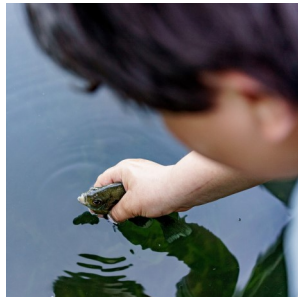




Vadnais Lake Area Water Management Organization
Education & Outreach Plan 2017-2026
2022 Edition



Why Water Matters

VADNAIS LAKE AREA WATER MANAGEMENT ORGANIZATION EDUCATION AND OUTREACH PLAN (EOP) DECEMBER, 2021

Adopted by the VLAWMO Board of Directors on 10/26/2017 Last Updated 11/9/2018

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Cover photos:

Green Heron: WC & MC

Fish: Clean Water MN

TERMS & ACRONYMS

Audience: A particular group with unique, defining qualities or values, at which a campaign is aimed.

Citizens/Residents: Citizens are all who either work or live within VLAWMO, while residents live in VLAWMO.

Community members: An over-arching term that includes all target audiences, stakeholders, and key personnel.

Citizen Advisory Committee (CAC): Volunteer-based program of residents who assist in advising Education and Outreach Staff, Technical Commission, and the Board of directors in programs and operations.

Fieldwork: Projects, or programs that VLAWMO conducts in the community, external from the office.

Implementation strategies: Categories which delineate the goals, objectives, and tactics based on their level of planning, timeframe, visibility, and results. Strategies range from high, intermediate, to low. See section 4 for further description.

Environmental Education: A process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions (US EPA).

Formal education: Planned, curriculum-based education within a school or similar community setting.

Informal education: Education outside of a formal school setting. Flexible, adaptable, and experience-based.

Key Personnel: VLAWMO Technical Commission (TEC), Board of Directors (BOD), and Citizen Advisory Committee (CAC).

Minnesota Water Stewards (MWS): Volunteer program partnership between VLAWMO and the nonprofit Freshwater Society. Volunteers selected by VLAWMO staff receive a one year training through Freshwater, complete a capstone project in the VLAWMO watershed, and engage in various volunteer activities.

Sense of Place: Experience and learning opportunities focused on the history and ecology of a specific place. In this case, the place is the VLAWMO watershed.

MPCA 319: Allocated funding from the Minnesota Pollution Control Agency pertaining to VLAWMO's 2018 designation as a priority small watershed. 319 funding is distributed as a grant program, and contains specific education and outreach measurements for grant reporting.

Stakeholders: Individuals or entities with an interest, concern, or investment into an organization.

Tactic: Tangible programs within VLAWMO that carry out the goals and objectives.

Tbilisi Declaration: Foundational environmental education principles established in 1977 by the United Nations.

Stewardship: An ethic that embodies the responsible planning and management of resources.

Watershed behaviors: Behaviors that relate to as well as adhere to an understanding of the watershed.

Watershed literacy: The capacity of an individual to act successfully in daily life on a broad understanding of how people and society relate to the watershed, and how they can do so sustainably.

Acronyms:

AIS: Aquatic Invasive Species

BOD: VLAWMO board of directors

BMP: Best Management Practice

CAC: Citizen Advisory Committee

EOC: Education and Outreach Coordinator

EOP: Education and Outreach Plan

EJ: Environmental Justice

MS4: Municipal Separate Storm Sewer System

SWPPP: Stormwater Pollution Prevention Plan

PI: VLAWMO Priority Issue from Water Plan

TEC: Technical Commission

WMO: Watershed Management Organization

WAV: Watershed Action Volunteers

MWS: Master Water Stewards

Executive Summary

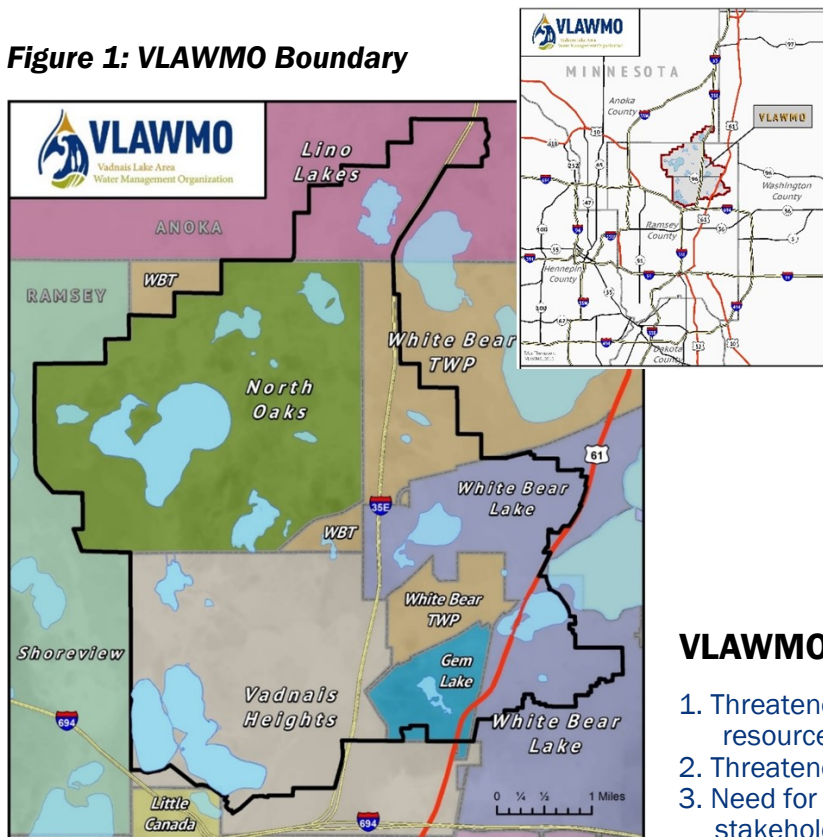
The Education and Outreach Plan (EOP) describes how the Vadnais Lake Area Water Management Organization (VLAWMO) will prioritize and organize its education and outreach activities in the watershed from the years 2017 through 2026. The plan describes the goals, objectives, target audiences, strategies, and tactics that will be used to support VLAWMO's Comprehensive Watershed Management Plan. Each of these components are situated in a sequence to bring the plan from theory to action. The EOP is an extension of the Comprehensive Watershed Management Plan, particularly *Priority Issue 3: Need for education and involvement from citizens and stakeholders*. This executive summary provides an overview of the EOP.

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. The watershed also includes 17 lakes, 1 creek, and over 1000 wetlands.

VLAWMO LOCATION & POLITICAL BOUNDARY

Figure 1: VLAWMO Boundary



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.”

VLAWMO Priority Issues

1. Threatened and impaired surface water and natural resources.
2. Threatened or impaired groundwater quality and quantity.
3. Need for education and involvement from citizens and stakeholders.
4. Need for adequate data, analysis, financing, and staff capacity in order to meet goals and accomplish strategies.
5. Invasive and exotic species management.
6. Localized flooding

EXECUTIVE SUMMARY

The EOP is theoretically structured to keep all education and outreach relevant to a core purpose. As shown in Figure 2, the EOP includes reference to external support mechanisms as well as internally planned frameworks. To organize and balance efforts, three EOP programs delineate the target audiences and therefore the programming geared towards each audience. VLAWMO aspires to balance investment into each EOP program equally. EOP goals are broad statements of general intentions, while objectives are specific and measurable.

Figure 2: EOP Layout

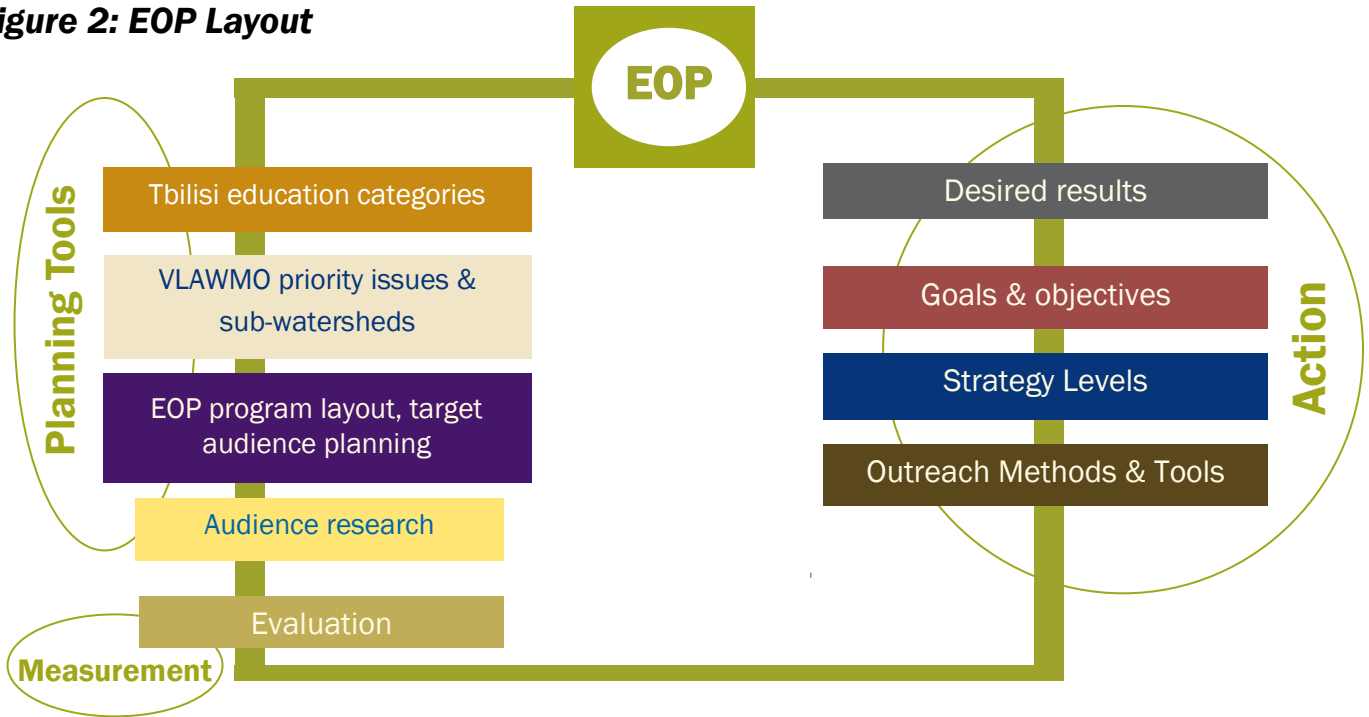


Figure 3: EOP programs and target audience layout



Desired Results

1. Have a citizenry that understands natural resource protection and responsible use.
2. To observe citizens demonstrating watershed protection behaviors.
3. To observe resident volunteers educating their fellow citizens.
4. To confirm that MS4 partners are collaborating, using resources, and making progress on MS4/SWPPP
5. To have active programs and partnerships that foster participation, relevant to residents and VLAWMO alike.
6. To observe evidence that VLAWMO residents are knowledgeable and engaged in VLAWMO's direction, policies, meetings, and projects.

Goals and Objectives: Summary

1. VLAWMO supports its partner Cities in making progress in their MS4's.
Support and collaboration for MS4 Minimum Control Measures #1, #2, and #6.
2. Key personnel have continued to advance their knowledge of water and related natural resources.
Enrichment opportunities for Board of Directors (BOD) and Technical Commission (TEC).
3. Establish place-based watershed education in local schools.
Develop resources and supplements to connect local schools to local water resources.
4. Schools have established and maintained stormwater BMP's, embracing their educational value.
Provide leadership assistance in BMP maintenance as well as resources for ongoing upkeep.
5. Community members are educated on VLAWMO water issues and projects.
Set up educational booths at community events, utilize the local newspaper and cable channel for outreach, and maintain an active social media, blog, and email presence.
6. Community members utilize watershed knowledge to act on watershed issues, with help from VLAWMO's tools and resources.
Workshops, ongoing surveys, Aquatic Invasive Species (AIS) monitoring, Community Blue
7. An appreciation of local natural resources is established in the community, fostering ecological awareness and community reflection.
Remote cameras, phenology, nature writing, neighborhood spotlight articles.
8. A continually growing volunteer base that learns and leads.
Master Water Stewards, Watershed Action Volunteers (WAV), Citizen Advisory Commission (CAC)
9. A water-focused congruency between community groups and agendas exists in VLAWMO.
Form creative partnerships with organizations of diverse missions, hold events that combine missions.

