

2016 ANNUAL REPORT
DOOR COUNTY SOIL AND WATER CONSERVATION DEPARTMENT
<http://map.co.door.wi.us/swcd/>

Mission Statement and Summary of Responsibilities:

The Door County Soil and Water Conservation Department is created under the authority of Chapter 92 of Wisconsin Statutes. Chapter 92 gives the SWCD the responsibility for the administration of the County soil and water conservation program and the authority to exercise the powers granted to the Land Conservation Committee. The legislative declared policy of the State in Chapter 92 is to halt and reverse the depletion of the State's soil resources and pollution of its waters. The SWCD has a responsibility, and directive under Chapter 92, to promote land uses and programs which advance conservation and the protection of Door County's natural resources. The mission of conservation and environmental advocacy is the standard by which SWCD programs are developed and implemented.

2016 Soil and Water Conservation Department Program Summary

Aggressive Invasive Species Initiative - The Door County SWCD maintains a lead role in the Door County Invasive Species Team (DCIST). DCIST is a collaboration of natural resource professionals, community leaders and interested citizens who are concerned with preserving Door County's natural environment. DCIST seeks to halt the invasion of exotic non-native plants by empowering citizens with the education, the tools, and the skills necessary to control invasive species.

Agricultural Performance Standards Ordinance - Agricultural operations are reviewed for compliance with minimum statewide nonpoint pollution standards for protection of ground and surface water quality. Operations found to be in noncompliance are contacted and a plan and schedule for achieving compliance is developed.

Animal Waste Storage Facility Ordinance - Permits are issued through Chapter 23 of Door County Code. The ordinance regulates the location, design and construction of animal waste storage facilities to reduce the impact to ground and surface water quality.

Beaches - The quality of the surface water at Door County beaches is the focus of a program which the SWCD and Door County Public Health Department (DCPHD) have joint responsibility for. The SWCD is responsible for the pollution source identification, and beach contamination reduction portions of the project.

Buffer Programs - The SWCD works with several agencies utilizing available funding sources to install vegetated buffer strips in critical and riparian areas to protect surface and groundwater resources.

Door County Greenprint Project – The Door County Greenprint Model, a joint project with the Door County Planning Department, has been developed to provide an online public access tool for analysis of lands for natural resource protection and land use planning in the county. Current efforts have incorporated data layers into the Door County WebMap.

Dunes Lake Watershed Study and Pollution Reduction – The SWCD along with other public and private sector natural resource organizations and individuals have investigated the cause and extent of the accelerated eutrophication occurring in Dunes Lake, located in the Town of Sevastopol. The study has been completed and the effort is now in the implementation phase of land use practices, changes to reduce nutrient sources causing the eutrophication, and the removal of legacy phosphorus that has accumulated in the organic sediments of the Lake.

Gypsy Moth Suppression Program - This program protects trees from mortality by controlling gypsy moth population outbreaks through an aerial spraying program sponsored by the WI DNR. Aerial spraying typically occurs in late May to early June. Aerial spraying is only conducted during years of identified significant population outbreaks.

Land & Water Resource Management Plan & Program – The LWRM Plan establishes the SWCD programming and priorities. State funds are allocated to the SWCD by the Wisconsin Department of Agriculture, Trade & Consumer Protection and Department of Natural Resources to address conservation issues identified in the approved LWRM Plan.

Nonmetallic Mine Reclamation Ordinance – Door County Code Chapter 36 is administered by the SWCD and was established to ensure that local nonmetallic mining sites would be properly reclaimed in accordance to State administrative code and Statutes. Annual compliance inspections are performed for each site. Financial assurance is also required and monitored annually to ensure adequacy.

Nutrient Management Program - The purpose of the program is to minimize nonpoint pollution in ground and surface waters by avoiding the over-application of nutrients to crop fields through the proper placement, timing and crediting of nutrients such as animal manure, legumes, and commercial fertilizers.

Planning Department Referrals - The SWCD provides technical reviews and onsite inspections of proposed plans for stormwater, erosion control, rockhole alternative protection, nonmetallic mining operations, and land disturbance projects. This review process is included in an inter-departmental agreement between the SWCD and the Planning Department for permitted land uses under County Ordinances.

