

Vadnais Lake Area Water Management Organization
Executive Summary of the
Comprehensive Watershed Management Plan 2017-2026



VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION COMPREHENSIVE WATERSHED MANAGEMENT PLAN EXECUTIVE SUMMARY JULY 2016

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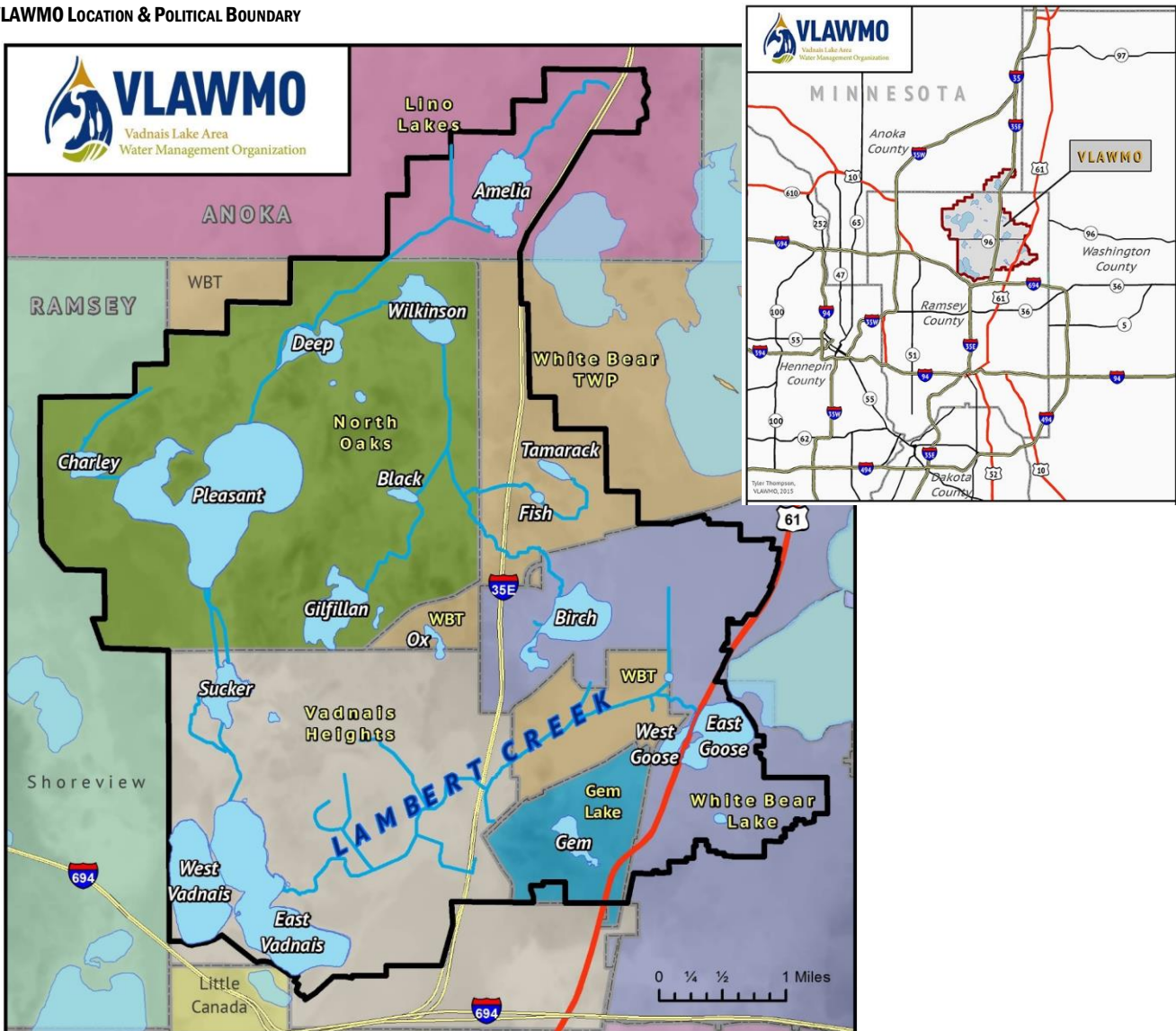
Executive Summary

