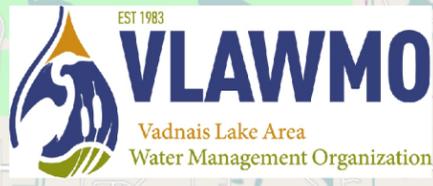
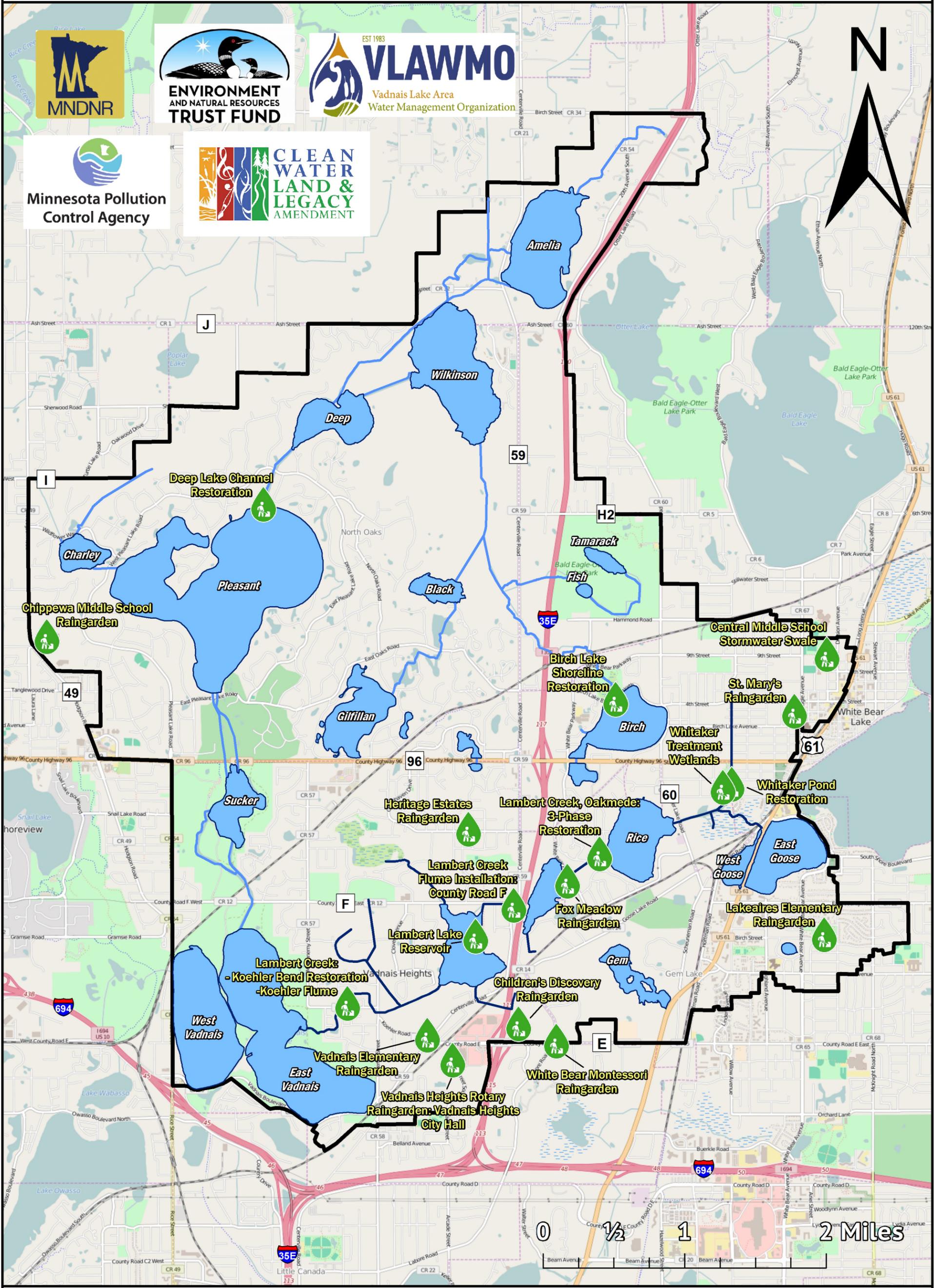


Projects in VLAWMO With State Aid Funding



Project location

VLAWMO boundary

Lambert Creek and tributaries

Streams and ditches

VLAWMO lakes

Birch Lake Shoreline Restoration, White Bear Lake, 2013 – Grant awards: \$49,393 Project cost: \$85,000

A 150 foot stretch of lakeshore on Birch Lake, in White Bear Lake was improved in the summer of 2010. In 2011-2012, an additional 700 feet of shoreline was restored on either side of the original planting area.



