Nonpoint Source Water Pollution Abatement and Soil Conservation Programs

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Introduction

The Wisconsin Department of Natural Resources (DNR) and the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) work jointly to control nonpoint source water pollution and soil erosion in the state. The soil and water conservation program in DATCP and the nonpoint source water pollution abatement program in DNR provide for local coverage of the state's soil and water conservation needs, typically at the county level. Further, DNR nonpoint source pollution abatement financial assistance programs intend to focus resources where nonpoint source-related water quality threats are the most severe and where control is most feasible. As shown in Table 1, approximately $118.3 million was available in 2017-18 for nonpoint source-related soil and water conservation grants and payments to landowners and municipalities. These grants are distributed through DNR and DATCP programs and through direct federal support. Funding sources for nonpoint programs are primarily general purpose revenue (GPR), the nonpoint account of the segregated (SEG) environmental fund, federal (FED) revenues and revenues from the issuance of bonds (BR).

Table 1: Total Available 2017-18 Direct Funding for Local Soil and Water Conservation

Funding Source	Amount (Millions)
GPR	$3.0
SEG	9.7
BR	11.6
FED	94.0
Total	$118.3

Nonpoint sources of water pollution are those sources that are diffuse in nature without a single, well-defined point of origin. Nonpoint source water pollution originates primarily from drainage of pollutants into lakes, rivers, wetlands, and groundwater due to snowmelt or storm water, from both agricultural and urban sources. Examples of nonpoint source water pollution include soil erosion due to construction, contaminated storm water drainage from paved urban areas, and fertilizer washed from an agricultural field after a rainstorm before it is absorbed. DNR reports that over one-half of the lakes and streams the state considers as impaired are degraded by varying levels of nonpoint source pollution.

Several state programs address both urban and rural sources of nonpoint pollution and soil erosion. These agencies and their roles in implementing water pollution abatement programs are described below.

Natural Resources

Section 281.11 of the statutes directs DNR to serve as the central unit of state government to protect, maintain and improve the quality and management of the waters of the state, ground and surface, public and private. DNR holds general supervision and control over the waters of the state and is directed to carry out planning, management and regulatory programs. Under these general powers, in addition to the specific statutory program, DNR implements nonpoint source water pollution abatement grant programs and regulates certain animal waste and nonpoint source pollution discharges.

Agriculture, Trade and Consumer Protection

Chapter 92 of the statutes establishes DATCP as the central state agency responsible for

implementing statewide land and water conservation policies. DATCP administers programs that assist in the abatement of rural water pollution through the reduction of soil erosion, the management of animal wastes, improvement of agricultural nutrient management, and funding of county and state land and water conservation staff. DATCP efforts are known as the soil and water resource management (SWRM) program, a complement to the DNR nonpoint source program.

Safety and Professional Services

The Department of Safety and Professional Services (DSPS) is required to establish statewide standards for erosion control at construction sites for one- and two-family dwellings and for public buildings and places of employment, provided an activity would disturb less than one acre of land. The Department may issue stop-work orders for noncompliance and may delegate its administrative authority to counties, cities, villages, or towns. Construction site erosion control is discussed in greater detail in Chapter 3.

Land and Water Conservation Board

The Wisconsin Land and Water Conservation Board (LWCB) is directed to develop recommendations and to advise DATCP and DNR on matters concerning land and water conservation and nonpoint source water pollution abatement. This advisory role includes the review and recommendation of an annual joint allocation plan for several grant programs administered by DNR and DATCP.

The LWCB also reviews county land and water resource management plans, which are described further below, and DATCP and DNR administrative rules pertaining to the SWRM and nonpoint source pollution abatement programs. In addition, the Board monitors the achievement of statutorily defined soil erosion control goals, as discussed in a later section. Chapter 281 of the statutes also provides LWCB the authority to make recommendations to the Governor and DNR concerning funds budgeted to the nonpoint source pollution abatement program or concerning the efficiency and effectiveness of the program. The Board is also responsible for assisting counties and DNR in the resolution of program concerns.

The LWCB consists of the following 11 members: (a) the Secretaries of the Departments of Administration (DOA), Natural Resources, and Agriculture, Trade and Consumer Protection, or their designees; (b) three county land conservation committee members, who are designated at a statewide meeting of land conservation committees and appointed for two-year terms; and (c) five members appointed by the Governor, one for a two-year term and four for staggered four-year terms, to include one farmer, one member of an environmental group, one person from a city with a population greater than 50,000 people, and one person from a governmental unit involved in river management.

In addition, advisory members to the Board include representatives from: (a) the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS); (b) the USDA Farm Service Agency (FSA); (c) the College of Agriculture and Life Sciences (CALS) of the University of Wisconsin–Madison; (d) the University of Wisconsin–Extension; and (e) the Wisconsin Land and Water Conservation Association (WI Land+Water), a nonprofit organization that represents the state's county land conservation committees and departments, which holds advisory memberships for its president and executive director. DATCP provides administrative support to the Board, and both DNR and DATCP staff provide technical support to the Board.

County Land Conservation Committees and Departments

County land conservation committees (LCCs) set county policy on land and water conservation issues and directly oversee the activities of county land and water conservation department staff.

Each county board is statutorily directed to create an LCC. County LCCs must include: (a) two county board members who are also members of the county committees on agriculture and extension education; and (b) the chairperson of the county FSA committee. In addition to these members, any number of other county board members and up to two persons who are not county board members may be appointed.

County LCCs' powers and duties relating to the implementation of state land and water conservation programs include: (a) distributing federal, state and county funds for cost-share programs; (b) providing equipment, technical assistance and materials to landowners for conservation purposes; (c) developing county ordinances for the regulation of land use and land management practices; and (d) developing standards for management practices and monitoring compliance with those standards. The LCCs are required to prepare land and water resource management (LWRM) plans. In addition, LCCs are required to prepare annually a single state grant request describing staffing and funding needs for all county soil and water conservation and animal waste management programs. These programs include: (a) DATCP's annual county staffing and support grants; (b) the targeted runoff management grant program; and (c) the urban nonpoint source and storm water management grant program. DATCP and DNR then prepare a single allocation plan for all counties, with DATCP and DNR each administering its own respective programs.

The LCCs direct the activities of county land conservation departments (LCDs), which in some instances have merged with other county departments such as planning and zoning. County LCDs or the combined departments implement state and federal land and water conservation programs, as well as other programs such as the DNR wildlife damage abatement program and tree planting programs, with assistance from federal and state staff. Conservationists also assist county zoning administrators on land and water resource issues.

Generally, a county employs a county conservationist, a clerical assistant (part- or full-time) and may also hire one or more technical assistants to the conservationist. As of the 2017 calendar year, which is the most recent year for which counties have reported staffing levels to DATCP, counties reported a total of 355 full-time equivalent (FTE) employees working in Wisconsin as county conservation staff.

Land and Water Resource Management Plans. In order to receive grant funding from DATCP, each LCC is required to have a LWRM plan reviewed by the LWCB and approved by DATCP. By statute and administrative rule ATCP 50, plans must include: (a) a county-wide assessment of soil erosion conditions and water quality, including identification of causes of impairments and pollutant sources; (b) water quality objectives identified for each watershed, including pollutant load reduction targets; (c) key problem areas for soil erosion and water quality, including priority farms and sites that contribute or may contribute to water quality impairment; (d) identification of the best management practices (BMPs) to achieve the water quality objectives and to reach current state soil erosion control goals; (e) strategies for achieving voluntary compliance with farm conservation practices, or for carrying out notice and enforcement actions against persons not complying with applicable standards; (f) a multi-year strategy for implementing LWRM plan-related activities and priorities, including those priorities identified in the plan and those activities necessary for compliance with applicable federal and state laws, and including an estimate of cost-sharing, education and other assistance needed for the implementation; (g) a system to track progress of activities identified in the plan; (h) a system for monitoring conservation compliance with persons claiming farmland preservation tax credits, which are described later; (i) an information and education strategy; and (j) local and state regulations to be used to implement the plan, as well as methods for coordinating implementation activities with local, state or federal agencies and organizations.

County LCCs develop the plans with the assistance of DATCP. DNR also assists by providing available water quality data and information, training and support for water resource assessments and appraisals and other related program information. The LWCB reviews plans and recommends DATCP approval or disapproval. LWRM plans must be approved by the DATCP Secretary and last for a period of 10 years. Counties must report progress after five years.

CHAPTER 1

NONPOINT SOURCE POLLUTION ABATEMENT GRANT PROGRAMS

Program Components

Several of the grant programs described throughout this chapter are primarily intended to fulfill statutory and administrative requirements for the funding that must be offered to owners of agricultural facilities or operators of agricultural practices that are existing nonpoint sources of pollution. Under s. 281.16(3) of the statutes, cost sharing must be available to require compliance with, or enforcement of, the performance standards, prohibitions, conservation practices and technical standards for agricultural facilities and practices existing prior to October 14, 1997.

In general, the state or a municipality may not require water pollution-abatement practices or structures that would change or discontinue existing agricultural practices or facilities to meet performance standards unless the landowner receives a "bona fide offer" of having a portion of the cost of installing the necessary BMP provided to them. This portion for most practices is 70% of eligible costs, meaning the landowner would be responsible for 30% of total project costs. Some practices are offered a 50% cost share, including practices in nonfarm settings and practices installed on lands owned by a local government. For a discussion of BMPs and a listing of BMPs and their respective cost-share rates, see Appendix I. Bona fide offers may consist of other public or private funding sources, such as those from federal conservation programs, and need not consist only of state funds.

Certain sites must comply with performance standards regardless of cost-sharing availability, including: (a) livestock facilities permitted as point sources of pollution under DNR's animal waste regulatory program (NR 243); (b) unpermitted small and medium livestock facilities that have a point source discharge to waters of the state; (c) persons obligated to meet standards as a condition of receiving farmland preservation tax credits; (d) expanded or modified sites that are granted a local livestock siting or manure storage permit; and (e) new croplands and livestock operations. Aside from these instances, BMPs generally cannot be required for existing facilities or practices, absent a cost-sharing offer. Therefore, the extent to which nonpoint source water pollution abatement is implemented in Wisconsin is significantly influenced by the grant funding that is available to Wisconsin landowners. This differs from abatement of point sources of pollution, for which the responsible party generally must pay for all necessary structures and practices.

The following chapter describes the grant programs that support the state's nonpoint source water pollution abatement program, including their purpose, eligibility requirements, and recent awards. A majority of awarded funds are provided under a joint allocation plan between DATCP and DNR. This section briefly discusses the joint allocation plan and associated grants, then provides a summary of grants offered by DATCP, DNR, and under federal programs.

For discussion of program administration and funding, see Chapter 2. For discussion of regulation of nonpoint source water pollution, including statutory requirements and administrative rules, see Chapter 3.

Joint Allocation Plan
Funding To Local Governments

LCCs are required to prepare a single annual grant request. This grant request describes staffing needs and proposed county activities for: (a) soil and water conservation and animal waste management under Chapter 92 of the statutes; and (b) financial assistance under s. 281.65 and 281.66 for nonpoint source water pollution abatement. Annually, in response to this request, DATCP and DNR provide state funds to local units of government and other project cooperators for land and water conservation activities across the state, known as the joint allocation plan. Under the plan, the agencies jointly review county applications and determine if projects should be considered for funding through DATCP or DNR competitive funding. The plan is submitted to the LWCB for its review and recommendation to the agencies.

Only counties that have an approved LWRM plan are eligible for funding, which must be spent consistent with that plan. LCCs are authorized to use grants for several purposes: (a) staff activities related to nonpoint source water pollution abatement, animal waste management, or other conservation activities; (b) activities that promote compliance with soil and water conservation requirements under the farmland preservation program; and (c) best management practices related to animal waste management, nonpoint source pollution abatement and other conservation practices determined by the county to be necessary for conservation and resource management.

DATCP has established a number of priorities for allocation of funds under the joint allocation plan. These include: (a) continuation of county staff and projects; (b) funding projects that address statewide priorities identified by DATCP and DNR; (c) the county's demonstrated commitment to implementation of its approved LWRM plan and to farm-conservation practices; (d) the cost-effectiveness of the grant; (e) the likelihood that the grant will resolve problems specified in the county's LWRM plan; and (f) the county's demonstrated cooperation and ability to implement the project.

Table 2 provides a summary of grant awards by agency and program, and Appendix II shows a summary of joint allocation plan awards for 2019 by county. The plan is finalized before the end of each calendar year, with funds distributed the following year.

Table 2: 2019 Joint Allocation Plan Awards

Program	Grants
Agriculture, Trade and Consumer Protection	
County Staffing and Support	$8,964,100
LWRM Implementation Grants	3,455,000
Nutrient Management Planning Grants	2,234,476
Animal Waste Management / Notice of Intent (NOI) Reserve	300,000
Nutrient Management Farmer Education Grants	182,524
Project Cooperator Grants	618,000
Subtotal DATCP	$15,754,100
Natural Resources	
Targeted Runoff Management (TRM) Grants	$3,675,815
Notice of Discharge / Notice of Intent (NOD/NOI) Reserve	1,500,000
Urban Nonpoint Source (UNPS) Grants*	0
Subtotal DNR	$5,175,815
Total	$20,929,915

* DNR provides UNPS grants to non-county grantees; these amounts are not included in the joint allocation plan.

County Staffing and Support

The largest component of annual funding is county staffing and support grants, which fund staff at county land and water conservation departments that implement LWRM plans. Staff are eligible for funding for the following activities: (a) LWRM plan implementation; (b) conservation practice engineering, design or installation; (c) cost-share grant administration; (d) farmland preservation program administration; or (e)

livestock regulation. Ineligible activities include: (a) planning and zoning; (b) parks; (c) geographic information systems; or (d) design of non-conservation practices.

For the 2019 joint allocation plan, available staffing and support funding of $8,964,100 includes $5,936,900 nonpoint account SEG and $3,027,200 GPR. Table 3 shows county staffing funding since 2013-14. Funds are awarded in a tiered process, providing each county a base allocation of $75,000. Remaining available funding is allocated consistent with statutory directives that DATCP provide full funding the first position in each county, 70% funding of a second position and 50% funding of third and subsequent positions, should sufficient funds be appropriated. In the 2019 allocation, first positions at each county were fully funded, and 64% of costs associated with second positions were funded. No funding was provided for third positions, as has been the case since the 2010 cycle.

Table 3: County Conservation Staffing Funding

Fiscal		Nonpoint SEG		Annual
Year	GPR	Base	One-Time	Total
2014	$2,844,500	$5,036,900	$998,600	$8,880,000
2015	3,027,200	5,036,900	815,900	8,880,000
2016	3,027,200	5,036,900	675,000	8,739,100
2017	3,027,200	5,036,900	675,000	8,739,100
2018	3,027,200	5,936,900	0	8,964,100
2019	3,027,200	5,936,900	0	8,964,100

In 2017, the most recent year for which counties have reported staffing levels, 111 of 355 total FTE were supported by state funds. Other funding for positions may come from county budgets, private or other governmental grants, or other sources. County funds supported 206 positions, and all other funding supported 38.

Cost-Sharing Grants to Local Governments

DATCP and DNR both support implementation of LWRM plans through cost-sharing grants that provide up to 70% (90% in cases of economic hardship) of the cost of implementing nonpoint source water pollution prevention BMPs. Under the joint allocation plan, the Departments distribute funds under several grant programs. DATCP programs include county LWRM implementation grants, nutrient management planning cost-share grants, nutrient management farmer education grants, and animal waste management and NOI grants. DNR programs include urban nonpoint source (UNPS) planning and construction grants, targeted runoff management (TRM) grants, and NOD/NOI grants. Several other grant programs are not managed under the joint allocation plan, including DNR's municipal flood control program and DATCP's producer-led watershed protection grant program. All of these grant programs are discussed later in detail.

In 2019, joint allocation plan funding for cost-share programs totaled $11.3 million. DATCP's portion consisted of $3,455,000 for county LWRM implementation grants, $2,234,500 for nutrient management planning cost-share grants, $182,500 for nutrient management farmer education grants, and $300,000 for animal waste and NOI grants. DNR's portion consisted of $3,675,800 for TRM grants, $1,500,000 for NOD/NOI grants and $0 for UNPS grants. (DNR provides UNPS grants to non-county grantees, but the statutes do not require these amounts be included in the plan.)

Project Cooperator Grants

As part of the joint allocation plan, DATCP has customarily funded projects to support statewide priorities of nutrient management, technical standards development, and training. The 2019 allocation includes an allocation of $390,000 to the UW-Madison College of Agricultural and Life Sciences. Of this $390,000, $220,000 is allocated for maintenance and improvement of SnapPlus software used for nutrient management planning and related soil and nutrient management projects, and the remaining $170,000 is allocated for outreach,

education and training by the Nutrient and Pest Management Program in UW-CALS. The 2019 allocation also provides funding of: (a) $189,500 to WI Land + Water; (b) $35,000 to the Standards Oversight Council to support the development and maintenance of technical standards for soil and water conservation practices in Wisconsin; and (c) $3,500 for Conservation Observance Day, an event recognizing conservation initiatives on farms.

DATCP Grant Programs

DATCP administers the majority of its nonpoint grant programs as grant awards to counties that distribute it locally. DATCP grants are intended to support implementation of county LWRM plans and state nonpoint performance standards. The following section describes DATCP's grant program under its soil and resource management program, their eligibility requirements, and awards.

