

TECHNICAL MATTERS

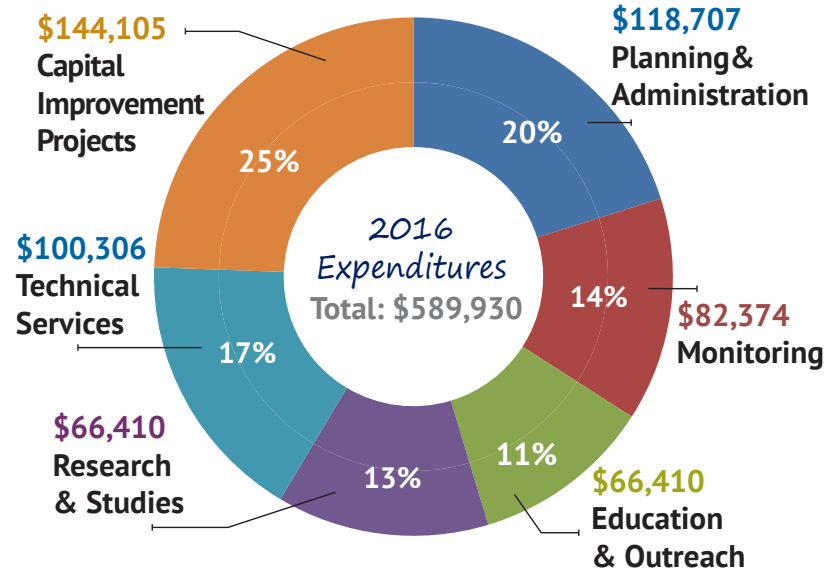
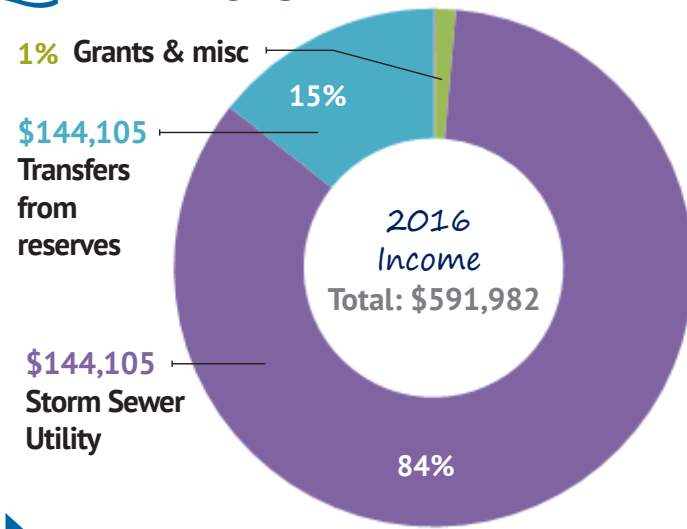
VLAWMO's primary source of income is through Storm Sewer Utility (SSU) fees. The average single family homeowner in VLAWMO pays \$28.92/year (\$2.41/month) to support all of the projects and programs conducted by the watershed.

Additional funding comes from grants from the Minnesota Board of Water and Soil Resources (BWSR) and the Legislative-Citizen Commission on Minnesota Resources (LCCMR).

2016 Quick Stats:



FINANCES



REGULATIONS

As a local governing unit, VLAWMO administers the Wetland Conservation Act (WCA). WCA oversees new developments as they pertain to wetland conservation: any wetlands lost to development, by law, are to be replaced either on-site or elsewhere in the state through the purchase of wetland banking credits.

The new Goodwill on Centerville Road, just south of Highway 96, is an example of partnerships and collaboration between developers, the City, the company, engineers, and VLAWMO. The 4.3 acre privately-owned site had a history of illegal dumping, posing several challenges for planning. The development impacted just under 1/2 an acre of wetland, with most of that replaced on site. The rest was purchased from the State wetland bank. Additional stormwater practices including the curb-cut retention basin (pictured right) will capture and infiltrate the rainfall of a 1.1" stormwater. This 1.1" storm comes to **12,856 gallons** of water per rainfall. The Goodwill is scheduled to open in Spring, 2017.



2016

ANNUAL REPORT SUMMARY



Established in 1983, VLAWMO is a unit of government co-created by Gem Lake, Lino Lakes, North Oaks, Vadnais Heights, White Bear Lake, and White Bear Township. Together, we use science and partnerships to improve the impacts of stormwater in the watershed.

GRANT PROGRAMS

19 Grants awarded



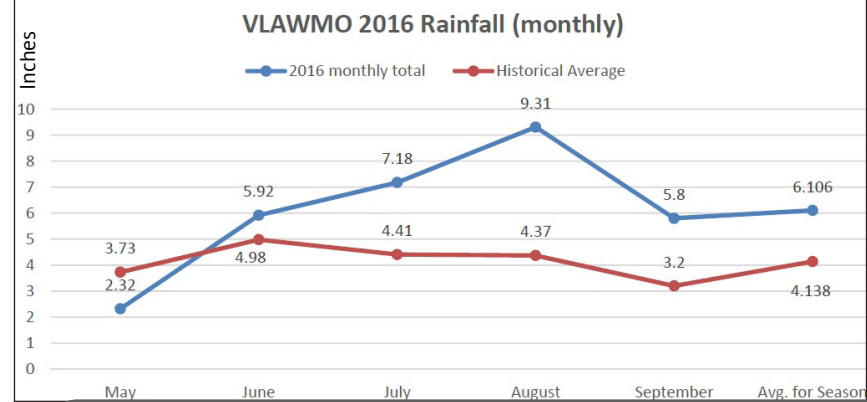
VLAWMO's grant programs fund clean water projects such as raingardens, shoreline restorations, and rainbarrels each year. The water quality benefit of this year's landscape projects was **.414 lbs** of phosphorus and **118 lbs** of sediment decreased annually. 21 rainbarrel grants were awarded in 2016. Since 2007, all 80 rainbarrels that have been installed capture and reuse up to **4,400 gallons** of stormwater each time they're filled. Much of this water would otherwise wash into stormdrains, bringing nutrients and other contaminants such as automotive oil into lakes and streams.

