

**Response:** The Natural Resources Board reduced the ORW and ERW buffer width from 100 feet to 75 feet to be consistent with shoreland management setbacks for structures.

**NR 151.12(8) Fueling and vehicle maintenance areas**

**F146 Comment:** (WLWCA/WALCE, several counties) Clarify that it is not feasible to require fueling station runoff treatment BEFORE final site stabilization.

**Response:** The organization of the rule places this requirement clearly in the section that governs construction sites after final stabilization. NR 151.12 (1)(a) defines post-construction and makes the subsequent performance standards applicable to this definition.

**F147 Comment:** (APWA) This requirement should be discussed with the potable water section of the DNR to ensure that this requirement will not negatively impact groundwater drinking water supplies.

**Response:** Section NR 151.12(5)(c)8 (current code numbering) was developed by DNR's Bureau of Drinking and Ground Water.

**NR 151.13 Developed Urban Area Performance Standard**

**F148 Comment:** (Turf co.) We support the educational program outlined in NR 151.13. We are concerned that a great deal of misinformation has been disseminated regarding the actual sources of urban phosphorus in storm water. We are working with other members of the specialty fertilizer industry through RISE to develop information on consumer BMPs to address this issue. We and RISE offer to work with the state on these educational programs or be of other assistance.

**Response:** We welcome discussions on future educational programs.

**F149 Comment:** (UW Hort. Dept.) Throughout the rules statements exist to the effect that "education" will be provided by the department or municipality to educate landowners and managers on proper fertility and related practices. Neither the DNR nor DATCP have the requisite staff or expertise to conduct such training. UWEX exists primarily to provide such training.

**Response:** We have had a close working and contractual relationship with UWEX since 1985 to develop and deliver nonpoint source educational materials and training. Most of the existing educational documents distributed through the Priority Watershed Program were developed through the UWEX system. We fully intend to continue to use their expertise to provide this information to municipalities. We cannot mandate that the UW provide us with this material but we have revised the language in the rule to indicate that DNR will identify appropriate educational materials.

**(Comment cont'd.)** Subsection 4(a)—Municipalities are not in the business of providing public education programs. These types of programs require experts in the areas; these experts are not typically on municipal payrolls. Proper disposal of grass clippings tends to be an issue with homeowners living on small urban lots of less than ½ acre. Larger areas do not collect the clippings when mowing.

**Response:** We in no way intended to force collecting of grass clippings where that is not currently being done. Any educational program would need to address these different situations. There are other options such as mulching and composting that would keep the grass on the lawn. The language in the code was written in a general way to include various activities and municipal cooperation where appropriate. We recognize municipalities do not have staff to develop these materials. We hope to be able to identify for them information that is already available that they can fashion to fit their situation. We have modified the language in the code.

**(Comment cont'd.)** Subsections (b) and (c)—Municipalities do not have the expertise to provide the intensely specific information on proper use of lawn and garden fertilizers and pesticides discussed in this section. There are many issues surrounding the verbiage requiring fertilizer applications to be based on soil tests and IPM plans (discussed under NR 151.14).

**Response:** The IPM requirement was deleted from NR 151.14, but kept as a component of the informational and educational requirements for developed urban areas (NR 151.13). DATCP has authority over pesticide regulation and has indicated that it will include IPM requirements in ATCP 29.

**F150 Comment:** (UW Hort. Dept.). The requirements in this section require undue financial and labor commitment of taxpayer money (further explained in comments on NR 151.14).

**Response:** The department does not consider NR 151.13 or NR 151.14 financial hardships. The fertilizer application performance standards in these sections apply to pervious areas greater than 5 acres and allows a grace period until March 2008. After that date, municipalities/owners are to apply fertilizer based on need rather than manufacturer recommendations. This has the reverse effect of saving owners money through reducing the amount of fertilizer purchased. Studies (e.g., Klien, 1990) have shown that residential owners and lawn services can inadvertently apply more fertilizer than cropland and much more than is required for turf growth by following manufacturers recommendations. The department will provide as much guidance as possible to municipalities for the educational component. Many municipalities in a priority watershed project area have done these activities in the past, as part of their "core" program, in order to receive grant dollars. For them, this will not seem new.

**F151 Comment:** (village) DNR should consider the impact these proposed rules would inflict on communities. The village has about 1,034 people and has access to the county-owned collection site (located in our village) for grass clippings and leaves. We currently contract for street sweeping twice a year. If we are required to pick up leaves and sweep streets, it would mean expensive purchase of the equipment plus maintenance costs and added cost of more employees.

**Response:** If grass and leaves are currently left on the lawn to compost there is no additional effort needed. If leaves or grass clippings are pushed into the street for disposal, there is a water quality problem and the city needs to either pick up the leaves or educate landowners on alternatives. If a municipality has access to a collection site for grass and leaves, it may only need to use an educational process to encourage land owners to use this option. The educational materials developed through DNR will need to address these different situations, as well as the level of street sweeping needed to meet the performance standards. Twice a year may be sufficient for a small community if it is done in response to spring thaw and fall leaf collection. We reworded this section to make this point clearer.

**F152 Comment:** (city public works dept.) NR 151.13(4) should not dictate the collection and proper disposal of leaves and grass clippings. Municipalities are generally not in the education business. While we can develop informational brochures on the programs we offer, municipalities should not act as a turf management resource to the public. This is better left to Ag. Extension or the technical schools.

**Response:** While UW Extension and DNR will develop this material, the municipality is best able to disseminate it and identify its role in reducing the amount of pollutants discharged to water bodies.

**F153 Comment:** (turf co.) NR 151.13(4)(c) imposes a significant and unnecessary burden on municipalities to conduct soil testing for small flower and garden areas before applying fertilizers when the department has failed to show that these pervious and often mulched areas contribute to surface runoff of phosphorus. This requirement would also burden municipalities and consumers that use small garden plots made available through community development programs. We are assuming that the 5 acre area is a threshold of total holdings and not specific to testing of 5 acre or larger sites. If this is not the case, then the language of the rule is confusing and needs to be spelled out in greater detail.

**Response:** The department does not consider this a burden when the municipality could incur a significant savings through reduced fertilizer applications and purchase. Applying fertilizers based on crop and soil requirements is a sound economical and environmental policy. The language was always meant to apply to individual 5-acre plots and not small municipal holdings that add up to five acres. We changed the language to reflect this intent.

**F154 Comment:** (APWA) Regarding NR 151.13(4)(d), municipalities can begin to or establish the process of identifying illicit discharges and initiate steps to eliminate them, but will not be able to guarantee there are no illicit discharges to the storm sewer system by a certain date. This is an ongoing problem if property owners modify their drainage systems. There are unscrupulous property owners who will make illicit connections in the future and municipalities need to have a process established.

**Response:** Municipalities need to initiate a program and disconnect existing illicit discharges by the date in the code. After that, there will need to be a municipal program that continues to identify any future

connections made to the system. We realize the municipality can't keep unscrupulous property owners from connecting inappropriately in the future. Hopefully an effective ongoing program will identify them and result in a disconnection.

**F155 Comment:** (LCC) NR 151.13(5) and (6). Agricultural land users are required to meet a much higher standard in a shorter time period than is proposed for urban land users. Agricultural performance standards are to become effective immediately upon rule adoption (except for the nutrient management performance standard) and require a very high level of pollutant reduction, while non-agricultural performance standards do not become effective until 2008 or 2013, and then only at a 20-40% reduction rate. This seems to be a double standard, and needs to be equalized either by requiring existing urban areas to meet the same level of pollutant reduction in the same time frame as agriculture, or by reducing pollutant reduction requirements on agricultural land users to levels similar to urban land users.

**Response:** The agricultural performance standards will not be imposed on anyone until cost-sharing is made available. This is not the case for urban land uses. The time frame for the agricultural practices will not be unlike those for the urban area when you take into account the time it will take for funding to become available. Nonpoint practices are often land intensive both for agricultural and urban land uses. In the developed urban area there is very little available land to apply practices. In the undeveloped area where land is available the performance standards are imposed immediately. Both the agricultural and urban standards will focus on the most impaired waters first.

**F156 Comment:** (APWA) NR 151.13(5)(a). Do not require all municipalities to collect leaves. Many communities have large enough properties that leaf collection is not warranted; this should be optional.

**Response:** We agree. It should and will be dependent on the practices of the given community. We have made this clearer in the code.

**F157 Comment:** (APWA) NR 151.13(5)(b) and (6) How are communities to determine what the actual reduction is? Is this just theoretical? We are fearful that the next step will be to monitor the flows and make comparisons. Because the variability of rainfall runoff is so extreme, this condition would be impossible to enforce.

**Response:** The reductions can be estimated using a model or a unit area load approach and assumptions based on research on given practices. The reduction is municipal-wide, leaving maximum flexibility for the municipality to meet the standard. There is no intention to monitor to see if the reduction is achieved since as is indicated in the comment, storms are variable. The goal is an average, annual reduction, based on a model or desktop evaluation.

**F158 Comment:** (APWA. ) NR 151.13(5)(c) — catch basin cleaning frequency should be based on land use and accumulation of debris, not an arbitrary figure. The word "annual" should be eliminated or replaced with "regular."

**Response:** We agree. Catch basin cleaning may need to be more frequent if the sumps are too small and fill in a relatively short period of time. We changed the language to recognize this physical limitation.

**F159 Comment:** (APWA) NR 151.13(6) — this requirement cannot be met by the street sweeping equipment currently in production. To establish a standard greater than the industry can meet in hopes that someday equipment will be developed to accomplish the goal is wishful thinking and not appropriate for developing a standard.

**Response:** The technology does exist but is not being utilized because there is no demand. This performance standard will encourage the expansion of this technology. Current street sweepers do not pick up as many fines as are needed to reduce the pollutant load significantly. The regenerative air and combination broom and vacuum sweepers collect more of the finer particles.

**F160 Comment:** (city public works dept.) NR 151.13(6) references the use of high efficiency street sweepers to achieve the 40% reduction. These units are costly both in the initial purchase and in the long-term maintenance. Disposal of the street sweeping is a liability due in part to the end uses that are

permitted for the sweepings. DNR should consider re-examining the potential use of street sweepings as a confined backfill material.

**Response:** Street sweepings from a conventional system are wet because of the water that must be used to keep the dust down. They are disposed of in many ways, such as a landfill. The drier sweepings from the newer technology can also be disposed of on land or in a landfill. The high efficiency sweepers are more costly right now in part because they are newer technology and are not yet mass produced. This cost will likely go down with demand. We are not aware that these sweepers are more expensive to operate or maintain. The Village of Osceola owns an Envirowhirl and they have reported that the operation and maintenance is much the same as for a conventional sweeper.

**F161 Comment:** (city public works dept.) NR151.13(6) In theory this standard will require NR 216-permitted municipalities to replace their existing fleet of sweepers with high efficiency sweepers and to retrofit BMPs into existing urban areas. Both of these requirements are costly and are directed at only NR 216-permitted municipalities. This brings up a concern of equal treatment for the same pollutant types in other urban areas that are not permitted. There is no proof available that high efficiency sweepers will be able to make the kind of impact that is proposed. If this portion of the code proceeds as written, we propose that funding of the new sweepers should be provided by the state at the same level as the agricultural practices—70 percent.

**Response:** We cannot make meeting the performance standard contingent on funding for urban development since statute is very clear on this point. We are piloting a program to fund the incremental difference between regular and high efficiency street sweepers under the Targeted Runoff Management grants at 70%. If this proves successful it may be expanded. Research data on high efficiency sweepers show they are much more effective than regular sweepers in removing finer particles. The performance standard has a delayed implementation to allow municipalities to purchase high efficiency sweepers when their old sweepers need replacing. It does not expect municipalities to discard existing useable sweepers and buy new ones. The 40% limit is applied to the area within the municipal border allowing the municipality maximum flexibility in meeting the goal and allowing them to capitalize on opportunities as they arise (such as redevelopment sites).

**F162 Comment:** (RPC) The density standard of 1,000 persons per square mile or more, which approximates a density of approximately 1.3 acres per dwelling unit, is too high. This definition exempts many areas from requirements such as housekeeping measures, information and education programs and other nonpoint source reduction measures, and appears to discriminate against the higher-density urbanized areas and promote land use practices typified by large lots in outlying and rural areas. We recommend that the density value be lowered to about 350 persons per square mile, or the equivalent of about 160 housing units per square mile.

**Response:** The selection of 1,000 people/square mile coincides with the Phase II stormwater program at the federal level. It recognizes the significance of increased density. The current level indicates that low-density residential development does not result in a significant level of pollution and should be lowest on our priority list for correction. New development in these areas will still need to meet the performance standards. If a municipality with less than the 1,000 people per square mile density is found to be a significant contributor, the state has the option to permit them and require them to meet the performance standards. In addition, a municipality with less than the overall density can still receive grant funding to correct problems in sections of the municipality that do meet that density requirement.

**F163 Comment:** (DATCP) This section overlaps DATCP's responsibilities for pesticide and fertilizer management. We are the delegated state lead agency for the regulation of pesticides including their storage and use. We must have a lead role in reviewing and approving pesticide management plans to ensure these plans are appropriate and consistent with existing pesticide laws.

**Response:** The rules were modified to remove requirements that apply to pesticide applications with the understanding that pesticide requirements will be included in ATCP 29.

**F164 Comment:** (DATCP) NR 151.13; NR 151.13(4)(b) and (c) The rule needs clarification on 1) whether the proposal is limited to those parcels where applications of fertilizer or pesticides are made to

at least five acres, or to those parcels five acres or larger in size where any fertilizer or pesticide application is made, regardless of size of area actually treated, and 2) applications of which pesticides are subject to the regulations (e.g., insecticides, herbicides, fungicides, rodenticides, etc.), with application ranging from small spot treatments to broadcast applications over larger areas. The proposed rules lack adequate definitions, standards or criteria for several terms, including IPM, soil testing and slow-release fertilizers. Most people, including local officials, do not have the expertise needed to develop IPM plans without significant assistance of knowledgeable experts. What is considered to be an adequate IPM plan? How will adequate compliance with a plan be determined? Who will enforce these requirements? How does DNR propose to implement these requirements? Many of the proposed requirements are to be implemented by municipalities through mechanisms including ordinances. Section 94.701, Stats., allows exemptions for municipalities to enact ordinances regulating pesticide use, but only after consultation with DATCP. The fiscal estimate for the proposed rules does not recognize the potential fiscal impact of this requirement and others on DATCP. Management concerns should be dealt with under ATCP 29, not in NR 151. These issues must be addressed prior to enactment and implementation of additional pesticide requirements in urban areas.

**Response:** 1) The proposal affects 5-acre plots where fertilizer is applied to all 5 acres. DNR believes the language is sufficient to make this clear. If fertilizer is applied to a 5-acre area, it should be done in accordance with a plan. We are looking to the UW for better guidance on what soil tests should be done and what slow-release fertilizers work best. This will be covered in a technical standard. Until the standard is written, we will follow UW guidance on these subjects. 2) We deleted the requirement that applies to pesticide application from the rule and recognize DATCP's authority in this area.

**F165 Comment:** (RISE) We have long promoted the use of Integrated Pest Management and was instrumental in placing the following definition into federal law: IPM is defined as "a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health and environmental risks."