LWRM Implementation Grants

The 2019 joint allocation provided $3,455,000 in bonding to counties for cost-sharing related to implementation of LWRM plans. Grants are provided by the county to landowners on a reimbursement basis. The bonding proceeds provide up to 70% (90% in cases of economic hardship) of the cost of installing nonpoint source water pollution BMPs, which are discussed in Appendix I. The Wisconsin Constitution generally requires bonds be used for permanent improvements that benefit the state's waters, thus practices supported by these grants are structural in nature. "Soft" nonstructural practices are supported by nonpoint SEG, as discussed later. Bonding is supported by debt service payments from the nonpoint account of the environmental fund. DATCP reports 728 practices received bond cost-sharing in 2017.

Nutrient Management Planning Grants

Under the 2019 joint allocation, DATCP provided $2,234,500 to counties to be distributed to landowners as cost-share payments for non-structural practices, primarily nutrient management planning (NMP). A small amount of this funding is also provided for other non-structural practices. Landowners are eligible for NMP funding of $10 per acre per year for four years, increased from $7 under revisions to ATCP 50 that were effective February, 2018. 2017 Wisconsin Act 59, the 2017-19 biennial budget act, provided an additional $825,000 annually to offset increased cost sharing per acre of NMP under the new ATCP 50. Funding is provided from nonpoint SEG, rather than bonding, because the Wisconsin Constitution generally requires bond-supported activities to be permanent structural improvements.

DATCP determines the allocation of NMP funding based on a number of criteria: (a) the size of county agricultural enterprise areas, which is a component of the farmland preservation program that target areas for agricultural development and preservation; (b) the extent of impaired waters and beaches; (c) the number of nutrient management checklists submitted to DATCP demonstrating active nutrient management plans in the county comply with USDA standards; (d) county acres in farmland; (e) cumulative spending over the past three years; and (f) nutrient management farmer education grants received in the previous two years. Criteria (a) and (b) implement a provision in 2017 Act 59 requiring DATCP and DNR to give priority in allocation of NMP funds to activities that are in, near, or affecting impaired waters or agricultural enterprise areas.

DATCP estimates that approximately 3.35 million acres in Wisconsin were under nutrient management planning in 2018. The 2018 amount reflects about 37% of Wisconsin’s harvested cropland, which comprises about 9 million acres, according to the 2012 USDA Census of Agriculture. This total includes: (a) 1,491,000

acres under cost sharing from DATCP, DNR or NRCS, or receiving farmland preservation tax credits; (b) 1,079,000 acres at concentrated animal feeding operations (CAFOs), which have wastewater discharge permits under provisions of NR 243, and must practice nutrient management planning regardless of cost-sharing availability as a condition of their wastewater discharge permit; (c) 675,000 acres under a local ordinance for manure management or livestock siting; and (d) 106,000 acres outside of a specific program.

Nutrient Management Farmer Education Grants

For 2019, DATCP awarded $182,500 nonpoint SEG to nutrient management farmer education (NMFE) grants. NMFE grants allow recipients to conduct workshops or other training to provide basic education to farmers on nutrient management principles. Grants also may fund stipends to farmers to assist with costs of training or soil sampling. DATCP reports most training results in farmers writing their own nutrient management plans, which the Department expects will help farmers gain necessary understanding to properly implement the plans. DATCP reports 24% of plans in 2018 were farmer-written. Plans written under NMFE-funded programs may help increase voluntary NMP, which may occur without the state providing cost-share funding under its NMP grants that compel farmers to participate.

Animal Waste Management / Notice of Intent Reserve

DATCP reserved $300,000 in nonpoint SEG-supported bonding under the 2019 joint allocation for cost-sharing of structural projects related to animal waste management. Funds are awarded to counties, who in turn provide funds to landowners. Funding is provided on a noncompetitive basis either: (a) in response to a notice of discharge (NOD) or a notice of intent (NOI) to issue an NOD; or (b) under recommendation of a discharge site identified by DATCP engineers, especially for managing runoff from feedlots and feed storage. Grants are intended to provide the 70% funding necessary to compel implementation of conservation practices by landowners. DNR awards primarily NOD grants, as discussed in a later section, while DATCP only awards grants for NOIs, reflecting the voluntary nature of projects. The Departments collaborate on grant awards to ensure cost-efficient allocation of funding.

Producer-Led Watershed Protection Grants

2015 Wisconsin Act 55 authorized DATCP to make grants totaling $250,000 nonpoint SEG per fiscal year for nonpoint source pollution abatement activities undertaken by producer-led groups. 2017 Wisconsin Act 196 increased this amount to $750,000 annually in the 2017-19 biennium on a one-time basis. In 2018, 19 producer-led groups were awarded a total of $558,200 in two rounds, and in 2019, 24 groups were awarded a total of $750,000. A listing and maps of 2018 and 2019 recipients can be found in Appendix III.

The grants, up to $40,000 per recipient per fiscal year, are available to groups that: (a) include at least five agricultural producers; (b) operate eligible farms meeting minimum farm income requirements under the farmland preservation program; (c) operate in one watershed; and (d) collaborate with at least one of the following: (1) DATCP; (2) DNR; (3) a county land conservation committee; (4) UW-Extension or the Discovery Farms program; or (5) a nonprofit conservation organization.

Under administrative rule ATCP 52, DATCP specifies allowable purposes and reimbursable expenses for the program. Grants may be used for the following purposes: (a) startup, planning, and shared learning activities; (b) surveying and identification of management practices and solutions; (c) development of innovative techniques that increase current benefits or identify new benefits; (d) increasing participation in conservation via

education, outreach, or incentive payments; (e) measurement and promotion of the benefits of conservation practices; and (f) water quality monitoring and soil testing. Reimbursable expenses include personnel costs for a group's coordinator, incentive payments, outreach and education events, and water quality monitoring and soil testing. Reimbursement is conditioned upon progress reporting and an annual report.

DNR Grant Programs

DNR funding for pollution management practices is distributed mostly through competitive grant programs. These competitive grants are intended to assist landowners and governmental units in controlling nonpoint source pollution by complementing staffing and practice grants made to counties by DATCP.

DNR administers the following three competitive grant programs under the noted administrative rules: (a) the targeted runoff management program (NR 153); (b) the urban nonpoint source and storm water grant program (NR 155); and (c) the municipal flood control program (NR 199). (Recent grants under these programs are listed in Appendices IV, V, and VI.) DNR also provides, in conjunction with DATCP, animal waste control grants to livestock operations issued an NOD or NOI. Grants under these programs may be supported by bonding, of which DNR was authorized $6.15 million in new authority under 2017 Act 59.

Targeted Runoff Management Grants

TRM grants provide financial assistance to projects addressing water quality concerns or impairments, primarily in rural and agricultural settings. Funds come from general obligation bonding, nonpoint SEG, and federal funding under Section 319 of the Clean Water Act. DNR awarded TRM grants to 26 projects for $3,837,000 in 2018, and 15 projects for $3,675,815 in 2019. For a complete list of grant awards in 2019, see Appendix IV.

Grants support pollution abatement in high-priority areas, characterized by: (a) a need to comply with DNR nonpoint source performance standards; (b) the existence of impaired waters as identified by DNR and the Environmental Protection Agency (EPA); (c) the existence of outstanding or exceptional resource waters as designated by DNR; (d) the existence of threats to public health; (e) the existence of an animal feeding operation that has received a NOD or NOI to issue a NOD; or (f) other water quality concerns of national or statewide importance. DNR provides TRM grants in four categories: (a) large-scale total maximum daily load (TMDL) implementation; (b) small-scale TMDL implementation; (c) non-TMDL large-scale control projects; and (d) non-TMDL small-scale control projects. A summary of grant categories, eligibility criteria, and awards is provided in Table 4.

TRM grants support implementation of TMDLs in Wisconsin. Under Section 303(d) of the Clean Water Act, DNR is required by EPA to report biennially on all waters it has identified as impaired, meaning they do not meet water quality standards. DNR is required to develop a TMDL report for all waters it identifies as impaired. TMDLs study pollution in a water body and set goals to limit pollution to a level that will allow the water body to meet water quality standards.

Since DNR has yet to develop TMDLs for all waters it has identified as impaired in the state, TRM funds are also available to non-TMDL projects, so long as they focus on attaining performance standards of NR 151 and ATCP 50. Non-TMDL projects must be guided by a watershed plan or other strategy for achieving water quality goals in the area.

Table 4: Targeted Runoff Management Grants

Category	Purpose	Eligible Activities	Project Length	Maximum Award	2018 Awards	2019 Awards
Large-Scale TMDL	Agricultural projects that implement a TMDL	Construction of structural BMPs, implementation of non-structural BMPs, some limited staff costs	3 years*	70% of project costs, up to $1 million	$907,575	$1,276,473
Large-Scale Non-TMDL	Agricultural projects that implement state performance standards in an area of 8 to 39 square miles				0	1,413,843
Small-Scale TMDL	Agricultural/urban nonpoint projects that implement a TMDL	Construction of structural BMPs, acquisition of property rights to support construction	2 years*	70% of project costs, up to $150,000	238,810	360,000
Small-Scale Non-TMDL	Agricultural projects that implement state performance standards	Projects that implement agricultural BMPs			2,690,600	625,499
				Total	**$3,836,985**	**$3,675,815**

*Projects may be extended by one year, if approved by DNR.

TRM grants provide reimbursement of up to 70% of eligible costs. Projects provide funding for construction of structural BMPs, such as manure storage facilities or filter strips, or non-structural BMPs, such as cropping practices. Eligible BMPs under the TRM program are explained in Appendix I. Grants may also support property acquisition costs for structural practices, or staff costs. DNR awards a small amount of TRM awards to staff costs directly related to a funded project. DNR reports these costs were 6% for small-scale projects and 9% for large-scale projects during the 2016 to 2018 period.

Only nonpoint sources of water pollution are eligible for TRM grants. This excludes certain nonpoint sources that are considered point sources and required to have a Wisconsin pollutant discharge elimination system (WPDES) permit from DNR, such as concentrated animal feeding operations (CAFOs) and the 245 urbanized municipalities in Wisconsin, including some UW campuses, that have municipal separate storm sewer systems (MS4) storm water discharge permits. Most TRM grants thus go to rural counties or small municipalities, and most of these grants in turn are provided to landowners to assist with costs of improvements made on privately held lands.

Urban Nonpoint Source (UNPS) and Storm Water Grant Program

Under the UNPS program, DNR provides urban municipalities financial assistance for planning or construction of urban runoff performance standards that meet requirements under NR 151, achieve water quality standards, protect groundwater, and help municipalities meet municipal storm water permit conditions of NR 216. Recipients must have a local program that ensures implementation of construction site runoff controls and storm water management for newly constructed or redeveloped sites. UNPS grants are funded by nonpoint SEG and bonding, with debt service supported by the nonpoint account.

The UNPS grant program contains two grant categories. Planning grants help local governments cover various non-construction costs including engineering designs not specific to a project, feasibility studies, public information initiatives, ordinance drafting, and ordinance enforcement. Planning activities may cover developed areas, new development, or redevelopment projects. Planning grants are supported by nonpoint SEG, as non-construction costs cannot be supported by bonding.

UNPS construction grants provide funding for physical improvements. Eligible projects include: (a) stream bank and shoreland stabilization; (b) structural BMPs for abating urban runoff, including costs of land acquisition, storm sewer rerouting, and structure removal; and (c) other activities, such as improved street sweeping. Costs associated with designing and building a BMP are allowable uses of grant funding. Ineligible construction-related activities include, among others: (a) BMPs associated with new development; (b) most replacement costs for BMPs; (c) BMPs whose installation began prior to the beginning of grant or cost-share agreements; and (d) BMPs for runoff that was adequately controlled at the time of a grant or cost-share agreement but has since undergone significant changes in land use. Construction grants may be funded by general obligation bonding or nonpoint SEG.

Governmental units, including the Board of Regents of the University of Wisconsin System, may apply for UNPS grants. Administrative rules for the UNPS program (NR 155) do not allow construction grants to support abatement of discharges covered under WPDES permits other than MS4 storm water discharge permits. This prohibits UNPS construction grants from supporting BMPs at private industrial properties to contain storm water runoff from sources associated with or contaminated by industrial activity. (These sources have separate storm water discharge permitting requirements under NR 216.)

All UNPS grants have a maximum state cost-share rate of 50%. The maximum amount for a construction grant is $150,000 and the maximum planning grant is $85,000. In addition, construction projects that involve land acquisition or permanent easements are eligible for an additional $50,000. Both construction and planning grants are limited to two years per project, although DNR may approve a one-year extension. State law does not specify how program funds are to be divided between the (a) UNPS planning; (b) UNPS construction; and (c) municipal flood control and riparian restoration grant program, discussed later. DNR attempts to allocate funding approximately equally between the programs as new bonding authority is provided each biennium, although actual spending on projects selected for grants affects how funds are expended.

DNR accepts applications for UNPS grants in alternating years, with planning grants in odd years and construction grants in even years. UNPS planning grants awarded in 2017 for 2018 projects totaled $992,700. UNPS construction grants awarded in 2018 for 2019 projects total $2,701,234. A list of grant recipients can be found in Appendix V.

Municipal Flood Control and Riparian Restoration Program

The municipal flood control and riparian restoration (MFC) program provides grants to cities, villages, towns or metropolitan sewerage districts with the goal of minimizing flooding and preventing flood-related damage through flood proofing, restoration activities, and acquisition of at-risk property. MFC grants may cover 50% of eligible costs, and may not exceed 20% of total program funding in a given year. The municipal flood control program offers two types of grants. Local assistance grants fund planning and administrative costs. Acquisition and development grants fund purchases of perpetual flowage and conservation easement rights on land within a flood way, as well as flood proofing of structures remaining in a 100-year flood plain. Awards are provided once per biennium, with awards for projects in 2019 and 2020 awarded in early 2019. Total funding available for MFC projects in the 2019-2020 grant cycle totals $2,421,400, and requested amounts total $2,587,000. A list of projects applying for MFC grants appears in Appendix VI. As with UNPS grants, MFC grants are supported by nonpoint SEG and bonding, with debt service supported by the nonpoint account.

Project priority is ranked by activity in the

following manner: (a) acquisition and removal of structures that cannot be rebuilt, or are in the 100-year flood plain; (b) acquisition and removal of repetitive loss structures or other flood damaged structures; (c) flood proofing, including reinforcement of walls, anchoring, or placement of utilities above flood levels; (d) restoration activities, including removal of dams, and stream bank and habitat restoration; (e) acquisition of vacant land for flood water flowage easements; (f) construction of detention ponds; and (g) flood mapping.

Under the statutes, projects must: (a) not transfer flooding downstream or accelerate upstream runoff; (b) not channel a stream or line a natural stream bed with concrete; (c) provide adequate opportunity for public use access to the stream and flood way; (d) to the extent practical, cause no harm to existing beneficial functions of water bodies and wetlands; (e) maintain aquatic and riparian environments; and (f) use storm water retention and detention structures and natural storage. DNR has specified additional program provisions in administrative rule NR 199.

Notice of Discharge / Notice of Intent Reserve

Similar to DATCP, DNR reserved $1,500,000 nonpoint SEG-supported bonding under the 2019 joint allocation plan for cost-sharing of construction projects related to animal waste management. Funds are awarded to counties who in turn provide noncompetitive grants to landowners. DNR awards funds primarily under notices of discharge (NOD), but may also provide funds under notices of intent (NOI) to issue an NOD. While DATCP provides funding only under NOIs, the Departments collaborate on grant awards to ensure cost-efficient allocation of funding. NODs reflect a regulatory order that require implementation of BMPs to ensure compliance with state performance standards. DNR issues NOD/NOI grants as the state's share of cost-share funding of up to 70% necessary to compel compliance with the NOD/NOI. As in other programs, bond revenues generally may only fund permanent structural improvements.

Federal Programs

Farm Bill Programs

In addition to federal funding that is provided to DNR for disbursement, federal funding may be received by landowners for implementation of conservation practices and land retirement under a variety of federal programs administered by the USDA's Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA). The programs described in the following paragraphs receive funding under the federal Farm Bill, which was reauthorized on December 20, 2018. However, as of January 1, 2019, federal fiscal year 2019 appropriations for USDA have not yet been established, and future year allocations for Wisconsin are not yet determined.

As shown in Table 5, $92.9 million in federal fiscal year 2018 was available to Wisconsin landowners and local governments under NRCS and FSA programs. It should be noted that this is an amount expected to be available to Wisconsin, but actual amounts received may vary with local government and landowner participation.

Table 5: Federal Land and Water Conservation Funding Available in Wisconsin -- Federal Fiscal Year 2018

Program	Funding (Millions)
Environmental Quality Incentives Program	$37.2
Conservation Stewardship Program	22.4
Agricultural Conservation Easement Program	1.9
Conservation Reserve Program	31.4
Total	$92.9

Environmental Quality Incentives Program (EQIP). Administered by NRCS, EQIP offers financial support and technical assistance to eligible participants for the installation or implementation

of structural and management practices on eligible agricultural land. EQIP contracts generally pay up to 75% of the cost of eligible conservation practices, or up to 100% of income foregone due to certain practices. EQIP participants enroll in the program under contracts of up to 10 years. Aggregate payments to any person or legal entity are capped at $450,000 for contracts begun through federal fiscal year 2018. The Wisconsin NRCS office reports EQIP funding available in the state for the 2017-18 federal fiscal year was $37.2 million.