WATER MONITORING

13 Waterbodies monitored



Each year VLAWMO monitors 12 lakes and Lambert Creek from May to September. Data recorded includes phosphorus, chloride, pH, turbidity, and bacteria such as E. coli.



VLAWMO Lake Grades

Lake	2015	2016	TSI Status
Amelia	B	B	Eutrophic
Birch	B+	B	Mesotrophic
Black	B+	A-	Mesotrophic
Charlie	C	C	Eutrophic
Deep	C-	C	Eutrophic
Gem	B	B	Mesotrophic
Gillfillan	C+	C+	Eutrophic
E. Goose	D-	D-	Eutrophic - Hypereutrophic
W. Goose	D	D-	Eutrophic - Hypereutrophic
Tamarack	D	D	Eutrophic - Hypereutrophic
Wilkinson	D	D+	Eutrophic

Mesotrophic lakes have moderately clear water.

Eutrophic is the state of a water body that's high in nutrients, experiencing limited oxygen. Hypereutrophic intensifies these nutrients to the point of frequent algal blooms, foul odors, and fish kills.

Looking Ahead

To start the 2017-2026 Comprehensive Water Plan, VLAWMO is focusing on two water sources on the edge of the watershed boundary: East and West Goose Lake in the western watershed, and Wilkinson Lake in the northern watershed. Making advances in water quality in these places will impact other lakes downstream. Fish surveys, vegetation surveys, and bathymetry studies will better inform us of the lake ecosystems and how they can best be managed and improved.

Research treatment wetlands are scheduled for installation in Columbia Park in White Bear Township. The research will monitor the removal of bacteria, nutrients, or pathogens as well as provide stormwater treatment. The project is planned for 2018.



What can you do?

In addition to workshops, rainbarrels, and stormwater innovations such as raingardens, VLAWMO has new opportunities in adopting a stormdrain and stormdrain stenciling. Find us on social media!

Learn more at vlawmo.org



WHAT DID WE DO IN 2016?

-  Event/booth locations
-  Water monitoring sites
-  Workshops/planning sessions
-  Projects

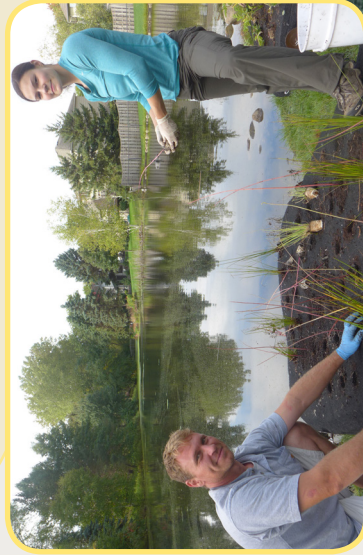
AUTOMATED STORM SAMPLING

Used to measure nutrient loading. We're investigating what's running off the landscape into lakes during a rain event.



FLOATING ISLAND WETLAND

Through a partnership between VLAWMO, the U of MN, and Midwest Floating Island, we're studying the potential floating wetlands have in cleaning storm ponds.



PURPLE LOOSESTRIFE CONTROL

A Community Blue grant allowed the Rice Lake Project Committee to implement beetles as a means to control invasive purple loosestrife in the Rice Lake wetland.



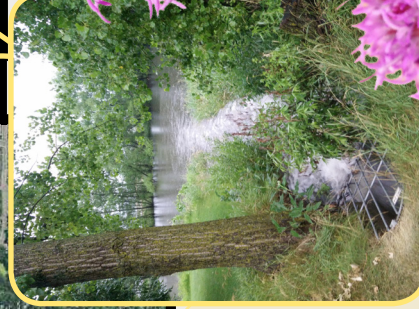
LAMBERT CREEK RESTORATION AT KOHLER ROAD

A drop structure is installed to reduce the velocity of water running off the road. Re-planting the bank with specialty grasses prevents erosion that influences water quality.



E. COLI SOURCING AT LAMBERT CREEK

As a state-listed impaired water for E. coli, we're investigating where it's coming from, and how runoff influences bacteria levels.



WHITE BEAR MONTESSORI

Two large raingardens were installed with a landscape level two grant. Together, these raingardens reduce phosphorus by .26 lbs/yr, and suspended solids by 2.68 lbs/yr.



0 1/2 1 2 Miles

Sources: MNDNR, Metropolitan Council, MNGSC, VLAWMO, ESRI

THERE'S MORE!

Read the all about the year in the complete VLAWMO Annual Report or on www.VLAWMO.org

