

Protecting water quality, recreation, and wildlife by helping landowners and local government manage natural resources since 1946

1318 McKay Dr. NE, Suite 300 Ham Lake, MN 55304 Ph:763-434-2030 www.AnokaSWCD.org The Anoka Conservation District (ACD) was established in 1946 through a voter led petition.

ACD's mission is to: "Conserve and enhance the natural resources of Anoka County. We do this by:

- conducting monitoring and analysis,
- informing landowners and local government in natural resource management, and
- leveraging technical and financial resources to promote natural resource stewardship practices."

As the character of Anoka County changed, so has ACD. We now offer a wide variety of programs and services in all areas of natural resource management in the county.



The ACD serves all of Anoka County's 354,000 residents spanning 284,000 acres, 72 recreational and natural environment lakes, 446 miles of streams and rivers, and a regionally critical groundwater

Per MN Stat. 103C.005 Soil and Water Conservation Policy:

Maintaining and enhancing the quality of soil and water for the environmental and economic benefits they produce, preventing degradation, and restoring degraded soil and water resources of this state contribute greatly to the health, safety, economic well-being, and general welfare of this state and its citizens. Land occupiers have the responsibility to implement practices that conserve the soil and water resources of the state. Soil and water conservation measures implemented on private lands in this state provide benefits to the general public by reducing erosion, sedimentation, siltation, water pollution, and opportunities further improve the quality of life of damages caused by floods. The soil and water conservation policy of the state is to encourage land occupiers to conserve soil, water, and the natural resources they support through the implementation of practices that:

What We Do

All Anoka Conservation District programs address one or more natural resource concerns. In order of priority they are:

Water Quality: Maintain high quality surface waters, improve impaired surface waters, and

protect drinking water



Water Quantity: Stop long-term depletion, and where possible, replenish aquifer levels, control stormwater runoff and the resultant erosion, and reduce localized flooding and related damage





Natural Habitats: Preserve and enhance ecological diversity in Anoka County and maintain ecological corridors and systems to support indigenous wildlife

Wetlands: Achieve no net loss. and where possible, improve the quality and quantity of wetlands

Soils: Maintain and enhance soil health

- control or prevent erosion, sedimentation, siltation, and related pollution in order to preserve natural resources;
- ensure continued soil productivity;
- protect water quality;
- prevent impairment of dams and reservoirs;
- reduce damages caused by floods;
- preserve wildlife;
- protect the tax base; and
- protect public lands and waters.

Working to ensure natural resources are managed to sustain benefits for current and future generations will greatly reduce long-term infrastructure maintenance costs by reducing flooding, preventing groundwater contamination, maintaining surface water quality, and preventing sedimentation of stormwater treatment infrastructure. Improved fisheries, wildlife, aesthetics and recreational Anoka County taxpayers.

resource.

Who We Are

The ACD Board of Supervisors is composed of five elected officials serving four-year terms. They determine the direction of the District and oversee its operations.

2018 Supervisors were:

- Chair Mary Jo Truchon term thru '20
- Vice Chair Jim Lindahl term thru '22
- Treasurer Glenda Meixell term thru '22
- Secretary Steve Laitinen term thru '20
- Member Sharon LeMay term thru '20

Guiding Principles

- Focus on long-term resource sustainability.
- Make informed and ethical decisions.
- Promote cost-effective and efficient resource management.
- Partner with both public and private sectors.
- Retain highly qualified, knowledgeable staff.
- Utilize technology to achieve efficiency and enhance work products.
- Keep natural resource issues visible in Anoka County.
- Respond to opportunity and changing needs.
- Develop diverse programs, partners, and funding sources.
- Utilize education and outreach in addition to technical and financial assistance to encourage natural resource stewardship.



Daily activities are attended to by staff.

2018 staff were:

- District Manager Chris Lord
- Office Administrator Kathy Berkness
- Wetland Specialist Becky Wozney
- Watershed Projects Manager Jamie Schurbon
- Water Resource Technician Jared Wagner
- Water Resource Technician Becky Hammer-Lester
- Stormwater and Shoreland Specialist Mitch Haustein
- Conservation Specialist Aaron Diehl
- Conservation Technician Carrie Taylor
- Assistant District Technician Chris Walz
- Conservation Corp MN Apprentice Jackson Miller (May-Aug)
- MN GreenCorps Member Emily Johnson (Jan-Aug)

SWCDs are non-regulatory local governments with elected boards covering 99.3% of Minnesota that provide technical and financial assistance to willing landowners to improve natural resources.

