Legislative Fiscal Bureau
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May 26, 2011 Joint Committee on Finance Paper #487

Repeal and Recreate Nonpoint Source Pollution Performance Standards (DNR -- Water Quality)

[LFB 2011-13 Budget Summary: Page 321, #7]

CURRENT LAW

The Department of Natural Resources (DNR) has promulgated administrative rule NR 151 (runoff management) with the intention of limiting nonpoint source water pollution as a means of achieving state water quality standards. Nonpoint source water pollution is that which is diffuse and not directly linked to a specific source. Such pollution may include erosion of agricultural land and stream banks, or accumulated sediment from urban settings and activities such as residential properties and automobile traffic. In accordance with requirements under s. 281.16 of the statutes, NR 151 establishes separate performance standards for runoff originating from: (a) agricultural lands and facilities; and (b) non-agricultural areas including construction sites, post-construction sites, and developed urban areas. NR 151 also creates standards for transportation facilities such as highways, railroads or mass transit facilities, and these standards are similar to those for non-agricultural areas. Performance standards generally prescribe limits or specify required and prohibited activities that would limit: (a) soil erosion or other sediment deposition to waters; (b) nutrient deposition; and (c) runoff of pollutants that tend to be location-specific, such as manure from agricultural facilities or motor vehicle petroleum products from developed urban areas and transportation facilities.

Additionally, administrative rule NR 216 (storm water discharge management) requires certain municipalities to secure a Wisconsin pollutant discharge elimination system (WPDES) permit. These municipalities include most owners and operators of municipal separate storm sewer systems [MS4s], which are systems conveying storm water only, as opposed to combined sewers that also carry untreated household and industrial wastewater. MS4s are required to be permitted if: (a) serving incorporated areas with a population of 100,000 or more; (b) serving a population of 10,000 or more with a population density of at least 1,000 persons per square mile; (c) operators required to be permitted prior to August 1, 2004; and (d) urbanized areas as defined

by the U.S. Census Bureau. These permitted municipalities are shown in Attachment 1 by permit type (general or individual). As a condition of the WPDES permit, covered municipalities are to: (a) have programs for public education of and involvement in storm water management programs; (b) manage erosion control from active construction sites and the same sites once construction is complete; (c) detect and eliminate any illicit discharges to the MS4; and (d) reduce and prevent pollutants from entering the MS4. As part of the pollution prevention requirement, permitted municipalities must reduce silt and sediment erosion in storm water, which is known as total suspended solids (TSS) by the following amounts: (a) 20%, or to the maximum extent practicable, as compared to no runoff control mechanism, within two years of receiving WPDES storm water permit coverage; and (b) 40% as compared to no runoff control mechanism, either by March 31, 2013, if permit coverage was granted prior to January 1, 2010, or within seven years of obtaining permit coverage, if coverage was granted after January 1, 2010. These are known as the Stage 1 (20%) and Stage 2 (40%) requirements. If a municipality determines it cannot meet the required TSS reduction within the time specified, it may, with the approval of DNR, enter into a long-term storm water management plan that would achieve the reduction within 10 years, or potentially more than 10 years, of the originally established compliance date.

GOVERNOR

Require DNR to repeal and recreate administrative rule NR 151. Specify the new rule shall not contain requirements more stringent than those under the federal Water Pollution Control Act (Clean Water Act, or CWA) and associated federal regulations. Specify the recreated rule shall take effect 90 days after the effective date of the bill.

Further, specify that if the recreated NR 151, to the extent allowed by federal law, establishes a date by which a municipality holding a WPDES general permit for storm water discharges must develop and implement a storm water management program that requires reductions in total suspended solids, the rules must not apply to any such municipality that determines compliance with the deadline would have a significant adverse economic impact on the municipality.

DISCUSSION POINTS

1. Since the introduction of the bill, the administration has recommended that the bill be changed to delete the full repeal and recreation of NR 151. Instead, the administration has recommended repealing the requirement within NR 151 that municipalities reduce TSS by 40% by 2013. However, a method for implementing such a "repeal" of an administrative rule through state statutes was not identified. Alternative 3 suggests one option. The administration indicates the intent of the NR 151 modification is to limit costs to municipalities in complying with water quality regulations.

2. In general, nonpoint source water pollution abatement is intended to help achieve state water quality standards. Sediment loading itself contributes to water turbidity. Sediment also carries phosphorus, which can contribute to algal blooms after being deposited to waterways. After

algae die off, the process of decomposition consumes dissolved oxygen in the water, which may lead to fish kills. Further, sediment washed from streets or other pavement may also contain other chemical pollutants or heavy metals.

3. Although the state has latitude in establishing its water quality standards, basic requirements are contained in the CWA and associated federal regulations, and states are required to establish water quality standards on these bases. If states fail to promulgate water quality standards on their own accord, federal law provides the U.S. Environmental Protection Agency (EPA) authority to promulgate water quality standards for states. Federal regulations also specify minimum water quality standards for Great Lakes states. Further, under current state law, DNR is required to promulgate administrative rules containing quality standards for Wisconsin's surface waters. These standards are contained in administrative rule chapters NR 102 through NR 105. DNR is also required under s. 281.16 of the statutes to promulgate administrative rules containing performance standards for nonpoint sources of water pollution. The performance standards in administrative rule NR 151 are intended to limit nonpoint source pollution as a means of achieving state water quality standards.

Nonagricultural Performance Standards

4. NR 151 contains multiple performance standards for activities that are not agricultural in nature. These standards include specifications for managing runoff and soil erosion from: (a) construction sites, both for sites of one acre or larger and smaller sites up to one acre, but not including one- or two-family dwellings, agricultural facilities or forestry management activities; and (b) post-construction sites, which specify required benchmarks for the site following the final stabilization. Generally, all construction sites, regardless of size, must employ all necessary practices to limit soil tracking to streets from construction vehicles as well as to limit other discharges of sediment, chemicals or building compounds. For sites of one acre or larger, which generally must seek WPDES coverage, the rule requires one of two standards beginning January 1, 2011: (a) for construction sites seeking coverage before January 1, 2013, BMPs must achieve an 80 percent reduction in the sediment load carried by runoff, as compared to no controls on an average annual basis, or to the maximum extent practicable. For sites seeking coverage after January, 2013, the sediment load in runoff carried from the site may not exceed five tons of sediment per acre per year. All permitted construction sites 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. Permitted sites are also required to create a written plan that implements all applicable NR 151 requirements.