**Response:** This is no longer applicable to NR 151 since we deleted the requirement for IPM but it would apply to DATCP and ATCP 29.

**F166 Comment:** (WI Env. Dec) We support the proposed language in this section. We are concerned with the extended compliance periods for both Stage 1 and Stage 2 requirements. Implementation dates for both stages should be shortened by five years. Wisconsin is already far behind in achieving the goals of the Clean Water Act. Unreasonably long implementation periods promise that the citizens of the state will have to suffer with impaired water quality for years to come.

**Response:** Many municipalities are already meeting the first stage, but until educational materials are developed and information is provided on how to assess the pollutant loads it is unfair to ask for immediate compliance. The Stage 1 requirements will be met by the end of the first permit coverage at the very latest. It is our belief that this goal will be met much earlier statewide.

**F167 Comment:** (WAL) We applaud the requirement for all urban areas to have a public education program regarding yard waste. We also like the soil test requirement for any property wishing to apply commercial fertilizers. We see no reason for the 5-acre or greater size requirement. Fertilizer applied to a median strip could wind up in a storm sewer more easily than from the middle of a soccer field.

**Response:** The performance standard applied to 5-acre sites will be enforced by the department rather than at the local level. Given the staffing capability of the department, to meet this challenge we felt it was most appropriate to use a threshold. For smaller areas such as the terrace in a residential area, we will rely on educational efforts at the local level. We do not have the mechanism to enforce a standard that would apply to all fertilizer use.

#### **NR 151.14 Non-Municipal Property Fertilizer And Pesticide Performance Standard**

**F168 Comment:** (golf course manager) The confrontational attitude surrounding these proposals is troubling. Golf course personnel believe the proposals are not realistic and have been developed by people who are not at all qualified to make such decision. The basic goal of both DNR and the golf

courses in minimizing pollution is identical. A more cooperative relationship needs to be developed. Educating golf course owners is the answer, not strict catchall regulations.

**Response:** Prior to the first public hearing on the rules, DNR met with UW turf managers and it is clear that we have the same goals. We agreed to continue working with them and to use as much of their guidance as is available to clarify what the individual owner would need to do. The performance standard was a late recommendation by the Natural Resources Board, which may have taken people by surprise, but it was not confrontational. It is a matter of both sides understanding what the other wants and then providing the technical standards to make this uniformly implemented. While we have deleted the IPM requirements for pesticide application, we understand that many golf courses are already implementing IPM. Education, and not a heavy hand, will be the method for implementing this performance standard.

**F169 Comment:** (state rep.) I have been contacted by constituents who are concerned about the impact this section will have on turf growing businesses. Another objection is that this section was added very late in the process and there was not enough time allowed for proper debate and discussion of this language. I hope that action on the rule can be delayed, thereby providing additional time for public input and further discussion.

**Response:** The performance standard is written in general terms. The details will be part of a technical standard developed with much debate and discussion by technical experts. In the interim, the DNR will identify a UW guidance document that will direct use of fertilizers by turf managers. The rules do not prevent owners of large properties from having a healthy turf. More likely it will identify how they can have that healthy turf without spending as much on fertilizer. This rule is trying to curb excessive use, not responsible use.

**F170 Comment:** (UW soils dept.) Regarding soil test requirements in this section and NR 151.13, there is no soil test for nitrogen and never will be. An alternative approach for technical standards for N application will have to be developed. N runoff and leaching losses from turf are generally in the range of <1-3 lbs/acre/year and not the 20-200 lb./acre/year often recorded for agronomic and horticultural crops.

**Response:** There is a nitrogen test that is most often used by corn growers described in a brochure authored by Larry Bundy, UW-Madison and soil scientist Scott Sturgil, UW Ext. entitled Soil Nitrate Tests for Wisconsin Cropping Systems. This test is probably not widely used since there is an alternative desktop approach to calculating N based on cropping practices. However, the chemistry would be the same in a turf system as in a cropping system and the test could be modified to reflect turf if the industry was interested. There may not be a desktop approach specific to turf grass that would reflect optimal N use. This would need to be developed as part of a technical standard that would identify the tests or the levels that need to be met to implement the performance standard. We changed the language to include wording for "appropriate" soil testing.

**F171 Comment:** (UW Hort. Dept.) Section (3) should be re-written to state fertilizers should be applied in accordance with management procedures recommended for optimal turf health. Plenty of such information exists and is readily available from sources such as UWEX.

**Response:** We have asked for this information and it has not been sent to us. We agree that turf health rather than optimal yield should be the goal of the fertilizer recommendations. If the current UW recommendations do not reflect this goal then they should be changed. We changed the wording to incorporate the concept of turf health.

**(Comment cont.):** Much research has been conducted on turf management to determine best fertility practices. These differ from those developed for agricultural crops, when fertilization is applied once annually and most crops are harvested annually. Turf is a perennial crop that is grown for form and function, not yield.

**Response:** The UW recommendations should reflect this important difference and we would defer to their expertise when developing the technical standard.

**(Comment cont.):** Data show annual nutrient loss from turf is negligible (usually less than 1/10 of 1%) compared to conventional agriculture because turf has a dense cover that completely prevents sediment

loss and associate movement of P. Up to 80% of the N and P that runs off turf areas occurs during winter/spring thaws when the ground is frozen and the N and P are being leached from the leaves. Turf has less than 1/3 the loss of N and P of prairies because prairies have greater leaf mass.

**Response:** The intent of this performance standard is to encourage responsible use of nutrients, whether the area is planted in turf or prairie. The recommendation is that these be applied only to the level required by the "crop" to maintain its desired effect, not maximum yield.

(Comment cont.): Soil test recommendations from state-approved labs are still basing recommendations on those developed for maximizing crop yield. Turf is grown for quality and density, not yield. Following soil test recommendations would actually cause most turf managers to apply more phosphorus and potassium than is required for turf maintenance, and more than is currently used!

**Response:** This rule cannot change a practice under the discretion of the UW scientists. If a change needs to be made in the recommendations that come back from the soils labs then we fully support the change. We do not want these rules to result in an increase in fertilizer use.

(Comment cont.): There is no soil test for nitrogen, the most important nutrient for turf management. Most soils have sufficient phosphorus and potassium for established turf, with only minor inputs required every several years if ever. Studies indicate that insufficient applications of fertilizer to turf actually increase sediment, phosphorus, and nitrogen runoff because the turf becomes less dense than normal and there are too few plants to prevent sediment loss and absorb the nutrients emitted from the soil/plant ecosystem naturally.

**Response:** See response above. This performance standard is intended to prevent over application of phosphorus which can result in excess runoff to surface waters and over application of nitrogen which can leach into the groundwater. If the nutrients are applied such that they are taken up by the plant then there will be no excess to run off. We cannot prevent the release of these nutrients when the plant dies back in the winter. This is not what the rule is trying to prevent or control.

(Comment cont.): Turf would require approximately 653 lb. N/A for maximum yield; instead, the maximum applied is normally 174 lb. N/A. This keeps the turf plants constantly "starved" for N, hence, between turf uptake and microbial activity, N is normally not available for leaching or runoff. Data from several studies support this contention.

**Response.** This is a recommendation for application that would hopefully be included in any nutrient application schedule for turf. This is not widely used right now, but sounds like it should be.

(Comment cont.) What is meant by slow-release fertilizers? Some commercially available fertilizers contain slow-release potassium. Encouraging only the use of slow-release fertilizers could backfire. 1) Nitrate-nitrogen from fertilizer does not run off from turf because turf readily utilizes the nitrogen. 2) Using only slow release fertilizers could impair turf maintenance practices, reducing turf density and resulting in more runoff. BMPs usually incorporate a mixture of fast and slow release products depending on the needs of the turf, which very depending on the grass species, soil type, environment and use of the site (e.g. athletic field versus lawn). 3) The best turf managers "spoon-feed" the turf by applying very low amounts of water-soluble nitrogen sources on a 7 to 21 day interval, ensuring the turf can utilize all possible nitrogen without microbes adsorbing or denitrifying the nitrogen.

**Response:** We modified the note so that spoon feeding or slow release fertilizers are acceptable. Previous comments indicated that this method minimizes leaching into the groundwater. Notes do not carry the weight of law, they are only suggestions.

**F172 Comment:** (UW Hort. Dept.) Most turf sites that use pesticides already use IPM because it prevents unwarranted use of pesticides, thereby saving them money. Turf managers are becoming increasingly educated and this trend is expected to continue. We have a voluntary IPM training program for K-12 school buildings and grounds. In the past 18 months, personnel representing over 50% of Wisconsin's schools have taken advantage of our IPM manual and training sessions to become educated and implement IPM policies and plans.

**F173 Comment:** (golf course manager) The proposal to require that pesticide applications be made in accordance with an IPM plan makes sense. The main benefit of IPM is informing people about options and strategies that they may not have been aware of previously. Some of the main points of an agricultural IPM plan are not possible on golf courses, mainly crop rotation, because we are dealing with a monoculture and pesticides will be necessary at certain times and under certain conditions. There has been a great reduction in the quantity of pesticides used as well as a trend to use products which are safer both to humans and to the environment which I attribute to education and research. The bottom line is money—once those who use pesticides improperly or unnecessarily realize they are throwing their money away, the waste is halted. UWEX and WI Turfgrass Assn. have been a tremendous help in educating golf course personnel and have done significant research that has helped us to use less toxic materials.

**F174 Comment:** (golf course manager) Many of us have not had an IPM plan on paper, but have been practicing integrated pest management for many years. UW Madison and UWEX have been educating turf professionals for a long time on the effects of nutrient and pesticide loss from turf.

**F175 Comment:** (WGCSA) Most golf courses already are practicing some type of an IPM program.

**F176 Comment:** (golf course manager) Our golf course is a certified Audubon sanctuary, a distinction which took us 3 years to earn and proves we are working hard to improve the environment. Use the education resources of Dr. Wayne Kussow and Dr. John Stier at the UW to help craft usable proposals.

**F177 Comment:** (lawn care co.) In the past 11 years there has been much progress in the lawn care industry in educating business people and the public about Integrated Pest Management.

**Response:** We have asked for and hope to get from Drs. Kussow and Stier, the educational resources they have developed. Until a technical standard is developed, the educational tools currently available will be the standard. If you are already meeting the intent of the standard, as you have indicated, then this rule should have little effect on your operation. Although IPM is no longer required in NR 151, it will continue to be part of an educational program for developed urban areas and part of ATCP 29.

**F178 Comment:** (golf course manager) I have concerns that all fertilizer applications be based on soil tests. Different reputable labs can and do provide test results that differ greatly in some areas. A true representative sample is difficult to collect and there can be great variability between samples even within a small area (animal waste or detritus in one spot, windblown material in another, etc.). Relying too much on soil testing could lead to additional waste and even cost good people their jobs. Soils and vegetation may vary a lot on a course. This regulation has an admirable goal, the science needed for implementation is questionable.

**Response:** We included language that indicates appropriate soil testing if this is not the best way to choose nitrogen values.

**F179 Comment:** (lawn care co.). This section of the rule is based on faulty science and is not justified. Turf areas around surface waters actually act as filtration devices to preserve clean water. Dr. John Stier (UW-Horticulture Dept.) and Dr. Wayne Kussow (UW-Soils Dept.) explained to the DNR that the decision to suggest deeper-rooted plants along a waterbody was based on faulty science. Turfgrasses, like Kentucky Bluegrass, have an extremely dense upper 3-inch profile in the soil and this, along with the thatch mat they create, diminish any excess runoff of contaminants to virtually a non-existent state. The microbial action in this thatch layer has the ability to break down inorganic pollutants, which may run off impermeable surfaces before encountering the filtration blanket of turfgrass.

**Response:** We changed the language to include some of the attributes of longer rooted plants rather than refer to Kentucky bluegrass. See responses to comments in the buffer section on these attributes. The research conducted by the university is under controlled, ideal conditions.

**F180 Comment:** (LCC). NR151.14(3) We are concerned over the delayed deadline for implementing this standard. Documentation has shown for many years that the application of fertilizers and pesticides to urban lawns and gardens is often done at rates up to 10 time higher than that used by farmers on agricultural land. Contaminants in surface runoff from urban landscapes are often 20 to 40 times greater than the health standard allows. At a minimum, NR 151 should be changed to specify the same implementation timetable for nutrient and pest management plans on privately owned urban lands as is



proposed for agricultural land users under NR 151.07(5), (6) and (7) or else relax the requirements on agricultural land users to be the same as currently proposed for urban land users.

**Response:** There is a delayed implementation schedule for agricultural users that is nearly identical to the schedule for urban lands unless the farm is located in a sensitive area. The concept of a nutrient management plan and the method to achieve it have been available in the rural environment for some time. Guidance on conducting a nutrient management plan for turf grass is not an existing technical standard and would need to be developed. This delay allows time for this effort to occur.

**F181 Comment:** (chemical company) The suggestion to use slow release fertilizers may prompt individuals to utilize recovered manure (e.g., pelletized chicken litter) that, unmodified, contain too much P in relation to the N requirements. This manure can be treated to bind soluble P. Use of aluminum phosphate as a litter amendment in poultry houses serves to bind soluble phosphorus as insoluble aluminum phosphate while preserving the nitrogen value of the manure by inhibiting ammonia release.

**Response:** The performance standard includes a note that only asks that someone consider slow release fertilizer. If there are some that are not good to use then a technical standard or UW guidance document would be the place to make this distinction. This note was expanded to address other options as well.

**F182 Comment:** (golf course manager) The use of slow release fertilizers does not always fit into the plan at a golf course, such as times when an immediate response is needed for regeneration of a damaged area, or when growth is only wanted at a desired time and used only in small quantity (spoon feeding). Also, the price for these fertilizers is very high and does not fit all budgets. Potassium may be in the soil, but it may not be available to the plant. Who will decide what the results of these tests are, thereby deciding what fertilizer to use? Who will decide the variables my golf course needs to justify the application of chemicals?

**Response:** The rules do not currently specify how this will be done. Certainly by the year 2008, and hopefully much sooner, this will be established using available research and technical experts, including the UW turf managers. For now we will use guidance available from the UW Ext. turf managers.

Eventually we would like to write a technical standard to address these issues. Through an educational effort, non-municipal property owners will be notified of the technical standards. Development of technical standards includes review by impacted users. Slow release fertilizer is not a requirement, only something for the landowner to consider as one of several means of fertilizer application.

**F183 Comment:** (2 lawn care companies) The requirement to apply pesticides according to an integrated pest management plan would mean such a plan would have to be developed, since none are in place, at additional expense and with virtually no added benefit. Lawn care companies currently minimize pesticide use and educate consumers on the best cultural practice to use.

**F184 Comment:** (golf course manager) IPM programs are very different from place to place, due to differences in expectation of the individual course.

**F185 Comment:** (UW Hort. Dept.) Other problems exist with requiring IPM: there is no, and can never be, a cut and dried definition of IPM. IPM is a continuum based on many factors including the use and expectations of the site, the environment of the site and seasonal practices. Each site has to be independently evaluated. Enforcement of this part of the rule is impossible; promulgation of unenforceable rules undermines the integrity of enforceable rules.