The Comprehensive Watershed Management Plan (Plan) describes how the Vadnais Lake Area Water Management Organization (VLAWMO) will manage activities in the watershed from the years 2017 through 2026. The Plan describes the natural resources and core activities of the watershed, the issues and goals that VLAWMO will focus on for the next ten years, and the implementation strategies and subwatershed activities which will be utilized to meet those goals. This Executive Summary provides an overview of the Plan.

INTRODUCTION

VLAWMO was organized in 1983 using a Joint Powers Agreement (JPA) developed under authority conferred by Minnesota Statutes, Sections 471.59 and 103B.201. The 24.2 square mile watershed is located in the northeast metro area within Ramsey and Anoka counties. The watershed encompasses the City of North Oaks, along with portions of the Cities of White Bear Lake, Gem Lake, Vadnais Heights, Lino Lakes, and White Bear Township, and includes 17 lakes, 1 creek, and over 1000 wetlands.

VLAWMO LOCATION & POLITICAL BOUNDARY



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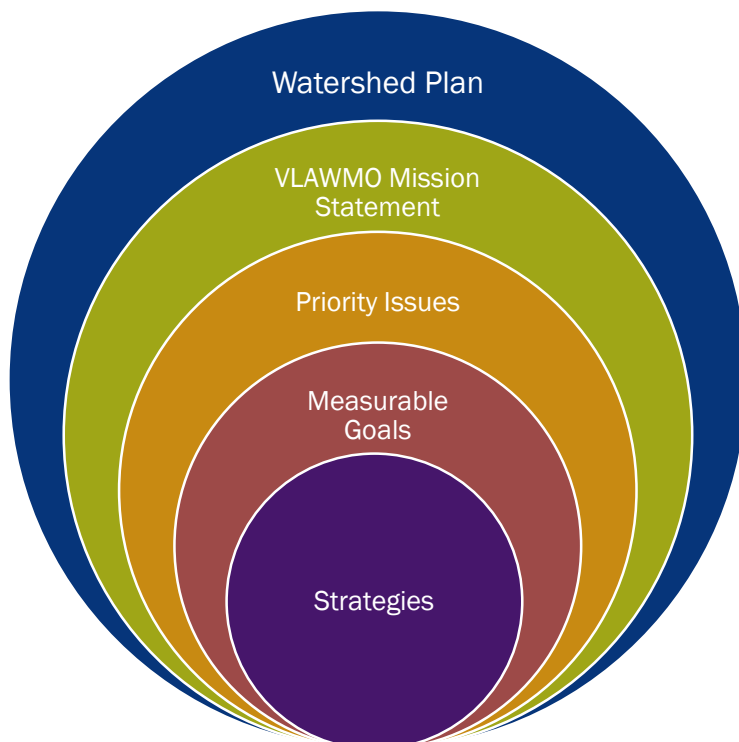
PURPOSE

The purpose of water management organizations is described in Minnesota Statutes 103B.201, Metropolitan Surface Water Planning, which codified the Metropolitan Surface Water Management Act of 1982:

1. *protect, preserve, and use natural surface and groundwater storage and retention systems;*
2. *minimize public capital expenditures needed to correct flooding and water quality problems;*
3. *identify and plan for means to effectively protect and improve surface and groundwater quality;*
4. *establish more uniform local policies and official controls for surface and groundwater management;*
5. *prevent erosion of soil into surface water systems;*
6. *promote groundwater recharge;*
7. *protect and enhance fish and wildlife habitat and water recreational facilities; and*
8. *secure the other benefits associated with the proper management of surface and groundwater.*

Water management organizations are required to develop a Plan at least every 10 years under State Statute 103B.231 and Minnesota Rules 8410. In general, these plans must contain information which describe the natural resources within the watershed, establish measurable goals which address priority issues, devise and implement strategies to reach the goals, and a procedure to evaluate progress. VLAWMO's fourth generation Plan will cover the years 2017 through 2026.