5. WPDES-permitted construction sites must also meet several performance standards following the completion of construction activities, at which time they are considered post-construction sites. These sites must meet standards relating to: (a) total suspended solids; (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; (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 required TSS percentage reductions, as compared to having no runoff control mechanism, are shown in the table below.

NR 151 Post-Construction Total Suspended Solids Reductions

Construction Type	Percentage Reduction
New Development	80%
Redevelopment	40
In-Fill Development, <5 Acres, By Oct. 1, 2012	40
In-Fill Development, <5 Acres, On or After Oct. 1, 2012	80
In-Fill Development, ≥ 5 Acres	80

6. In addition to provisions for construction and post-construction sites, NR 151 specifies performance standards for developed urban areas, which are areas of an average population density of at least 1,000 persons per square mile, based on the most recent U.S. Census. NR 151 creates requirements both for incorporated municipalities of more than 1,000 residents per square mile that are not WPDES-permitted for 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. All municipalities must also provide public education on these topics. WPDES-permitted municipalities must also achieve the TSS reductions noted earlier.

7. DNR reports the 40% TSS reduction is based on research and monitoring done under the priority watershed program, which closed in 2010. The priority watershed program consisted of 86 projects that identified impaired waterways, and then developed and implemented plans to reduce water pollution throughout the watershed over a period of several years. In general, participation in the priority watershed program was not required, unless a landowner received cost-sharing to implement a best management practice intended to reduce pollutant loadings from a property. Certain critical sites, however, were required to participate, if they were significant contributors to the impairment of a waterway. DNR reports that of the 86 priority watersheds, more than 70 included an urbanized area. Further, research done under the program suggested those urban areas were able to meet water quality standards with TSS reductions of 40% to 60%. As a result, DNR established the 40% TSS level as a minimum long-term level for WPDES-permitted municipalities in the NR 151 performance standards first promulgated in 2002. This level of reduction was to be achieved by March, 2013, with a 20% reduction required by March, 2008. The current estimated levels of reductions are shown in Attachment 2. However, it should be noted that these amounts are self-reported, and DNR has not verified the bases on which these municipalities estimated both their baselines and reductions.

8. TSS reductions, as well as the baseline conditions of no controls, are largely determined by computer modeling. Using inputs of baseline land uses, physical and chemical constants, proposed management practices, and statistical conversions based on previous research, these models yield estimated runoff and TSS reductions.

9. Many urbanized municipalities may have to install various types of structures to achieve TSS reductions. Various types of basins, swales or other filtration or infiltration devices

capture storm water during rains and may either store them to reduce peak flow into storm sewers, or in some cases also treat runoff to reduce pollutant loading to waterways. One such example would be a wet pond, which contains a constant pool of water to allow suspended solids to settle and not be further discharged. Wet basins have been found to reduce TSS loading to storm sewers by up to 90% within the drainage area, which makes wet ponds one of the most effective management structures for reducing TSS. Additionally, municipalities may be able to achieve a portion of TSS reductions through high-efficiency street sweeping systems, but DNR estimates this typically would only achieve a maximum TSS reduction of about 10%.

Agricultural Performance Standards

10. NR 151 also contains performance standards for agricultural facilities and practices; these would be subject to repeal and recreation under the bill. NR 151 generally divides agricultural performance standards by those for croplands and those for livestock. Cropland performance standards include: (a) controlling cropland for soil erosion; (b) a mandatory no-till area of five feet from any surface water channel; (c) a limit on phosphorus in runoff; (d) required nutrient management planning for all mechanical applications of nutrients such as fertilizer or manure; and (e) achievement of allocations of load allocations made in a total maximum daily load (TMDL) plan, which is discussed later. Livestock performance standards include: (a) meeting TMDL requirements; (b) a prohibition of discharges of wastewater from production areas of animal feeding operations; (c) a required diversion of runoff from animal feedlots in certain sensitive water quality management areas; and (d) proper management of animal waste and proper design and operation of manure storage facilities.

Rule-Making Considerations

11. It is difficult to determine what parts, if any, of the current NR 151 would exceed the Clean Water Act requirements and associated federal regulations. Specifically, the CWA establishes broad requirements with relatively little specificity, which allows states flexibility to establish water quality standards that are suitable to their circumstances, such as geology and climate. Federal law generally does not specify numeric standards. It could be argued that many state standards do not conform to federal requirements, in that they may require levels or manners of pollutant reduction that are not directly specified in federal law. However, because NR 151 further clarifies the state policy for achieving water quality standards, which are federally required, it could be argued that the rule is not more stringent than federal law. Further, NR 151 is intended to fulfill the state statutory requirement for DNR to promulgate agricultural and nonagricultural performance standards. DNR has indicated that if a full repeal and recreation of NR 151 were required, the Department may delete the required TSS percentage reductions, but DNR officials have not indicated any other specific provisions that would be deleted or modified under such circumstances.

12. Under the revised NR 151 that took effect January 1, 2011, DNR established a means by which WPDES-permitted municipalities would have additional flexibility in meeting the 40% TSS reduction beyond the original March, 2013, deadline. Currently, NR 151 provides that if a municipality determines it will not meet the 40% reduction by its specified date (March 31, 2013, or seven years after receiving storm water permit coverage), the municipality may report, by six months prior to the deadline, on what actions it has taken toward achieving the reduction and what a

long-term storm water management plan would do to accomplish the reduction within 10 years of the original deadline. If a municipality is not able to meet the 10-year extended deadline, it may instead: (a) demonstrate why the reduction cannot be achieved in 10 years; (b) provide in a cost-effectiveness analysis a comparison of alternatives to meet the 40% reduction, and a discussion of other competing interests for available funding; and (c) subject to DNR approval or modification of the management plan, enter into a five-year reporting cycle with DNR to document progress. DNR reports this option of a long-term management plan was intended to remove concerns that had been expressed by municipalities about the costs to be incurred by municipalities in complying with the TSS reductions by the March, 2013, date originally established.