Sister City Program – The SWCD is the lead County Department that, along with the Door County Economic Development Corporation, coordinates the Sister City Program with Jingdezhen, China. Door County hosts annual Sister City Delegations from Jingdezhen and sends a Delegation to Jingdezhen.

Targeted Runoff Management Program - A competitive grant program through the Department of Natural Resources to address water quality issues over a two-year grant period for small-scale projects and three years for large-scale projects. The Program provides grants to the SWCD by which cost-share grants can be offered to landowners to install water quality practices.

Technical Assistance Provided - Technical Assistance to the public is a service provided by the SWCD. The SWCD maintains a personnel resource base of diverse knowledge and expertise in natural resources to serve the public. Maintaining a

resource network for referrals to other departments and agencies is also an important element of the technical assistance provided to the public. Technical assistance to the public will continue as SWCD resources are available and where the service will provide an environmental or conservation benefit.

Tree and Shrub Program - The Wisconsin DNR tree/shrub provides large increments of seedlings to be purchased for reforestation, windbreak packets, hardwood forest packets and wildlife habitat packets. Door County SWCD assists the DNR with this program. The SWCD also has tree planters which are made available to the public for a rental fee.

Water Pollution Abatement Cost-share Program - This program financially assists landowners in the cost of installing practices, which prevent and/or reduce ground or surface water pollution.

Wildlife Damage Abatement & Claims Program - The wildlife damage program is a technical assistance program for landowners who are experiencing crop damage from deer, geese, turkey and/or bear. Eligible crops under the program include any commercial or agricultural crops. Enrolled landowners must choose one of two public hunting options and follow their abatement plan to remain eligible for assistance, claim payments, and/or abatement reimbursements. If a landowner does not want their land open to the public for deer hunting, there is a shooting permit option, with mandatory harvest objectives, where in return enrollees forfeit eligibility for any claim payments or abatement reimbursements.

Wisconsin Working Lands Initiative/Farmland Preservation Program - Eligible landowners receive income tax credits for maintaining land in farming activities and meeting conservation standards required by the county. The Door County SWCD ensures participants meet state conservation standards to remain eligible for tax credits.

Goals/Objectives Achieved in 2016

Aggressive Invasive Species Initiative – Several accomplishments were possible as a result of the implementation of a DNR Aquatic Invasive Species (AIS) grant, one US Forest Service (USFS) grant, a one-time donation from Ducks Unlimited and numerous donations from landowners and local Town Boards; supporting both educational and control activities. Two limited-term employees inspected 429 boats with 606 boaters regarding Clean Boats Clean Water educational efforts. Volunteer match hours totaled over 300 hours for both aquatic and terrestrial work. Follow up herbicide control treatments occurred on 12 acres of Phragmites along the shorelines within the Towns of Sturgeon Bay, Liberty Grove, Sevastopol, Nasewaupee and the City of Sturgeon Bay. Additionally, the Towns of Sturgeon Bay, Sevastopol and the City of Sturgeon Bay adopted a noxious weed ordinance for Phragmites to be controlled on landowner's shorelines. The DCIST Coordinator and SWCD assisted volunteers with the inventory using GPS units and providing draft permission letters, but long term the program will be monitored by the respective Towns and volunteers. Phragmites inventory was conducted by the DCIST Coordinator on the shores and right-of-ways of municipalities that have adopted the ordinance and have been provided town boards and volunteer leads to implement the Phragmites noxious weed ordinance. Efforts were also made by SWCD LTE's and DCIST volunteers to control pioneer populations of cut-leaved teasel, Japanese knotweed, Wild Parsnip and Garden Valerian.

Agricultural Performance Standards Ordinance – Seventy-two notification letters were sent to landowners/operators informing them of the compliance or non-compliance status findings regarding their property/operation. Many of the landowners/operators were offered cost-share funds to facilitate correction of their non-compliant status. Of the 72 letters, 40 of them were follow up letters to inform landowners that compliance was achieved.