WATER PLAN STRUCTURE



VLAWMO's mission is **“to protect and enhance the water and natural resources within the watershed through water quality monitoring, education and outreach projects, wetland protection, and water quality enhancement projects and programs.”** With this updated Water Plan, VLAWMO aims to demonstrate the connection and relationship of its mission statement with the priority issues, goals and strategies developed through the planning process.

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PRIORITY ISSUES

To develop the list of priority issues, VLAWMO conducted a vigorous stakeholder process which included numerous stakeholder meetings, public engagement efforts via different avenues (community fairs, open houses and surveys), and the development of a Plan webpage. VLAWMO also convened a TAC comprised of municipal, regional, and state agencies and the St. Paul Regional Water Service (SPRWS) to provide guidance and input throughout the planning process. Once the priority issues were established, a paired weighting analysis activity was conducted with the VLAWMO Board of Directors and Technical Commission to rank the six identified issues.

GOALS

The goals established for the Plan are associated with each of the priority issues and were developed through an evaluation of watershed data and studies, as well as input from staff and stakeholders. Gaps in essential information were assessed, and staff capacity and partnerships were considered to make certain the goals were measurable and that they were manageable yet aggressive. Goals will be measured yearly through an assessment of the implementation strategies as part of the annual reporting process.

MAJOR ACTIONS

The Plan's priority issues and the supporting measurable goals provide direction for the work of VLAWMO. Numerous strategies have been developed to reach each goal. These strategies will be implemented through the five core activities: Administration, Monitoring and Studies, Education and Outreach, Capital Projects and Programs and Regulatory Programs. Throughout the planning process all of the major activities of the Plan, including the core activities, strategies, and goals, have continuously been evaluated and adjusted to better address the priority issues of the watershed. Specific core activities have been expanded for implementation in a variety of the subwatersheds. These subwatershed activities provide focus on the priority issues and are done along with core actions.

