

Appendix 3 - DEFINITIONS

BASIN	The specific land area that drains several watersheds.
DESYNCHRONIZE	Cause to occur at unrelated times.
DRAINAGE AREA	An area having a common outlet for its surface runoff.
EROSION	The wearing away of land or soil by the action of wind, water, or ice.
GEOGRAPHIC INFORMATION SYSTEM (GIS)	Analysis that combine relational databases with spatial interpretation and outputs often in form of maps.
GROUNDWATER	Water that exists beneath the earth's surface in underground streams and aquifers.
HYDROLOGY	The science of understanding the properties, distribution and circulation of water on or below the earth's surface and in the atmosphere.
HYDROLOGIC CONDITION ASSESSMENT	Gaining an understanding of the circulation and movement of water in a designated area.
LAND MANAGEMENT	The process of managing the use and development of land resources in a sustainable way.
MAP SCALE	A statement of a measure on the map and the equivalent measure on the Earth's surface, often expressed as a representative fraction of distance, such as 1:24,000 (one unit of distance on the map represents 24,000 of the same units of distance on the Earth)
MORPHOMETRY	Refers to the physical characteristics of a lake or river such as size and shape of a lake basin or channel, mean depth, maximum depth, volume, drainage area, and flushing rate.
ORTHOPHOTOGRAPHY	The process of aerial photographs that have been rectified (adjusted) to produce an accurate image of the Earth by removing tilt and relief displacements which occurred when the photo was taken.
PEAK DISCHARGE	The maximum volume flow rate passing a particular location during a storm event, expressed in units of volume/time
POLLUTANTS	Unwanted chemicals or other materials found in the environment.
SEDIMENTATION	The process of subsidence and deposition of suspended matter from a wastewater by gravity.
SOIL PERMEABILITY	The rate at which liquids pass through soil or other materials, expressed in units of depth/time.
TOPOGRAPHY	The configuration of a surface and the relations among its man-made and natural features.
WATERSHED	The specific land area that drains water into a river system or other body of water.

Appendix 4 - ACRONYMS

ABDI-LCC	Ashland, Bayfield, Douglas & Iron Counties Land Conservation Committees
ABDI-LCD	Ashland, Bayfield, Douglas & Iron Counties Land Conservation Department
BRNRD	Bad River Band of Lake Superior Ojibwa Natural Resources Department
CFS	Cubic Feet per Second
DEM	Digital Elevation Model
GIS	Geographic Information System
GLBPSEC	Great Lakes Basin Program for Sediment and Erosion Control
GLC	Great Lakes Commission
MSL	Mean Sea Level
SURRGO	Soil Survey Geographic Database
TR-55	Technical Release 55 (USDA NRCS)
USDA FS	United States Department of Agriculture Forest Service
USDI BLM	United States Department of the Interior Bureau of Land Management
USDI FWS	United States Department of the Interior Fish & Wildlife Service
USDI GS	United States Department of the Interior Geologic Survey (also USGS)
USDA NRCS	United States Department of Agriculture Natural Resources Conservation Service
UWEX	University of Wisconsin Extension
WDNR	Wisconsin Department of Natural Resources

Appendix 5: LIST OF LAKE SUPERIOR BASIN WATERSHED DATA SOURCES

Climate

Rainfall, Mean Annual Snowfall, Air Temperature, Evaporation, Wind Speed

- ___ The Climate Source
946 NW Circle Blvd #222, Corvallis, Oregon 97330-1410
www.climatesource.com

- ___ Wisconsin State Climatology Office
1225 W. Dayton Street, Madison, WI 53706 (608)263-2374
www.aos.wisc.edu/~sco/index.html

- ___ NOAA National Weather Service, Duluth
<http://www.crh.noaa.gov/ifps/MapClick.php?CityName=Ashland&state=WI&site=DLH>

- ___ NOAA National Weather Service, Volunteer Weather Monitoring Program,
Duluth Area Data Acquisition Program Manager
5027 Miller Trunk Highway, Duluth, MN 55811 (218)729-0651
<http://www.weather.gov/om/coop/>

Surface & Ground Water

Surface Water Quantity (Flow Rates, Average Annual Flow, Peak Runoff, Drainage Area, General flow Modeling, etc.)

