



Nonpoint Source Water Pollution Abatement and Soil Conservation Programs

Informational Paper 69

Wisconsin Legislative Fiscal Bureau
January, 2013

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Nonpoint Source Water Pollution Abatement and Soil Conservation Programs

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 county-level coverage of the state's soil and water conservation needs. Further, the DNR nonpoint source pollution abatement financial assistance program intends 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 \$130 million was budgeted in the 2011-13 biennium for nonpoint soil and water conservation grants to landowners and municipalities. These grants are distributed through DNR and DATCP programs and through direct federal support. Funding sources for soil and water conservation programs include general purpose revenue (GPR), segregated (SEG) and federal (FED) revenue and issuance of bonds (BR).

Nonpoint sources of water pollution are those sources that are diffuse in nature without a single, well-defined point of origin. Nonpoint sources include land management activities that contrib-

ute to runoff, seepage or percolation and adversely affect the quality of waters in the state. DNR reports that nearly one-half of the lakes and streams the state considers as impaired are degraded by varying levels of nonpoint source pollution. Soil erosion and runoff of water polluted by chemicals and/or nutrients are major contributors to the level 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 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 agri-

Table 1: Total Available 2011-13 Direct Funding for Local Soil and Water Conservation

Funding Source	Biennial Amount
GPR	\$9,104,400
SEG	23,413,600
BR	20,000,000
FED	<u>77,713,200</u>
Total	\$130,231,200

cultural nutrient management, and funding of county and state land and water conservation staff. DATCP efforts are commonly 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 of one- and two-family dwellings. The Department also may issue stop-work orders for noncompliance. DSPS may delegate its administrative authority to counties, cities, villages or towns. DSPS also has authority over erosion control at construction sites for public buildings and places of employment. This authority had previously been under the Department of Commerce but was transferred to DNR under 2009 Act 28, beginning January 1, 2010. However, this authority and others related to building safety and environmental regulation were transferred to DSPS under 2011 Act 32, which eliminated the Department of Commerce and divided its programs among other state agencies.

Land and Water Conservation Board

The Wisconsin Land and Water Conservation Board (LWCB) is directed to develop recommendations and 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 a joint annual 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 is to monitor the achievement of statutorily defined soil erosion control goals. 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 of the University of Wisconsin–Madison; (d) the University of Wisconsin–Extension; (e) the Wisconsin Land and Water Conservation Association (WLWCA); and (f) Wisconsin Association of Land Conservation Employees (WALCE). (In 2012, WLWCA and WALCE merged under the WLWCA name, but advisors previously appointed from each organization have continued to attend LWCB meetings.) 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 grant program. DATCP and DNR then prepare a single allocation plan for all counties, with DATCP and DNR each administering its own programs.

The LCCs direct the activities of county land conservation departments (LCDs), which in some instances have merged with other county depart-

ments 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 2011 calendar year, which is the most recent year completed for which counties have reported staffing levels to DATCP, counties reported a total of 359 full-time equivalent 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. Plans at a minimum must include: (a) a county-wide assessment of soil erosion conditions and water quality, including information available from DNR; (b) water quality objectives identified for each water basin, priority watershed and priority lake; (c) key problem areas for soil erosion and water quality; (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; (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; (g) a system to track progress of activities identified in the plan; (h) an information and education strategy; and (i) methods for coordinating plan implementation activities with other applicable local, state or federal agencies and or-

ganizations.

County LCCs develop the plans with the assistance of DATCP. The LWCB reviews plans and recommends DATCP approval or disapproval. Currently, DATCP administrative rules require LWRM plans to be approved by an order of the DATCP Secretary for a period of up to 10 years. This 10-year period replaced a five-year maximum approval period effective August 1, 2011. However, county planning documents must include the following to receive a 10-year approval: (a) evidence the county specifically constructed the plan on a 10-year horizon; and (b) a

detailed outlining of targets the county will attempt to reach over the plan period. Plans approved for 10 years typically will be required to report on progress after five years. Counties not meeting the requirements for a 10-year approval will continue to have LWRM plans approved for five years, and may be eligible for a five-year extension in certain circumstances. DNR assists counties in LWRM plan activities by providing available water quality data and information, training and support for water resource assessments and appraisals and other related program information.

CURRENT NONPOINT SOURCE POLLUTION ABATEMENT PROGRAMS AND GRANTS

Program Components

The current structure of the nonpoint and SWRM programs was first created by the 1997-99 biennial budget act (1997 Act 27) and the 1999-2001 biennial budget act (1999 Act 9). These acts made several major modifications and additions to the nonpoint and SWRM programs, as described below, and created the basis for the current programs.

Although the current nonpoint source pollution abatement program has several distinct components and grant programs as noted below, LCCs have been required since 2000 to annually prepare a single 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; (b) financial assistance under s. 281.65 for nonpoint source water pollution abatement, including funding requested under the competitive targeted runoff management [TRM] grant program; and (c) the urban nonpoint source water pollution abatement and storm water management program under s. 281.66. To this end, DATCP and DNR have created a single grant application process and a single set of forms for soil and water resource management and nonpoint source program grants, reporting and evaluations. However, each agency prepares, issues and administers its own grants. The agencies are required to jointly review the applications, determine if projects should be considered for funding through DATCP or DNR competitive funding, and submit a coordinated grant allocation plan to the LWCB for its review and recommen-

dation to the agencies.

The grant programs described throughout the paper are primarily intended to fulfill statutory and administrative requirements for the funding that must be offered to owners of facilities or operators of practices that are existing nonpoint sources of pollution. Water pollution-abatement practices or structures that would change or discontinue existing practices or facilities generally require the landowner to receive a "bona fide offer" of having a minimum portion the cost of installing the necessary best management practice (BMP) provided to them. This portion for most practices is 70 percent, meaning the landowner would be responsible for 30 percent of total project costs. (BMPs and their cost-share rates are listed in Appendix I.) Absent a cost-sharing offer, BMPs generally are not required of landowners, outside of some exceptions discussed later. Further, although municipalities may assemble bona fide offers using other funding available to them, cost-sharing offers generally consist of state grants to counties and other municipalities. The extent to which nonpoint source water pollution abatement is implemented in Wisconsin is therefore significantly influenced by the grant funding that is ultimately 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.

County Staffing and Cost-Sharing Grants.

Rather than DATCP and DNR each funding county staffing and cost-share grants, 1999 Act 9 required DATCP under its SWRM program to fund grants to counties for land conservation staff and administration of land and water conserva-

tion programs. This includes cost-sharing grants distributed by DATCP to counties for implementing pollution abatement practices in accordance with their LWRM plans.

Urban Nonpoint Source and Storm Water Management. 1999 Act 9 removed cost sharing for urban storm water management practices from the priority watershed program, and created a competitive urban nonpoint source and storm water management grant program (UNPS) under DNR's authority. This program provides funding for both planning and construction activities. Also, the municipal flood control and riparian restoration program (MFC) was created to address floodplain and storm water quality issues.

Targeted Runoff Management. 1999 Act 9 also created a competitive nonpoint grant program to pay for urban and rural nonpoint source water pollution abatement projects. This program became the TRM grant program, also administered by DNR.

Performance Standards and Conservation Practices. DNR was required under 1997 Act 27 to create performance standards for both agricultural and nonagricultural facilities that are nonpoint sources of pollution. DNR and DATCP subsequently revised and created several administrative rules (NR 120, 151, 152, 153, 154, 155, 216, and 243, and ATCP 50) to implement the program changes enacted under 1997 Act 27 and 1999 Act 9. The revised rules mostly took effect on October 1, 2002. However, several chapters have undergone revision since 2002 to change performance standards or make changes to procedures for awarding and distributing grants. These administrative rules are discussed later in greater detail in Chapter 2.

through its grant program to local units of government and other project cooperators for the purpose of conducting land and water conservation activities across the state. A joint final allocation plan lists the amount and program purpose for funds to be received by the county in each calendar year. DATCP has the authority to make these grants through the provisions of s. 92.14 of the statutes, and administrative rule ATCP 50.

Funds are allocated only if the county has an approved LWRM plan and the county board has resolved to match state grants with county funds. LCCs are allowed to use the grants for several purposes: (a) staff activities related to the county's LWRM plans for nonpoint source water pollution abatement, animal waste management, or other conservation activities; (b) activities that promote compliance with soil and water conservation requirements for persons under the farmland preservation program; and (c) consistent with approved LWRM plans, 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. LCCs also may use the grant for shoreland management projects. DATCP provides funding on a reimbursement basis, not as advance payments.

DATCP may provide SWRM grant funding to an organization on behalf of multiple counties for regional or statewide efforts. For example, DATCP has customarily allocated grant funds to the WLWCA for partial support of its Standards Oversight Council (SOC). The SOC assists in the development and maintenance of technical standards for statewide soil and water conservation practices, and DATCP intends for the allocation to further a comprehensive statewide approach to soil and water conservation and the achievement of state program requirements. Grants under the SWRM program typically have not been made to any state agencies, although they are eligible for

DATCP Funding to Counties

Since 1987, DATCP has disbursed state funds

grants to administer or implement the program.

Appendix II shows, by recipient, the proposed 2013 DATCP soil and water resource management (SWRM) allocations, and Table 2 shows the funding by primary grant type, which is either county staffing support or cost-sharing for LWRM plan implementation. DATCP administrative rules specify that counties and cooperating organizations such as the WLWCA must apply for funds each year by April 15. The DATCP portion of the plan is to be approved by each December 31, with funding then provided in the subsequent calendar year.

Table 2: DATCP 2013 SWRM Grant Allocation (Preliminary)

Program	Grants	Percent of Total
County Staffing Grants	\$8,603,400	59.7%
LWRM Plan Implementation*	<u>5,799,700</u>	40.3
Total	\$14,403,100	

* Includes cost-sharing funds for implementation of LWRM plans and funding for nutrient management planning and related activities.

Counties may use staffing grants to pay salaries, fringe benefits, training, and support costs for employees and agents engaged in land and water resource management activities. Support costs, which are to be identified in the grant application, may include travel expenses, computers and software, office supplies and equipment, field equipment, information and education support costs, or any other costs approved by the Department.

Staffing grants in limited circumstances may be transferred to pay for landowner cost-sharing grants with DATCP approval, provided the funds are expended the same year in which they were allocated. Additionally, while the statutes allow for GPR appropriated for the SWRM program to be used for general program purposes, under

2009 Act 28 nonpoint account SEG appropriated by the Legislature must be used specifically for county staffing grants or landowner cost-sharing. ATCP 50 also allows counties to reallocate state staffing grant funds provided to a local government or tribe to meet LWRM plan priorities or achieve compliance with state agriculture performance standards.

Allocation Procedures

Both statutes and administrative rules describe the methods by which annual allocations to counties are determined. Section 92.14 (6) of the statutes requires DATCP and DNR to attempt to provide funding for an average of three staff persons in each county, with salary and fringe benefits funded at a rate of: (a) 100% for the first county staff person; (b) 70% for the second staff person; and (c) 50% for each additional staff person. Accordingly, a county match is required for 30% of the salary and fringe benefits of the second staff person and 50% of the salary and fringe benefits for each additional staff person. The statutes do not specify the match requirement for costs other than salary and fringe benefits, and ATCP 50 requires no local match for these training and support costs. Additionally, the Departments are to attempt to provide an average of \$100,000 in cost-sharing funds per county, with the statutes generally requiring a 30% landowner match for most cost-shared practices for agricultural facilities or practices in place prior to October 14, 1997, the effective date of 1997 Act 27. The minimum landowner contribution typically is 10% in cases of economic hardship.

Further, DATCP has set forth in ATCP 50 several priorities it must consider in establishing each grant allocation plan: (a) continuation of county staff and projects; (b) funding projects that address statewide priorities identified by DATCP and DNR; and (c) other factors. Other factors include: (a) the county's demonstrated commitment to implementation of its approved

LWRM plan and to farm-conservation practices; (b) the cost-effectiveness of the grant; (c) the likelihood that the grant will resolve problems specified in the county's LWRM plan; and (d) the county's demonstrated cooperation, commitment and ability to manage and implement the project.

Staffing Grants. To carry out these funding directives, DATCP uses tiers to divide funds among counties and other collaborators. For 2013, DATCP has proposed to allocate funds in two tiers, including one tier for base funding and a second tier to provide funding for additional positions. A third tier was implemented in 2009 to award counties that had been most effective in creating and substantially following local strategies for limiting nutrient runoff. DATCP awarded \$10,000 each to 13 counties in this tier in 2009, but no Tier 3 funding has been awarded since.

Base funding under ATCP 50 is established at \$85,000 per county per year, and in recent years this has been the minimum amount awarded to each county under Tier 1. However, due to reductions in funding available during the 2011-13 biennium, the Department waived the \$85,000 minimum grant award for both the 2012 and 2013 allocations.

Tier 2 grants provide staffing for second and subsequent positions, with DATCP's goal being to provide funding for an average of three positions per county. Each county matches at least 30% of the second position and 50% of third and subsequent positions. DATCP awards these grants based on the amount of state funding available, as well as how far the Tier 1 base allocation goes toward covering multiple staff positions. This funding is awarded in up to three rounds, one for each position to be funded, although first-round funding is awarded only to counties that have costs of the first position exceeding the Tier 1 base.

DATCP implemented somewhat different allocation structures between the 2012 and 2013 grant years to reduce staffing grants to the funding available. In 2012, a total appropriation of \$8,880,000 was available under 2011 Act 32 for county staffing grants in 2011-12, including \$3,843,100 GPR and \$5,036,900 nonpoint account SEG. Providing each county the greater of either \$85,000 or 100% of the cost of its first conservation position was an estimated \$6,557,900. Remaining budget authority was therefore \$2,322,100.

However, total funding was further reduced by \$1,100,400 GPR to meet DATCP lapse requirements under Act 32. To meet this reduction, DATCP calculated each county's funding for a second position as though the total \$8.88 million in appropriations were available. The full \$8.88 million available would have supported about 74% of the 70% state cost-share for second positions, or 51.8% overall. A further across-the-board reduction of 12.39% was applied to the total each county would otherwise have been estimated to receive in 2012 for first and second positions. (The percentage was to reflect the proportion of the \$1.1 million lapse relative to total 2011-12 appropriations for county staffing grants.) For example, a county that would have been awarded \$130,000 under the originally budgeted funding level, would have received \$113,900 following the reduction. As a result of the reduction, five counties' 2012 awards were reduced below the \$85,000 minimum specified in ATCP 50.

For the 2013 joint preliminary allocation plan, which was published in December, 2012, available staffing grant funding of \$8,603,400 includes \$5,036,900 nonpoint account SEG and \$3,566,500 GPR, which reflects \$3,800 in unspent encumbered funds from previous grant years and a reduction of \$280,400 to meet 2012-13 Act 32 lapses. DATCP again has proposed waiving the minimum \$85,000 grant allocation,

and base funding for conservation staff instead would be set at \$75,000 per county, or \$5,400,000 overall.

Following a Tier 1 allocation of \$75,000 per county, additional funds would be allocated under the first round of Tier 1 to counties whose first position costs exceed that level. For example, a county with a first position cost of \$95,000 would be provided \$20,000 additional funding in the first round of Tier 2 funding. For 2013, DATCP would allocate \$905,200 over 51 counties to fund first positions not fully supported by base funding of \$75,000. Therefore, total allocations in 2013 for fully funding each county's first position, with minimum funding of \$75,000 per county, are estimated at \$6,305,200. Based on \$8.6 million appropriated in 2012-13 for county conservation staffing grants, funding remaining for second and subsequent positions would be \$2,298,200.

The subsequent two rounds of Tier 2 allow funding for second and third positions at 70% and 50%, respectively, subject to fund availability. For 2013, DATCP estimates it would be able to fund counties' second positions at about 46.25%, or two-thirds of the 70% level, given available funding relative to county requests. No funding is available for third positions in 2013.

The change in allocation methods between 2012 and 2013 had the effect of reducing combined funding for the base or first position to \$6,305,200 in the 2013 grant year from \$6,557,900 in the 2012 grant year. This change is intended to preserve additional funding for second and subsequent positions, which DATCP believes may better target available funding. Specifically, counties for which the typical \$85,000 base allocation under ATCP 50 nearly fulfills or exceeds the entire cost of its land and water conservation staffing tend to be those counties with smaller populations and fewer pressures from development on land and water

resources. These counties also would tend to be less affected by reductions to funding for second and subsequent positions. More populous counties, however, would tend to have staffing reduced if funding reductions are applied only to second and subsequent positions, and DATCP contends this may inhibit the implementation of land and water conservation practices in places where such practices could have the greatest impact. As a result of the 2013 allocation process for county staffing grants, five counties would receive less than the \$85,000 base established in ATCP 50, and two counties would receive no more than the \$75,000 base established for 2013.

For 2011, the most recent year for which counties have reported staffing levels and the use of staffing grant awards, allocated DATCP funding of \$9,300,900 supported 119 full-time equivalent (FTE) positions out of 359 total FTE reported by counties.

Cost-Sharing and LWRM Plan Implementation. As shown in Appendix II, the 2013 allocation plan provided \$3,718,500 in bonding for LWRM plan implementation cost-sharing. This bonding is distributed through counties on a reimbursement basis for cost-sharing grants to landowners that provide up to 70% of the cost of installing conservation practices. Funding up to 90% may be available in cases of economic hardship. These cost-sharing grants are intended to support implementation of nonpoint source water pollution prevention BMPs, which are discussed later in this paper.

DATCP has customarily provided a base amount for each county; since 2007, this has been \$20,000, for a total of \$1,440,000 among all 72 counties. DATCP has customarily awarded additional bond funding to counties that have spent all or most of recent annual allocations of cost-sharing funds. For 2013, DATCP provided the remaining \$2.28 million in additional funding to counties that left on average no more than 20%

of their cost-share grants unspent over the preceding three years. The maximum award given out in this category was \$41,741, which 46 counties received. (These counties would, therefore, have a total bonding allocation of \$61,741, including the \$20,000 base amount.) Seventeen other counties received smaller performance-based grants, meaning that 63 counties received some portion of the \$2.28 million in performance-based funding. (DATCP reserved bond funding of \$200,000 for regulatory animal waste grants, which are discussed later in greater detail.)

In addition to the bond funding that was awarded to counties for cost-share grants, DATCP has had funding available annually since 2005-06 for nutrient management plan (NMP) development grants. 2005 Act 25 made \$520,000 nonpoint account SEG available beginning in 2005-06, and this increased under 2007 Act 20 by an additional \$6,000,000 nonpoint SEG available beginning in 2008-09. Funding has been reduced to \$5,356,700 annually by subsequent biennial budgets (2009 Act 28 and 2011 Act 32). This funding is provided to counties for: (a) grants to landowners for the implementation of NMPs, which were required under ATCP 50 for most Wisconsin cropland beginning January 1, 2008, or (b) other impermanent or "soft" cropping practices that will reduce nutrient runoff. Impermanent practices may not be funded through the use of state general obligation bonds, which the Wisconsin Constitution generally requires to be used only for permanent structural improvements.