Animal Waste Storage Facility Ordinance – Four waste storage permits were issued for construction. The SWCD programming has been redirected to a greater emphasis on “soft” agricultural conservation practices such as erosion control and nutrient management.

Beaches – Efforts focused on completion of a final report, data sharing, and Dune grass operation and maintenance activities. On March 29, 2016, the Door County SWCD submitted the final report for the Great Lakes Restoration Initiative (GLRI) grant for \$703,200 to implement beach restoration practices at six local beaches. Subsequently the EPA provided the SWCD with a GLRI Grant Final Closeout Notification in June of 2016. The Final Report was shared with the WL+WCA Great Lakes Committee, Lake Michigan Association and the Great Lakes Beach Association. Door County SWCD and County Park staff weeded the Dune grass area at Murphy park where more than two pick up trucks of weeds were removed. In addition, SWCD staff and Lakeside Park volunteers also removed competing weeds at Lakeside Park in Jacksonport.

Door County Greenprint Project – In 2016 SWCD and LIO reviewed the contract with Trust for Public Lands as well as how the data was being utilized and displayed and determined that a function of Greenprint could be maintained with complete data on the County WebMap, but without the query function.

Door County Cost-Share: Well Abandonment – A total of 14 letters were mailed to landowners with possible improperly abandoned wells informing them of the cost share program.

Dunes Lake Watershed Study and Pollution Reduction - The SWCD along with the Department of Natural Resources, the University of Wisconsin – Madison Department of Geology & Geophysics, the Wisconsin Geologic and Natural History Survey (WGNHS), and the Nature Conservancy have teamed up to form the Dunes Lake Partnership (DLP) to investigate the cause of the accelerated eutrophication occurring in Dunes Lake, located in the Town of Sevastopol. The study has been completed and is now in the implementation phase to reduce nutrient sources causing the eutrophication. Nutrient management planning efforts have been completed on all cropland. One agricultural site remains noncompliant and enforcement activities continue.

Dunes Lake Non Agricultural Activities – In 2016, efforts focused on implementation the pilot effort to remove legacy phosphorus accumulated in organic sediments, development of a friends group, and advancing the completion of a designated public parking area on Town of Sevastopol property. Approximately three feet of organic or 10,000 cubic yards of sediment were hydraulically removed from the northeast area of Dunes Lake. These sediments were pumped approximately ½ mile to a sediment detention basin for dewatering, with the clarified liquids being pumped back to the project site. Efforts to complete a parking lot have encountered numerous setbacks

with funding issues and landfill maintenance distractions. The friends group has had minimal interest although some momentum has been made with local residents. The engineering efforts for the third cell has been hampered by a lack of funding and a lack of interest by the Valmy/Institute Sanitary District President. The SWCD's position is until the Sanitary District implements additional discharge treatment, Dunes Lake will be harmed by excess nutrients to the Lake's ecosystem.

Gypsy Moth Suppression Program - There were no spray blocks eligible for treatment in 2016 and there are no spray blocks scheduled in Door County for 2017.

Land & Water Resource Management Plan & Program – A total of \$32,000 in a state cost-sharing grant funds were encumbered on one cost-share agreement for a milking center waste control system project in 2016. Construction of a water quality protection manure storage project was completed in 2016, receiving cost-sharing of \$37,500.

NFWF Conservation Partners Program - The Door County SWCD applied for the NFWF Conservation Partners Program for the Sugar, Renard, and Silver Creek Watersheds Phosphorus Reduction Project. The funding would be used for staff time providing technical assistance for conservation practices such as cover crops, nutrient management, filter strips, reduced tillage, etc. to landowners. The amount requested for this grant was \$53,000.

Nonmetallic Mine Reclamation Ordinance – One site was transferred to a new operator. One site was reclaimed. One new topsoil mine site was proposed on Washington Island, however it was later withdrawn and \$313.50 in annual fees were returned to the landowner. There remains 50 permitted mine sites representing 1,684 potential mine acres and approximately 827 actively mined or un-reclaimed acres. All sites are reviewed annually to assess status and financial assurance needs. The nonmetallic reclamation program is a self sustaining fee driven effort. Operator annual fees in 2016 were reduced by 45 percent to reflect actual 2016 anticipated SWCD workload.