VLAWMO Core Activities



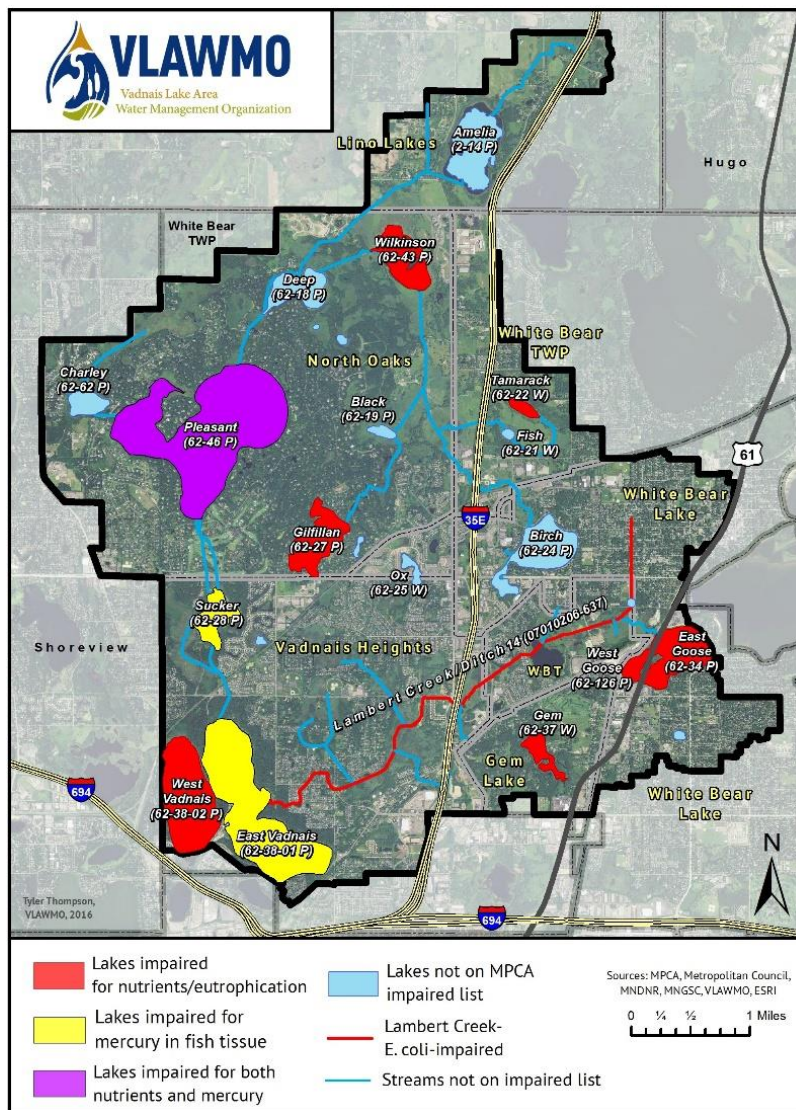
VLAWMO frequently teams up with partners to reach its goals. Partnerships are common with municipal storm sewer system (MS4) agencies. MS4s include the six communities within VLAWMO as well as Anoka County, Ramsey County and the Minnesota Department of Transportation (MnDOT). Other partners may include the SPRWS, other state agencies, and local groups such as the Birch Lake Improvement District (BLID) and the North Oaks Homeowners Association (NOHOA), among others. Because of these vital partnerships, VLAWMO's function in some strategies may be more of a supporting role, while others will require a major role and responsibility.

PLAN FRAMEWORK

All of the priority issues and goals developed for the Plan are included with this Executive Summary, along with an abbreviated list of strategies. Strategies are discussed in full within the Plan as well as details regarding VLAWMO's core activities and planned subwatershed activities.

Priority Issue 1: Threatened and impaired surface water and natural resources.

IMPAIRED WATERS OF VLAWMO



Threatened or impaired surface waters refers to those waterbodies which have been included on the Minnesota Pollution Control Agency (MPCA)'s Section 303d Impaired Waters List. A Total Maximum Daily Load (TMDL) study and implementation plan has been completed which provides guidance towards actions that can be taken by VLAWMO and its partners to restore these water bodies. VLAWMO plans to focus efforts in the first few years of the Plan on selected lakes to ascertain the best projects that could be implemented to aid in better water quality. These actions are described in more detail within the goals and strategies in the Plan.

Goal 1-1: Work to delist all waters within VLAWMO currently on the 303d Impaired Waters list.

Strategy 1-1-1: Show measurable in-lake nutrient reductions in targeted impaired waters (Goose Lake, Wilkinson Lake, Gem Lake, and Giffilian Lake) within the first 5 years of Plan implementation.

Strategy 1-1-2: For lakes in which studies indicate internal loading as a primary source of nutrients, complete an internal load management feasibility study to identify projects with the best potential for nutrient reduction.

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Strategy 1-1-3: Use an annual evaluation process to organize funding, along with technical and staff resources in line with the implementation schedule. Identify gaps in funding, technical and staff resources and set a plan to fill those gaps.

Strategy 1-1-4: Support watershed load reductions prescribed in Total Maximum Daily Load (TMDL) studies by providing stormwater management program assistance for MS4s to meet their regulatory requirements under the National Pollutant Discharge Elimination System (NPDES) and their Storm Water Pollution Prevention Program (SWPPP), as well as the goals identified in their Local Water Management Plans (LWMP). Communicate with MS4s on a regular basis to identify opportunities and gaps where VLAWMO can provide support through education programs, cost share, and technical support.