- ___ United States Geological Survey (USGS) website (<http://wi.water.usgs.gov/public/data.html>)
Real-time Data Viewer (existing stream gauges) (<http://waterdata.usgs.gov/wi/nwis/rt/>)
- ___ National Flood Frequency Program (USGS) / computer flood frequency program for ungauged sites
Instructions, Specific State Information & Computer Program (<http://water.usgs.gov/software/nff.html>)
- ___ Long-Term Hydrologic Impact Assessment (L-THIA) website (<http://www.ecn.purdue.edu/runoff/>)
Purdue University

Surface Water Quality –

- ___ Bad River Watershed Association, (<http://www.badriverwatershed.org/>)
- ___ St. Louis River Citizens Action Committee (St. Louis & Nemadji Rivers), Executive Director (218)733-9520
(<http://www.stlouisriver.org/index.html>) E-mail Executive Director at slrcac@StLouisRiver.org
- ___ US Environmental Protection Agency - Monitoring & Assessing Water Quality
(<http://www.epa.gov/owow/monitoring/>)
- ___ Water Action Volunteer Program (DNR/UWEX & Volunteers)
(<http://watermonitoring.uwex.edu/wav/>)
- ___ Wisconsin Department of Natural Resources Bureau of Fisheries Internal Website (Habitat Assessments)
(http://infotrek.er.usgs.gov/wdnr_bio)
Madison Contact: Joanna Griffiths, 608-264-8953
(Note: this database is not accessible to the public. Habitat assessment information may be obtained from DNR fishery biologists.)
Local Contacts: WDNR fishery biologist at Mercer (Iron and part of Ashland County),
Brule (part of Bayfield and part of Ashland Counties)
Superior (Douglas and part of Bayfield County)
(<http://www.dnr.state.wi.us/fish/people/fisheriesbiologists.html>)
- ___ Wisconsin Department of Natural Resources Lake Superior Homepage
(<http://www.dnr.state.wi.us/org/gmu/superior/index.html>)
- ___ Wisconsin Department of Natural Resources Lake Superior Basin Plan
(<http://www.dnr.state.wi.us/org/gmu/superior/BasinPlan/Watersheds.html>)
Hard copy document found at DNR offices
- ___ Wisconsin Department of Natural Resources Source Water Assessment Program
(<http://www.dnr.state.wi.us/org/water/dwg/swap/index.htm>)
- ___ Wisconsin Department of Natural Resources Surface Water Data Viewer
(<http://dnrmaps.wisconsin.gov/imf/imf.jsp?site=SurfaceWaterViewer>)

Wetlands / Riparian Areas

___ Wisconsin Department of Natural Resources Wetland Inventory

(<http://dnr.wi.gov/org/water/fhp/wetlands/mapping.shtml>)

Wisconsin Wetland Maps can also be viewed at each county's Planning and Zoning office

Bayfield County Land Records (online):

(<http://www.bayfieldcounty.org/landrecords/mapviewer/bcmv4101.asp>)

___ Wisconsin Department of Natural Resources Coastal Wetlands of Wisconsin's Great Lakes

(<http://www.dnr.state.wi.us/org/land/er/publications/cw/>)

DRAINAGE BASIN CHARACTERISTICS

Watershed morphometry (channel geometry and topography)

___ Special Lake Superior Basin projects:

- *Investigation of Erosion, Sedimentation, Channel Migration, and streamflow Trends in the Bad River Basin, Wisconsin* (USGS, BRNR, Draft Dec. 2005)

Soil Information

___ USDA Natural Resources Conservation Service Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>)

___ USGS Topographic Maps, Soil Transitional Areas and Elevation 750 – 1,050 Feet Above Mean Sea Level
Prepared for Marengo Project and previously prepared for Nemadji Project

Geology

___ Special Lake Superior basin projects:

- *Update Investigation of Erosion, Sedimentation, Channel Migration, and Streamflow Trends in the Bad River Basin, Wisconsin* (USGS, BRNR, Dec. 2005) <http://infotrek.er.usgs.gov/pubs/>
- Environmental Protection Agency St. Louis River Area of Concern – (<http://www.epa.gov/glnpo/aoc/stlouis.html>)
- *St. Louis Remedial Action Plan*- <http://www.stlouisriver.org/rap.html>
- *Erosion and Sedimentation in the Nemadji River Basin. Natural Resource Conservation Service and U.S. Forest Service, 1998.* Phase Two project workplan: (<http://www.stlouisriver.org/nrbppphaseIIworkplan.pdf>)

Forest Age Class

___ Maps are available from the ABDI-LCD of 16-years of satellite imagery evaluation of forest age-class in the Wisconsin's Lake Superior basin (1988-2004). Contact ABDI-Land Conservation Department at (715)682-0232 or visit 315 Sanborn Avenue, Ashland, WI 54806.

