

## IV. Problems and Corrective Actions

Outlined below is an assessment of existing and potential water resource-related problems that are known at this time. These problems have been identified based on an analysis of the land and water resource data collected as part of this watershed management plan preparation and through the member cities' input. A description of any existing or potential problem within the topic area has been listed.

<b>A. Lake and stream water quality problems</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO has recognized the need for continued collection of water quality monitoring data for lakes and other water bodies within the watershed. The member community's have incorporated updated information into their approved plans.	<p>During 2007 – 2009 the GCLWMO will implement the Surface Water Assessment Grant (2007-2009) to conduct citizen lake monitoring on seven waterbodies within the GCLWMO. This information will provide direction to the member communities and the Board on future monitoring needs.</p> <p>The GCLWMO will continue to ask local communities to continue to review and update as necessary their system to evaluate water quality assessments to determine conformance with local guidelines.</p>
2	<p>The following lakes within the Gun Club Lake Watershed Management Organization (GCLWMO) that have been identified as impaired waters:</p> <ul style="list-style-type: none"> <li>• Fish Lake for Mercury and Excess Nutrients</li> <li>• Schwanz Lake for excess nutrients</li> <li>• Blackhawk Lake for Mercury</li> </ul>	The approved City of Eagan Water Quality Plan has identified lake management plans for these water bodies which will establish a recommended long term management program. The GCLWMO will also further explore collaboration options related to how to add value to the implementation of TMDL / lake management plans.
3	Many lakes and waterbodies within the GCLWMO have experienced some level of degradation due to erosion within the shoreland area adjacent to the basin.	The GCLWMO will shoreland restoration grant program in partnership with Dakota County Soil and Water Conservation District (2007-2008).

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<b>B. Flooding and storm water rate control concerns within the watershed</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	<ol style="list-style-type: none"> <li>1. High water issues have been recognized within the Lebanon Hills Regional Park.</li> <li>2. The GCLWMO recognizes that many wetlands have been hydrologically connected to the City stormwater system.</li> <li>3. The GCLWMO recognizes that regular maintenance of hydrologic system is required to preserve the system's intended use to convey storm water runoff and provide treatment.</li> </ol>	<p>The GCLWMO has been an active player in work to reach a tentative agreement between the Cities of Eagan, Apple Valley, Rosemount, Dakota County Parks, and the Vermillion River Watershed Joint Powers Organization to address issues related to flooding within and adjacent to Lebanon Hills Regional Park.</p> <p>In addition, GCLWMO will require that flood problems recognized within the approved local plans be recognized in the City's capital improvement program.</p> <p>In cases where surface water impacts or the source of impacts transcend municipal boundaries, or the community is found to not be in compliance, the GCLWMO shall review such problems and issue directives to the appropriate local governmental unit or units for resolution. It should be noted that this issue is not relevant to the GCLWMO, given that only one area currently has potential to create intercommunity flows.</p> <p>It will be the responsibility of the local communities to implement a project.</p>

<b>C. Flooding or storm water rate control issues between the member communities.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	Flooding problems in and adjacent to the Lebanon Hills Regional Park.	The GCLWMO has been an active player in work to reach a tentative agreement between the Cities of Eagan, Apple Valley, Rosemount, Dakota County Parks, and the Vermillion River Watershed Joint Powers Organization to address issues related to flooding within and adjacent to Lebanon Hills Regional Park.

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<b>D. Impacts of water quantity or quality management practices on recreational opportunities</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	Several critical waterbodies within the GCLWMO are located within City parks. Several of these waterbodies Non-point source and sediment pollution entering to these waterbodies may be contributing to the degradation of water quality and affects the recreational opportunities available for residents.	The GCLWMO will develop strategy to promote wetland buffers in member city parks.

<b>E. Impacts of storm water quality on fish and wildlife resources</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	It has been recognized that Kennelly and Harnack Creeks, designated trout streams; and Nicols Fen, a calcareous fen have storm water runoff directed to this resource.	Work cooperatively with State, Federal, regional, and non-profit agencies and organizations to pursue grant resources needed to implement the recommendations outlined in the Nicols Fen, Kennealy and Harnack Creeks study.

<b>F. Impacts of soil erosion on water quality and water quantity.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	<ol style="list-style-type: none"> <li>1. During significant rainfall events, soil erosion, particularly from construction sites, has carried sediment to water bodies within the watershed. This sediment deposition has reduced the depth of water within these water bodies and degraded the quality of water in the basin.</li> <li>2. Concern was noted regarding the need for adequate erosion control measures to be utilized within the watershed and that the implementation of Best Management Practices should be addressed in this plan.</li> </ol>	Continue to implement the erosion control programs currently in place within the watershed for areas where construction activity is taking place. The GCLWMO has and will continue to review local municipalities' plans to determine adoption of proper erosion and sedimentation control policies.