Nutrient Management Program - In the year 2016, 227 nutrient management plans were submitted to the SWCD, covering approximately 81,800 acres. Seventeen Soil & Water Resource Management (SWRM) cost-share agreements were signed to enroll 527.22 acres of nutrient management planning and an additional 209.46 acres where cost-sharing was offered, but not accepted by the landowner/operator. Seven cost-share agreements were signed to establish 144.71 acres of cover crops. Annual cost-sharing for the program was provided by a SWRM Grant of \$19,600.

Parks Department Assistance/Forestville Millpond Project – The Door County SWCD applied for a WI DNR Lake Management Planning Grant for the Forestville Millpond Watershed in conjunction with the Airport and Parks Department. The amount requested from the DNR was \$22,013. Funding will be used for staff time, creating a lake management plan, water and sediment sampling, and assistance in creating a “friend's group” for the lake.

Parks Department Assistance – In 2016, the SWCD assisted the Parks Department with planning and monitoring of the beach project at Murphy Park. The SWCD also continues a co-lead role in the development and implementation of a Management Plan

for Horseshoe Bay Cave which includes a bat white-nose syndrome component as well as potential future uses of the cave.

Planning Department Referrals - The SWCD reviewed 19 land disturbance projects, one nonmetallic mine proposal and reviewed or investigated 12 new or existing projects for storm water.

Sister City Program – A Sister City Delegation from Jingdezhen, China was hosted in June and a Door County Delegation was sent to Jingdezhen, China in October. A Door County Sister City Square constructed in Jingdezhen had an official opening ceremony. The J1 Visa Student Seasonal Worker/Cultural/Education Exchange program was established.

Targeted Runoff Management Program - The Logan Creek Headwaters Groundwater Protection Project grant was completed in 2016. Practices installed included a manure storage system and barnyard runoff control system. With all the BMP's installed through this grant the pollutant load reductions were: 289.5 lbs/yr of Phosphorus and 2,591.7 lbs/yr of Nitrogen. The West Jacksonport Source Water Protection Project grant began construction in 2016 and a request to DNR for a grant extension into 2017 was granted.

Tree and Shrub Program – Five DNR tree customers rented the County's tree planters to plant 14,600 trees. DNR tree and shrub orders have experienced a decline in public participation in recent years.

Wildlife Damage Abatement & Claims Program (WDACP) – Seventeen landowners completed enrollment for deer and/or turkey crop damage abatement. No damage appraisals were conducted in 2016. Landowner complaints continue to be increasing with deer and turkey damage. Sandhill crane complaints were minimum, however Sandhill cranes are currently regulated by the federal government and are ineligible for any WDACP assistance. Seven shooting permits were issued to control excessive deer damage and one permit was issued for excessive turkey damage. A preliminary count indicates that 36 deer were shot by the 7 permitted landowners. The Deer Donation Program for Door County received 49 deer donated to local food pantries, compared to 33 in 2015, 24 in 2014, 39 in 2013, 43 in 2012, 40 in 2011, 58 in 2010, 70 in 2009 and 253 deer donated in 2008 (last earn-a-buck season).

Wisconsin Working Lands Initiative/Farmland Preservation Program – Self-certification forms were sent to all participants under contract or under Exclusive Agriculture zoning and the SWCD issued 26 Certificates of Compliance for the 2016 tax year.

2016 Knowledge Sharing

Beaches

- Completion of 6 beach projects in late 2014 and early 2016 wrapped up. Final report of the current GLRI grant, have been shared at the State and Great Lakes levels.
- Presentations continue for local and statewide audiences regarding the SWCD's beach water quality program.

