes a dirty, grimy, gray and brown blanket that has collected litter and car exhaust for the past four months. Spring thaw washes all that grime, trash, salt, and sand into our lakes, streams, and rivers.

Minnesota's lakes, especially those located in and near the twin cities are becoming more saline with increased road salt use.

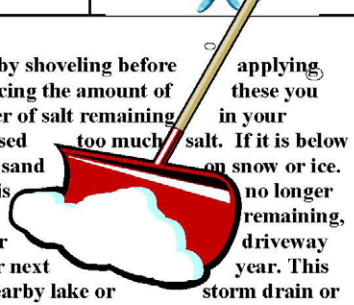
Salts dissolve in water; flowing in storm water to rest at the bottom of our lakes. Salt concentrations add up over time, virtually staying in the water cycle forever. The increased salinity of the lakes can result in a loss of lake turnover, decreased water clarity, clogged fish gills, slower plant growth, and smothered small aquatic life. Amazingly, one teaspoon of salt can pollute five gallons of water; and one 50lb bag of salt can pollute over 10,000 gallons of water.



Are all salts the same?

The most common road and sidewalk salt is Sodium Chloride (table salt). There are other Chloride formulations with Magnesium, Calcium, and Potassium. These salts all have different toxicities and melting temperatures.

Sodium Chloride (table salt) should only be used when the pavement temperature is at or above 15 °F. If the salt is not melting the ice or snow, do not add more! Instead, shovel and use sand on the remaining snow for traction.



What can you do at home?

You can prevent storm water pollution by shoveling before applying sand, salt, or other deicers, and by reducing the amount of these you use. As a rule of thumb, if there is a layer of salt remaining in your driveway after the ice melts, you have used too much salt. If it is below 15 °F, use sand for traction. Only place sand on snow or ice. Sand on bare pavement is slippery and is no longer effective. If you have excess sand or salt remaining, sweep the extra sand and salt from your driveway and sidewalks into a container to use for next year. This prevents it from being washed into a nearby lake or storm drain or sewer. In essence, even if it *tis the season* for salt use, we can minimize the salt seasoning of our lakes, streams, and rivers.

If you plow snow…

Avoid pushing the snow piles onto lakes, ponds, wetlands, or rivers. Don't place the snow pile next to a storm drain where it can melt and flow into the storm sewers (See picture to the right). Place the snow down slope from sand and salt piles. After the snow melts sweep up the remaining sand and salt to re-use next year or throw it away. To save money, use deicers when you need to melt snow, and sand when you need traction. Don't use sand and salt at the same time as they work against each other. It is less wasteful to apply sand and deicers after a storm event. Pavement temperature, time of application, weather conditions, and type of road surface are some of the factors that affect deicer effectiveness. For instance, salt is five times more effective at 30°F than at 20°F.

Stay tuned for future NPS articles. Please be sure to check out the RLDNR's website at: http://www.redlakednr.org/ or contact Jeni Bohm at the RL DNR: 218-679-3959x1347 or Jbohm@paulbunyan.net for questions or comments.

Source: Minnesota Pollution Control Agency. 2006. "Winter Parking Lot and Sidewalk Maintenance Manual" 47pp.

Abandoned Well Sealing Project

RED LAKE DNR is sealing abandoned wells at NO COST to the owner while funding is available.

ABANDONED WELLS:
A HAZARD TO DRINKING WATER

*An abandoned well is any well that is no longer used to supply water.
*A well is a hole, usually vertical, that transports ground water to the surface.
*Old, uncapped, or unused wells with casing cracks can be a direct line for pollution to reach our drinking water.

Is YOUR Drinking Water SAFE?

*Pollutants such pesticides, sewage, fertilizers, debris, and other hazardous materials can enter the ground water through abandoned wells, making our water unsafe to drink.
*Abandoned wells should never be used as disposal sites for household wastes, roof or septic water, and other debris.
*If you are unsure whether you have an abandoned well, contact our office for a free inspection.
*If you know of an abandoned well or would like your well sealed at **NO COST**, please contact our office immediately.

Red Lake DNR Water Resources Program: 218-679-3959
Contact Rick Barrett (ext 1325) or Jenilynn Bohm (ext 1347)

Any Questions?

Jenilynn Bohm NPS Specialist

Jbohm@paulbunyan.net

218-679-3959

www.redlakednr.org