Goal 1-2: Demonstrate stable or improving water quality trends in all of VLAWMO lakes and streams by 2026.

Strategy 1-2-1: Conduct an annual monitoring program that tracks trends in the waters VLAWMO manages. Report data annually to the Minnesota Pollution Control Agency's (MPCA) database and create an annual monitoring report which will be available on VLAWMO website. Share monitoring results with MS4s to identify opportunities for achieving waste load allocations (WLAs) assigned through the TMDL. Annually evaluate monitoring program and make adjustments to the program as necessary.

Strategy 1-2-2: Develop and implement Sustainable Lake Management Plans (SLMPs) for each major lake within VLAWMO by 2026. Update SLMPs every 10 years.

Strategy 1-2-3: In addition to water quality monitoring, VLAWMO will track and document progress by reporting the number of public projects implemented, along with documenting the volume of runoff reduced, the amount of total phosphorus and total suspended solids reduced, and the acres converted from standard turf grass or impervious surface to native landscaping. The information will be provided in the Annual Report and made available to the MS4s.

Goal 1-3: Minimize loss of major wetland function and value within the watershed.

Strategy 1-3-1: Continue to administer the WCA rules as the local government unit (LGU) for the watershed.

Strategy 1-3-2: Establish a wetland monitoring program to determine condition of major wetland complexes. Monitor the watershed's major wetland complexes on a five year rotational schedule. Conduct a map review to prioritize and schedule monitoring by January 1, 2018.

Strategy 1-3-3: Locate potential wetland restoration sites, assess with WCA technical evaluation panel, and develop a plan for sustainable restoration of degraded wetland functions. Pursue partnerships to assist with funding, monitoring, maintenance or other activities. Restoration of mitigation sites may be considered.

Strategy 1-3-4: Continue to follow VLAWMO wetland standards as established in the Water Policy.

Priority Issue 2: Threatened or impaired groundwater quality or quantity.

Goal 2-1: Support projects and programs which provide shallow groundwater recharge and deep groundwater conservation.

Strategy 2-1-1: To promote shallow groundwater recharge, VLAWMO will maintain cost share and technical support programs to promote infiltration projects exceeding minimum infiltration rates identified in VLAWMO's adopted Water Policy.

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Strategy 2-1-2: To conserve deep groundwater, VLAWMO will continue to implement cost share and technical assistance programs to reduce the need for irrigation by promoting conversion from turf grass or impervious surface to native prairie, and stormwater capture or reuse projects.

Strategy 2-1-3: Groundwater sensitivity will be considered for all cost share projects.

Goal 2-2: Support public water suppliers within VLAWMO in developing and implementing water use and protection goals.

Strategy 2-2-1: Coordinate with partner organizations to establish conservation and water use goals and strategies which may include metering, sprinkling bans, tiered fees, etc.

Strategy 2-2-2: Encourage water suppliers within VLAWMO to develop and implement a consistent testing method for private drinking water wells.

Strategy 2-2-3: Support North and East Metro Groundwater Management Areas to implement identified protection strategies. Develop task list as necessary and assign roles.

Goal 2-3: Enhance education and communication on the use of groundwater and increase the focus on water conservation. Improve the understanding and management of water use for both citizens and MS4s.

Strategy 2-3-1: Coordinate with partner organizations to develop a posting schedule and publish groundwater education materials through social media, community events, and other venues, multiple times per year.

Strategy 2-3-2: Promote available cost share programs which support water conservation through social media, community events, and other venues, multiple times per year.

Priority Issue 3: Need for education and involvement from citizens and stakeholders.

Goal 3-1: Support MS4 partners in the implementation of their MS4 permits through VLAWMO's Education and Outreach Program.