Serving the Community

Working with Local Government Entities

Natural resources valued by Anoka County residents require collaborative management by entities with varying jurisdictions within and across city, county and watershed boundaries. It is important that ACD remains continually engaged with each entity to

- avoid duplication,
- maximize efficiencies,
- capitalize on common interests.
- direct limited financial and staff resources to the most cost-effective approaches, and
- apply management strategies at a scale most appropriate to meet identified goals and objectives (e.g. multi-city lakesheds vs. multicounty aquifer recharge areas).

Working with the Public

Over 78% of Anoka County is privately owned, and over 350,000 residents call Anoka County home. Effective natural resource management requires that we actively partner with those who live, work, and play in Anoka County, whether or not they own land in the county. ACD enlists the public to assist with natural resource management by offering the following services.

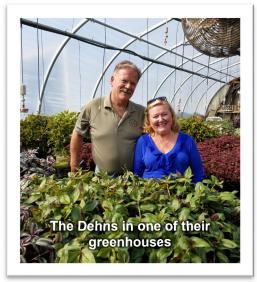
- <u>Technical assistance</u> providing project design and installation management
- <u>Financial assistance</u> securing, allocating and administering grant funding to install conservation projects
- Regulatory assistance providing guidance to help keep landowners out of regulatory harm's way with regard to several federal and state laws, and local ordinances
- Outreach and engagement providing Information resources and opportunities to assist with community efforts to improve our natural resources

Conservation News & Updates

Outstanding Conservationists - ACD selected Bonnie and Bob Dehn as the 2018 Anoka County Outstanding Conservationists. For 40 years the Dehns have operated a 100+ acre farm and greenhouses in Andover, growing produce, herbs and flowers using chemical free natural fertilizers and pest control techniques. They are also active in their community and Bonnie teaches cooking and gardening workshops.

Watershed Based Funding ACD led a process to identify
priorities and distribute \$826,000
from the Clean Water Fund
between six watershed
management entities and
twenty-one cities to address
water resource management
needs. ACD will be administering
funds for the Sunrise River
WMO, assisting the Lower Rum
River WMO with riverbank
stabilization projects, and
hosting a countywide outreach
coordinator.

Outdoor Heritage Fund - The Lessard-Sams Outdoor Heritage Council recommended a record amount of funding to the Anoka Sand Plain Partnership for ecological management and protection projects. If approved by the Legislature, ACD will receive funding to complete restoration projects in the Burman WMA and Blaine SNA. The success of this application was attributed in part to the strategic planning completed over the last 18 months.



"Thanks to you and all the staff for what you have done for us."

Dehn's Garden

Outreach and Engagement
Coordinator - Emily Johnson was hired to coordinate and implement outreach efforts across Anoka County utilizing Watershed Based Funding. While the position is hosted at ACD, Emily's activities are guided by the Water Resources Outreach Collaborative (WROC) of Anoka County.

MN GreenCorps Member Joined ACD - MPCA placed a MN GreenCorps member at ACD Sept. 2018 - Aug. 2019. With a focus on Public Outreach and Engagement, Jaron Cook assisted Emily Johnson with WROC priorities and initiated projects to increase awareness of groundwater resources, chloride pollution, and conservation planning in ecologically sensitive areas.

Programs

Monitoring and Inventory

<u>Water Monitoring</u> - In order to manage water resources for consumption, recreation, and wildlife, ACD monitors water quality and/or quantity in Anoka County lakes, streams, wetlands, and groundwater. Data summaries and analyses are presented in an annual Water Resources Almanac. Water management organizations and lake associations often contract for these services. 2018 sites included:

- 12 manual precipitation gauges
- 19 electronic reference wetland shallow wells
- 24 deep groundwater observation wells
- 12 electronic stream elevation monitoring wells
- 25 lake level gauges
- 1 continuous rain garden water level
- 13 lake water quality monitoring sites
- 24 stream water quality monitoring sites
- 4 continuous stream water quality monitoring stations
- 3 stream biomonitoring sites with area high schools



<u>AIS Inventory</u> - ACD staff completed an inventory of two aquatic invasive species on Lake George; curly-leaf pondweed and Eurasian watermilfoil to enable targeted treatments. ACD staff also monitored for new AIS in four lakes for Coon Creek Watershed District as part of their early detection program.