13. DNR reports fiscal impacts to communities have been difficult to estimate since the rule-making process for NR 151 began in 2000. At that time, DNR estimated reaching Stage 1 (20%) TSS reductions would cost $5.7 million statewide each year from 2008 to 2012, and that TSS reductions toward the 40% goal would total $31.5 million annually statewide in the same period. Further, the Department estimated total statewide costs for meeting the 40% TSS reduction would be $63 million annually beginning in 2013, based on the cost at that time for best management practices thought necessary to achieve the reduction. However, DNR reports these costs have been reported by municipalities to be higher than estimated. Actual cost differences have not been estimated. wet detention ponds may vary considerably in cost, depending on the cost of land acquired for the purchase as well as the volume of the pond required for the area to be drained. Total costs may range from several thousand dollars to hundreds of thousands or more. High-efficiency street sweepers may cost $100,000 or more per unit.

14. Municipalities' individual costs in pursuing the TSS reductions will vary substantially by location, as municipalities have both discretion in what measures to adopt and considerable differences in existing land uses. These affect how and at what cost a practice is to be applied. For example, a suburban area of moderate population density may have more available lands on which to build structures such as detention ponds to manage storm water runoff. Available space for construction would tend to contain costs of developing such structures, which may in other cases include costs of acquiring land in addition to construction costs. However, densely populated urban areas may have fewer areas in which to build additional storm water catch basins or detention ponds; it may be more economical for these areas to conduct storm sewer improvements at the same time street replacement projects are undertaken. DNR reports this type of situation in part prompted the allowance for a long-term storm water management plan in NR 151. Under such a plan, municipalities may improve their systems for conveying and treating storm water in conjunction with other municipal projects.

15. Although the administration has recommended the repeal of the required 40% TSS reduction, it is possible that WPDES-permitted municipalities would be required to meet or exceed a similar standard imposed under a total maximum daily load (TMDL) plan. TMDL plans are required for any water that a state lists on its federally-required list of impaired waters, commonly known as a 303(d) list, after the authorizing section of the Clean Water Act. Wisconsin's most recent 303(d) list includes approximately 1,000 waters or segments of waters, which includes segments counted multiple times due to having multiple pollutants. Of this number, 262 are identified as being polluted with sediment or TSS, and 182 are identified as being impaired by phosphorus loading. Additionally, 106 are listed as polluted by E. coli, fecal coliform bacteria, or

various heavy metals that may be associated with storm water runoff. Most of these waters' pollutants have been attributed to nonpoint source pollution. For these waters, a TMDL will generally allocate a maximum contribution from each point source, a load for current and potential future nonpoint sources, plus a margin of safety to allow for uncertainty in calculations. Wisconsin currently has TMDLs in development for: (a) the Rock River basin; (b) the Fox River and Wolf River basin; (c) the Wisconsin River; (d) Lake Menomin and Tainter Lake [Dunn County]; (e) Mallelieu Lake [St. Croix County]; and (f) Lake St. Croix [St. Croix and Pierce Counties]. TMDL plans are subject to public hearings and EPA approval.

16. Most agricultural management practices that achieve performance standards cannot be required of a landowner unless a state offer of cost-sharing is made. For these cost-sharing purposes, DNR and the Department of Agriculture, Trade and Consumer Protection (DATCP) administer grant programs supported by GPR, the nonpoint account of the segregated environmental fund, federal funds, and general obligation bonding. Conversely, because urban storm water discharged via MS4s is considered a point source of pollutants, management practices to be undertaken by these municipalities are generally not required to have costs shared by the state. This difference is primarily due to the difficulty in attributing nonpoint source pollution to a single source, whereas point sources of pollution are more identifiable and generally considered to be responsible for implementing needed pollution controls for discharges directly attributable to them. However, the urban nonpoint source (UNPS) and storm water management grant program does provide competitive grant funding to urbanized areas for either planning or constructing urban best management practices. In 2009-11, this program is provided approximately $1.3 million nonpoint SEG, which is typically used for planning grants, as well as $6 million in bonding authority. This bonding authority is shared with the municipal flood control and riparian restoration grant program, and it is generally limited to use for structural improvements. Municipalities also have access to the clean water fund program, administered by DNR and the Department of Administration, which provides low-interest loans for nonpoint source pollution abatement and storm water management projects.

17. Because the TSS reduction is a WPDES permit requirement, non-attainment of the standard could lead to DNR pursuing enforcement action under NR 216. Enforcement could include: (a) loss of coverage under a general permit, which would require a municipality to seek an individual permit; or (b) referral of a municipality to the Department of Justice for possible criminal or civil remedies provided under Chapter 283 (pollution discharge elimination) of the statutes. General noncompliance may result in forfeitures of $10 to $10,000 per day of noncompliance, with willful or negligent violations incurring possible fines of up to $25,000 or $50,000. However, DNR reports it would not pursue such action against municipalities not meeting a permit requirement such as the TSS reduction, as long as the municipality was cooperating in the establishment of a long-term storm water management plan under NR 151.

18. It could be argued that a general requirement of a 40% reduction in TSS would further statewide water quality in a more even fashion across municipalities, which may more evenly spread costs over the state. This could be contrary to potential TMDL load allocations, which may require disproportionate reductions and costs in certain areas. Conversely, it could be argued that TMDL plans assign load allocations to places for which it is most appropriate to require larger reductions based on geography or other features, and, therefore, deleting the general 40% TSS

reduction would allow TMDL plans to distribute required pollution reductions in a manner that would generate the most significant contributions to water quality, albeit at potentially disproportionate cost across the state.