Strategy 3-1-1: Improve stormwater guidance and information. Develop and implement NPDES and MS4 information and documents to assist municipal compliance. Assist MS4s with regulatory questions and information. Collaborate with local governments in achieving a consistent and streamlined municipal education program for various target audiences to meet MS4 requirements. Develop and facilitate MS4 staff trainings for best practices and compliance as required, including knowledge and implementation of best management practices (BMPs).

Strategy 3-1-2: Regularly communicate with MS4 stakeholders to assess their needs and opportunities for collaboration on water resource management.

Goal 3-2: Implement the 2016 Education and Outreach Plan.

Strategy 3-2-1: Build on existing and pursue new partnerships with governmental entities and diverse stakeholders to maximize effectiveness and eliminate gaps in water resource communication. This will be addressed through regular communications with our MS4s, partnering with coordinated metro-wide efforts, and timely communication with other stakeholders.

Strategy 3-2-2: Use effective marketing techniques, including social media, brand recognition and regular, timely communications. The annual report, electronic newsletters, website, print, and other communications will use a cohesive brand.

Strategy 3-2-3: Be a resource to residents, business owners, and developers by providing an easy to use website, responsive staff and useful print material. Requests for how the watershed may better help its public will be added to the communications program as appropriate.

Goal 3-3: Implement education and outreach programs and activities that engage adult and school age residents in the watershed.

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Strategy 3-3-1: Continue to implement citizen-based science programs and volunteer opportunities such as the Citizen Lake Monitoring Program (CLMP), Watershed Action Volunteers (WAV - VLAWMO's Citizen Advisory Committee), Community Blue grant program, and/or others as opportunities are identified. Programs will focus primarily on water resource benefits and public understanding of those resources.

Strategy 3-3-2: Develop at least one ongoing program targeting school age children through either schools, scouts, local nature centers or other organized groups. Target reaching 10% of the school age population per year through programs.

Priority Issue 4: Need for adequate data, analysis, financing, and staff capacity in order to meet goals and accomplish strategies

Goal 4-1: VLAWMO will have adequate resources to address our priority issues.

Strategy 4-1-1: Continue to operate a robust data collection program to support assessment of progress towards goals by taking a broad-based approach to assessing water quality and water quantity conditions and trends in the lakes and streams of the watershed over time. Prioritize baseline monitoring. VLAWMO will publish an annual water quality monitoring report by January 31st of each year.

Strategy 4-1-2: Sustainable Lake Management Plans (SLMPs) will be written and updated per the schedule in Table 2 of the Plan to assess lake and drainage area conditions and include information regarding land use and vegetative cover, as well as water quality, and other ecological assessment data.

Strategy 4-1-3: VLAWMO may, from time to time, retain consultants to provide data and analysis. Staff and Board will evaluate when it is most efficient to use existing staff vs. consultants.

Strategy 4-1-4: Minimize overlap with other agencies and evaluate the potential for collaboration of services. Partnership with lake associations, schools, businesses, and individuals will also be sought to implement practices, programs and various education efforts. Collaboration with MS4s and other groups will also be documented on annually.

Strategy 4-1-5: Evaluate job descriptions and needed qualifications and training for staff every 5 years or at employee turnover to ensure consistency with VLAWMO's needs. A market assessment will be reviewed on a regular basis to assure VLAWMO's capacity to acquire and retain well qualified staff. Potential modifications would be brought to the Board for consideration.

Strategy 4-1-6: The financial capacity identified in the budget will be reviewed yearly through the annual report process with fiscal needs identified for short term and long term projects and programs.

Priority Issue 5: Aquatic invasive species (AIS) management

Goal 5-1: In cases where AIS management overlaps with water quality improvement efforts, especially in shallow lakes (for example rough fish and curly leaf pondweed management), VLAWMO will look for opportunities to improve water quality as they align with the priorities of the VLAWMO Capital Improvements and Programs Plan.

Strategy 5-1-1: Implement rough fish management (such as harvesting or fish migration barriers), and curly leaf pondweed treatment, where applicable.

Goal 5-2: Support other LGUs and partners in AIS management.