Implementation Strategies

Recognizing that watershed stewardship requires both front-end action in addition to behind the scenes planning, VLAWMO utilizes strategy levels and corresponding tactics to create a realistic workload.

Strategies are organized into high, intermediate, and low levels. Each goal and objective fits into a strategy level. A balance of these strategies keeps VLAWMO's education and outreach initiatives producing results visible to the community while still planning for future partnerships and projects. Priorities for goal implementation rely on annual finances and maintaining a workload according to the strategy levels. Within these changing circumstances, not every goal is intended to be completed on an annual basis. Rather, the Education and Outreach Plan strives to pursue the goals incrementally throughout the greater 10-year comprehensive watershed plan. Annual reporting will occur to measure and document progress.

Table 1: Strategy levels

<p>High Strategies</p> <p><u>Goals:</u> Capital Improvement Projects, 1</p>
<p>Intermediate Strategies</p> <p><u>Goals:</u> 2, 3, 4, 5</p>
<p>Low Strategies</p> <p><u>Goals:</u> 6, 7, 8</p>

Table 2: Outreach Methods and Tools

<p>Outreach Methods</p> <p>How VLAWMO carries out education and outreach.</p>	<p>Outreach Tools</p> <p>Planned and created content from VLAWMO staff. Tangible materials and documents.</p>
<p>Meeting notes/ agendas</p> <p>Planning/WAV meetings</p> <p>Face-to-face</p> <p>Phone, Email</p> <p>WAV, CAC</p> <p>Mass email</p> <p>Website</p> <p>Social media</p> <p>Events, Workshops</p>	<p>Reports and summaries</p> <p>Print materials</p> <p>Curriculum</p> <p>Branding</p> <p>Workshop content</p> <p>Fieldwork</p> <p>Multimedia: articles, photo, video</p> <p>Booth Displays</p> <p>Education materials available for rent</p>

Evaluation

Annual evaluation will complete the measurement of the goals and objectives outlined in part two: Education and Outreach Goals. Goals and objectives are modified annually to improve programs, ensure accountability, and maximize effectiveness. Goals may be added or omitted depending on the evaluation. Evaluation of the objectives considers the Tblisi environmental education categories: Attitude, awareness, knowledge skills, and behavior.

1.1 Purpose



Roughly the same amount of water exists on Earth today as when it first formed on the planet. Only about 2.5% of this water is freshwater. Of this 2.5%, about half is tied into glaciers and groundwater, and half is available as surface water. While the world's water is relatively constant, the demand for freshwater however, has increased. According to some specialists, world water usage has tripled since 1950. With an increased demand for a finite resource such as fresh water, comes complex issues for human and environmental communities. The resolution of these issues depends on a populace sensitive to and knowledgeable of freshwater and water resources. As water related issues and conflicts continue to present

themselves both locally and globally into the 21st century, water and watershed education will provide one of the best tools to ensure protection of this precious resource. Through education comes the ability to act collectively.

This Education and Outreach Plan (EOP) serves priority issue #3 of the VLAWMO the Comprehensive Water Plan. Education and Outreach is also one of the core activities of VLAWMO (p.11). With the theme of “Why Water Matters”, it will guide the education, outreach, and communication of the Vadnais Lake Area Water Management Organization (VLAWMO) through it's 10-year plan cycle of 2017-2026. This EOP is a living document that is to be updated upon yearly evaluation of VLAWMO's education and outreach activities.

Why Water Matters

The desired results of this EOP are:



1. Have a citizenry that understands natural resource protection and responsible use.
2. To observe citizens demonstrating watershed protection behaviors.
3. To observe resident volunteers educating their fellow citizens.
4. To confirm that MS4 partners are collaborating, using resources, and making progress on MS4/SWPPP reporting.
5. To have active programs and partnerships that foster participation, and are relevant to both residents and VLAWMO's mission.
6. To observe evidence that VLAWMO residents are knowledgeable and engaged in VLAWMO's direction, policies, meetings, and projects.

The EOP is not meant to prescriptively define each step over the entire 10-year process, but to serve as a guide for VLAWMO's education and outreach. It is to be an aid in public transparency, and to provide a structure for evaluation and documentation to the board, who reviews and allocates supporting resources. Evaluation will be a valuable tool for fine-tuning future programming, and will provide an informed basis for modifying VLAWMO's goals and objectives over time.

1.2 History of the EOP

June, 2015-September, 2016: Identify goals, objectives, potential barriers, target audiences, and stakeholder feedback. Consultants and staff facilitated the use of the “Why Water Matters” theme. Banners, storyboards, and games were used at stakeholder meetings as well as public community events.

October, 2016-September, 2017: Implement EOP and begin the period which is to be annually evaluated.

2017-2020: Annual edits with adjusted goals and objectives, reflecting the issues, needs, projects, and focuses VLAWMO is experiencing in each particular year.

1.3 Background

Map & Mission

The VLAWMO 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. It includes 17 lakes, 1 creek, and 1137 wetlands.

Figure 1: VLAWMO Boundary

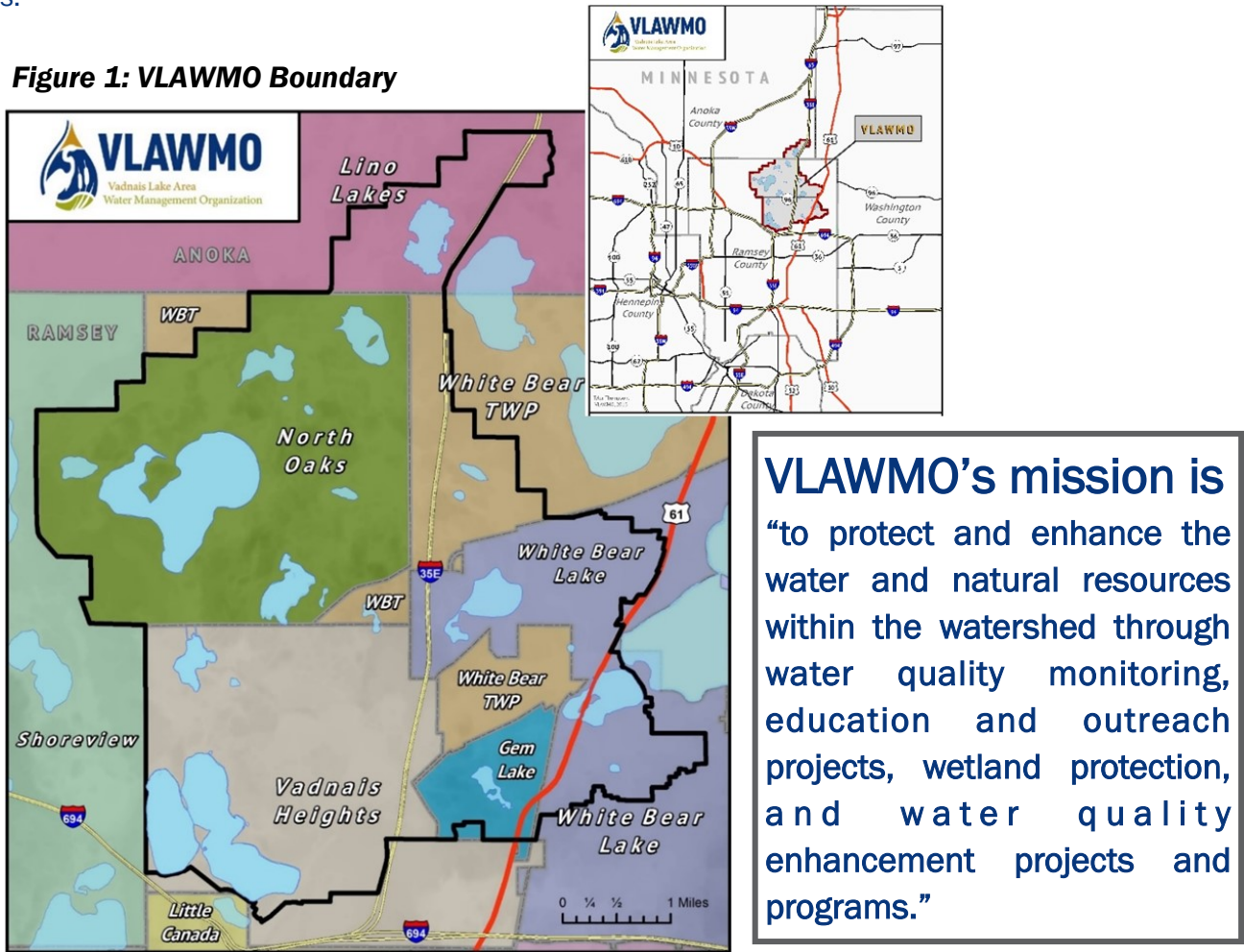
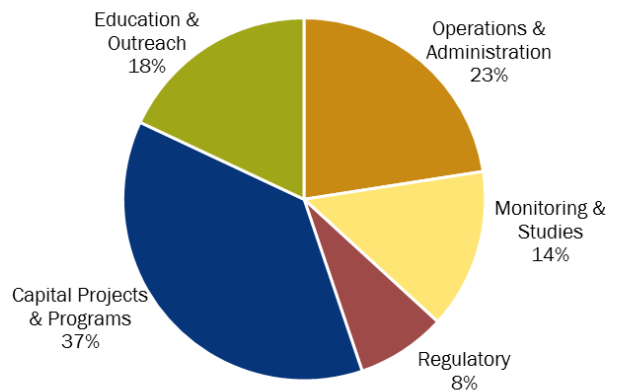


Figure 4: Core activities and budget
VLAWMO Core activities



Budget allocation



1.3 Background

VLAWMO Priority Issues

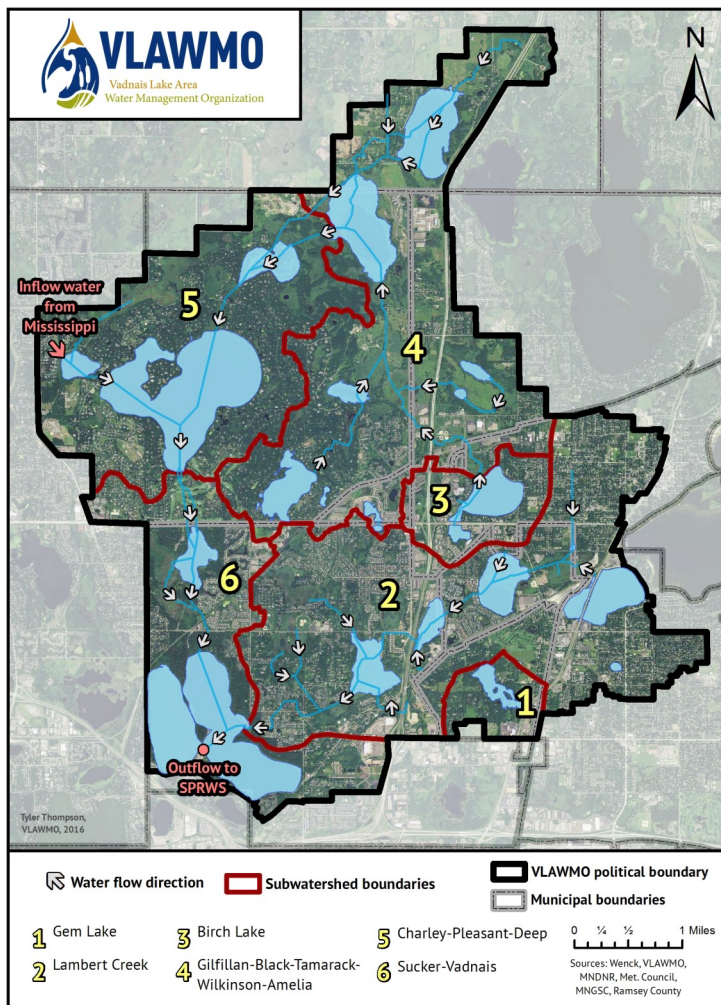
Reference to VLAWMO's priority issues keeps the EOP consistent and relevant to VLAWMO's 2017-2026 Comprehensive Water Plan. This plan is available at the VLWMO website (www.vlawmo.org). It contains description on the rest of VLAWMO's core activities, found on page 7 of this document. The VLAWMO priority issues are:

1. Threatened and impaired surface water and natural resources.
2. Threatened or impaired groundwater quality and quantity.
3. Need for education and involvement from citizens and stakeholders.
4. Need for adequate data, analysis, financing, and staff capacity in order to meet goals and accomplish strategies.
5. Invasive and exotic species management.
6. Localized flooding

VLAWMO Sub-watersheds

Inclusion of VLAWMO's sub-watersheds in the EOP allows VLAWMO to target certain initiatives geographically and ecologically. As one of the smaller WMO's in the Twin Cities Metro, planning that balances time and energy is crucial. Directing education and outreach programs to where they are most relevant and needed supports this balance of time and energy, and helps VLAWMO continually progress towards its goals.