Invasive Species

- The DCIST website continues to be updated and is a useful resource for many with all of its features including: alerts, video links, printable color publications, online resources and contacts, identification and control methods, and an online calendar of DCIST events. Recent invasive plant inventories and control activities are now on the County Web Map under the Conservation folder.
- Handouts, brochures, and wildcards were made available at all meetings, presentations, landowner work groups, and workshops administered by the DCIST coordinator.
- Coordinator and SWCD staff presented and administered numerous educational presentations, and hands-on workshops to the general public, organizations, county personnel, landowner groups, and members of DCIST. Including presentations at 6 local Town meetings.
- Clean Boats Clean Water LTE conducted educational contacts to 243 boaters during boat inspections at several boat launches in the county.
- Informational packets along with an invitation to participate were sent to approximately 2,920 landowners.
- Staff provided a presentation at Wisconsin Wetlands Association, Upper Midwest Invasive Species Council and State Invasive Species Council Board on local ordinance efforts on invasive species.
- Staff was on WDOR to discuss Invasive Species concerns within Door County
- Staff was interviewed by Fox 11 to discuss the confirmed locations of the introduced invasive Starry Stonewort.
- Staff held five public meetings to educate individual landowners on how to ID new growth Phragmites and next steps in maintenance after a large scale treatment effort.
- Staff and Coordinator provided 19 one on one site visits to provide personalized invasive management plan.
 - These names, with their permission, were provided to the respective town boards as invasive 'champions' to assist with inventory and ordinance implementation.

Other

- Provided office information to Door County new employees, Door County Leadership class, and to the Learning in Retirement participants.
- Attended several WI Coastal Management Council Meetings.
- Provided educational presentations for individual farmers and their respective employees regarding manure spreading hazards.
- Provided a presentation to 23 Sturgeon Bay High School Ecology Students about groundwater protection and concerns.
- Provided a presentation on SWCD programs to the United Methodist church group.
- Participated/joined Great Lakes Committee (WLWCA)
- Assisted Parks Department in public Horseshoe Bay Cave Tour.
- Participated in Sustainable Fair; Wetland/Pond Workshop at Crossroads; DCIST booth at Bass Tournament.
- Participated on County Deer Advisory Council.
- Provided educational presentations for individual farmers and their respective employees regarding manure spreading hazards.
- Assisted WI Geological & Natural History staff inventory of large springs.

SWCD Budget Status

Approved 2016 Budget	\$948,440	Actual 2016 Budget	\$893,147
2016 Budgeted revenue	\$527,574	2016 Actual Revenue	\$475,254
2015 Levy appropriation	\$411,977	2016 Levy appropriation	\$420,866
2015 Actual Levy appropriation	\$403,459	2016 Actual Levy appropriation	\$417,893

Grant Totals Utilized In 2016:

Dunes Lake Anonymous Grant	\$10,000.00
DNR Aquatic Invasive Species Grant	\$43,031.04
DNR Targeted Runoff Management Grant	\$90,400.00
DATCP Soil & Water Resource Management Grant	\$160,095.00
DATCP Land & Water Resource Management Grant	\$73,886.87
DNR Wildlife Damage Claims Program	\$29,047.41
US Forest Service (Invasive Species)	\$24,391.76

Revenue from Self-funding Accounts:

Soil & Water Fund	\$9,963.12
Tree & Shrub Program	\$377.81
TRM Technical Support	\$786.97
Nonmetallic Mine Program	\$27,308.63

Donations Utilized in 2016:

Invasive Species Donations	\$3928.14
Dunes Lake Donations	\$0.00
Green Printing Donations	\$1,364.75

Other Revenue

Copies & Postage	\$672.50
Vehicle Replacement Fund	\$0.00

Other Accomplishments

- Preparation and review of farm operation specific prioritization maps for the winter spreading of animal waste to reduce water quality impacts.
- Conservation planning with farmers for proper resource management.
- Provided training sessions to Door County farmers teaching them about Nutrient Management and how to use SnapPlus.
- Conducted in-depth Nutrient Management Plan Reviews for fields located in Door County and operated by CAFOs. Discrepancies were communicated to the landowner, farm owner and crop consultant.
- Conducted depth to bedrock determinations using soil probes and augers on soils classified as 20-40 inches to bedrock to verify actual depths. This was done for CAFO purposes because of the NR 243 rule stating CAFOs must not spread manure on soils with less than 24 inches to bedrock.
- Conducted pilot legacy phosphorus sediment removal on approximately two acres of Dunes Lake.
- Assist the City of Sturgeon Bay in final installation of water quality practices and lake restoration efforts for Little Lake.
- Assist the City of Sturgeon Bay with the planning and installation of improvements from Walmart storm water systems.