From the approximately \$5.4 million annual appropriation for 2012-13, DATCP is allocating \$1,881,300 in the 2013 joint allocation plan. The 2013 allocation reflects a reduction of \$3.5 million, in part, to better align expenditures with expected account revenues, with an addition of \$24,600 in previously encumbered but unspent funds. The SEG allocation for landowner cost-

sharing is planned to be \$1,304,900 in 2013, with an additional \$576,400 SEG planned for collaborating organizations, as described below. Grants are shown by county in Appendix II.

For funds spent during 2011, the most recent year reported, 1,208 practices received cost sharing, including 938 funded by bond proceeds and 270 funded by nonpoint account SEG. In 2010, installed practices numbered 1,096, including 860 bond-supported practices and 236 SEG-funded practices.

Further, DATCP estimates that approximately 1.95 million acres in Wisconsin were under nutrient management planning in 2012, compared to approximately 1.5 million acres in 2010 and 1.85 million acres in 2011. The 2012 amount reflects about 22% of Wisconsin's 9 million acres of cropland as being subject to nutrient management plans. This total includes: (a) 816,000 acres under state cost sharing; (b) 468,000 acres under a local ordinance for manure management or livestock siting, for which cost sharing is required to change existing practices; (c) 630,000 acres at concentrated animal feeding operations, 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; and (d) 35,000 acres outside of a specific program.

In addition to funding landowner cost-sharing, DATCP has customarily provided funding for projects intended to allow statewide implementation of nutrient management practices. The 2013 preliminary allocation includes allocations of \$483,700 for UW-Extension, which is for several initiatives, including maintaining and updating online nutrient management planning tools. DATCP also awarded 2013 funding of \$92,600 to the WLWCA, including up to \$25,000 for the Standards Oversight Council to support the development and maintenance of technical stand-

ards for urban and rural soil and water conservation practices in Wisconsin and \$3,000 for the WLWCA Conservation Observance Day, an event organized by WLWCA recognizing conservation initiatives on farms. In the past, other organizations such as WALCE and Central Wisconsin Windshed Partners received funds.

Regulatory Animal Waste Grants

Regulatory funding for animal waste management is statutorily available from DATCP or DNR. Counties may use DATCP grants under s. 92.14 (3) to share costs for installing animal waste management practices and facilities as a result of a "notice of discharge" (NOD), or notice of intent (NOI) to issue an NOD under Chapter 283 of the statutes and administrative rule NR 243. DATCP in recent years has customarily reserved \$200,000 in bond revenue for grant awards. DATCP also has customarily funded NOIs rather than NODs. DATCP contends NOIs better reflect the voluntary nature of counties' implementation of LWRM plans, which seek to use cost-sharing to encourage the installation of conservation practices at sites where the practices would have the greatest effect, as opposed to requiring pollution abatement practices at specific sites.

To accomplish this policy, the Department waived a provision in ATCP 50 that conflicts with s. 92.14. ATCP 50, which governs DATCP's soil and water resource management responsibilities, prohibits counties from using LWRM funding from DATCP to award cost-sharing grants for practices needed to comply with NOIs and NODs. DATCP intends for the waivers to reflect the intent of the law and to provide a funding source designated specifically for NOIs. DATCP must commit its reserve funds to cost-share agreements by the end of the calendar year in which funds are allocated. This is intended to align with provisions of ATCP 50 for extending funding by one year to projects that are not com-

pleted by the end of the grant year, but for which contracts have been signed.

Between 2002 and 2007, when DATCP first reserved bond revenues for animal waste management, only the priority watershed program and the competitive TRM grant program funded NOD remediation. The 2007-09 budget act, however, authorized DNR to address animal waste pollution from a similar reserve that operates outside competitive grant programs. DNR funding for animal waste pollution is discussed later in greater detail.

DNR Nonpoint Source Grants

With the expiration of the priority watershed program in 2010, DNR funding for pollution management practices exists through three 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 [TRM] program [NR 153]; (b) the urban nonpoint source and storm water [UNPS] grant program [NR 155]; and (c) the municipal flood control [MFC] program [NR 199]. (The priority watershed program is described in Appendix VI.) Local governments that are awarded any of these grants enter into a contract with DNR, for a specified minimum period, which in most cases is 10 years. Grant recipients must comply with program conditions, provide the local portion of the project costs, and install and maintain all BMPs constructed under these programs, and local governments that use state funds to provide assistance to private landowners must enter into a

Table 3: Summary of Targeted Runoff Management Grant Categories

Category	Standard Duration	Maximum Grant	Agricultural or Urban	2012 Funding	2013 Estimated Funding
Large-Scale TMDL	3 years	\$1,000,000	Agricultural	\$1,763,500	\$587,100
Large-Scale Non-TMDL	3 years	1,000,000	Agricultural	529,400	635,800
Small-Scale TMDL	2 years	150,000	Both	321,800	523,700
Small-Scale Non-TMDL	2 years	150,000	Both	<u>2,434,200</u>	<u>2,086,200</u>
			Totals	\$5,048,900	\$3,832,800

similar contractual agreement with the landowner. Project applications to construct practices in navigable streams or in wetlands require a waterway permit or a wetlands permit prior to the submittal of the application.

Grant Programs

Targeted Runoff Management Grant Program. As created under s. 281.65 (4c) of the statutes, TRM grants are intended to promote "the accelerated implementation of nonpoint source water pollution control" that cannot be achieved through activities funded under DATCP cost sharing. Grants are to support pollution abatement in high-priority target areas, characterized by the following: (a) a need to meet compliance with nonpoint source performance standards established by DNR; (b) the existence of impaired waters as identified by DNR to the federal 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 notice of discharge or a notice of intent to issue a notice of discharge; or (f) other water quality concerns of national or statewide importance.

Beginning with grants awarded in 2011 and funded in 2012, administrative rule NR 153 (targeted runoff management grants) provides that TRM grants are to be allocated in one of four project categories: (a) large-scale TMDL [total maximum daily load] implementation; (b) small-

scale TMDL implementation; (c) non-TMDL large-scale control projects; and (d) non-TMDL small-scale control projects. (TMDL plans are intended to reduce pollutant loads introduced to a water body to levels that will allow water quality standards to be achieved. TMDL plans are required for waters DNR has identified to EPA as being impaired by some type of pollutant.) Table 3 compares characteristics of each project type, including information on funding allocated for the 2012 grant year, the first since the categories were instituted, and amounts tentatively budgeted for the 2013 grant year. Following is a description of each type of project:

- *Large-Scale TMDL Implementation.* These projects are limited to managing agricultural nonpoint sources. Projects should manage the most critical or significant sources in a watershed area, based on relative contributions to the identified impairment, and must be possible to control cost-effectively. Projects may last up to three years, with extensions possible for a fourth if approved by DNR. Grants are capped at \$1 million per project.

- *Large-Scale Non-TMDL Projects.* Large-scale projects not implementing a TMDL plan may apply for this category of TRM grants, provided the project focuses on attaining performance standards of NR 151 and ATCP 50. Such projects must be guided by a watershed plan or another strategy for achieving water quality goals in an area. As with large-scale TMDL projects, large-scale non-TMDL projects must be limited

to agricultural sources, and must focus on controlling the most critical or significant sources, and that can be cost-effectively controlled, within a watershed area of between 8 and 39 square miles. Projects are limited to three years, although extension to a fourth year is possible. Maximum funding is \$1 million per project.

- *Small-Scale TMDL Implementation.* Small-scale TMDL implementation projects may address nonpoint source pollution at one or more sites, which may be either agricultural or urban in character. As with large-scale projects, small-scale TMDL-implementation projects are required to address significant nonpoint sources that can be cost-effectively abated. Projects may last for two years, with a possible extension to a third, given DNR approval. Projects may receive a maximum grant of \$150,000.

- *Small-Scale Non-TMDL Implementation.* Small-scale non-TMDL projects may address water quality concerns in agricultural or urban settings, and are required to achieve attainment with corresponding performance standards. Projects are limited to two years, unless an extension to a third year is approved by DNR. Maximum grants for this project type are \$150,000.

Construction grants may be awarded under any of the categories. Property acquisition costs are also eligible for grant funding. Non-construction local assistance grants may only be made for activities conducted during the grant period in large-scale projects. Local assistance grants fund activities including public outreach, planning, management and evaluation of best management practices. However, local assistance grants are contingent on the availability of funding other than general obligation bonding, which is the primary source of funding for TRM projects, and the Wisconsin Constitution only allows issuance of public debt for support of long-term capital improvements. DNR also reports project costs typically exceed the grant maximum, leading to most grants being fully allocated to con-

struction costs.

DNR is to determine the annual TRM budget prior to applications being submitted. The Department then divides total funding into sub-allocations for each category following application submission. Sub-allocations are to be based on water quality goals and the quality of applications in each category. Projects therefore compete only within categories. For 2012 grants, the first awarded under the four-category structure for TRM, DNR reports it attempted to fund half of the applications submitted in each category. However, DNR reports relative funding levels will vary by year with the types of applications submitted. The type of funding available also would be expected to influence project selection; for example, federal funds under the Clean Water Act have multiple conditions for their use. Further, DNR expects more grants may be funded through TMDL-based projects as TMDL plans continue to be created for more impaired waters.

Both urban and rural nonpoint projects can be funded through a TRM grant. However, revised federal standards adopted under NR 216 in 2004 for storm water management have required 218 municipalities in Wisconsin, including some UW campuses, to obtain a Wisconsin pollutant discharge elimination system (WPDES) permit. This permit classifies these municipalities as point sources, and point sources are ineligible for TRM grants. 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.

Up to 70% of a project's eligible costs can be funded through a TRM grant, which may be exceeded in cases of economic hardship. Conversely, local units of government may request a lower cost-share rate in their project applications. Eligible BMPs under the TRM program are explained in Appendix I.

DNR awarded TRM grants of \$5,048,900 in 2012, as shown in Table 3, including \$4,418,400 in general obligation bonding and \$630,500 in federal Clean Water Act funding. For calendar year 2013, the Department has selected 25 projects to be funded with a total of \$3,832,800 from bonding, federal funds and GPR. Small-scale projects will be initially authorized through 2014, and large-scale projects will be initially authorized through 2015. These grants are listed in Appendix III.

Urban Nonpoint Source and Storm Water Grant Program. 1999 Act 9 created an urban nonpoint source (UNPS) program under DNR and removed the program's oversight and project selection from the LWCB. The primary goals of the UNPS program include implementing urban runoff performance standards that meet requirements under NR 151, achieving water quality standards, protecting groundwater, and helping municipalities meet municipal storm water permit conditions of NR 216. UNPS grants are funded by a combination of SEG and bond revenues.

The DNR awards UNPS grants to local governments either with jurisdiction over a project area or with responsibility for controlling storm water discharges under a WPDES storm water permit (s. 283.33 of the statutes). To be eligible for UNPS grants, projects must occur in an urban area, which is land: (a) with a population of at least 1,000 persons per square mile; (b) used industrially or commercially; or (c) surrounded by either type of area. Projects must align with urban nonpoint source performance standards and with DNR pollution abatement priorities identified for a watershed or other geographic area. Recipients must also have a local program that adequately ensures implementation of construction site runoff controls, and of storm water management for newly constructed or redeveloped sites; these are also required conditions under a municipal WPDES storm water permit.

The UNPS grant program contains two grant types. Local assistance grants, or 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 re-development projects. Municipalities seeking planning grants must be urban areas or areas projected to be urban within 20 years. Planning grants are supported by nonpoint account SEG, as non-construction costs cannot use bond revenues, and projects are carried out either by the local government or a contract entity.

UNPS construction grants provide funding for physical improvements. As with TRM grants, UNPS construction grants are provided to local governments applying for funds. However, under the UNPS program, storm water management projects typically occur on municipal property, and do not involve cost-sharing with private landowners. Eligible projects include: (a) stream bank and shoreland stabilization; (b) structural urban BMPs for abating runoff from government, transportation, commercial, recreational or certain industrial facilities, including costs of land acquisition, storm sewer rerouting, and structure removal; and (c) other activities, such as improved street sweeping, identified by DNR rule. Costs associated with designing and building the specific 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 grants 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 in some instances, 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 storm water discharge permits. This provision therefore prohibits UNPS construction grants from supporting, for example, 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.)

Planning grants may not exceed 70% of total costs, while construction grants have a 50% cost-share rate. The maximum amount for a construction grant is \$150,000, a level established in 2003. The maximum planning grant is \$85,000. In addition, projects that involve land acquisition or permanent easements are eligible for an additional \$50,000 at the 50% state cost-share rate. Both construction and planning grants are limited to two years per project, although DNR may approve a one-year extension.

About \$8.6 million is available for urban nonpoint grants and municipal flood control and riparian restoration grants in 2011-13. This includes \$1,313,200 annually in nonpoint account SEG and \$6 million in additional general obligation bonding under 2011 Act 32 for use during the biennium. State law does not specify how program funds are divided between the UNPS and municipal flood control (MFC) and riparian restoration grant programs. DNR typically 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.

For 2012, the UNPS program awarded grants of \$2,742,700, including \$181,500 in planning

grants supported by nonpoint SEG and \$2,561,200 in construction grants supported by \$1,881,000 in general obligation bonding and \$680,200 in nonpoint SEG. DNR has approved grants of \$2,540,000 for 2013, including \$1,838,800 in construction grants and \$701,200 in planning grants. A list of these grants can be found in Appendix IV.

Municipal Flood Control and Riparian Restoration Program. 1999 Act 9 created a municipal flood control (MFC) and riparian restoration program within the urban nonpoint program. The program provides grants to cities, villages, towns or metropolitan sewerage districts for the collection and transmission of storm water for flood control and riparian restoration projects. As in the UNPS program, 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 public or private structures remaining in a 100-year flood plain.

DNR may provide grants for up to 70% of construction and acquisition costs for an approved project. DNR may also provide local assistance grants for up to 70% of eligible costs, including planning and design costs. In any fiscal year, the Department may not award more than 20% of the program's available funding to any one applicant.

Projects affecting any number of local governmental units are eligible for municipal flood control and riparian restoration grants. For projects affecting one governmental unit, DNR may award a grant to that unit. For projects affecting two or more local government units, grants may be awarded to: (a) an applying municipality or metropolitan sewerage district upon application by all of the municipalities or metropolitan sew-

erage districts affected by the project; or (b) a municipality or metropolitan sewerage district with jurisdiction for the provision of storm water collection facilities to two or more municipalities or metropolitan sewerage districts affected by the project.

The statutes specify several criteria for determining the eligibility and priority ranking of projects: (a) no transfer of flooding down stream or acceleration of upstream runoff; (b) no channeling of a stream or lining of a natural stream bed with concrete; (c) provide adequate opportunity for public use access for 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.

In 2012, 12 grantees were allocated a total of \$3,324,800 for MFC projects that will end in 2014. A list of these awarded appears in Appendix V.

Notice-of-Discharge Response Grants. Like DATCP, DNR has statutory authority to issue noncompetitive grants for manure management at

animal feeding operations that have been issued a DNR notice of discharge (NOD). This authority was first provided under 2007 Act 20. DNR is currently authorized to provide funding pursuant to an NOD or a notice of intent (NOI) if necessary to protect the waters of the state.

DNR may issue NOD/NOI grants using bonding authority available under the TRM program, which was provided \$7 million in new authority for 2011-13 under 2011 Act 32. As in other programs, bond revenues generally may only fund permanent structural improvements, while federal funds and GPR may support non-structural practices. Funding requests are generally divided by department, with DNR issuing funding pursuant to NODs and DATCP issuing funding for NOIs. 2009 Act 28 authorized DNR to provide grants directly to landowners, as opposed to providing funding through local governments in their annual grant applications. DNR reports it does not expect to use direct grant authority, as the Department generally considers participation by county land conservation departments to be a significant component in designing and implementing effective projects. Table 4 shows the annual amounts held in reserve by DNR and DATCP for animal waste grants as of the final joint allocation plan for each year.

Table 4: Notice of Discharge (NOD) and Notice of Intent (NOI) Grants by Yearly Allocation

Year	DNR				DATCP	Total
	BR	GPR	FED	Subtotal	BR	
2007	\$0	\$0	\$0	\$0	\$100,000	\$100,000
2008	250,000	50,000	0	300,000	200,000	500,000
2009	1,000,000	50,000	246,400	1,296,400	200,000	1,496,400
2010	301,900	69,700	517,100	888,700	200,000	1,088,700
2011	317,900	85,600	1,034,800	1,438,300	200,000	1,638,300
2012	883,500	0	0	883,500	200,000	1,083,500
2013	<u>1,000,000</u>	<u>0</u>	<u>0</u>	<u>1,000,000</u>	<u>200,000</u>	<u>1,200,000</u>
Total	\$3,753,300	\$255,300	\$1,798,300	\$5,806,900	\$1,300,000	\$7,106,900

NOTE: DATCP reserve amounts are exclusively from general obligation bonding authority.

Project Selection Process

Eligible governmental units must apply for grants under the TRM and UNPS programs by April 15 to be considered for funding in the following calendar year. Governmental units eligible for TRM grants include cities, villages, counties, towns, sanitary districts, lake districts, tribal governments and others. State agencies may also apply for TRM grants in priority watersheds, which have been clarified under administrative rule NR 153 to include designated lakes and watersheds 10 years past the area's original expiration date. Therefore, after December 31, 2019, state agencies will be required to have the local unit of government in which the project area is located submit applications on their behalf. State agencies, except the UW System Board of Regents, are not eligible for UNPS grants. Under the UNPS program, construction and planning projects are separated into two groups that compete for different pools of grant funding. TRM grant awards are not divided between construction and local assistance grants.

The DNR is to select projects by each November 1. Applicant scores and recommended projects are presented to the Land and Water Conservation Board. (Although statutes and administrative rules only require TRM scoring to be presented for the LWCB's recommendation, DNR customarily presents UNPS scores as a courtesy to the LWCB.) Grant agreements are then entered into by January 1 of the following year, or by the soonest date possible after the allocation plan is signed by the DNR Secretary.

Targeted Runoff Management

Provided sufficient funding exists, DNR is required to solicit applications for small-scale projects annually and may solicit applications for large-scale projects biennially or annually. As of December, 2012, DNR is planning to award grants to large-scale TRM projects beginning in 2013, which would account for a second con-

secutive year large-scale projects were awarded.