<u>Shoreland Condition Inventory</u> - Photo inventories were conducted of several shorelines using a camera that takes 360 degree photos. The photos are then uploaded to the internet and can be viewed by the public using Google Streetview. Lake George, Martin Lake and the Mississippi River below the Coon Rapids Dam were completed in 2018.



The public expects safe and plentiful drinking water, clean lakes and streams, good fishing and hunting, and plenty of opportunities to enjoy nature. Soil and Water Conservation Districts (SWCDs) are the only statewide government entity that works with private landowners to implement projects to meet these expectations. 78% of natural resources are on private lands, so this approach is critical.

Federal EPA 319 Grant - In partnership with Isanti and Mille Lacs SWCDs, ACD secured a federal 319 grant for water resource management in the Rum River watershed. The grant will span 16 years and provide over \$1M to complete projects.

Analyses & Plans

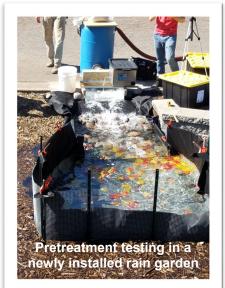
Lake George SRA - Lake
George water quality has been
declining over the last decade.
To determine the cause and fix
it, ACD secured a grant through
BWSR from the Clean Water
Fund. ACD staff completed
analysis in 2018 that identified
several potential water quality
improvement projects and
modeled their likely impact on
the lake. The full report is
available online.

Ditch 20 Feasibility - Ditch 20, which flows through wetlands, historically discharged high phosphorus into Typo Lake from Isanti County. ACD completed a feasibility analysis to determine if and how we might restore hydrology to the partially drained wetlands, thereby improving Typo Lake water quality. Alternative water quality improvement practices were also considered because drainage rights hinder projects that could restore wetland hydrology.

Linwood Lake Carp Management
- An analysis was initiated on
Linwood Lake to determine the
feasibility of improving water
quality by managing rough fish.
The process involves analyzing
population numbers and age
classes, tracking carp
movements and congregation
patterns, and conducting pilot
trapping to ascertaining box trap
efficacy on the lake.

Rain Garden Pretreatment Efficacy - In partnership with the St. Anthony Falls Laboratory, ACD staff tested the effectiveness of four common rain garden inlet pretreatment methods including two styles of Rain Guardian pretreatment chambers. The results were impressive.

Rain Guardians remove up to 60% and 90% of gross solids and sediment respectively.



Land Protection Strategies -

Properties of high ecological diversity and significance that fall within the wildlife corridors network were reviewed to determine optimal land management and protection strategies to maintain their ecological functions and values. Many factors were considered to ascertain whether fee title acquisition, conservation easements, or registries of open space design development were optimal approaches.

Anoka Conservation District Comprehensive Plan - ACD initiated our 2020-2029 Comprehensive Plan update in the fall of 2018 with a kickoff event for SWCD supervisors, county commissioners and state legislators. Throughout 2019, planning efforts will continue to lay the groundwork for actions over the coming decade to manage surface water, groundwater, ecological, and soil resources.



Campus Groundwater Conservation Planning - In partnership with SWCDs throughout the eleven-county metro, ACD led a process to develop and implement protocols to analyze large campuses for opportunities to reduce groundwater use through irrigation management and fixture maintenance and upgrades. Opportunities to increase groundwater recharge using infiltration practices were also highlighted. Each of the eleven partners initiated a campus analysis in 2018 with program completion planned by the end of 2019.

Anoka Sand Plain Partnership
Strategic Plan - ACD continued
to lead a process of developing a
strategic plan for the partnership.
The strategic plan makes the
case for investment in the Anoka
Sand Plain for drinking water,
ecology, and outdoor recreation.