**F186 Comment:** (homeowner). It would be impossible to write a proposal for state approval because IPM plans are area and problem specific. Who will develop them? What's the approval criteria? Is the state properly staffed to process soil samples, etc.? What are the goals and objectives of the program? How will the plan be evaluated? Is it possible to quantify the environmental impact we will enjoy as a result of the proposed program? What will it really cost? Maybe the costs to run the program might be better invested in programs with better long-range environmental returns.

**F187 Comment:** (turf co./WI Landscape Fed.) There's a lot of landowner and state time and expense that is not accounted for—who develops/monitors/controls IPM plans, who take/pays for/interprets soil sample results and makes recommendations, etc. Do we really want our churches, public and parochial schools, cemeteries, parks and private citizens overburdened with unnecessary paperwork?

**F188 Comment:** (WI Sod Producers Assn.) We hope the IPM recommendations have strong input from growers to create a workable management system.

**Response:** The requirement to develop an IPM plan was deleted from the performance standard.

**F189 Comment:** (2 lawn care companies, WI Sod Producers Assn.) Regarding the requirement that fertilizer applications must be based on the results of a soil test, be aware that there is no current economically feasible soil test for nitrogen.

**F190 Comment:** (golf course manager, golf course supervisor, N. Great Lakes Golf Course Supervisors Assn.) Nitrogen has a very high rate of variability in the soil due to the rapid changes in its use by the plant, weather, temperature, volatilization and soil variables.

**F191 Comment:** (golf course super.) There is no soil test for nitrogen, so what happens? Who does the soil testing and who interprets the tests? Soil testing results seem to vary from lab to lab, and will we receive the results in time to set up a program and order the products we need?

**Response:** We have changed the rule to indicate that appropriate soil tests be conducted. If there is an alternative that is more appropriate for nitrogen then this will be identified during the technical standard development process.

**F192 Comment:** (golf course supervisor) Regarding soil testing prior to fertilizer application, some types of soil in the state have phosphorus and potassium tied up in the soil. These soils would show an abundance, but the plant would show a deficiency of these elements. Soil testing procedures do not give a reading for nitrates because it is subject to rapid changes and variability. Soil testing is only one of the tools that are used in determining what fertilizer to use and when to apply it. Another thing that needs to be looked at is that many golf course greens and tees use a soil mixture of 85-90% sand. Sand does not hold nitrates, phosphate and potassium on the soil particle. Golf course superintendents spoon-feed these areas. Spoon feeding is a procedure in which you apply fertilizer at a very low rate every couple of weeks throughout the growing season as dictated by the need of the plant. This is done to prevent excess fertilizer from leaching into the groundwater and runoff.

**Response:** We reworded this section to recognize appropriate soil testing and identified alternative methods for fertilizer application.

**F193 Comment:** (golf course supervisor) Slow-release fertilizers do not fit into my fertilization program during certain time of the year. Certain soils have a high potassium content, but only a small portion is normally available for uptake by the turfgrass plant. This will be a problem if someone with limited turf experience is trying to interpret my soil test reports and telling me what I can and cannot do.

**Response:** The note in this section has been reworded to include a couple of options for application as recommendations. It is clear that there needs to be better guidance or a technical standard to address turf. This will be done through the standards development process.

**F194 Comment:** (co. lakes spec.) We support this performance standard but it should include language on implementation.

**Response:** There is no permit program for implementation of this standard. Implementation will consist of an educational effort and utilization of existing labs (for testing), co-ops and university staff that currently provide services to landowners on fertilizer application. Through the technical standard development process we will be producing a technical document to identify for the landowner what needs to be done on their property to meet the performance standard.

**F195 Comment:** (turf co.) NR 151.14 imposes an unnecessary burden on private landowners that apply fertilizers to turf areas over 5 acres to conduct soil testing while DNR has failed to show that these pervious areas contribute to surface runoff of phosphorus. Dr. Wayne Kussow's 6-year study of phosphorus runoff from turf fertilizers found that less than 4% (1.3 inches) of the total annual precipitation actually ran off of turf and 80% of this amount was collected when the turf was frozen. Only 0.25 inches of runoff actually occurred during a period when turf would be fertilized. In the same study, Dr. Kussow found that unfertilized turf had 40% higher phosphorus levels than fertilized plots. He

concluded that the small amount of phosphorus measured during winter runoff was leaching out of dead, desiccated, frozen turfgrass tissue rather than coming from phosphorus fertilizers.

**Response:** Studies conducted on existing lawns indicate that phosphorus does run off during the growing season. The lawns tested for the study were typical residential lawns where the landowner was in charge of the nutrient applications. On a watershed basis these lawns were significant contributors of phosphorus. The standard is intended to provide the owners of large properties the information they need to apply chemicals in an environmentally sound manner, while still maintaining a healthy lawn. The results of the UW research on turfs indicate the value of a healthy lawn.

**F196 Comment:** (UW Soils Dept.) There are problems with current soil tests for soil phosphorus.

a) the test used in most of the Midwest was designed for use on acid soils. Many turf soils are calcareous, either because of repetitive irrigation with high Ca and Mg well water or, in the case of many golf putting greens, construction with calcareous sand because that is what is available. Acid-soil P tests do not provide reliable measures of plant-available P in calcareous soils.

b) Soil test P interpretations currently in use in state laboratories for turf were developed in the early 1960s. In 1993, I assembled all current literature on turfgrass response to fertilizer P and K at different soil test levels of the two nutrients and, in 1994, prepared new soil test interpretations for turfgrass. These are quite different from those currently being used.

c) The fertilizer recommendations currently being made by state laboratories for turfgrass are in units of lb.  $P_2O_5$  and lb.  $K_2O$  per 1,000 ft.<sup>2</sup> Only professional turf managers are trained to convert these recommendations to rates of fertilizer application and only they have access to the grades of fertilizer required. Others find the recommendations useless. I have developed and shared with our state laboratories an approach that allows anyone from a home owner to school maintenance staff to apply the correct rates of N, P and K to turfgrass. Although my approach was developed over 6 years ago, it is yet to be implemented by our state soil testing laboratories.

d) Many professional turf managers recognize the limitations of the state soil testing programs. Thus, they either do not expend the time and resources to have their soils tested or they send their samples to non-state certified laboratories. These laboratories use other soil test methods and have their own interpretations.

e) Many turf fertilizers contain micronutrients. There are not reliable soil tests available in Wisconsin to guide the application of these nutrients.

**Response:** The code language only addresses these issues in general terms. This level of detail is needed at the technical standard development stage and will be addressed there.

**F197 Comment:** (UW Soils Dept.) States that have adopted soil test P limits above which nutrient application is not permitted on agricultural crops use "environmental" rather than "agronomic" limits. The environmental limits are typically 2-3 times higher than the agronomic limits and are based on research showing that runoff loss of P does not accentuate until the environmental limit is reached. Such studies have not been conducted in Wisconsin for agricultural crops, let alone turf. In fact, we are not at all certain that there is a meaningful relationship between soil test P levels and runoff loss. Data from Minnesota suggest that there is no meaningful relationship between soil test P levels and concentrations of P (quantities not measured) in runoff water.

**Response:** Studies conducted by USGS under the direction of DNR indicate that on a watershed basis, phosphorus from residential lawns is a significant contributor to the phosphorus load delivered to the stream or lake. If there is a flaw in the recommendations that result from a soil test being conducted on a lawn, then the development of a technical standard should help to identify this. The correlation between the lawn and what reaches the stream does exist, but the soil test may not be the best way to determine when this is a potential problem. We will investigate this further during the technical standard process.

**F198 Comment:** (UW Soils Dept.) A typical turf fertilizer is one that is high in N and low in P and K. Examples of grades are 27-3-3, 29-3-3 and 30-3-3. These fertilizers do not match turfgrass uptake of P and K. Consequently, their use actually leads to declines in soil test P and K. For example, if someone applies a 29-3-4 fertilizer at the recommended rate of 4 lb. N/M ( $M=1,000$  ft.<sup>2</sup>)/year, they are applying 0.4 lb.  $P_2O_5$ /year. This P rate is not sufficient to maintain the existing soil test P level. The picture does

change, however, if P is being recycled via mulch mowing. In this case, application of 4.0 lb. N/M/year as a 29-3-4 fertilizer will lead to gradual buildup of soil test P because the break-even P rate is then around 0.2 lb. P<sub>2</sub>O<sub>5</sub>/year.

**Response:** This level of detail needs to be addressed at the technical standard development stage.

**F199 Comment:** (UW Soils Dept.) Once turfgrass is established and properly fertilized, mowed and irrigated, sediment losses are extremely low. In my own research conducted over 6 years, I never found measurable amounts of sediment in runoff from a simulated home lawn. What I did observe is that when I did not fertilize the turf for 2 years, the turf thinned out to the extent that runoff increased more than 30%. The net result was that I measured considerably more runoff N and P from non-fertilized than fertilized turf. I also found that about 80% of the P in runoff was collected between December and snow-melt in mid-March. Collectively, these observations raise some questions regarding the sources of P in runoff water from pervious surfaces. A common assumption is that the runoff P is either from the fertilizer applied or from the soil. There is a lot of research showing that substantial amounts of P leaches from vegetation in the landscape, particularly from frozen and dried vegetation. I have investigated this for turfgrass and have found that leaching of plant P has the potential for accounting for all of the runoff P that I detected. This raises some interesting questions regarding regulations of runoff P from turf areas. To what extent and how can it be regulated? What are attainable targets for reduction of runoff P losses from pervious surfaces?

**Response:** The goal of this standard is to prevent excessive use of nutrients on pervious areas. Natural processes will continue and may result in phosphorus release during die-off.

**F200 Comment:** (UW Soils Dept.) Regarding the recommendation to use native plants instead of Kentucky bluegrass, I conducted a literature search and could find but one piece of research in which there was a direct comparison between the efficacies of maintained turfgrass and native vegetation as buffer strips. That research failed to generate any evidence that one was better than the other. The authors recommended harvest of buffer zone vegetation in the fall to reduce quantities of dissolved reactive P in spring snow-melt. There is some literature that shows that quantities of P in snow melt from native prairies is up to four times that from turf.

**Response:** Studies on tallgrass species in Ontario (URL: [www.tallgrassontario.org](http://www.tallgrassontario.org)) indicate that warm-season grasses are ideal for filter strips (buffers) because they are adaptable to many areas, they are easy to seed and the seed is easy to handle, they have a dense foliage and are tolerant to floods and drought. They have been shown to remove significantly more nitrogen and phosphorus than cool-season grass filter strips. In the rules we have changed the wording to reflect the benefits of native grasses rather than describe the root length of either native or Kentucky bluegrass.

**(Comment cont'd.)** Research in Florida has shown that bermudagrass mowed as low as 0.5 inches significantly reduced runoff losses of pesticides and nutrients from a golf course fairway. The authors also cited more nutrient runoff loss from unfertilized than fertilized grass, but gave no substantiating data. Mowing triggers hormone production which, in turn, stimulates the tiller, stolon, and rhizome production that is responsible for the very high plant densities in regularly mowed turf. I do not condone nor recommend application of any chemical to turf areas without justification. But all my experiences tell me that judicious use of chemicals to maintain high-quality turf is environmentally more benign than not using the products.

**Response:** We added wording that recognizes the need to maintain a healthy lawn.

**F201 Comment:** (golf course supervisor) A study done at the O.J. Noer Research Center in Madison on fertilizer runoff showed that fertilized Kentucky bluegrass plots had less nitrates, phosphate and potassium in the runoff than an unfertilized plot. The type of fertilizer formulation did not make much difference. While native grasses work well along stream banks to prevent erosion, Kentucky bluegrass, with its fine texture, slows the movement of water borne sediments, keeping the sediment out of the water.

**Response:** We changed the wording to include the reasons why native grasses are more desirable along streambanks, such as erosion control and flood/drought tolerance.

**F202 Comment:** (golf course supervisor) Any study that has been done on the effects of chemicals and pesticides used on golf courses has shown that the condition of the surface waters and groundwater improved because of the golf course. Before this proposal is finalized, talks need to include representatives from the O.J. Noer Turfgrass Research Center in Madison on some of the research projects that have been done on runoff and fertilizer.

**Response:** Researchers with expertise in this area will be invited to participate in the development of the technical standard. There is evidence that groundwater is affected by N applications in areas where there is frequent dosing and irrigation. To say that there has been an improvement to surface or groundwater associated with golf courses in all cases begs the question as to how the test is conducted. What parameters are being measured and what value are they being given? Not all golf courses are operated the same way and with the same goals. See comment F210.

**F203 Comment F163 (DATCP)** regarding responsibilities for pesticide and fertilizer management apply to NR 151.14

**F204 Comment F164 (DATCP)** regarding clarification of fertilizer and pesticide provisions applies to NR 151.14(2) and (3).

**F205 Comment:** (lawn care co.) A healthy turf is more beneficial to our ecosystem than suspected problems with runoff (not saying that runoff is not a problem). 625 sq. feet of lawn provides enough oxygen for one person for one day; an average block of 8 homes can have a cooling effect equal to 70 tons of air conditioning; blades of grass control dust and catch pollen from plants, thus provide relief for allergy sufferers (turf grasses trap an estimated 12 million tons of dust and dirt that are released annually into the atmosphere); lawns absorb gaseous pollutants such as carbon dioxide and sulfur dioxide and converts them to oxygen; turf reduces water runoff and filters contaminants from rainwater on its way to groundwater supplies; and a thick green lawn can retard the spread of fire.

**Response:** We don't argue that the goal should be a healthy lawn. The problem is that if excessive nutrients are applied beyond the need of the turf, it runs off into nearby lakes and streams either during storm events or during normal irrigation practices. Turf is much more likely to be watered than native grasses, which can tolerate drought and flood conditions, because of their deeper roots and compatibility with the climate.

**F206 Comment:** (lawn care co.) There needs to be better soil test procedures (maybe water tests also). Different plants use different types of nitrogen formulations in the soil. There is no soil test for nitrogen. Soil tests for phosphorus need to be better understood for turf runoff.

**Response:** This will need to be addressed in the technical standard.

**F207 Comment:** (lawn care co.) Is there a concern with snow and ice control in winter with phosphorus runoff problems?

**Response:** This comment may be referring to the amount of phosphorus reported by Dr. Wayne Kussow that comes off a lawn during winter die-off and ends up in the spring runoff after the snow and ice melt. Winter die-off is a natural process of all plants and cannot be addressed by these rules.

**F208 Comment:** (WI Env. Decade) We support these requirements but oppose the extended implementation period. The implementation period should be reduced by five years. This should pose no undue hardship since the performance standards do not require construction activities.

**F209 Comment:** (N. Great Lakes GCSA) How is the education and development of criteria to be set up for people who fall under the non-agricultural performance standards? How can we meet those criteria? The size of the property should not matter more than current management practices. What will be the time frame for approval of a plan once a soil test has been made?

**Response:** The deadline is the same as for municipal entities and is a fairness issue. It will also give the department time to develop educational documents and technical standards to support the goals.