Administrative rule NR 153 requires all applicants to provide basic details of the projects to be funded. These screening criteria are intended to ensure a proposal is both eligible and would be appropriately staffed and completed if funded. Required information includes: (a) the BMPs to be installed; (b) how the BMPs would achieve stated goals such as those in an LWRM plan; and (c) evidence that the governmental unit has arranged for sufficient and capable staffing for the project and for completing the project within allowable funding periods.

Statutes specify the following scoring criteria for applications for TRM grants: (a) the extent to which the application proposes cost-effective and appropriate BMPs to achieve water quality goals; (b) the existence of an impaired water body in the project area, as reported by DNR to EPA; (c) the extent to which the project will attain established water quality objectives; (d) the local interest in, and commitment to, the projects; (e) the inclusion of a strategy to evaluate the progress toward project goals; (f) the extent to which the project would use federal funding; and (g) the extent to which the project enables the City of Racine to control storm water discharges under federal and state requirements. (Under both the TRM and UNPS programs, the criterion relating to storm water management in Racine is used by DNR as a tie-breaker.)

NR 153 has further defined these scoring criteria for the large-scale and small-scale project categories. Both large-scale and small-scale projects are evaluated and assigned points for water-quality needs in the project area and the likely improvements to be realized through the BMPs proposed. Additionally, large-scale projects must: (a) justify the extent of the geographic boundaries defining the project area; (b) identify nonpoint sources and state needs and strategies for creating an additional inventory; and (c) propose a strategy by which nonpoint source pollution

will be controlled in the project area. Small-scale project scoring accounts for the extent to which state performance standards will be implemented. Both size categories are also scored on their cost-effectiveness, their consistency with other conservation or management plans, use of other funding, and the ability of the local government to enforce performance standards. Project scores are then multiplied by up to 15 percent for the degree to which the applicant unit of government has authority to enforce nonpoint source performance standards, with full credit available for governments having authority to enforce all standards at all sites to which the standards apply.

Following the scoring procedures, projects in each category are ordered beginning with the highest scores, creating four statewide lists. Large-scale projects are funded in order until funds for the category are exhausted. For small-scale projects, however, DNR awards funds to the top-ranked project in each of the Department's five regions before awarding in a highest-to-lowest fashion until funds are exhausted. If available funding only covers a portion of a request, DNR may make a partial award, and the applicant is required to complete the project if the grant is accepted, even though the cost-sharing may be less than the 70-percent cost-share requirements. NR 153 also grants DNR the right to bypass higher-ranking projects if a lower-scoring project is eligible for and is being allocated federal funds, provided the higher-ranking project is ineligible for federal funding.

NR 153 institutes a funding cap on grantees, which is the greater of: (a) 20 percent of funding allocated for the category, for grantees receiving multiple awards; or (b) a per-project amount determined annually based on available funding and requested funding. For the latter, a project is considered to be all management practices proposed on contiguous property, regardless of how many grants cover the requests. DNR may also reduce

cost-share grants for projects not requiring minimum cost sharing.

Although the statutes allow TRM grants to last three years with extensions to a fourth, NR 153 limits small-scale projects to two years, with extensions possible for a third. The limit for large-scale projects remains that specified in the statutes.

Urban Nonpoint Source and Storm Water Management

As under the TRM program, UNPS project selection procedures are generally structured to address the same aims of cost-effectiveness and water quality improvement. Applicants must submit screening information to prove the project is in an urban area, that BMPs or planning projects would be eligible, and that the project would be completed within allowed timeframes and by capable staff and contractors. Applicants must also demonstrate the municipality has the policy instruments necessary to manage urban runoff, such as ordinances for construction site and post-construction runoff and inter-municipal agreements, where appropriate, to ensure operation and maintenance of urban runoff controls.

The statutory criteria for scoring are nearly identical to those listed earlier for the TRM program. In implementing the statutory criteria, administrative rule NR 155 scores projects on a variety of bases, including: (a) cost-effectiveness, including monitoring and evaluation associated with the project and the extent of pollution abatement expected; (b) water quality needs and their alignment with DNR priorities for the area; (c) the consistency with other management regimes such as county LWRM plans; (d) the applicant's use of other funding sources to minimize necessary state cost sharing; and (e) support of local persons and entities that would be required to implement BMPs. Initial scores determined by the above metrics may be increased by 10 percent for municipalities with qualifying local imple-

mentation programs. A qualifying local implementation program must include: (a) pollution-prevention education for residents and property owners; (b) nutrient management practices required of the applying government unit; and (c) a program of tracking and reporting to the DNR on construction site erosion control and storm water management permit activity.

Selection procedures are fewer than under the TRM program. Specifically, UNPS projects are ranked on a statewide basis only, with the highest-scoring projects receiving funding in descending order until available funds are allocated. However, under NR 155, DNR retains the right to establish minimum qualifying scores for components measuring cost-effectiveness, monitoring/evaluation, local support and consistency with DNR priorities; projects not considered viable in one of these dimensions are dropped from consideration. As under TRM, DNR limits funding to a maximum amount per project (\$85,000 for planning grants and \$150,000 for construction, with an additional \$50,000 possible for acquisitions and easements), and DNR may also limit a grantee's total awards under multiple projects to 20 percent of overall funding available. DNR may also deny funding if: (a) a project will expose environmental hazards or will have an unacceptable impact on endangered, threatened or wetland resources; or (b) the applicant has been delinquent in meeting previous grant responsibilities.

Municipal Flood Control and Riparian Restoration

Administrative rule NR 199, which implements the MFC program, specifies several eligible project activities. Following are eligible projects, listed in order of priority for funding:

1. Acquisition and removal of structures that cannot be rebuilt or repaired due to zoning restrictions;

2. Acquisition and removal of structures in the 100-year flood plain;

3. Acquisition and removal of repetitive-loss or substantially damaged structures;

4. Acquisition and removal of other flood-damaged structures;

5. Flood-proofing and elevation of vulnerable structures;

6. Restoration projects, such as removals of dams and artificial obstructions, bank restoration or repair of fish and plant habitat;

7. Acquisition of vacant land or perpetual conservation or flowage easements;

8. Construction of structures for the collection, storage or conveyance of storm water or groundwater for flood control purposes;

9. Preparation of flood insurance studies and other mapping projects.

In recent years DNR has customarily awarded MFC grants once each biennium, with most funding coming from general obligation bonding. As such, most grant awards fund construction projects or land and easement acquisition. However, local assistance grants may be awarded for certain labor, testing, engineering or publications costs that are approved by DNR as necessary for the project.

NOD Response Grants

Applications for animal waste management grants may be submitted throughout the year, and applications remain valid for one year. If an application is not approved for funding within a year, the applicant must reapply. NR 153 provides that DNR is to identify up to four periods during which funding decisions will be made on active, unfunded applications. The Department is also required to determine what amounts from

the NOD reserve will be available for awards in each period. DNR customarily has tried to equally divide available amounts among funding periods, with the goal of eventually disbursing all funds. DNR has forgone subdividing awards for periods in which requested funding has not exceeded available funding. DNR awarded NOD grants in April, June, and August of 2012.

NR 153 specifies that DNR will make awards on the basis of the project's merits, which include: (a) environmental impacts of pollution at the site; (b) the site history; (c) funding available, both from the NOD reserve and other sources; (d) farm viability; (e) state cost-share requirements; and (f) follow-up options for state and local authorities if the project is not successfully implemented. Specifically, NR 243 (animal feeding operations) classifies animal waste discharges as Category 1, 2 or 3 unacceptable practices.* DNR has authority to require compliance following Category 1 and 3 discharges without offering cost sharing. NR 153 therefore specifies that DNR may award grants pursuant to these discharges that are less than 70 percent sharing of costs. Grants in response to Category 2 discharges, however, must meet the 70 percent threshold.

NR 153 does not limit the duration of a grant to a specific period, other than requiring DNR to establish and extend a grant for sufficient time to accommodate the compliance period set in the NOD, which is generally in a range of 60 days to two years.

* Category 1 unacceptable practices are those resulting in discharges to navigable waters through a man-made device such as a ditch or flushing system, or if a navigable water originates outside the facility and passes over or through the operation and contacts the operation's confined animals. Category 2 unacceptable practices are those resulting from an owner's failure to meet performance standards for livestock operations, which are described in Chapter 2. Category 3 unacceptable practices are any other practices resulting in discharges to waters of the state not included in Categories 1 and 2.

Best Management Practices

Recipients of cost-share funding from any of the grant programs described above 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, but 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.

Cost-Share Rates

Cost-share grants generally equal 70 percent of the cost of implementing the BMP, except the rate may be up to 90 percent in cases of economic hardship, as defined by rule. BMPs and the associated cost-share rates have been established by administrative rules NR 120, 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. A definition of each of the cost-shared BMPs is provided in Appendix I. Also noted in Appendix I are practices eligible for cost sharing in addition to or different from the typical 70 percent rate for BMP installation. For example, certain vegetation plantings may be reimbursed for both prevailing land rental rates as well as maintenance costs such as mowing.

Property Acquisition and Easements

Under the TRM and UNPS programs, grants may cover land or easement acquisitions for any

of the following: (a) the construction of a structural urban BMP; (b) land which contributes or will contribute to nonpoint source water pollution, and which 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 Department must find that the additional cost is 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 percent applies to acquisitions and easements, except the rate is 50 percent 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, and DNR may grant funds to itself for easement purchasing, provided an easement would be located within a previously designated priority watershed not expired for 10 years or longer. Administrative rules require that any acquisitions or easements may only be purchased from willing sellers.

Maintenance of Practices

Landowners and governmental units receiving grants under the SWRM and nonpoint source grant programs are required to maintain all cost-shared structural practices for 10 years beginning

with the date the last practice is installed. Exceptions are for grassed waterway systems and riparian buffers, which landowners must maintain for 15 years if the project receives support payments in addition to installation costs. Non-structural 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.

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. Beginning January 1, 2010, contracts greater than \$14,000 under the SWRM, TRM, UNPS and NOD grant programs must be filed with the local register of deeds. DNR also requires 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 an 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. At the close of a cost-share agreement, local governments may release the recipient from all or part of an agreement if the

BMPs installed will be maintained or replaced without compromising water quality objectives. DNR must approve releases for agreements filed with a register of deeds. 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.

Soil and Water Resource Management and Nonpoint Source Grant Funding

Funding for rural nonpoint source water pollution abatement grants comes from a variety of state and federal sources. DATCP is provided over \$35.5 million during the biennium for rural grants, including LWRM plan implementation. DNR is provided an additional \$10.2 million for rural nonpoint grants, which includes approximately \$1.8 million in federal Section 319 funds used for local cost-share grants. In addition, approximately \$75.9 million in additional federal funding is expected to be directly available to local governments for nonpoint pollution abatement practices in the 2011-13 biennium. This brings total appropriated funding for the biennium to approximately \$121.6 million as shown in Table 5.

Funding for cost-share and staffing grants is provided from the following sources:

General Purpose Revenues (GPR)

DATCP is provided \$3,843,100 each year in the 2011-13 biennium for county staffing grants under the SWRM program. Funding was reduced by \$1,100,400 in 2011-12 and by \$280,400 in 2012-13, however, to meet general fund lapse requirements under 2011 Act 32.

Table 5: Rural Nonpoint Grants

	2011-12	2012-13
GPR*	\$4,552,200	\$4,552,200
FED**	38,831,900	38,881,300
SEG*	10,393,600	10,393,600
BR***	<u>7,000,000</u>	<u>7,000,000</u>
Total	\$60,777,700	\$60,827,100
Biennium	\$121,604,800	

* Appropriated amounts are shown, and do not reflect the following reductions: (a) \$1,808,400 GPR in 2011-12 and \$888,400 GPR in 2012-13; and (b) \$3.5 million nonpoint SEG annually.

** FED shown for 2012-13 is estimated.

***\$14,000,000 in new bonding authority is available for the 2011-13 biennium. Distributions need not be the same in each year.

NOTE: The table does not include state operations appropria-

DNR is provided \$709,100 each year in the 2011-13 biennium in a biennial appropriation for nonpoint source water pollution abatement. Funding was reduced by \$708,000 in 2011-12 and by \$608,000 in 2012-13, however, to meet the 2011 Act 32 requirements. For 2012-13, DNR plans to assign remaining funds to cost-sharing for non-structural BMPs in TRM projects.

Segregated (SEG) Funding

The segregated nonpoint account of the environmental fund has two primary funding sources: (a) a GPR allocation budgeted at \$11,577,300 annually in the 2011-13 biennium; and (b) \$3.20 per ton from the \$12.997 per-ton state tipping fee for most solid waste, other than high-volume industrial waste, disposed in Wisconsin landfills. DNR reports nonpoint tipping fees payable for 2011-12 were approximately \$17.4 million. A description of each appropriation supported by these revenues follows below. Table 6 shows the condition of the segregated nonpoint account. It should be noted that unspent segregated appropriation authority generally lapses back to the

environmental fund at the end of each fiscal year. However, some past budget acts required transfers from the nonpoint account to the state general fund, and these are also described below.

The nonpoint account formerly had a \$7.50 automobile title transfer fee as its primary revenue source. This funding mechanism began in 1991. This revenue source was intended to reflect the nonpoint source pollution attributable to vehicle operation and the state's transportation infrastructure. However, the 1997-99 biennial budget required that title transfer fees be deposited to the transportation fund, and that general fund revenues in an amount based on the annual title transfer fee revenues from the previous fiscal year be deposited to the segregated nonpoint account to be used for nonpoint source water pollution abatement-related activities.

The 2007-09 budget act: (a) changed GPR funding to a sum-certain amount of \$11,514,000 in 2007-08 and \$13,625,000 beginning in 2008-09; and (b) established the nonpoint portion of the tipping fee at 75 cents per ton. Under 2009 Act 28, the nonpoint tipping fee increased by \$2.45 per ton and the annual GPR transfer was also reduced to \$12,863,700. The GPR transfer was established at \$11,577,300 annually under 2011 Act 32. However, under general fund lapse requirements of Act 32, the transfer was reduced by an additional \$603,100 in 2011-12, and it was expected to be reduced by perhaps \$251,600 in 2012-13. GPR transfers shown in Table 6 reflect these actions.

Table 6 also reflects a reduction in tipping fee revenues from 2010-11 to 2011-12. DNR reports this is due to approximately \$5.8 million in tipping fees billed for 2011-12 that were not received in time to be credited to that fiscal year. Instead, these funds are considered as revenue in 2012-13, and they will increase estimated nonpoint tipping fees from \$18.4 million to \$24.2 million for the fiscal year.

In addition to providing grants to counties, the nonpoint account funds a number of DATCP and DNR positions related to nonpoint source pollution abatement efforts, as well as debt service for general obligation bonds issued for the departments' grant programs. These appropriations are shown in Table 6 but described in a later section. It should be noted the segregated environmental fund consists of the nonpoint account and the environmental management account (EMA), the latter of which primarily supports DNR programs related to recycling programs, groundwater programs, and cleanup of contaminated lands. The two accounts are statutorily designated as one fund but are tracked separately. More information on this account is available in the Legislative Fiscal Bureau informational papers "Contaminated Land and Brownfields Cleanup Programs" and "Solid Waste Recycling and Waste Reduction Programs."

County Staffing Grants. In addition to the GPR allocation noted above, DATCP funds county staffing grants with nonpoint SEG. Prior to 2009 Act 28, this portion of grant funds was combined in an annual appropriation with the soil and water management grants discussed in the next paragraph. The purposes were split into separate appropriations under Act 28. DATCP has \$5,036,900 available annually for county staffing in the 2011-13 biennium.

Soil and Water Management Grants. DATCP is appropriated \$5,356,700 annually in the 2011-13 biennium for soil and water management grants. Nonpoint SEG for these grants was established at \$520,000 beginning in 2005-06, primarily for addressing cost-sharing needed for nutrient management planning, which cannot be funded by general obligation bonding. Annual funding increased by an additional \$6 million beginning in 2008-09 under 2007 Act 20. However, the base allocation of \$6,520,000 was reduced under 2009 Act 28 to offset reductions that otherwise would have lowered amounts available

Table 6: Nonpoint Account Fund Condition

	Actual 2009-10	Actual 2010-11	Actual 2011-12	Estimated 2012-13	2012-13 Staff
Opening Balance	\$8,165,800	\$7,519,700	\$10,288,800	\$10,256,000	
Revenue:					
GPR Transfer	\$12,863,700	\$12,863,700	\$10,974,200	\$11,325,700	
Tipping Fee	10,662,000	17,773,900	12,851,300	24,190,600	
Miscellaneous	<u>-3,400</u>	<u>-4,500</u>	<u>-2,500</u>	<u>5,000</u>	
Total Revenue	\$23,522,300	\$30,633,100	\$23,823,000	\$35,521,300	
Total Available	\$31,688,100	\$38,152,800	\$34,111,800	\$45,777,300	
Expenditures:					
<i>Agriculture, Trade and Consumer Protection</i>					
Soil and water management administration					
	2,054,800	\$2,037,700	\$2,189,500	\$2,189,500	21.00
County staffing grants	4,252,800	4,161,800	5,036,900	5,036,900	0.00
Soil and water management grants	1,879,400	1,293,700	884,100	5,356,700	0.00
Debt service	1,175,800	2,186,000	2,699,200	3,384,300	0.00
Planned reductions	--	--	--	-3,500,000	--
<i>Natural Resources</i>					
Integrated science services	358,800	350,200	421,700	424,500	4.50
Nonpoint source contracts	320,900	0	197,100	997,600	0.00
TMDL and Wisconsin Waters	742,900	809,000	755,000	798,300	4.25
Nonpoint source administration	552,300	573,000	521,400	583,500	7.00
Urban nonpoint source grants	651,500	459,700	132,800	1,313,200	0.00
Lake and river grants	50,000	0	0	0	0.00
Debt service – Facilities	106,900	111,200	85,900	93,600	0.00
Debt service – Priority watershed	2,940,500	6,473,600	7,788,100	8,508,000	0.00
Debt service – TRM	154,100	342,500	646,700	1,036,200	0.00
Debt service – UNPS	932,500	1,697,400	2,145,700	2,537,400	0.00
Administrative operations	259,300	235,800	204,900	204,900	0.00
Customer assistance and communication	<u>188,400</u>	<u>188,900</u>	<u>146,800</u>	<u>149,700</u>	<u>0.74</u>
Total Expenditures	\$16,620,900	\$20,920,500	\$23,855,800	\$29,114,300	37.49
Transfer to General Fund	-7,547,500	-6,943,500	0	0	
Cash Balance	\$7,519,700	\$10,288,800	\$10,256,000	\$16,663,000	
Encumbrances/Continuing	<u>-6,844,400</u>	<u>-7,146,700</u>	<u>-9,971,900</u>	<u>-9,144,900</u>	
Available Balance	\$675,300	\$3,142,100	\$284,100	\$7,518,100	

for county staffing grants in the 2009-11 biennium. Portions of the 2009-11 appropriations (\$4.0 million in 2009-10 and \$4.4 million in 2010-11) were transferred to the state general fund under 2009 Act 28 requirements. It should be noted that DOA and DATCP expected to reduce these grant expenditures in the 2011-13 biennium by approximately \$3,500,000 each year. Despite a significant anticipated fund balance, the agencies indicate these reductions are needed to align non-

point account expenditures with expected revenues. This is shown in Table 6 as a planned reduction under DATCP.