Central Middle School Swale Retrofit, White Bear Lake, 2012 – Grant awards: \$55,800 Project cost: \$74,400

VLAWMO secured funds from the Board of Water and Soil Resources, as well as the Ramsey Conservation District to have an infiltration swale designed and installed to capture stormwater runoff from the surrounding parking lot and school.



Deep Lake Channel Restoration, North Oaks, 2015 – Grant awards: \$17,800 Project cost: \$34,092

In September 2015, the channel outlet going from Deep Lake and into Pleasant Lake was restored with rock armoring, native plantings, and tree removal. The Restoration fixed approximately 150 feet of shoreline undercutting and the native vegetation is helping anchor surrounding soils. Ramsey Conservation District designed the Project and assisted with installation. A crew from the Conservation Corps of Minnesota performed the labor for the project, as supplied by a Minnesota



Clean Water Fund grant.

Lambert Creek Flumes, 2007-2010 – Project cost: \$93,880

With grant money secured by the Ramsey Conservation District through the Minnesota Clean Water Partnership Grant allowed VLAWMO to have three flumes installed or repaired on Lambert Creek.



The flumes were installed on Koehler Road and County Road F in Vadnais Heights, and Oakmede Lane in White Bear Township. These sites allow for safe and reliable sampling locations, as well as locations to measure streamflow and volume.

Vadnais Elementary Raingarden, Vadnais Heights, 2014 – Grant awards: \$15,000 Project cost: \$17,550

A 1,000 square foot raingarden was installed next to the playground at Vadnais Elementary School to infiltrate stormwater from the parking lot. The Project received money from the Community Blue Grant program, and includes a full day of education and planting for 375 students.



Heritage Estates Condo. Association Raingarden, Vadnais Heights, 2014 – Grant awards: \$14,500

A Community Blue grant was awarded to construct a 800 square foot raingarden to capture stormwater from the west side of Thornhill Lane. The garden captures over 62,000 cubic feet of stormwater, per year, that would otherwise flow into the storm sewer system and into surrounding water bodies.



White Bear Montessori Raingarden, Gem Lake, 2013 – Grant awards: \$17,000 Project Cost: \$19,000

In 2013, a Community Blue Grant funded a 750 square foot raingarden that captures stormwater from the entire parking lot. This was the first of several projects VLAWMO has partnered with the school to make its stormwater footprint virtually zero.



Vadnais Heights Rotary City Hall Raingarden, 2014 – Grant awards: \$16,500 Project cost: \$18,500

Partnering with the Vadnais Heights Rotary Club, a 1,050 square foot raingarden was installed to capture stormwater from the auxiliary parking lot. Thank you to the Rotary Club members that helped with the installation and maintenance.



Lambert Creek, Koehler Bend Restoration, Vadnais Heights, 2010-2011

A section of Lambert Creek, north of Koehler Road, in Vadnais Heights, was restored to prevent further streambank erosion. A Minnesota Clean Water Fund grant allowed for a MN Conservation Corps crew to perform the labor of the Project.



Lambert Lake Project, Vadnais Heights, 2005

A large holding pond was created in the Lambert Lake wetland in Vadnais Heights to more effectively distribute and filter water from Lambert Creek into the wetland, with goals of flood mitigation and increased water quality. Flooding in the area has been nearly eliminated, and the pond effectively removes suspended solids from flow upstream.



Whitaker Pond Restoration, White Bear Township, 2011

Before reconstruction, Whitaker Pond was overgrown and ill-equipped to handle and treat the volume of water that exits from the White Bear Lake stormsewer. Reconstruction added a forebay for energy dissipation to lower suspended solids, and a weir with iron filings for phosphorus reduction.



St. Mary's of the Lake Raingarden, White Bear Lake, 2011 – Grant awards: \$6,250 Project Cost: \$16,446

Partnering with the Church, this 750 SF raingarden includes a retaining wall and a pretreatment sediment basin, which collects stormwater from half of the parking lot before releasing it for infiltration in the raingarden.



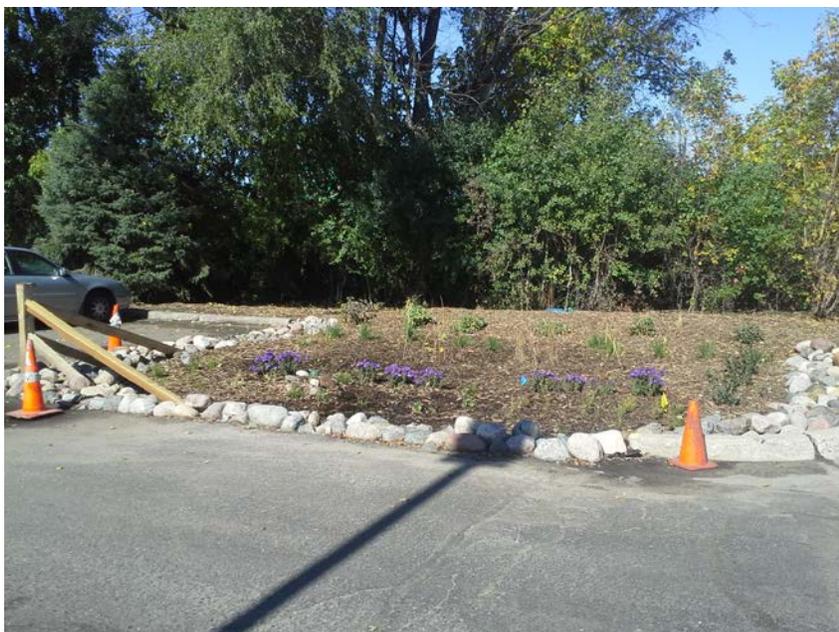
**Fox Meadow Park Raingarden, White Bear Township, 2014 – Grant awards: \$15,000
Project costs: \$18,750**