Human Influence

Mining

- Ashland County Zoning Dept. general information: (715) 682-7014
- Bayfield County Zoning able to provide a printout of location, name of owner & mine size
Bayfield County Courthouse, P.O. Box 58, 117 E. 5th. St., Washburn, WI 54891
Phone: 715 - 373 – 6138 Fax: 715 - 373 – 0114
General Info: zoning@bayfieldcounty.org
<http://www.bayfieldcounty.org/zoning/Zoning.htm>
- Douglas County Planning & Zoning able to provide a printout of location, name of owner & mine size
Douglas County Courthouse, Room 206, 1313 Belknap St., Superior WI 54880
Phone: (715)395-1380 Fax: (715)395-7643
<http://www.douglascountywi.org/countydepartments/zoning/zoning.htm>
- Iron County general information: www.ironcountywi.com

Roads & Road Ditches

___ Wisconsin Department of Transportation - *Transportation Planning & Resource Guide*
<http://www.dot.wisconsin.gov/localgov/land/resourceguide.htm>

___ Wisconsin Department of Transportation – Database of Wisconsin's Local Comprehensive Plans
<http://www.dot.wisconsin.gov/localgov/docs/compplan-database.xls>

Agriculture

___ Wisconsin Agricultural Statistics Service
P.O. Box 8934, Madison, WI 53708-8934 (800)789-9277
<http://www.nass.usda.gov/wi/>

___ UWEX Agricultural Agent
Ashland, Bayfield, Douglas & Iron Counties (715)373-6104 ext. 253
<http://www.uwex.edu/ces/ag/issues/>

Groundwater Extraction

___ Wisconsin Department of Natural Resources Drinking Water & Groundwater Program
Water Supply Specialist (715)685-2922 (local contact)
<http://www.dnr.state.wi.us/org/water/dwg/swap/index.htm>

___ Central Wisconsin Groundwater Center (715)346-4270
<http://www.uwsp.edu/cnr/gndwater/> Email gndwater@uwsp.edu

___ Wisconsin Geological & Natural History Survey
Groundwater Observation Network
Website <http://wi.water.usgs.gov/public/gw/>

Data at the Survey (well records, data files and samples, digital information,
Website <http://www.uwex.edu/wgnhs/mapdata.htm>

Rural Development

___ Wisconsin Department of Administration – Census and Population Information
http://www.doa.state.wi.us/section_detail.asp?linkcatid=11

APPENDIX 6: LIST OF LAKE SUPERIOR BASIN CONTACTS

WEB PAGE CITIES/VILLAGES/TOWNS:

- ___Ashland County; <http://www.co.ashland.wi.us/>
City of Ashland; <http://www.ci.ashland.wi.us/>
- ___Bayfield County; <http://www.bayfieldcounty.org/>
City of Washburn; <http://www.cityofwashburn.org/>
City of Bayfield; <http://www.cityofbayfield.com/>
Town of Herbster; <http://www.herbsterwisconsin.com/>
Town of Drummond; <http://www.drummondwi.com/>
- ___Douglas County; <http://www.douglascountywi.org/>
Town of Superior; <http://www.townofsuperior.net/>
City of Superior; <http://www.ci.superior.wi.us/>
- ___Iron County; <http://www.ironcountywi.com/>

COUNTY OFFICIALS

- ___ABDI-Land & Water Conservation Department – County Conservationist
315 Sanborn Ave, Su 100, Ashland, WI 54806-1014 (715)682-7187 (800)682-1675
<http://www.bayfieldcounty.org/ABDI/default.asp>

STATE OFFICIALS

- ___Wisconsin Department of Natural Resources – Lake Superior Basin Water Team Leader & Forestry Leader
Ashland Service Center – 2501 Golf Course Road, Ashland, WI 54806 (715)685-2900
Superior Service Center – 1401 Tower Ave., Superior, WI 54880 (715)395-6911
General - <http://www.dnr.state.wi.us/>
Lake Superior's Home Page - <http://dnr.wi.gov/org/gmu/superior/>

