

Otter River Rapid Watershed Assessment News

August 2008

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In the spring of 2008, the Natural Resources Conservation Service, working in partnership with Upper Peninsula Resource Conservation & Development Council, members of Friends of the Land of Keweenaw (FOLK), the Houghton Keweenaw Conservation District, the Michigan Department of Environmental Quality, and the Keweenaw Economic Development Alliance, began a Rapid Watershed Assessment (RWA) of the Otter River Watershed. This project will assess the natural resource concerns within the watershed and provide a summary report by October 1, 2008.

A Rapid Watershed Assessment provides guidance on where conservation investments would best address the concerns of landowners, conservation districts, community organizations and stakeholders within that watershed. This assessment will help landowners and local leaders set priorities and determine the best actions to achieve their goals.

The project study area is approximately 83,561 acres. During the first phase of the project, the Natural Resources Conservation Service put together GIS maps on land use, land cover types, soil conditions, climate, and socio-economic data. In addition, members of the steering committee identified and took photos of road crossings, fish blockages and eroded streambanks within the watershed area. Road crossings have the potential to significantly impact stream quality and fish passage due to erosion and perched culverts. Gathering input from the residents and stakeholders in the watershed regarding the prioritization of the natural resource concerns and future funding opportunities is an important part of the process. A public meeting is planned for August 26, 2008 (see details on time and location on last page). Once completed, the resource assessment will be a valuable tool for land owners, resource professionals, and community leaders.

What is a watershed?

A watershed is all the land that drains to a common point; more specifically, the area of land from which runoff from rain, snow, and springs drain to a stream, river, or lake. Streams and rivers function as the “arteries” of the watershed. They drain water from the land as they flow from a higher to a lower elevation (see diagram on page 4).

Watershed Management

Because storm and spring snowmelt runoff washes pollutants from the land’s higher elevations into the water below, almost every activity on the land has the potential to affect the quality of water in our lakes and streams. Watershed planning brings together people and their communities within the watershed to address those activities. By working together, individuals and communities within the watershed can design a coordinated plan to protect their water resources for this generation and generations in the future.

Watershed Information

The Otter River Rapid Watershed Assessment area consists of the North Branch, the West Branch, the main branch of the Otter River and Otter Lake. The Otter River Watershed flows into the Sturgeon River. Numerous unnamed tributaries of various lengths are found in the study area in addition to many larger creeks. Some of the better known creeks in the area are: Ebers, Bear, Bart, Sante, Thirteen Mile, Little Otter, Slate, Bruno, Beaver, and Lake Fifteen Creeks. The watershed has a complex drainage system, consisting of perennial and intermittent small feeder streams and feeding creeks which become rivers. Within this watershed, stream flow is much more uniform during the summer months than in other streams found in the western sections of the Upper Peninsula. The population in the watershed is rural and sparse. Significant population fluctuations occur due to tourists, sportsmen, and people with seasonal residences. Many protected or threatened species are seen within the watershed, including eagles, hawks, falcons, timber wolves, and osprey. An extremely diverse fishery once existed within this watershed and its migratory

Land Use	Acres	Percent
Agricultural	2,873.0	3.4
Barren Land	87.0	0.1
Developed	1,462.9	1.8
Forestland	67,114.8	80.3
Grassland	1,724.9	2.1
Shrub/Scrub	277.3	0.3
Water	1,748.0	2.1
Wetlands	8,273.3	9.9
TOTALS	83,561.2	100.0

fishery was perhaps one of the state’s finest according to the MDNR. Abundant steelhead runs occurred in the spring and fall which attracted hundreds of fishermen. The annual migration of walleye was once rated as one of the best in the state. Local residents recall the migration of burbot which were netted or trapped and used as a principal food source. Also, lake sturgeon, a threatened species in Michigan, is still found in this river system. Sturgeon continue to be observed but the population continues to dwindle. This watershed was the last known river to host Michigan grayling. The last verified reported grayling catch in Michigan occurred about 20 years ago on the North Branch of the Otter River.

Sub Watershed Name	Acres	Sq. Miles
West Branch Otter River	37,331.7	58.3
North Branch Otter River	32,698.1	51.1
Otter River	13,504.6	21.1



Eroded streambank on the Otter River.