Sunrise River WMO Plan Update
- ACD was awarded a contract
by the SRWMO to complete
updates to their watershed
management plan. The process
was initiated in 2018 and is
scheduled to be completed by
the end of 2019.

Rum River Watershed 1W1P - Partners throughout the 11-county Rum River watershed from Lake Mille Lacs to the City of Anoka were jointly awarded \$267K to complete a One Watershed, One Plan. The plan will be completed in 2020.

Regulatory Assistance

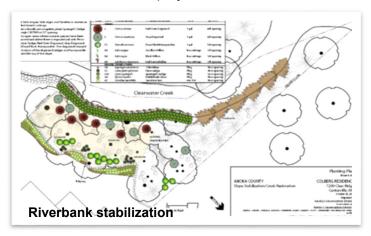
Although not regulatory, ACD provides guidance to help keep landowners out of regulatory harm's way.

Wetland Conservation Act - ACD employs one full time Wetland Specialist whose responsibilities include serving on Technical Evaluation Panels, processing cease and desist orders, providing quality control reviews of wetland replacement plans and other projects that impact wetlands, and assisting project applicants by providing technical and regulatory interpretations to facilitate project review and permitting at the local level.

Buffer Law Compliance
Inventory - Of the 112 parcels
that a 2016 inventory suggested
were non-compliant with the
buffer requirements, ACD
assisted landowners to achieve
compliance on 85 parcels by the
end of 2018. The remaining 27
parcels are on schedule to be
compliant by the spring of 2019.

Technical Assistance

Site Planning and Design - ACD staff provide landowners with consultation and design assistance for projects that attract wildlife, reduce erosion, conserve water, and improve water quality. In 2018, ACD completed site surveys and/or designs for 1 iron enhanced sand filter, 1 curb-cut rain garden, 13 riverbank stabilization projects, 18 habitat enhancements, and 8 lakeshore restoration projects.



Financial Assistance

Natural Resources Block Grant - ACD supports the Subsurface Sewage Treatment System program, Local Water Plan implementation, Wetland Conservation Act implementation, and Shoreland rules implementation by passing NRBG funds through to local government units (LGUs). In 2018, \$26,070 in grant funds were used to reimburse nine LGUs for their efforts.

Engineering Assistance - Through a state funded program, ACD has access to funds to contract with consulting engineers to design non-point source pollution projects such as riverbank and lakeshore restoration, gully stabilization, and sediment basins.

Cost Share - ACD helps landowners pay for conservation projects with community level benefits. Some incentive programs include the State Cost Share Program, USDA Environmental Quality Incentive Program, DNR Conservation Partners Legacy Grants, MN Clean Water, Land and Legacy Fund, County Ag. Preserves Grants, and Watershed District and Watershed Management Organization cost share programs.

The most common cost share projects include:

- Lakeshore stabilization and buffer restoration
- Streambank stabilization and buffer restoration
- Rain garden installation
- Wildlife habitat enhancement and invasive species control

Products

Annual Tree Program - Each year, ACD sells approximately 23,000 tree and shrub seedlings to control erosion and enhance wildlife habitat. We also distribute prairie seed and are available to help landowners develop site-specific plans.

Rain GuardianTM - ACD patented pretreatment chambers to address many of the challenges associated with rain garden maintenance in 2013. Distributorships covering 31 states, tradeshows, and the RainGuardian.biz website all promote the use of this product in bio-retention practices. There are currently three product lines with others under development to address a variety of field conditions. In 2018, sales were just under \$400K. Proceeds from sales fund conservation initiatives in Anoka County.



Public Outreach and Information Access

<u>Videos for the Web</u> - ACD staff have developed videos on a variety of topics, all of which can be found on AnokaSWCD.org and YouTube. In 2018, ACD hosted a stormwater themed video contest and provided cash prizes for the winners in two categories. We also contributed to the production of a series of rain garden videos which were being developed primarily by Winona County.



<u>AnokaSWCD.org</u> - Website design and maintenance is all completed inhouse by ACD staff. A project map interface features ongoing and completed projects, inventories, and analyses. The site also includes current events, policies, board actions, financials, and information on technical and financial assistance programs and services.