Nonpoint Source Contracts. DNR is appropriated \$997,600 annually to support contracts for implementing or administering the nonpoint source water pollution abatement program. The statutes require that at least \$500,000 each year be allocated to the University of Wisconsin–

Extension's Natural Resources Education (NRE) program, formerly known as the basin education program. The NRE program consists of educational and outreach services relating to water quality and land use. The program, although provided by the UW–Extension, is intended to complement other state and local agencies.

Contract funding in the past has also supported: (a) the Wisconsin Land and Water Conservation Association (WLWCA), a nonprofit organization that represents the state's 72 county land conservation committees and departments; (b) research related to the effectiveness of buffer strips in preventing water pollution; and (c) the Wisconsin Agricultural Stewardship Initiative (WASI), a research-oriented effort to develop environmentally compatible and economically sustainable farms.

Amounts appropriated each year in the 2009-11 biennium were transferred to the general fund. DNR has resumed funding UW-Extension programs at \$895,300 in 2011-12 and \$635,800 in 2012-13 from this appropriation.

Urban Nonpoint Source Grants. DNR is appropriated \$1,313,200 nonpoint SEG in each year of the 2011-13 biennium under a biennial appropriation for urban nonpoint source-related grants. As discussed elsewhere in this paper, this appropriation funds grants for the urban nonpoint source and storm water management program as well as the municipal flood control and riparian restoration program. Funding from this appropriation most often supports local assistance grants for planning under these programs, but funding may also be allocated to construction or land acquisition grants.

In addition to base funding, 2009-10 also included funds for two one-time designated grants under 2009 Act 28: (a) \$19,000 for the village of Bagley in Grant County for study of projects that could mitigate flooding risks to the village, including work on storm sewers; and (b) \$50,000

for the Rock-Koshkonong Lake District for a study of options to preserve wetlands, shoreline, fish and wildlife habitat and the navigability of the lake.

General Obligation Bonding and Debt Service

General obligation bonds to provide funding for DATCP's SWRM activities were first authorized in the 1997-99 biennial budget act. A total of \$47,075,000 in bonds has been authorized for SWRM activities. As noted earlier, bond proceeds may only fund cost-share grants for the installation of structural pollution-abatement or conservation practices and cannot be used for local program administration.

General obligation bonds to support DNR grants for installing cost-share practices were first authorized for the program in the 1991-93 biennial budget act. Since that time, a total of \$161.2 million in bonding revenue has been authorized for DNR nonpoint pollution abatement activities, including: (a) \$94.3 million for the priority watershed program; (b) \$41.9 million for urban nonpoint source and municipal flood control programs; and (c) \$25 million specifically for the TRM program. However, with all remaining priority watersheds having closed in 2010, no additional general obligation bonding for the priority watershed program has been authorized since 2007 Act 20. DNR reports approximately \$67,000 remains available to allocate to other projects in 2013.

Bonding authority for each agency has customarily been increased in biennial budget acts, but authority is usable outside of the biennium in which it is first authorized. Therefore, any bonding authority that goes unused in a grant year, perhaps due to projects spending less than authorized, may be awarded by DATCP or DNR in subsequent years, up to the total amount authorized.

Debt service costs on bonds issued for these grant programs were \$13,279,700 nonpoint SEG in 2011-12. Debt service in 2012-13 is budgeted under 2011 Act 32 at \$15.5 million nonpoint SEG, although a restructuring of state debt in 2011-12 may increase payments for 2012-13 to approximately \$16.1 million. The amounts attributable to each program are shown in Table 6. Debt service costs are expected to represent over one-half of 2012-13 nonpoint account expenditures.

The \$2.45 increase in tipping fees under 2009 Act 28 was primarily intended to cover increases in nonpoint account obligations attributable to this debt service. These debt payments were converted under 2009 Act 28 from primarily GPR sum-sufficient appropriations to nonpoint SEG sum-sufficient appropriations. (Debt service on DATCP SWRM bonding was partially supported by an annual sum-certain appropriation of \$847,700 nonpoint SEG from 2005-06 through 2008-09. This offset GPR debt service by that amount in those years.)

In addition to debt service on bonds issued for grants to abate pollution, the nonpoint account supports a portion of DNR obligations on bonds issued to fund the construction of DNR administrative facilities. DNR has budgeted \$93,600 nonpoint account SEG in 2012-13 for this debt service.

Federal Funding

Section 319 Grants. States are awarded funding through the EPA for nonpoint source pollution abatement efforts. These funds are known as Section 319 grants after the Clean Water Act section creating them. According to the EPA, Section 319 grants had been appropriated about \$200 million annually or more by Congress since federal fiscal year 1999. Amounts were reduced to about \$175.5 million in FFY 2011 and \$164.8 million in FFY 2012, ending September 30, 2012.

To be eligible to receive Section 319 funds, a state must create a management plan to control nonpoint pollutant loadings and improve the water quality in navigable waters by doing so. The plan must describe several program aspects, including: (a) BMPs to be undertaken; (b) programs under which financial or technical assistance will be provided to implement the practices; (c) financial assistance other than Section 319 funds that are anticipated to implement the programs and practices; and (d) a schedule of milestones for achieving program goals. DNR's most recent management plan was approved by EPA in July, 2011, and will be in effect through federal fiscal year 2015.

Federal assistance for state programs funded by Section 319 may cover up to 60 percent of the total cost to a recipient state in administering its nonpoint source management program. States must, therefore, provide at least 40 percent of total program funding from other non-federal sources. Federal law also contains a maintenance-of-effort requirement that a state maintains its level of aggregate expenditures from all other sources at or above the average funding level for the two fiscal years prior to February, 1987.

Section 319 funding is divided into components known as base funding and incremental funding. Base funding is available to agencies administering state nonpoint source programs to cover administrative costs and staffing. Incremental funds are to be directed to creating and implementing plans, including TMDL plans, to reduce nonpoint source pollution and to restore impaired waters. DNR has used incremental funding both for administrative and staffing costs of the nonpoint source programs, and for grants to landowners. Total DNR awards of Section 319 incremental funds were \$2,592,000 in federal fiscal year 2012, which covers January through September of the 2012 calendar year. In 2012, DNR allocated \$882,500 in Section 319 incremental funding to NOD grants, and \$931,900 is budgeted for TRM grants in the 2013 preliminary

joint allocation plan. As of December 1, 2012, DNR had not received information on an incremental grant award for federal fiscal year 2013.

The Department expects Section 319 grants to landowners will be used most often for TRM grants as opposed to NOD grants under the revised NR 153. This is due to several planning activities for TMDL-based grants that may require cost sharing but would not be eligible for funding by bond proceeds. Section 319 funding, however, may allow for additional expansion of nutrient management planning and other cropping practices in the state, particularly when supporting responses to NODs, as DNR's TRM and UNPS grant programs typically support structural BMPs, through the use of bond proceeds, or planning activities, through the use of other GPR or SEG funding.

In addition to federal funding that is provided to DNR for county grants, federal funding may be received by landowners via local governments, who may receive federal funds directly for conservation practices under a variety of federal programs administered by the USDA's Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA). Funding under these programs is separate from DNR and DATCP grants to counties. As shown in Table 7, actual funding received directly by Wisconsin landowners and local governments for conservation practices totaled approximately \$37.9 million in federal fiscal year 2011-12. Funding by program is not yet known for 2012-13. It should be noted that this is an amount expected to be available to Wisconsin, but actual amounts received by landowners may vary with local government and landowner participation.

Environmental Quality Incentives Program (EQIP). EQIP offers cost sharing and technical help to eligible participants for the installation or implementation of structural and management practices on eligible agricultural land. Participants create a plan of operations to detail their

Table 7: Federal Fiscal Year 2012 Federal Land and Water Conservation Funding Awards to Wisconsin Landowners

Program	Funding
Environmental Quality Incentives Program	\$26,000,000
Conservation Stewardship Program	3,060,400
Farm and Ranch Lands Protection Program	665,000
Wildlife Habitat Incentive Program	24,000
Wetlands Reserve Program	8,200,000
Grasslands Reserve Program	<u>0</u>
Total	\$37,949,400 *

*Excludes funding for conservation reserve program (CRP), which primarily involves rental payments, and conservation reserve enhancement program (CREP).

conservation objectives and the practices that will achieve those goals. EQIP pays up to 75 percent of the cost of eligible conservation practices, including income foregone due to certain practices. EQIP participants enroll in the program under contracts of at least one year and up to 10 years. For Wisconsin, funding for installation of conservation practices was about \$26 million in the 2011-12 federal fiscal year. EQIP provides funds for general nonpoint source water pollution abatement and other resource concerns on agricultural lands; landowners may also receive funding under other federal programs described below, each of which has a more specific focus than EQIP.

Conservation Stewardship Program (CSP). The CSP provides financial and technical assistance by awarding incentive payments to landowners for the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on private land. Any agricultural producer 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 based on environmental performance, with better-performing systems receiving higher payments. Contracts per

person are limited to \$40,000 per year and no more than \$200,000 during a five-year contract. Wisconsin had \$3,060,400 allocated for CSP contracts in federal fiscal year 2011-12.

Farm and Ranch Land Protection Program (FRPP). Under the FRPP, the NRCS provides matching funds to help purchase conservation easements (development rights) to keep productive farm and ranchland in agricultural uses. The program also generally requires landowners under easements to have conservation plans for any cropland considered highly erodible. The NRCS provides up to 50% of the purchase costs of permanent easements on eligible farmland. The other 50% must come from a state, tribal or local government or a non-governmental group. Wisconsin was allocated \$665,000 for easement purchases in the 2012 federal fiscal year, according to NRCS reports. From the program's beginning in 1996 through the 2011 federal fiscal year, the USDA and American Farmland Trust report Wisconsin landowners have received total allocations of \$20.7 million under FRPP.

A purchase of agricultural conservation easements (PACE) program structured similarly to FRPP was created in Wisconsin under 2009 Act 28, although the program stopped accepting new applications in 2011 and two primary funding mechanisms for the program were repealed under 2011 Act 32. More information about this program is provided later in this paper and in the Legislative Fiscal Bureau informational paper, "Working Lands and Farmland Preservation Tax Credits."

Grassland Reserve Program (GRP). The GRP offers private landowners an easement or rental payment for the implementation of practices to preserve grasslands on their property and limit uses to those consistent with grazing. Eligible lands are those: (a) predominantly used for grazing; (b) areas historically dominated by grassland and also containing habitat for ecologically valuable animal and plant populations; or (c) lands

under Conservation Reserve Program (CRP) contracts that are expiring, if the land is ecologically valuable and susceptible to conversion to non-grazing uses. (The CRP is described in a later section.) Landowners may apply for permanent easements, or rental contracts of 10, 15, or 20 years, and may also apply for restoration agreements providing cost-sharing to restore functions to degraded grasslands. Payments vary by agreement, with rental contracts receiving between \$5.50 and \$16.50 per acre per year, depending on the county in which the land is located. Easement payments are determined by appraisal. No new funding was available for Wisconsin in the 2011-12 federal fiscal year.

Wildlife Habitat Incentive Program (WHIP). WHIP provides private landowners with technical assistance and cost sharing for the establishment and improvement of wildlife and fish habitat. Participants create plans of operation describing conservation practices to be undertaken, and NRCS will provide up to 75 percent cost-sharing under contracts ranging from one to 10 years. Practices receiving cost-share funds must be maintained for their anticipated lifespan.

Wetlands Reserve Program (WRP). The WRP provides technical and financial assistance to eligible private landowners to protect wetland resources. Wetland restoration and preservation is intended to improve or maintain water quality, wildlife habitat, groundwater recharge and flood mitigation. Program enrollment is through: (a) 30-year easements; (b) perpetual easements; or (c) restoration cost-share agreements lasting at least 10 years. For perpetual easements, USDA covers all easement and wetland restoration costs. Restorations are cost-shared at 75 percent for the other enrollment options, as are the purchase costs for a 30-year easement. From the WRP's inception in 1992 through the 2010-11 federal fiscal year, USDA reports Wisconsin landowners had enrolled in 593 WRP agreements covering 58,700 acres.

Conservation Reserve Program (CRP). Administered by the USDA Farm Service Agency, the 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 the following: (a) up to 50 percent 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 September, 2012, Wisconsin had about 23,400 CRP contracts in effect covering 14,300 farms and 368,100 acres, with statewide average annual rental payments of \$83.36 per acre. (This figure excludes acreage enrolled in the Conservation Reserve Enhancement Program, which is discussed in the following paragraphs, as well as other low-enrollment CRP subprograms.) These enrollments will result in approximately \$30.7 million annually in payments statewide.

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 ground 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 from 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 restorations, 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 percent overall match to a federal grant of up to \$200 million. As such, the state originally authorized \$40 million in general obligation bonding authority for the program under 1999 Act 9. However, because DATCP believes program demand is unlikely to approach these funding authorizations, bonding authority was reduced under 2009 Act 28 to \$28 million, with \$12 million being initially reallocated to provide funding for the PACE program. This funding for PACE was repealed under 2011 Act 32. Funding was not restored to CREP, but DATCP currently projects the \$28 million authorized will be sufficient for state payments.

Through June 30, 2012, about 43,600 acres of land have been enrolled in CREP, with 37,150 acres entered in 15-year agreements and 6,450 acres in perpetual easements. DATCP reports about 3,200 contracts are in effect with approximately 3,500 different landowners. The FSA projects that total federal payments associated with this acreage over CREP contracts will total about \$86.5 million. In addition, state incentive payments to enroll this land into the program and to make cost-share grants to landowners for the installation of conservation practices are approximately \$12.5 million as of June 30, 2012. This includes incentive and cost-sharing payments of \$6.5 million associated with permanent easements and \$6 million associated with 15-year agreements. Of these amounts, \$6 million is for incentive payments on permanent easements and about \$4.75 million is for incentive payments associated with 15-year agreements. In total, expenditures of approximately \$99 million of the total \$240 million contract amount are expected over the life of the CREP contracts for the lands enrolled in CREP as of June 30, 2012.

Practices funded by CREP have achieved the following: (a) buffered 1,470 miles of streams, part of the state goal of 3,700 miles; (b) prevented an estimated 138,000 pounds of phosphorus deposition annually, part of the state goal of 610,000 pounds annually; (c) prevented an estimated 73,200 pounds of nitrogen deposition annually, part of a goal of 305,000 pounds annually; and (d) removed an estimated 67,700 tons of sediment annually, part of a goal of 355,000 tons annually. Additionally, CREP has made the following progress toward goals for certain practices: (a) established 11,600 acres of the state goal of 15,000 acres of grassland habitat; (b) restored 2,900 wetland acres of the statewide goal of 5,000; and (c) established 29,100 acres of riparian buffers, part of a goal of 80,000 acres. The overall goal for total enrolled acres is 100,000; Wisconsin currently has about 43,600, as noted above. Wisconsin and the USDA extended the state's participation in CREP in December 2007, although CREP is subject to reauthorization in the next federal Farm Bill, the last of which expired October 1, 2012. DATCP expects it would continue participating in CREP should the program be reauthorized, and should state policy not otherwise change.

Great Lakes Restoration Initiative (GLRI). The Great Lakes Restoration Initiative 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, projects in Wisconsin have been granted approximately \$48.2 million since 2010 from EPA, the U.S. Department of the Interior, the U.S. Army Corps of Engineers and the National Oceanic and Atmospheric Administration. Approximately \$37 million has been awarded by EPA.

Soil and Water Resource Management and Nonpoint Source Administrative Funding

DATCP and DNR are provided approximately \$8.4 million in direct administrative funding for staff and associated costs for the nonpoint and SWRM programs in 2012-13, as shown in Table 8. In addition to amounts identified in the table, each program also supports a portion of agency overhead costs.

Table 8: 2012-13 Administrative Funding and Associated Positions

Source	DATCP		DNR	
	Funding	Staff	Funding	Staff
GPR	\$0	0.00	\$405,400	5.00
FED	226,000	2.25	2,268,800	28.50
SEG	2,189,500	21.00	1,381,800	11.25
PR	<u>0</u>	<u>0.00</u>	<u>1,909,300</u>	<u>18.50</u>
Total	\$2,415,500	23.25	\$5,965,300	63.25

DATCP Soil and Water Management Staff

DATCP is appropriated \$2,189,500 and 21.0 positions annually from the nonpoint account for soil and water management in the 2011-13 biennium. These positions are a part of DATCP's Bureau of Land and Water Resources. Soil and water resource management efforts 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.

DATCP receives \$226,000 FED in Clean Water Act Section 319 funding from DNR for approximately 2.25 positions. DATCP has allocated these staff to: (a) land and water resource man-

agement plan implementation; (b) implementing and evaluating agricultural performance standards; and (c) providing engineering assistance and technical support, such as for implementing conservation practices or manure storage at agricultural operations. Additionally, DATCP reports it is using one-time funding of \$139,600 from NRCS from September, 2011, through September, 2013, to support nutrient management programming in northeastern Wisconsin.

DNR Watershed Management Staffing

State and federal funding has been provided for DNR planning, monitoring and administration of the nonpoint program. In 2012-13, DNR is provided \$6.0 million and 63.25 staff to administer its nonpoint pollution abatement and storm water activities. Program revenues (PR) are provided from storm water permitting fees. Segregated revenues are provided from the nonpoint account of the environmental fund. Federal funds are provided from the Department's Section 319 grant from the EPA.

Total Maximum Daily Load (TMDL) Implementation and Wisconsin Waters Initiative. DNR is appropriated \$798,300 nonpoint SEG annually with 4.25 positions for nonpoint source administrative duties. These positions have various responsibilities such as wastewater engineering, coordinating nonpoint source pollution abatement grants, coordinating state implementation of agricultural performance standards, and policy development related to agriculture-based pollution and storm water. DNR formerly allocated a portion of the appropriation's positions to development of Wisconsin's federally required TMDL plans. TMDL plans attempt to reduce the amount of specific pollutants reaching an impaired lake or stream so that water quality standards will be met. DNR reports all positions now implement TMDL plans indirectly through other administrative duties.

Also included in the appropriation is approx-

imately \$424,000 nonpoint SEG annually 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 state and local access to improved data such as floodplain mapping.

Nonpoint Source Operations. In addition to the administrative duties listed above, DNR is appropriated \$583,500 nonpoint SEG annually with 7.0 positions for other nonpoint source activities. These resources are used for technical assistance and the administration of DNR's nonpoint source water pollution abatement programs.