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Strategy 5-2-1: Where appropriate, VLAWMO may act as a partner and fiscal agent to lake associations or other interest groups to manage AIS.

Strategy 5-2-2: Where appropriate, VLAWMO may partner with other agencies or lake associations to provide education on AIS. These partnerships will be described and approved by the Board and each opportunity will be evaluated to ensure consistency with VLAWMO's priorities, goals, strategies and statutory responsibilities.

Priority Issue 6: Localized flooding

Goal 6-1: Minimize flood damage to private and public property within VLAWMO.

Strategy 6-1-1: Communicate regularly with member cities and road authorities to assess what they need to address new flooding concerns and support floodplain management in accordance with city, state, and federal regulations.

Strategy 6-1-2: In the event of localized flooding that crosses municipal boundaries but is within the watershed, VLAWMO may collect hydrologic and hydraulic (H&H) data to support municipal modeling efforts which address flooding and water quality issues. Limit modeling support to only those instances where VLAWMO can use its unique abilities and authorities to address its priority issues.

Strategy 6-1-3: Support floodplain management in accordance with city, state, and federal regulations.

Strategy 6-1-4: Facilitate the management of intercommunity stormwater flows if necessary. No MS4s report issues related to flooding currently, however if flooding issues arise that cross municipal boundaries, VLAWMO may mediate and coordinate the necessary modeling and implementation solutions. This can include convening meetings, providing technical support, or implementation support.

Strategy 6-1-5: Use cost share programs and technical support to encourage local partners with land use authority to promote infiltration and minimize flooding issues.

Responsibilities of Local Governments

All municipalities within VLAWMO are required to complete and adopt a Local Water Management Plan (LWMP) that conforms to Minnesota Statutes 103B.235 and Minnesota Rules 8410.0160 by December 31, 2018. The LWMPs must become part of the local comprehensive plan for the municipality. The LWMPs must be consistent with VLAWMO's Plan and address the priority issues identified in the Plan as it pertains to their community. Each municipality must consider the VLAWMO water management policy in the development of their LWMPs. Prior to adoption of a LWMP, a municipality must prepare their local water plan, distribute it for comment, and have it approved by VLAWMO.

VLAWMO does not operate a regulatory program for development review. Each of the municipalities, along with Anoka County, Ramsey County and the Minnesota Department of Transportation (MNDOT) has an MS4 permit and is responsible for stormwater management associated with those permits. The MS4s will be responsible for ensuring that development, redevelopment, and construction meets National Pollutant Discharge Elimination System (NPDES) requirements. Each municipality is required to operate a permitting program and have local controls consistent with the [VLAWMO water management policy](#).

Additionally, for the waterbodies that have a completed [TMDL study and implementation plan](#), the MS4s have Total Phosphorus (TP) waste load allocations (WLAs) for which they are responsible. Further discussion regarding the TMDL and WLAs is located in Appendix B of the Plan.

ASSIGNED WLAs FOR WATERBODIES WITH COMPLETED TMDL STUDY

Lake	WLA (lbs/yr)	M-Foods Dairy	MS4s								
			Anoka County	City of Gem Lake	City of Lino Lakes	MN DOT	City of North Oaks	Ramsey County	City of Vadnais Heights	City of White Bear Lake	White Bear Township
Gem	47.0	-	-	23.9	-	5.2	-	9.0	-	8.9	-
Goose - East	78.7	-	-	2.2	-	7.9	-	3.9	-	64.7	-
Goose - West	40.0	24.7	-	2.8	-	3.6	-	1.6	-	7.3	-
Gilfillan	17.0	-	-	-	-	-	14.7	0.5	0.1	-	1.7
Wilkinson	179.4	-	0.1	-	1.2	47.2	26.4	1.8	-	35.1	67.6

VLAWMO looks forward to continuing its strong partnerships with the MS4s as we work together to accomplish the goals of this Plan.