Figure 5: VLAWMO Sub-watersheds



The specification of sub-watersheds in the EOP allows for VLAWMO to integrate this component into future goals and objectives in the future. As the comprehensive water plan will be active from 2017-2026, additional insights, opportunities, and lessons learned will create an understanding as to how to direct education and outreach efforts to more precise, localized areas based on the needs of the watershed.

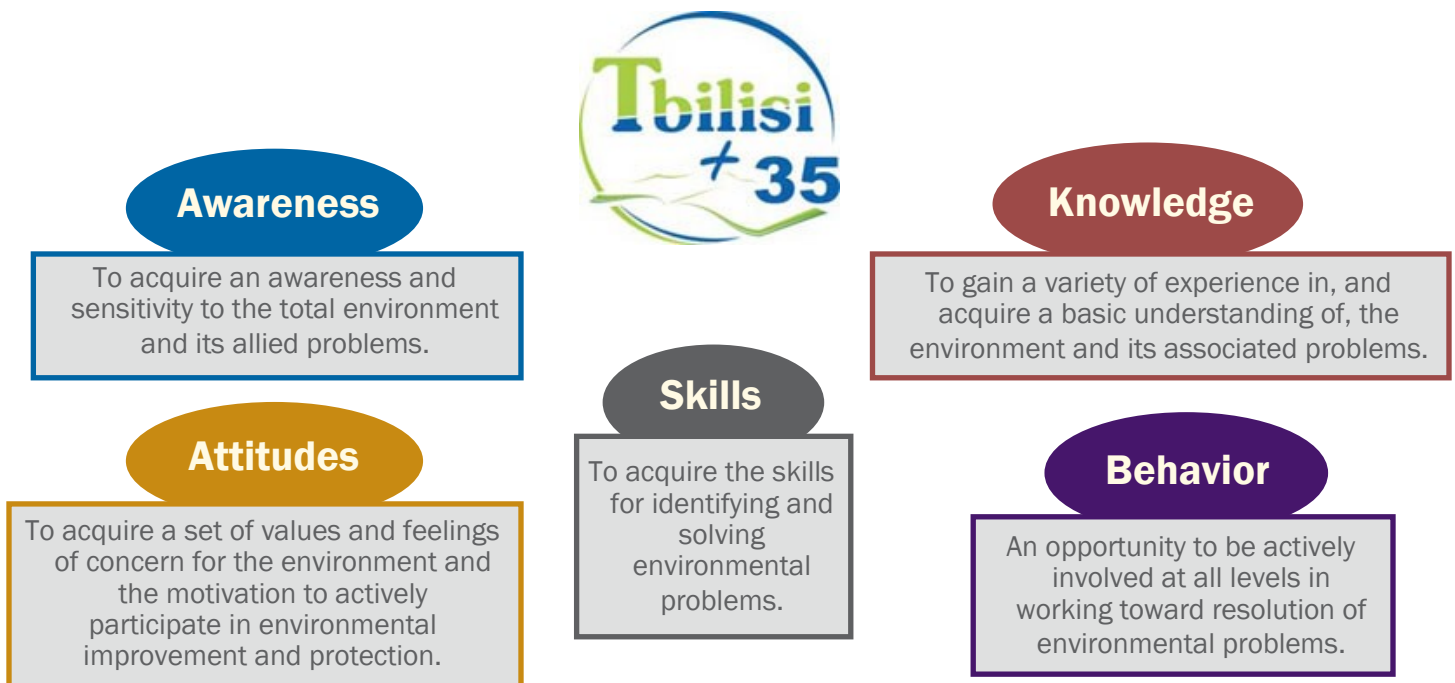
1.4 EOP Supporting Structures

To support the EOP, environmental education theory is considered in the creation of the goals and objectives. Striving for results under all five of the Tbilisi categories supports long-term, perpetual results both culturally and environmentally.

Tbilisi Environmental Education Categories

The Tbilisi Education categories help this EOP to be aligned with methods familiar to the field of environmental education. In 1977, the world's first intergovernmental conference was organized by the United Nations Education, Scientific, and Cultural Organization (UNESCO) in Tbilisi, Georgia. The outcome of this conference was the Tbilisi Declaration, which stated the importance of environmental education in the preservation and improvement of the world's environment and communities. Today, these educational categories are still utilized by hundreds of organizations, including the North American Association for Environmental Education (NAAEE).

Figure 7: Tbilisi environmental education categories



1.4 EOP Framework

EOP program Descriptions

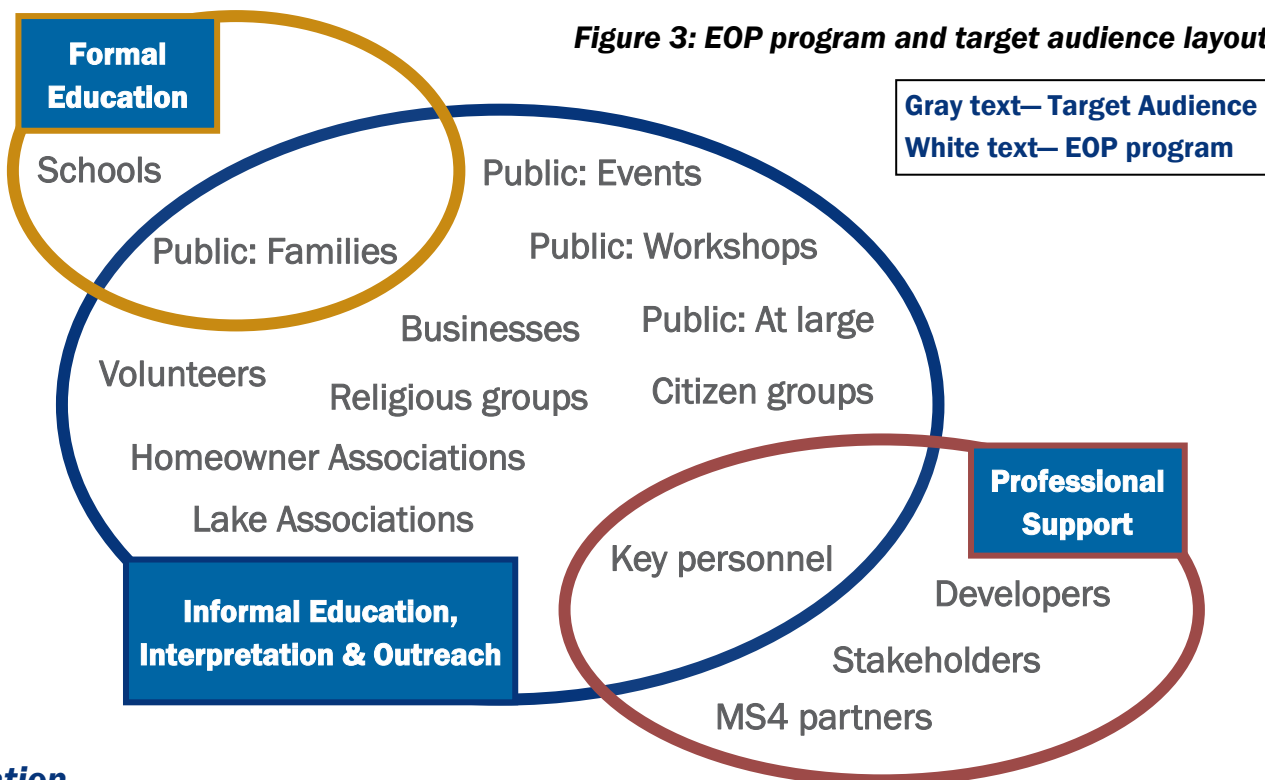
To organize VLAWMO’s education and outreach efforts, the EOP organizes the target audiences into three EOP programs. Generally, VLAWMO’s efforts are evenly divided between each sub-program. Certain times of the year or certain opportunities external to VLAWMO may validate extra focus to be placed on a certain EOP program.

Formal Education	Informal Education, Interpretation & Outreach	Professional Support
Partnering with local teachers, watershed curriculum development, and class visits to schools. Curriculum is designed to bring VLAWMO topics into the household, engaging the whole family through homework assignments.	Online communication such as website and social media, community involvement such as local TV and newspapers, watershed tours, community events, raingarden workshops, promoting VLAWMO cost-share programs, volunteer projects, custom initiatives with local associations and groups.	Providing MS4 assistance to city staff and council members, referencing the WCA with developers, and networking with stakeholders for programming and sharing of resources.

Table 3: EOP program descriptions

EOP program and target audience layout

The various target audiences VLAWMO serves are also integrated into the EOP goals. Target audiences are defined as a particular group of people with distinguishing characteristics, priorities, and values. The public is therefore divided into four different audiences (families, events, workshops, at large) depending on the interests and purpose of various settings. VLAWMO’s target audiences are outlined in gray text below, are paired to the goals and objectives in part two, and are expanded upon in part three.



Evaluation

Annual evaluation will derive from the measurement of the goals and objectives outlined in part two. Goals and objectives are modified to improve programs, ensure accountability, and maximize effectiveness. Goals may be added or omitted depending on the evaluation. See pages XX-XX for the evaluation table.

1.4 Supportive Materials

End-of-year Survey: VLAWMO staff distributes an annual review survey that reflects the initial research that was completed at the start of the VLAWMO 2017-2026 water plan. Adjustments are made each year according to the projects, issues, and local events that occurred in that year. Survey findings help plan the following year.

Initial Research

To gather essential insight from VLAWMO's community members, three surveys were conducted for the start of the VLAWMO's 2017-2026 water plan. One survey was devoted to each EOP program. Surveys assessed needs, interests, and possible barriers in engaging with various audiences. Survey findings were directly applied to the planning of each program. Copies of each survey can be found in the appendices section, summaries available upon request. Each survey was distributed in both hardcopy and with SurveyMonkey web service.

Community for Clean Water Survey: Written in the first year of VLAWMO's 10-year water plan to gather values, interests, and watershed familiarity, this survey gathers insight for each target audience. Questions such as why water matters to them, how familiar they claim to be with local water, and what barriers are present when engaging with local water are asked. This survey is distributed annually primarily online during VLAWMO community events, accompanying a booth, informational display, and other water-based educational games.

Educator Survey: Written to gather insight as well as initiate new networks with local educators. Various water-focused curriculums are currently being used at local schools within VLAWMO, however VLAWMO offers unique assets that connect students to their local water resources. This survey aims to find the areas of need as well as school's preferences to best fit place-based watershed curriculum into local VLAWMO schools.