**F210 Comment:** (WI Env. Decade) During the second round of public hearings, numerous objections were voiced by golf course managers and the turf grass industry regarding the need to comply with the nutrient management plan. Citing an industry-funded study conducted under ideal circumstances utilizing a simulated rain event, they argued that turf grasses do not significantly contribute to polluted runoff. We are not persuaded by this study and are opposed to a blanket turf industry/golf course exemption. Golf courses currently utilize NMPs to reduce the costs associated with chemical fertilizer and pesticide applications. However, that should not in any way negate the need for mandatory NMPs for this industry. We urge the DNR to review the U.S. Geological Survey report entitled: "Pesticides used on and detected in ground water beneath golf courses (URL: <http://water.wr.usgs.gov/pnsp/golf.html>) prior to exempting municipal turf areas from the requirement to develop an IPM program. There should be no exemption for turf owners in municipal settings. Any attempt to suggest that turf is a benign actor in the nonpoint pollution realm should be viewed for what it is, a hollow assertion by those with vested interests in the turf industry.

**Response:** We modified the requirement to address some of the issues raised concerning N soil tests and the slow release fertilizer suggestion. We have not removed the requirement that pervious areas over 5 acres apply nutrients in an environmentally sound manner. We did acknowledge DATCP's authority to regulate pesticide application. DATCP has committed to including an IPM requirement in ATCP 29.

**F211 Comment:** (golf course supervisor) The people in this industry have set standards for ourselves far higher than DNR ever has and will continue to do so. There has never been a problem with a golf course on runoff issues, to my knowledge, but we are lumped with everyone else and are having more regulations thrown at us as a reward for being responsible.

**Response:** If the standard is less than is already being self imposed then there will be no conflict with DNR. In this case the golf courses can be the model for the other landowners.

**F212 Comment:** (WGCSA) We agree with the basic concepts behind proper application of fertilizers based on soil tests and the use of pesticides in accordance with an integrated pest management plan. Most turf managers already have these programs in place and are practicing these principles in our day-to-day decision making. We feel very strongly that the University of Wisconsin turf advisors be involved in the writing of guidelines for specification of the requirements. Considerable studies and research have been invested at the university in areas of fertilizer and pesticide runoff. We feel that the various turf organizations and the University of Wisconsin turf advisors should be involved in the writing of the technical standards that are required to support the revised laws.

**Response.** The department has every intention of involving the technical experts in the field when we undertake the task of writing technical standards. Until that is done, we will likely cite existing guidance documents provided by the University.

**F213 Comment:** (N. Great Lakes GCSA) The problem really seems to come down to homeowners and if they own under 5 acres there is no regulation of nutrients and pesticides applied to those properties.

**Response:** The intent was to control large applications of fertilizer rather than all the smaller applications. This is more comparable to a rural farmer and what they are being asked to do on the property that is their business. Eventually there may be a local mechanism to control pollutants from smaller residential areas. Efforts now will be on better education of these property owners on proper lawn care.

**F214 Comment:** (golf course superintendent) I support these rules, but you need to implement them on a quicker timeline. You also need to work closely with UW turf experts John Stier, Wayne Kussow and Chris Williams to write an effective IPM program.

**Response:** See earlier comment on implementation schedule. We definitely hope to work with the UW turf experts on the technical standard/guidance on how to meet the performance standard.

**F215 Comment:** (turf industry rep.) How do we do accurate soil testing and accurate analysis for interpretation? You can take 3 soils samples to 3 different labs, and you will come back with 3 different recommendations. Which recommendation should we use for application of fertilizers in a turf application? If we follow a recommendation to apply lime to the turf or soil, it is illegal for me to sell lime products in

Wisconsin. According to DATCP interpretation, lime is not necessary for Wisconsin soils. So the only way to sell product is to put on a separate label saying lime is not necessary on Wisconsin soils. Many fertilizer products are used in state. One is Milorganite. This is a national product produced in Milwaukee made from biosolids and wastewater, and it's approved for sale in Wisconsin. The 6-2-0 version of the product has phosphorus in it. If every state adopted these rules, and based decisions essentially on soil testing that would indicate a landowner may not need phosphorus, this product would not be able to be sold.

We need to be cautious in how we set these interpretations into law. Homogeneous fertilizers in turf applications are an important part of our industry. Homogeneous fertilizer has slow-release nitrogen sources. That type of source is the safest type of N release. It has the longest life and the least runoff, this is what you want to use on all turf applications. According to these rules, all pre-formulated homogeneous fertilizers will not be able to be sold. We will have to match any actions to a soil test. We will have to go to blended fertilizer product, which is most prone to runoff.

**Response:** We changed the language to indicate that where fertilizers are used they be applied in accordance with a nutrient management plan and appropriate soil tests. While we do not want additional phosphorus applied when the soil already carries a sufficient load, the technical standard to address how a nutrient management plan will be used can address the issue of using organic fertilizers such as compost, manure, Milorganite, etc. The plan should discourage the use of chemical P if it is already in the soil. We do specifically encourage the use of slow release fertilizer for nitrogen.

**F216 Comment:** (turf industry rep.) I ask that the Natural Resources Board look at these rules in an urban setting, in a landscape setting, and that that any rules be done again with scientific data in conjunction with the UW. It makes the most sense to conduct research before laws start. These are going in right direction. We now need to show the rest of the world how Wisconsin does research before they act.

**Response:** We spoke directly with the UW researchers and reviewed their research. We also conducted independent studies on existing urban lawns, that are more realistic settings than the controlled environment of the UW studies. The soil tests indicate that much of the soil is already high in phosphorus and no additional application is needed. There is very clear evidence from all the research that fertilizer and pesticides need to be applied in a controlled manner with the intent of providing a healthy lawn. We are not prohibiting the responsible use of fertilizer nor will ATCP 29 prohibit the responsible use of pesticide for this purpose. This performance standard exists so that urban application of nutrients meets the needs of the crop (turf) and is not applied in excess. Additional technical standards will make it clearer for the landowner how this may be accomplished. The development of technical standards will be done with the assistance of University and other technical experts in the field.

**F217 Comment:** (individual) Chemical application companies claim that they are abiding by laws, but I have seen applications with no protective gear in high winds, just before rains. Why are they allowed to spray freely without warning people who don't know how to get on the list to be notified that chemical companies are going to spray in their areas? Chemical companies should be much more tightly controlled. Anyone applying should be required to notify everyone in the immediate area. We need to make it difficult to apply any unneeded chemicals.

**Response:** This comment needs to be directed to the DATCP which has authority over pesticide use.

**F218 Comment:** (golf course manager) Will soil testing be required? What type of buffer strip will be required on fairways? Do clippings need to be picked up?

**Response:** The code will require application in accordance with nutrient and integrated pest management plans and appropriate soil testing. The individual plans will identify whether grass clippings should be left behind, what fertilizers to use, when and how to apply them, etc. If the fairway is running alongside a stream or lake, then the vegetation in the buffer must be such that it maintains streambank stability, habitat and provides filtering of pollutants. The buffer performance standard applies only to new construction of a golf course while the management plans are applied to existing golf courses.

**F219 Comment:** (individual) Golf courses seem to fall into an agricultural zone, but since they are not farms, they are not controlled by agricultural rules, and towns have no authority because they are in an

agricultural zone. Golf courses are allowed to have drains in fairways that pipe into riparian corridors, but they are not called point sources even though it's coming out of pipes.

**Response:** Future golf courses will be required to meet the performance standards for construction and post-construction, which includes the buffer. Any pipe will have to first remove 80% of the total suspended solids load, control the peak flow rate and meet the infiltration requirement. After the golf course is constructed they will need to apply nutrients in accordance with a plan. These requirements will be enforced through a permit from the department and not through local ordinances.

**F220 Comment:** (individual) Farmers know what it costs to prevent soil erosion and what it costs to pay for fertilizers, those in the construction industry are aware of regulations that pertain to them, most municipal leaders are aware of their responsibilities, but urban/suburban landowners are generally ignorant of the effects of their pesticide and nutrient use. If you look at the per acre use of pesticides, I suspect that suburban landowner uses more pesticide than farmers do. The 5-acre standard is not appropriate. No problem with siltation and erosion, but with excess use of fertilizers and pesticides.

**Response:** See response to F167 and F221.

**F221 Comment:** (farmer) From a hardware store pamphlet about applying fertilizer to the lawn, I calculated that you would be applying 223 units of N to a lawn when 20-50 units of N should be enough, according to my agronomist. The farmer is getting blamed for everything, but the homeowner who doesn't have a clue is causing most of the problems. Three miles away from the farm is a subdivision of close to 50 houses with acre lawns. If you apply 5 times the amount of fertilizer on those 50 lawns, that is more than we put on 350 acres. Homeowners don't take soil tests, they just follow the pamphlet. Scotts is selling the product, and homeowners are stupid enough to buy it. If I was in their business, I would recommend more so people buy more.

**Response:** We recognize, as does your comment, that the suburban and urban landowners need to be educated on the proper application of nutrients. We need to bring the application recommendations in line with the needs of the lawn for optimal health rather than maximum yield. A farmer may be applying a nutrient to maximize the product but that isn't the homeowners' goals. They want their lawn to look healthy, but they don't need to mow it twice a week. We hope to address this issue and others through the development of a technical standard.

**F222 Comment:** (county club) Studies have shown that turf-type grasses are very effective in reducing sediment runoff and have very dense rooting qualities which aid in streambank stabilization during heavy rains or flood events, although it won't protect against monster storms or flash flooding. Without the inclusion and support of university scholars, educators, extension specialists, golf course superintendents or associations, the rules would be incomplete and inconclusive and any technical standards developed without them would be irresponsible and detrimental to my ability to manage the golf course in an ecologically and fiscally responsible manner. Golf course superintendents and the supporting entities would implement standards that included their opinions and research.

**Response:** We are aware that turf can achieve many of the goals of a buffer standard and are not disputing the findings of the research on turf grass. Nutrient export is only one of the issues related to a buffer standard. Bank stability is also a concern. The ability of turf to withstand the erosive conditions of storms and high water levels is less than for longer rooted plants and trees. Longer rooted vegetation can also withstand drought conditions. Vegetation other than turf provides habitat, shading, and biodiversity, all of which are desirable features next to a water body. What is planted in the buffer is dependent on the situation. The code does not specify the type of vegetation, nor does it preclude the use of turf grass. We intend to include the UW specialists and other technical experts in the development of technical standards to address this performance standard. Their expertise will be invaluable. UW researchers indicated they have guidance for landowners that may be useful for the technical standard development process.

**F223 Comment:** (WI Landscape Fed.) A lot of homeowners have more than 5 acres. These rules would appear to include churches, parks, and cemeteries. Do we have to do all this work for our cemeteries and churches?



**Response:** Along with churches, cemeteries and parks, included in the list are owners of large properties, corporate headquarters, school districts and any other place where fertilizers are applied to 5 acres or more of pervious area. If the property owner is spending time and money applying these products, then they should take a little more time and possibly save money while making sure they are doing it responsibly.

**F224 Comment:** (WAL) We like the soil test requirement for the application of fertilizers and pesticides and see no reason to wait until 2008 to implement this.

**Response:** The performance standard for non-municipally owned property is parallel to the one for municipally owned property, which is under a stormwater permit for compliance. For consistency, and since the department will need to be the one enforcing in all these cases, we will be keeping the deadline as indicated. However, we will be working on technical standards and information and education packages to explain the expectations well in advance of the deadline. Hopefully, many of the facilities will be in compliance well before the deadline requires all facilities to be in compliance.

**F225 Comment:** (turf manager) Don't use agricultural standards for non-agricultural situations and force us to come to those standards.

**Response:** This rule does not address the technical standard that will be used to judge compliance with the rule. This technical standard will be specific to lawns and will not be an agricultural standard. The need for a nutrient management plan is appropriate both in the urban and rural setting. The goal is to apply no more than the lawn needs. The technical standard will identify what the lawn need is and it will not be the same as the agricultural recommendations.

**F226 Comment:** (golf course supervisor/former municipal official) I hope that DNR would seriously step back and talk to other researchers, get them involved, and figure out where we are as an industry. We're light-years ahead of the stuff in the rules as far as record keeping and planning goes. It would be a travesty to drag us backwards.

**Response:** There is no reason why this rule would drag anyone back if they are already keeping records, using a plan and watching what they apply. If your application of nutrients is responsible and controls runoff of pollution to the water resources, then you are in line with the rule and would not have to change anything. From your comment, it would seem that you are meeting our expectations and more and the rule should not be any threat to the way you do business. We have had discussions with the UW turf experts and we believe we have similar goals. They will be instrumental in developing the technical standards.

**F227 Comment E194 (CWC)** opposing an exemption for turf managers from the nutrient management standard applies to this section.

## **G NR 151, Subchapter IV, Transportation Performance Standards**

### **General Comments**

**G1 Comment:** (2 co. hwy. depts., co. hwy. comm.) The rules say "...per federal requirements..." but we're not sure what those changes may be. There is an assumption that the federal rules will go into effect as is, but what if the federal rules change? The rules should have a fall-back position if the federal rule is modified.

**Response:** The proposed NR 151 rules were developed pursuant to a Wisconsin legislative requirement, not a federal one. We assume by federal rules that you're referring to the EPA Phase II storm water rules. DNR will need to again revise NR 216 after the legislature approves the biennial budget that will provide the statutory authority to bring NR 216 into accord with Phase II. However, we reviewed the Phase II rules and adjusted our performance standards so that they are consistent with one another. We have included language in the rule to exempt transportation projects that are exempted by the federal regulations so that the application of these state transportation standards is consistent with the federal applicability of a federal permit for land disturbance construction activity.

**G2 Comment:** (2 co. hwy. depts.) The 1-acre threshold is huge. Going from 5 acres to one acre in several years will create a huge number of projects. Are we ready for this and how practical is this effort?

**Response:** The requirement for construction sites of one acre and above to obtain permit coverage was not a department initiated action through these rules, but an attempt to be consistent with EPA Phase II Storm Water rules that require all construction sites of one acre and greater obtain a construction site permit by March 10, 2003. EPA and the state estimate that this will result in 5 to 10 times as many construction sites being required to obtain permit coverage. This will be a significant workload increase that will greatly challenge the department with its limited staff. The decision to require permits for construction projects down to one acre has already been made by EPA. EPA lost a law suit brought by the National Resource Defense Council that now requires that construction site permitting be done to sites of less than 5 acres and that the threshold needs to take in account water quality considerations.

**G3 Comment:** (co. hwy. comm.) The rules will make it very difficult to do normal operations. Bringing down area requirement to 1 acre means 24-foot wide roads, less than ½ mile, 3-foot shoulders, and only a little over ¼ mile. Resurfacing wouldn't fall under this requirement, but a lot of rural road sections need to have reconstruction. Resurfacing won't satisfy road requirements. These rules would require counties to buy additional right of way, but there's only a limited amount of land to work with without purchasing land from property owners.

**Response:** Construction sites of one acre can potentially lead to a serious sedimentation problems to surface waters and we feel that they should be held to the same standards that larger sites must achieve. We agree that minor highway reconstruction projects do not need to meet the post-construction performance standards and already have included an exemption for minor highway reconstruction. See the rule definition of minor highway reconstruction within s. NR 151.21. The exemption is given within s. NR 151.24(1)(b).