<u>Brochures and Table Top Displays</u> - ACD developed a series of brochures and table top displays covering many natural resources topics that are all available for use by our partners.

Topic	Brochure	Display
Lakeshore Restoration: Enhancing water quality and habitat on your shore	Х	Х
Riverbank Stabilization: Understanding water flow and managing erosion		Х
Backyard Habitat: Attracting wildlife to your property	Х	Χ
Water-Smart: Conserving water at home	Х	Х
Rain Gardens: Treating runoff at the source	Х	Х
Wetlands: Benefitting wildlife and people.	X	Х
Stormwater Management: Improving water quality and reducing runoff	X	Х
Native Plants: Restoring habitat in Anoka County	Х	
Natural Resource Threats		Х
Land Protection: Establishing a legacy		Х
Soil Health (US Dept. of Ag. NRCS design)		Х
Invasive Species: Restoring ecosystem health		Х



Projects

2018 Project Technical Assistance Summary

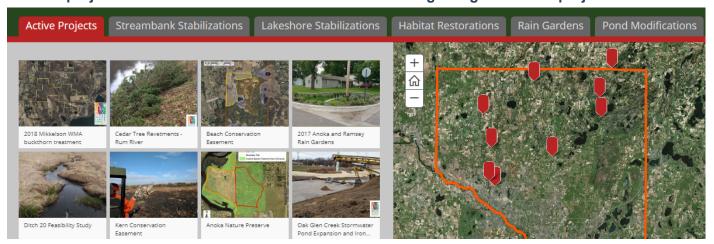
Project Type	Consult	Design	Install	Maintain
Lakeshore	8	2	4	0
Streambank	13	7	5	9
Rain Garden	15	1	1	0
Habitat Enhancement	18	6	10	6
Other*	1	1	1	0
Total	55	17	21	15

^{*}IESF, carp barrier, stormwater treatment structure, and swale

94% of Anoka County Residents Supply Their Household Water Needs with Groundwater

ACD is integrating groundwater benefits into project design and ranking.

All ACD projects are featured online at www.AnokaSWCD.org using our virtual project tour.



Project Inspection & Maintenance Guidance ACD guides project installations and provides long-term maintenance oversight. In 2018, ACD staff inspected 39 projects and provided guidance on maintenance needs. Each project installed with public financial assistance must be maintained by the landowner for varying durations depending on the project type and contract terms. Routine inspections are important to ensure contract terms are complied with. Assisting landowners with

project maintenance beyond the

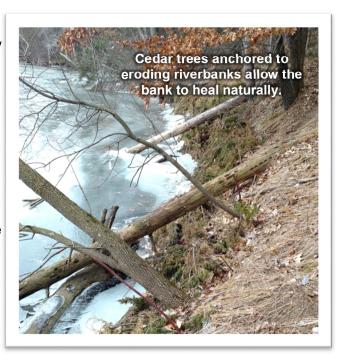
agreements is a cost-effective

way to achieve added benefits.

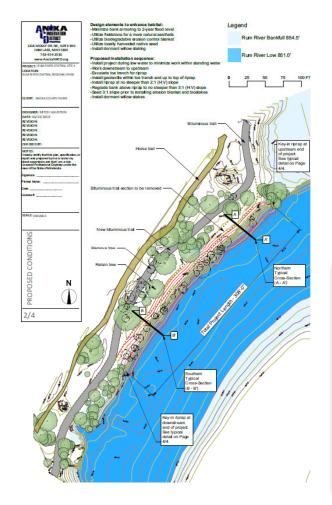
duration required by grant

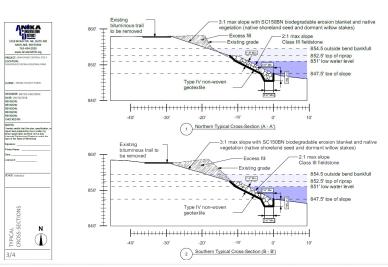
Streambank Stabilization and Restoration

With grant funds from the Outdoor Heritage Fund and granted crew days from the Conservation Corp of Minnesota (CCM). ACD staff led crews to install cedar tree revetments at 4 private properties spanning over 1,405 linear feet of the Rum River. Cedar tree revetments provide a cost-effective stabilization approach for moderately eroding riverbanks. The 236 trees needed for the project were donated by two Anoka County landowners.