When rebuilding the Fox Meadow Park parking area, the Township provided a 700 SF raingarden in addition to the required stormwater treatment. Water flows directly into Lambert Creek in this area.



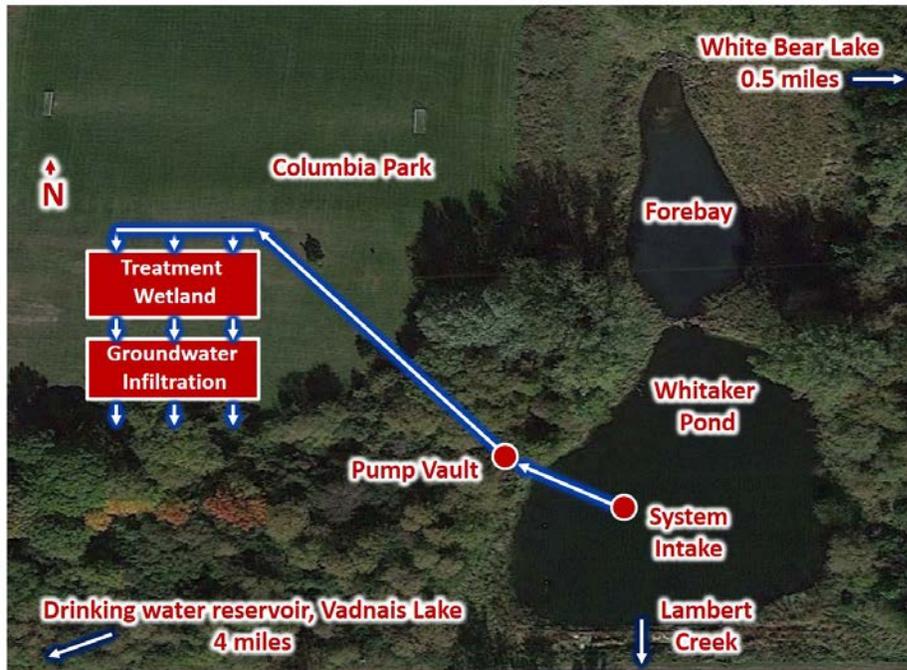
Children’s Discovery Raingarden, Vadnais Heights, 2013 – Grant awards: \$16,000 Project costs: \$18,000

This 400 SF raingarden will take stormwater from the Children’s discovery parking lot. The daycare center hopes to use this as a learning site for their children. Two parking stalls were removed.



Whitaker Pond Treatment Wetlands, White Bear Township, 2017 – Grant awards:

An LCCMR grant has been awarded to implement a wetland treatment system for the water in Whitaker Pond to treat, reduce, and infiltrate stormwater from the pond. A study, in conjunction with the University of Minnesota, will measure the results of the Project.



Lakeaires Elementary Raingarden, White Bear Lake, 2014 – Grant awards: \$19,000 Project cost: \$29,000

A 1,150 square foot raingarden was constructed with the use of Community Blue grant money. The large capacity of the raingarden does a great job of collecting and infiltrating stormwater from the connected parking lot.



**Lambert Creek, Oakmede Restoration (3 phases), White Bear Township, 2011-2013 –
Grant awards: \$67,420 Project costs: \$88,920**

This was a 3-phase project to restore and repair the streambanks of Lambert Creek at the Oakmede Lane site, before and after the creek flume. The stabilization of the Project has proven to be a success in restoration and water quality.

- **Phase 1** – Restoration north of Oakmede Lane. \$3,000 grant given by VLAWMO to White Bear Preserve Condominium Association.
- **Phase 2** – Streambank restoration south of Oakmede Lane and through the flume. Total cost of \$13,500, with a \$10,000 grant from the St. Paul Regional Water Service and the MDH.
- **Phase 3** – Streambank restoration downstream of flume- biologs, planting, and shoreline armoring. Total cost of \$72,420, with BWSR and RCD paying for \$57,420. Cost to VLAWMO: \$15,000.