**G4 Comment:** Several individuals along with four environmental organizations, WAL and TU urged opposition to efforts by WisDOT to gain exemptions from these standards. They stated that DNR is the state agency responsible for water quality standards, and all other agencies should have to abide by standards enforced by the DNR. TU also included county road departments. WI Env. Decade stated that the worst erosion problems are where roadways cross rivers and streams; those are areas that push water down, where it blasts out channels. Agricultural producers are forced to address that. You need to make sure that the people causing the problems also are required to address those situations. One individual stated that WisDOT should be held to higher standards and another stated that WisDOT plans in the next 20 years to pave over about 25,000 acres of Wisconsin farmland and wetlands for highways.

**Response:** The department agrees that WisDOT should be held accountable to the standards of NR 151.

**G5 Comment:** (WLWCA/WALCE, several counties) Transportation facilities represent public funded projects and should not have the rules "bent" to avoid installing water pollution control practices. Grass swales are not the answer to all runoff pollution problems from highways, especially during cold weather. Additional right-of-way space is required for sediment basins during the construction phase to comply with erosion control requirements. These same structures should be used for permanent storm water treatment and management afterwards.

**Response:** The department feels that grassed swales that are properly stabilized and designed to slow water to enhance sediment removal are appropriate practices for most transportation facilities. However, the department will be able to require additional practices for areas that drain to outstanding, exceptional, and 303(d) listed waters pursuant to s. NR 151.24 (10)(b)2. Also, within urbanized areas that are permitted under subch. I of NR 216, DOT will be required to develop and implement a storm water management plan to control pollutants from transportation facilities pursuant to s. NR 151.25 (2)(a).

**G6 Comment:** (WTBA) WisDOT has challenged DNR's authority to adopt rules regulating runoff from certain construction sites based on, among other items, a statute that indicated WisDOT is the agency to regulate erosion from highway and bridge construction sites funded with state or federal dollars. This fundamental issue needs to be settled before rules should be adopted. New legislation may be required.

**G7 Comment:** (WisDOT) NR 151 cannot regulate activities directed and supervised by WisDOT. The Legislature has unequivocally stated its intent that the DNR and WisDOT act cooperatively as sister agencies and has exempted activities directed and supervised by WisDOT from numerous, specific

environmental prohibitions, including prohibitions and approval requirements under ch. 281, Stats. Instead of direct regulation of one agency over another, the legislature established a negotiated, interdepartmental liaison process to minimize any adverse environmental impact of activities directed and supervised by WisDOT. This agreement was incorporated verbatim in WisDOT's Facilities Development Manual. DNR's attempt to directly regulate a sister agency is contrary to the spirit and letter of this law. There is no indication that the legislature intended to jettison this specific, successful, cooperative process in favor of direct unilateral regulation. WisDOT believes that the general requirement for DNR to establish performance standards is not intended to supersede the exemption of activities directed and supervised by WisDOT.

**Response:** Section 281.16(2)(a) requires DNR to develop rules specifying performance standards to achieve water quality standards. Section 85.19(1) requires WisDOT to develop rules specifying "best management practices" for "the control of soil erosion related to highway and bridge construction," and thus deals with technical standards. Performance standards establish the level of attainment that must be achieved, and BMPs and technical standards are the means to attain a specified outcome. WisDOT through s. 85.19(1) has the authority to establish the appropriate BMPs and would be expected to establish those practices that meet the appropriate performance standards of ch. NR 151. DNR believes this interpretation is most appropriate and enables WisDOT and DNR to properly administer their respective statutory missions.

The department, as the state's water quality agency, was directed by the legislature to establish the performance standards for attaining water quality. NR 151 performance standards are intended to be the level of performance needed to meet water quality standards taking a holistic approach to controlling runoff pollution. NR 151 standards cover both agricultural and non-agricultural sources, of which transportation projects/facilities are one significant source of runoff pollution. The department believes that it is appropriate and necessary to apply erosion control and storm water management standards to transportation projects/facilities to meet water quality standards statewide.

**G8 Comment:** (WisDOT) NR 151 cannot prescribe erosion control for certain highway and bridge projects. It is a well established rule that when both a general statute and a specific statute relate to the same subject matter, the specific statute controls. Section 85.19(1) of the statutes specifically requires WisDOT to establish standards for erosion control on highway and bridge construction that is funded in whole or in part with state or federal funds. This statute and s. 281.16(2), Stats., relate to the same subject matter, but s. 85.19(1), Stats., is more specific and therefore controls.

Sections 281.16(2) and 85.19, Stats., cannot be harmonized by claiming that one statute requires the DNR to prescribe performance standards while the other requires WisDOT to prescribe technical standards to achieve those performance standards. Statutes must be construed in ways that do not render other statutes meaningless or superfluous, and that avoid absurd results. NR 151 requires WisDOT to prescribe technical standards for *all* its activities and facilities affected by storm water, making the requirements of s. 85.19, Stats., superfluous. NR 151 swallows the statute whole and leads to an absurd result by suggesting that s. 85.19 is required to authorize WisDOT to prescribe technical standards for highway and bridge projects involving state or federal funds, while no such statute is required to prescribe technical standards for highways or bridge projects using other funds, or for any other project. The legislature would have addressed s. 85.19, Stats., if it intended NR 151 to supersede that law. WisDOT has previously provided to the DNR specific language that recognizes the precedence of s. 85.19, Stats., and again suggests the DNR to include that language in NR 151.

**Response:** See response to previous comment.

**G9 Comment:** (WisDOT) NR 151 prohibits WisDOT from implementing innovative erosion control practices unless they are approved by the DNR. It is these types of prohibitions and approval requirements that the legislature intended the interdepartmental liaison process under s. 30.12(4), Stats., address. WisDOT has previously provided to the DNR specific language that recognizes the precedence of s. 30.12(4), Stats., and again suggests the DNR to include that language in NR 151.

**Response:** The department disagrees. The performance standards establish the level of performance that is to be met for controlling erosion and other pollutants contained in runoff. The performance standards do not require any specific type of practice nor do they prohibit specific practices.

**G10 Comment:** (WisDOT) Statutes of general application, like s. 281.16(2), Stats., to not apply to the state. In contrast to s. 281.16(1), Stats., which expressly applies to DATCP, s. 281.16(2), Stats., does not name WisDOT, or any state agency. The Wisconsin Supreme Court has generally applied the following rule when deciding whether the provision of a statute apply to the state: "Statutory provisions which are written in such general language that they are reasonably susceptible to being construed as applicable both to the government and to private parties are subject to a rule of construction which exempts the government from their operation in the absence of other particular indicia supporting a contrary result in particular instances." State Department of Natural Resources v. City of Waukesha. 184 Wis.2d 178, 193-94, 515 N.W.2d 888 (1994).

The Wisconsin Supreme Court will apply a general statute to the state only where the objective of a statute could not be accomplished without including the government or where the inclusion of a particular activity within the meaning of the statute would not vitally interfere with the processes of government. The objective of s. 281.16(2), Stats., achieving water quality standards, can be accomplished without including the state under the rule. NR 151 also vitally interferes with required WisDOT activities. NR 151 establishes design standards for WisDOT projects, requires the DNR review of WisDOT decision making and construction activities, requires the DNR approval for use by WisDOT of innovative or improved methods of controlling erosion and other non-point source pollution, imposes construction contract requirements, and requires WisDOT to acquire additional real property for transportation facility buffer areas and infiltration devices.

**Response:** We believe that the performance standards of NR 151 developed pursuant to s. 281.16(2), Stats, are applicable to state government agencies including WisDOT. Controlling runoff from transportation facilities is an important component to meeting water quality standards and the erosion and sediment control standards for construction and post-construction will have a minimal impact on the vast majority of transportation projects.

NR 151 will not vitally interfere with transportation projects administered by WisDOT, which are already required to comply with ch. Trans 401 to control erosion and sediment. NR 151 will not replace Trans 401, but will provide a level of performance for the required practices. Individual projects will continue to follow the same administrative requirements of Trans 401. Transportation work group discussions indicate that WisDOT erosion and sediment control design standards required under Trans 401 are in substantial compliance with the erosion control requirements of NR 151 and only minor changes may be needed.

It is correct that new and major reconstruction projects may require additional property to remove pollutants from runoff using practices such as buffers, vegetated swales or wet detention ponds to meet the post-construction standards. However, the infiltration standard has been changed and highways will not be required to provide infiltration. Also, the alternative to use designed vegetative swales will make meeting the post-construction standards fairly easily attainable in rural areas. Within urban areas where vegetated swales are impractical and/or too costly, other treatment practices will need to be evaluated. However, cost effectiveness is a factor to be used to determine what practices are to be employed. This individual project site evaluation to select appropriate practices is needed and is similar to the evaluation and selection process that commercial and residential construction projects will be required to perform.

**G11 Comment:** 5 co. hwy. depts., co. hwy. comm., co. public works dept., RPC, WCHA strongly support additional discussions with the Transportation Stakeholders Group regarding this proposed subchapter. The group was not allowed to complete its work and halting this effort was premature and counter-productive. We urge the DNR to exempt transportation projects from this rule until such time as there is more stakeholder input and a consensus on this subchapter.

**G12 Comment:** (co. hwy. dept.) While an attempt is now being made to simultaneously work with the Transportation Stakeholders Group while advancing the rule, there are no assurances that any consensus will be reached on transportation issues. Transportation projects should be exempted until such time as there is a consensus on this subchapter. At least give a six-month window for further deliberation and effort.

**G13 Comment:** (WCA) We applaud DNR's numerous revisions to this subchapter. The transportation stakeholders' group made great strides, but the group ran out of time while still making revisions to the

proposed rule. The new rule is far reaching and a potentially costly regulation—the deliberation process should not be rushed, and WCA requests more time for the transportation work group to continue improving the rule.

**G14 Comment:** (public works dept.) The Transportation Work Group should be pulled together; I think they can do a lot of good work and require urban designers to do the same things as rural designers.

**Response:** As recommended, the department did continue its transportation work group meetings to address concerns expressed by the transportation industry. The department believes that many concerns have now been resolved and/or clarified. For example, an erosion control matrix was developed to clarify the practices needed for erosion control on highway projects and infiltration is no longer required for highways and heavily traveled roads. DNR does not intend to exempt the transportation industry from the performance standards. The department believes it has gotten as much agreement/consensus on the standards as it likely will ever get on the transportation standards and we should move forward.

**G15 Comment:** (2 co. hwy. depts., RPC) Why should the ag and non-ag rules be promulgated at the same time? Exempt transportation project from this rule until there is a consensus on the Transportation Subchapter. At least give a 6-month window for further deliberation and effort.

**Response:** The department feels that it is important to promulgate performance standards to control runoff from both agricultural and non-agricultural sources at the same time. Both ag and non-ag sources commonly blame the other for runoff pollution problems. We are setting standards for both ag and non-ag sources to ensure that both sources will receive proper performance standards to meet the state's objective of meeting water quality standards. Also, see previous comments on this issue.

**G16 Comment:** (public works dept.) The process should be halted until solid evidence exists that the rules regulating nonpoint pollution will result in predictable and measurable benefits at acceptable levels of expenditure.

**Response:** See response to comment G28.

**G17 Comment:** (4 co. hwy. dept., WCHA, RPC) Technical standards need to be developed in advance of the rules implementation. Without technical standards we do not know what specific actions will need to be implemented in various construction conditions. Local governments have no idea whether the implementation of this rule will be reasonable or not and no idea of what the cost will ultimately be. Not having specifics as to how compliance can be achieved in a practical, efficient manner, the chance of compliance in general is greatly reduced, due to lack of understanding.

**G18 Comment:** (WCA, co. hwy. dept., co. public works) The heart of this rule is the technical standards—the details we will have to work out later. This is asking us to endorse a regulatory blank check. This is not good government. Local governments do not know at this point what the costs of the rules will ultimately be because technical standards have not been developed. Technical standards need to be developed in advance of the rule's implementation.

**G19 Comment:** (co. hwy. dept.) We are in full support of protecting our water quality by establishing effective, efficient and economical erosion control standards for local construction projects. These standards must be developed before DNR goes through the rule-making process.

**Response:** The department was directed by the state legislature to develop performance standards and a process by which to develop technical standards for the non-agricultural performance standards. The legislative mandate clearly indicates that the department is to develop a process to develop technical standards and not to develop the technical standards prior to the performance standards. Additionally, the department does not have the authority to mandate what technical standards are required for transportation projects that are administered by WisDOT. However, the department has worked with a transportation work group to clarify what measures are needed to meet the transportation performance standards, which included development of an erosion control matrix. We believe that this matrix gives much clarity to the concerns that the transportation industry had with the standards. The department developed a transportation fiscal estimate for local governments. Also, see response to comment G17.

**G20 Comment:** (WTBA, 3 co. hwy. dept., co. public works dept., RPC, co. hwy. comm.) In order for the transportation industry to evaluate whether the performance standards in NR 151 are appropriate, and for

local governments to know the costs and impacts associated with the rule, technical standards and guidance need to be developed in advance of the rule's implementation and a fiscal estimate needs to be developed from the standards. Drafting rules without a rudimentary fiscal impact analysis of its effect on local government is not acceptable and is not good government from a state/local partnership approach.

**Response:** There is a fiscal analysis to assess the cost of the transportation performance standards to state and local governments. Also, see response to next comment.

**G21 Comment:** (WisDOT) NR 151 is not cost-effective for transportation facilities. WisDOT believes the complex and expensive post-construction requirements will produce relatively few water quality benefits, compared to the benefits that would be produced by concentrating on aggressive, statewide implementation of transportation facility construction-site erosion controls; the rule could be more cost-effective by emphasizing erosion control and de-emphasizing post-construction performance.

In its fiscal analysis, the DNR included no cost impacts to WisDOT. We attempted to estimate the rule's fiscal impact to its anticipated transportation budget for fiscal year 2003, however, we cannot provide a comprehensive forecast of added costs for transportation, because of the uncertainties regarding how transportation construction sites can comply with NR 151. We believe that complying with just the post-construction performance standards may add between \$3 million to \$6 million to the transportation budget in 2003. Maintenance costs will also increase.

**G22 Comment:** (3 co. hwy. depts.) Unintended consequences are going to occur such as the need to buy more right-of-way for highway projects to accommodate swales, infiltration areas, detention areas and buffer zones. Engineering costs and soils exploration costs are going to increase considerably.

**Response:** The department was not provided the information or evaluation that was used to determine that the performance standards are unreasonable or not cost-effective for transportation facilities. The department has been working with a transportation work group to discuss the various concerns of DOT and other affected stakeholders and we understand from information discussed at the meeting, that a small percentage of DOT projects are considered new or major reconstruction and thus affected by the post-construction standards. At the meetings, DOT did not seem very concerned about the post-construction standards due to its impact on a relatively small number of projects. Also, for those projects impacted by the post-construction standards, most of these projects could have a grassed swale designed to meet the standard. There will be some projects near Exceptional or Outstanding Resource Waters that will require additional treatment practices. However, cost effectiveness is a factor that is to be considered in selecting what practices that are to be implemented under the standard of "maximum extent practicable" pursuant to s. NR 151.002 (19). The infiltration requirement is no longer applicable to highway facilities--that will also reduce costs with meeting the post-construction standards.