Grade levels: 2nd (29%), Pre-K, K, 3rd, 5th (24%)

STEM standards that could use curriculum development: Life cycles (33%), practice of engineering (33%), interdependence (26%)

STEM standards capable of partnerships: Practice of science (54%), life cycles (46%), practice of engineering (46%)

Thoughts on take-home assignments: Flexible to any in-class/ take home assignment to go along with visit (60%)

Subjects to be explored in applying to water topics: Art (62%), creative writing (56%)

Barriers in covering watershed topics: Time constraints (73%), lack of experience (53%)

Barriers in hosting guest visitors: Time constraints (38%), difficulty in planning (38%)

Municipal Stormwater (MS4) Support Survey: Each municipality as well as the counties and other entities hold MS4 permits within VLAWMO. As VLAWMO aims to be a resource in MS4 activity, this survey gathers guiding insight to create an active, local, and informational network between local MS4 holders, as well as finds the needs of MS4's for future progress.

How often are trainings conducted? A few times each year (100%)

What education methods work best? Single-event workshops (80%), attending meetings with qualified professionals (60%)

Regulation activities that require assistance: Public participation, public education and outreach, pollution prevention (all 66%)

What are the barriers to improving MS4 performance? Funding (75%)

MS4 initiatives undertaken in the last year: IDDE training, surface water management program inspections education, outfall inspections, storm structure repairs, pond inspections.

How can VLAWMO help? Provide data, education, templates for inspections, help meet mandates, project and drainage coordination

EOP Layout

The VLAWMO EOP is composed of internal, external, and reflective components.

External components include entities and concepts originating outside of the VLAWMO EOP.

Internal frameworks are designed in a hierarchical fashion. The purpose guides the desired results, and the desired results create a foundation for the goals and objectives. The goals and objectives are divided into high/intermediate/low strategy levels, supported by outreach strategies, and lastly assigned to various tactics.

Reflection consists of ongoing, annual evaluation. This evaluation allows for critique on the EOP's efficiency as well as relevancy to VLAWMO's mission. Adjustments are to be made accordingly.

Figure 2: EOP Layout

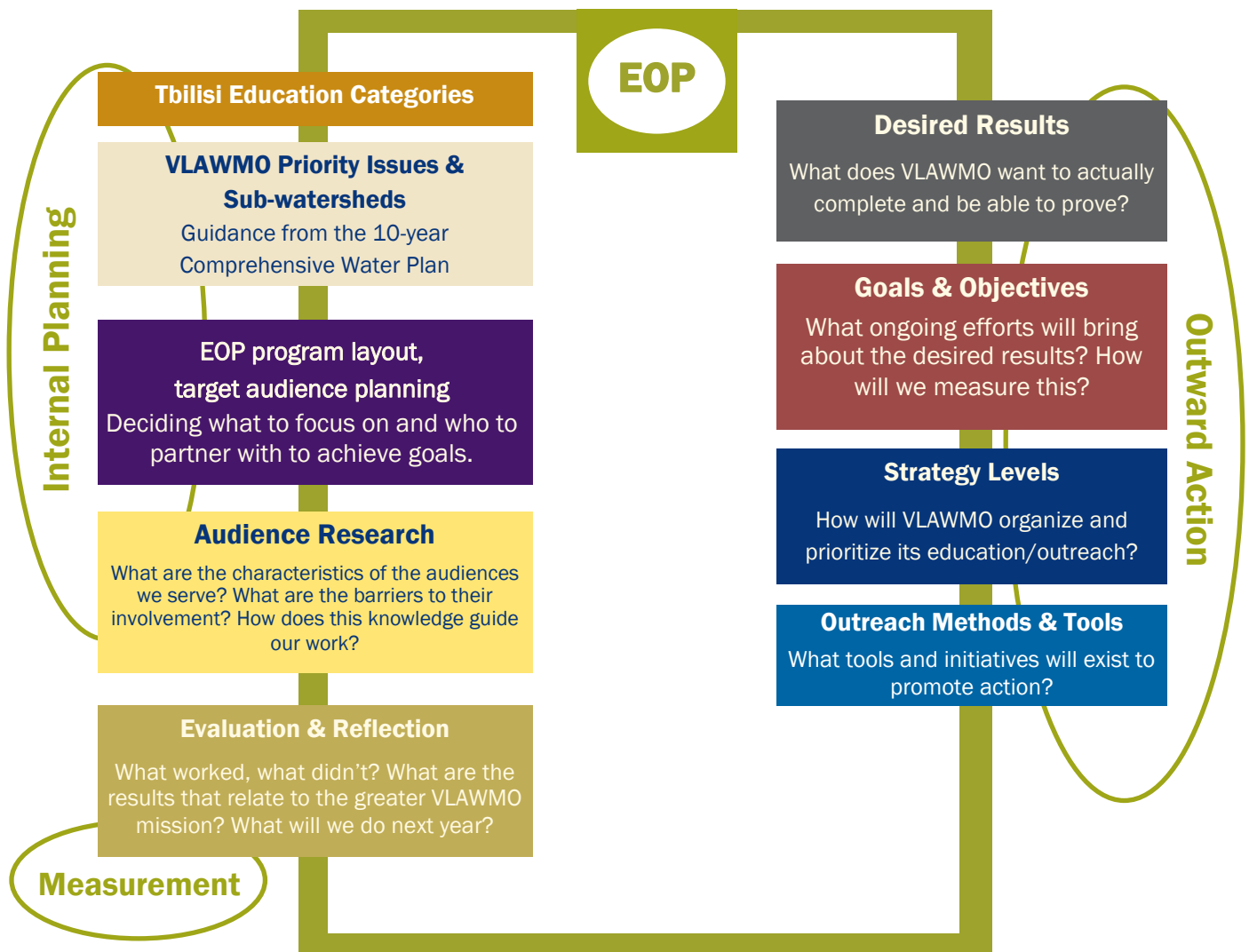
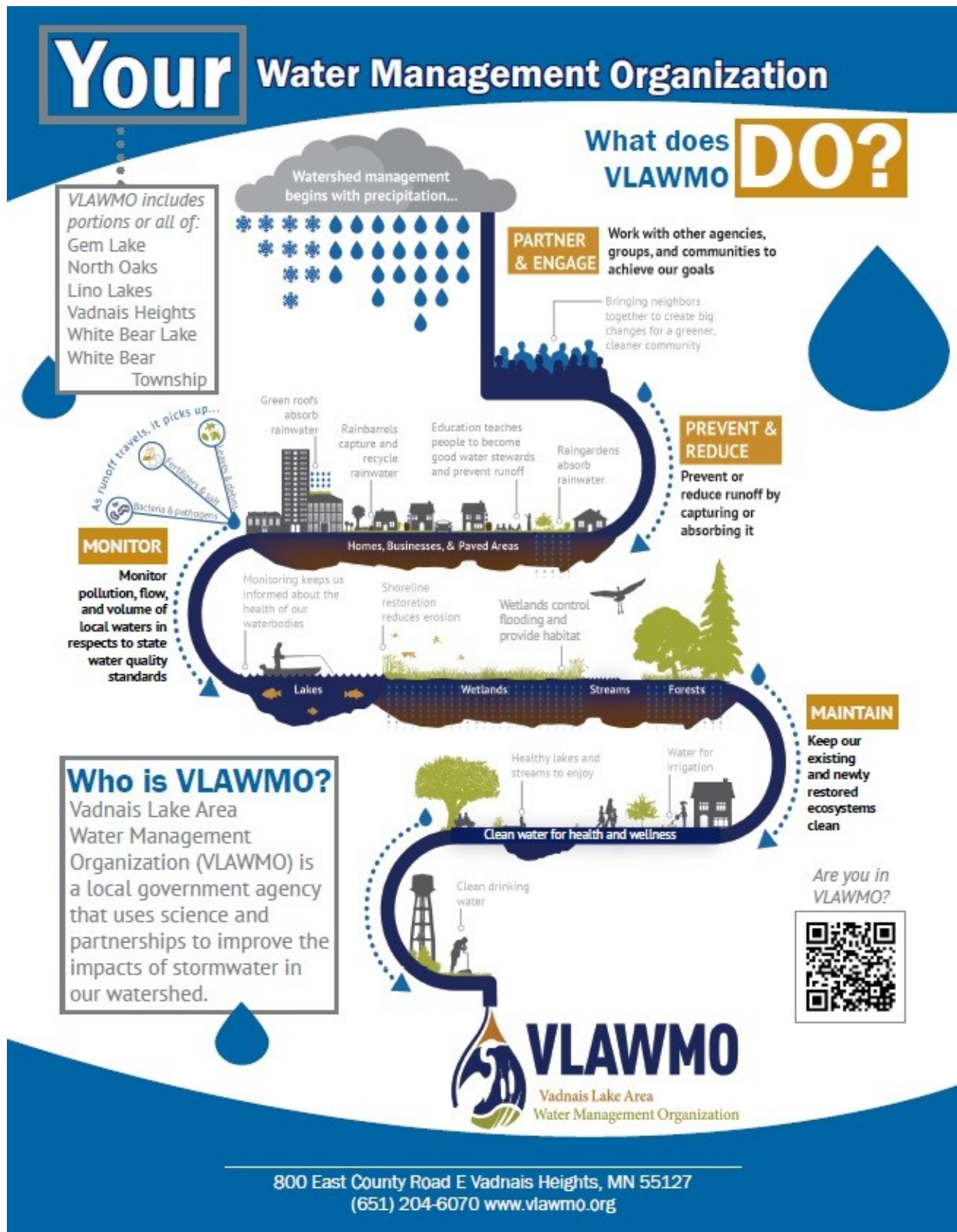


Figure 8: VLAWMO infographic



2.1 Desired Results, Measurable Outcomes

How is the Education and Outreach Plan Measured?

The following goals and objectives function as the fulfillment of the VLAWMO Water Plan Priority Issue #3: Need for education and outreach. The desired results portray VLAWMO’s vision of what that education and outreach will ideally look like as long-term results. Some objectives are especially relevant to this or other priority issues, these are included in parenthesis after the objectives, phrased as “(PI #-#-#)”.

Desired Results: *“Through the EOP, VLAWMO desires to...”*

Listed according to priority.

1. To complete annual Capital Improvement Campaigns; specific education efforts related to VLAWMO projects including outreach, communication, and stakeholder engagement.
2. To confirm that MS4 partners are using VLAWMO MS4 resources and are striving to improve their MS4 permits and SWPPP reports according to the full scope of the current MS4 permit.
3. To maintain active, relevant outreach that fosters participation with VLAWMO’s cost-share and volunteer programs, in addition to member community partnerships.
4. Witness a citizenry that grapples with the complexity of water resources, culture, and climate change, and advocates for solutions that promote long-term stewardship of resources.
5. To observe resident volunteers educating and being educated by their peers, utilizing knowledge and skills related to stormwater, watersheds, and water quality.
6. To observe citizens demonstrating watershed protection behaviors.

2.1 High Priority Strategies

Capital Improvement Project Campaigns: 2022

East Goose Adaptive Lake Management

Goal: Compliment the Goose Lake Adaptive Management project with accurate documentation, stakeholder engagement, and relevant supplementary education.

- Special focus on aquatic plant management.
- Facilitate communications around an East Goose Adaptive Lake Management (ALM) plan as available depending on the planning process and local partnerships.
- Facilitate staff planning for presentations: Set agendas, schedule meetings and consultations, ensure meeting outcomes are delivered, follow-up as needed.
- Coordinate a minimum of two introductory stakeholder meetings: PowerPoints, agendas, communications, follow-up for outcomes.

Desired result: #1 **Priority issue:** #1, 5, 6 **Target audience:** Public: At large, workshops, events, businesses, homeowners/lake association

Ditch Maintenance Communication and Floodplain Education

Goal: Compliment ditch maintenance activities with documentation and relevant education on ditch history, wetlands, and stream and floodplain function.