19. If the Committee adopted the administration's recommendation to eliminate the effect of the required TSS reduction, DNR reports several provisions in NR 151 would remain in effect on municipalities. The Stage 1 requirement of 20% TSS reduction would remain, as would performance standards for new development and redevelopment in NR 151, and requirements of municipalities, construction sites and industrial sites in being permitted for storm water discharges under NR 216. However, it should be noted that for municipalities that had progressed beyond the 20% reduction, there would not be a requirement that the municipality retain all reductions achieved prior to the bill's effective date. For example, it could be the case that a municipality that achieved a 30% to 40% TSS reduction would discontinue certain practices currently in place to meet only the 20% reduction. This could lead to a net decrease in local water quality from current levels.

20. The bill would allow municipalities to be exempt from any required TSS reduction if the reduction was required by a certain date, and if a municipality holding a general storm water permit determined compliance with the deadline and the requirement would cause a significant adverse economic impact. There are currently 142 municipalities covered under the state general permit that would be eligible for this exemption. However, 76 municipalities covered under individual permits, the majority of which are located in Dane County or the Milwaukee metropolitan area, would not be eligible under the bill provisions. The administration indicates this exclusion was made erroneously. DNR further reports certain municipalities may have individual permits primarily because they were permitted prior to the general permit being available, but that they otherwise may not be substantially different from general permittees in size or their ability to meet TSS reductions.

21. The bill would establish an effective date for the recreated NR 151 of 90 days after the bill's effective date. Typically, the rule-making process may take six months to a year, or more, but the time required to promulgate any given rule is difficult to predict. This is because for certain complex or controversial rules, the promulgating agency or the Legislature may provide for additional public hearings or public comment periods, and the proposal may undergo several drafts. If the Legislature wishes to require rule promulgation to occur on a defined timeline, a more customary provision is to require an agency to submit a rule proposal to the Legislative Council Rules Clearinghouse by a specific date, as the submission of the initial proposal is more directly within the control of the promulgating agency.

22. The Committee could make no change to the bill [Alternative 1]. This would require DNR to repeal and recreate NR 151, and the recreated rule could not specify a date certain by which a municipality would be required to achieve a percentage reduction in TSS. As modifications, however, the Committee could consider specifying: (a) the provisions for not applying a time limit to permitted municipalities applies to all municipalities [Alternative 2a]; and (b) DNR must submit proposed rule changes to the rules clearinghouse no later than January 1, 2012 [Alternative 2b].

23. One method of adopting the administration's revised recommendation could be to specify that DNR may not enforce any provision of an administrative rule establishing

nonagricultural performance standards for runoff from developed urban areas, excluding performance standards for new development or redevelopment, if the provision specifies a percentage reduction in total suspended solids exceeding 20% from no controls that is to be achieved by a political subdivision holding a WPDES permit by a certain date. This would establish a statutory provision that would prohibit 40% TSS reductions, or any reduction greater than 20%, from being in effect for developed urban areas [Alternative 3].

24. Additionally, the Committee could also consider specifying that any TSS reductions achieved as of the effective date of the bill must be sustained by the municipality. To be consistent with the bill, however, the Committee could specify that the municipality is to sustain, to the maximum extent practicable, any TSS reductions achieved as of the bill's effective date. This would generally attempt to limit water quality from decreasing, but municipalities would have some flexibility to achieve these goals in balance with other municipal priorities [Alternative 4]. This alternative may require municipalities to support annual maintenance costs, which would vary with the management practices already installed. For example, detention basins, depending on type, may require periodic dredging or clearing of accumulated sediment. Street sweeping programs incur routine operating costs and may require periodic expenditures for equipment maintenance.

25. Chapter 227 of the statutes establishes procedures for agencies to promulgate administrative rules that implement the laws passed by the Legislature, for legislative review and approval of proposed rules, and for legislative review of rules that are in effect. The Joint Committee for Review of Administrative Rules (JCRAR) is authorized to take action under certain situations, to suspend a rule that is in effect if it determines the rule does not meet statutory requirements. The JCRAR would then introduce a bill that prohibits an agency from promulgating a rule that does what is in the suspended rule. In general, Chapter 227 does not permit the Legislature to amend, delay or repeal a rule. However, the Legislature has the authority to enact a bill that requires an agency to promulgate a rule that does a certain thing, or that prohibits an agency from promulgating or enforcing a rule that does a certain thing.

26. The Committee could also delete the Governor's recommendation [Alternative 5]. Under this alternative, NR 151 would remain in full effect, including the provisions allowing municipalities to enter into long-term storm water management plans if the TSS reductions could not be achieved by the date required.

27. DNR could choose to propose changes to the current administrative rule, whether in the effective date, compliance schedule, requirements that must be met by permittees, or other provisions. The Legislature would also have the option of reviewing the issue in separate legislation. DNR has the option of using current administrative rule procedures if it wishes to propose changes in administrative rules. It may take six months to one year or longer to hold public hearings, obtain Natural Resources Board approval, and go through the normal legislative review process. In addition, it is unknown whether the Natural Resource Board would agree to change nonpoint source water pollution performance standards. The Board unanimously approved forwarding the proposed rule to the Legislature in June, 2010.

ALTERNATIVES

1. Make no change to the bill. (DNR would be required to repeal and recreate NR 151, with the rule taking effect 90 days after the bill's effective date. Additionally, any provision that specified a date by which municipalities are to achieve a reduction in total suspended solids would not apply to general permit holders.)

2. Adopt the bill provisions with one or both of the following modifications:

a. Apply the exemption for time limits on TSS reductions to both general and individual storm water permit holders; or

b. Specify that DNR is to submit to the Legislative Council Rules Clearinghouse, no later than January 1, 2012, a proposal for amending NR 151.