**G23 Comment:** (WisDOT) WisDOT hired a storm water modeling consultant to apply the models identified by the DNR to a sample WisDOT construction projects. At the end of the modeling effort, WisDOT could not determine if the anticipated erosion control efforts would be adequate to meet the requirements of NR 151.23 and, if they were not, what changes would be required to achieve compliance. We believe it is unreasonable and counterproductive for the DNR to go forward with a transportation construction site performance standard for which compliance cannot be predicted or demonstrated. DNR has agreed to work with WisDOT to determine what types of erosion control measures and efforts are necessary for compliance. We believe that with DNR's help, the level-of-effort and BMPs necessary to achieve water quality goals at a reasonable cost can be identified, even if they cannot be modeled to show an 80% sediment reduction. When that task is complete, WisDOT intends to incorporate appropriate transportation performance standards into its own erosion control rule, Trans 401, and to specify additional tools and techniques for erosion control in the Facilities Development Manual.

**Response:** The department believes that there are models that can be utilized to show compliance with the performance standards. We agree that it would be more practical and effective to have a methodology without having to model individual projects such as highway construction. Therefore, the department in cooperation with the DOT, WCHA, WTBA and others has developed an erosion control matrix and references it within NR 151 as an alternative method to meet the erosion control standard of 80% control. Using the matrix would not require the need for modeling erosion control measures. It is

our understanding that WisDOT and WCHA would be comfortable using this erosion control matrix to demonstrate compliance as a similar matrix has already been in use by both WisDOT and the counties.

**G24 Comment:** (WisDOT) The numeric-standards approach of NR 151 is flawed. NR 151 needlessly requires computer modeling that cannot be performed accurately and that does not affect the pollution management practices applied. NR 151 requires a projection of both the percentage change in pollution resulting from applying BMPs and the effectiveness of BMPs applied to all activities affected by storm water, requiring complex computer modeling. WisDOT has neither the staff nor the computer modeling software required by NR 151 and it is highly unlikely that contractors and most local units of government can do the required technical computer modeling. Modeling programs currently available, including those specified in the rule, are not intended to apply to large-scale transportation facility construction sites. They do not recognize many commonly used BMPs and cannot recognize innovative BMPs (see specific comments under NR 151.23 and 151.24).

**Response:** See responses to previous comment.

**G25 Comment:** (WisDOT) NR 151 will affect not only direct, but indirect, costs of WisDOT activities by increasing the amount of state aid payable under various transportation aid programs. WisDOT awards more than \$80 million annually to local units of government through the General Transportation Aids program (s. 86.30, Stats.) to reimburse a portion of their transportation expenditures for roads, streets and ally construction and maintenance. Increasing construction and maintenance expenditures will increase the amount reportable, which in turn will increase the amount payable by WisDOT, or will skew proportionally larger payments to local units of government that have the highest reportable construction and maintenance expenditures. NR 151 cost increases will similarly affect the Local Roads Improvement Program (s. 86.31, Stats.) which reimburses local units of government more than \$20 million annually for improvements to seriously deteriorating local roads.

**Response:** For the majority of transportation projects, we believe that the capital and maintenance costs associated with NR 151 will be relatively insignificant. We agree that the costs to meet the standards within urban areas could be significant and that maintenance of storm water treatment systems is important. DOT should consider funding for maintenance of storm water treatment systems where appropriate.

**G26 Comment:** (WTBA) The NRB and the Legislature must understand that as more resources are shifted to address storm water and erosion control at the construction and post-construction phases, less transportation projects will be completed.

**Response:** Providing proper erosion control and storm water management does have associated monetary costs. However, the department believes that the state is concerned with protecting water quality for health, recreation, tourism, aesthetics, etc., and that additional costs associated with erosion and storm water management control of transportation projects/facilities will be relatively small in comparison to the overall cost of transportation projects. See fiscal estimate.

**G27 Comment:** (WCA) There has not been a fiscal estimate on the impact this rule will have on local governments. A detailed fiscal analysis should be completed so that property taxpayers will know exactly what this rule change will cost.

**G28 Comment:** (2 co. hwy. depts., RPC, co. public works dept.) The cost/benefit of these rules has not been discussed. (WCA also) We need solid evidence that in the area of transportation a real betterment will take place and that betterment will not come at an unacceptable cost.

**Response:** We developed a transportation fiscal estimate for local governments. Nonpoint pollution sources are the leading cause of water quality impairment statewide. Clean water leads to improved public health, recreation, tourism, and aesthetic beauty. Tourism alone brings millions of dollars to Wisconsin's economy. Other important benefits such as public health are difficult to assess in monetary terms.

**G29 Comment:** (WisDOT) Dual regulation of transportation facilities by the DNR and WisDOT is undesirable. Providing two sets of hoops to jump through will confuse and frustrate contractors and local units of government. If NR 151 takes effect, determining whether WisDOT or the DNR rules apply to a

given project will depend upon the combination of the type and size of the project, the level of WisDOT involvement and the source of project funds. Such a patchwork of rules (Trans 401, NR 216, NR 151) likely will result in uneven enforcement, will reflect badly on the state and could ultimately degrade efforts at protecting the environment. Consistent regulation by only one agency, having transportation project experience, serves everyone better and WisDOT believes this is the intent of s. 30.12(4), Stats. **Response:** The department is not requiring any additional permit or approval for projects administered by DOT. The intent of s. 30.12(4), Stats. is maintained. DOT is expected to require that NR 151 be met through its administration of Trans 401. Likewise, DNR is going to require that NR 151 be met through NR 216. Regulated transportation projects would follow Trans 401 if it is administered by DOT and follow NR 216 if it is administered by DNR. This is the same process that already exists. DNR is willing to assist DOT in revising Trans 401 so that appropriate conditions are contained in Trans 401 to achieve compliance with NR 151 is achieved. Following Trans 401 will achieve compliance with NR 151 as well. Also see response to comment G6.

**G30 Comment:** (WTBA, 5 co. hwy. depts., WCHA, co. public works dept., RPC ) If NR 151 is adopted, there will be an overlap with a number of regulations local governments must comply with on road, street and highway construction, reconstruction and maintenance projects such as NR 216, Trans 401, ss. 30, Trans 207 and others. These statutes and rules should be reviewed and reconciled before NR 151 is adopted to eliminate conflict and confusion and to develop clear, concise, understandable regulatory environment that is fair to the regulated community.

**Response:** The department does not believe that NR 151 should be held up to review and/or reconcile the statutes and rules related erosion control and storm water management of the transportation industry. See response to comment G6.

**G31 Comment:** (co. hwy. dept., co. public works dept.) There needs to be clear and distinct urban and rural approaches to nonpoint source pollution. NR 151's "one-size-fits-all" approach is not appropriate or sensible.

**G32 Comment:** (WCA, 2 co. hwy. depts.) The rules are written in a "one-size-fits-all" approach. It asks rural areas to deal with issues that are only problems in urban areas and it gives urban areas rural approaches to dealing with problems. A rural highway cross-section is promoted as a means of dealing with runoff issues. This is appropriate in a rural setting, but totally inappropriate in an urban setting. Infiltration areas are being promoted as a solution for "urban" stream recharge problems, but there may not be recharge problems in the rural areas it is being applied to and an unintended consequence may be groundwater contamination. There needs to be a clear and distinct urban and rural approach to non-point pollution regulation.

**Response:** We disagree that the transportation rules are a one-size-fits-all approach or that there needs to be a one approach for urban and another for rural. The allowance for designed grassed swales that are deemed to meet the post-construction standards is intended mainly for rural highways. However, if grassed swales are designed appropriately they also may be used in an urban setting. Storm water might be managed in several ways in an urban environment and the rule allows new and innovative designs to be employed. Where designed grassed swales are used to convey runoff, such as in the rural areas, there is no requirement to provide infiltration beyond what naturally infiltrates through the grassed swales.

**G33 Comment:** (WCA, 4 co. hwy. depts., WCHA) NR 151 requires compliance "by design" in a number of areas. This in itself leads to interpretation as to whether the agency is "adequately" achieving compliance. Any "design" requires judgement by the designer, thus putting the local agency in a position of regulatory judgement. Should DNR determine that the local agency's design is not in compliance, by making different judgements than the designer made, they then may determine the local agency is out of compliance. This combined with a history of inconsistent regulatory enforcement throughout the different areas of the state presents a very serious concern for local government officials. DNR will be regulating projects around the state that they have not been involved with before as applicability goes from 5 acres to 1 acre. Straightforward procedures that local governments can implement need to be developed, and an appeals process outside the DNR needs to be created.



**G34 Comment:** (2 co. hwy. depts., co. public works dept.) Straightforward procedures that local government officials can implement need to be developed and a conflict resolution process such as that recommended by the Kettl Commission needs to be in place. Compliance "by design" is subject to judgement and interpretation and can lead to conflicts between state and local agencies.

**Response:** Compliance by "design" means that if the project is designed to meet the rules and the design is implemented appropriately then the project is in compliance. Compliance is not based on as-built water quality monitoring of runoff leaving the project site, which would be a more expensive and complicated means of determining compliance. What if after-the-fact monitoring showed that the runoff contained more pollution than the intended design? We are avoided this situation by having the design and its implementation be the manner of showing compliance. It may be that some estimates or judgment calls may need to be made in analyzing and selecting designs to meet the standards. To help clarify these issues, the department has in consultation with the DOT and other interested parties developed and erosion control matrix that may be used to select proper BMPs that are in compliance with the erosion control performance standards. This matrix will help to provide clarity and consistency and thus help to minimize assumptions and judgment calls.

Department final decisions are reviewable under ch. 227, Stats. The department may bring enforcement actions through s. 283.89, Stats., for violating ch. NR 216 permit requirements, or through s. 281.98, Stats., if performance standards are not met.

**G35 Comment:** (2 co. hwy. depts.) How is success going to be measured? How do we argue with a regulator that feels we're not being successful enough?

**Response:** We assume that you mean compliance when you refer to "success". See response to previous set of comments.

**G36 Comment:** (3 co. hwy. depts.) The rules imply a huge enforcement effort. Where will the enforcement effort come from? Is local government going to pick up the tab?

**Response:** Enforcement of the transportation standards will be done by the department for projects that require a construction permit under subch. III of NR 216. Enforcement for transportation projects administered under Trans 401 will be primarily done by the DOT. The proposed set of rules does not require local government to enforce the transportation performance standards.

**G37 Comment:** (co. public works) The change from 5 acres to 1 acre is interesting. The NOI goes to Madison and into a file drawer and is never looked at again. The bureaucracy cannot keep up with these rules. Local government officials will not take kindly to implementing rules because the DNR cannot get staff to pay for it. Who will enforce the ambiguity in these rules? The DNR is understaffed. Who exactly will follow-up on rule violations? The "good boys" will get punished, and the "bad boys" will go free.

**Response:** EPA was sued by the Natural Resources Defense Council for only regulating construction sites down to 5 acres. The EPA Phase 2 regulations will require construction sites down to 1 acre to receive a permit. The department is being consistent with its application of performance standards by applying them to both larger sites and smaller sites of one acre. This extensive workload of regulating sites down to acre is required regardless of the NR 151 standards. We agree that the DNR does not and will not have the staff to review or inspect all projects. We do screen projects and review and inspect those that pose the most concern to surface water of highest concern and we also will follow up on complaints. DNR requested additional staff and is fortunate to have gotten 4 additional positions in the last biennial state budget. However, admittedly those 4 positions will not be adequate to provide the level of review, support and inspection follow-up that we would like to provide.

**G38 Comment:** (co. hwy. comm.) Will local governments be required to police other jurisdictions? As a county highway commissioner, I am a clearinghouse for different townships and municipalities in the county to work through problems and situations. I want to make sure that additional staff can handle the situation. As written, the rules do not address the fiscal impact of that.

**Response:** Enforcement of the transportation standards is to be done by the DNR for those projects covered under a NR 216 construction permit and the DOT is expected to enforce the standards for transportation projects that it administers under Trans 401. The counties are not expected to police other

jurisdictions. However, the county is required to follow the standards with oversight by DNR and/or DOT for their own projects that they undertake.

## **Specific Comments**

### **NR 151.20 Purpose and Applicability**

**G39 Comment:** (co. hwy. dept.) Highway maintenance and reconstruction projects should be exempt from the rules until there is a clearer understanding of when these rules apply to a transportation project.

**Response:** Certain maintenance activities were completely exempted such as ditching less than 5 acres of land and road resurfacing. Minor highway reconstruction was also exempted from the post-construction performance standards. Major reconstruction projects should be held to the post-construction performance standards. We made the exemption language clearer.

**G40 Comment:** (city) Our concern is with the requirement that facilities, including trails, reduce runoff of suspended solids by 80% over current corridors. We are currently planning the development of a greenway corridor recreational trail system which will inter-connect various neighborhoods, parks, schools, etc. The trails are proposed to be located within existing environmental corridors and will likely require some method of installation (paved, stone) that may go through or near wet areas, floodplains or natural areas. These rules and standards will be very difficult if not impossible to meet in these situations, and will significantly limit the City's ability to develop this important community transportation and recreational resource.

**G41 Comment:** (co. hwy. dept.). These rules apply to projects that may not have significant runoff problems. What problems are we trying to control from walking or biking trails?

**Response:** During construction, significant sediment runoff could occur from trail development that impacts surface waters. Construction of trails such as walking or biking would be required to meet the construction performance standard if enough land area is disturbed. However, if the walking or biking trail were through an area with minimal impervious area of less than 10%, then the project would be exempt from having to meet the performance standards [see s. NR 151.24 (1)(d)]. Generally, projects that result in less than 10% imperviousness based on the complete development of the site are exempt from the post-construction standards. Research indicates that when about 10% of a streams watershed is converted to impervious areas that fish diversity within the stream is significantly reduced.

It is agreed that after construction of a pedestrian or bicycle trails that the runoff from the trail should be relatively clean and not in need of treatment. Provided runoff from these trails is, to the extent practical, allowed to flow off onto permeable areas to provide for infiltration, this would be adequate to meet the post-construction performance standards.

### **NR 151.21 Definitions**

**G42 Comment:** (WisDOT). The application of this subchapter depends on the size of the construction site. The definition of construction site in NR 151.002(4) includes areas that are part of a larger common plan of development. This language allows the DNR to consider unrelated projects, undertaken by unrelated parties at different times, to be a single, larger project to which NR 151 applies. A lengthy highway project is often considered a single project for NEPA and WEPA purposes, but would likely be let for construction in much smaller segments, perhaps over a period of years; these separate projects should not be considered a single construction site. The DNR should define "larger common plan" and should specify its intended application to these complex projects. (The DNR uses the same undefined language in NR 216.002(2), but WisDOT is exempt from NR 216).

The "common plan" language could link projects undertaken in furtherance of other planning documents. WisDOT engages in long-range transportation planning. Federal law requires WisDOT to carry out a continuing, comprehensive and intermodal statewide transportation planning process. Federally required planning must cover a period of at least 20 years. State law requires WisDOT to develop biennially a highway improvement plan covering the succeeding 6 years, and requires WisDOT to submit that plan to the DNR, among others (e.g. Corridors 2020 is a single "larger common plan" covering several hundred miles of state highways). NR 151 would apply to the smallest WisDOT project undertaken in furtherance of any such "larger common plan."