- Provide updates with photos, videos, and links on VLAWMO website project page: vlawmo.org/projects
- Maintain ditch management communications informed by local policies, studies, and ditch and drainage education.
- Complete a complimentary outreach series utilizing construction footage, drone footage, storymaps, and background information on ponds, ditches in context of ecosystem health, and creek meanders. Utilize newspaper, website, and social media (using #LambertCreekVH).
- Distribute hardcopy mailings (letters, postcards) containing updates on upcoming projects and public input opportunities.
- Facilitate questions and address concerns between staff, the public, and City officials. Coordinate communications informed by feedback.

Desired outcome: #1 **Priority issue in focus:** #1, 5 **Target audience:** Public: At large, homeowners assc.

2.1 High Priority Strategies

Professional Support: MS4 permit support

Goals

1. VLAWMO will support partner Cities and Townships in making progress in their MS4's.
 - A. VLAWMO will pursue items and partnership agreements formed from a 2021 needs assessment with each MS4 community to benefit each community's 2020 general MS4 permit:
<https://www.pca.state.mn.us/sites/default/files/wq-strm4-49a.pdf>
 - Emphasis on Minimum Control Measures 1, 2, 3, and 6.
 - B. Each MS4 in VLAWMO will utilize VLAWMO for assistance under **Minimum Control Measure #1 (Education and Outreach)**:
 - Partner Cities and Townships retain compliance based on part 16 in the 2020 MS4 General Permit: <https://www.pca.state.mn.us/sites/default/files/wq-strm4-94a.pdf>
 - VLAWMO creates and pulls from existing resources to provide theme-specific and municipality-specific content to support MCM #1.
 - C. Each MS4 in VLAWMO will utilize VLAWMO for assistance under **Minimum Control Measure #2 (Public Participation/Involvement)**:
 - Partner Cities and Townships retain compliance based on part 17 in the 2020 MS4 General Permit: <https://www.pca.state.mn.us/sites/default/files/wq-strm4-94a.pdf>
 - Becoming a member of Adopt-a-Drain and working with VLAWMO in program promotion and implementation.
 - Promote or host storm drain clean-up events and/or trash pick-up events.
 - Collaborate with VLAWMO in hosting and promoting an annual raingarden, native plant, groundcover, shoreline restoration, or BlueThumb-sponsored workshop.
 - Partnerships with White Bear Lake Environmental Advisory Commission (EAC) and Vadnais Heights Planning Commission: Adopt-a-Drain/East Goose subwatershed, Bridgewood raingarden
 - D. Each MS4 in VLAWMO will utilize VLAWMO for assistance under **Minimum Control Measure #3 Illicit Discharge Detection and Elimination (IDDE)**:
 - Partner Cities and Townships retain compliance based on part 18 in the 2020 MS4 General Permit: <https://www.pca.state.mn.us/sites/default/files/wq-strm4-94a.pdf>
 - E. Each MS4 in VLAWMO will utilize VLAWMO for assistance under **Minimum Control Measure #6 Good Housekeeping**
 - Partner Cities and Townships retain compliance based on part 21 in the 2020 MS4 General Permit: <https://www.pca.state.mn.us/sites/default/files/wq-strm4-94a.pdf>
 - F. VLAWMO will provide community-specific maps highlighting relevant best management practices and TMDL-related efforts to accompany partner Cities and Township's SWPPP reports.
 - G. VLAWMO will produce an MS4 report containing the year's programming and outreach summary to City and Township councils in December, 2022.

Desired Result #4

Primary priority issue in focus: #3

Target audience(s): MS4 partners

2.2 Intermediate Priority Strategies

Informal Education and Interpretation

Goals

2. Community members utilize watershed knowledge to act on watershed issues with help from VLAWMO's tools and resources.
 - A. VLAWMO will offer and collaborate on at least three native plant, raingarden, and/or yard-care workshops annually.
 - B. VLAWMO will create and distribute cost-share promotional material to all VLAWMO municipalities and host a cost-share open-house annually.
 - C. VLAWMO will continually promote and evaluate the use of watershed stewardship activities through social media, website content, email blasts, and surveys (PI 3-3-1). To guide and organize VLAWMO's messaging, watershed stewardship messages include:
 - Water-friendly yard care strategies (keeping lawn at 3" height, keeping grass clippings on the lawn, etc.) A full list of strategies is found at vlawmo.org/residents/water-stewardship/
 - Adopting a stormdrain (Adopt-a-Drain.org)
 - Adopting a raingarden (vlawmo.org/get-involved)
 - Properly disposing yard waste and hazardous waste
 - Planting a raingarden, bioswale, native plant buffer, or installing other stormwater retention features
 - Redirecting downspouts away from pavement
 - Practicing salt and de-icer best practices

Desired outcome: #1, 2, 5 **Priority issue in focus:** #1, 2, 3 **Target audience:** Public: at large, workshops

2.2 Intermediate Priority Strategies

Informal Education and Interpretation

3. Community members are educated on VLAWMO issues and projects.

- A. VLAWMO will attend and present relevant water information and project updates at annual community events as opportunities arise. Examples include MarketFest in White Bear Lake and Heritage Days in Vadnais Heights (PI 3-2-2).
- B. VLAWMO will utilize community partnerships to promote VLAWMO events and capital improvement projects (PI 3-2-1). VLAWMO will also produce specific, separate communications plans corresponding with specific partnerships, capital improvement projects, and MPCA 319 projects being conducted within the defined year of this edition of the Education and Outreach Plan. VLAWMO will host kick-off info sessions and planning meetings on new projects happening in the watershed. **See Capital Improvement Project Campaigns.**
- C. VLAWMO will utilize the VLAWMO.org blog, VLAWMO YouTube channel, E-newsletter, and social media a minimum of once each week to promote awareness and build community rapport. Topics will include lake and stream monitoring, fieldwork updates, VLAWMO publications, local ecology, tips on water-friendly behaviors such as yard care practices, and current news relating to water resources and lake SLMP's (PI 3-2-2).

Desired outcome: #2, 6 **Priority issue in focus:** #1, 3 **Target audience:** Public: at large, associations, citizen groups, stakeholders

4. Coordinate an active volunteer base that learns and leads.

- A. VLAWMO will creatively recruit volunteers through relationship building and nurture its existing volunteer base. Volunteer programs include participation in the Minnesota Water Stewards program and facilitating VLAWMO-designed volunteer positions (PI 3-3-1).
- B. VLAWMO plans out annual projects for the Watershed Action Volunteers (WAV) and Citizen Advisory Committee (CAC) with volunteer input (PI 3-3-1). Possible activities for 2022 include:
Wetland Health Evaluation Program pilot demonstration with Tamarack Nature Center, Neighborhood BMP demonstration tour, Leaf Pack Macroinvertebrate monitoring, Shoreline restoration open house, native plant swap, raingarden maintenance, “adopt-a-raingarden” maintenance on public raingardens and bio-swales, community stormdrain clean-ups, adopt-a-drain promotion.
- C. Trained volunteers will help monitor the status of Aquatic Invasive Species (AIS) in the watershed. VLAWMO will partner with the Ramsey County Soil and Water Conservation Division to host volunteer trainings (PI 5-2-2).
- D. VLAWMO will maintain a relationship with the University of Minnesota service learning, and will host students for outdoor fieldwork such as buckthorn removal and camera trap

Desired outcome: #3 **Priority issue in focus:** #1, 3 **Target audience:** Volunteers

2.2 Intermediate Priority Strategies

Informal Education and Interpretation

5. Watershed communications are accountable and active in the community.
 - A. Notes and minutes from VLAWMO meetings will be posted on the website for stakeholders and the public. (PI 3-2-1, 3-2-3).
 - B. Each municipality will be reached annually through newsletters, email blasts, or website updates with relevant MS4, watershed stewardship, cost-share, or Capital Improvement Campaign content.
 - C. Due to its remote location, small area, and being in Anoka County, the Lino Lakes portion of the VLAWMO watershed will receive one hardcopy mailing annually.
 - D. VLAWMO will produce and submit at least 10 newspaper articles annually.
 - E. VLAWMO will participate in local groups such as VHDEC Partners for Good to maintain connections with local businesses and nonprofits.
 - F. VLAWMO continues memberships with Metro Watershed Partners and Blue Thumb to provide education content and peer-to-peer consultation with other watershed organizations in order to enhance programs and services to the VLAWMO public.

Desired outcome: #1

Priority issue: #1, 5, 6

Target audience: Public: At large

2.3 Low Priority Strategies

Formal Education: Schools

6. Schools have established and maintained stormwater BMP's integrated with watershed education efforts.
 - A. VLAWMO will provide at least one BMP maintenance event annually within the WMO, either during school hours or during after hours care. (PI 3-2-2)
 - B. Visit or provide supportive water resource content to each school at least once/year for water-focused lesson and activity. Repeatable and accessible education activities are listed at vlawmo.org/students (PI 3-3-2).

Desired Result: #2, 5

Priority issue in focus: #3

Target audience: Schools, Public: families

2.3 Low Priority Strategies

Informal Education and Interpretation

7. An appreciation of natural resources is established in the community, fostering ecological awareness, participation, and a sense of place.
 - A. Continued use of remote cameras to photograph local wildlife and use photos for educational messaging, capital improvement project support, schools, newspapers, blogs, and presentations as time allows.
 - B. VLAWMO staff will develop story maps focused on wetland wildlife, frog and toad populations, and VLAWMO projects.
 - C. VLAWMO will produce Neighborhood Spotlight articles (successful cost-share raingardens, stewardship practices, and other best management practices) and Faces of Wetlands articles (featuring ecological knowledge on wetland wildlife while relating it to human activities).
 - D. VLAWMO will organize citizen science initiatives for community members to participate in. These include but aren't limited to LeafPack macroinvertebrate monitoring, pollinator monitoring, or picture posts (phenology). Resulting data will be interpreted in terms of watershed health (PI 3-3-1).

Desired outcome: #1, 2, 3 Priority issue in focus: #1, 5, 6 Target audience: Public: at large, events

Professional Support: BOD, TEC, WAV

8. Key personnel (BOD, TEC, CAC) have continued to advance their knowledge of water and related natural resources.
 - A. VLAWMO will provide one enrichment opportunity annually in the form of a supplementary presentation titled "Water Matters". Presentations will invite guest speakers on watershed related topics from the greater Twin Cities metro. Each presentation will be recorded and posted on the VLAWMO website, and the public invited.
 - B. VLAWMO staff will forward relevant news, events, and research to TEC and BOD members for supplementary learning when available.

