

Issues within the Sub-Watershed: Clearwater River

What are the existing conditions, related potential problems and solution alternatives?

Issues related to: FLOOD DAMAGE	What is the NATURE of the problem?	How SEVERE is the problem? [high, moderate, low]	How wide spread or to what EXTENT is the problem?	What are the possible SOLUTIONS?
Flooding	City of Clearbrook Flooding			U.S. culvert restrictions
	City of Bagley – some homes on East end	Low / mod – during extreme events only		City drain outlet needs better maint.

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Flood Damages <i>(crop land, pastures, residential, roads, etc.)</i>				
Drainage	Beavers plugging ditches, culverts, and waterways		Entire subwatershed	Beaver bounty should be advertised
	Lack of maintenance of aging public ditch systems		Entire subwatershed	Ditches should be evaluated for necessity, some could be abandoned; or they should be cleaned and the woody vegetation removed.

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Drought				
Stream Flows	Perceived lack of flow/WQ data in Maple Lake area		In developed lakes area near Erskine	RLWD could increase frequency of monitoring. More <u>public information</u> press releases. Use modeling software to create nutrient budget for the lake.

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	More stage / flow data			Rating curves will be developed for the inlet and outlet of the lake. Install continuous stage monitoring equipment at the inlet and outlet or install staff gauges that can be read and recorded by citizen volunteers.
Lake Levels				
Groundwater				
Other Flood Damage Issues				



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<p>Erosion and Sedimentation <i>(stream, lake bank, ag and residential, ditches, etc.)</i></p>	<p>Bank stabilization and erosion (RLWD to provide report) (eg: Lost River, Greenwood)</p>		<p>Sites Identified by CNPS where no work has been done: Red Lake Falls Township - Section 23, Terrebonne 1/Gervais 31, Emardville 17, Emardville 19, Poplar 4, Greenwood 22</p>	<p>Obtain grant money to help fund the implementation of bank stabilization</p>
	<p>Channelized reach of the Clearwater River and Ruffy Brook (seeking new channel); USACE project cut</p>			

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	Sand/sediment transport: impacts Wild Rice pump intakes: spring; no sampling during flooding			Need to identify source of sand – find location of sedimentation, look at potential sources upstream
	Ditch bank sloughing and stabilization			
	Sediment from commercial wild rice production			Install drain tile, outlet structures, and/or sedimentation ponds where possible using a cost share program or grant money.
	New development of homes Walker Brook lake			Education, ordinance

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	Maple Lake and other lakes erosion of shoreline			Look at zoning and new developments, shoreline stabilization/restor ation
	Ag erosion western half			Lots of CRP currently in place. Implement riparian buffer strips using programs such as CRP.
	Wind erosion on beach ridges			Wind breaks, tree rows

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<p>Water Quality (point and nonpoint pollution, groundwater, etc.)</p>	<p>Maple Lake suffers from poor water quality</p>	<p>high</p>	<p>The lake is shallow and turbid; suffered a partial fish kill a couple of years ago</p>	<p>Reduction of nutrient input from upstream JD 73; more monitoring and data to pinpoint individual problems. RLWD could do a study to better understand the causes of the problem. The RLWD will begin monitoring water quality within the lake on a regular basis.</p>
	<p>RLC Ditch 57 has low D.O.</p>		<p>Short reach, but may be contributing to low dissolved oxygen problem on the Clearwater R.</p>	<p>A TMDL study will be conducted on the reach beginning in 2005 to determine the source(s) of the problem and if/how it can be corrected</p>

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	<p>Citizens are concerned about TMDL regulations and their effect on Wild Rice and all other farming operations</p>			<p>TMDL implementation funding may be available. Best management practices have been developed and installed by the RLWD and some producers that reduce sediment entering the river from ditches used to drain paddies and improve efficiency of production as well.</p>

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	<p>Very high percentage of subsurface drainage: possible positive impacts on water quality (TSS, TP, less tillage, reduced runoff, increased infiltration) possible adverse N impacts</p>			<p>Landuse and its impacts. Study how subsurface drainage affects water quality (+ or -). Retention ponds would help reduce any N in the water, but may reduce the effectiveness of the ditch. Surface intakes negate the positive affects of SSD on WQ because sediment is allowed to enter. Setbacks from existing wetlands, also make sure hydrology changes from SSD don't negatively affect wetlands</p>

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	Tiling has changed ag practices to no-till or near it	This is a good thing, not a problem – less erosion		
	Walker Brook and Walker Brook Creek naturally occurring TMDL			Buffer strips, other BMPs. Change stream classification
	Delisting of Clearwater for Fecal TMDL, denied by MPCA, need to revisit		Fecal coliform levels are only high during high flows/large rain events	BMPs, TMDL report on how to reduce fecal coliform loads during high flows
	Other Lakes, Cameron-historic sewage effluent, Badger, Mitchell;	High – Cameron is hypereutrophic		Lake restoration on Cameron L. and retention ponds on inlets. Study causes of eutrophication on Badger L. – reduce nutrient input through BMPs, etc.

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	Poplar River Diversion; JD 73-outlets to Maple Lake, sediment plume; east and west flows in 73			Lessen the “flashiness” of flows through J.D. 73 so that organic matter from wetlands is not “stirred-up” and transported into the lake.
	ISTS compliance on area lakes			Create lake management plans that include septic system inventories
Fish and Wildlife Habitat <i>(fish passage, waterfowl nesting habitat, beaver, otter, upland game, etc.)</i>	Oak Lake is not able to sustain a viable fishery		Oak Lake has had good fishing periodically, but winterkills almost annually	Raise the lake, upstream watershed treatments (reduce nutrient inputs), lake treatment (alum)

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Water-based Recreational Activities <i>(water access, fishing, hunting, recreational trails, etc.)</i>				
Unique Water / Land Related Resources				

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Other Natural Resource Issues				

OTHER COMMENTS/ISSUES TO COMPLETE THE “PICTURE!”

Note: investigate open house advertising

THESE COMMENTS SHARED BY: _____ (NAME) _____ (TELEPHONE)

NOTE: Return this form to Myron Jesme, Red Lake Watershed District Office