Partners

U. P. Resource Conservation and Development Council

Keweenaw Economic Development Alliance

USDA Natural Resources Conservation Service

Friends of the Land of Keweenaw

Houghton Keweenaw Conservation District

Michigan Department of Environmental Quality

Land Ownership	Acres	Percent
State	19,213	23.0
Federal	1,086	1.3
Private	63,262.2	75.7

Otter River Rapid Watershed Assessment Stakeholder Survey

What natural resource issues are most important to you? *(Check as many as you like)*

- | | | |
|---|---|--|
| <input type="checkbox"/> Water quality | <input type="checkbox"/> Groundwater Protection | <input type="checkbox"/> Lake Levels |
| <input type="checkbox"/> Wetland Protection | <input type="checkbox"/> Poor Land Use Practices | <input type="checkbox"/> Shoreline Development |
| <input type="checkbox"/> Fish & Wildlife Habitat | <input type="checkbox"/> Invasive Species Control/Mgmt. | <input type="checkbox"/> Erosion Control |
| <input type="checkbox"/> Unregulated Development | <input type="checkbox"/> Endangered/Threatened Species | <input type="checkbox"/> Forest Pests/Diseases |
| <input type="checkbox"/> Forestry Management. Practices | <input type="checkbox"/> Other _____ | |

In your opinion, what are the top three needs/concerns in your community?

1. _____
2. _____
3. _____

Please return your survey to:

U. P. Resource Conservation & Development Council
780 Commerce Drive, Suite C
Marquette, Michigan 49855

Land Development and its Effects on the Water Cycle

The water cycle is basically the movement of water through our environment. It is through this movement that water in our river systems is replenished. When rain or snow falls to an undeveloped watershed, 40 percent will return to the atmosphere by evaporation and transpiration

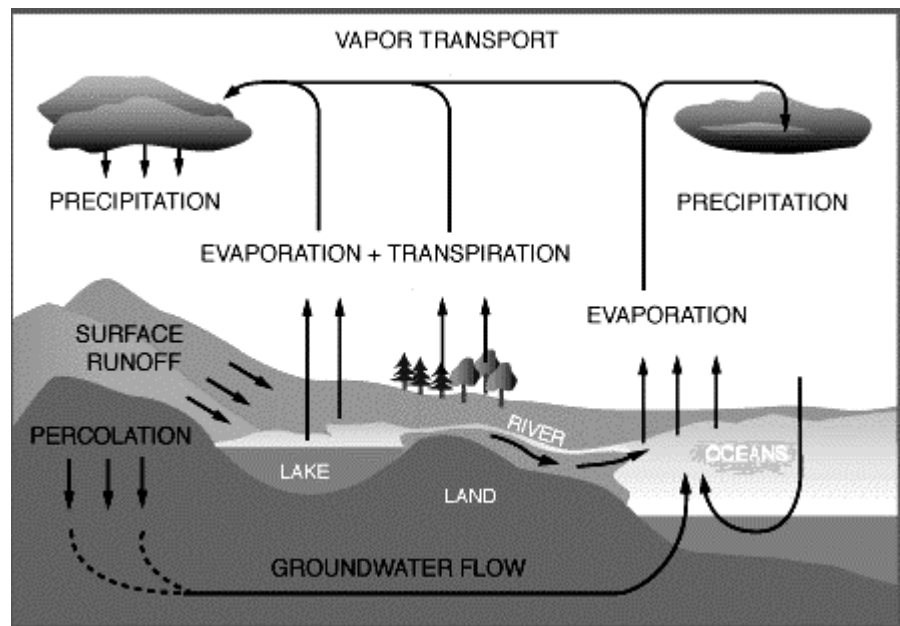
(loss of water vapor by plants). About 50 percent will percolate into the soil, and the remaining 10 percent moves across the land as runoff that drains into creeks, rivers, wetlands and other bodies of water.

The water that soaks into the ground is important for maintaining stream flow during dry weather. Percolating water slowly moves downward through

the soil eventually draining into a bedrock area where all the pores and cracks in the rock become saturated with water. The top of this saturated zone is known as the water table.

Water in this saturated zone moves laterally, largely due to gravity and/or water pressure from above. If the path of this moving ground water intercepts a stream channel, the ground water is discharged into the stream as a spring. At times when there is no surface water runoff, the entire flow of a stream might be totally comprised of this "base flow" from ground water.

Developed lands, which may be as simple as well-manicured lawns, parking lots, roofs or a driveway, are more impermeable (solid) than natural land. Rain hits these hard surfaces and runs off into storm drains instead of percolating into the ground. This occurrence drastically



changes the fate of precipitation in the water cycle. Here are some things to think about:

- Less water soaking into the ground results in less aquifer recharge.

- Stream flow becomes more intense during and immediately after storms.