Conservation Stewardship Program (CSP). Administered by NRCS, CSP provides financial and technical assistance by awarding incentive payments to landowners for implementation of conservation practices. Agricultural producers may apply to enter into five-year contracts providing: (a) annual payments for installation of new conservation practices and maintenance of old practices; and (b) supplemental payments for adopting crop-rotation systems. Payments are to be based on expected environmental benefits, costs to the producer for installation, and foregone income. Contracts are set at a maximum of $200,000 in aggregate per person or other legal entity during a five-year contract. In federal fiscal year 2017-18, Wisconsin NRCS reports expenditures of $4.4 million on new CSP contracts and $18.0 million on prior year active contracts.

Agricultural Conservation Easement Program (ACEP). ACEP consists of an agricultural land easement and a wetland reserve easement. Agricultural land easements seek to preserve agricultural land use and its associated conservation benefits. Wetland reserve easements seek farmed or converted wetlands to restore to their original purpose. In each case, ACEP provides easements of varying lengths to landowners in exchange for the owner maintaining the land in accordance with program specifications. Wisconsin NRCS reports that agricultural land easement payments totaled $378,000 and wetland reserve easement payments totaled $1.5 million in federal fiscal year 2017-18.

Conservation Reserve Program (CRP). Administered by the USDA Farm Service Agency, CRP encourages private landowners to establish vegetative covers on land susceptible to erosion. CRP contracts range from 10 to 15 years, and owners receive rental payments based on: (a) the relative productive capacity of soils on a county-level basis; and (b) the area's average cash rent or cash-rent equivalent. CRP lands may also be eligible for: (a) up to 50% cost sharing for establishing vegetative covers; (b) per-acre payments for maintenance practices; and (c) up-front signing incentives for committing to certain conservation practices. As of July, 2018, Wisconsin had 16,808 CRP contracts in effect covering 9,380 farms and 219,985 acres. Statewide average annual rental payments were $143 per acre, with annual payments totaling approximately $31.4 million. (These figures include payments for and acreage enrolled in the Conservation Reserve Enhancement Program, which is discussed in the following paragraphs.)

Conservation Reserve Enhancement Program (CREP). CREP is a subprogram of CRP and is administered by both the USDA and the state of Wisconsin. Participating landowners voluntarily establish conservation practices on environmentally sensitive agricultural land near bodies of water. The conservation practices are intended to decrease erosion, restore wildlife habitat, and safeguard groundwater and surface water, while leaving most acreage in agricultural production. Enrollment is through 15-year agreements or perpetual easements.

USDA pays enrollees annual land rental payments for 15 years, as well as cost-sharing for 50% of the cost of installing conservation practices. Eligible CREP conservation practices include riparian buffers, filter strips, wetland restoration, and establishment of native grasslands in two designated grassland project areas. The state of Wisconsin also makes up-front, one-time incentive payments of 1.5 times the annual rental rate for 15-year easements and 12 times the annual rental rate

for permanent easements, as well as 20% cost sharing for eligible costs of establishing conservation practices.

The state is required to provide a 20% overall match to a federal grant of up to $200 million. As such, the state originally authorized $40 million in general obligation bonding authority, which was later reduced to $28 million in 2009. Based on historical enrollment rates, DATCP currently projects the $28 million authorized will be sufficient for state payments for the foreseeable future. Since its inception, net total state and local costs for CREP are $21.4 million. This consists of $18.7 million in state payments, approximately $600,000 returned from landowners buying out their agreements, and $3.3 million in spending by counties for staff and other implementation costs.

CREP has enrolled 36,000 acres into agricultural conservation practices, with 29,300 acres entered in 15-year agreements and 6,700 acres in perpetual easements as of September 30, 2018. This represents 36% of the 100,000 acre goal established for CREP in Wisconsin. DATCP reports 3,174 contracts are active. In addition, payments to landowners enrolling their land totaled $18.7 million as of September 30, 2018, which includes $16.4 million in incentive payments and $2.3 million in cost-share payments for installation of conservation practices.

As of 2018, practices funded by CREP have achieved the following: (a) buffered 1,000 miles of stream or shoreline, part of the state goal of 3,700 miles; (b) prevented 104,000 pounds of phosphorus deposition annually, part of the state goal of 610,000 pounds annually; (c) prevented 56,000 pounds of nitrogen deposition annually, part of a goal of 305,000 pounds annually; and (d) prevented 51,700 tons of sediment runoff annually, part of a goal of 355,000 tons annually.

Wisconsin and the USDA have regularly extended the state's participation in CREP as the program is reauthorized by Congress. New CREP contracts can be entered in Wisconsin through September 30, 2018, which is the expiration date of the 2014 Farm Bill.

Great Lakes Restoration Initiative

The Great Lakes Restoration Initiative (GLRI) began in 2010 as a coordinated effort among several federal agencies to provide federal funding to address concerns in the Great Lakes watersheds pertaining to water quality, public health and wildlife habitat. According to a federal GLRI grants database, approximately $2.2 billion in GLRI grants had been awarded from 2010 through April, 2018. Projects located primarily in Wisconsin have been granted $331 million in that period from EPA, USDA, the U.S. Army Corps of Engineers, the U.S. Department of the Interior, the National Oceanic and Atmospheric Administration, the U.S. Department of Transportation, the U.S. Geological Survey (USGS), and their constituting agencies. Of this amount, the majority, $200 million, has been awarded by EPA. Not included in the total are other amounts for multistate awards that may have Wisconsin components.

CHAPTER 2

PROGRAM FUNDING AND ADMINISTRATION

This chapter describes the funding for and administration of the soil and water resource management and nonpoint source water pollution abatement programs in Wisconsin. Funding comes primarily from GPR, the nonpoint account of the environmental fund SEG, bonding revenues supported by nonpoint account SEG, federal Clean Water Act awards, and the federal Farm Bill.

Nonpoint Account of the Environmental Fund

The segregated environmental fund consists of the nonpoint account and the environmental management account, the latter of which primarily supports DNR programs related to recycling, groundwater, and cleanup of contaminated lands. The two accounts are statutorily designated as one fund but are tracked separately for budgetary purposes. For discussion of the environmental management account, see the Legislative Fiscal Bureau paper entitled "Environmental Management Account." Table 6 summarizes the condition of the nonpoint account for fiscal years 2015-16 through 2018-19.

Revenues

Both accounts of the environmental fund rely heavily on revenues from several solid waste tipping fees. Wisconsin landfills pay state solid waste tipping fees for each ton of solid waste disposed of in the landfill. State solid waste tipping fees total $12.997 per ton for most solid waste disposed of at Wisconsin landfills, including municipal solid waste and non-high-volume industrial waste. Of this total, $3.20 per ton is deposited into the nonpoint account. As seen in Table 6, tipping fee revenues represent more than half of nonpoint account revenues annually. Fee revenues totaled $21.9 million in 2017-18, but have fluctuated substantially in recent years. The variation shown represents fiscal year-end timing issues associated with collection of these fees. Tipping fees are collected from billings issued by DNR each May. As a result, a portion is not received in the fiscal year billed, but the following year.

The nonpoint account also receives an annual GPR transfer to support its operations. This fee originated from an automobile title transfer fee deposited into the nonpoint account. At the time, the fee was chosen in recognition of nonpoint source water pollution attributable to the state's transportation infrastructure and vehicle operation. In 1997, statutory changes required the fee be deposited into the transportation fund, and it was replaced with a GPR transfer equal to collected fees. The 2007-09 biennial budget act later established a sum-certain GPR transfer consistent with historical amounts of title fee transfer revenue. This amount has been adjusted occasionally, and was most recently reduced from $11,143,600 annually to $7,991,100 annually beginning in 2017-18 under 2017 Act 59.

The nonpoint account has also been supported in recent years by transfers from other segregated sources. In the 2015-17 biennium, the segregated agricultural chemical cleanup program (ACCP) fund transferred $1,000,000 annually to the nonpoint account. The ACCP fund is supported by various surcharges on agricultural chemicals and commercial feed; for more discussion on the ACCP, see the Legislative Fiscal Bureau paper entitled "Agricultural Chemical Fees and

Table 6: Nonpoint Account Fund Condition

	Actual 2015-16	Actual 2016-17	Actual 2017-18	Estimated 2018-19	2018-19 Staff
Opening Balance	$19,909,100	$9,987,200	$6,619,900	$11,058,600	
Revenue:					
GPR Transfer	$11,143,600	$11,143,600	$7,991,100	$7,991,100	
Tipping Fee*	8,615,800	14,977,700	21,921,800	18,048,000	
Transfers**	1,000,000	1,000,000	3,652,500	3,652,500	
Interest and Misc. Income	3,100	10,200	28,900	338,000	
Total Revenue	$20,762,500	$27,131,500	$33,594,300	$30,029,600	
Total Available	$40,671,600	$37,118,700	$40,214,200	$41,088,200	
Expenditures:					
Agriculture, Trade and Consumer Protection					
Soil and water management admin.	$2,237,900	$2,245,300	$2,216,400	$2,217,600	20.30
County staffing grants	5,940,500	5,823,400	5,512,600	5,936,900	0.00
Soil and water management grants	2,594,000	2,738,300	2,257,100	3,825,000	0.00
Debt service	3,776,800	3,825,800	4,114,400	4,668,200	0.00
Natural Resources					
Nonpoint source operations	$1,816,100	$1,753,500	$1,215,000	$1,769,000	15.25
Department operations	339,000	341,900	366,500	370,700	0.91
Nonpoint source contracts	865,800	1,212,000	831,100	767,600	0.00
Urban nonpoint source grants	1,064,400	975,300	1,005,200	500,000	0.00
Rural TRM/NOD grants	0	0	65,000	100,000	0.00
Debt service – Facilities	102,600	100,000	104,200	109,700	0.00
Debt service – Priority watershed	7,506,700	6,716,500	6,106,200	5,675,900	0.00
Debt service – TRM	1,444,800	1,766,000	2,165,800	2,206,700	0.00
Debt service – UNPS	2,995,800	3,000,800	3,196,100	3,363,100	0.00
Total Expenditures	$30,684,400	$30,498,800	$29,155,600	$31,510,400	36.46
Cash Balance	$9,987,200	$6,619,900	$11,058,600	$9,577,800	
Encumbrances/Continuing	-13,264,500	-12,064,700	-13,495,200	-13,495,200	
Tipping fees receivable	9,574,800	11,554,700	8,377,500	8,377,500	
Unobligated Balance	$6,297,500	$6,109,900	$5,940,900	$4,460,100	

* Tipping fees vary based on timing of year-end billings, which may be collected the following fiscal year.
** Includes transfers of: (a) $1,000,000 in each year of the 2015-17 biennium from the agricultural chemical cleanup fund; and (b) $3,652,500 in each year of the 2017-19 biennium from the environmental management account.

Programs." In the 2017-19 biennium, the decrease in the annual GPR transfer to the nonpoint account was offset by an equivalent transfer from the environmental management account of $3,652,500 annually. However, while the GPR transfer reduction was ongoing, the transfer from the environmental management account is on a one-time basis during the 2017-19 biennium. Under current law, this will result in a structural imbalance in the account in the 2019-21 biennium, with adjusted base expenditures that will exceed anticipated revenues.

Expenditures

The following section discusses budgeted 2018-19 expenditures for programs supported by the nonpoint account. It should be noted that budgeted amounts do not closely reflect annual grant awards discussed in previous sections due to the

timing of grant awards, returned funds, projects finishing under cost, and the reimbursement nature of many grant programs, all of which may delay expenditure of funds or make available additional funding.

Debt Service. The largest expenditure category within the nonpoint account is principal and interest payments primarily for general obligation bonds issued for SWRM and nonpoint grant programs discussed previously. Debt service funds also support the now discontinued priority watershed program, the predecessor program to modern nonpoint programs. Finally, a small amount of debt service is associated to DNR facilities proportionally attributed to nonpoint programs. In 2018-19, debt service represents 51% of budgeted nonpoint SEG expenditures, totaling $16,023,600, with $4,668,200 under DATCP and $11,355,400 under DNR.

DATCP Grants. As discussed previously, DATCP supports a number of its SWRM grant programs with nonpoint SEG, including county conservation staff funding, cost-sharing for nutrient management planning and other soft conservation practices, producer-led watershed protection grants, nutrient management farmer education grants, and project cooperator grants. These are supported by two appropriations totaling $9,761,900 in 2018-19, with the majority of funding directed towards county conservation staff. 2017 Act 59 increased nonpoint SEG base funding for county conservation staff by $900,000 annually to provide $5,936,900 nonpoint SEG and $3,027,200 GPR. (Previous biennial budget acts had provided one-time supplements to the base funding level for conservation staffing grants, including $998,000 in 2013-14, $815,900 in 2014-15, and $675,000 each year in the 2015-17 biennium.

DNR Grants. Similar to DATCP, DNR supports a number of its nonpoint grant programs with nonpoint SEG. These grants typically support non-structural practices in the TRM, UNPS planning, and MFC programs that would not be eligible for bond funding. UNPS construction grants may also receive nonpoint SEG support, although SEG funds are primarily directed for planning purposes. 2017 Act 59 also provided $50,000 in 2017-18 to the Southeastern Wisconsin Regional Planning Commission (SEWPRC) for a storm water management study for the City of Burlington. Total budgeted nonpoint SEG amounts are $600,000 in 2018-19.

DNR Nonpoint Contracts. DNR is appropriated funds for contracts with entities providing research, education, and outreach related to its nonpoint programs. These contracts have historically been awarded to UW-Extension and other UW System institutions. In the 2017-19 biennium, these funds primarily supported the Natural Resources Education program at UW-Extension ($300,000 annually), UW-Madison Soils Department development and maintenance of SnapPlus nutrient management planning software ($180,000 annually); and nonpoint runoff research at USGS ($130,000 annually). 2017 Act 59 provided $767,600 annually in the 2017-19 biennium for these contracts, consisting of $500,000 in one-time funding and $267,600 in ongoing funding. This was decreased from historical amounts of $997,600 annually in fiscal years 2003-04 through 2016-17. Act 59 also removed a requirement that $500,000 of contracts annually be provided to UW-Extension for education and technical assistance, which primarily supported the Natural Resources Education program.

DATCP Staff and Administration. A portion of nonpoint SEG funds support staff and administrative costs related to each department's nonpoint programs. DATCP is appropriated $2,217,600 in 2018-19 with 20.30 positions as part of the Bureau of Land and Water Resources, as seen in Table 7. Supported activities include establishing technical standards for nonpoint pollution, assisting the development of nonpoint pollution abatement measures, providing agricultural engineering assistance across the state through five field

offices, implementing the farmland preservation program, providing nutrient management support, overseeing county LWRM planning, managing grant programs and evaluating nonpoint pollution abatement efforts.

DNR Staff and Administration. As seen in Table 7, DNR activities are supported by $2,139,700 and 16.16 positions from the nonpoint account in 2018-19. DNR staff dedicated to nonpoint operations, totaling 15.25 positions for $1,769,000, conduct the following activities: (a) grant administration; (b) policy development; (c) regulation, permitting, and enforcement of WPDES permits for CAFOs and smaller facilities that have been sources of manure or process wastewater discharges to state waters; (d) coordination and technical support related to implementation of agricultural performance standards; (e) wastewater engineering; and (f) research, evaluation, and monitoring of nonpoint source water pollution. Nonpoint operations expenditures include support of $400,000 for the Wisconsin waters initiative, used to develop a computer-based system to improve access to water-related site information electronically. The goal of this initiative is to expedite water permit processing and enable access to data such as floodplain maps. Finally, 2017 Act 59 provided $65,000 nonpoint SEG in 2017-18 under nonpoint operations for a project using biomanipulation to improve water quality of Tainter Lake in Dunn County; this amount is not included in the 2018-19 figures in Table 7.

Table 7: 2018-19 Administrative Funding and Positions

	DATCP		DNR	
Source	Funding	Staff	Funding	Staff
GPR	$0	0.00	$861,300	8.50
FED	191,100	1.50	2,655,900	26.72
SEG-NP	2,217,600	20.30	2,139,700	16.16
SEG-EIF	0	0.00	174,800	2.00
PR	0	0.00	1,646,700	16.50
Total	$2,408,700	21.80	$7,478,400	69.88

The nonpoint account also supports 0.91 position and $370,700 in 2018-19 for a portion of departmentwide activities attributable to nonpoint programs, such as legal services, finance and auditing, administrative and field services, data processing, information technology, human resources, facility rental costs, grant management, licensing, and public information.

Other Funding Sources

General Purpose Revenue

In addition to the $7,991,100 GPR annually transferred to the nonpoint account, DATCP and DNR receive other appropriations of GPR for nonpoint programs. DATCP was appropriated $3,027,200 each year in the 2017-19 biennium for county conservation staff awards, as discussed previously. DNR also uses GPR to support its CAFO regulatory duties, estimated to cost $861,300 with 8.50 positions in 2018-19.

Program Revenue

DNR is authorized $1,646,700 PR in 2018-19 with 16.50 positions under an annual appropriation for storm water management and permitting. The DNR storm water program is responsible for annual WPDES permitting of municipalities, industrial sites, and construction sites required to operate under permits for their storm water discharges. The program also conducts inspections and enforcement of permit violations. Storm water management is discussed in greater detail in Chapter 3.

Federal Funds

NRCS Grants to DATCP. DATCP has often received various federal grants for projects related to nonpoint programs. In 2017, DATCP was

awarded a NRCS grant for $350,000 to establish a network of demonstration farms in Door and Kewaunee counties to demonstrate conservation practices that benefit surface water and groundwater in the Great Lakes basin. In 2018, DATCP was awarded a three-year conservation collaboration grant totaling $332,900 from NRCS to hire a technician that will provide engineering assistance to farmers in northwestern Wisconsin that participate in state and federal conservation programs.