Desired Result #4 Primary priority issue: #3 Target audience(s): Key personnel

2.4 Desired Results, Measurable Outcomes

Measurable Outcomes: *Measured program participation that indicates incremental accomplishment of goals. Objectives attributed to each goal are evaluated through this pool of outcomes.*

1. Adopt-a-Drain: Observe a minimum of 50 new drain adoptions, exceed 20 reported volunteer hours, maintain 20 active annual volunteers and achieve 50 lbs of debris collected and reported by adopt-a-drain volunteers.
2. Grow email subscriptions and social media following by 75 people annually.
3. Achieve 10,000 website visits annually.
4. 50 new social media followers annually.
5. 500 VLAWMO received and opened email newsletters annually.
6. 20 end-of-year annual survey results or Facebook engagements reporting independent watershed stewardship (goal 2c).
7. Successfully published articles in various newspapers, newsletters, and custom mailings. A minimum of four times annually.
8. Reach 4 classrooms (90-100 students) annually through school programs or use of VLAWMO web resources.
9. A reported increase in Tblisi education categories: Knowledge, awareness, attitude, skills, and behavior. Increases in each category as a result of VLAWMO workshop or tour survey, or annual end-of-year survey.
10. Monthly phenology posts made at each picture post, at least one new participant engaging in program annually.
11. A minimum of 50 watershed residents attending VLAWMO workshops, open houses, tours, and Blue Thumb workshops annually.
12. A minimum of 5 VLAWMO event participants from the past two years will participate in a VLAWMO cost-share or soil health grant.
13. A minimum of 5 VLAWMO cost-share participants from the past two years will also participate in education and outreach through a spotlight article or volunteering with VLAWMO.
14. A minimum of 2 Lawns to Legumes applications in the VLAWMO watershed annually.
15. At least 5 public raingardens are adopted and annually maintained by volunteers under Adopt-a-Raingarden.
2022 goals: St. Mary's and Chippewa Middle School
16. Achieve over 500 reported volunteer hours through volunteer opportunities such as leading a short-term service projects, citizen science, specific or custom volunteer roles, or utilizing a VLAWMO education display.
17. A minimum of five volunteers will act as educators to their local citizen peers annually.
18. A minimum of three volunteer efforts completed annually, at least 25 participants across all activities.
19. One or more trained AIS volunteers will report and monitor at least once on each lake in VLAWMO annually.
20. At least two schools each year will schedule and complete raingarden maintenance with or without VLAWMO assistance.
21. A minimum of one engagement annually with a resident in Lino Lakes portion of watershed.
22. TEC and BOD quorum met at each meeting.
24. If cost-share best management practices are successfully installed as a result of education and outreach efforts (workshops, events, etc.), VLAWMO will report these as supplementary measurable outcomes.

Barriers: *What challenges will be faced when pursuing the goals?*

1. Many watershed features in VLAWMO (lakes, wetlands) are difficult to access and are also generally out of sight to the public. This creates difficulty in building personal interaction and appreciation with local natural resources. Finding ways to foster local, place-based appreciation of water resources (lakes, wetlands, etc.) is an important strategy for inspiring behavior change and watershed stewardship (water friendly yard care, etc.).
2. Maintaining a variety of activities that appeal to a wide range of communities on a limited budget. With a wide range of age groups, political affiliations, and professions in the watershed, VLAWMO is unable to focus on one particular group.
3. Competing for attention and focus from the public. To get educational messages across in newspapers, social media, or email, they must compete with many more news stories, email distributions, advertisements, and social functions. This inundation of information has the potential to turn community members off to watershed education and messages.
4. A trend of disassociation to place and water resources. Having many causes, priorities, and interests active in the watershed allows for many different focuses. A particular niche may or may not require attention to the local environment or water resources to function. This creates space for an assumption that water resources are irrelevant to some, and the responsibility of others. As a watershed organization, VLAWMO focuses on the interconnectivity of water resources, recognizing that everyone who lives or works in the watershed impacts water resources. A challenge VLAWMO faces is to assist in making this interconnectivity visible, relevant, and accessible to all interests and priorities.
5. Perceived complexity, intimidation, or conflict concerning water management. The notion of not being an expert may inhibit some from pursuing actions or policies that strive to improve water quality. Education focused on new behaviors regarding land use and watershed connectivity may also reveal differences in attitudes, norms, and priorities. Gridlock, conflict, or disengagement may occur when these differences require cultural, political, or social reflection within the discussion. Such reflection demands a degree of voluntary personal interest and a receptiveness to difference, which can vary. Potential reflective topics include land use and water use, climate change, private property ethics, or yard care routines.

TARGET AUDIENCES & STAKEHOLDERS

3.1

Target audience and stakeholder identification

Table 4: Target audiences

Target Audiences/Stakeholders	
Public ¹	Lake associations
Schools	Home owner associations
Community groups ²	Volunteers ³
Businesses	Developers
Churches/religious groups	Regional sub-watershed or lakeshore homeowners
MS4 Partners (9): City of North Oaks, City of Lino Lakes, City of Vadnais Heights, City of White Bear Lake, White Bear Township, City of Gem Lake, White Bear Township, Ramsey County, Anoka County, MNDOT	

Table 5: Stakeholders

Partners			
Saint Paul Regional Water Service (SPRWS)	MN Department of Natural Resources (DNR)	Conservation MN, Blue Thumb, H ₂ O for Life	City of Gem Lake
Ramsey Soil and Water Conservation Division, Ramsey County, Tamarack Nature Center	Freshwater Society	Washington Conservation District (East Metro Water Resource Education Program)	City of North Oaks
Anoka Conservation District, Anoka County	Watershed Partners/ Hamline University, Adopt-a-Drain.org	Other metro area Watershed Districts and Water Management Organizations	City of Lino Lakes
Board of Soil and Water Resources (BWSR)	U.S. Army Corps of Engineers, MN Department of Agriculture	Metro Watershed Partners, adopt-a-drain.org, Master Water Stewards	City of Vadnais Heights
Minnesota Pollution Control Agency (MPCA), Sharing Environmental Education and Knowledge (SEEK)	Ramsey County Geographic Information Systems User Group (RCGISUG)	Birch Lake Improvement District (BLID), North Oaks Home Owner's Association (NOHOA), John Mitchell Assc.	City of White Bear Lake
Minnesota Erosion Control Association (MECA)	Northland NEMO (Nonpoint Education for Municipal Officials)	Key personnel (Board, technical commission, and policy committee)	White Bear Township

Table 6: Target audience/ stakeholder overlap

Partner/Stakeholder overlap		
Homeowner associations	Cities and Townships	Community groups
Lake associations		Key personnel ⁴
Volunteers ³		Schools

1– Public is divided into four target audiences based on their interests and roles: events, workshops, families, and at large

2– Community groups are entities with any sort of organizational structure: Scouts, Lions, Rotary, performing arts groups, local organizations, etc.

3– Volunteers working with VLAWMO are referred to as WAV: the Watershed Action Volunteers

TARGET AUDIENCES & STAKEHOLDERS

3.2

Table 7: A summary of the results from the *community for clean water survey*, which can be found in the appendices section.

Table 8: For planning purposes, VLAWMO organizes the public into four groups based on their place and role in the community. Organizing the public in this way allows for VLAWMO to provide flexible outreach that is equipped to meet the level of engagement most likely to be found in that group. See the *Terms & Acronyms* section under *outreach terms* for audience definitions.

Table 7: Organization of public audiences

Public groups	At-large	Events	Families	Workshops
Audience description	Latent audience. For broad outreach measures such as newspaper articles, VLAWMO caters to members of the public who are unaware of watershed issues, problems, or watershed literacy. Messaging is most likely to be received if basic and approachable to all.	Latent, active, and aware audiences. Public events bring all three types of audiences, as individuals from any opinion or awareness can openly approach VLAWMO.	Aware audience. Families are made aware of watershed literacy and behaviors through the formal education sub-program.	Active audience. Workshop attendees have individually chosen to act on an existing awareness of watershed issues, and are therefore seeking watershed behaviors.

Table 8: Community for Clean Water Survey results

Target Audience	Why does water matter to this audience?	How familiar with local water does this audience claim to be?	What barrier does this audience list as preventing them from engaging in water issues?	What water-related issue does this audience indicate as most important?
Public	Clean drinking water, future generations, scenery	Average	Time constraints, not enough experience	Water pollution
Schools	Future generations, clean drinking water, recreation	Above average	Time constraints, other priorities	Water supply (quantity)
Community groups	Future generations	Average	Other priorities, time constraints	Water supply (quantity)
Businesses	Clean drinking water	Maybe a little	Not enough experience	Water pollution
Churches/religious groups	Clean drinking water, future generations	Average	Not enough experience, time constraints	Water supply
Lake associations	Future generations	Above average	Time constraints, not enough experience, don't see the purpose	Water supply, (quantity), water pollution
Home owner associations	Scenery, future generations	Average	Not enough experience, time constraints, other priorities	Water supply (quantity), water pollution, wetland habitat, wetland conservation
Volunteers (WAV)	Scenery, clean drinking water, gardening/lawn care, animals, recreation, plants, and future generations	Above average	Time constraints	Water supply (quantity), water pollution
Cities and municipalities	Scenery, clean drinking water, future generations.	Above average	Time constraints	Water pollution
Key personnel	Scenery, clean drinking water, future generations	Above average	Time constraints	Water pollution, wetland conservation

TARGET AUDIENCES & STAKEHOLDERS

3.2

Table 9: Target Audience and Partner Planning

Target Audience	What knowledge and awareness will VLAWMO strive for with this audience?	What behavior is VLAWMO asking for from this audience?	Methods and tools used: How will VLAWMO engage them?	Subprogram & Most Applicable Goal(s)
Public	The physical definition of a watershed, aware of water as a finite resource. Has heard of VLAWMO and could name something VLAWMO does.	Watershed behaviors such as water-friendly yard maintenance, initiative to engage in VLAWMO's cost-share programs. Can name one thing a watershed does, and engages social media, website, or news articles.	Events, branding, media, print materials, citizen science, WAV, website, displays, citizen science	Informal ed. 1, 2
Schools	Children: awareness that they can make a positive impact on water, know of ways to enjoy water. Adults: connected to schools to know the resources available to them through student work.	Children: Demonstrate water knowledge to groups, families Adult : Seek or participate in workshops on water	School planning, school visits, cost-share promotion, Community Blue, curriculum	Formal ed. 6
Community groups	Is familiar with VLAWMO's mission and programs. Knows what a watershed is and their watershed address.	Service project activities, events, and projects that promote water quality awareness. Help VLAWMO spread the word on water conservation.	Community Blue, stakeholder networking, watershed tours, media, fieldwork	Informal ed. 3, 5
Businesses	Developers understand when and where to seek regulation guidance (WCA, etc.) Is aware of VLAWMO and other watershed districts as well as what they do.	Knows their watershed address and could name what a watershed does. Knows and seeks partnership potential.	Community blue, cost-share promotion, media, WAV	Informal ed. 2, 3
Churches/religious groups	Is aware of mission overlap in terms of stewardship of the earth.	Is practicing water conservation measures and promotes stewardship through site BMP's and/or education efforts.	Community Blue, cost-share promotion, WAV, fieldwork	Informal ed. 2, 3, 7
Lake associations	An exceptional understanding of water resources, lake ecosystems, drainage area, and watersheds. Sense of responsibility in lake stewardship extends to the whole watershed.	To be leaders in water resource protection, advocating native shorelines and sound landscaping to benefit their lake and watershed health.	Citizen science, media, stakeholder networking	Informal ed. 3, 5, 7
Home owner associations	An understanding of how a watershed works, which watershed they're in, and how we affect our water resources.	Practicing water conservation measures, demonstrates appropriate BMP's for area, and assists with disperses education materials.	Citizen science, media, stakeholder networking	Informal ed. 3, 5, 7
Volunteers (WAV)	Exceptional understanding of watershed processes as well as current needs. Exceptional knowledge of VLAWMO's processes and current work.	Proactively advocate for VLAWMO and our work. Engage with all other target audiences to support VLAWMO programs, feeling engaged as well as valued. Communicate with VLAWMO.	Internal planning, workshops, events, supplies	Informal ed. 4
Cities and municipalities	Aware of Water Plan, Policy, and EOP Knows what a watershed is and does.	Will meet periodically to discuss partnership plans. Looks to VLAWMO for MS4 help Will be consistent with water policy	Internal planning, watershed tours, workshops, media	Prof. support 1
Key personnel	Staff: Expert level understanding of watersheds and VLAWMO's work. BOD/TEC: Solid understanding of what a watershed is from both a hydrologic and regulatory perspective. Basic understanding of VLAWMO programs and projects.	Staff: Operations and support for all projects and programs with increased knowledge base and expanding partnerships. BOD/TEC: Engagement in training and outreach efforts; continued effort to increase watershed understanding.	Internal planning, watershed tours, website	Prof. support 8