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<b>G. General impact of land use practices and in particular, land development and land alteration on water quality and water quantity.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	Selected areas of the watershed have been exposed to increased rates and volumes of storm water runoff as a result of an increase in impervious surface area due to development.	Member communities have incorporated rate and volume management policies into their approved plans. The GCLWMO will continue to support local ordinance updates that address and manage impervious areas.

<b>H. The adequacy of existing regulatory controls to manage or mitigate adverse impacts on public waters and wetlands.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO feels that the existing regulatory controls contained within this watershed plan are adequate to manage or mitigate adverse impacts on public waters and wetlands.	Implement the Gun Club Lake Watershed Management Plan and require the municipalities within the watershed to be the local government units for the administration of the rules associated with the Wetland Conservation Act of 1991 and NPDES Phase II rules.
2	The GCLWMO has recognized that a public educational program targeted at educating the public about wetlands and their functions is important.	<ul style="list-style-type: none"> <li>a. The GCLWMO will participate with Dakota County SWCD to implement landscaping and “blue thumb” type workshops to provide educational opportunities for residents within the WMO to learn about issues concerning wetlands and water resource restoration within the watershed.</li> <li>b. Promote, educate, and possibly assist with shoreline restoration/wetland buffer improvements on private property. In 2007-2008 a restoration grant program will be pursued in partnership with Dakota SWCD.</li> <li>c. Develop a Wetland Management Plan for the WMO through the local communities.</li> </ul>

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<b>I. The adequacy of programs to limit soil erosion and corresponding water quality degradation.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	It is the position of the GCLWMO that the existing programs are adequate to limit soil erosion and corresponding water quality degradation, provided that enforcement of these programs is expanded.	The watershed will require member municipalities to develop soil and sedimentation ordinances concerning construction activities within the watershed. In addition, these ordinances must be contained within the local surface water management plans which will be reviewed by the GCLWMO. The GCLWMO will evaluate performance of ordinance enforcement and compliance programs as part of this annual oversight review program.

<b>J. The adequacy of programs to maintain the tangible and intrinsic values of natural storage and retention systems.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO feels that goals and programs must be established to maintain the tangible and intrinsic values of natural storage and retention systems.	The GCLWMO will encourage member municipalities to complete diagnostic feasibility studies and to implement corrective actions where these cities feel that the tangible and intrinsic value of natural storage and retention systems within their communities are in jeopardy due to influence from water quality and quantity problems.

<b>K. The adequacy of programs to maintain water level control structures.</b>		
	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO will require local municipalities to contain storm water system maintenance plans within their local storm water management plans. These plans should address the maintenance of water level control structures within their communities.	The GCLWMO will review local watershed management plans for conformance with the requirement to establish a storm sewer system maintenance plan which will address water level control structure maintenance.

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**L. The adequacy of capital improvement programs to correct problems relating to water quality, water quality management, fish and wildlife habitat, public waters and wetland management, and recreational opportunities.**

	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO has recognized the extensive programs and efforts of local member communities related to addressing the areas of concern within the watersheds' various recreational and aesthetics waters and wetlands.	Several programs and projects have been identified in approved local plans to address concerning waters where marked decrease in water quality or wildlife habitat has been recognized.

**M. Identification of potential problems which are anticipated to occur within the next 20 years based on growth projections and planned urbanization.**

	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO anticipates that the watershed will start to see any increase in redevelopment applications which may provide an opportunity for member communities to incorporate updated policies and standards to improve downstream waterbodies.	The GCLWMO will review local plans to identify possible updates to ordinances and policies to address issues related to redevelopment. If necessary, the GCLWMO will recommend changes to the proposed local definition of redevelopment consistent with GCLWMO policies.

**N. The adequacy of existing technical and background information on systems in the watershed that are used to manage water resources.**

	<b>Identified Problem, Issue, or Concern</b>	<b>Corrective Action</b>
1	The GCLWMO will encourage the development of ground water protection ordinances when adequate technical and background information becomes available for decision making.	Review local watershed management plans for conformance with providing a ground water protection plan.
	The GCLWMO has recognized the need for continued collection of water quality monitoring data for lakes and other water bodies within the watershed. The member community's have incorporated updated information into their approved plans.	<ul style="list-style-type: none"> <li>a. Analyze and complete long-term water quality monitoring for selected surface waters within the GCLWMO.</li> <li>b. Completion of several lake management studies have been identified within member community local waters.</li> </ul>