USDA Programs. As discussed previously, federal programs from USDA's NRCS and FSA were allocated $92.9 million in federal fiscal year 2018, available for the installation of conservation practices to prevent nonpoint runoff and soil erosion, restore wetlands and wildlife habitat, and retire agricultural land.

Clean Water Act. DNR and DATCP receive funds from EPA under the Clean Water Act to support activities related to nonpoint source pollution control (Section 319 of the Act) and general surface water and groundwater pollution control (Section 106). In 2018-19, DNR received Section 319 funds totaling $494,200 that support 4.0 positions, and Section 106 funds totaling $2,161,700 that support 22.72 positions. In addition, DNR transferred $191,100 in Section 319 funds to DATCP in 2018-19, which support 1.50 positions for engineering work in the field related to education, design, and implementation of BMPs. These amounts are seen in Table 7.

Also under the Clean Water Act, DNR and DOA administer the clean water fund program, which provides subsidized loans to municipalities for nonpoint source pollution abatement and storm water management projects. The subsidized interest rate is 55% of the market rate. As of June 30, 2018, the program has funded 26 nonpoint or urban storm water projects for $23,414,900. The Legislative Fiscal Bureau informational paper entitled, "Environmental Improvement Fund" describes the clean water fund program.

The environmental improvement fund (EIF) also provides 2.0 positions and $174,800 EIF SEG for CAFO regulatory activities within DNR. 2017 Act 59 expanded eligible activities under the environmental improvement fund to allow DNR to support CAFO regulatory staff.

Other Federal Funds. Grant recipients in Wisconsin have received federal Great Lakes Restoration Initiative funding of at least $331 million since 2010, as discussed previously.

Adaptive Management, Water Quality Trading and the Multi-Discharger Variance for Phosphorus

In addition to traditional grants and agency support for nonpoint source water pollution abatement, alternative approaches to water quality improvement are available through adaptive management (AM) and water quality trading (WQT) programs. Both AM and WQT approaches recognize that discharges of pollutants to a watershed can more readily be reduced by engaging multiple entities to cooperate on abatement activities, notably from nonpoint sources, to achieve the most cost-effective solutions to water quality issues. While point sources, such as wastewater treatment plants or industrial facilities, may have discharges that are easier to identify and monitor, such entities have already achieved reductions of certain regulated pollutants, and pursuing additional reductions may be technologically difficult or expensive. At the same time, nearby nonpoint sources may have relatively fewer pollution controls and may be able to manage their runoff with lower-cost practices to help meet water quality standards for area waters.

The following sections discuss both AM and WQT programs. While each seek similar results, they do so through different approaches. AM seeks pollution reductions based on attainment of a certain water quality standard of an entire waterbody, while WQT represents equivalent, measured reductions of a given pollutant from different sources within the same watershed. In both instances, point and nonpoint source

dischargers cooperate to reduce pollutants in a watershed through more cost-effective means.

Water Quality Trading. Section 283.84 authorizes DNR to administer a water quality trading program under the federal Water Pollution Control Act. Under water quality trading agreements, WPDES-permitted point sources may enter into agreements with credit generators to offset the following pollutants, among others: (a) phosphorus, (b) total suspended solids (TSS), (c) temperature, and (d) nitrogen. Credit generators may include: (a) other point sources who agree to reduce their discharges; (b) DNR or local governmental units that will use funds to reduce nonpoint pollution, often through cost-share grants; (c) other watershed dischargers not under a permit, typically nonpoint sources, who agree to reduce their discharges; or (d) the WPDES-permitted point source, if operators are implementing their own project to reduce pollution outside their permitted discharges. Credit generators receive payments to implement practices that would reduce pollutant levels within the same watershed, and are preferred to be upstream of the trading discharger. Credits are scaled to a ratio based on factors related to the nature of the practice and its demonstrated success in reducing a pollutant. For example, a hypothetical trade ratio of 2:1 for nutrient management planning means two pounds of pollutant reduction from NMP would be worth equivalent to one pound of discharge at the point source.

Adaptive Management. NR 217 creates an AM option for WPDES-permitted point source dischargers of phosphorus that can demonstrate: (a) the phosphorus concentration is above water quality standards; (b) more than 50% of the phosphorus in water is attributable to nonpoint sources; and (c) technological improvements would be necessary for the plant to achieve water quality standards. Entities approved for an AM plan may take up to three five-year WPDES permit terms to meet phosphorus concentration limits, with requirements becoming progressively more stringent each term. Entities would cooperate with others in the watershed to implement eligible practices to reduce phosphorus pollution. Eligible activities funded under AM agreements include both urban and agricultural BMPs, such as porous pavement, retention basins, cover crops, nutrient management planning, and wetland restoration, among others.

Multi-Discharger Variance for Phosphorus. Federal law provides regulatory flexibility to states for implementing water quality standards in the form of variances. A variance is a short-term deviation from pollution abatement standards that represents the highest attainable pollution abatement with given technology within a given time period. Variances are intended to allow incremental step-ups over a period of time to enable a more feasible and cost-effective implementation of pollution abatement technology. Under Chapter 283 of the statutes, point sources may apply for an individual variance on a case-by-case basis.

Effective December 1, 2010, the state promulgated new, stricter phosphorus standards for point sources under WPDES permits. DNR reports that under these new standards, almost 80% of permittees face more stringent standards than under previous standards. 2013 Wisconsin Act 378 required DOA to examine the compliance costs on Wisconsin industries, municipalities, and the overall economy, and DOA found that expenditures of at least $3.45 billion would be required by Wisconsin businesses and municipalities to comply with the new phosphorus rule. As a result of this analysis, DOA directed DNR to apply to EPA for a multi-discharger variance for phosphorus. A multi-discharger variance (MDV) means that each point source would not be required to apply individually to DNR and receive DNR and EPA approval for a variance from phosphorus standards. Instead, approval would be granted by DNR to any point source meeting certain criteria.

DNR received approval from EPA in February, 2017, for the MDV for phosphorus. Qualifying municipal and industrial wastewater treatment

facilities are eligible for the variance; CAFOs and MS4s under WPDES permits are not. Facilities under the variance are required to optimize their performance in controlling phosphorus discharges, but will be allowed four WPDES permit terms, or 20 years, before being required to comply fully with effluent limits for phosphorus.

During the interim period, facilities will be required to incrementally reduce discharges, while also undertaking one of three options to reduce phosphorus discharges within their watershed. The first two options consist of either a permit holder or a third-party contractor implementing practices to reduce phosphorus discharges within the geographic drainage basin of the point source. The amount of phosphorus reduction is required to be at least as much as the difference between the point source's actual phosphorus contributions and the level it would be expected to reach to meet effluent limits. Any person conducting a project under these options must report annually to DNR on the estimated phosphorus reductions achieved by the project. If the project is shown not to effectively reduce phosphorus, the project is to be modified or terminated. For 2018, DNR reports three permittees selected the watershed project option, all of which were self-directed.

The third option is for the permit holder to make payments to counties in support of county nonpoint source pollution abatement activities. The payment is to be an amount per pound of phosphorus by which the point source in the previous year exceeded the level of phosphorus discharge it would be expected to reach to meet water quality standards. The amount was originally set at $50 per pound, and is annually adjusted by DNR for inflation. For 2018, it was $52.02 per pound of phosphorus. In 2017, two permittees selected this option, with total payments of $2,600. In 2018, 37 permittees selected this option, with estimated total payments of approximately $750,000 available to 65 of 72 counties, provided they are participants. DNR determines final payments in January each year, and distributes them each March.

Payments are distributed to counties electing to participate in the MDV program in proportion to the territory each county has in the basin. If no counties are participating in the basin, DNR may direct payments to counties of its choice. For 2017 funding, 16 counties elected to participate. For 2018, applications are open through January 1, 2019. Between 2017 and 2018 applicants to date, 20 unique counties have applied. DNR anticipates total counties participating to increase for 2018 funding, since more funding is available and more permittees are participating.

Counties must develop a plan for funds they receive. The plan must: (a) be consistent with the county LWRM plan; (b) include measures to ensure project completion and evaluation; and (c) identify projects or watersheds with the greatest potential to achieve phosphorus reductions. Funds received by counties may support: (a) cost-sharing projects to reduce phosphorus at agricultural facilities; (b) staff to implement such projects; or (c) modeling or monitoring of waters for planning purposes for future efforts to reduce phosphorus entry into state waters. At least 65% of funds must be used for cost-share projects. Two years after receiving a payment from a point source permit holder, a county must submit a report detailing the projects or staff funded and the estimated pounds of phosphorus reductions achieved. Reports are to be submitted to each permit holder from which it received payments, as well as DNR and DATCP. DNR is to review the reports, and if it determines funding is not being effectively used to reduce phosphorus entry to state waters, future funding can be reduced or eliminated.

DNR reports that the MDV has proven to be effective in providing relief to facilities and communities experiencing economic hardship as a result of stringent phosphorus standards, has improved viability of other compliance options like AM and WQT, and has provided substantial cost savings to both DNR and EPA related to development, review, and approval of individual variances.

Nonpoint Source Performance Standards

The 1997-99 biennial budget act required DNR to develop performance standards for agricultural activities and facilities, and required DATCP to prescribe conservation practices that would allow attainment of the associated performance standards. Performance standards are to be designed to achieve state water quality standards by preventing or limiting nonpoint source pollution. At a minimum, the prohibitions must provide that livestock operations have no:

1. Overflow of manure storage structures;

2. Unconfined manure piled in a "water quality management area" (WQMA), defined as follows: (a) the area within 1,000 feet from the ordinary high-water mark of a lake, pond or flowage; (b) the area within 300 feet from the ordinary high-water mark of a river or stream; or (c) sites that are susceptible to groundwater contamination or that have a potential to be a direct conduit to groundwater contamination;

3. Direct runoff from a livestock operation or stored manure into waters of the state; or

4. Unlimited access by livestock to waters of the state where high concentrations of animals prevent adequate sod cover.

Additionally, DNR is required under Chapter 281 of the statutes to prescribe performance standards for nonagricultural, nonpoint source water pollution. The Department is also required to develop and disseminate technical standards to implement these performance standards.

With the promulgation of the nonpoint source water pollution abatement rules, there are enforceable state standards to control runoff. DNR administrative rule NR 151 establishes the standards and defines enforcement procedures. However, as noted earlier, agricultural sources are entitled to receive a cost-share offer before being required to change an existing livestock operation or facility, or existing cropland.

NR 151

In order to administer its nonpoint and soil erosion performance standard responsibilities, DNR promulgated administrative rule NR 151. The rule prescribes performance standards for three general areas: (a) agricultural land; (b) nonagricultural land; and (c) transportation facilities, including highways, roads, public mass transit facilities and harbor improvements. The performance standards initially took effect in 2002 and underwent further revisions in 2011 and 2018.

Agricultural Standards. NR 151 generally divides agricultural performance standards by those for croplands and those for livestock. Cropland performance standards include those for: (a) erosion; (b) tillage setback; (c) phosphorus; (d) nutrient management; and (e) total maximum daily load (TMDL) requirements. Livestock performance standards relate to: (a) TMDL requirements; (b) process wastewater handling; (c) clean water diversions; (d) manure storage facilities and handling; (e) nutrient management; and (f) phosphorus. Performance standards are summarized in Table 8. It should be noted that conservation practices specified in administrative

Table 8: NR 151 Agricultural Performance Standards

Pollutant/Activity	Standard
Erosion Control	Must meet tolerable ("T") soil-loss rate as determined for specific site.
Tillage Setback	Minimum five feet from top of water channel; up to 20 feet may be required.
Phosphorus Index	Average phosphorus index (PI) of 6 over eight-year period; no PI higher than 12 for any individual year.
Nutrient Management	Mechanical applications of nutrients must be done according to management plan.
Total Maximum Daily Load	Reduce discharges as needed to meet TMDL for watershed.
Process Wastewater	No significant discharges of water contacting animals, animal byproducts or raw materials.
Clean Water Diversions	In WQMAs, no runoff contact with feedlots, barnyards or manure storage areas.
Manure Storage Facilities	Construction and operation shall minimize risks of leaking or overtopping.
Manure Management	Manure shall be properly stored and kept separate from runoff water.
Silurian Bedrock	Manure applications must comply with specified practices to avoid well and groundwater contamination.

rule ATCP 50 serve the purpose of implementing agricultural performance standards in NR 151.

Erosion Control. All cropland and pasture must be managed to meet a tolerable soil erosion rate, or "T," which is intended to be the maximum average annual rate of soil erosion allowable that will also sustain high crop productivity. The T-value for most Wisconsin cropland and pasture is two to five tons of erosion per acre per year. Rates for individual fields are calculated under soil-loss models developed by the USDA NRCS that account for particular characteristics of the field. State erosion control goals are discussed later in greater detail.

Tillage Setback. The tillage setback prohibits tilling that would compromise the integrity of stream banks or result in direct sediment deposits to surface waters. Specifically, the standard generally allows no tilling within five feet of the top of a surface water channel. Setbacks of up to 20 feet may be required in instances where such an increase is determined to be necessary. Further, setback areas must be at least 70% covered by sod or self-sustaining vegetative covers. These conditions and dimensions do not apply to a grassed waterway installed specifically as a conservation practice.

A tillage setback may resemble a riparian buffer by limiting tillage on some areas. However, a riparian buffer, which is a conservation practice eligible for cost sharing under DATCP and DNR grant programs, would typically have varying plantings and widths to account for upland drainage areas.

Phosphorus Index. NR 151 also contains limits on the amount of phosphorus runoff allowed from cropland, pasture, and winter grazing areas. Phosphorus loading is measured using the phosphorus index (PI), which is an estimate of phosphorus loading potential of agricultural lands based on indigenous phosphorus in soil, phosphorus introduced through fertilizers or manure, and the field's estimated soil erosion rate. The NR 151 performance standard allows for an average PI of 6 over a period of eight years. The PI, however, is not to exceed 12 for any single year in that period. The eight-year accounting period begins with completion of a nutrient management plan, and the PI initially is to be calculated based on planned phosphorus introductions rather than historical

data. Actual data, however, is to be used each year as it becomes available following the beginning of the accounting period. In addition to meeting PI limits for runoff potential, the phosphorus standard prohibits crop and livestock producers from applying nutrients or manure directly to surface waters.

As with the tillage setback standard, the phosphorus index standard is intended to be in lieu of required riparian buffers, in that it limits phosphorus introduction to waters but allows landowners discretion in achieving the standard.

Nutrient Management. As discussed earlier, the nutrient management standard requires applications of fertilizer, manure or other nutrients to be in accordance with a nutrient management plan created for the cropland. This requirement took general effect on October 1, 2003, for new cropland and by January 1, 2008, it was in effect for most other existing cropland, provided there is a bona fide offer of cost sharing if applicable.

Total Maximum Daily Load. The 2011 revisions to NR 151 created requirements that crop or livestock producers reduce pollution discharges to surface waters if necessary to achieve limits established for a TMDL. TMDL plans are required for waters on the state list of impaired waters submitted biennially by DNR to the EPA. TMDL reports use studies of pollutant loading within the impaired water's basin to allocate a maximum daily amount of pollutants from both point and nonpoint sources that can enter the water and still allow the body to meet water quality standards.

Process Wastewater. Under the 2011 revisions, NR 151 prohibits all significant discharges of process wastewater to any surface water or groundwater. Process wastewater includes production-area wastewater from an animal feeding operation that results from: (a) overflow of watering systems; (b) washing, cleaning or flushing of pens, barns, manure pits or other facilities; or (c) water used for swimming, washing or spray cooling that directly contacts animals, raw materials or animal byproducts such as manure, feed, bedding, milk, or eggs.

A significant discharge is to be determined based on the circumstances of the event, including: (a) the volume and frequency of discharges; (b) the discharge's proximity to affected waters; (c) the means of wastewater conveyance to affected waters; (d) slope, vegetation and rainfall that may influence the frequency and likelihood of discharges; and (e) the susceptibility of groundwater to contamination from the discharge and whether the discharge was to a direct conduit to groundwater, such as a well or area of bedrock fracture.

Clean Water Diversions. The performance standard for clean water diversions applies only to livestock producers within a water quality management area, which is discussed earlier. The standard generally requires runoff water to be diverted from contacting feedlots, manure storage areas and barnyard areas within the WQMA.

Manure Storage Facilities. The performance standard for manure storage facilities requires facilities to be designed, built and maintained to minimize or eliminate the risk of failures, including leaks to surface and groundwater sources or overtopping in significant rains. The standard applies to new facilities, including those being substantially altered from existing uses, as well as facilities being abandoned. Any facility ceasing operation with no additions or removals of manure is to be closed in a manner to prevent future leakage or contamination. Similarly, operating facilities that pose an imminent threat to public health or fish and aquatic life, or that are violating groundwater standards, are also to be upgraded, replaced or abandoned.

Manure Management. NR 151 prohibits mishandling of manure that results in any of the following: (a) an overflow of storage facilities; (b) an unconfined manure pile existing in a WQMA;

(c) direct runoff to surface or groundwater from a feedlot or stored manure; or (d) unlimited access to state waters by livestock, such that animal concentrations are high enough to prevent continuing sod or self-sustaining vegetative cover to prevent runoff and preserve bank integrity.