Considering projects together based on their common plan could link unrelated projects undertaken with a shared intent, such as stimulating business growth and development. Consider unrelated construction of a small private business abutting construction of a rail spur or highway exit. NR 151.22(1)(c) requires the transportation facility authority to control erosion and sediment at the construction site if the contractor does not. Should the facility authority be required to maintain BMPs for the business? NR 151.22(1)(d) makes the contractor responsible for a project until the construction site has undergone final stabilization. Should the contractor remain responsible until the business is landscaped? The common plan of development shared by these two unrelated projects links them in a way that the DNR cannot intend. The DNR may not want to consider these projects together, but there is no basis in the rule for considering them separately. WisDOT suggests language clarifying "larger common plan of development" or excluding from consideration as a single construction site any construction activities that are not directly related to the construction of a transportation facility.

**Response:** Individual segments of an overall project should be evaluated to determine if they are a common plan of development to which the performance standards should apply. We agree that a state or county transportation project would not be considered part of the same construction project as a private business or residential development located adjacent to the project. However, if the plan was to break apart a contiguous highway project (or the segments are close together) then the segmented projects should be evaluated as a whole. The existing language allows flexibility for such case-by-case evaluation based on the nature of the project. However, the definition of construction site will be clarified to indicate that an overall-planning document such as what transportation improvements are planned for within the next 20 years does not constitute a common plan of development.

**G43 Comment:** (WisDOT) NR 151.11(1m)(b) states that transportation facility construction projects that are part of a "larger common plan of development" are subject to NR 151 subchapter III, non-agricultural performance standards. NR 151.23(1m) (note) and 151.24(1)(note) state that such projects "may comply with the performance standards of subch. III in lieu of meeting the requirements" of subch. IV. NR 151 should clarify the intended application of subch. III or subch. IV, or both, to such construction projects.

**Response:** We have clarified the application of subch. III and IV to transportation facilities that are part of a common plan of development.

**G44 Comment:** (WisDOT). The term "total suspended solids" should be defined. It is used in different ways in NR 151 to establish various requirements. Computer modeling is required to project reductions of both the "total suspended solids" and the "average annual total suspended solids load." NR 151.24(3) requires reduction in the "average annual total suspended solids load", while NR 151.25(2)(a) requires reduction in the "total suspended solids". The rules provide at least four different definitions of suspended solids. The DNR should specify the intended meaning of these terms.

**Response:** Total suspended solids is determined though by a standard procedure based on the solids that remain behind when a sample is poured onto a specified filter. The filter is then dried and weighed. This method is identified in "Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> edition," 1998, prepared and published by American Public Health Association, American Water Works Association and Water Environment Federation.

**G45 Comment:** (co. hwy. dept.) Definitions need to be clear to increase compliance by local governments.

**Response:** We agree that clarity is important but we have also tried to use existing definitions for consistency but will try to adjust as appropriate.

#### **NR 151.22 Responsible Party**

**G46 Comment:** (WisDOT) NR 151.22(1) requires the facility authority to write a plan to meet the performance standards. NR 151.22(2) requires the contractor to write an implementation plan and to follow that plan. WisDOT agrees with and supports this scheme, but believes NR 151 needs a mechanism for implementing corrective changes to the plan and the implementation plan when site conditions, construction methods or work schedules change to increase the potential for a discharge of

pollutants to state waters. NR 151 should outline a process for quickly changing the implementation plan when necessary, consistent with revisions anticipated in TRANS 401.

**Response:** The department believes that changes to the erosion control implementation plan, for projects administered by WisDOT, should be addressed within Trans 401 and it does not need to be addressed within NR 151.

**G47 Comment:** (WisDOT) NR 151.22(1)(d) prohibits a transportation facility authority from accepting a project (and from assuming responsibility for nonpoint source pollution related to the facility) "before it determines that the construction site has undergone final stabilization in accordance with the implementation plan". NR 151.002(9) defines "final stabilization", in relevant part, as "a uniform perennial vegetative cover [that] has been established with a density of at least 70 percent of the cover." WisDOT objects to this proposal because the contractor will remain responsible for a project throughout winter until the following spring, if weather prevents the growth of adequate ground cover. This liability will limit the contractor's ability to obtain bonding for future projects, which in turn limits WisDOT's ability to obtain competitive bids. Keeping the contractor responsible is also unnecessary in light of NR 151.22(1)(e), which requires the facility authority, not the contractor, to remove erosion and sediment controls that are no longer necessary (compare Trans 401.06(2), which assigns the prime contractor primary responsibility removing temporary erosion control and storm water management measures). WisDOT cannot perceive any environmental or other justification for keeping contractors responsible, or for prohibiting a transportation facility authority from accepting a project, until final stabilization. WisDOT believes that the duration of a contractor's responsibility should be part of the contracting process and not required by law.

**Response:** The department agrees that the contractor's responsibility should be part of the contracting process. However, the transportation workgroup spent considerable time on the issue of the responsible party and the group felt that the responsible party should be included in the performance standards. Therefore, we revised this section of the rule to allow the transportation facility authority to take responsibility of the project prior to final stabilization in accordance with the contract for erosion control.

**G48 Comment:** (WisDOT) NR 151.22(1)(e) requires the facility authority to remove unnecessary "erosion and sediment control measures." NR 151.22(3)(a) requires the maintenance authority to "maintain the BMPs". WisDOT recommends clarifying the roles of facility authority and maintenance authority in the event of a disagreement as to whether a control measure or BMP must be removed or maintained.

**Response:** We clarified that the maintenance authority will remove the unnecessary BMPs upon final stabilization of the site.

**G49 Comment:** (WTBA) NR 151.22(2)(a). The term "material disposal site" should be defined. The definition should exclude, for example, privately and municipally owned landfills. Also, if the "borrow site" is regulated by NR 135, the language in this provision is regulatory duplication.

**G50 Comment:** (WisDOT) Contractors should not be liable for all material disposal sites. NR 151.22(2)(a) requires the contractor to install BMPs at "disposal sites", which could include large municipal landfills. "Disposal sites" is not defined, and should be restricted to include only sites used exclusively for the disposal of construction waste or demolition waste (NR 500.03(50)), or under the direct control of the contractor.

**Response:** We added a definition for material disposal site to clarify what types of material disposal sites to exclude.

**G51 Comment:** (WisDOT) NR 151.23(2)(c) similarly requires that the "disposal of chemicals, cement and other compounds and materials used on the construction site shall be managed to prevent their entrance into waters of the state". This is a duty of indeterminate duration, possibly including post-disposal management. This duty should terminate when the contractor no longer controls the material.

**Response:** The language has been adjusted to indicate that this material management is during construction not the post-construction period.

**G52 Comment:** (WTBA) NR 151.22(2)(c) We agree with the concept of a transportation authority complying with the requirements of this section if it is conducting construction activity. But a transportation authority is not a "prime contractor" because it is not contracting with any entity. The language should be modified to read: "A transportation authority that carries out the construction activity with its own employees and resources must comply with the prime contractor requirements contained in this subsection."

**Response:** We agree and changed the rule in accordance with the language suggested.

### **NR 151.23 Construction Site Performance Standards**

**G53 Comment:** (WTBA) NR 151.23(1). The first concern with this subsection relates to the language that provides "Except as provided in s. NR 151.20(2)... this section applies to all of the following:..." NR 151.20(2) provides for some exemptions from the Transportation Subchapter, but specifically indicates that those exemptions are not applicable for the performance standards set forth in NR 151.23. The language quoted above in NR 151.23 is nonsensical and the reference to NR 151.20(2) contained in NR 151.23(1) should be removed.

**Response:** We agree and have removed those references that are inappropriate and/or unnecessary.

**G54 Comment:** (WTBA) The second concern is that the performance standards become effective "beginning with bids first advertised on or after the effective date of this rule." Construction project plans must include these new requirements, and these plans are obviously developed before bids are advertised. Additional time is needed to ensure that contractors have adequate training regarding any new erosion control requirements. We request that the rules become effective "beginning with bids advertised one year after the effective date of this rule."

**Response:** An additional delay for implementation of the construction standards is unnecessary. WisDOT's development of an erosion control plan and associated BMPs will not change very much. The transportation erosion control matrix that is being developed will be similar to the matrix that is already in the DOT Facilities Development Manual. However, the DNR believes that it may be appropriate for additional specifications or guidance to be added to the erosion control plan in order to get proper BMPs implementation in the most timely fashion as practical. Reducing the amount of time that an area is left open without erosion controls may be the most effective method of reducing erosion.

**G55 Comment:** (WTBA) The third concern is that the sites to which the construction performance standards are applicable have been greatly expanded since the previous versions of the rules package was discussed with interested parties. The rules initially applied to a transportation construction site facility over 5 acres. The rules now apply to any site where grading on a bank of a navigable body of water will expose more than 10,000 square feet. We need more information regarding the impact of this expansion before we can determine whether we oppose this provision. It is disconcerting that this type of major rule expansion would be proposed without the DNR discussing the matter with the Transportation Work Group. This expansion appears contrary to legislative intent. By expanding NR 151 to apply to projects that require a DNR ch. 30 permit, DNR is usurping the Legislature's decision to handle these transportation projects through the ch. 30.12(4) process.

**Response:** The applicability to grading sites of 10,000 or more square feet of land on a bank of a navigable body of water has been deleted.

**G56 Comment:** (WisDOT) NR 151.23(2)(b)1. The goal of reducing average annual sediment load by 80% is neither understandable nor measurable in the construction phase of a transportation project. The mathematical models required by NR 151 to calculate sediment losses for construction sites would need to calculate both the baseline "no control" condition and the controlled condition on slopes and in ditches in order to calculate the percent reduction of sediment loss on an average annual basis. The DNR has identified SedCad or RUSLE as models that can calculate construction site erosion losses. However, SedCad is an event (design storm) based model and cannot calculate sedimentation loads or reductions on an average annual basis as NR 151.23 requires. RUSLE calculates sheet and rill erosion loads on an average annual basis, but is incapable of calculating ditch flow and ditch erosion—an important element of construction site erosion control. Neither model identified by the DNR can be used to design or

demonstrate compliance with NR 151.23. If both tools are used, one for sheet and rill erosion on slopes and another for ditch flow and ditch erosion, the results are not compatible and cannot be compared or combined. SedCad reports results in weight/design storm event, while RUSLE reports its results in weight/acre/year. Neither tool, nor both tools in combination, can predict erosion reduction in a manner compliant with NR 151. WisDOT suggests the following: "(a) Reduce erosion and, to the extent practicable, retain sediment on site during and after construction; and (b) Prior to land disturbance, produce and implement erosion control plans or similar administrative documents that contain erosion control provision."

**Response:** The department believes that erosion control of 80% based on annual average rainfall is a measurable design condition. You are correct that SedCad is run using a single design storm event and not an annual average rainfall (series of rainfall events). It is correct that more than one model is needed to evaluate sheet and rill erosion and another model is needed to evaluate ditch flow and ditch erosion but there are models available to evaluate both types of erosion. Also see response to comment G23.

**G57 Comment:** (WTBA) NR 151.23(2)(b). We oppose the 80% number and request that it be removed because, 1) DNR has failed to provide any basis for the number in the context of highway projects, 2) it is not needed because of the MEP language contained in the rule, 3) while DNR refers to the 80% as a goal, in reality it acts as a substantive standard with requirements attached to it, and 4) it is unclear how, or if, the 80% will be determined. We are aware that DNR has proposed using a model used to calculate runoff from building construction sites, but we understand this model is not applicable to transportation sites.

**Response:** The department revised the erosion control performance standard to read, "to the maximum extent practicable control 80% of the sediment as opposed to no controls." The standard is to the maximum extent practicable as recommended, but would not require that control go beyond 80%. This is a uniform standard not just for transportation projects, but for all types of construction projects. The department believes that controlling sediment to a level of 80% will go a long way toward meeting water quality standards. See the response to comment G56 with regard to ability to model erosion and sediment control effectiveness.

**G58 Comment:** (WTBA) NR 151.23(2)(b)(1). This provision was apparently meant to highlight that DNR has discretion to give credit towards the 80 percent for something, but it is unclear under what circumstances credit would be given, how the amount of credit provided would be determined and why credit would be requested. It should also be noted that the fact that "credit" must be given to meet the "goal" supports the point that the 80 percent is really a requirement.

**Response:** This issue for giving credit toward meeting the standard was included in order to indicate that limiting the amount of time and area that land is disturbed is a method of meeting the standard. We do not encourage using only sediment control methods to meet the standard. Limiting the amount of time and area that land is disturbed is a more effective means of minimizing erosion. The department has revised the erosion control performance standard to "to the maximum extent practicable control 80% of the sediment as opposed to no controls."

**G59 Comment** F157 (APWA) regarding measuring/estimating reductions applies to NR 151.23(2)b.1.

**G60 Comment** F93 (MMSD, city, APWA) regarding infiltration in certain soils apply to NR 151.22(3)(c).

#### **NR 151.24 Post-Construction Site Performance Standards**

**G61 Comment:** (WisDOT) NR 151.24(3)(a) and (b). The DNR has identified SLAMM and P8 as models to predict post-construction storm water management compliance for transportation facilities, but both models have very serious drawbacks. SLAMM currently can't model more than one storm water management BMP at a time. Transportation facilities typically use two or more BMPs for storm water management and because SLAMM cannot model two or more BMPs used in conjunction, it cannot be used to accurately model transportation facilities compliance with NR 151.

In contrast to SLAMM's simplicity, P8 is a DOS-based modeling program that challenges even experienced modelers. Unless P8 is updated to run from a Windows or other modern platform, and to simplify input variables and assumptions, it cannot effectively be used to model complex systems such as

transportation facilities or suitable for projecting or demonstrating compliance with the total suspended solids performance standard. DNR and WisDOT should review available data and select a range of BMP efficiencies for designers and contractors to use when designing storm water management practices and devices for transportation facilities.

**Response:** We agree that the models do have some limitations. P8, though more advanced to use in simulating storm water management designs is still an effective tool that can be used by those more experienced users. We also agree that modeling every project is not necessary and it would be more productive to utilize a design approach with a matrix of storm water BMPs that are appropriate and effective for transportation facilities.

**G62 Comment:** (WisDOT) The computer modeling is only make-work, at best resulting in a written explanation as to why implementing BMPs to the maximum extent practicable could yield less than the specified percentage improvement. DNR has offered no rationale for the numeric standards specified. Why 80 percent? Without a rationale supporting the specified percentages, the goal appears arbitrary and in all likelihood would be applied capriciously.

A single numeric standard of performance is not appropriate for statewide application given the variety of soil types statewide. DNR employees have asserted to WisDOT employees that the numeric percentages are goals, not standards, but the 80% has substantive effect. 1) It requires pre-construction modeling of a site to establish a baseline against which the effectiveness of BMPs—applied to the required MEP—must be predicted. 2) It requires a written justification if the 80% goal cannot be met. NR 151.23(2)(b) also suggests that 80% is a substantive standard ("Credit toward meeting the sediment reduction goal may be given for limiting the duration or area, or both, of land disturbing construction activity"). An official DNR summary (fact sheet) of proposed NR 151 states, "Some exceptions to meeting the 80% goal are allowed, provided a reasonable justification is presented." This statement and statements in the rule, is inconsistent with any assertion that NR 151 does not establish a statewide numeric standard of performance.