- Individual landowner, local business, and local government drainage problem reviews and conservation planning.
- Lead and arsenic pesticide residue in soils and groundwater information and technical assistance to landowners, potential buyers, real estate agencies, and land developers.
- Several Phase I reviews for potential property contamination issues (orchard mixing sites, old dumps, etc.)
- Participated in Door/Kewaunee DNR workgroups regarding groundwater protection and Karst topography.
- Individual landowner pond and wetland technical assistance and development.
- Preparation and review of farm operation specific prioritization maps for the winter spreading of animal waste to reduce water quality impacts.
- Conducted compliance inspections on storm water runoff construction projects and construction site erosion practices.
- Conducted approximately 69 site reviews of cost-share projects with contractual operation and maintenance periods.
- Conservation planning with farmers for proper resource management.

2016 Conservation Practice Summary

25	New nutrient management plans submitted/736.68 acres of new cropland acres enrolled in the nutrient management program
227	Nutrient Management plans/81,800 acres
144.71	Acres of Cover Crop installed with cost-sharing
50	Nonmetallic Mine Reclamation Plan Review/Permits
1	Nonmetallic mine permit transfer
1	Nonmetallic mine certification of completed reclamation
13	Topographic/PS/Laser Surveys
13	Planning/Design with Landowners
1	Animal Waste Storage Systems
1	Transfer System
2	Extensive review of CAFO Calf Facility plans.
1	Barnyard Runoff Control Systems
19	Stormwater Management/Erosion Control Reviews
13	Well Abandonment
36	Deer harvested on seven shooting permits issued in the WDACP
49	Deer donated in Door County through Deer Donation Program
243	Boaters contacted during <i>Clean Boats Clean Waters</i> inspections
300	Volunteer Hours of Invasive Species Control work throughout Door County
12	Acres Phragmites treated
62	Right of Way miles of Wild Parsnip treated

Issues, Concerns and Restraints:

Program demands and natural resource protection needs are continuing to expand while fiscal and staffing resources are limited or decreasing. Recently hired staff members of less experience are actively being trained and advancing their skillsets.

Goals and Objectives for 2017:

1. Use SEG funds to implement Nutrient Management and other best management practices that aid in nutrient reduction in target areas such as the NFWF

Conservation Partners Program Project Area and the Forestville Millpond Watershed.

2. Continue keeping up with the latest version of SnapPlus for Nutrient Management Planning and encourage landowners to do the same.
3. Assist UWO ERIC Lab staff in conducting water and sediment sampling for the NFWF Conservation Partners Program (Sugar, Renard, Silver Creeks) and Forestville Millpond WI Lake Management Plan.
4. Maintain existing natural resource protection programs implementation during a time of diminishing fiscal resources and governmental uncertainty.
5. Locate and/or develop new program support revenue streams.
6. Continued implementation of agricultural nonpoint water quality performance standards. Continue greater emphasis on requiring quality private sector prepared nutrient management plans.
7. Work with State Legislative Representatives to develop and require agricultural groundwater protection standards which provide greater groundwater quality protection than existing standards.
8. Develop an engineering plan for a polishing cell to further treat the effluent discharged from the sanitary lagoons to reduce point source nutrient delivery to Dunes Lake Watershed (Geisel Creek, Dunes Lake, Shivering Sands Creek, Lake Michigan and local ground water).
9. Build a designated Town of Sevastopol parking area to improve access and use of Dunes Lake.
10. Obtain additional funding for aquatic and terrestrial invasive species control work for DCIST.
11. Conduct additional acres of nutrient management implementation and compliance reviews.
12. Continue Greenprint training to agencies, staff and public to increase awareness of the model and plan the Program's future. (Transferred to County Web Map.)
13. Conduct and complete a Lakes Monitoring study for the Forestville Millpond.