Area-Specific Standards for Silurian Bedrock. Silurian bedrock has been found to allow rapid transport of contaminants from surface to groundwater without attenuating those contaminants, leading to a higher chance of groundwater contamination. As a result, DNR promulgated revisions to NR 151 in 2018 to create more stringent, terrain-specific performance standards in order to ensure attainment of state surface water and groundwater standards. The revisions require producers to comply with progressively more restrictive manure spreading practices in areas with less than 20 feet of soil to bedrock, and prohibit mechanical spreading for areas with less than two feed of soil to bedrock. Silurian bedrock is located in the eastern portions of Wisconsin, including Brown, Calumet, Dodge, Door, Fond du Lac, Kenosha, Kewaunee, Manitowoc, Milwaukee, Outagamie, Ozaukee, Racine, Walworth, Washington, and Waukesha counties.

Nonagricultural Performance Standards. The 2011 revisions to NR 151 created two standards for construction sites. One standard applies to sites not required to hold a WPDES storm water permit, which generally are those less than one acre in size, and the other applies to sites of one acre or larger, which are required to hold a WPDES storm water permit under administrative rule NR 216. Each nonagricultural standard is described below. Table 9 summarizes performance standards for construction sites.

Construction Sites–Non-Permitted. The non-permitted site standard requires practices to reduce the following: (a) soil being tracked onto streets from vehicle tires; (b) sediment discharges by various means; and (c) runoff of chemicals, cement and other building compounds, unless required by the nature of the project, such as bridge supports. Controls are to be in place prior to construction beginning and must remain in place until land disturbances cease and final grade has been reached.

Construction Sites–Permitted. Requirements for permitted sites differ, depending on whether the responsible party sought WPDES storm water permit coverage prior to January 1, 2011. For sites seeking permit coverage prior to January 1, 2011, permitted sites are to implement BMPs designed to achieve an 80% reduction in the sediment load carried off-site, compared to a circumstance of no controls, as measured on an average annual basis. However, the rule allows reductions to be to the "maximum extent practicable," if the responsible

Table 9: NR 151 Construction-Site Performance Standards

Activity	Standard
Less than One Acre (Non-Permitted) Soil/Sediment Loss Controls	BMPs shall reduce or prevent soil tracking on streets, and reduce or prevent discharges of sediment, chemicals or building materials.
One Acre or Larger (Permitted), Prior to January 1, 2011 Sediment Runoff	Sites in general should reduce or prevent soil tracking on streets and sediment discharges; additionally, BMPs must reduce sediment carried off site by 80%, as compared to no control, or to the maximum extent practicable if 80% is unattainable.
One Acre or Larger (Permitted), After January 1, 2011 Soil/Sediment Loss Controls	Sites in general should reduce or prevent soil tracking on streets and sediment discharges; additionally, BMPs must reduce sediment carried off site: (a) by 80% if site is permitted by Jan. 1, 2013; (b) to no more than 5 tons/acre/year if site permitted after January 1, 2013; or (c) to maximum extent practicable if standard is unattainable.

party justifies to DNR why the 80% standard is unattainable. Sites are also obligated to manage soil tracking, sediment deposition and chemical release similar to the manner described for non-permitted sites.

For sites seeking WPDES storm water permit coverage beginning January 1, 2011, NR 151 requires one of two standards for sediment contained in runoff. For sites that sought coverage by December 31, 2012, BMPs needed to achieve a reduction in sediment load of 80%, as compared to no controls on an average annual basis, or to the maximum extent practicable. For sites seeking coverage beginning January 1, 2013, the standard is no more than five tons of sediment per acre per year. Regulated sites may also reduce sediment loading to the maximum extent practicable if BMPs cannot be designed to meet the specified standards. All permitted construction sites must attempt to limit sediment loss in the manner described for non-permitted sites, and must also: (a) maintain existing vegetation, where practicable; (b) minimize soil compaction and preserve topsoil; (c) minimize land disturbances on slopes of 20 degrees or steeper; and (d) develop spill prevention and responses.

As with non-permitted sites, permitted sites are to institute erosion control practices prior to land-disturbing activities occurring, and practices must remain in place throughout construction. Permitted sites are also required to create a written plan that implements all applicable NR 151 requirements.

Post-Construction. NR 151 requires several performance standards to be met following the completion of construction activities at each WPDES storm water-permitted construction site. As is the case for the performance standards applied to WPDES storm water-permitted construction sites, post-construction sites must meet different standards under NR 151 if the initial construction project sought permit coverage following the effective date of the 2011 NR 151 revisions.

All post-construction sites must meet standards relating to: (a) total suspended solids (TSS); (b) peak discharges, which would be estimated to occur during a 24-hour design storm taking place on average every two years; (c) infiltration of runoff volume; (d) areas immediately adjacent to bodies of water, known as protective areas; and (e) fueling and vehicle maintenance areas. As with active construction sites, post-construction sites must continue adhering to a written storm water plan that incorporates NR 151 requirements. The performance standard in each category, based on when the initial construction site sought its WPDES storm water permit, is shown in Table 10. Percentage reductions typically are determined by using runoff models that show how a BMP designed in a particular manner would be expected to reduce runoff, relative to an environment at the site in which no controls existed. Installed BMPs are required to be maintained as designed.

Developed Urban Areas. NR 151 creates requirements both for incorporated municipalities of more than 1,000 residents per square mile but not holding WPDES MS4 permits for storm water discharges under NR 216, and for municipalities required to hold a WPDES MS4 permit under NR 216. Both municipal categories must implement programs including yard waste management, proper nutrient application to municipal turf areas, and detection and elimination of illicit discharges. Municipalities must also provide public education on these topics.

Municipalities covered by WPDES MS4 permit must also achieve TSS reductions in storm water runoff from existing development. These reductions are to occur in stages, and are measured as percentages compared to an alternative of no controls. Permitted municipalities must achieve a Stage 1 TSS reduction of 20% within two years of WPDES MS4 permit coverage. Stage 2

Table 10: NR 151 Post-Construction Performance Standards

Category	Standard Prior to Jan. 2011	Standard Beginning Jan. 2011
Total Suspended Solids (Percentage Reduction)		
New Development	80%	80%
Redevelopment	40%	40%*
In-Fill Development, <5 Acres, Before Oct. 1, 2012	40%	40%
In-Fill Development, <5 Acres, On or After Oct. 1, 2012	80%	80%
In-Fill Development, ≥ 5 Acres	80%	80%
Peak Discharge	No more than pre-development peak runoff for 2-year, 24-hour storm.	No more than pre-development peak runoff for 1-year and 2-year 24-hour storms.
Infiltration (Minimum, as a Percentage of Pre-Development Volume)		
Residential	90%, or at least 25% of 2-year, 24-hour storm	N/A
Non-Residential	60%, or at least 10% of 2-year, 24-hour storm	N/A
Low Imperviousness (Parks, Cemeteries)	N/A	90%
Medium Imperviousness (Multi-Family Residential)	N/A	75%
High Imperviousness (Strip Malls, Downtowns)	N/A	60%
Protective Areas (An area extending outward from the edges of lakes, rivers, streams and wetlands, up to a specified distance, usually 50 to 75 feet)	No impervious surfaces, and at least 70% vegetative cover for land-disturbing construction.	No impervious surfaces, and at least 70% vegetative cover for land-disturbing construction.
Fueling and Vehicle Maintenance	BMPs shall reduce petroleum in runoff to eliminate sheen.	BMPs shall reduce petroleum in runoff to eliminate sheen.

*Applies to parking areas and roads.

requirements are one of the following: (a) a 40% TSS reduction by March 31, 2013, if WPDES MS4 permit coverage began January 1, 2010, or earlier; (b) a 40% TSS reduction within seven years of WPDES MS4 permit coverage if permit coverage was issued later than January 1, 2010; or (c) if a 40% reduction is not achieved, the municipality may describe controls in place and submit a long-term storm water management plan to describe future cost-effective efforts to reach the 40% reduction. If a municipality will not meet the seven-year deadline, NR 151 contains provisions under which DNR may extend the compliance deadline by 10 years or more. Any such extension would include five-year reviews by DNR.

2011 Act 32 limits the application of the Stage 2 requirements by prohibiting DNR from enforcing a rule provision that requires a permitted municipality to achieve a specified TSS reduction if the reduction would exceed 20%. However, WPDES MS4-permitted municipalities that had achieved a TSS reduction of more than 20% are required to maintain, to the maximum extent practicable, any BMPs implemented by the act's effective date of July 1, 2011. This provision is intended to prevent the degradation or abandonment of publicly funded practices already in place that may have contributed to water quality improvements.

The 2011 Act 32 provision and the 2011 NR 151 revisions were intended to reflect concerns that costs of complying with the TSS deadlines

Table 11: NR 151 Developed Urban Area Performance Standards

All Urban Areas (1,000+ persons/square mile)	**Additional for WPDES MS4 Permit Holders**
Storm Water Management Plan	Stage 1:
Yard waste management	20% TSS reduction in storm water from existing development
Proper nutrient application to municipal turf	Stage 2:
Prevention of illicit discharges	40% TSS reduction by varying deadlines; superseded by 20% maximum reduction specified by s. 281.16 (2) (am)
Public education on runoff prevention	

could be too onerous. Prior to January 1, 2011, the NR 151 performance standards for developed urban areas required WPDES MS4-permitted municipalities to achieve a 20% TSS reduction by March 10, 2008, and a 40% reduction by March 10, 2013. The seven-year compliance period for certain municipalities, as well as the option to develop a long-term storm water management plan, were introduced in the 2011 NR 151 revisions. Requirements for developed urban areas are summarized in Table 11.

Turf Standards. NR 151 requires that private owners of nonagricultural turf or gardens of five acres or larger that apply nutrients for fertilizer do so based on site-specific schedules designed to achieve optimum health of the turf or garden through the use of soil tests. The provision applies only to properties that discharge to surface or groundwater, and that are not the site of silvicultural (forestry) activities.

Transportation Facility Performance Standards. Transportation facilities are required to be constructed according to a development plan that utilizes BMPs to meet all performance standards. In general, the standards for transportation facilities in each category mirror those for nonagricultural facilities. This includes differences for: (a) construction sites, which can be either WPDES-permitted for storm water or not; (b) post-construction sites; or (c) transportation facilities in developed urban areas. Further, standards may differ somewhat between sites seeking coverage either before or after January 1, 2011, as is the case with other nonagricultural standards. As such, the preceding tables depicting nonagricultural performance standards are largely consistent with standards for transportation facilities. For example, construction site performance standards for transportation facilities are those summarized in Table 9, with non-permitted sites including both those less than one acre, or those less than five acres undergoing routine maintenance for cleaning of storm water conveyance systems. Notable differences for post-construction and developed-area standards for transportation facilities are described below, although overall TSS reduction requirements are consistent.

Post-Construction. Standards for TSS reduction at post-construction transportation facilities are slightly different than those summarized in Table 10 for nonagricultural facilities and practices. Transportation facilities must achieve the following reductions: (a) for new transportation facilities, 80%; (b) for highway reconstructions, 40%; and (c) for redevelopment of non-highway transportation facilities, 40% of the load from parking areas and roads. The standard for highway reconstruction applies beginning January 1, 2017, for municipalities with WPDES storm water permits and transportation facilities under the jurisdiction of the Wisconsin Department of Transportation (DOT) that are located in WPDES MS4-permitted municipalities, provided permit coverage was sought after January 1, 2011.

Standards relating to transportation facilities in protective areas are somewhat less restrictive than the same standards for nonagricultural facilities. NR 151 prohibits impervious surfaces of

transportation facilities in protective areas, unless it is determined necessary by the approving authority of the facility and DNR. In such a case, construction is only allowed to the degree it is reasonably necessary.

Post-construction facilities that use swales for runoff conveyance generally are considered to meet applicable performance standards, provided the swale is vegetated and meets certain technical standards. (A swale is a channel that receives and absorbs runoff. It commonly contains vegetation, and may be located on roadsides or in highway medians.) DNR may impose additional requirements on swales occurring near certain high-traffic areas where runoff enters impaired or significant waters.

Post-construction performance standards for transportation facilities may not in all cases apply to certain activities, such as minor reconstruction of highways, bicycle/pedestrian paths, or road resurfacing.

Developed Urban Areas. DOT transportation facilities within a WPDES MS4-permitted municipality must meet 20% and 40% TSS reductions consistent with those assigned to the municipality as described earlier. DOT has the same flexibility granted to municipalities in achieving a 40% reduction if a standard seven-year deadline is unattainable. DNR interpreted the 2011 Act 32 provision limiting the 40% TSS reduction for covered municipalities to also apply to the identical TSS reduction standard required of DOT transportation facilities within covered municipalities.

Implementation Procedures. Although much of the language of NR 151 refers to DNR ensuring compliance with performance standards, standards in many cases may be implemented and enforced by local entities. The implementation of each performance standard is described below.

Agricultural. NR 151 provides that DNR may rely on local governments to implement standards and make various determinations required if landowners are believed to be noncompliant. In most cases, county land conservation departments implement and enforce agricultural standards. However, NR 151 also states DNR intends to assist counties when requested and pursue compliance in cases where municipalities have failed to achieve it. It should be noted that local governments may also enforce their own ordinances that primarily focus on livestock facilities. Local regulations are discussed in a separate section.

Construction Sites and Post-Construction. For sites of at least one acre of land disturbance, implementation of performance standards for construction sites and post-construction sites occurs through the process under NR 216 by which landowners apply to DNR for construction site storm water discharge permits. NR 216 requires a permittee to have both an erosion control plan (for construction) and a storm water management plan (post-construction), each of which must describe how the site will meet the applicable performance standards.

Municipalities are encouraged to adopt storm water management ordinances, both explicitly in NR 151 language and implicitly under score-multiplier provisions in the ranking procedures of the competitive TRM and UNPS grant programs. Those municipalities covered under a WPDES-MS4 permit also are required under terms of their permit to administer such ordinances. To help municipalities create local programs, DNR has published model construction site and post-construction erosion control ordinances as appendices to NR 152. Local regulation of construction site erosion control is discussed in a separate section.

Developed Urban Areas. Standards for developed urban areas are implemented through municipal storm water permitting under NR 216. Urbanized areas and operators of MS4s, which require WPDES permits, must have as permit conditions programs for public education and participation, illicit discharge detection, construction

site erosion control, post-construction erosion control and general pollution prevention within the MS4 service area.

Transportation. DOT and DNR are required by statute to cooperate in establishing standards for activities related to construction site erosion control and storm water management for transportation facilities. Statutes also previously exempted DOT-supervised or DOT-directed projects from several permitting requirements, including those for storm water management, provided DNR and DOT adhered to interagency agreements minimizing adverse environmental impacts of transportation projects. In order to comply with Clean Water Act provisions requiring a permit for sufficiently large projects or storm water discharges, 2015 Act 307 instituted changes requiring DNR to issue a general permit to DOT before June 30, 2018. The permit was issued in April, 2018, and DOT's storm water permitting exemption has now terminated. Transportation projects implemented by municipalities are required to comply with standards described earlier, and are subject to permitting requirements for projects of one acre of land disturbance or greater.

Enforcement. Chapter 281 of the statutes authorizes DNR to enforce any rules such as NR 151 that were promulgated under the chapter's authority. The Department typically follows a process of "stepped enforcement" for environmental violations. This process usually begins with a notice of violation and a written response from the alleged violator. NR 151 also allows for violations of performance standards to be addressed under a compliance schedule and with an offer of cost-sharing, if required. Further steps may include an enforcement conference between the involved parties to discuss resolution of the matter. Livestock operations not required to hold a WPDES permit may be issued a notice of discharge under the WPDES program; enforcement of discharges from small and medium animal feeding operations is discussed in a separate section. Formal orders to take or cease certain actions may be used by DNR in cases of long-term noncompliance, or in cases of repeated mismanagement or willful violations. Some cases may be referred to the Department of Justice (DOJ) for court action. Violations of rules promulgated under Chapter 281 may incur forfeitures of between $10 and $5,000 per day of violation.

If a WPDES-permitted livestock facility violates performance standards, DNR may instead pursue remedies under the WPDES program, including possible criminal penalties, civil forfeitures and permit revocation.

DATCP Authority and ATCP 50

DATCP is directed under ss. 92.05, 281.16 and 281.65 of the statutes to: (a) promulgate rules to improve agricultural nutrient management in Wisconsin, consistent with the nonpoint source performance standards established in NR 151; (b) provide technical assistance to counties and other local governments in developing ordinances to implement agricultural standards on a local basis; (c) promulgate rules prescribing conservation practices that would achieve agricultural performance standards; and (d) disseminate technical standards, including numeric or other objectives, that constitute achievement of a performance standard. In other words, whereas NR 151 is intended to establish goals for reducing nonpoint source pollution, ATCP 50 is intended to describe how agricultural operations are to contribute to meeting those goals. Conservation practices and technical standards created by DATCP must include provisions relating to management of animal waste, nutrients applied to the soil, and cropland sediment.

Administrative rule ATCP 50 implements the entire SWRM program, beginning with requirements that agricultural landowners practice nonpoint source pollution control in accordance with NR 151, control cropland erosion and comply with nutrient management plans. In addition, the rule provides technical means for meeting performance standards, such as establishing the

universal soil-loss equation used to determine whether a field is meeting the tolerable soil-loss level known as "T." ATCP 50 also details minimum requirements for installed, cost-shared BMPs, the definitions and cost-share rates of which appear in Appendix I. It also establishes procedures for annually distributing grant funds to counties. The current rule generally took effect October 1, 2002, with revisions in 2014, and it was most recently updated effective July 1, 2018. 2014 revisions included: (a) specifications for implementing a tillage setback; (b) clarifications on nutrient management planning requirements, including how to incorporate pastures into a plan; and (c) several technical changes to standards for cost-shared practices. 2018 revisions were primarily to incorporate the newest standard for nutrient management adopted by NRCS, and to increase the cost-share rate for nutrient management planning from $7 per acre to $10 per acre.