TARGET AUDIENCES & STAKEHOLDERS

3.3

Table 9: Target Audience and Partner Planning

Stakeholder Category	Stakeholder entities	What specialties does this group of entities have?	How does this group relate to VLAWMO's mission?	How will VLAWMO work with this group?
State and National	MN Board of Soil and Water Resources, Minnesota Erosion Control Association (MECA), MN Department of Transportation (MNDOT), MN Department of Natural Resources (DNR), MN Department of Agriculture, U.S. Army Corps of Engineers, MN Pollution Control Agency (MPCA)	Permitting, water plan technicalities, watershed planning guidance, construction and development regulations. Knowledge of state-level operations, policies, and processes. Provides training and interprets legislative mandates.	Provides technical essentials for enhancing and protecting water.	Board meetings, custom meetings, official notices, email, phone
County	Ramsey Soil and Water, Ramsey County, Anoka County, Anoka Conservation District, Tamarack Nature Center, Ramsey County Geographic Information Systems User Group (RCGISUG), Washington Conservation District, East Metro Water Resource Education Program	Knowledge of county operations and processes, an existing structure of workshops, networking and training meetings, and resources pertaining to watersheds. Partnership opportunities.	Provides a network of groups that reflect VLAWMO's mission, expands VLAWMO's knowledge and resource pool to keep current on the watershed field. Provides professional consultation and technical support.	Attendance of workshops and planning meetings, input and assistance in planning workshops, custom meetings, email, phone
Nonprofits & Academic	Metro Watershed Partners/Hamline University, Adopt-a-Drain.org, Freshwater Society, Blue Thumb, Conservation Minnesota, Northland NEMO, H ₂ O for Life	Civic engagement, resources in education, programming, and state environmental issues.	Provides programs to reach out to the public to protect and enhance environmental quality. Resources and tools for public engagement.	Creative partnerships where missions align, workshops, sharing of advocacy materials and resources. Email, phone
Local	Schools, City of Gem Lake, City of North Oaks, City of Lino Lakes, City of Vadnais Heights, City of White Bear Lake, White Bear Township, Rice Creek and Ramsey Washington Metro Watershed Districts.	Community networks, media resources and outlets, knowledge of local watershed issues, conflicts, and assets.	Strives to protect water quality, solve local issues, and disperse corresponding knowledge and information to the public.	Newsletters, social media, trainings, custom meetings, email, phone
Internal	Key Personnel	Knowledge and support of VLAWMO, connection to various communities. Trainings.	Members of the local community that directly support and guide VLAWMO.	Board and TEC meetings, email, phone
Public	Homeowner associations, Lake associations, Volunteers (WAV), community groups	Close connection and understanding to community ideas, values, and preferences. On-the-ground results, potential for action.	Seeking improvement of quality of life and the strengthening of community networks.	Training workshops, custom meetings, social media, email blasts

Prioritizing the work load

Three strategy levels organize the goals and objectives into a balanced work load. Various strategy levels tend to utilize similar methods and tools,

Table 10: Strategy levels

High priority strategies

High priority strategies that receive primary focus in content creation, planning, and implementation.

Goals: Capital Improvement Campaigns, Goal 1

Methods & Tools: Internal planning, stakeholder engagement, content development such as mailings, VLAWMO website, media, and presentations.

Intermediate priority strategies

A segue between long and short term results, requiring intentional planning yet produces tangible results.

Goals: 2, 3, 4, 5

Methods & Tools: Community Blue, annual watershed awards, cost-share promotion, Watershed Action Volunteers (WAV/CAC), Minnesota Water Stewards (MWS), branding, workshops/workshop partnerships, tours.

Low Strategies

Quickly accessible, short-term oriented, and self-perpetuating resources. Participation shifts to public participation and volunteers as the active agents.

Goals: 6, 7, 8

Methods & Tools: Short-term WAV events (stormdrain clean-up, invasive species control, Adopt-a-Drain, Adopt-a-Raingarden), school support, education supplies, citizen science and service, nature awareness.



STRATEGY LEVELS

4.0

Three strategy levels organize the goals and objectives into a balanced and self-perpetuating education program.

High strategies

Capital improvement campaigns: Communications, branding, meetings, documentation, and planning. Creating and updating the Comprehensive Water Plan, articles, annual reports, water monitoring reports, Water Policy, or Education and Outreach Plan.

Stakeholder engagement: Sharing resources and accruing knowledge through ongoing correspondence with stakeholders. Education, mailings, website maintenance, content/video creation, surveys, and webinars.

Intermediate strategies

Community Blue: A grant program focused on small-scale native plantings, community service initiatives, and citizen engagement. Emphasis on education, collaboration, innovation, and interactions between citizens and local water resources.

Watershed Action Volunteers (WAV): The recruitment and fostering of an active volunteer group. Formal volunteer positions are designed and filled annually, primarily driven by participation in the Minnesota Water Stewards program (MWS). Inclusion of Citizen Advisory Committee (CAC).

Cost-share promotion: The promotion of existing cost-share programs.

Tours: Live, on-site watershed demonstrations and interpretation throughout the watershed.

Annual Watershed Awards: Peer-nominated acknowledgement of watershed leadership.

Workshops: Formal instruction and training on watershed topics such as raingardens, shoreline restoration, wetlands, or citizen science.

MINNESOTA WATER STEWARDS
Community Leadership for Clean Water

Low strategies

Media: Physical or digital (social media, website) messaging and promotion of VLAWMO.

School planning and visits: Planning and supporting schools in watershed education through raingarden assistance, online watershed resources, class visits.

Events: Booth set-up, educational event (videos, ice cream social, etc.) or open house that occurs in the watershed or targeting watershed constituents.

Short-term volunteer: Adopt-a-Drain, Adopt-a-Raingarden programs and promotion. More at adopt-a-drain.org

Supplies: Education materials and displays for rent allow the general public to be empowered to participate in watershed improvement and leadership.

Nature awareness: The public at large being aware of watershed natural resources. Remote cameras, original staff wildlife and wetlands articles, and phenology picture posts. Non-volunteer public interact with and learn from the content generated from these efforts, each effort contains opportunities and invitations on how to be more involved in supporting the watershed.

Citizen science and service: Volunteers, community groups, or school groups gathering ecological data in the watershed or conducting service projects. Service projects include trash pick-up or raingarden/BMP maintenance. The citizen science program includes LeafPack macroinvertebrate monitoring, Aquatic Invasive Species (AIS) monitoring, and phenology picture posts. Descriptions of these projects are available at: leafpacknetwork.org picturepost.unh.edu.



Outreach Methods and Tools

Strategies are supported and made tangible by outreach methods and tools. In the implementation of the EOP, VLAWMO staff may utilize any of the outreach methods and tools to carry out any of the strategies as needed.

Table 11: From Strategies to Outreach Methods and Tools



Outreach Methods

Meeting notes/agendas: Summaries of the decision-making and dialogue that occurs in VLAWMO TEC and BOD meetings.

Face-to-face: Any in-person communication.

Phone: Incoming and outgoing calls.

Email & mass email: Individual email as well as newsletters and special announcements through mass mailing lists using MailChimp.

Website: Blog, news, calendar, reports, and relevant information to be posted and updated on www.vlawmo.org.

Social media: Facebook, Twitter, and blog usage. See Appendix B—social media policy. Used for process-building, distinguished from multimedia.

Events and Workshops: Community events coordinated by VLAWMO, cities in VLAWMO, or partnering groups, workshops led or hosted by VLAWMO.

Outreach Tools

Reports/summaries: Annual reports and spotlight summaries of certain VLAWMO programs.

Print materials: Educational and promotional prints.

Curriculum: Lesson plans, materials, and resources focused on the VLAWMO watershed.

Branding: Giveaways, signage, or promotional items. Hats, shirts, pens, brochures, and infographics.

Workshops: Formal teach-ins instructing about raingardens, yard care, or similar BMP's.

Fieldwork: Volunteer projects, class visits, tours, adopt-a-drain, adopt-a-raingarden, other events.

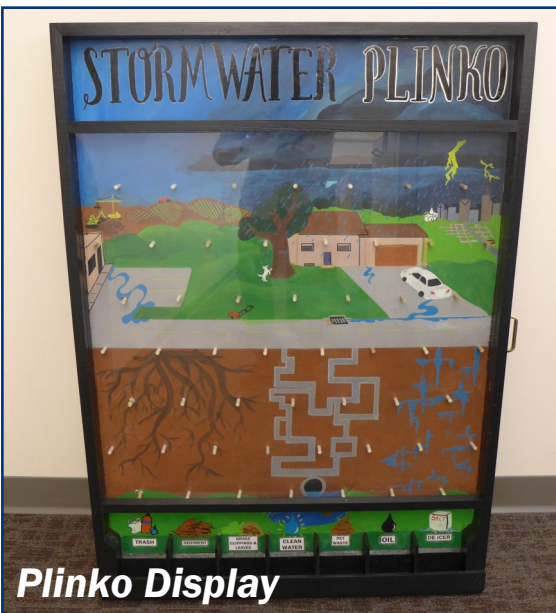
Multimedia: Non-internet newspaper/newsletter articles, videos, and photos (TV, presentations, etc.).

Displays: Tools for visual or auditory representation during community events.

Supplies: Materials for rent to foster education and volunteer engagement (see page 33).

Outreach Tools: Supplies

VLAWMO has a variety of tools, displays, and materials that are available to the public. Watershed Action Volunteers help present them to the community in various social circles and organizations, but materials are also available to all. The supplies help support short-term volunteering and work well for scouts, students, and congregations in completing service hours. Posted at vlawmo.org/get-involved.



How goals and their underlying objectives brought about the EOP desired outcomes

Table 12: Evaluation of how goals bring about the desired outcomes

		EOP Desired Outcome					
		1	2	3	4	5	6
Goals	1						
	2		Appropriate objective measurable listed here.				
	3						
	4						
	5						
	6						
	7						
	8						
	9						

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APPENDIX B: SURVEYS CONDUCTED

Research Description: Annual Public Survey

2019 VLAWMO Review

Each year VLAWMO evaluates its education and outreach effort in hopes to improve it for better outreach in the future. Your feedback is **greatly** appreciated and will allow us to work **together** to build fun, relevant, and effective ways to protect our **water**.



Vadnais Lake Area Water Management Organization
800 East County Road E
Vadnais Heights, MN 55127

(651) 204-6070

1. Where did you see VLAWMO in 2019?

(circle any/all)

None Facebook Local newspaper Email Newsletter
Twitter Instagram City council meeting/agenda
Snail mail Neighborhood newsletter Event booth
VLAWMO website

Other: _____

2. What VLAWMO initiatives were you aware of in 2019?

(circle any/all)

Adopt-a-Drain Swans & lead Lake studies
Whitaker Treatment Wetlands Wildlife Remote Cameras
Goose Lake efforts Water monitoring
Remote water monitoring on Lambert Creek Tours
Raingarden maintenance Workshops/presentations
Project construction (raingarden/native plants/shoreline restoration)

3. Did your selection in #3 change any of the following?

(circle any/all)

Knowledge about local water:	1	2	3	4	5
Awareness of local water issues:	1	2	3	4	5
Attitude towards lakes/wetlands:	1	2	3	4	5
Behavior/habits around water:	1	2	3	4	5

4. What VLAWMO initiatives do you think are most important for water resources? (circle three MAX)

Adopt-a-Drain Swans & lead Lake studies
Whitaker Treatment Wetlands Buckthorn removal
Wildlife Remote Cameras Goose Lake efforts
Water monitoring Remote water monitoring Raingarden maintenance Workshops/presentations
Project construction (raingarden/native plants/shoreline restoration)

Other: _____

5. What's your impression of VLAWMO's 2019 education materials? (circle any/all) Review at survey booth or with online survey link at VLAWMO.org/news

Just right Too much jargon Confusing
Too long/too many words Compelling Interestin

Other: _____

6. What inspires you to take action? (circle two MAX)

Understanding the problem Something urgent
Facts A clear result Improving the environment
Something affects you personally Seeing others participate

7. How familiar are you with local water?

Issues/topics/quality (circle one)

Not at all Maybe a little Average Above average Expert
1 2 3 4 5

8. What would you like to see in 2020? (circle any/all)

Projects Volunteer opportunities Information

other: _____

9. Hypothetically, what are you willing to do for the watershed in 2020? (circle any/all)

Improve lawn care practices Volunteer Adopt-a-Drain
Learn more and be engaged with my City/Township

other: _____

10. Which of these is most important to you?

(select ONE)

water quantity (too little/too much) water pollution
 wildlife habitat wetland conservation pollinators
 stormwater runoff

other: _____

Thank you for taking our survey! To be eligible for winning a free rainbarrel, please leave your name, email, and address below. Must live or work within VLAWMO's watershed boundary to be eligible to win.