Storm Water Management. DNR is authorized \$1,909,300 PR in 2010-11 with 18.5 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. The storm water management program is discussed in greater detail in a later section.

Federal Funding. The current DNR federal positions were first authorized in 1990 and are funded through the state's performance partnership grant, which combines base funding provided by EPA to the state under Section 319 of the Clean Water Act for control of nonpoint source pollution and under Section 106 for general surface water and groundwater pollution control. The federal program requires states to submit a proposed management program for controlling pollution from nonpoint sources and improving water quality. This must include a list of BMPs, a program of implementation of those measures and a timetable. States that comply with requirements are eligible for 60% federal grants to assist nonpoint source plan implementation.

Of the DNR FED positions shown in Table 8, 12.5 are supported by Section 319 base funding, 10.0 are supported by Section 319 incremental funding, and 6.0 are supported by Section 106 funding.

DNR Other Staffing

In addition to the 11.25 nonpoint SEG positions in the DNR Bureau of Watershed Management, the nonpoint account supports a number of other positions outside the DNR Division of Water. These positions are described below, but are not reflected in Table 8.

Integrated Science Services. DNR is appropriated \$424,500 nonpoint SEG annually with 4.5 positions in the Division of Enforcement and Science for activities related to the research, evaluation and monitoring of nonpoint source water pollution.

Administrative Operations. DNR has allocated \$204,900 nonpoint SEG in 2012-13 for general and administrative costs in its Division of Customer and Employee Services. The administrative operations appropriation supports general departmental nonpoint-related support functions such as grant management, legal services, finance and auditing, administrative and field services, data processing, information technology, human resources and facility rental costs.

Customer Assistance and Communications. DNR has allocated \$149,700 nonpoint SEG with

0.74 positions in 2012-13 to support staff in the Division of Customer and Employee Services, which is responsible for customer service and communication and education efforts. These amounts are intended to reflect the time addressing nonpoint source water pollution issues.

Clean Water Fund Loans

The clean water fund program, administered by DNR and DOA, provides subsidized loans to municipalities for nonpoint source pollution abatement and storm water management projects. The subsidized interest rate is 75% of the market rate. DNR promulgated rule changes effective March 1, 2001, to allow funding for nonpoint and urban storm water projects. To date the program has funded 23 urban storm water projects for \$22,528,000 and three nonpoint projects for \$886,900.

The land recycling loan program is part of the clean water fund program and provides no-interest loans to certain local governments for the investigation and remediation of certain eligible properties. Under federal clean water regulations, land recycling loans are considered to be for nonpoint source pollution abatement projects. The Legislative Fiscal Bureau informational paper, "Environmental Improvement Fund," describes the clean water fund program.

NONPOINT SOURCE POLLUTION ABATEMENT REGULATORY AUTHORITY

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 navigable waters that consist 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, rural landowners in most cases are entitled to receive a cost-share offer before they would be required to change an existing operation.

NR 151

In order to administer its nonpoint and soil erosion performance standard responsibilities, DNR promulgated administrative rule NR 151, which establishes runoff management performance standards under the nonpoint source water pollution abatement program. The rule prescribes performance standards for three general areas: (a) agricultural land; (b) nonagricultural land; and (c) transportation facilities. The performance standards initially took effect in 2002, but were expanded under new rules that were developed in 2010 and took effect January 1, 2011.

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

Table 9: 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 5 feet from top of water channel; up to 20 feet may be required
Phosphorus	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 plan 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

facilities and handling; (e) nutrient management; and (f) phosphorus. Performance standards are summarized in Table 9.

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 2 to 5 tons of erosion per acre per year. Rates for individual farm fields are calculated under a revised universal soil-loss equation developed by the USDA NRCS and specific for each soil type in the state based on soil composition, field slope, tillage method, crop residue characteristics and rainfall. 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 allows no tilling within five feet of the top of a surface water channel, but DNR may require setbacks of up to 20 feet in instances where such an increase is determined to be necessary. Further, setback areas must be at least 70 percent 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.

The tillage setback was a new standard promulgated under NR 151 revisions that took effect on January 1, 2011. This standard is based in part on recommendations made in the 2005 final report of the Wisconsin Buffer Initiative (WBI), a project convened in 2002 by the Natural Resources Board to develop guidance on where riparian buffers would best be utilized in Wisconsin to protect surface waters from agricultural runoff. The tillage setback in some ways resembles a buffer by preserving certain acreage near waterways from tillage, thereby allowing other vegetative covers in those areas to capture sediment and pollutant runoff from agricultural fields and maintain the integrity of the stream bank. The tillage setback differs from a buffer, however, in that the WBI report recommended buffers that accounted for the characteristics of the upland drainage area, including its size and any areas in which runoff converges into more concentrated flows. The tillage setback instead imposes a more uniform requirement. Riparian buffers remain a best management practice eligible for DNR or DATCP cost-sharing.

Phosphorus. Also contained in the 2011 NR 151 revisions are 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 all mechanical 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 on January 1, 2008, for all existing cropland, provided there is a bona fide offer of cost sharing.

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 in TMDL plans. TMDL plans are required for waters on the state list of impaired waters submitted biennially by DNR to the EPA. TMDL plans 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 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 requires runoff water to be diverted from contacting feedlots, manure storage areas and barnyard areas within the WQMA. Diversions to protect a private well are required only if the livestock facility is upslope from the well.

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 result 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.

Nonagricultural Performance Standards.

Prior to revisions in 2011, NR 151 contained performance standards for the following nonagricultural sites or practices: (a) construction sites disturbing one acre or more after March 10, 2003; (b) any construction sites regulated under NR 151 in their post-construction operation; (c) developed urban areas; and (d) fertilizer applications on non-municipal properties of five acres or greater. However, 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 10 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

Table 10: NR 151 Construction-Site Performance Standards

Activity	Standard
<i>Less than One Acre (Non-Permitted)</i> Soil/Sediment Loss Controls	BMPs shall reduce or prevent soil tracking on streets, and reduce or prevent discharges of sediment, chemicals or building materials.
<i>One Acre or Larger (Permitted), Prior to January 1, 2011</i> Sediment Runoff	80 percent reduction in sediment carried off-site, as compared to no control
<i>One Acre or Larger (Permitted), After January 1, 2011</i> 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 percent if site is permitted within two years of rule; (b) to no more than 5 tons/acre/year if site permitted after rule has been in effect for two years; or (c) to maximum extent practicable if standard is unattainable

to construction beginning and 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 permit coverage prior to January 1, 2011, which is the effective date of the revised NR 151. For sites seeking permit coverage prior to January 1, 2011, permitted sites are to implement BMPs designed to achieve an 80 percent 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 party justifies to DNR why the 80 percent standard is unattainable. Sites are also obligated to manage soil tracking, sediment deposition and chemical release similar to the manner described for nonpermitted sites.

For sites seeking WPDES coverage beginning January 1, 2011, the rule 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 percent, 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 nonpermitted 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 nonpermitted sites, all permitted sites

are to institute erosion control practices prior to land-disturbing activities occurring, and 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-permitted construction site. As is the case for the performance standards applied to WPDES-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 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 permit, is shown in Table 11. Percentage reductions are not typically determined by actual testing of installed practices. Rather, they are estimated 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. The revised NR 151 creates requirements both for incorporated municipalities of more than 1,000 residents per square mile but not holding WPDES permits for

Table 11: NR 151 Post-Construction Performance Standards

Category	Standard Prior to Jan. 2011	Standard Beginning Jan. 2011
Total Suspended Solids		
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 (Percentage of Pre-Development Volume)		
Residential	90%, or 25% of 2-year, 24-hour storm	N/A
Non-Residential	60%, or 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.

storm water discharges under NR 216, and for municipalities required to hold a WPDES permit. 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 a municipal storm water discharge 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 permit issuance. Stage 2 requirements are one of the fol-

lowing: (a) a 40% TSS reduction by March 31, 2013, if WPDES permit coverage began January 1, 2010, or earlier; (b) a 40% TSS reduction within seven years of permit issuance if the permit 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

Table 12: NR 151 Developed Urban Area Performance Standards

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

enforcing a rule provision that requires a permitted municipality to achieve a specified TSS reduction if the reduction would exceed 20%. However, 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 practices already in place that may have contributed to water quality improvements.

The Act 32 provision and the 2011 NR 151 revisions were intended to reflect concerns that costs of complying with the TSS deadlines could be too onerous. Prior to January 1, 2011, the NR 151 performance standards for developed urban areas required WPDES-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 enter a long-term storm water management plan, were introduced in the 2011 NR 151 revisions. Requirements for developed urban areas are summarized in Table 12.

Turf Standards. NR 151 requires that private owners of nonagricultural turf or gardens of five acres or larger that apply nutrients 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 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. As with nonagricultural facilities and practices, transportation-facility performance standards vary based on whether the site is: (a) a construction site, which can be either WPDES-permitted for storm water or not; (b) a post-construction site; or (c) in a developed urban area. Further, the standards for transportation facilities in each category are identical to those for nonagricultural facilities. For example, construction site performance standards for transportation facilities are those summarized in Table 10. Post-construction and developed-area standards for transportation facilities include slight modifications as described below, but 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 11 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 does not apply until 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-permitted municipalities.

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 are subject to the requirements for TSS reductions, peak discharges and infiltration, unless the swale is vegetated and complies with DOT technical standards for swales. (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.

It should be noted post-construction performance standards for transportation facilities currently may not 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-permitted municipality must meet 20% and 40% TSS reductions consistent with those assigned to the municipality as described above. DOT has the same flexibility granted to municipalities in achieving a 40% reduction if a standard seven-year deadline is unattainable. However, it should be noted that although DOT transportation projects are generally exempt by statute from storm water discharge permits, 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 transporta-

tion 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 operating under DNR's auspices. 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 livestock facility ordinances, but these may not exceed state standards unless: (a) the ordinance does not directly target livestock operations; (b) the ordinance was created before October 1, 2002, or (c) the governmental unit receives DATCP and DNR approval.

Construction Sites and Post-Construction. 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. To help municipalities create local programs, DNR has published model construction site and post-construction erosion control ordinances as appendices to NR 152. Municipalities passing such ordinances can apply to be authorized local programs under NR 216's provisions for construction-site erosion control. Approvals by such a local program are equivalent to a DNR permit.

Developed Urban Areas. Standards for developed urban areas are implemented through municipal storm water permitting under NR 216. Urbanized areas and operators of municipal separate storm sewer systems (MS4s), of which WPDES permits are required, 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.

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. 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.

It should be noted that performance standards

for activities supervised and directed by the DOT are generally not subject to requirements of NR 151, although DOT and DNR are required by statute to cooperate to minimize environmental impacts of transportation building.

If a WPDES-permitted livestock facility violates performance standards, DNR may instead follow NR 243 procedures, which are discussed later in greater detail.

DATCP Authority and ATCP 50

DATCP is directed under sections 92.05, 281.16 and 281.65 of the statutes to: (a) promulgate rules to improve agricultural nutrient management in Wisconsin, consistent with the non-point 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.

To fulfill these responsibilities, DATCP promulgated administrative rule ATCP 50. This rule generally took effect October 1, 2002, and was updated in August, 2007, to incorporate the 2005 NRCS 590 Nutrient Management Standard, which the NRCS created as a national model. The rule implements the entire SWRM program, beginning with requirements that agricultural

landowners practice nonpoint source pollution control in accordance with NR 151, cropland erosion control and nutrient management planning. 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, and it establishes procedures for DATCP's annual distribution of grant funds to counties.

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. It should be noted that in enacting any of the local regulations described below, a unit of government must still comply with provisions under s. 93.90 of the statutes, the livestock facility siting law, which limits local governments' abilities to disapprove or prohibit a livestock facility siting or expansion.

Livestock Operations. Local governmental units are allowed to promulgate rules for livestock operations that are consistent with the performance standards, prohibitions, conservation practices and technical standards established by DNR and DATCP. As noted earlier, 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 DNR water quality standards, and one of the Departments approves the standards. The Departments report only Manitowoc County has requested and received approval for an ordinance related to manure application that creates standards more stringent than state standards. This approval occurred in 2006.

The restrictions on local regulation do not apply to measures that were enacted prior to October 1, 2002. It also does 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. Also, the statutes provide that existing livestock operations that were a lawful use or legal nonconforming use on October 14, 1997 and that have received a notice of discharge or are required to apply for a DNR point source permit may continue to operate at that location, in conformance with the permit, regardless of any subsequent city, village, town or county general zoning ordinance. Further, 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.

1999 Act 9 requires DATCP 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.

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 DATCP, the county land conservation committee and the county planning and zoning agency. These procedures do not require any reviewing entity to approve the ordinance, however. DATCP reports 59 counties currently have manure storage ordinances, with all counties except several in the far northern and extreme southeastern portions of the state having adopted

such ordinances.

Agricultural Shoreland Management Projects. The agricultural shoreland management program was established in 1992. This law allows counties, cities, towns and villages to enact agricultural shoreland management (ASM) ordinances for the purposes of maintaining and improving surface water quality. ASM ordinances generally are intended to limit excessive nutrient and sediment runoff into waterways. Ordinances may specify required structures, such as livestock fences or vegetative "buffer" strips, or farming practices to achieve water-quality goals, and they may also prohibit certain structures in designated management areas. Municipalities must obtain DATCP approval before enacting an ordinance, and the Department has developed ASM ordinance guidelines to assist local governments. As is the case with counties' implementation of LWRM plans, no landowner can be required to cease or modify operations or practices without certain levels of cost-sharing being offered.

Beginning with the 2003 joint allocation plan, DATCP eliminated separate grant funding for ASM ordinances. Rather, ASM activities such as compliance and monitoring enforcement may be funded by LWRM grants.

Cost-Share Requirement

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 for the abatement of nonpoint source water pollution caused or threatened to be caused by agricultural facilities and practices existing prior to October 14, 1997. This requirement took effect October 1, 2002, for most farmland. Certain sites must comply with performance standards regardless of cost-sharing availability, including: (a) facilities permitted 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; and (d) sites that are granted a local livestock siting permit.

Further, cost-sharing must be offered under local regulations that exceed state performance standards and that apply to agricultural facilities that were a lawful use or legal nonconforming use on October 14, 1997. Local nonpoint source performance standards that require installation or implementation of a water pollution-abatement practice must contain a minimum cost-share rate of 70% and up to 90% in cases of hardship. Both DNR and DATCP revised their cost-share rates in administrative rules (NR 120, NR 154 and ATCP 50) that became effective on October 1, 2002. These rates are shown in Appendix 1.

Animal Waste

DNR administrative rule NR 243, which was first promulgated in 1984, regulates all large animal feeding operations in the state and those smaller animal feeding operations that have caused a significant discharge of pollutants into state waters. DNR regulates such operations as "point sources" of water pollution. Point sources must obtain a WPDES permit, which is the same permit system used to regulate discharges such as municipal sewage treatment plants. DNR promulgated rules that updated NR 243 in September, 2002, by adding the agricultural performance standards and prohibitions in NR 151 to the existing requirements for animal feeding operations. In 2003, DNR began the process of revising NR 243 to comply with revised federal animal feeding operation regulations and address manure runoff issues associated with land application ac-

tivities. A revised NR 243 took effect July 1, 2007.

Discharge Permits

Individual Permits. Under NR 243, all large concentrated animal feeding operations (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 potential impacts of their wastes. For example, 700 milking cows, 1,000 beef cattle, and 200,000 broiler chickens are each approximately equivalent to 1,000 animal units. CAFOs are required to maintain acceptable management practices and facility design standards to prevent groundwater or surface water pollution. The construction of new or altered storage or pollutant runoff control structures may be required due to NR 243 regulations.

In addition, NR 243 regulates all other medium and small animal feeding operations, if DNR determines that the animal feeding operation has unacceptable practices. An animal feeding operation is defined as "a lot or facility, other than a pasture or grazing area, where animals have been, are or will be stabled or confined, and will be fed or maintained for a total of 45 days or more in any 12-month period." The Department has the authority to issue a notice of discharge (NOD) directing the operator to take corrective action. Any operation, regardless of the number of animal units on the property, may be designated as a point source if it makes certain discharges to navigable waters. Such operations must apply for a WPDES permit.

Currently, most active CAFO permits are individual permits, which are intended to be specific to the operation applying for coverage. Large CAFOs must pay annual WPDES permit fees of \$345, which was established in the statutes under

2009 Act 28. 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 \$21,200 in revenues in 2011-12, equaling payments from 223 CAFOs.

Act 28 requires DNR annually to report to the Joint Committee on Finance and the Legislature's agricultural and environmental standing committees how these PR funds were used. DNR reports that of the amount collected, \$19,700 PR was used in 2011-12 for salaries, fringe benefits and supplies for limited-term employees (LTEs). LTE responsibilities typically include: (a) reviewing applications for permit issuances and renewals; (b) CAFO compliance and enforcement; (c) nutrient management-related duties, including review of NMPs required under WPDES permits and review of permit holders' annual reports; and (d) responding to manure spills.

General Permit. 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 feature.

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 expires March 31, 2016. As of October 1, 2012, 13 CAFOs with active permits were covered under the general permit. In

addition to the general permit for large dairy facilities, DNR has been considering a general permit for any livestock operations not exceeding 999 animal units that have been required to hold a WPDES permit based on past discharges.

Enforcement of Small and Medium Livestock Operations

DNR investigates animal waste sites on the basis of either citizen complaints or information received from state and county staff. The DNR estimates that it currently receives between 250 and 300 citizen complaints annually. The complaints and subsequent investigations resulted in the issuance of 660 notices of discharge or notices of intent to order abatement to livestock operators from 1984 through June 30, 2012, including 10 in 2010-11 and 14 in 2011-12.

Currently, the TRM program and reserves established by both DATCP and DNR are the primary funding sources for grants to manage animal waste. As noted earlier, NOD grants must be issued to protect the waters of the state. The DNR typically distributes these grants to counties, which enter into cost-sharing agreements with a landowner.

Approximately 60% (or 394) of the livestock operations receiving DNR notices of discharge or intent have received, or are in the process of receiving, cost sharing from the state. This includes 23 of the 24 operations that were issued notices in 2010-11 and 2011-12. Of these 394 operations, 329 have received grants from DATCP's animal waste regulatory cost-share program and 25 have received grants from DNR under either the priority watershed program, TRM program or NOD reserve. One project has had funding split between DNR and DATCP programs, while one operation received federal funding under EQIP.