Special Orders and Notices of Intent

DNR has authority under Chapter 281 to order the abatement of most occurrences of nonpoint source water pollution that the Department has determined to be significant. This includes nonpoint pollution that causes the violation of a water quality standard, significantly impairs aquatic habitat or organisms, restricts navigation, is deleterious to human health or otherwise significantly impairs water quality. This authority also applies to agricultural sources, provided DNR consults with DATCP on determining the significance of the pollution. DNR's authority to issue orders does not, however, apply to pollution caused by animal waste. Statutes provide that violations of special orders issued under Chapter 281 are subject to forfeitures of not less than $10 and not more than $5,000 per day of violation.

Although DNR continues to have authority to issue orders for nonpoint sources of pollution, the Department interprets most of these provisions to pertain to the priority watershed program, which is inactive. Instead, DNR reports it has typically pursued enforcement of performance standards through procedures established in NR 151 or NR 243, in the case of discharges from animal feeding operations.

Local Regulations

The statutes allow local governments to create several types of ordinances to further regulate agricultural activities that may contribute to nonpoint source water pollution in their jurisdictions. These ordinances are described in the following paragraphs. State law limits local regulation of agriculture by requiring: (a) DNR or DATCP approval of local provisions relating to livestock operations, and that are more stringent than state standards (s. 92.15); (b) compliance with state-mandated procedures and standards when approving new or expanding livestock facilities (s. 93.90); and (c) an offer of cost-sharing if a local government ordinance requires existing agricultural facilities to install practices to comply with state standards (s. 281.16).

Livestock Operations

Local governmental units are allowed to enact ordinances or regulations for livestock operations that are consistent with the performance standards, prohibitions, conservation practices and technical standards established by DNR and DATCP. The most common focus of local ordinances involves the regulation of livestock facilities. Local standards for livestock operations may only exceed those established by DNR or DATCP if the more stringent regulations are shown to be necessary to achieve state water quality standards, and one of the Departments approves the standards. As of August, 2018, of the 131 local governments with ordinances requiring approval of new and

expanded livestock facilities, 28 counties have adopted zoning (16) or licensing (12) ordinances, according to DATCP.

For a local ordinance to apply to an operation in existence on October 14, 1997, cost-sharing must be available to the owner if the regulation would require a change to practices. DATCP is required to provide technical assistance to county land conservation committees and local units of government for the development of any local ordinance that implements agricultural performance standards. Technical assistance includes preparing model ordinances, providing data concerning these standards and reviewing draft ordinances for compliance with applicable state laws. The restrictions on local regulation do not apply to measures that do not directly relate to livestock operations, such as local standards for cropland that may be more stringent than state standards.

Manure Storage Facility Ordinances

Chapter 92 of the statutes authorizes counties, cities, villages or towns to enact ordinances requiring manure storage facilities in their jurisdictions to comply with technical standards the municipality may impose on such structures. ATCP 50 further specifies the content of these ordinances and provides for the review of the ordinances, prior to enactment, by the county land conservation committee and the county planning and zoning agency. DATCP also may require a municipality to submit a proposed ordinance for review. These procedures do not require any reviewing entity to approve the ordinance, however. As of August, 2018, 61 counties have used the authority under s. 92.l6 of the statutes to adopt manure storage ordinances that require construction permits for new or substantially altered manure storage structures and implementation of nutrient management plans. These ordinances often include provisions that require operators to close storage structures unused for 24 months and to obtain permits to close unused manure storage structures.

Animal Feeding Operations and Animal Waste

DNR administrative rule NR 243, which was first promulgated in 1984, regulates all concentrated animal feeding operations (CAFOs) in the state. CAFOs include all large-scale animal feeding operations (1,000 animal units or more) and smaller animal feeding operations (less than 1,000 animal units) with certain discharges of pollutants into state waters. DNR regulates such operations as "point sources" of water pollution under a WPDES permit, which is the same permit system used to regulate discharges from such sources as municipal sewage treatment plants and paper mills. Point sources are not eligible for cost sharing to meet permit conditions.

DNR investigates CAFOs on the basis of its general inspection authority for WPDES-permitted CAFOs, as well as on the basis of citizen complaints or information received from state and county staff. Administrative and field staff associated with CAFO permitting and oversight in 2018-19 consists of 22.0 positions total, including 8.5 GPR, 9.5 nonpoint SEG, 2.0 EIF SEG, and 2.0 FED positions, with associated funding of $861,300 GPR, $913,800 nonpoint SEG, $174,800 EIF SEG, and $218,800 FED.

Discharge Permits

WPDES Permit Program. Under NR 243, all large CAFOs, which are those having 1,000 "animal units" or more, are required to obtain a WPDES permit from DNR. Animal units measure the total number of animals present in an animal feeding operation in a manner that adjusts for the relative size and manure production of different animal types. For example, 700 milking cows, 1,000 beef cattle, and 125,000 broiler chickens are each approximately equivalent to 1,000 animal units. CAFOs are required to prevent groundwater or surface water pollution through management

practices and facility design standards. The construction of new or altered storage or pollutant runoff control structures may be required due to NR 243 regulations. Smaller operations may be defined or designated as a point source if they make certain discharges to navigable waters. Such operations must also apply for a WPDES permit.

General Permits. DNR has authority under the statutes to issue WPDES general permits for "specified categories or classes of point sources" of water pollution. NR 243 further allows permitting based on operation size, livestock type or species, geographic or other watershed area, method of manure management, or other appropriate features.

In 2011, DNR issued a general permit for dairy operations of at least 1,000 animal units but fewer than 5,720 animal units. Eligibility for the permit requires dairy animals to be 80% or more of the animal population of the farm, and covered facilities generally may not have been subject to criminal or civil actions, including DNR citations, for prohibited discharges under the statutes. The general permit expired on March 31, 2016, although permit terms remain in effect for operations already operating under a previously issued general permit. As of June 30, 2018, 18 CAFOs with active permits were covered under the general permit. Efforts to reissue the general permit are ongoing as of September, 2018.

CAFO Oversight

DNR reports 301 CAFOs were permitted as of June 30, 2018. This number includes the following subtotals classified by primary livestock operation type: (a) 268 dairy; (b) 13 swine; (c) 11 beef; and (d) nine poultry. Currently, most active CAFO permits (283) are individual permits, which are intended to be specific to the operation applying for coverage. CAFOs must pay annual WPDES permit fees of $345. Of the $345, $250 is deposited to the general fund and $95 is deposited to a PR appropriation for management of the state's water resources. Permits are valid for five years, and holders are required to pay the $345 each year. The $95 per-permit deposit to the PR appropriation generated approximately $28,600 in revenues in 2017-18.

DNR reports annually to the Joint Committee on Finance and the Legislature's agricultural and environmental standing committees how these PR funds were used. DNR reports $21,600 PR was used in 2017-18 for costs related to issuing and enforcing CAFO permits.

Enforcement of Small and Medium Livestock Operations

Under NR 243, if DNR determines that a non-WPDES permitted animal feeding operation has unacceptable practices, DNR may issue an NOD directing the operator to take corrective action. DNR estimates that it currently receives between 350 and 400 citizen complaints annually. Due in part to complaints and subsequent investigations, DNR issued 20 NOIs or NODs in 2017, and 15 through June 30, 2018, to non-WPDES facilities. DNR officials report NODs or NOIs generally are not issued until the required funding has been reserved for the project, typically under the TRM program or NOD/NOI reserves established by DATCP and DNR, unless administrative rules allow DNR to require compliance without cost sharing. Of operations receiving NOD or NOI citations, six in 2017 and two in 2018 through June 30 have received cost sharing from the state. Historically, 56% of NOD/NOI citations have been accompanied with a cost-share grant, compared to 23% in 2017 and 2018, through June 30.

After issuance, NODs are either corrected, issued WPDES permits, or, if compliance is not achieved, referred for legal action. Of NODs issued in 2017 and 2018 through June 30, none were issued WPDES permits, and one was referred to DOJ for prosecution.

In addition to issuing NODs or NOIs, DNR has the ability to issue notices of noncompliance under NR 151. Such notices would typically be issued if violations of performance standards had occurred, but no discharge to state waters had occurred. DNR issued six notices of noncompliance in 2017 and 10 in 2018, through June 30. Counties also may issue notices of noncompliance, although DNR does not maintain comprehensive data on such activity.

Erosion Control Programs

DATCP implements programs to achieve the state's soil erosion control goals contained in Chapter 92 of the statutes. To achieve these statutory goals, DATCP uses a combination of programs, including LWRM planning, the farmland preservation program and regulatory actions, to address problem areas. As discussed earlier, administrative rule ATCP 50 now contains much of the basis for DATCP's erosion control programs, namely the requirement that fields and pastures meet tolerable soil erosion rates. Although many of these efforts have been discussed earlier, the following sections are intended to provide detail on the attainment of these statutory goals.

Erosion Control Goals

The state's statutory land and water conservation goals, enacted in 1985, focus on achieving tolerable soil erosion rates on a statewide basis, a countywide basis and individual-field basis. The statutes define a tolerable soil erosion rate (or "T") as the maximum average annual rate of soil erosion allowable that will also sustain high crop productivity. Using the universal soil-loss equation, a separate tolerable soil erosion rate is calculated for each soil type in the state based on soil composition, depth to bedrock, rainfall, and groundwater depth. In Wisconsin, tolerable soil erosion rates generally range from two to five tons of soil loss per acre per year, depending on soil type.

The specific long-term and interim statutory goals, which are based on the tolerable soil erosion rate, include the following:

State Goal. By January 1, 2000, no individual cropland field in the state was to have had a soil erosion rate exceeding the tolerable soil erosion rate. This goal is known as "T by 2000."

County Goal. By July 1, 1990, no county was to have had an average annual cropland soil erosion rate exceeding 1.5 times the tolerable soil erosion rate. By July 1, 1993, no county was to have had an average annual cropland soil erosion rate that exceeded the tolerable soil erosion rate.

Individual-Field Goal. By July 1, 1990, no individual crop fields in the state were to have a soil erosion rate exceeding three times the tolerable soil erosion rate. By July 1, 1995, no individual crop fields in the state were to have a soil erosion rate exceeding two times the tolerable soil erosion rate.

State-Run Farms Goal. By July 1, 1990, no individual crop fields of a farm owned by the University of Wisconsin System, the Department of Corrections, or any other agency of state government were to have a soil erosion rate exceeding the tolerable soil erosion rate. This requirement excluded research plots.

Attainment of Erosion Control Goals

DATCP depends on counties to identify their most severe soil erosion problem areas. LWRM plans are the most pertinent component of counties addressing statewide soil erosion. Additionally, nutrient management plans are required to address soil erosion. The grant programs described earlier, as well as technical assistance from county, state and federal agencies, ultimately are intended to provide resources to assist landowners

and local governments with the implementation of practices that will abate or prevent soil erosion.

Various efforts to survey soil erosion conditions in counties have occurred at least since the 1980s. However, DATCP reports that data published in the USDA National Resources Inventory (NRI) are the most reliable sources of information on current statewide T attainment. The most recent NRI, published in 2015 for 2012 data, showed Wisconsin's statewide soil-loss rate from water-based (sheet and rill) erosion on cultivated cropland declining from 4.7 tons per acre per year in 1982 to 3.7 tons per acre per year in 1997, but then increasing to 4.3 tons per acre per year in 2007 and to 5.0 tons per acre per year in 2012. These estimates are generally consistent with other state surveys during this time, and are consistent with an increase in row cropping practices that tended to increase soil loss on Wisconsin cropland.

DATCP expects the prevention of future soil erosion from cropland may be contingent on nutrient management planning. The nutrient management planning program SnapPlus, which DATCP, DNR, USDA and the UW System offer online for landowners who are creating a nutrient management plan, estimates soil loss. DATCP staff work with counties on a voluntary basis to build local capacity to track soil erosion using SnapPlus.

Cross-Compliance Enforcement - Farmland Preservation and Federal Programs

In addition to the SWRM grant program, the "cross-compliance" aspects of the farmland preservation program and federal commodity programs are significant components of state soil erosion control efforts. The farmland preservation program requires persons claiming farmland preservation credits to comply with land and water conservation standards under ATCP 50 and NR 151. County LCCs must monitor compliance, which includes county inspections of lands on which credits are claimed and annual certification by the landowner that the land is in compliance with the standards.

A county may issue a notice of noncompliance if a landowner fails to: (a) comply with performance standards; (b) certify compliance with the standards; or (c) allow an inspection. Notices of noncompliance are to be submitted to the Department of Revenue (DOR) and are to be withdrawn once the landowner resumes compliance. Counties are required at least once every four years to inspect those farms claiming credits, and DATCP is similarly required at least once every four years to review each county's inspection efforts.

In 2017-18, representing primarily claims for the 2017 tax year, the farmland preservation program provided $17.2 million in state income tax credits to agricultural landowners. Most tax credits currently are payable for each acre of land under either farmland preservation zoning, a restrictive covenant known as a farmland preservation agreement, or both. However, certain landowners under agreements entered into prior to July 1, 2009, may claim credits based on their property tax liability, the income of the farm household and the land being subject to exclusive agricultural zoning or a preservation agreement. DOR data for the 2017 tax year shows approximately 11,700 individual claimants, excluding corporate and trust claimants. Total acreage of these claimants was approximately 2.3 million acres. DATCP estimates that as of July, 2018, approximately 5.8 million of 14.3 million farmland acres were under farmland preservation zoning and approximately 259,100 acres were under farmland preservation agreements.

The cross-compliance provisions of the program are thought to encourage land and water conservation on Wisconsin farms, as claimants generally would be more likely to abide by conservation standards than risk losing tax credit eligibility. ATCP 50 also allows a landowner to be considered compliant with standards, and remain eligible for the tax credit, if operating under a

county-approved performance schedule that specifies a plan to achieve full compliance with all conservation standards within five years of being notified of the tax credit's compliance obligations. The availability of performance schedules is further thought to encourage compliance with conservation standards.

In 2018, approximately 13,900 certificates of compliance with soil and water conservation standards were issued, more than the number of claimants in the corresponding 2017 tax year. More information on the farmland preservation program is available in the Legislative Fiscal Bureau informational paper entitled, "Farmland Preservation Program and Tax Credits."

Similarly, it is thought federal programs also have contributed to the amount of land meeting the state's soil erosion goals. Beginning with the 1985 Food Security Act (Farm Bill), federal law generally requires persons participating in USDA programs to use conservation systems to limit agricultural impacts on highly erodible lands and wetlands. Federally funded USDA field staff work closely with county LCD staff and jointly provide technical assistance to farmers for the development of such systems.

Construction Site Erosion Control

Since the 1990s, programs for controlling storm water runoff and soil erosion from construction sites have been shared among DNR, the Department of Safety and Professional Services (DSPS), and several other agencies. In the past, it has been argued that erosion control programs dealing with building construction were best placed in agencies, such as the former Department of Commerce, that had oversight of building construction on other regulatory fronts, particularly regarding building safety and accessibility. Conversely, it has been argued DNR is a more appropriate place for centralizing runoff management programs, as DNR generally has regulatory authority over activity impacting the waters of the state.

An additional consideration in assigning regulatory responsibilities for construction site erosion control is that EPA has delegated to DNR the authority to act as the state permitting agency for point sources of pollution under the federal Clean Water Act. Under federal law, construction sites of one acre or larger are considered point sources of pollution and must seek WPDES permits for discharges of storm water that may occur from those sites. This authority extends to larger development plans such as those for residential subdivisions that contain multiple parcels of less than one acre but that collectively surpass the one-acre threshold. EPA requires states with permitting authority split among state agencies to seek federal approval for the divisions to ensure all programs are operated in accordance with the Clean Water Act. The following sections describe the state's construction site erosion control responsibilities by agency.

DNR Authority. DNR has permitting authority for all land-disturbing activities of one acre or larger. This includes sites of one acre or larger that involve commercial buildings, places of employment, and one- or two-family dwellings. DNR administers its portion of the construction site erosion control program primarily by maintaining a statewide WPDES general permit for construction site storm water discharges. Administrative rule NR 216 specifies the process by which permit coverage is granted and terminated, as well as other provisions regarding the erosion control and storm water management plans required of all WPDES-permitted construction sites.

Landowners apply for coverage under the permit by submitting to DNR notices of intent (NOIs) seeking permit coverage. In 2016-17 and 2017-18, the total sites covered under a construction site storm water general permit were 1,617 and 1,846, respectively. NOIs submitted to DNR constitute certification by the site owner that all applicable performance standards are being met by the

erosion control plan. DNR reviews NOIs to determine whether self-certification is plausible, and sites with potential environmental impacts may be inspected and have plans reviewed. Inspections may also be prompted by complaints to the Department.

A general permit provides coverage for a project up to three years from the original date of coverage, although the site owner is required to submit a notice of termination when construction activities have ceased, all disturbed areas have been stabilized, and all temporary erosion and sediment-control practices have been removed. If a project is not completed within three years, the site owner must reapply and pay the original application fee. In the post-construction phase, storm water from the site is to be managed under a storm water management plan created prior to the site's NOI.

In addition to the WPDES permitting authority for larger construction sites, DNR has regulatory authority for storm water management standards at construction sites less than one acre that do not involve construction of a public building or place of employment, or that are not for one- or two-family dwellings. Such sites are subject to performance standards under NR 151, although these sites are generally not regulated by WPDES permits. DNR may require such sites to seek WPDES coverage if it determines a site to be contributing either: (a) to violation of a water quality standard; or (b) significant pollution to waters of the state.