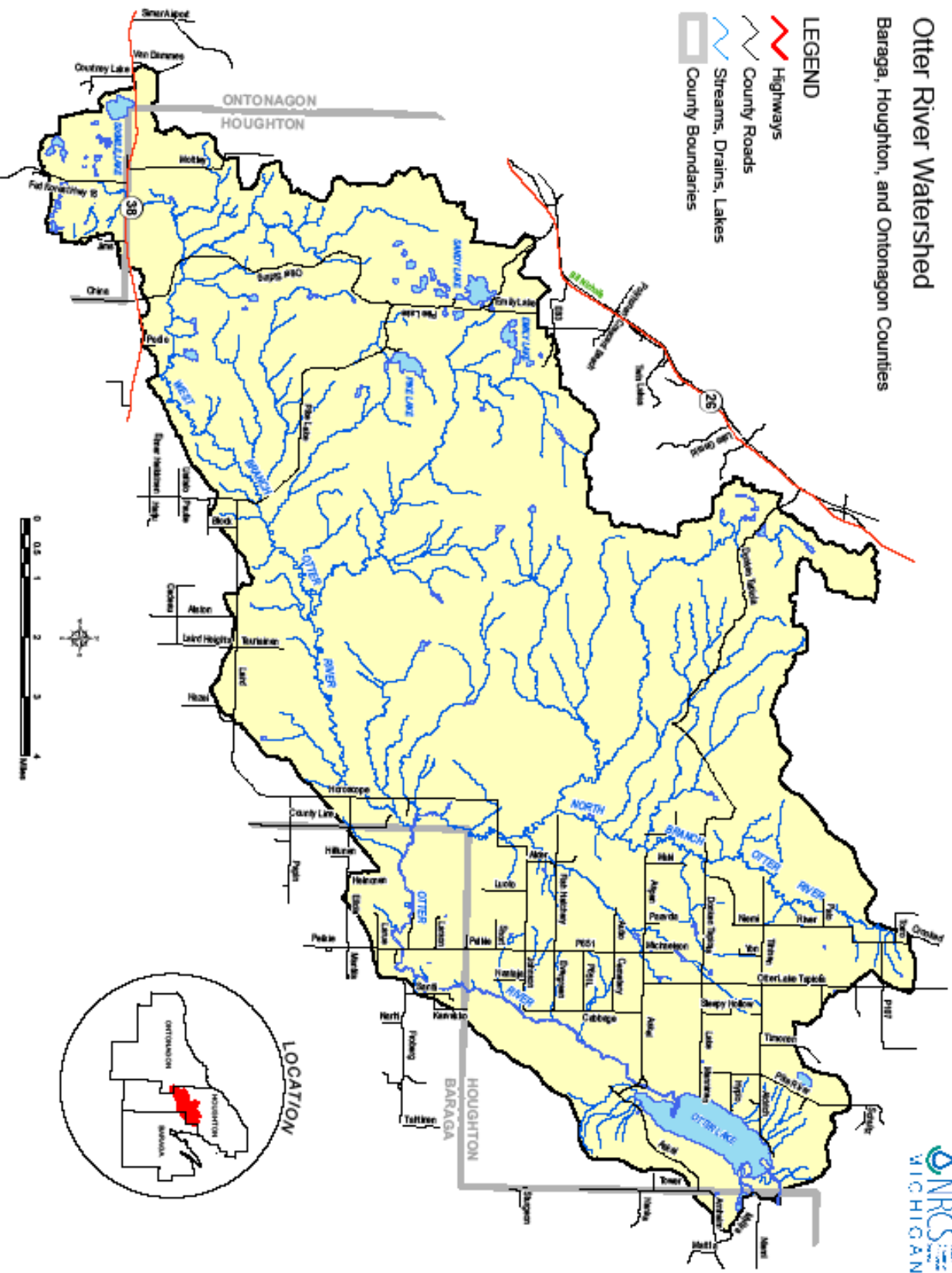
- Less precipitation is transpired back to the atmosphere from plants.

Could these factors be partially responsible for our current water levels?

Otter River Watershed

Baraga, Houghton, and Ontonagon Counties

- LEGEND**
-  Highways
 -  County Roads
 -  Streams, Drains, Lakes
 -  County Boundaries



07/01/2008 - USDA NRCS
 DATA SOURCE: MDCS Framework and NHD Flowlines

Map produced at the Michigan State Office
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780 Commerce Drive, Suite C
Marquette, Michigan 49855

Otter River Rapid Watershed Assessment Public Meeting
August 26, 2008 - 7:00 pm
At the Doelle Senior Citizens Center in Tapiola
(Located on the SE corner of Lake Avenue & Tapiola Road)

This meeting will give the community an update on how the Rapid Watershed Assessment Study came about, a summary of the work done so far, and plans for the future direction the assessment will take.

All watershed residents are invited to attend and provide their input for the development of solutions to protect the natural resources of the area. Refreshments will be provided.

For further information on the meeting, or general questions, contact the
Houghton Keweenaw Conservation District at 906-482-0214.