TRIBAL OFFICIALS

- ___Bad River Band of Lake Superior Chippewa Indians
Bad River Natural Resources Department – Director
P.O. Box 39, Odanah, WI 54861 (715) 682-7103
- ___Red Cliff Band of Lake Superior Chippewa Indians
88385 Pike Road, Hwy 13, Bayfield, WI 54814 (715)779-3732
<http://www.redcliff.org/rc.php?page=home.html>
- ___Great Lakes Indian Fish and Wildlife Commission
P.O. Box 9, 100 Maple Street, Odanah, WI 54861 (715)682-6619
<http://www.glifwc.org/>
- ___Great Lakes Inter-Tribal Council, Executive Director
623 Peacepipe Road, P.O. Box 9, Lac du Flambeau, WI 54538 (715)588-3324

FEDERAL OFFICIALS

- ___ USDA Natural Resources Conservation Service – District Conservationist
315 Sanborn Avenue, Su. 100, Ashland, WI 54806-1032 (715)682-9117
<http://www.nrcs.usda.gov/>
- ___ USDA Forest Service/Chequamegon-Nicolet National Forest – Forest Hydrologist
1170 4th Avenue South, Park Falls, WI 54552 (715)762-2461
<http://www.fs.fed.us/r9/cnnf/>
- ___ USDI Fish and Wildlife Service – Supervisory Fishery Biologist
2800 Lake Shore Drive East, Ashland, WI 54806 (715)682-6185
<http://www.fws.gov/midwest/ashland/>
- ___ USDI Bureau of Indian Affairs – Great Lakes Agency, Supervisor
615 Main Street West, Ashland, WI 54806 (715)682-4527

EDUCATIONAL INSTITUTIONS

- ___ Northland College
1411 Ellis Avenue, Ashland, WI 54806 (800)753-1840 (715)682-1224
<http://www.northland.edu/Northland/>
- ___ University of Wisconsin-Superior – Extension Water Resource Specialist
McCaskill 143A, 1800 Grand Ave., Superior, WI 54880 (715)394-8525
- ___ University of Wisconsin Extension Service – Lake Superior Basin Educator
29270 County Highway G, Ashland, WI 54806 (715)685-2674
<http://basineducation.uwex.edu/lakesuperior/>
- ___ University of Wisconsin Sea Grant Institute – Coastal Engineering Specialist
UW-Superior, 246 Hawkes Hall, Superior, WI 54880-9985 (715)394-8472
<http://www.seagrant.wisc.edu/>
- ___ Sigurd Olson Environmental Institute, Executive Director
1411 Ellis Avenue, Ashland, WI 54806-3999 (715)682-1223
<http://www.northland.edu/Northland/Soei/>

COMPREHENSIVE PLANNING

- UWEX County Community, Natural Resource & Economic Development Agents (CNRED Agents)
- ___ Ashland County UWEX CNRED Agent
Courthouse Room 107, Ashland, WI 54806-1652 (715)682-7017
<http://www.uwex.edu/ces/cty/ashland/cnred/index.html>
- ___ Bayfield County UWEX CNRED Agent
County Administration Bldg., 117 E. 5th Street, Washburn, WI 54891-9464 (715)3736104
<http://www.uwex.edu/ces/cty/bayfield/cnred/index.html>
- ___ Douglas County UWEX CNRED Agent
Courthouse Room 207, 1313 Belknap Street, Superior, WI 54880-2781
(715)395-1363
<http://www.uwex.edu/ces/cty/douglas/cnred/index.html>
- ___ Iron County UWEX CNRED Agent

Courthouse, 300 Taconite Street, Su. 118, Hurley, WI 54534
<http://www.uwex.edu/ces/cty/iron/cnred/index.html>

(715)561-2695

ORGANIZATIONS & GROUPS

- ___ Ashland-Bayfield Sportsmen's Club,
 - ___ Bad River Watershed Association; <http://www.badriverwatershed.org/>
 - ___ Bayfield County Lakes Forum; <http://www.bayfieldcountylakes.org>
 - ___ Brule River Sportsman's Club; President
P.O. Box 100, Brule, WI 54820 (715)398-7644
 - ___ Douglas County Association of Lakes & Streams; slapinewood@centurytel.net
 - ___ Douglas County Conservation League
 - ___ Inland Sea Society; <http://www.inlandseasociety.org>
 - ___ Lake Superior Greens
P.O. Box 1144, Superior, WI 54880
 - ___ League of Women Voters
 - ___ Sioux River Watershed Association; <http://www.inlandseasociety.org>
 - ___ St. Louis River Citizens Action Committee (St. Louis & Nemadji Rivers), Executive Director
(218)733-9520
(<http://www.stlouisriver.org/index.html>) Email slrcac@StLouisRiver.org
 - ___ Wild Rivers Chapter / Trout Unlimited; wtrout@cheqnet.net
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