There are several provisions in statute or DNR administrative rule under which municipalities may be responsible for regulating construction site erosion control. Any municipality with an MS4 permitted under NR 216 is required as a condition of its permit to administer a program requiring erosion control at construction sites and storm water management at newly developed or redeveloped sites following the completion of construction. At a minimum, the municipal regulatory framework must apply to sites with a land disturbance of one acre or larger. As these requirements apply to municipalities with permitted MS4s, these municipalities would constitute the local inspection and enforcement authority for most parts of the state with higher population. Granting or revoking permit coverage, however, would typically continue to be the responsibility of DNR. DNR is required to maintain uniform statewide erosion control standards for: (a) all construction sites with a land disturbance of one acre or larger; (b) construction sites less than one acre and that do not involve a commercial building, place of employment or one- or two-family dwelling (sites of less than one acre that include these buildings are regulated by DSPS); (c) storm water management; and (d) construction work on roads, highways and bridges. These standards are contained in NR 151. Further, DNR has issued model ordinances for construction site erosion control and post-construction storm water management. These model ordinances are contained in NR 152.

Department of Safety and Professional Services (DSPS) Authority. The Department of Safety and Professional Services is responsible for developing and administering statewide standards for erosion control at construction sites of less than once acre that are also public buildings and buildings that are places of employment. This authority includes construction of multi-family dwellings, commercial shopping malls, industrial buildings, and schools; but not federal buildings, buildings on Native American tribal reservations or farm buildings.

DSPS administrative rule SPS 360 functions as an analog to NR 151 in that it requires commercial construction sites subject to DSPS standards to employ practices that will not discharge or deposit soil or sediment to streets, the waters of the state or any location off site. The numeric standards of SPS 360 also are intended to be similar to those under NR 151. Sites must achieve one of the following: (a) soil loss of no more than five tons

per acre per year or seven and a half tons per acre per year, depending on the type of soil at the site; or (b) a reduction of 40% of the potential sediment load in storm water runoff, as compared to a circumstance of no controls during construction.

(NR 151 requires WPDES-permitted construction sites to limit sediment loss to no more than five tons per acre per year. DNR intended for this to be consistent with SPS 360 provisions for the most common soil types in the state, and it is intended to provide a limit more consistent with how total maximum daily loads are measured.)

The statutes allow DSPS to delegate to municipalities the authority to conduct certain activities otherwise required of DSPS, including the review of erosion control plans required of certain commercial-building construction sites less than one acre and the inspection of erosion control practices installed at such sites. DSPS reported that as of the fall of 2018, it had delegated agency regulatory authority to 235 municipalities.

In addition to exercising certain regulatory authorities, the statutes allow for local standards in municipal ordinances to, in some cases, be more stringent than DSPS erosion control standards for commercial buildings or places of employment. The statutes require a superseding ordinance to have been adopted before January 1, 1994. DSPS estimated that approximately 165 local soil erosion control ordinances were adopted prior to 1994, but it is unknown how many of the local ordinances are more restrictive than state standards, if any. Further, the statute allows ordinances to exceed state standards only to the extent the municipal ordinance regulates sites of commercial buildings or places of employment.

Although WPDES permits are not required for most sites less than one acre, the statutes do require submittal to DSPS of erosion control plans for public buildings and places of employment, as well as inspections of these sites to verify erosion control activities and any necessary structures have been implemented. The plan review and inspections are to be performed by either the state or a delegated municipality, should a municipality seek such authority. During the construction phase, DSPS or an authorized municipality may issue stop-work orders at sites until required plans are approved or until the site complies with state erosion control standards.

DSPS One- and Two-Family Dwelling Program. DSPS is responsible for administering the state one- and two-family uniform dwelling code, including standards for erosion control for such dwellings built on sites of less than one acre. DSPS administers code SPS 321.125 to administer the erosion control provisions.

DSPS spent $113,900 PR in 2016-17 and $109,600 in 2017-18 and allocated 0.98 PR position annually to administer the one- and two-family building site erosion control program. The amount of time is provided through 30% of three uniform dwelling code inspectors and 0.08 of a supervisor's time. The program revenue funds are derived from permit fees for one- and two-family dwellings. The Department received $365,400 in program revenue from the fees in 2016-17 and $443,000 in 2017-18. Revenues supported the one- and two-family dwelling code program in addition to the erosion control program. DSPS anticipates that expenditure and revenues will be similar in 2018-19 to the levels in 2017-18.

DSPS performs the following activities related to construction site erosion control: (a) inspecting soil erosion control activities at building sites where building inspections are performed (one- and two-family buildings) or where complaints have been received; (b) providing consultation and advice to persons who may perform soil erosion control activities; (c) certifying local inspectors who inspect erosion control at building sites; (d) participating in interagency coordination efforts; and (e) auditing agent inspection municipalities. Beginning in January, 2017, DSPS began

to require self-verification by municipalities of local soil erosion control plans through a DSPS online survey. The Department anticipates a municipality will be required to complete the online survey every five years.

DSPS reported that as of July, 2018, 1,577 municipalities have chosen to adopt the state code and administer it at the local level. In addition, 12 counties (Adams, Buffalo, Chippewa, Eau Claire, Florence, Forest, Iron, Langlade, Marquette, Richland, Trempealeau, and Waushara) administer the program for 192 municipalities. DSPS enforces the code in other municipalities, and contracted with 10 private inspection agencies during the 2017-19 biennium to provide inspection in 136 municipalities that chose not to provide their own enforcement.

During January, 2017, through July, 2018, DSPS audited the programs of 591 municipalities. To accomplish this, DSPS conducted 12 field audits with municipalities, counties, and contracted inspection agencies that administer one- and two-family dwelling construction site erosion control programs. The audits reviewed: (a) implementation and enforcement of the DSPS erosion and sediment control rules; (b) record-keeping related to permit issuance, inspection and plan review; and (c) the proper credentialing of inspectors and contractors.

Audits and reviews of municipal, county, and private inspection agency programs during 2017 and 2018 found enforcement activities in need of improvement included: (a) requiring complete erosion control plans prior to issuance of new home building start permits; (b) ensuring that erosion and sediment control measures are installed at construction sites prior to beginning activities that disturb the land; (c) providing greater enforcement of basic erosion control practices required in DSPS administrative rules; (d) ensuring that proper and timely maintenance of erosion control practices are carried out; (e) inspecting erosion and sediment control measures at the same time other construction activities are inspected during site visits; and (f) improving inspection notes for erosion control measures and enforcement activities. DSPS also identified a need for increased continuing education on these issues for one- and two-family dwelling inspectors in the state.

Program Evaluations

Joint Evaluation System

DNR and DATCP are required to conduct a joint evaluation system for the nonpoint source program and the soil and water resource management program. DATCP and DNR are required to annually submit a report to the Land and Water Conservation Board on the status of all nonpoint source pollution abatement and soil and water resource management projects. DATCP and DNR have developed an evaluation system based both on local implementation of the state performance standards and on increased emphasis on county LWRM plans. Evaluations are intended to include: (a) establishing baseline data for both agricultural and nonagricultural performance standards; and (b) measuring compliance, tracking and evaluating for the TRM and UNPS competitive grant programs.

DATCP annually collects data from counties and other grantees on cropland soil erosion rates, local technical assistance for animal waste violations under NR 243, acres under nutrient management, conservation planning status, farmland preservation program status, overall progress toward soil erosion control goals and progress toward LWRM plan implementation. Additional data is collected via the TRM, UNPS, and NOD grant programs, which require evaluations of ongoing and completed projects to assess reductions in expected pollutant loads and increases in acres

under nutrient management plans.

Further, under state law, DNR and DATCP must prepare a comprehensive program evaluation report that contains project status reports, program accomplishments, expenditures, an evaluation of program policies and recommendations for future changes. DATCP and DNR generally include evaluation components in their annual report intended to meet both the annual and biennial reporting requirements.

APPENDIX I

Best Management Practices

Recipients of cost-share funding from any of the grant programs discussed in Chapter 1 must agree to install certain cost-effective structures or operations known as best management practices (BMPs). Best management practices are those techniques considered to be the most effective and practical means of abating nonpoint source pollution to a level compatible with state water quality goals. BMPs are generally eligible for cost-share agreements, provided that they are the lowest cost practice. More expensive alternatives may receive grant funding if they confer additional benefits for fish, wildlife, practice longevity, ease of maintenance, or reduced risk of failure. DNR and DATCP jointly establish technical standards for management practices eligible for grant funds. A listing of BMPs and their cost-share rate follows at the end of this section.

Cost-Share Rates

Cost-share grants under rural nonpoint programs generally equal 70% of the cost of implementing the BMP, except the rate may be up to 90% in cases of economic hardship, as defined by rule. Urban BMPs generally are cost-shared at 50%. BMPs and the associated cost-share rates have been established by administrative rules NR 154 and ATCP 50. For certain cropland practices, a county has the option to select between fixed rates per acre or rates based on costs incurred.

Property Acquisition and Easements

Under some programs, grants may cover land or easement acquisitions for any of the following: (a) the construction of a structural urban BMP; (b) land that contributes or will contribute to nonpoint source water pollution and that may be used for riparian buffers, wetland restoration, critical area stabilization or other practices; or (c) under the TRM program, abandonment/relocation of livestock or livestock facilities. For livestock facility relocation, an acquisition must meet eligibility requirements as a BMP. Further, if the acquisition cost is greater than amounts needed for installation of other BMPs, the additional cost must be justified by additional water quality improvements. If the acquisition cost is less than the amount needed to install BMPs, but the landowner is unwilling to sell property rights, the amount that would be needed for acquisition may be used as the ceiling for the cost of installing BMPs.

Easements are to be held in perpetuity. The standard cost-share rate of 70% applies to acquisitions and easements, except the rate is 50% for acquisitions supporting structural urban BMPs. The rate is applied to the lesser of: (a) the cost of the acquisition or easement; or (b) the appraised value and reasonable related costs, including appraisals, land surveys, relocation payments, title evidence, recording fees, historical and cultural assessments, and environmental inspections and assessments. Easements may be donated in whole or in part. Administrative rules require that any acquisitions or easements may only be purchased from willing sellers.

ATCP 50 also allows for SWRM cost-share payments to compensate part of the landowner's cost of removing land from agricultural production to install or maintain certain practices, provided the area is more than half an acre. The landowner's annual cost is generally the county average annual land rental rate for each year the land is required to be removed from agricultural production. Riparian land of more than a half an acre removed from agricultural production is eligible for rental rates equivalent to those under the Conservation Reserve Enhancement Program (CREP), a state-federal program discussed in Chapter 1.

Lands removed from production may be placed under a fixed-term or perpetual easement, depending on the nature of the agreement with a landowner.

Maintenance of Practices

Landowners and governmental units receiving grants under the SWRM and nonpoint source grant programs are required to maintain most cost-shared structural practices for 10 years beginning with the date the last practice is installed. Nonstructural practices such as strip cropping, contour farming, or nutrient, pesticide and residue management need only be maintained through any year in which cost-sharing is provided; these cost-sharing agreements generally last four years.

However, it should be noted that administrative rule NR 151, which establishes performance and technical standards for runoff, specifies that once agricultural land comes into compliance with a performance standard, it must continue to meet that standard regardless of whether future cost-sharing is available. In other words, a landowner may be required to maintain a structure or practice following the expiration of a cost-sharing agreement, provided the minimum cost-sharing requirements were met.

Cost-share agreements, which are the contracts between local governments and landowners that specify the terms of BMP installation and subsequent maintenance, are required to be filed with the appropriate county register of deeds if cost-share grants are to exceed certain dollar amounts. The TRM and NOD programs also require filing of cost-share agreements covering all riparian buffers or any grassed waterway systems receiving one-time per-acre payments.

Additionally, DATCP specifically requires any contracts of $14,000 or more to be binding on future landowners for the term of the agreement if the property is sold before expiration. This means subsequent owners or users must maintain the BMPs installed. DNR administrative rules also bind any future owners to cost-share agreements for the agreements' specified durations. However, local governments are authorized to approve different management of the land if requested by a new landowner, provided that the appropriate degree of environmental protection is maintained. Violations of a cost-share agreement may be penalized by repayment of all or part of the cost-share funds received under the contract, and the seriousness of the infraction determines the amount of the penalty.

Monitoring and Reporting

Local governments administering funding under the SWRM and nonpoint source grant programs must maintain records of the financing and proper installation of BMPs receiving state cost sharing. Such documentation forms the basis for reimbursement requests and for required reporting, which grantees must complete at varying intervals or at the completion of a project, depending on the program. Although requirements vary somewhat among programs, reporting in general must include evaluations of how a project or projects have furthered the conservation goals stated in a project application or county LWRM plan.

Definitions of Cost-Shared Agricultural Best Management Practices

Unless otherwise specified, these practices have up to a 70% cost-share rate. For certain DATCP cost-sharing, noted with a dagger,† this amount may not exceed 50% of eligible costs to install and maintain, unless installation is required to achieve compliance with an agricultural performance standard. Further, practices not associated with permanent structural improvements may not be supported by bonding revenues, and are marked with an asterisk.* The Wisconsin Constitution generally restricts the issuance of public debt to long-term capital projects. In the context of nonpoint source water pollution, this would include projects that permanently benefit the waters of the state.

Access Roads.† A road or pathway that confines or directs the movement of livestock, farm equipment or vehicular traffic, and which is designed and installed to control surface water runoff, to protect an installed practice, or to prevent erosion.

Animal Feeding Operation Relocation or Abandonment. Discontinuing an existing animal lot at a location, and, if appropriate, relocating the operation to minimize pollutants introduced to surface or ground waters. Reimbursement costs for permanent relocation or abandonment of livestock operation must be the most cost-effective option to address a water quality problem at the site, and DATCP must approve a plan for relocation or abandonment. The landowner also must agree to abstain from reestablishing an animal lot at the abandoned site unless certain conditions are satisfied. Eligible abandonment costs are those for removing structures, closing wells and stabilizing the site. Eligible relocation costs are those for installing manure storage and other conservation practices at the new site, transporting animals (up to $5,000), and constructing livestock buildings at the new site. Cost-sharing for new buildings may not exceed the appraised value of buildings at the current site.

Barnyard Runoff Management. The use of structural measures to intercept, collect, treat or redirect surface runoff around an outdoor area with concentrated animal activity. Such measures may include roofs, sediment basins or vegetated treatment areas.

Contour Farming.* Plowing, preparing, planting and cultivating sloping land on the contour and along established grades of terraces or diversions. (Contour farming may be cost-shared at $9 per acre per year for up to four years.)

Cover and Green Manure Cropping.* Close-growing grasses, legumes or small grain grown for seasonal protection and soil improvement. (Cover cropping may be cost-shared at $25 per acre per year for four years.)

Critical Area Stabilization. The planting of suitable trees, shrubs and other vegetation appropriate for controlling and stabilizing sloped lands that are producing nonpoint source pollutants and lands that drain into bedrock crevices, openings or sinkholes.

Diversions. Structures installed to divert water from areas where it is in excess to sites where it can be used or transported safely. Usually the system is a channel with a supporting ridge on the lower side constructed across the slope at a suitable grade.

Feed Storage Runoff Control Systems. A system of facilities or practices to contain, divert, treat or convey runoff from feed storage areas.

Field Windbreaks. A strip or belt of trees, shrubs or grasses established or renovated within or adjacent to a field, so as to control soil erosion by reducing wind velocities at the land surface.

Filter Strips. An area of herbaceous (non-woody) vegetation that separates an environmentally sensitive area from cropland, grazing land or disturbed land. (For non-riparian filter strips that remove one-half acre or more from agricultural production, a cost-sharing offer may include: (a) 70% of installation costs; (b) 70% of the rental rate for the length of the cost-share agreement; and (c) costs for mowing twice per year at $10 per mowing if necessary to maintain the practice. A filter strip of one-half acre or larger required of a landowner must include all components. For riparian filter strips, landowners must be offered at least the rate landowners would receive under CREP. Landowners may elect to receive payment under either 15-year or perpetual CREP-equivalent contracts.)

Grade Stabilization Structures. A structure used to reduce the grade in a drainage way or channel to protect the channel from erosion or to prevent formation or advance of gullies.

Livestock Fencing. The enclosure or division of one area of land from another to create a permanent barrier to livestock movement. Fencing may exclude livestock from land areas that should be protected from grazing or gleaning. It also may be erected to prevent human or animal access to manure storage containment.

Livestock Watering Facilities. A trough, tank, pipe, conduit, spring development, pump, well, or other device or combination of devices installed to deliver drinking water to livestock.

Manure Storage Facilities. A structure or impoundment for the storage of manure, along with equipment for the proper conveyance of manure to storage. Cost-sharing is limited to instances in which facilities are necessary to properly land apply the manure according to a nutrient management plan. Such instances may include operations with unsuitable land application sites: (a) during frozen or saturated conditions; or (b) due to contamination potential of nearby surface or groundwater resources. Nutrient management plans are required of recipients.

Manure Storage Systems Closure. Permanently dismantling and sealing manure storage systems, including those improperly sited or at risk of failure. Closure may include the disposition of manure-saturated soils.

Milking Center Waste Control. Equipment or practices to reduce the quantity or pollution potential of wastes from milking facilities.

Nutrient Management.* Controlling the application of manure, legumes and commercial fertilizers, including the rate, method and timing of application, to minimize the amount of nutrients entering surface or ground waters. (Under ATCP 50, cost-sharing of $10 per acre per year for four years, paid as a lump sum, is intended to cover soil testing, manure analysis and plan development consistent with NRCS Conservation Practice Standard Nutrient Management Code 590, dated December, 2015. Under NR 154, DNR offers $6 per acre for the first year and $4 per acre for three subsequent years.)