In the Rum River Central Regional Park, ACD partnered with Anoka County Parks to design and install a 308 foot riverbank stabilization project that involved rock armor below the normal water level and relied on slope grading and vegetation establishment and management above the rock. The project was necessary to save a trail that ran along the riverbank. The trail had to be moved a bit to accommodate grading, but it still connects the north and south parts of the park and provides excellent views of the Rum River.







Lakeshore Restoration

ACD designed and coordinated installation of a 675 ft. long shoreline stabilization project on Centerville Lake with the City of Centerville. Cost share funds from the Rice Creek Watershed District were used to help pay for the project. We also designed and coordinated installation of a shoreland restoration project on Coon Lake (below) that will reestablish a buffer of native plants to filter water and provide pollinator habitat.



Rain Gardens

In 2018, ACD assisted with the installation of a rain garden in the City of Anoka. The garden is placed at the curbside immediately up-gradient of a catch basin. It intercepts and filters half of the neighborhood's runoff from the road, driveways, and roofs. Previously, the water was discharged to the Rum River untreated. Due to site constraints, we utilized a proprietary rain garden system called Focal Point, which has an engineered soil mix and underdrain to treat a lot of water in a very small space. The Lower Rum River WMO and Met Council provided funds for the project, and the homeowners have agreed to maintain it for at least 10 years.

In Columbia Heights, ACD designed and oversaw installation of a 463 square foot rain garden that treats stormwater runoff from 7.35 acres of a residential neighborhood. The project was jointly funding by the landowner, the City of Columbia Heights, and the Rice Creek Watershed District. The landowner has agreed to maintain the project for at least 10 years, which involves weeding, regularly cleaning out the pretreatment chamber, refreshing mulch, removing accumulated sediment, and replacing plants that don't survive. Models indicate that this rain garden will reduce phosphorus loading into Silver Lake by 2.33 lbs./year; enough to grow 1200 lbs. of algae!





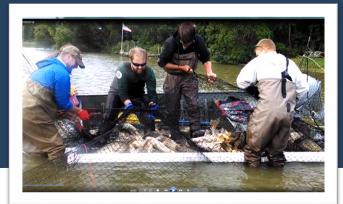
Golden Lake Stormwater Pond Pump Controlled IESF

With \$467,968 secured by ACD from the Clean Water Fund of the Clean Water, Land and Legacy Amendment, \$66,000 from the City of Circle Pines, and \$50,000 from the Rice Creek Watershed District, construction of an Iron-Enhanced Sand Filter (IESF) began in 2018. The project is designed to reduce phosphorus discharging to Golden Lake by 109 lbs./yr. The project uses a pump instead of natural water level fluctuations to get water into the IESF, which will allow the City of Circle Pines to proactively manage it for optimum benefits to the lake for the next 25 years.



Carp Management

\$99,000 was secured from the DNR Conservation Partners Legacy program, along with \$9,900 in local match from the SRWMO and Martin Lakers, to implement carp management on Martin Lake and Typo Lake. Using insights into carp movement gained in 2017 through a radio telemetry tracking initiative, harvesting was continued throughout 2018 using box nets. In 2018, 3,369 and 3,552 pounds of carp were harvested using box nets from Martin and Typo Lakes respectively.



Wildlife Habitat Enhancement

Some projects ACD helps landowners install are done primarily to enhance habitat for wildlife and pollinators.

Outdoor Heritage Fund (OHF) - ACD worked on the following three projects with OHF grants from the Clean Water, Land, and Legacy Amendment.

Beach Conservation Easement - 22 acres were treated for buckthorn, and 7 acres of prairie were interseeded with locally collected native prairie seed on the property in St. Francis.

Kern Conservation Easement - 2 acres of wetland depressions were scraped free of reed canary grass and planted with 315 native plugs, 60 native trees and shrubs, and seeded with wetland forbs and sedges to provide habitat for native pollinators and other wildlife. Invasive species were spot treated with herbicide.