Name: _____

Address (home/work): _____

Email: _____

Sign me up to receive seasonal updates and info on VLAWMO.

APPENDIX B: SURVEYS CONDUCTED

Research Description:

VLAWMO Educator Survey

As VLAWMO enters a new 10-year plan (2017-2026), we at VLAWMO are excited to form new partnerships and programs with **local educators**.

Your feedback will greatly help us in designing relevant, engaging, and useful programming for students.



Vadnais Lake Area Water Management Organization
800 East County Road E
Vadnais Heights, MN 55127
(651) 204-6070
www.vlawmo.org

1. What grade level(s) do you work with?

(circle any/all)

Pre-K K 1 2 3 4
5 6 7 8

2. What water/nature topics will you cover in class this year?

(circle any/all)

Stormwater Pollinators Watersheds
The water cycle Plants The food chain

Other: _____

3. In your experience, which STEM standards could use additional curriculum development? If STEM doesn't apply to you, which subjects?

(circle any/all)

Natural Systems Scientists Earth Materials Life Cycles
Practice of Science Practice of Engineering Interdependence
Structure & Function Systems Inquiry Society's Influence

4. In your experience, which STEM standards are easy to target through partnerships and guest visits?

(circle any/all)

Natural Systems Scientists Earth Materials Life Cycles
Practice of Science Practice of Engineering Interdependence
Structure & Function Systems Inquiry Society's Influence

Other: _____

None

5. What water-focused curriculum have you utilized in the past?

(circle any/all)

Project Wet H₂O for Life MinnAqua

Other: _____

None

6. Concerning take-home assignments that accompany a class visit, which option is most appealing?

(check one)

- Graded preparation before a class visit
- Participatory preparation before a class visit
- Graded homework for after a class visit
- Participatory homework for after a class visit
- I'm flexible towards any take-home assignment strategy

7. Outside of STEM, which arts/humanities subjects would you infuse with local water topics?

(circle any)

Communication/conciliation Multi-cultural studies
Theater Paint/drawing Creative writing
Physical education Other: _____

8. If your school has a stormwater feature such as a raingarden, what is your perspective on its maintenance?

(circle one)

N/A

Excellent Could use some maintenance
Could use considerable maintenance Neglected

9. What barriers might prevent you from covering watershed topics in your class?

(circle any/all)

Time constraints Lack of materials Lack of expertise
A focus on state testing Other subjects take priority

Other: _____

10. What barriers would prevent you from partnering with external organizations such as VLAWMO?

(circle any/all)

Other subjects take priority A focus on state testing
Difficulty in planning A need to know more about the org.

Other: _____

11. VLAWMO would like to support watershed education in your area. Are there additional events or functions at your school that VLAWMO could partner with (science fairs, open houses, etc.)?

(list name and date)

Thank you

for taking our survey! Please leave your name and position to assist our analysis. To be involved in our curriculum planning, please leave your contact information.

Name: _____

Position & School: _____

Email: _____

Phone: _____

- Please send me updates on planning meetings, curriculum review, and pilot programs

APPENDIX B: SURVEYS CONDUCTED

Research Description:

Municipal Stormwater (MS4) Support

As VLAWMO enters a new 10-year plan (2017-2026), we at VLAWMO are excited to offer support and resources for local MS4 permitting.

Your feedback will greatly help us in designing relevant, engaging, and useful programming for local municipalities and MS4 holders.



Vadnais Lake Area Water Management Organization
800 East County Road E
Vadnais Heights, MN 55127
(651) 204-6070
www.vlawmo.org

1. How often do you focus on stormwater in your regular workload? (circle one)

Daily Weekly Monthly
A few times each year

2. How often does your department conduct formal training in stormwater permit regulations?

(circle one)
Daily Weekly Monthly
A few times each year

3. Which education method(s) work best for you? (circle any)

Brochures Training and demonstration videos
Articles Demonstration photos
Single-event workshops Workshop series
Attending meetings with qualified professionals

Other: _____

4. Which regulation activities do you need assistance with? (check any)

- Public education and outreach
- Public participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post construction stormwater management
- Pollution prevention and housekeeping in municipal operations

5. Which of the following are beneficial to improving your MS4 reporting?

- (check any)
- Staff maintenance best practices
 - Machinery and operations best practices
 - Updates on the latest technology
 - Updates on state policies
 - Public engagement best practices

Other: _____

6. What is your opinion on the maintenance of your agency's stormwater infrastructure?

(circle any)
Excellent Could use some maintenance
Could use considerable maintenance
Neglected

7. What barriers prevent you from engaging in MS4 improvements? (circle any)

Other needs take priority Funding
Difficulty in planning
Not sure of a direction to take

Other: _____

8. In the past year, what MS4 initiatives have you taken? (list)

9. What resources have you utilized for MS4 information, assistance, or examples? (list)

10. As your WMO, how can we help you? (list)

Thank you for taking our survey! Please leave your name, position, and department to assist our analysis.

Name: _____

Position: _____

Department: _____

Email: _____

APPENDIX C: SOCIAL MEDIA POLICY

Social Media Policy



800 East county Rd E
Vadnais Heights, MN 55127
Vlawmo.org
(651) 204-6070

Approved by: VLAWMO Board of Directors

Date: June 22, 2016

APPENDIX C: SOCIAL MEDIA POLICY

I. Background

To support its mission, Vadnais Lake Area Watershed Management Organization (hereby referred to as “VLAWMO”) speaks with individuals through many outlets, such as direct contact with landowners, public meetings, events, displays, the website, email, and workshops. To maintain steady relevant communications, VLAWMO sees social media as a tool to help residents and partners be more informed and more effectively communicate.

Social media has been an effective tool for many institutions to increase communication with people who are unlikely to attend a meeting, such as youth who partake in sports or residents who travel frequently. Additionally, social media can be a useful tool for receiving community feedback. It is from this premise that VLAWMO will engage in strategic social media efforts.

The social media platforms VLAWMO chooses to partake in are Facebook, Twitter, YouTube, and a blog through the VLAWMO.org website. The use of additional platforms must have the permission of the VLAWMO administrator.

II. Goals

- Provide relevant informational content concerning watershed operations
- Increase awareness on water issues
- Reach those who don't come to public meetings
- Inform the public about VLAWMO projects, programs, and events
- Establish and maintain relationships with residents and volunteers
- Receive community feedback
- Obtain insight into community values, opinions, and demographics to better inform VLAWMO outreach content.

III. Regulations

Transparency:

When posting as VLAWMO: Staff will hold the responsibility to positively convey VLAWMO's best interests to the public (e.g. “At VLAWMO, we usually say...” or “According to VLAWMO's goals and water plan, the position we take is...”)

When posting as an individual: VLAWMO staff, TEC, and board must identify their connection to VLAWMO when posting or commenting on any social media page. Staff will also distinguish personal viewpoints from VLAWMO when commenting as an individual (e.g. “In my personal view...”). This protects VLAWMO reputation as well as instills a sense of delineation and respect for public processes into content.

Copyright:

Respect the copyright of other individuals and organizations, citing the original sources of any content created by others.

Confidentiality:

Employees may not share the organization's confidential information, such as unreleased details of current and future projects. Please consult the administrator if unsure whether information you wish to discuss online is confidential.

All VLAWMO staff will adhere to Minnesota State Statute 626.556 - Reporting of Maltreatment of Minors.

Financial information:

Staff may not discuss matters relating to the organization's finances – including grants applied for or received, donations or donor identity, fund balances and funding shortfalls- without prior approval from the administrator. Commenting on financial information already released to the public by VLAWMO is acceptable.

APPENDIX C: SOCIAL MEDIA POLICY

Data:

All data stored through social media platforms is public and will be consistent with the VLAWMO Data Practices Policy. The VLAWMO Data Practices Policy complies with the requirements of the Minnesota Data Practices Act: Minnesota Statutes Sections 13.025, 13.03, subdivision 2 and 13.05 subdivisions 5 and 8.

Comments and posts that fail to follow these regulations may damage VLAWMO's standing in the community and ability to accomplish its mission and goals. Violations of the social media regulations will be treated on a case-by-case basis by the administrator and board. Consequences may include verbal or written reprimands, negative performance reviews and reassignment from duties dealing with the public. Extreme abuse of the policy rendering an employee "unfit for further service" under the legal guidelines established by the National Labor Relations Act may result in an employee's dismissal.

IV. Policy measures

1. Assign a staff person(s) to moderate content.
 - i. Ensure appropriateness
 - ii. Encourage positive questions and responses
2. Manage updating of multiple social media sites in a time-effective manner.

Staff will share responsibility for posting on social media a minimum of twice/week. The education and outreach coordinator will maintain the website and a social media schedule, which contains the posting times and staff responsibility allocation for various posts and their social media platforms.
3. Select content for posting based on relevancy to VLAWMO priority issues:
 - i. Threatened and Impaired natural and surface water resources
 - ii. Threatened or Impaired Groundwater
 - iii. Need for education and involvement from citizens and stakeholders
 - iv. Need for adequate data, as well as analytic, financial and administrative capacity to accomplish goals and strategies
 - v. Invasive and exotic species infestation
 - vi. Localized flooding
4. Utilize the Education Outreach plan's desired outcomes as a supportive guide for selecting social media content and phrasing language:
 - i. Document water quality improvements such as reduced phosphorous
 - ii. Have a citizenry that's knowledgeable and aware of responsible natural resource use
 - iii. Witness citizens demonstrating watershed protection behaviors
 - iv. Witness trained volunteers educating citizens
 - v. Confirm that MS4 partners are collaborating, using resources, and meeting state requirements to the best of their ability.
 - vi. Readily harness existing partnerships that expand reach, cultivate citizen science, enhance education, and defray costs.
 - vii. Have strong capital improvement projects through complimentary education and interpretation
 - viii. Witness proof of clear, effective communication amongst internal staff, TECH, board, partnering organizations, state and county entities, and the public

APPENDIX C: SOCIAL MEDIA POLICY

Policy measures continued

5. Refer to the VLAWMO comprehensive water plan theme “why water matters” whenever possible. For example, “Another reason why water matters...”.
6. The North American Association for Environmental Education defines environmental education in terms of the 1977 Tbilisi definition: “*EE is a learning process that increases people’s knowledge and awareness about the environment and its associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action.*” Postings should be mindful of maintaining a balance between knowledge, awareness, skills, attitudes, and actions.
7. Monitor and evaluate the effectiveness of social media use according to the evaluation protocol described in the VLAWMO Education Outreach plan.
 - i. Record measurables such as likes, retweets, comments, and link clicks. Compare how these measurables correspond to various topics, events, and seasons.

V. Resources

To assist efficient content generation and to keep consistent weekly postings, additional resources can be sought from the following trusted sources:

- Blue Thumb
- Metro Blooms
- Freshwater Society
- Metro Watershed Partners
- East Metro Water
- Friends of the Mississippi River
- Great River Greening
- Star Tribune, Pioneer Press
- Minnesota Association of Watershed Partners
- Minnesota Landscape Arboretum
- Minnesota Pollution Control Agency (MPCA)
- Minnesota Board of Water & Soil Resources (BWSR)
- Minnesota Department of Natural Resources (DNR)
- US Environmental Protection Agency (EPA)
- Metropolitan Council