As of June 30, 2012, 576 NOD violations have been resolved and 20 were planning or implementing corrections. Fifty one notices have

expired over time, meaning that the one-year deadline had passed without the operation achieving compliance due to insufficient funding available for cost sharing. DNR officials report that NODs now generally are not issued until the required funding has been reserved for the project, unless administrative rules allow DNR to require compliance without cost sharing. NODs are therefore corrected, issued WPDES permits or, if compliance is not achieved, referred for legal action. Fewer than two percent of the operators failed to take required actions under the notice of discharge and have been issued WPDES permits or have DNR action pending. DNR reports one operation issued an NOD was subsequently issued a WPDES permit between July 1, 2010, and June 30, 2012.

Through June 30, 2012, 29 livestock operations had been referred to the Department of Justice for prosecution, including both WPDES-permitted and non-permitted operations. The operators were assessed a civil forfeiture and agreed, or were required, to install practices to address the discharges that lead to the referrals.

Special Orders and Notices of Intent

DNR has authority under Chapter 281 to order the abatement of most occurrences of non-point source water pollution that the Department has determined to be significant. This includes nonpoint pollution which 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 vi-

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.

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 all cropland meet soil erosion rates of T or less. 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 statutory land and water conservation goals for the state focus on achieving tolerable soil erosion rates on a statewide basis, a county-wide 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 com-

position, depth to bedrock, rainfall, and groundwater depth. In Wisconsin, tolerable soil erosion rates generally range from three 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 which exceeded 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 which 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 which exceeded 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 which exceeded 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 which exceeded the tolerable soil erosion rate. This requirement excluded research plots.

Attainment of Erosion Control Goals

The Department 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 re-

quired 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.

County efforts to assess soil erosion conditions have occurred for many years. The state's 55 southern-most counties assessed vulnerable areas between 1984 and 1988 in county soil erosion control plans. The typical plan included an analysis of land uses, calculations of soil erosion rates and a strategy for addressing areas with soil erosion greater than "T." These plans were approved by the Land Conservation Board, predecessor of the LWCB.

When ATCP 50 was revised in December, 1996, it required that all counties have approved soil erosion control plans or have soil erosion control plan waivers in order to continue receiving LWRM plan grant funds. By January 1, 2003, all counties had earned LWCB approval for either soil erosion control plans or LWRM plans that encompass required soil erosion control components.

Beginning with calendar year 1995, there was a significant change in the way data were reported to and analyzed by DATCP staff to determine progress toward meeting "T by 2000" goals. County LCD staff previously had submitted data indicating the number of acres of cropland in their county that fell into the various erosion categories. In many cases, counties estimated this data. In response to concerns expressed by the Legislative Audit Bureau in 1994 about unequal estimations and sometimes erroneous data supplied by counties, DATCP began relying exclusively on data entered into a unified county database to track progress toward "T by 2000" goals. However, it became difficult to maintain ever-changing data from fields not participating in

state or federal programs, and by 1998 only half of Wisconsin's cropland was entered into the county database.

In response to the need for accountability and additional data on the current status of soil conservation efforts in Wisconsin, 60 counties in 1999 participated in a transect survey designed to determine erosion rates and conservation tillage residue levels. DATCP has compiled information from similar surveys performed annually by counties since then, although the Department reports recent participation has declined to such a degree that the results no longer carry statistical significance.

Instead, DATCP reports data published in the USDA National Resources Inventory (NRI) are the most reliable sources of information on statewide T attainment. The most recent NRI, dated 2007 but published in 2009, showed Wisconsin's statewide soil-loss rate for cultivated cropland declining from 4.6 tons per acre per year in 1982 to 3.7 tons per acre per year in 1997, but then increasing to 4.4 tons per acre per year in 2007. These estimates are generally consistent with results of the state transect 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 SNAP-Plus, which DATCP, DNR, USDA and the UW System offer online for landowners who are creating a nutrient management plan, estimates soil loss at the farm level. Although the Department reports there is currently no mechanism that aggregates SNAP-Plus data on attainment of tolerable soil loss, individual adherence to nutrient management plans would be expected to result in increased attainment of T statewide.

Cross-Compliance Enforcement -- Farmland Preservation and Federal Programs

DATCP officials indicate that aside from the SWRM grant program to counties, the cross-compliance aspects of the farmland preservation program and federal commodity programs have had a large impact on the state's ability to attain its soil erosion control goals. Through the farmland preservation program, land and water conservation activities of participating landowners are regulated under a "cross-compliance" provision. All claimants of farmland preservation credits must conduct farming activities in compliance with land and water conservation standards.

This cross-compliance provision changed slightly under 2009 Act 28. Prior to the act, the LWCB had developed documents and guidance to assist landowners and counties, including: (a) guidelines for land and water conservation standards; (b) procedures for the submission of these standards for review by county LCCs; (c) standardized forms; and (d) notices of noncompliance. Using these guidelines, county LCCs were required to establish applicable local standards and also monitor compliance with the standards. If a farmer receiving tax credits did not meet conservation standards, the county LCC was authorized to issue a notice of noncompliance, which withheld the tax credits for an individual landowner. Counties were required to notify the Department of Revenue (DOR) and the local zoning authority.

Under Act 28, counties are no longer required to develop local standards; the act instead required compliance with the performance standards under ATCP 50 and NR 151. County LCCs must continue to monitor compliance, which may include inspections by the county 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 are still to be submitted to DOR, and may be withdrawn once the landowner resumes compliance. It should be noted that counties are required at least once every four years to inspect farms claiming credits, and DATCP is similarly required at least once every four years to review each county's inspection efforts.

In 2011-12, representing primarily claims for the 2011 tax year, the farmland preservation program provided \$19.6 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 Act 28 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 2011 tax year show 15,100 individual claimants, excluding corporate and trust claimants. Total acreage of these claimants was approximately 2.8 million acres. DATCP estimates that as of July, 2012, approximately 6.5 million of Wisconsin's 15.2 million farmland acres were under farmland preservation zoning and approximately 529,000 acres were under farmland preservation agreements.

DATCP believes that the cross-compliance provisions of the program have a significant effect on the amount of land and water conservation activities occurring on Wisconsin farms, as most claimants seem likely to abide by erosion control standards rather than risk losing tax credit eligibility. The most recent review of local compliance with program conservation requirements was conducted by DATCP between 2010 and 2012 and covered approximately 15,200 claimants. DATCP estimates 3,300 claimants had been determined to be complying with soil and water

conservation standards, of which 1,100 had been issued formal certificates of compliance by the county land conservation department. Approximately 4,100 claimants were given schedules to comply with soil and water conservation requirements by 2015. The remaining 7,800 claimants had not yet been contacted by county conservation staff persons. More information on the farmland preservation program is available in the Legislative Fiscal Bureau informational paper, "Working Lands and Farmland Preservation Tax Credits."

Federal programs also have significantly contributed to the amount of land meeting the state's soil erosion goals. Federally funded USDA field staff work closely with county LCD staff and jointly provide technical assistance to farmers through the development of conservation plans. Also, the cross-compliance requirements of the 1985 Food Security Act (Farm Bill) increased the number of landowners requesting conservation plans in order to be eligible for USDA benefits. These conservation plans require crop rotations and other management strategies that reduce soil erosion to "T" or less.

Construction Site Erosion Control

Prior to 2009 Act 28, administration of programs for controlling erosion from construction sites rested with both DNR and the Department of Commerce, the latter of which has since been eliminated. DNR prior to that time had authority for, and continues to enforce, standards at all sites of one acre or larger, except where construction is for one- or two-family dwellings, which are under jurisdiction of the Department of Safety and Professional Services (DSPA). DNR authority includes 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. These sites are required to seek WPDES permits for storm water discharges. DNR's authority for permitting sites exceeding one acre owes to the

authority EPA has delegated to DNR to act as the state permitting agency for point sources of pollution under the federal Clean Water Act. Construction sites of one acre or larger are considered to be point sources of pollution.

Also, prior to Act 28, Commerce was responsible for administration of erosion control standards at construction sites involving public buildings or places of employment. Administrative rule Comm 60 established uniform standards for these construction sites. For commercial construction sites one acre and larger, Comm 60 contained provisions allowing for these sites to be covered by DNR discharge permits.

Administration of these standards was centralized in DNR under 2009 Act 28, except for authority for one- and two-family dwellings, which remained with Commerce. DNR was authorized by Act 28 to administer Comm 60 on a temporary basis. The act also required DNR to submit its own rules package no later than January 1, 2011, to incorporate necessary programmatic changes prompted by the transfer. DNR accomplished the rule-making requirements in part in 2010 with the NR 151 revisions.

However, 2011 Act 32 effectively reversed the Act 28 transfer, retaining DNR's authority for sites of one acre or larger. Authority for erosion control standards at construction sites involving public buildings or places of employment was placed with DSPS, which assumed responsibilities for certain environmental regulations following Act 32's elimination of Commerce. The authority for DSPS does not specify the size of the project, meaning DNR and DSPS would have overlapping authority for commercial and public building sites of one acre or larger. Act 32 therefore required DNR and DSPS, by October 1, 2011, to enter into a memorandum of understanding (MOU) to specify each agency's responsibilities for commercial structures. DNR and Commerce had operated under an MOU between

1993 and 2009.

For sites one acre or larger, it is likely DSPPS would, at a minimum, have to establish a procedure review and permitting process equivalent, and perhaps identical, to that DNR uses as the state's delegated permitting authority. However, EPA also has noted that states with split permitting authority are expected to seek federal approval for any divisions of permitting authority within the state. EPA reports if a state has divided permitting authority, such that the delegated agency (DNR) is not allowed under state law to take action against unauthorized discharges, the state's delegated authority could be revoked. EPA would assume permitting for a state in such a case. Further, any site regulated by the nonapproved permitting agency (DSPPS) may be considered to be in violation of the Clean Water Act.

As of December 1, 2012, DNR and DSPPS had not established an MOU detailing each agency's responsibilities in administering erosion control standards for construction sites involving public buildings or buildings that are places of employment. DSPPS also had not begun administering erosion control standards for such sites. Administration of erosion control standards for public buildings and buildings that are places of employment continued to be administered by DNR during this time.

Further, DNR's 2013-15 agency budget request, submitted in September, 2012, requested the authority for commercial and public buildings be transferred to DNR. In the request, DNR cited an EPA letter from July, 2011, that detailed 75 concerns EPA had about inconsistencies between state law regarding WPDES permits and minimum federal requirements for state programs. Among the inconsistencies cited was the split regulatory authority that existed between DNR and Commerce prior to 2011 Act 32. The 2011 EPA letter required the state to either explain how DNR possessed adequate permitting and en-

forcement authority or outline how state statutes and administrative rules would be amended to comply with federal requirements.

Commercial Buildings. Following 2011 Act 32, DSPPS is responsible for developing and administering statewide standards for erosion control at construction sites for 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 American Indian reservations or farm buildings. If authority for public buildings and buildings that are places of employment were to revert to DNR beginning with the 2013-15 biennium, DNR would again assume these responsibilities, in addition to its currently designated role administering erosion control standards for sites that do not include construction of a building.

For land-disturbing activities of one acre or larger not involving construction of a public building or place of employment, 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. Landowners apply for coverage under the permit by submitting to DNR notices of intent (NOIs) seeking permit coverage. As of October, 2012, approximately 5,500 construction sites were operating under the storm water general permit.

Further, administrative rule NR 216 allows municipalities to become authorized to administer storm water permitting for construction sites. In these cases, municipalities administer permitting of construction sites and ensure that construction sites are in compliance with state standards. DNR reports one municipality, Waukesha County, has been so designated. Additionally, any municipality permitted for storm water discharges under NR 216 is required as a condition

of its permit to administer a program for storm water management and erosion control for sites of one acre or larger. It should be noted, however, that EPA in its 2011 letter contended no delegations of permitting authority to local governments were allowed under the Clean Water Act.

Land-disturbing activities at sites for public buildings and places of employment, regardless of size, are to be regulated by DSPS. As noted above, the transfer of these responsibilities from DNR to DSPS has not occurred following 2011 Act 32. However, DSPS has promulgated administrative rule SPS 360, which is nearly identical to the earlier administrative rule Comm 60, which functions as an analog to NR 151, in that it requires all sizes of commercial construction sites 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 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; (b) for sites one or more acres of land disturbance, a reduction of 80% of the potential sediment load in storm water runoff, as compared to a circumstance of no controls during construction; or (c) for sites less than one acre of land disturbance, a reduction of 40% of the potential sediment load in storm water runoff, as compared to a circumstance of no controls during construction.

(Current language in 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 Comm 60 [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.)

Sites also must have in place erosion control

plans for the construction phase, and implement storm water management plans for the site's post-construction phase that will bring the site into compliance with NR 151 standards. NR 216 holds that construction sites regulated by DSPS are deemed to be WPDES-permitted if regulated in a manner equivalent to DNR's administration of WPDES-permitted construction sites. Accordingly, SPS 360 requires landowners to submit NOIs and notices of termination following stabilization of the site, similar to requirements in NR 216 for DNR-regulated sites. As noted above, EPA has expressed concern about this division of permitting responsibility.

Sites less than one acre, and not involving construction of a public building or place of employment, are subject to performance standards under NR 151, as described earlier. Although these sites generally are not regulated by WPDES permits, DNR may require such sites to seek permit 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.

Although WPDES permits are not required for most sites less than one acre, the statutes do require 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. (It should be noted that this authority is not the same as the WPDES-permitting authority under NR 216 for larger construction sites, and makes a delegated municipality responsible for commercial building sites in addition to those of one acre or larger.) 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.

As of January, 2010, when commercial con-

struction site erosion control administration moved to DNR, 221 municipalities had been delegated authority by the Department of Commerce. These delegations have continued, although no new municipalities have received delegations. Further, whereas administrative rule Comm 60 allowed delegated municipalities to receive NOIs for sites of one acre or larger, DNR now receives all NOIs.

In addition to the statutory authority for commercial building sites, a municipality may enforce erosion-control standards on a local basis under ordinances that supersede statewide standards. The statutes require a superseding ordinance to have been adopted before January 1, 1994. Prior to the Act 28 transfer, Commerce had estimated that approximately 165 local soil erosion control ordinances were adopted prior to 1994. However, it was not clear how many of the local ordinances are more restrictive than state standards, if any. Further, DNR reports that because statutory language relating to general storm water management ordinances does not contain such a restriction, the Department encourages municipalities with particular circumstances to enact stricter ordinances for general storm water management if appropriate for local circumstances.

Erosion Control Plans. Under NR 216 and SPS 360, erosion control plans must be prepared and implemented for all construction sites of one acre or more, or for sites involving construction of a public building or place of employment. NR 216 provides that the plans are to be completed prior to submitting an NOI so the Department can determine the adherence to standards. Further, landowners must update the plan as necessary, and they must inspect the construction site following certain heavy rains and document their assessment of the control practices contained in the plan.

NOIs submitted to DNR constitute certifica-

tion by the site owner that all applicable performance standards are being met by the erosion control plan. However, DNR reviews NOIs to determine whether that self-certification is plausible. Sites with potential environmental impacts may be inspected and have plans reviewed. Inspections may also be prompted by complaints to the Department. Also, municipalities with storm water permits are required to have construction-site erosion control ordinances in effect, so these municipalities in many cases constitute the local inspection and enforcement authority.

The owner is required to submit a notice of termination when the land-disturbing construction activities have ceased, all disturbed areas have been stabilized, and all temporary erosion- and sediment-control practices have been removed. 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. The storm water management plan must comply with the post-construction performance standards contained in NR 151.

Department of Safety and Professional Services One- and Two-Family Dwelling Program. The Department of Safety and Professional Services (DSPS, formerly Department of Commerce) is responsible for administering the state one- and two-family uniform dwelling code, including standards for erosion control for such dwellings.

DSPS spent \$112,700 PR and allocated 0.91 PR position in 2011-12 to administer the one- and two-family building site erosion control program. The amount of time is provided through a small portion of the time of several uniform dwelling code inspectors and other staff. DSPS anticipates a similar level of allocation during 2012-13. The program revenue funds are derived from permit fees for one- and two-family dwellings. The Department received \$192,100 in program revenue from the fees in 2011-12.

DSPS performs the following activities related to construction site erosion control: (a) inspects soil erosion control activities at building sites where building inspections are performed [one- and two-family buildings] or where complaints have been received; (b) provides consultation and advice to persons who may perform soil erosion control activities; (c) certifies local inspectors who inspect erosion control at building sites; (d) participates in interagency coordination efforts; and (e) audits agent inspection municipalities.

As of July, 2012, 1,704 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 194 municipalities. DSPS enforces the code in other municipalities, and contracted with 14 private inspection agencies during 2011-13 to provide inspection in 146 municipalities that chose not to provide their own enforcement.

During January, 2011, through July, 2012, DSPS conducted 33 field audits with municipalities, counties, and contracted inspection agencies that administer one- and two-family dwelling construction site erosion control programs. This included 15 audits of individual municipalities and their employed inspectors, and six audits of counties. It also included audits of a limited number of the municipalities covered by contracts with 11 private contract inspection agencies. The audits reviewed the soil erosion control plans submitted with building plans, the conditions of the plan review, and the plan implementation and maintenance at the site.

Audits and reviews of municipal, county, and private inspection agency programs during 2011 and 2012 found enforcement activities in need of improvement included: (a) require complete erosion control plans prior to issuance of new home building permits; (b) ensure that erosion and sed-

iment control measures are installed at construction sites prior to beginning activities that disturb the land; (c) provide greater enforcement of basic erosion control practices required in DSPS administrative rules; (d) ensure that proper and timely maintenance of erosion control practices are carried out; (e) inspect erosion and sediment control measures at the same time other construction activities are inspected during site visits; and (f) improve inspection notes for erosion control measures and enforcement activities. The Department also found that increased continuing education about construction site erosion control is needed for one- and two-family building inspectors throughout the state.

It should be noted that EPA, in the 2011 letter of program concerns, cited DSPS supervision of one- and two-family dwelling construction sites as a potential inconsistency for instances in which a site involves a land disturbance of one acre or larger. These sites, according to EPA, are to be regulated by DNR, as the state's delegated permitting authority. DNR reports it has committed to addressing this matter in future administrative rule revisions, per EPA's directive.

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. Major aspects of the agencies' program evaluations are described below.

Annual and Comprehensive Reports. 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 man-

agement projects. Beginning in 2006, DATCP and DNR have developed a new 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 non-agricultural 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.

Prior to the 2010 closure of the priority watersheds program, DNR annually collected data on the following in counties with priority watersheds: (a) pollutant load reduction; (b) progress toward other plan goals; (c) acres under conservation plans; (d) landowner contacts and participation levels; (e) major information and education activities; (f) overall project progress; (g) critical sites updates; and (h) land and/or water conservation ordinances. These data are not collected following the closure of the priority watershed program. However, the TRM, UNPS, and NOD grant programs require evaluations of 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. Joint evaluation reports were last published in 1990, 1993 and 1994, although DATCP and DNR generally include eval-

uation components in their annual report intended to meet both the annual and biennial reporting requirements.