3. Delete the bill provisions. Specify that DNR may not enforce any provision of an administrative rule establishing nonagricultural performance standards for runoff from developed urban areas, excluding performance standards for new development or redevelopment, if the provision specifies a percentage reduction in total suspended solids exceeding 20% from no controls that is to be achieved by a political subdivision holding a Wisconsin pollutant discharge elimination system permit by a certain date.

4. In addition to one of the alternatives above, specify that if any municipality is exempt from a provision establishing a date by which a percentage reduction in total suspended solids is to be achieved, the municipality shall, to the maximum extent practicable, sustain that level of total suspended solids reduction, as compared to no controls, that had been achieved as of the bill's effective date.

5. Delete the bill provisions. (NR 151 would remain in effect until or unless modified by DNR through the administrative rule process.)

Prepared by: Paul Ferguson
Attachments

ATTACHMENT 1

Storm Water Discharge General Permits

County	Permittee
Barron	City of Rice Lake
Brown	Brown County
Brown	Town of Lawrence
Brown	Town of Ledgeview
Brown	Town of Scott
Brown	Village of Allouez
Brown	Village of Ashwaubenon
Brown	Village of Bellevue
Brown	Village of Howard
Brown	Village of Suamico
Brown	City of De Pere
Brown	City of Green Bay
Brown	University of Wisconsin–Green Bay
Calumet	Calumet County
Calumet	Town of Harrison
Dane	Town of Bristol
Dane	Town of Cottage Grove
Dane	Town of Dunkirk
Dane	Town of Dunn
Dane	Town of Pleasant Springs
Dane	Village of Cottage Grove
Dane	City of Stoughton
Dodge	City of Beaver Dam
Dodge	City of Waupun
Douglas	Village of Oliver
Douglas	Village of Superior
Douglas	City of Superior
Douglas	University of Wisconsin–Superior
Dunn	City of Menomonie
Dunn	University of Wisconsin–Stout
Eau Claire	Eau Claire County
Eau Claire	Town of Seymour
Eau Claire	Town of Washington
Fond du Lac	Fond du Lac County
Fond du Lac	Town of Fond du Lac
Fond du Lac	Town of Friendship
Fond du Lac	Town of Taycheedah
Fond du Lac	Village of North Fond du Lac
Fond du Lac	City of Fond du Lac
Grant	University of Wisconsin–Platteville
Green	City of Monroe

County	Permittee
Jefferson	City of Fort Atkinson
Jefferson	City of Watertown
Kenosha	Kenosha County
Kenosha	Town of Bristol
Kenosha	Town of Salem
Kenosha	Town of Somers
Kenosha	Village of Paddock Lake
Kenosha	Village of Pleasant Prairie
Kenosha	Village of Silver Lake
Kenosha	Village of Twin Lakes
Kenosha	City of Kenosha
Kenosha	University of Wisconsin–Parkside
La Crosse	La Crosse County
La Crosse	Town of Campbell
La Crosse	Town of Holland
La Crosse	Town of Shelby
La Crosse	Town of Onalaska
La Crosse	Village of Holmen
La Crosse	City of Onalaska
La Crosse	City of La Crosse
La Crosse	University of Wisconsin–La Crosse
Lincoln	City of Merrill
Manitowoc	City of Manitowoc
Manitowoc	City of Two Rivers
Marathon	Marathon County
Marathon	Town of Rib Mountain
Marathon	Village of Kronenwetter
Marathon	Village of Rothschild
Marathon	Village of Weston
Marathon	City of Mosinee
Marathon	City of Schofield
Marathon	City of Wausau
Marinette	City of Marinette
Outagamie	Outagamie County
Outagamie	Town of Buchanan
Outagamie	Town of Grand Chute
Outagamie	Town of Greenville
Outagamie	Village of Combined Locks
Outagamie	Village of Kimberly
Outagamie	Village of Little Chute
Outagamie	City of Appleton
Outagamie	City of Kaukauna
Ozaukee	Ozaukee County
Ozaukee	Town of Cedarburg
Ozaukee	Village of Saukville
Ozaukee	City of Port Washington
Pierce	City of River Falls
Pierce	University of Wisconsin–River Falls

County	Permittee
Portage	City of Stevens Point
Portage	University of Wisconsin–Stevens Point
Racine	Racine County
Racine	Village of Sturtevant
Racine	Village of Wind Point
Rock	Rock County
Rock	Town of Beloit
Rock	Town of Harmony
Rock	Town of Janesville
Rock	Town of Rock
Rock	Town of Turtle
Rock	City of Beloit
Rock	City of Janesville
Rock	City of Milton
Sauk	City of Baraboo
Sheboygan	Sheboygan County
Sheboygan	Village of Howards Grove
Walworth	City of Whitewater
Walworth	University of Wisconsin–Whitewater
Washington	City of Hartford
Washington	City of West Bend
Waukesha	Waukesha County
Waukesha	Town of Genesee
Waukesha	Town of Merton
Waukesha	Town of Oconomowoc
Waukesha	Town of Summit
Waukesha	Town of Vernon
Waukesha	Village of Big Bend
Waukesha	Village of Dousman
Waukesha	Village of Hartland
Waukesha	Village of Lannon
Waukesha	Village of Merton
Waukesha	Village of Mukwonago
Waukesha	Village of Nashotah
Waukesha	Village of North Prairie
Waukesha	Village of Wales
Waukesha	City of Delafield
Waukesha	City of Muskego
Waukesha	City of Oconomowoc
Winnebago	Winnebago County
Winnebago	Town of Algoma
Winnebago	Town of Black Wolf
Winnebago	Town of Menasha
Winnebago	Town of Neenah
Winnebago	Town of Omro
Winnebago	Town of Oshkosh
Winnebago	Town of Vinland
Winnebago	City of Menasha
Winnebago	City of Neenah

County	Permittee
Winnebago	City of Oshkosh
Winnebago	University of Wisconsin–Oshkosh
Wood	City of Marshfield
Wood	City of Wisconsin Rapids

