



Rainy River Headwaters Watershed Workshop 2012

*A professional development workshop for teachers / environmental educators
examining the relationship of people to the Rainy River Headwaters Watershed*

Session I: June 11-12 Proposed Session II: June 18-19

Day I

9:00-9:30 a.m.

Meet at Kawishiwi Ranger Station

- Arrival, check in, time to look at displays

9:30 -10:00 a.m.

Workshop Kick-off: Introductions & Workshop overview (Kawishiwi Ranger Station)

- Workshop leader introductions and participant introductions with icebreaker
- Workshop overview - the activities of the workshop will follow the chronological path of historical to current relationships of people and the watershed
- “What is a watershed” activity

10:00-10:15 a.m. Board Bus and Travel to “Pillow Rock”

10:15-10:45 a.m.

Program 1: Geologic History of the Watershed (Pillow Rock) Geologic uniqueness of this area – 2.7 billion year old greenstone, iron range, Duluth complex, agates and more.

10:45 – 11:00 a.m. Board Bus and Travel to Bass Lake Trailhead

11:00 a.m. – 12:00 p.m.

Program 2: Glacial History of the Watershed (Bass Lake Trail)

- Glacial Geology Activity – Hands on introduction to glacial features and how they form. This activity will illustrate how glaciers impact topography, geology, and ultimately watersheds. Another activity involves a demonstration using ice cream to show how glaciers form and move.
- Hike on Bass Lake Trail looking at Glacial Features – Drainage of Bass, Dry, and Little Dry because of glacial deposit washout in 1925. Exposed lake bottom has grown up with pioneer species aspen, birch.
- Glacial features and Soils – Glaciers had a huge impact on the soils of the watershed. Hands on investigation of what soil is and how it impacts forest systems. (Casey McQuiston – Forest Soil Scientist Superior National Forest)

Noon – 12:30 Lunch

12:30 – 12:45 p.m. - Travel to Ely-Winton History Museum

12:45- 2:00 p.m.

Program 3: Early Inhabitants and Their Relationship to the Watershed (Ely-Winton History Museum)

- Humans have shaped the land in the Kawishiwi River Headwater watershed for over 9,000 years. Why did various groups choose this site and why did they

make the choices for use that they did? This is an overview of three prehistoric periods of human activity. (*Archaeologist -Superior National Forest*)

- Paleo overview and atl atl throwing.
- Archaic overview with flint knapping demonstration
- Woodland overview and pottery puzzle
- Voyaguers and Fur Trade
- Archeological Dig Site Activity- Learn how to create an archeological dig site for your class. Explore the tremendous potential of this learning tool to engage students in the historical and geological study of a watershed. Also learn about and experience a traditional hunting method.
- Emphasize how the landscape shapes plant and animal species that are present. This impacts human use.

2:00-2:30 Travel to Winton

2:30 – 4:30 p.m.

Program 3: Historic Logging

- Impact on watershed – millions of board feet of white/red pine harvested – red pine used in mining operations, white pine for lumber, intense slash fires transition forest composition to aspen/birch, dams/temp railroads to move lumber
- Visit site of former mill site in Winton

4:30 -5:30 p.m.

- Travel to lodging for the night (Settle in Vermillion Community College Dorm rooms)

5:30-6:30 p.m.

- Supper

6:30-7:30 p.m.

Program 4: Ojibwe Tradition (*Bois Forte Interpreter presenting at VCC*)

- Ojibwe creation story, their migration to the watershed, way of life, importance of wild rice

Day 2

7:30-8:00 a.m. Breakfast

8:00-8:30 a.m.

Board Bus and travel to Listening Point on Burntside Lake

- European settlers are beginning to see that natural resources are finite... Beginning of the conservation phase for forestry with Bernard Fernow, Gifford Pinchot, and later others like Sigurd Olson promoting the values in the forest beyond timber production such as recreation and spiritual renewal.

8:30 a.m. – 10:00 a.m.

Program 5: Early Conservation Efforts & Boundary Waters Canoe Area Wilderness Formation (*Listening Point, Burntside Lake*)

- Listening Point Tour (*Allana Dore – Executive Director – Listening Point Foundation*)

10:00-10:30 Travel to Kawishiwi Falls Trail

Program 6: Our Current Relationship with the Watershed

- Laws, regulation, and agencies put in place to help protect, manage natural resources for sustainable use.

10:30- Noon

- **Hydroelectric Power Generation and Forest Management** (*Matt Radzak Minnesota Power Forester - Kawishiwi Falls Trail*)
 - Discussion on the operation of the Winton Hydroelectric Power Station that operates within this watershed and backs water into the Boundary Waters Canoe Area Wilderness and the associated FERC guidelines.
 - Discussion on the sustainable forest management objectives of Minnesota Power in this region.

Noon – 12:30 Lunch

12:30- 1:00 p.m. Travel to current mining exploration area (Location TBD -Birch Lake area?)

1:00-2:00 p.m.

- **Mining** - Presentation on process of current exploration, core samples, mining techniques, what are potential benefits and costs of proposed mining. (MN DNR Lands & Mineral Division)

2:00-2:30 Travel to Kawishiwi Ranger Station

2:30 -3:30 p.m.

- **Natural Resource Management Inside and Outside the Boundary Waters Canoe Area Wilderness** – (*Kawishiwi District Ranger - Superior National Forest*)
 - The complexity and balancing act of management decisions inside and outside of the Boundary Waters Canoe Area Wilderness on the 300 million acres of land, water, rock, trees that comprise the Superior National Forest

3:30-4:30 p.m.

Workshop Wrap Up (*Kawishiwi Ranger Station*)

- Conclusion and reflection on how teachers will implement in the classroom
- Tour of flash drives -Participants can look through the flash drives, ask questions about materials, and see how it is organized
- Written evaluation / Verbal debrief