Pesticide Management.* Managing the handling, disposal and application of herbicides, insecticides and fungicides, both through application planning and spill-prevention facilities. (Pesticide management may be cost-shared at 70% of costs of structural practices, as well as $7 per acre per year for up to four years for other non-structural activities.)

Prescribed Grazing.* A grazing system that divides pastures into multiple cells, each of which is grazed intensively for a short period and then protected from grazing until its vegetative cover is restored.

Residue Management.* The preparation or planting of land using methods that yield a rough surface with variable residue cover in order to reduce soil erosion. (Residue management systems may be cost-shared at $18.50 per acre per year for four years.)

Riparian Buffers. An area in which vegetation is enhanced or established to reduce or eliminate the movement of sediment, nutrients and other nonpoint source pollutants to an adjacent surface water resource. (Under ATCP 50, if a landowner is required to install a riparian buffer, a cost-sharing offer must include at least a CREP-equivalent offer of cost sharing for more than one-half acre of riparian land removed from agricultural production, regardless of the land's eligibility for CREP. In such a case, the landowner must agree to refrain from agricultural production activities on the land for either 15 years or in perpetuity under a CREP-equivalent contract. However, a landowner may instead elect to receive: (a) 70% of buffer installation costs; (b) two annual mowing reimbursements ($10 per mowing); and (c) 70% of the current rental rate for the length of the agreement. The standard 10-year cost-sharing requirement applies in such a case. As an alternative to a 70% installation cost-share offer, a landowner

may receive a flat payment of $100 per acre per year for installing conservation plantings. DNR offers 70% of installation costs plus a one-time payment of $500 per acre. DNR allows the one-time payments only for acreage on which commodity crops were harvested in two of the preceding five years.)

Roofs. A roof and supporting structure constructed specifically to prevent rain and snow from contacting manure.

Roof Runoff Systems.† A facility for collecting, controlling, diverting, and disposing of precipitation from roofs.

Sediment Basin. A permanent basin that reduces the transport of waterborne pollutants such as eroded soil sediment, debris and manure sediment.

Sinkhole Treatment. The modification of a sinkhole, or its surrounding area, to reduce erosion, prevent expansion of the hole, and reduce pollution of water resources.

Stream Bank and Shoreline Protection.† Waterway-specific treatments to stabilize and protect banks of streams or constructed channels, and the shorelines of lakes or other surface waters. Component practices may include critical area stabilization, riparian buffers and others.

Stream Crossing.† A road or path to confine or direct the movement of livestock, equipment or vehicles over a stream, and which is designed to improve water quality, protect an installed practice or control livestock access to surface water.

Strip-cropping.* Growing crops in a systematic arrangement of strips or bands, usually on the contour, in alternated strips of close growing crops, such as grasses or legumes, and tilled row crops. (Strip-cropping may be cost-shared at $7.50 per acre per year for four years, or at $13.50 per acre per year for four years, if methods used are more preventive of soil erosion.)

Subsurface Drains. A conduit installed below the surface of the ground to collect drainage water and convey it to a suitable outlet.

Terrace Systems. A system of ridges and channels constructed on the contour of the land with a non-erosive grade at a suitable spacing.

Trails and Walkways. A travel lane to facilitate the movement of livestock or people.

Underground Outlets. A conduit installed below the surface of the ground to collect surface water and convey it to a suitable outlet.

Wastewater Treatment Strips. An area of herbaceous vegetation used to remove pollutants from runoff of an animal lot or milking center. (Such practices are similar to a filter strip or riparian buffer, but installed where greater amounts of pollutants are anticipated.) Recent changes in NRCS technical standards will significantly limit the use of treatment areas for larger livestock operations.

Water and Sediment Control Basin. An earthen embankment or a ridge and channel combination installed across a slope or minor watercourse to trap or detain runoff and sediment.

Waterway System. A natural or constructed waterway or outlet that is shaped, graded and covered with a vegetation or another suitable surface material to prevent erosion by runoff waters. (DNR offers 70% of installation costs plus $300 per acre.)

Well Decommissioning. The proper filling and sealing of a well to prevent it from acting as a channel for contaminants to reach the groundwater or as a channel for the vertical movement of surface water to groundwater.

Wetland Development or Restoration.† The construction of berms or destruction of the function of tile lines and drainage ditches to create or restore conditions suitable for wetland vegetation.

APPENDIX II

2019 Joint Final Allocation Plan

County	Staff & Support	Cost Sharing	Total
Adams	$116,671	$59,400	$176,071
Ashland	100,021	79,475	179,496
Barron	123,651	106,750	230,401
Bayfield	108,687	100,900	209,587
Brown	144,209	47,250	191,459
Buffalo	108,727	224,250	332,977
Burnett	102,353	197,000	299,353
Calumet	136,568	87,900	224,468
Chippewa	173,220	210,466	383,686
Clark	237,415	184,650	422,065
Columbia	145,737	326,693	472,430
Crawford	101,146	65,750	166,896
Dane	174,201	120,250	294,451
Dodge	133,254	39,250	172,504
Door	180,798	488,518	669,316
Douglas	114,013	13,400	127,413
Dunn	162,747	73,250	235,997
Eau Claire	275,150	315,749	590,899
Florence	75,000	50,475	125,475
Fond du Lac	143,463	80,000	223,463
Forest	83,857	11,975	95,832
Grant	99,306	60,513	159,819
Green	137,314	102,750	240,064
Green Lake	138,388	88,900	227,288
Iowa	113,219	105,250	218,469
Iron	102,925	40,000	142,925
Jackson	130,364	91,013	221,377
Jefferson	173,385	39,250	212,635
Juneau	125,099	165,000	290,099
Kenosha	128,606	59,400	188,006
Kewaunee	133,201	75,750	208,951
La Crosse	157,839	68,400	226,239
Lafayette	94,068	68,750	162,818
Langlade	90,476	87,900	178,376
Lincoln	83,481	13,400	96,881
Manitowoc	149,699	127,250	276,949
Marathon	$138,908	$181,930	$320,838
Marinette	120,678	396,900	517,578
Marquette	127,341	84,400	211,741
Menominee	75,000	20,000	95,000
Milwaukee	75,000	20,000	95,000
Monroe	110,462	98,513	208,975
Oconto	139,166	60,000	199,166
Oneida	94,591	46,475	141,066
Outagamie	261,238	1,044,840	1,306,078
Ozaukee	147,488	117,563	265,051
Pepin	123,232	80,000	203,232
Pierce	134,932	82,250	217,182
Polk	157,613	27,250	184,863
Portage	144,022	66,750	210,772
Price	87,502	35,400	122,902
Racine	134,085	112,163	246,248
Richland	92,863	83,750	176,613
Rock	156,474	135,513	291,987
Rusk	88,526	84,400	172,926
Saint Croix	130,051	55,000	185,051
Sauk	131,289	133,013	264,302
Sawyer	87,007	48,000	135,007
Shawano	114,972	51,250	166,222
Sheboygan	140,635	80,750	221,385
Taylor	109,754	111,013	220,767
Trempealeau	165,906	770,750	936,656
Vernon	126,672	105,250	231,922
Vilas	112,572	21,975	134,547
Walworth	142,772	75,750	218,522
Washburn	99,768	43,400	143,168
Washington	124,610	118,400	243,010
Waukesha	166,794	41,900	208,694
Waupaca	128,012	139,750	267,762
Waushara	124,768	75,000	199,768
Winnebago	151,983	93,400	245,383
Wood	132,364	112,513	244,877
Subtotal	$9,397,308	$8,923,083	$18,329,391

Note: These figures reflect grant awards under the 2019 joint final allocation plan. Actual spending may be less, and funds may be transferred or reallocated to increase or decrease funding awards.

Reserve Funds:	
DATCP Cost-Share Reserve	$300,000
DNR Cost-Share Reserve	1,500,000
Other Project Funding:	
UW-CALS	$390,000
Nutrient Management Farmer Education Grants	182,524
Wisconsin Land and Water Conservation Association	189,500
Standards Oversight Council	35,000
Conservation Observance Day	3,500
Total	**$20,929,915**

APPENDIX III

Producer-Led Watershed Protection Project Grants

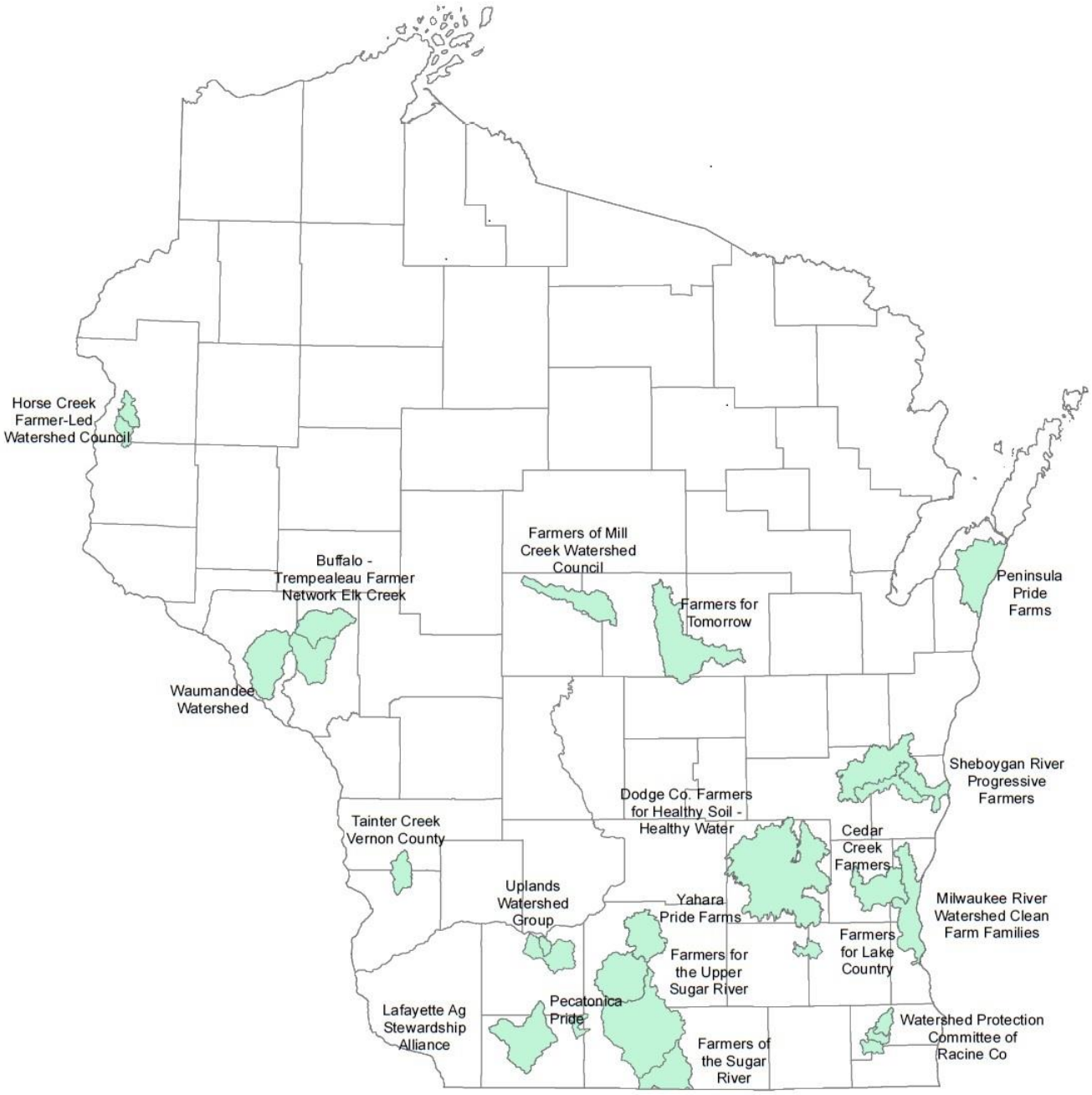
2018 and 2019 Awards

Recipient	2018	2019
Buffalo-Trempealeau Farmer Network	$25,120	$0
Cedar Creek Farmers - Improving Land for Cleaner Waters	23,000	0
Dodge County Farmers for Healthy Soil & Healthy Water	39,552	39,050
Eau Pleine Partnership for Integrated Conservation	0	32,000
Farmers for Lake Country	38,375	0
Farmers for the Upper Sugar River	0	40,000
Farmers for Tomorrow	37,120	40,000
Farmers of Barron County	0	40,000
Farmers of Mill Creek	33,075	36,535
Farmers of the Sugar River	16,500	25,000
Hay River Farmer-Led Watershed Council	0	13,125
Horse Creek Farmer-Led Watershed Council	20,000	18,750
Lafayette Ag Stewardship Alliance	20,000	32,000
Milwaukee River Watershed Clean Farm Families	35,000	40,000
Pecatonica Pride	30,500	20,250
Peninsula Pride Farms	40,000	40,000
Producers of Lake Redstone	0	40,000
Red Cedar Conservation Farmers	0	40,000
Sheboygan River Progressive Farmers	30,000	40,000
Shell Lake - Yellow River Farmer-Led Watershed Council	0	15,600
South Kinni Farmer-Led Watershed Council	0	7,500
Tainter Creek Farmer-Led Watershed Council	30,004	40,000
Upland Watershed Group	26,300	29,120
Upper Sugar River Producer Coalition	20,000	0
Watershed Protection Committee of Racine County	40,000	40,000
Waumandee Watershed	13,700	19,080
Western Wisconsin Conservation Council	0	22,000
Yahara Pride Farms	40,000	40,000
Total	$558,246	$750,010

APPENDIX III (continued)

Producer-Led Watershed Protection Project Grants

Map of 2018 Awardees



APPENDIX III (continued)

Producer-Led Watershed Protection Project Grants

Map of 2019 Awardees

APPENDIX IV

2019 Targeted Runoff Management Project Grants by County

Large-Scale TMDL

County	Amount
Outagamie	$999,999
Clark	171,474
Chippewa	105,000

Large-Scale Non-TMDL

County	Amount
Trempealeau [2]	$689,138
Door	449,480
Eau Claire	275,225

Small-Scale TMDL

County	Amount
Burnett	$150,000
Columbia	150,000
Washington	60,000

Small-Scale Non-TMDL

County	Amount
Marinette [2]	$300,000
Buffalo	150,000
Juneau	100,000
Eau Claire	75,499

Awards Summary

County	Total Funding
Outagamie	$999,999
Trempealeau [2]	689,138
Door	449,480
Eau Claire [2]	350,724
Marinette [2]	300,000
Clark	171,474
Columbia	150,000
Burnett	150,000
Buffalo	150,000
Chippewa	105,000
Juneau	100,000
Washington	60,000
Total TRM	$3,675,815

Note: Numerals listed after grantees denote multiple grants to the governmental unit within the grant category or overall.

APPENDIX V

Urban Nonpoint Source and Storm Water Project Grants for 2018 and 2019

Grantee	Funding Awarded
Planning Grants (2018)	
City of Sheboygan	$85,000
Milwaukee Metropolitan Sewerage District	85,000
Village of Mt. Pleasant	85,000
Village of Harrison	78,292
City of Plymouth	62,932
City of Portage	62,500
Village of Rothschild	61,400
Village of Germantown	60,000
Village of Brown Deer	57,835
Village of Elm Grove	49,083
Village of Grafton	38,000
Town of West Bend	37,452
Town of Omro	30,000
Village of Shorewood	26,750
Town of Norway	26,539
City of Beaver Dam	22,170
City of Cedarburg	19,500
Village of River Hills	16,800
City of Fond du Lac	16,249
Town of Fond du Lac	15,849
Town of Friendship	15,849
Town of Taycheedah	15,849
City of Superior	12,451
City of Winnebago	12,200
Subtotal – Planning	$992,700

APPENDIX V (continued)

Urban Nonpoint Source and Storm Water Project Grants for 2018 and 2019

Project Grantee	Funding Awarded
Construction Grants (2019)	
City of Kenosha	$200,000
City of Stoughton [2]	189,464
City of Two Rivers	170,293
Village of Ashwaubenon	168,404
City of Appleton	150,000
City of Neenah	150,000
City of Oconomowoc	150,000
City of Portage	150,000
Village of Hartland	150,000
Village of Mukwonago	150,000
City of Wauwatosa	149,000
City of River Falls	135,000
Village of Allouez	135,000
City of Middleton	124,000
City of Waupun	110,785
City of Menomonie	93,300
City of Platteville	75,000
Village of Slinger	60,576
Village of North Fond du Lac	51,475
City of Racine	44,000
Town of Ledgeview [2]	42,587
Town of Scott	31,350
Village of Shorewood Hills	21,000
Subtotal – Construction	$2,701,234
Total Urban Nonpoint Source Grants	**$3,693,934**

Note: Numerals listed after the grantees denote multiple grant awards to the governmental unit within the same grant category.

APPENDIX VI

Municipal Flood Control Grant Requests for 2019 and 2020

Project Grantee	Amount Requested
City of Appleton	$480,000
City of Glendale	467,360
City of Janesville	460,139
Milwaukee Metropolitan Sewerage District	404,021
Village of Bristol	175,550
Town of Grafton	163,090
Village of Gays Mills	128,980
Town of Forest	90,138
Village of Cassville	81,500
Village of Readstown	67,963
Village of Eau Claire	45,185
Town of Viroqua	23,113
Total	$2,587,039

Note: Amounts listed represent grant requests. Awards are expected to be announced in February, 2019, with the total available funding of $2,421,413.