Storm Water Discharge Individual Permits

County	Permittee
Chippewa	Chippewa County
Chippewa	Town of Eagle Point
Chippewa	Town of La Fayette
Chippewa	Village of Lake Hallie
Chippewa	City of Chippewa Falls
Dane	Dane County
Dane	Town of Blooming Grove
Dane	Town of Burke
Dane	Town of Madison
Dane	Town of Middleton
Dane	Town of Westport
Dane	Town of Windsor
Dane	Village of DeForest
Dane	Village of Maple Bluff
Dane	Village of McFarland
Dane	Village of Shorewood Hills
Dane	Village of Waunakee
Dane	City of Fitchburg
Dane	City of Madison
Dane	City of Middleton
Dane	City of Monona
Dane	City of Sun Prairie
Dane	City of Verona
Dane	University of Wisconsin - Madison
Eau Claire	City of Altoona
Eau Claire	City of Eau Claire
Eau Claire	University of Wisconsin Eau Claire
Milwaukee	Milwaukee County
Milwaukee	Village of Brown Deer
Milwaukee	Village of Fox Point
Milwaukee	Village of Greendale
Milwaukee	Village of Hales Corners
Milwaukee	Village of River Hills
Milwaukee	Village of Shorewood
Milwaukee	Village of West Milwaukee
Milwaukee	Village of Whitefish Bay
Milwaukee	City of Cudahy
Milwaukee	City of Franklin
Milwaukee	City of Glendale
Milwaukee	City of Greenfield
Milwaukee	City of Milwaukee
Milwaukee	City of Oak Creek

County	Permittee
Milwaukee	City of Saint Francis
Milwaukee	City of South Milwaukee
Milwaukee	City of Wauwatosa
Milwaukee	City of West Allis
Milwaukee	Southeast Wisconsin Professional Baseball Park District
Milwaukee	Wisconsin State Fair Park
Ozaukee	Town of Grafton
Ozaukee	Village of Bayside
Ozaukee	Village of Grafton
Ozaukee	Village of Thiensville
Ozaukee	City of Cedarburg
Ozaukee	City of Mequon
Racine	Village of Caledonia
Racine	Village of Mount Pleasant
Racine	City of Racine
Sheboygan	Town of Sheboygan
Sheboygan	Town of Wilson
Sheboygan	Village of Kohler
Sheboygan	City of Sheboygan Falls
Sheboygan	City of Sheboygan
Washington	Village of Germantown
Waukesha	Town of Brookfield
Waukesha	Town of Delafield
Waukesha	Town of Lisbon
Waukesha	Town of Waukesha
Waukesha	Village of Butler
Waukesha	Village of Elm Grove
Waukesha	Village of Menomonee Falls
Waukesha	Village of Pewaukee
Waukesha	Village of Sussex
Waukesha	City of Brookfield
Waukesha	City of New Berlin
Waukesha	City of Pewaukee
Waukesha	City of Waukesha

ATTACHMENT 2

Total Suspended Solids Reductions Self-Reported by Municipalities

County	Permittee	Modeled Base (No Controls)	Modeled Reductions (With Controls)	Percent Reduction
Brown	Brown County	185.1	132.4	28.5
Brown	Town of Lawrence	116.4	77.0	33.8
Brown	Town of Ledgeview	115.2	77.8	32.5
Brown	Town of Scott	62.5	42.6	31.8
Brown	Village of Allouez	263.8	246.3	6.6
Brown	Village of Ashwaubenon	585.8	503.0	14.1
Brown	Village of Bellevue	216.6	179.3	17.2
Brown	Village of Howard	--	--	--
Brown	Village of Suamico	147.6	67.7	54.1
Brown	City of De Pere	646.0	432.0	33.1
Brown	City of Green Bay	2,472.0	2,174.0	12.1
Brown	University of Wisconsin–Green Bay	46.7	28.0	40.0
Calumet	Calumet County	13.5	10.9	19.3
Calumet	Town of Harrison	245.7	187.6	23.6
Chippewa	Chippewa County	100.0	3.0	97.0
Chippewa	Town of Eagle Point	100.0	3.0	97.0
Chippewa	Town of LaFayette	100.0	3.0	97.0
Chippewa	Village of Lake Hallie	100.0	3.0	97.0
Chippewa	City of Chippewa Falls	750.5	510.3	32.0
Dane	Dane County	27.9	16.1	42.2
Dane	Town of Blooming Grove	68.0	54.4	20.0
Dane	Town of Bristol	41.0	22.4	45.3
Dane	Town of Burke	180.8	70.7	60.9
Dane	Town of Cottage Grove	44.9	26.6	40.7
Dane	Town of Dunkirk	--	--	--
Dane	Town of Dunn	66.6	30.5	54.2
Dane	Town of Madison	104.4	62.5	40.1
Dane	Town of Middleton	345.8	223.3	35.4
Dane	Town of Pleasant Springs	72.8	42.9	41.1
Dane	Town of Westport	135.4	59.6	56.0
Dane	Town of Windsor	120.9	77.5	35.9
Dane	Village of Cottage Grove	--	--	--
Dane	Village of DeForest	361.5	221.9	38.6
Dane	Village of Maple Bluff	35.5	27.0	24.0
Dane	Village of McFarland	246.2	186.1	24.4
Dane	Village of Shorewood Hills	61.0	59.5	2.5
Dane	Village of Waunakee	345.1	232.8	32.5
Dane	City of Fitchburg	433.0	271.0	37.4
Dane	City of Madison	3,990.6	2,807.6	29.6
Dane	City of Middleton	611.7	359.1	41.3
Dane	City of Monona	275.0	163.4	40.6
Dane	City of Stoughton	368.0	253.3	31.2
Dane	City of Sun Prairie	753.6	434.8	42.3
Dane	City of Verona	348.2	264.9	23.9
Dane	University of Wisconsin–Madison	108.5	81.9	24.5