Whole-Stream Monitoring

As part of a joint agreement, DNR and the U.S. Geological Survey (USGS) conducted "whole-stream monitoring" of seven designated streams located in five priority watershed projects. The whole-stream monitoring project included the following creeks, which are grouped by priority watershed: (a) Brewery and Garfoot [Black Earth Creek–Dane and Iowa counties]; (b) Joos Valley and Eagle [Waumandee–Buffalo County]; (c) Otter [Sheboygan River–Sheboygan County]; (d) Bower [East River–Brown County]; and (e) Spring [Rock County]. (An additional three streams, two of which were in Grant County and one in the City of Milwaukee, were initially selected, but were later eliminated due to BMPs not being installed.)

Whole-stream monitoring involves the collection of chemical, physical, and biological data before and after the implementation of nonpoint source practices. The purpose of the monitoring is to determine if the implementation of the recommended nonpoint source practices improves the quality of a whole stream. All of the streams are impacted by runoff from agricultural activities. The size of the drainage areas for the seven streams varies from five to 40 square miles. Monitoring for most of the streams began between 1990 and 1993, but all monitoring, both prior to and following BMP implementation, is complete for the seven participating streams.

Results from the whole-stream monitoring projects in general have found that BMPs have both reduced erosion from stream banks and also improved fish habitat. Fish populations in Otter Creek, Eagle Creek and Spring Creek particularly had increased, although fish communities in Joos Valley Creek did not show significant changes. Water chemistry, particularly with respect to sus-

pendent solids and phosphorus, has also improved in all streams during both base drainage periods and runoff events. Joos Valley and Eagle creeks have exhibited the most significant improvements in water composition.

As of October, 2012, final reports on whole-stream monitoring had been published for the watersheds of Black Earth Creek (2003), the Sheboygan River (2005), and the Waumandee River (2011). DNR expected the final report for the East River to be published in late 2012. A final, comprehensive summary for all projects will also be published following the reports for individual projects. Reports are published by the USGS.

Single-Source and Multi-Stream Comparisons

Because "whole-stream monitoring" is a time-consuming process, the nonpoint source program has adopted more immediate ways of documenting the benefits of abatement practices. Both single-source monitoring and multi-stream comparison monitoring are ways of measuring water quality in a more timely fashion. Single-source monitoring was started in 1994 and multi-stream comparison monitoring began in 1996.

Single-source monitoring attempts to evaluate

the benefits of a single practice. A stream that is adjacent to the source of pollutants, such as a barnyard, is monitored before and after practices are installed. DNR began the project using three barnyard sites and one site on which the landowner practiced rotational grazing. (One barnyard participant elected not to install BMPs following initial monitoring.) DNR reports the projects that installed BMPs generally demonstrated significant improvements. For example, using this data, staff found that pollutant loads were reduced as much as 90% after complete barnyard systems were installed at two dairy farms. Also, initial monitoring of a small stream in Fond du Lac County on which riprap was installed on eroded stream banks has indicated improvements in the stream.

DNR began multi-stream comparison monitoring by collecting information from 45 streams on differences in water quality and the level of management in each watershed. Unlike the other types of monitoring, data collection is only done once. This snapshot of water quality is intended to compare streams with high, medium and low levels of practice implementation. However, the Department indicates it was unable to collect complete implementation data from counties and, therefore, did not produce a final report.

APPENDIX I

Definitions of Cost-Shared Best Management Practices

Note: Unless otherwise specified, these practices have a 70 percent cost-share rate.

Access Roads and Cattle Crossings. A road or pathway which confines or directs the movement of livestock or farm equipment, and which is designed and installed to control surface water run off, to protect an installed practice, to control livestock access to a stream or waterway, to stabilize a stream crossing, or to prevent erosion.

Animal Feeding Operation Relocation or Abandonment. Relocation of an animal lot from a site such as a floodway to a suitable site to minimize the amount of pollutants from the animal lot to surface or ground waters. Reimbursement costs for permanent relocation or abandonment of livestock operation must be the most cost-effective option to deal with a water quality problem at the site, and DATCP must approve a plan for relocation or abandonment. For abandonment, eligible costs are those for removing structures, closing wells and stabilizing the site. For relocation, eligible 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 although cost sharing for new buildings may not exceed the appraised value of buildings at the current site.

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

Barnyard Runoff Management. The use of structural measures such as gutters, downspouts and diversions to intercept and redirect surface runoff around the barnyard, feeding area or farmstead, and collect, convey and temporarily store runoff from the barnyard, feeding area or farmstead.

Contour Farming.* Plowing, preparing, planting and cultivating sloping land on the contour and along established grades of terraces or diversions.

Cover and Green Manure Cropping.* Close-growing grasses, legumes or small grain grown for seasonal protection and soil improvement.

Critical Area Stabilization. The planting of suitable trees, shrubs and other vegetation appropriate for controlling and stabilizing sloped lands which 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.

Field Windbreaks. A strip or belt of trees, shrubs or grasses established or restored 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, DATCP offers: (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. For riparian

filter strips, landowners may elect to receive the same cost-sharing, but DATCP must at least offer the rate landowners would receive under CREP. Landowners electing to receive the CREP equivalent must enter into 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.

Heavy Use Area Protection. Installation of surface material to control runoff and erosion in areas subject to concentrated or frequent livestock activity.

Livestock Fencing. The enclosure, separation or division of one area of land from another in such a manner that it provides a permanent barrier to livestock in order to exclude livestock from land areas that should be protected from grazing or gleaning where degradation of the natural resource will likely result if livestock access is permitted.

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 for the storage of a volume of manure: (a) for which suitable land application sites or practices are temporarily unavailable generally due to frozen or saturated conditions; (b) from operations where the location and site characteristics of areas where manure is spread have a high potential to carry pollutants to lakes, streams and groundwater; and (c) for which the facility is necessary to properly land apply the manure according to a nutrient management plan.

Manure Storage Systems Closure. The proper abandonment of leaking or improperly sited manure storage systems.

Milking Center Waste Control. A piece of equipment, practice or combination of practices installed in a milking center for the purposes of reducing the quantity or pollution potential of wastes. For example, a waste storage system that captures milking equipment cleaning agent waste, discarded milk and other potential milking center wastes.

Nutrient Management.* The management of 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, DATCP allows counties to offer cost-sharing of the higher of: (a) 70 percent; or (b) \$7 per acre per year paid as a lump sum. In either case, state cost-sharing for nutrient management is not required beyond four years. Under NR 154, DNR offers \$6 per acre for the first year and \$4 per acre for three subsequent years.)

Pesticide Management.* The management of the handling, disposal and application of pesticides (including herbicides, insecticides and fungicides) including the rate, method and timing of application to minimize the amount of pesticides entering the air, water and nontarget organisms.

Prescribed Grazing.* A grazing system which 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 that results in a rough surface in order to maintain residue cover and avoid disturbing the entire soil surface.

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, DATCP must offer at least the CREP rate 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, landowners 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 ten-year cost-sharing requirement does not apply in such a case; rather, rent-based cost-sharing must continue for the duration of the contract. 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.

Stream Bank and Shoreline Protection. The stabilization and protection of the banks of streams and lakes against erosion and the protection of fish habitat and water quality from livestock access.

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.

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.

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 with a non-erosive grade at a suitable spacing.

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

Water and Sediment Control Basin. An earthen embankment or a ridge and channel combination which is 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 conditions suitable for wetland vegetation.

* Practices for which bonding revenues may not be used for implementation. The Wisconsin Constitution generally restricts the issuance of public debt to long-term capital projects.

APPENDIX II

2013 Proposed Rural Nonpoint Source Water Pollution Abatement Grants

	Staffing and and Support Total	Landowner Cost Sharing (Bonding)	Landowner Cost Sharing (SEG)	Total DATCP Allocation	DNR Targeted Runoff Management (TRM) Cost Sharing	Total 2013 Allocation
Adams	\$128,480	\$61,741	\$15,000	\$205,221	\$0	\$205,221
Ashland	100,162	61,741	15,000	176,903	0	176,903
Barron	108,279	61,741	15,000	185,020	0	185,020
Bayfield	99,141	61,741	5,600	166,482	0	166,482
Brown	134,163	50,357	20,000	204,520	0	204,520
Buffalo	107,042	61,741	0	168,783	0	168,783
Burnett	90,934	31,384	12,000	134,318	0	134,318
Calumet	134,843	61,741	40,000	236,584	150,000	386,584
Chippewa	147,554	20,000	0	167,554	0	167,554
Clark	132,279	61,741	40,000	234,020	104,238	338,258
Columbia	130,882	61,741	35,000	227,623	955,199	1,182,822
Crawford	99,655	40,681	14,000	154,336	0	154,336
Dane	179,007	61,741	30,000	270,748	0	270,748
Dodge	139,342	35,179	20,000	194,521	0	194,521
Door	147,365	61,741	40,000	249,106	225,478	474,584
Douglas	113,269	20,000	0	133,269	0	133,269
Dunn	137,517	38,973	16,800	193,290	0	193,290
Eau Claire	140,819	61,741	35,000	237,560	0	237,560
Florence	77,186	46,563	0	123,749	0	123,749
Fond du Lac	140,749	27,596	30,000	198,345	0	198,345
Forest	84,650	20,000	0	104,650	0	104,650
Grant	102,531	61,741	35,000	199,272	0	199,272
Green	115,750	61,741	35,000	212,491	0	212,491
Green Lake	140,323	61,741	40,000	242,064	0	242,064
Iowa	104,192	61,741	35,000	200,933	0	200,933
Iron	96,512	42,768	0	139,280	0	139,280
Jackson	108,311	61,741	0	170,052	0	170,052
Jefferson	150,063	35,179	28,000	213,242	0	213,242
Juneau	108,568	42,768	0	151,336	0	151,336
Kenosha	144,852	50,357	15,000	210,209	0	210,209
Kewaunee	110,269	38,973	40,000	189,242	111,602	300,844
La Crosse	135,158	61,741	35,000	231,899	0	231,899
Lafayette	101,552	61,741	35,000	198,293	0	198,293
Langlade	75,000	61,741	28,000	164,741	0	164,741
Lincoln	96,681	61,741	15,000	173,422	213,000	386,422
Manitowoc	155,147	61,741	40,000	256,888	0	256,888
Marathon	150,669	61,741	40,000	252,410	115,500	367,910
Marinette	143,331	61,741	15,000	220,072	300,000	520,072
Marquette	107,045	61,741	15,000	183,786	0	183,786
Menominee	75,000	20,000	0	95,000	0	95,000

APPENDIX II (continued)

2013 Proposed Rural Nonpoint Source Water Pollution Abatement Grants

	Staffing and and Support Total	Landowner Cost Sharing (Bonding)	Landowner Cost Sharing (SEG)	Total DATCP Allocation	DNR Targeted Runoff Management (TRM) Cost Sharing	Total 2013 Allocation
Milwaukee	\$100,130	\$20,000	\$0	\$120,130	\$0	\$120,130
Monroe	119,636	61,741	15,000	196,377	0	196,377
Oconto	127,107	54,152	15,000	196,259	0	196,259
Oneida	104,786	61,741	0	166,527	0	166,527
Outagamie	150,405	61,741	40,000	252,146	356,400	608,546
Ozaukee	150,520	61,741	35,000	247,261	0	247,261
Pepin	102,258	35,179	11,200	148,637	0	148,637
Pierce	121,459	61,741	15,000	198,200	0	198,200
Polk	138,342	35,179	10,000	183,521	59,500	243,021
Portage	125,921	61,741	0	187,662	0	187,662
Price	93,329	61,741	5,600	160,670	0	160,670
Racine	123,785	61,741	0	185,526	0	185,526
Richland	95,235	61,741	28,000	184,976	0	184,976
Rock	142,099	61,741	28,000	231,840	0	231,840
Rusk	103,890	61,741	0	165,631	0	165,631
Saint Croix	128,939	61,741	15,000	205,680	0	205,680
Sauk	121,270	61,741	35,000	218,011	341,950	559,961
Sawyer	82,785	20,000	4,200	106,985	0	106,985
Shawano	107,742	20,000	40,000	167,742	0	167,742
Sheboygan	135,298	61,741	0	197,039	0	197,039
Taylor	118,928	61,741	15,000	195,669	0	195,669
Trempealeau	113,763	61,741	35,000	210,504	449,940	660,444
Vernon	109,056	61,741	35,000	205,797	0	205,797
Vilas	97,109	42,768	0	139,877	0	139,877
Walworth	152,317	61,741	0	214,058	0	214,058
Washburn	119,963	20,000	0	139,963	0	139,963
Washington	106,290	61,741	10,080	178,111	150,000	328,111
Waukesha	144,484	20,000	0	164,484	0	164,484
Waupaca	109,816	61,741	15,000	186,557	300,000	486,557
Waushara	115,190	50,357	8,400	173,947	0	173,947
Winnebago	131,557	61,741	40,000	233,298	0	233,298
Wood	115,696	61,741	15,000	192,437	0	192,437
Non-Counties	0	0	576,390	576,390	0	576,390
Reserve	<u>0</u>	<u>200,000</u>	<u>0</u>	<u>200,000</u>	<u>1,000,000*</u>	<u>1,200,000</u>
Total	\$8,603,377	\$3,918,499	\$1,881,270	\$14,403,146	\$4,832,807	\$19,235,953

Note: These figures reflect grant awards under the 2013 joint preliminary allocation plan. Actual spending may be less, and funds may be reallocated as described in the paper.

* The 2013 DNR animal waste management reserve is funded by \$1,000,000 in bond revenues.

APPENDIX III

Targeted Runoff Management Project Grants for 2013

Large-Scale TMDL		Large-Scale Non-TMDL	
County	Amount	County	Amount
Columbia	\$587,098	Columbia	\$293,866
		Sauk	341,950
		Subtotal	\$635,816

Small-Scale TMDL		Small-Scale Non-TMDL	
County	Amount	County	Amount
Columbia	\$74,235	Calumet	\$150,000
Outagamie	149,500	Clark	104,238
Trempealeau	150,000	Door [3]	225,478
Washington	150,000	Kewaunee	111,602
Subtotal	\$523,735	Lincoln [2]	213,000
		Marathon	115,500
		Marinette [2]	300,000
		Outagamie [2]	206,900
		Polk	59,500
		Trempealeau [2]	299,940
		Waupaca [2]	300,000
		Subtotal	\$2,086,158

County	Total Funding
Calumet County	\$150,000
Clark County	104,238
Columbia County [3]	955,199
Door County [3]	225,478
Kewaunee County	111,602
Lincoln County [2]	213,000
Marathon County	115,500
Marinette County [2]	300,000
Outagamie County [3]	356,400
Polk County	59,500
Sauk County	341,950
Trempealeau County [3]	449,940
Washington County	150,000
Waupaca County [2]	300,000
Total TRM	\$3,832,807

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

APPENDIX IV

Urban Nonpoint Source and Storm Water Project Grants for 2013

Project Grantee	Funding Designated
<u>Planning Grants</u>	
Village of Ashwaubenon	\$60,060
City of Delafield	49,000
Garners Creek Storm Water Utility (Calumet, Outagamie Cos.)	60,370
Town of Ledgeview (Brown Co.)	33,390
City of Menasha	59,150
City of Mequon	16,975
Towns of Merton and Oconomowoc (Waukesha Co.)	70,350
City of Middleton	33,315
City of Oak Creek	83,000
City of Oconomowoc [2]	100,687
City of Thorp	49,140
Walworth County	77,350
Waukesha County	<u>8,400</u>
Subtotal – Planning	\$701,187
<u>Construction Grants</u>	
City of Appleton [2]	\$300,000
Village of Bellevue	77,389
Garners Creek Storm Water Utility	71,970
Town of Grafton	118,975
Village of Hartland [2]	165,000
Town of Menasha	95,854
City of Milwaukee	150,000
City of Oshkosh [2]	300,000
City of Racine	150,000
Town of Scott (Brown Co.)	76,500
Village of Valders	150,000
City of Whitewater [2]	<u>243,100</u>
Subtotal – Construction	\$1,838,788
Total Urban Nonpoint Source Grants	\$2,539,975

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

APPENDIX V

Municipal Flood Control Grant Awards for 2012-14

Project Grantee	Grant Amount
City of Brookfield	\$121,401
City of Elroy	107,573
Village of Gays Mills	153,500
City of Glendale	176,358
City of Mauston	360,500
City of Milwaukee	625,000
Milwaukee Metropolitan Sewerage District	625,000
City of Muskego	90,345
City of New Berlin	625,000
City of Prairie du Chien [2]	466,415
City of West Allis	<u>108,080</u>
Total	\$3,324,781

NOTE: Numerals listed after the grantees denote separate grant awards to the governmental unit.

APPENDIX VI

Original Nonpoint Source Pollution Abatement Grant Program

Chapter 418, Laws of 1977, created the nonpoint source water pollution abatement grant program to provide state financial assistance to landowners and municipalities for installing practices that abate nonpoint sources of pollution. Through December 31, 2010, approximately \$216 million in local assistance and cost-share grants was spent for original priority watershed and lake projects. The program remains authorized under s. 281.65 of the statutes and administrative rule NR 120, but the program has effectively ended. In its place, DNR and DATCP administer the grant programs described earlier.

Original Priority Watershed Projects

Prior to 1998, the nonpoint source grant program was implemented solely through a priority watershed strategy. A watershed comprises all land that contributes runoff water to a stream or lake. In the past, DNR used area-wide water quality plans originally developed under the Federal Water Pollution Control Act to identify watersheds and lakes where the need for nonpoint source pollution abatement was most critical. Only abatement projects located within watersheds designated as a high or medium priority were eligible for funding. Specific projects within these areas were then selected, first by DNR and later by the LWCB, based on district workload and priorities, county ability to manage a project and landowner participation.

Priority Watershed Designations

The 1997-99 biennial budget act, 1997 Act 27, required that DNR re-rank all watersheds and lakes in the state by the level of impairment by nonpoint source pollution. In preparing the rankings, DNR considered water bodies appearing on

the state-designated impaired waters list, or 303(d) list, which DNR is required to submit to EPA. The 1997-99 biennial budget act also required that funding be terminated for any of the 62 active priority watershed projects that were not re-identified by the LWCB. DNR subsequently sorted large-scale, small-scale and priority lakes projects watersheds into high-, medium- or low-priority watershed status. Using this list, the LWCB identified priority watersheds and lakes with DNR and DATCP recommendations, regardless of past priority watershed designations. Statutorily designated watersheds in the Milwaukee River basin and the South Fork of the Hay River were exempt from funding termination.

The LWCB ultimately re-designated all 62 active priority watershed projects, therefore keeping them eligible for funding on an area-wide basis until their completion. No future designations of priority watershed projects could be made. Priority areas were grouped by the following designations:

Large-Scale Priority Watersheds. For planning purposes, the state is divided into 330 large-scale watersheds. Each large-scale watershed is generally 75 to 300 square miles.