Mikkelson WMA - 297 acres of the 842-acre Gordie Mikkelson WMA were treated for common and glossy buckthorn, which will create space for native species.

National Fish and Wildlife Foundation Grant - 24.5 acres of monarch habitat at 6 sites were restored/enhanced by planting 650 wildflower plugs, 35 shrubs, 4,000 milkweed seedlings and 7 pounds of pollinator seed mix.

(below inset) herbicide treated cut stump with blue dye added

<u>Cooperative Weed Management Area Partnership</u> - Using a state grant, ACD assisted 6 landowners to enhance habitat.

Malette - as an alternative to using herbicide to treat buckthorn,

this property owner rented a herd of goats. Goats are voracious grazers and readily eat both buckthorn species. Areas with desirable species were fenced off to protect them.

Bauman - 30 acres were treated for common buckthorn and Canada thistle.

Phragmites - a small infestation of common reed grass on the shores of Ham Lake was treated with herbicide.

Lewis - 1 acre of common buckthorn was treated on two adjacent residential properties.

Weston Woods - ACD assisted a homeowners' association to remove 1 acres of common buckthorn on their Mississippi River front property in the City of Anoka.

Ravnes - 2.7 acres of common and glossy buckthorn were treated in an oak forest. Following buckthorn treatment, native trees and shrub were planted and the site was seeded with sedges, grasses and wildflowers.



Financials

Where the Money Goes

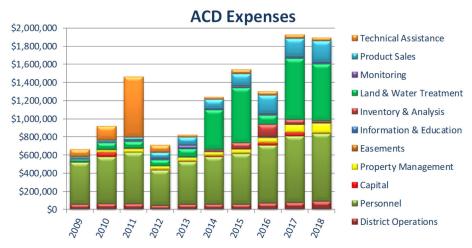
ACD finances experience dramatic variability from year to year due to activities being driven by competitive grants, several of which have been in excess of \$400,000. Many grants we receive are from sales tax revenue dedicated to natural resource activities. ACD is committed to accessing these funds so Anoka County taxpayers will benefit from them in proportion to sales tax paid in the county. Also of note is how consistent ACD's operational and personnel costs have been. ACD staff and supervisors keep overhead costs down, while expanding services.

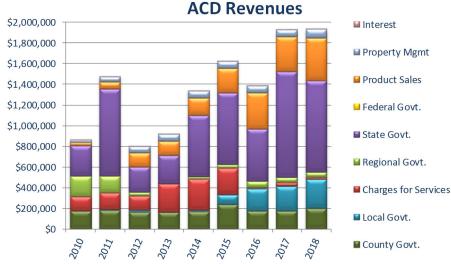


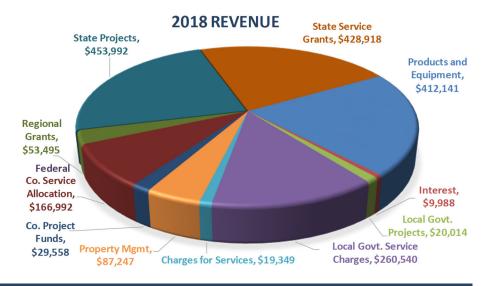
Although governed by an elected board, conservation districts do not yet have taxing authority and must secure funds from many sources to maintain programs and services. State grants are the primary funding source for project installation, while the county provides seven times what the state does to support general district operations. County funds are critical because many grants do not cover overhead expenses. Unfortunately, many grants also require matching funds, so county funds must serve as match and cover all costs ineligible under complex grant rules. \$2,000,000 \$1,800,000 \$1,400,000 \$1,000

Making Dollars of the Cents

To provide comprehensive natural resource management, ACD collaborates with cities, watershed management entities, state agencies, county departments, non-profits, and landowners on projects of mutual interest. The 2018 revenue chart begins to convey this but does not show the 78 projects and programs supported by 22 distinct funding sources, many of which supported multiple projects and programs. For example, County Project Funds alone is comprised of 7 projects, and State Service Grants were used to partially fund 28 different initiatives.







Lackluster financial support for conservation by counties statewide has led to conservation districts seeking levy authority as their top legislative agenda item for several years.