County	Permittee	Modeled Base (No Controls)	Modeled Reductions (With Controls)	Percent Reduction
Dodge	City of Beaver Dam	693.1	567.8	18.1
Dodge	City of Waupun	319.0	294.0	7.8
Douglas	Village of Oliver	--	--	--
Douglas	Village of Superior	--	--	--
Douglas	City of Superior	--	--	--
Douglas	University of Wisconsin–Superior	--	--	--
Dunn	City of Menomonie	697.5	470.0	32.6
Dunn	University of Wisconsin–Stout	--	32.6	--
Eau Claire	Eau Claire County	43.1	4.6	89.4
Eau Claire	Town of Washington	72.8	44.3	39.1
Eau Claire	Town of Seymour	12.0	0.4	96.9
Eau Claire	City of Altoona	138.8	123.9	10.7
Eau Claire	City of Eau Claire	2,162.3	1,290.3	40.3
Eau Claire	University of Wisconsin–Eau Claire	2,162.3	1,290.3	40.3
Fond Du Lac	Fond du Lac County	234.6	159.5	32.0
Fond Du Lac	Town of Fond du Lac	198.0	97.9	50.6
Fond Du Lac	Town of Friendship	70.4	31.3	55.5
Fond Du Lac	Town of Taycheedah	136.0	52.6	61.3
Fond Du Lac	Village of North Fond du Lac	142.9	97.4	31.8
Fond Du Lac	City of Fond du Lac	1,319.0	1,143.0	13.3
Grant	University of Wisconsin–Platteville	--	--	--
Green	City of Monroe	--	--	--
Jefferson	City of Fort Atkinson	469.0	420.6	10.3
Jefferson	City of Watertown	1,591.5	1,362.5	14.4
Kenosha	Kenosha County	279.0	191.0	31.5
Kenosha	Town of Bristol	40.0	30.0	25.0
Kenosha	Town of Salem	297.0	229.0	22.9
Kenosha	Town of Somers	65.0	43.0	33.8
Kenosha	Village of Paddock Lake	48.0	37.0	22.9
Kenosha	Village of Pleasant Prairie	855.0	582.0	31.9
Kenosha	Village of Silver Lake	31.0	20.0	35.5
Kenosha	Village of Twin Lakes	155.0	90.0	41.9
Kenosha	City of Kenosha	1,859.0	1,488.0	20.0
Kenosha	University of Wisconsin–Parkside	79.0	52.0	34.2
La Crosse	La Crosse County	116.2	61.6	47.0
La Crosse	Town of Campbell	72.6	30.5	58.0
La Crosse	Town of Holland	30.0	16.0	44.5
La Crosse	Town of Onalaska	132.0	101.5	23.1
La Crosse	Town of Shelby	--	--	--
La Crosse	Village of Holmen	146.7	101.7	30.7
La Crosse	City of La Crosse	1,125.3	958.7	14.8
La Crosse	City of Onalaska	424.0	369.0	13.0
La Crosse	University of Wisconsin–La Crosse	--	--	--
Lincoln	City of Merrill	208.7	158.9	23.9

County	Permittee	Modeled Base (No Controls)	Modeled Reductions (With Controls)	Percent Reduction
Manitowoc	City of Manitowoc	924.6	818.9	11.4
Manitowoc	City of Two Rivers	282.8	248.6	12.1
Marathon	Marathon County	--	--	--
Marathon	Town of Rib Mountain	221.6	115.7	47.8
Marathon	Village of Kronenwetter	174.2	7.3	95.8
Marathon	Village of Weston	--	--	--
Marathon	Village of Rothschild	222.6	171.0	23.2
Marathon	City of Marshfield	713.7	557.0	22.0
Marathon	City of Mosinee	--	--	--
Marathon	City of Schofield	709.5	465.7	34.4
Marathon	City of Wausau	--	--	--
Marinette	City of Marinette	397.7	253.3	36.3
Milwaukee	Milwaukee County	630.0	444.0	29.5
Milwaukee	Village of Brown Deer	299.0	185.0	38.1
Milwaukee	Village of West Milwaukee	140.0	134.0	4.3
Milwaukee	Village of Whitefish Bay	246.0	228.0	7.3
Milwaukee	Village of Fox Point	157.0	105.0	33.1
Milwaukee	Village of Greendale	245.0	217.0	11.4
Milwaukee	Village of Hales Corners	149.0	119.0	20.1
Milwaukee	Village of Shorewood	81.0	72.0	11.1
Milwaukee	Village of River Hills	--	--	--
Milwaukee	City of Cudahy	369.0	289.0	21.7
Milwaukee	City of Franklin	548.0	404.0	26.3
Milwaukee	City of Glendale	577.0	452.0	21.7
Milwaukee	City of Greenfield	562.0	471.0	16.2
Milwaukee	City of Milwaukee	10,242.0	6,350.0	38.0
Milwaukee	City of Oak Creek	744.0	477.0	35.9
Milwaukee	City of South Milwaukee	291.0	234.0	19.6
Milwaukee	City of St. Francis	169.0	156.0	7.7
Milwaukee	City of Wauwatosa	691.0	553.0	20.0
Milwaukee	City of West Allis	976.0	931.0	4.6
Milwaukee	Southeast Wis. Prof. Baseball Park District	36.0	22.0	38.9
Milwaukee	Wisconsin State Fair Park	45.0	43.0	4.4
Outagamie	Outagamie County	139.5	83.5	40.1
Outagamie	Town of Buchanan	198.8	169.7	14.6
Outagamie	Town of Grand Chute	631.0	521.0	17.4
Outagamie	Town of Greenville	455.9	320.2	29.8
Outagamie	Village of Combined Locks	80.9	72.2	10.8
Outagamie	Village of Kimberly	167.5	165.5	1.2
Outagamie	Village of Little Chute	312.3	280.7	10.1
Outagamie	City of Kaukauna	457.9	368.7	19.5
Outagamie	City of Appleton	1,604.0	1,249.0	22.1
Ozaukee	Ozaukee County			
Ozaukee	Town of Cedarburg	79.0	56.0	29.1
Ozaukee	Town of Grafton	505.0	277.0	45.1
Ozaukee	Village of Bayside	156.0	114.0	26.9
Ozaukee	Village of Grafton	392.0	272.0	30.6
Ozaukee	Village of Saukville	234.0	149.0	36.3
Ozaukee	Village of Thiensville	360.0	124.0	65.6
Ozaukee	City of Cedarburg	291.0	198.0	32.0
Ozaukee	City of Mequon	875.0	583.0	33.4
Ozaukee	City of Port Washington	328.0	202.0	38.4