Small-Scale Priority Watersheds. Small-scale priority watersheds are sub-watersheds within a large-scale watershed. Small-scale priority watershed projects implement the same best management practices (BMPs) as the large-scale projects but are selected to achieve local water quality objectives, such as reducing sedimentation of a small stream. Small-scale projects are often found in medium- or low-priority watershed areas where it can be demonstrated that sig-

nificant local benefits can be derived.

Priority Lakes Projects. Priority lakes projects generally include watersheds draining to a selected lake or lakes. Priority lakes are those where the need for nonpoint source water pollution abatement is most critical. The affected area of these projects has ranged from eight to 230 square miles. Until 2003, the statutes required DNR to allocate at least \$300,000 of nonpoint source grant funds each year to priority lakes projects.

High-Priority Areas. High-priority areas contain a preponderance of impaired waters, threatened waters or a mix of impaired, threatened and partially impaired waters. The presence of endangered or threatened species may also prompt a high ranking.

Medium-Priority Areas. Medium-priority areas are a mixture of those fully meeting their uses and those partially meeting their uses.

Low-Priority Areas. Low-priority areas have a majority of waters fully meeting their uses.

Statutorily Designated Priority Watersheds. As part of 1983 Act 416, DNR was required to identify watershed projects in the Milwaukee River Basin, which includes portions of Milwaukee, Waukesha, Washington, Ozaukee, Fond du Lac and Sheboygan counties. In 1989 Act 366, the Kinnickinnic River was designated a part of the Milwaukee River Basin, and was, therefore, included as a part of the nonpoint project area. Six of the 66 large-scale priority watershed projects were located in the Milwaukee River Basin. In 1997 Act 209, the Root River Watershed was statutorily designated a priority watershed, reopening a watershed that previously had been completed.

The South Fork of the Hay River in Barron, Dunn, Polk and St. Croix counties was originally

designated a priority in 1993 and guaranteed such a designation until June 30, 2001. This designation was subsequently extended to 2005. The South Fork watershed area was exempt from nonpoint requirements related to cost-share rates and the types of BMPs installed. Instead, Dunn County and the DNR developed guidelines that were intended to distribute shared costs on the basis of higher reductions in nonpoint source water pollution.

Project Planning and Implementation

Best Management Practices (BMP). As under current grant programs, BMPs were the primary means of abating nonpoint source water pollution under the priority watershed program. Area-wide water quality management plans were drafted to identify appropriate BMPs, and the implementation of these practices were further refined in the nonpoint source water pollution abatement plan prepared for each watershed project. Counties used cost-share grants under the priority watershed program to enter into cost-share agreements with landowners to install BMPs, similarly to the operation of current programs.

In addition to landowner grants, DNR had authority to require local governments to adopt manure storage ordinances and construction site ordinances as a grant condition under the priority watershed program. DNR for these circumstances, as well as for purposes of achieving statewide performance standards under NR 151, has developed construction-site erosion control technical standards and a model construction site erosion control ordinance. The technical standards replace the handbook of construction-site BMPs previously developed by DNR. In addition, the Department of Commerce and the Department of Transportation (DOT) have specific authorities and duties related to one- and two-family construction sites and highway and bridge construction projects, respectively. These provisions re-

quire Commerce and DOT, in consultation with DNR, to establish standards based on BMPs.

Designated Management Agency. For the nonpoint source grant program, the term "designated management agency" is used to identify the primary local government participant or participants. Various local governmental units can participate in the nonpoint source grant program, including counties, cities, villages, towns, tribal governments, metropolitan sewerage districts, town sanitary districts, regional planning commissions, drainage districts and various lake districts. DNR designates management agencies for nonpoint source planning and implementation activities in a given watershed area. Designated management agencies in rural watersheds generally were counties, while cities, villages and towns typically managed urban watersheds.

Watershed Assessment and Planning. Projects in the original nonpoint program were based on watershed plans and assessments with continual updates. The first step in watershed planning required preparing an inventory of nonpoint source water pollution in the watershed. This assessed the water quality problems in the watershed's lakes, streams and groundwater, and identified the nonpoint sources causing the problems. The priority watershed plan was also required to: (a) identify critical surface water and groundwater protection management areas within the watershed, which are those portions where pollution is most significant and where BMPs will be most effective; (b) establish an integrated resource management strategy to protect or enhance fish and wildlife habitat, aesthetics and other natural resources; and (c) develop a comprehensive strategy to manage agricultural and nonagricultural nonpoint source water pollution affecting surface water or groundwater.

DNR delegated some of the planning work to the designated management agency in the priority watershed areas. DATCP, other state agencies, local governmental units and persons located in

the watershed also participated in planning. DATCP responsibilities were to prepare parts of the watershed plans relating to: (a) farm-specific implementation schedules; (b) cross-compliance activities, which are requirements that recipients of farmland preservation tax credits employ BMPs and comply with land and water conservation standards; (c) animal waste management; and (d) selection of BMPs for agricultural areas.

1991 Act 309 required DNR to complete the planning process for all designated priority watersheds by December 31, 2000. 1995 Act 27 extended that date to December 31, 2015, although the date is moot given that all originally designated priority watersheds closed by 2010.

Local Priority Watershed Advisory Committee. DNR was directed to appoint a local committee for each priority watershed and priority lake to provide advice on all aspects of the project. A committee was to consist of at least two farmers if the watershed or lake included agricultural land. Committees also included at least two representatives of a public inland lake protection district, or, in the absence of such a district, owners of riparian properties abutting a lake, river or other natural water body. For priority areas in the Milwaukee River basin, committees were to include a member of the county board of each county within the Milwaukee River Basin priority watershed or priority lake area. The current grant programs have discontinued the local advisory committees.

Project Implementation Phase. Designated management agencies were responsible for coordination and implementation of plan activities once each plan received approval from the LWCB, counties and DNR. This implementation included contacting all owners or operators identified as significant nonpoint sources in the watershed plan and securing their cooperation. As participation in the nonpoint program is voluntary except for those sites within critical watersheds, an important function of designated man-

agement agencies is securing the cooperation of land users who have the greatest impact on non-point source pollution. The agency executed cost-share agreements with individual landowners, ensured proper installation of BMPs, and provided general local program administration and coordination. In urban areas, municipalities typically were landowners receiving cost-sharing.

The maximum cost-share rate under the priority watershed program was 70 percent, as under the current competitive programs, except the rates up to 90 percent were allowed for cases of economic hardship. Priority watershed grants, commonly called anticipated cost-share reimbursement amounts or ACRAs, were included in the annual joint allocation plan. Counties and other municipalities, in turn, entered cost-share agreements with individual landowners for the installation of pollution-abatement practices and structures. As under the competitive program, cost-share agreements are filed with county registers of deeds and their requirements are binding on the land for the duration of an agreement, even following ownership transfers.

Critical Sites. Critical sites were those considered most important to achieving water quality goals established in a priority watershed plan, and participation by these sites was required. 1993 Act 166 directed DNR, in preparing priority watershed plans, to designate critical sites within the watershed as part of the planning processes. The DNR, in consultation with DATCP, presented proposed critical sites to the LWCB, whose approval was required for designations to take effect. In addition, critical-site owners had rights of appeal to the county LCC, the LWCB, and finally DNR, if they wished to contest their designation. Following designations, DNR had authority, in consultation with DATCP and with LWCB approval, to modify critical site lists.

Designated Watershed Projects

Under the original nonpoint program, 86 large, small and lake projects were selected for

funding, and all have been completed and closed as of 2010. DNR formerly issued final reports for closed projects, but now updates the following information each year for all priority watershed projects: (a) cumulative pollutant load reduction; (b) cumulative landowner participation rates; (c) progress on other project goals; (d) cumulative BMPs installed and cost-share funds reimbursed; and (e) cumulative critical sites resolved. This information then appears in an annual progress report published jointly by DNR and DATCP. Additional information on expended funds, cost-share participation rates and water quality information for remaining watersheds is available from, or reported annually by, DNR and DATCP.

Table 13 lists small-scale, priority lakes and other uses of grant funds. Table 14 lists large-scale nonpoint source pollution control projects. The tables portray the grant amounts that have been expended for each project including funding for cost-share and local assistance grants. The amounts listed reflect final project costs, and reflect state and federal expenditure figures.

Priority Watershed Funding

Between 1997 and 2009, the DNR provided counties with active priority watershed projects with an anticipated cost-share reimbursement amount (ACRA), to be used to reimburse landowners for BMPs installed during that calendar year. The ACRA was to equal the state cost-share amount for practices installed in each watershed project for that calendar year. If a county exceeded its ACRA, the county was responsible for funding the amount of the overage. In 1998, the LWCB approved revised nonpoint source grant totals for original nonpoint projects; this decreased most grant awards but still fully funded all signed cost-share agreements.

Unspent ACRAs were allowed to be transferred between priority watersheds within the same county, between grantees in the same priority watershed, or between counties in different

priority watersheds. In the past, DNR reallocated unspent ACRA's to grants in the TRM program.

As under the competitive grant programs, ACRA's supported by general obligation bonding could not be used to pay for cropping practices such as nutrient management and conservation tillage. Cropping practices were only reimbursed using the combination of federal Section 319 funds, which are restricted to certain areas of the state, and GPR.

DATCP Participation in the Original Nonpoint Source Grant Program

Under the priority watershed program,

DATCP had authority to: (a) prepare the parts of the watershed plans relating to farm-specific implementation schedules, cross-compliance activities, animal waste management and agriculturally related BMP selection; (b) identify areas within a watershed that were subject to activities required under the cross-compliance provisions of the farmland preservation program; (c) identify recommendations for implementation of these activities; (d) develop a grant disbursement and project management schedule for agricultural BMPs; (e) provide input on critical-site selection within a watershed when pollution is animal waste-related; and (f) provide engineering assistance.

Table 13: Original Nonpoint Source Pollution Abatement Grant Program Expenditure Through December 31, 2010 -- Small-Scale Priority Watersheds and Priority Lake Projects

Year Started	Project Name (end date)	County	Watershed Size (Sq. Miles)	Local Assistance	Cost-Share
Small Scale Watershed Projects					
1986	Bass Lake	Marinette	1	\$23,026	\$94,593
1990	Dunlap Creek	Dane	14	100,742	181,907
	Lowes Creek	Eau Claire	10	289,587	232,255
	Port Edwards Groundwater Project	Wood	10	157,108	0
1991	Whittlesey Creek	Bayfield	12	343,826	182,987
	Spring Creek	Rock	6	234,741	9,999
1994	Osceola Creek	Polk	9	198,646	158,828
	Subtotal		62	\$1,347,676	\$860,569
Priority Lake Projects					
1990	Minocqua Lake	Oneida	10	\$175,587	\$82,001
	Lake Tomah	Monroe	32	376,096	358,657
1991	Little/Big Muskego-Wind Lakes	Waukesha, Racine	41	1,297,915	668,586
1992	Middle Inlet-Lake Noquebay	Marinette	155	556,907	1,897,187
	Lake Ripley	Jefferson	8	646,918	230,904
1993	Camp/Center Lakes	Kenosha	8	585,045	149,913
	Hillsboro Lake	Vernon	35	551,334	697,335
	Lake Mendota	Dane, Columbia	230	1,740,591	837,720
1994	St. Croix Lakes Cluster	St. Croix	3	282,465	298,245
	St. Croix Flowage & Upper St. Croix Lake	Douglas	45	313,583	71,171
1995	Big Wood Lake	Burnett	20	280,753	159,929
	Horse Creek	Polk	15	306,247	545,039
	Rock Lake	Jefferson	10	163,288	139,582
	Subtotal		612	\$7,276,729	\$6,136,269
Other Grant Recipients					
	Federal (NRCS, USGS)			\$1,238,526	\$0
	State Institutions (UW, UWEX)			1,524,702	0
	Regional Planning Commissions			282,188	0
	Other			103,170	0
	Subtotal			\$3,148,586	\$0
Total				\$11,772,991	\$6,996,838

NOTE: All projects completed by 2010. A limited amount of expenditures were reimbursed in early 2011.

Table 14: Original Nonpoint Source Pollution Abatement Grant Program Expenditures Through December 31, 2010 -- Large-Scale Priority Watershed Projects

Year Started	Project Name (end date)	County	Size Sq. Miles	Local Assistance**	Cost-Share
1979	Galena River	Lafayette, Grant	241	\$120,412	\$2,267,305
	Elk Creek	Trempealeau	112	78,732	1,456,717
	Root River	Racine, Waukesha, Milwaukee	198	489,057	1,487,593
	Lower Manitowoc River	Manitowoc, Brown	168	8,224	188,750
	Hay River	Barron, Dunn	289	29,464	841,307
1980	Big Green Lake	Green Lake, Fond du Lac	106	312,913	650,435
	Upper Willow River	St. Croix, Polk	183	53,173	327,522
	Six-mile/Pheasant Branch Creek ♦	Dane	119	2,321	493,293
	Onion River	Sheboygan, Ozaukee	97	58,324	321,193
1981	Upper W. Branch Pecatonica River	Iowa, Lafayette	77	9,227	257,049
	Lower Black River	La Crosse, Trempealeau	189	312,364	1,309,686
1982	Kewaunee River	Kewaunee, Brown	142	245,452	647,267
	Turtle Creek	Walworth, Rock	288	586,582	1,482,020
1983	Oconomowoc River	Waukesha, Washington, Jefferson	130	594,875	283,984
	Little River	Oconto, Marinette	210	777,206	1,472,807
	Crossman Creek/Little Baraboo River	Sauk, Juneau, Richland	213	1,616,899	3,846,414
	Lower Eau Claire River	Eau Claire	399	399,224	833,631
	Beaver Creek	Trempealeau, Jackson	160	166,794	1,620,347
1984	Upper Big Eau Pleine River	Marathon, Clark, Taylor	219	696,567	1,119,674
	Seven-mile/Silver Creek	Manitowoc, Sheboygan	112	291,508	1,188,890
	Upper Door Peninsula	Door	287	1,161,944	3,846,414
	East & West Branch Milwaukee River	Fond du Lac, Washington, Sheboygan,			
		Dodge, Ozaukee	265	1,665,851	1,625,934
	North Branch Milwaukee River	Sheboygan, Washington, Ozaukee	149	1,369,836	1,348,996
	Cedar Creek	Ozaukee, Washington	129	1,262,521	1,171,100
	Milwaukee River South	Ozaukee, Milwaukee	167	3,830,134	4,692,988
	Menomonee River	Milwaukee, Waukesha, Ozaukee, Washington	136	3,224,356	1,150,422
1985	Black Earth Creek	Dane	105	645,841	1,600,512
	Sheboygan River	Sheboygan, Fond du Lac, Manitowoc,			
		Calumet	260	2,827,999	3,712,468
Waumandee Creek	Buffalo	221	1,409,795	3,561,279	
1986	East River	Brown, Calumet	206	3,936,671	3,458,325
	Yahara River-Lake Monona	Dane	93	2,070,735	1,856,528
	Lower Grant River	Grant	129	1,061,056	1,425,192
1989	Middle Trempealeau River	Trempealeau, Buffalo	205	2,492,682	5,177,533
	Lake Winnebago/East	Fond du Lac, Calumet	99	1,946,144	2,205,232
	Middle Kickapoo River	Vernon, Monroe, Richland	246	2,170,618	3,436,155
	Yellow River	Barron	239	828,868	952,367
	Upper Fox/Illinois River	Waukesha	151	1,717,551	659,421
	Narrows Creek/Baraboo River	Sauk	176	1,408,825	3,755,138
	L. E. Branch Pecatonica River	Green, Lafayette	144	1,898,949	2,147,746

Table 14: Original Nonpoint Source Pollution Abatement Grant Program Expenditures Through December 31, 2010 -- Large-Scale Priority Watershed Projects (continued)

Year Started	Project Name (end date)	County	Size Sq. Miles	Local Assistance*	Cost-Share
1990	Arrowhead River/Daggets Creek	Outagamie, Winnebago	142	\$1,473,852	\$1,585,313
	Kinnickinnic River	Milwaukee	33	175,094	0
	Beaver Dam River	Dodge, Columbia, Green Lake	290	2,104,624	2,390,764
	Duncan Creek	Chippewa, Eau Claire	191	2,283,577	2,150,357
	Lower Big Eau Pleine River	Marathon	138	993,368	1,687,907
	Upper Yellow River	Wood, Clark, Marathon	212	1,320,268	2,540,116
1991	Upper Trempealeau River	Jackson, Trempealeau	175	1,490,582	4,185,814
	Neenah Creek	Adams, Marquette, Columbia	173	1,078,588	710,240
1992	Balsam Branch Creek	Polk	104	896,430	1,010,789
	Red River/Little Sturgeon Bay	Door, Kewaunee, Brown	139	1,944,648	7,460,263
1993	Branch River	Brown, Manitowoc	108	2,056,800	4,494,382
	Soft Maple/Hay Creek	Rusk	176	567,997	444,369
	South Fork Hay River	St. Croix, Dunn, Polk, Barron	181	1,170,004	1,472,625
	Tomorrow/Waupaca River	Waupaca, Portage	290	1,331,289	2,452,748
1994	Duck/Apple/Ashwaubenon Creeks	Brown, Outagamie, Oneida Nation	264	2,126,536	5,490,741
	Dell Creek	Juneau, Sauk	133	708,940	1,343,408
	Pensaukee River	Oconto, Shawano	163	685,373	2,268,958
	Spring Brook	Langlade, Marathon	69	305,913	442,657
	Sugar & Honey Creeks	Racine, Walworth	166	749,964	972,850
1995	Fond du Lac River	Fond du Lac, Winnebago	244	616,281	2,750,215
	Kinnickinnic River	Pierce, St. Croix	206	639,213	1,828,321
	Lower Little Wolf River	Waupaca	152	380,529	2,808,924
	Lower Rib River	Marathon	129	503,692	1,354,691
	Middle Peshtigo & Thunder Rivers	Marinette, Oconto	193	238,916	1,078,126
	Pigeon River	Manitowoc, Sheboygan	78	544,838	659,962
	Pine & Willow Rivers	Waushara, Winnebago	<u>303</u>	<u>576,741</u>	<u>2,961,519</u>
Total			11,511	\$70,743,751	\$126,425,693

NOTE: All projects completed by 2010. A limited amount of expenditures were reimbursed in early 2011.

* Local assistance reflects grants made by DNR predominantly through 2000. Starting in 2001, funding for most local assistance grants was consolidated in DATCP through staffing and support grants. Remaining DNR local assistance grants are primarily made to lake districts.

◆ Six-mile/Pheasant Branch Creek was a part of the Lake Mendota priority lake project.