County	Permittee	Modeled Base (No Controls)	Modeled Reductions (With Controls)	Percent Reduction
Pierce	City of River Falls	277.9	117.3	57.8
Pierce	University of Wisconsin–River Falls	57.8	--	--
Portage	City of Stevens Point	459.7	310.3	32.5
Portage	University of Wisconsin–Stevens Point	--	--	--
Racine	Racine County	52.0	45.0	13.5
Racine	Village of Caledonia	571.0	445.0	22.1
Racine	Village of Mount Pleasant	518.0	353.0	31.9
Racine	Village of Sturtevant	145.0	90.0	37.9
Racine	Village of Wind Point	29.0	15.0	48.3
Racine	City of Racine	1,731.0	1,369.0	20.9
Rock	Rock County	14.6	9.6	34.4
Rock	Town of Beloit	130.4	70.8	45.7
Rock	Town of Harmony	10.9	6.5	40.6
Rock	Town of Janesville	3.3	1.8	44.8
Rock	Town of Rock	130.4	70.8	45.7
Rock	Town of Turtle	0.9	0.5	40.2
Rock	City of Beloit	1,115.0	879.0	21.2
Rock	City of Janesville	--	--	--
Rock	City of Milton	--	--	--
Sauk	City of Baraboo	351.5	296.8	15.6
Sheboygan	Sheboygan County			
Sheboygan	Town of Sheboygan	309.0	275.0	11.0
Sheboygan	Town of Wilson	154.0	34.0	77.9
Sheboygan	Village of Howards Grove	90.0	71.0	21.1
Sheboygan	Village of Kohler	187.0	137.0	26.7
Sheboygan	City of Sheboygan	1,081.0	866.0	19.9
Sheboygan	City of Sheboygan Falls	580.0	310.0	46.6
Walworth	City of Whitewater	256.0	210.0	18.0
Walworth	University of Wisconsin–Whitewater	--	--	--
Washington	Village of Germantown	704.0	429.0	39.1
Washington	City of Hartford	1,269.0	1,015.0	20.0
Washington	City of West Bend	752.0	593.0	21.1
Waukesha	Waukesha County	465.0	241.0	48.2
Waukesha	Village of Big Bend	27.0	14.0	48.1
Waukesha	City of Brookfield	1,581.0	1,093.0	30.9
Waukesha	Town of Brookfield	--	--	--
Waukesha	Town of Waukesha	738.0	389.0	47.3
Waukesha	Town of Vernon	203.0	115.0	43.3
Waukesha	Town of Summit	464.0	272.0	41.4
Waukesha	Town of Oconomowoc	648.0	384.0	40.7
Waukesha	Town of Merton	107.0	59.0	44.9
Waukesha	Town of Lisbon	272.0	203.0	25.4
Waukesha	Town of Genesee	607.0	362.0	40.4
Waukesha	Town of Delafield	379.0	216.0	43.0
Waukesha	Village of Butler	77.0	71.0	7.8

County	Permittee	Modeled Base (No Controls)	Modeled Reductions (With Controls)	Percent Reduction
Waukesha	Village of Dousman	87.0	46.0	47.1
Waukesha	Village of Elm Grove	273.0	172.0	37.0
Waukesha	Village of Hartland	224.0	162.0	27.7
Waukesha	Village of Lannon	126.0	80.0	36.5
Waukesha	Village of Menomonee Falls	1,729.0	1,386.0	19.8
Waukesha	Village of Merton	172.0	86.0	50.0
Waukesha	Village of Mukwonago	332.0	259.0	22.0
Waukesha	Village of Nashotah	49.0	35.0	28.6
Waukesha	Village of North Prairie	159.0	85.0	46.5
Waukesha	Village of Pewaukee	148.0	117.0	20.9
Waukesha	Village of Sussex	1,314.0	973.0	26.0
Waukesha	Village of Wales	74.0	38.0	48.6
Waukesha	City of Delafield	1,178.0	768.0	34.8
Waukesha	City of Muskego	3,235.0	2,170.0	32.9
Waukesha	City of New Berlin	1,476.0	1,016.0	31.2
Waukesha	City of Oconomowoc	504.0	297.0	41.1
Waukesha	City of Pewaukee	801.0	539.0	32.7
Waukesha	City of Waukesha	1,716.0	1,347.0	21.5
Winnebago	Winnebago County	75.9	53.8	29.1
Winnebago	Town of Algoma	149.4	92.9	37.8
Winnebago	Town of Black Wolf	114.7	66.9	41.7
Winnebago	Town of Menasha	679.9	555.0	18.4
Winnebago	Town of Neenah	210.4	146.5	30.4
Winnebago	Town of Omro	8.0	4.6	42.5
Winnebago	Town of Oshkosh	179.4	103.0	42.6
Winnebago	Town of Vinland	3.9	3.2	17.9
Winnebago	City of Menasha	373.5	332.5	11.0
Winnebago	City of Neenah	716.0	557.0	22.2
Winnebago	City of Oshkosh	1,693.0	1,400.0	17.3
Winnebago	University of Wisconsin–Oshkosh	13.9	12.8	7.9
Wood	City of Wisconsin Rapids	683.4	621.9	9.0

Note: Permittees with no reductions or baseline shown have not submitted this information to DNR. Figures shown represent tons of total suspended solids per year.