**Response:** Although the 80% post-construction standard is by design, this does not mean that computer modeling is required on each project. Also the written justification does not specify that a model must be performed to justify not meeting the 80% standard. NR 151.24 (10) allows an alternative swale treatment standard whereby transportation facilities that incorporate designed vegetative swales will not have to model the percent effectiveness for pollutant control. This designed swale alternative does not apply to discharges to ORW, ERW and impaired waterbodies. With these sensitive water areas additional controls may be necessary, such as a wet detention pond. Certain practices such as a wet detention pond already have a technical standard developed so following this standard would not require that the percent effectiveness be modeled either. Urbanized areas will be the most difficult and expensive areas to meet this standard. In urban areas designed vegetated swales may be too expensive due to the high cost of land. Other storm water treatment devices will need to be evaluated to determine what is practical given the cost and effectiveness of pollutant control. It may not be practical to meet 80% due to cost. However, storm water controls still are to be employed to the maximum extent practicable, which is to be determined on a site specific basis and computer modeling of the percent efficiency may be needed to help determine what practices are most cost effective.

The 80% total suspended solids post-construction standard has been adopted in many other states as a single numeric standard. The Coastal Zone Reauthorization Act has an 80% reduction of total suspended solids on an annual basis by design as its performance standard for post-construction. DNR's advisory committee discussed this and the committee was comfortable with being consistent with a commonly accepted national standard of controlling 80% of the total suspended solids. The department has also worked with DOT, WTBA and WCHA to develop a construction site erosion control matrix that, if used appropriately, will meet the 80% design standard for construction site erosion control.

**G63 Comment F62** (city eng. dept.) objecting to the exception for development sites that don't increase surface elevation within the downstream receiving water by more than 0.1 inch for the 2-year, 24-hour storm event applies to NR 151.24(4).

**G64 Comment F117** (city eng. dept.) objecting to 50-75 foot wide buffer requirement adjacent to wetlands applies to NR 151.24(6).

**NR 151.24(5) Infiltration**

**G65 Comment:** (city eng. dept.) NR 151.24(5). We completely disagree with the inclusion of the infiltration standard for highways. Saturated soils along or near roadway pavements cause the pavements to deteriorate at an astounding rate. Each year, transportation authorities throughout the state spend millions of dollars to keep water out of their roadway bases and sub-bases. I am extremely concerned with the potential for groundwater contamination through infiltration. Transportation facility owners do not have control over the types of substances that are transported along our highways, nor do we have control over what drips, runs, or spills onto our highways.

**G66 Comment:** (3 co. hwy. depts.) Infiltration from highways is a bad idea. Concerns include spills of contaminants getting into groundwater; heavy metals, sodium chloride and other background contaminants would have a more direct route into the groundwater; and how do we know that we will be recharging streams and not damaging someone's drinking water?

**Response:** The requirement for infiltration of highways has been removed.

**G67 Comment F77** (WLWCA/WALCE, several counties) regarding appropriate placement of criteria to determine where infiltration BMPs are prohibited applies to NR 151.24(5).

**G68 Comment:** (WisDOT) Infiltration of storm water runoff should be employed very cautiously to minimize adverse impacts to groundwater resources. While infiltration through grassy swales is practical and beneficial, required infiltration from high volume transportation facilities, traveled by tens of thousands or hundreds of thousands of vehicles per day, may not be appropriate. WisDOT recommends that infiltration should not be a statewide standard, but should be evaluated and promulgated for specific water bodies per NR 151.004, to allow for appropriate consideration of the benefits vs. the risks of each application.

NR 151.24(5)(d) prohibits the use of BMPs within specified areas for the purposes of infiltrating runoff. Presumably the infiltration standards continue to apply to these areas. NR 151 is silent as to how to meet the infiltration standards without use of BMPs. We suggest language reducing the infiltration standards consistent with the BMPs that can be used at the site. NR 151.24(8) state that BMPs may be placed on site or off site, but does not recognize prohibited areas excluded by NR 151.24(5)(d)1. The DNR should specify which of these two placement provisions controls the other.

The exception for chloride deicers in NR 151.24(5)(d)1.i. requires near-constant monitoring to determine whether chlorides in the runoff exceed a chloride preventive action limit. The pass-through or diversion mechanism requires seasonal adjustment. WisDOT believes these labor or capital intensive practices are impractical.

NR 151.24(5)(e) requires infiltration systems to reduce pollutants to the extent "technically and economically feasible". 1) It is not clear who makes the determination regarding feasibility, or the standards for such determination. 2) It seems unfair to require different infiltration systems based on ability to pay. 3) The language suggests that the DNR could require replacement or modification of infiltration devices, if more effective infiltration devices become technically or economically feasible. WisDOT suggests language clarifying who makes feasibility determinations and under what standards, and stating that feasibility-driven retrofitting cannot be required.

**Response:** The requirement for infiltration of highways has been removed.

**G69 Comment:** (consultant) When you construct a facility, you dedicate 4-8 percent of your development to infiltrating water. That represents a lot of land and cost. You don't put 4-8 percent into roadways. Where will that money come from? It's hard enough to route water into stormwater detention ponds at end of site. You will need an infiltration basin as well, but how can I do that and collect all water in a detention basin before I send it to the infiltration basin? The rules assume that there's a flat spot on all sites where I can infiltrate. Many sites don't have flat spots. Some are steeply sloped by 1-5%, and I don't have a flat spot where I can pond water for 1 foot and let it sit there for 30 hours. But I don't work on hypothetical sites. I work with real sites, and I have to think of how to implement these infiltration regulations. I have to think



about major earth movement involved and the large expense involved. There will also be conflicts when a road is next to a buffer area; there's no place to do infiltration because you can't touch the buffer area.

**Response:** The requirement for infiltration of highways has been removed.

#### **NR 151.24(6) Buffer Areas**

**G70 Comment:** (3 co. hwy. depts.) Buffer zones around wetlands, rivers, streams and lakes sound good, but many times transportation projects have no choice but to cross such features. There are serious practical problems with the buffer zone concept. Will we have to fill a wetland to provide the "buffer" required under the rules?

**Response:** Buffers are to be maintained to the maximum extent practicable. With road projects, stream crossings can't be totally avoided. However, efforts are to be made to limit the amount of road area that is within the buffer area. Similar to streams, wetlands are also to be protected with a buffer. Wetlands are not to be filled in as to create a buffer. The buffer standard will have language added to indicate that waters of the state are not to be filled in order to provide a buffer area.

**G71 Comment:** (TU) Last summer, I watched the construction of Highway 60 from Lodi to Prairie du Sac. Part of the project bordered Lodi Marsh and Spring Creek, a trout stream that flows north into Lake Wisconsin. It was gratifying to see erosion barriers in place prior to construction. It was also nice to see the barriers maintained. Even so, once the project is done we again face runoff from the road surface. Requiring a buffer strip of 100 feet on either side of the roadway is both prudent and fair.

**G72 Comment:** (individual) Buffers in transportation areas should be at least 100 feet (also applies to urban/non-ag buffers).

**Response:** We agree that the larger the buffer the better the water quality protection. However, we do not have support to pass a 100 foot buffer for ag and non-ag statewide and have developed a set widths based on the type of receiving water for urban/non-ag. Thus, we are getting more protection on the streams of most concern.

**G73 Comment:** (co. hwy. comm.) It is not always easy to put a buffer zone; there might be an exception that was already accounted for.

**Response:** The buffer standard is written to allow for necessary exceptions to the numeric widths given.

**G74 Comment:** (individual) Construction should be prohibited in buffer zones, even if runoff does not go directly into a waterway (also applies to ag and non-ag buffers).

**Response:** The performance standards that are being developed must be based on water quality concerns. If the runoff does not enter receiving water at that location then a buffer is not going to be providing filtering/treatment for the highway runoff. Granted, there are many ancillary benefits of having buffers in these areas. However, our performance standard authority must be based on water quality benefits.

#### **NR 151.24(7) Fueling and Vehicle Maintenance Areas**

**G75 Comment:** (WisDOT) WisDOT believes this performance standard cannot be accomplished using oil and grease separators and other BMPs suggested. Only absorbent materials and micro-filters are capable of eliminating all visible petroleum sheen. Such BMPs require regular maintenance and replacement, and are probably not cost-effective.

**Response:** The department believes that to protect water quality, runoff should have no visible petroleum sheen. Appropriate controls need to be employed as necessary or to the maximum extent practicable. The department has seen both commercial gas station facilities and county highway garages implement relatively inexpensive rock weeper systems and some with petroleum absorbent pads to achieve this level of control. Also, having appropriate staff implement proper spill prevention and clean up procedure will go a long way toward meeting this standard. Immediately cleaning up spills is possibly the easiest and most cost effective means to minimize runoff contamination from petroleum spills.

#### **NR 151.24(10) Swale Treatment**

**G76 Comment:** (WTBA) NR 151.24(10)(b). This provision provides that the DNR has authority to require any condition it desires be met on a transportation facility if the runoff enters outstanding resource

waters, exceptional resource waters, water bodies listed as impaired under s. 303(d) of the Clean Water Act, or any other water bodies for which targeted performance standards have been developed. This gives DNR broad discretion over much of the state and greatly restrict the use of the swale exemption contained in NR 151.24(10). The provision gives DNR too much unbridled and undefined authority in regard to transportation facilities.

**G77 Comment:** (WisDOT). The rule requires only that the "other conditions" be consistent with water quality standards, yet provides no indication as to what those conditions could be, or whether the conditions are limited to specifications for qualifying swales, or could be entirely different post-construction performance standards not included in the test of the rule. Lacking such a clear standard, WisDOT cannot properly comment on the potential impact of this aspect of the rule, and fears that those conditions could be applied arbitrarily and capriciously, or will delay projects until the propriety of the DNR's asserted conditions can be sorted out.

**Response:** The department feels strongly that the identified waterbodies may require more runoff protection than grassed swales can provide. However, the department will specify that it cannot require more treatment practices than what otherwise would be required by this section. The department would be limited by the other standards as to how much could be required.

**G78 Comment:** (co. public works dept.) I'm entertained by the idea that swales are acceptable in a city environment. Picture stepping over a ditch when parking in downtown Green Bay or Milwaukee. The alternative is to build a percolation pond on \$300,000-an-acre land. People say we will figure something else out. People have personal and professional agendas. I've met with DNR representatives and with the Roads and Streets Committee. They didn't know that you couldn't run water 2 miles without a 10-foot drop. You don't have the right kind of professionals involved to know that with road that has sewer under it, that the sewer can have a much flatter pitch than on surface.

**Response:** Grass swales are not always feasible and may not be acceptable/appropriate the majority of the time. However, there are urban developments that have utilized grassed swales successfully. Not all developments will be able to be built in the same manner and the rules allow flexibility for swales where it is feasible. Based on your comment, it does not sound as though swales would be appropriate in very flat areas. This may be true. However, the rules do not mandate the use of swales and other designs may be necessary and allowable where swales can not achieve adequate flow conveyance.

**G79 Comment:** (city) The City of Pewaukee objects to the mandate of storm water standards for transportation projects. The standard is unreasonable and basically unattainable. Roadways are linear and have multiple points of discharge rather than one. It is almost impossible to control all these points of discharge. During construction, silt fences, hay bales and sometimes stilling basins are used to protect the downstream waters but these do not achieve an 80 percent reduction. After construction, only catch basins and street sweeping can be used to try to achieve the 80 percent reduction. Neither of these will achieve this standard. While there is a provision that allows swales to satisfy the standard, in reality it is difficult to install swales in many road projects. There often is not enough room to fit a swale in the right-of-way. Also, 1.5 fps is a conservative velocity and somewhat difficult to attain. Often the existing roadway configuration dictates that the velocity in the swales is more than 1.5 fps. Check dams are not a reasonable solution in any residential area. People think of the swales as part of their yard and wish to maintain them in the same manner. The only alternative left is to put detention ponds at every outfall. This is an unattainable alternative. There is not enough land or money available.

**Response:** The transportation workgroup evaluated the practices and materials that are available to limit erosion and sediment control and believes that 80% control can be achieved in most situations. In order to simplify erosion control practice selection, the workgroup developed an erosion control matrix that can be followed which meets 80% control. It is true that at certain periods during construction that reliance upon solely sediment control devices such as silt fence and hay bales will not meet 80% control. However, effort must be made to get the area stabilized using seeding, mulch and matting as soon as possible, and generally these erosion control practices will achieve greater than 80% control.

The designed swales for roads to meet the post-construction standards was primarily developed for rural areas as opposed to urban areas. For new urban developments, it likely will require a combination of practices and/or design changes to meet 80% total suspended solids control. Designs to lower the total

impervious area would result in less runoff to be managed. The department believes that regional wet detention ponds and infiltration practices will be the primary means to managing runoff from roads within new developments. In most areas, detention ponds are already required to manage runoff to prevent flooding. Instead these structures can be designed to manage flooding and provide treatment of runoff can be utilized. Wet detention ponds may require up to 3% surface area of the watershed draining to them for areas that are nearly fully impervious. Most developments would require closer to 1% of the surface area of the watershed draining to them to obtain 80% control of total suspended solids. However, if detention ponds are already required for flood control, the area required will even be less since the structure(s) for flooding can be modified for water quality purposes and the incremental increase of land required would be less in these situations. See the fiscal estimate for a cost analysis.

#### **NR 151.25 Developed Urban Area Performance Standard**

**G80 Comment:** (WisDOT) The goals for reducing suspended solids in developed urban areas may not be achievable. NR 151.25 requires WisDOT to develop and implement a plan to reduce the amount of pollutants carried in runoff from its transportation facilities located within developed urban areas, including the cities of Madison, Milwaukee, Green Bay, Ashwaubenon, Allouez, DePere, Marinette, Sheboygan, Superior, Eau Claire, Racine, West Allis, Waukesha and perhaps others. 1) WisDOT may not have enough transportation facility construction projects in these cities to meet these standards by installing appropriate settlement devices, such as detention basins, in the ordinary course of construction. If WisDOT does not, retrofitting of existing transportation facilities may be required. The cost and size of buffer areas, detention basins and other devices needed to meet these standards in developed urban areas, with high real estate costs and high development densities, whether installed with original construction or as a retrofit of existing facilities, may be impracticable. 2) Storm water runoff in developed urban areas likely enters a storm sewer system, where it is mixed with storm water runoff from other sources; the total suspended solids attributable to transportation facilities under WisDOT's jurisdiction is impossible to determine. It is not clear how WisDOT could remove an adequate amount of suspended solids from a city's storm sewer system. It is unclear whether street sweeping—preventing solids from entering storm water to begin with—can achieve the required reductions. The operation of slower-moving street sweepers on high-speed interstate highways and U.S. highways, and other highways under WisDOT jurisdiction within developed urban areas would create a significant public safety hazard to the motoring public.

**Response:** In recognition of the challenges faced by existing developed areas, the existing urban development standard was set at initially 20% and then up to 40% total suspended solids control (as opposed to 80% control for new development). Still, the department believes that existing developed areas will have the most difficult time to cost-effectively meet the numeric standard. Nevertheless, we should not give up on our urban streams as their water quality can be maintained or improved to yield a greater biological and aesthetic value to society.

During post-construction conditions, heavily traveled roads and highways are an area where a significant amount of pollutants collect and then get carried in runoff to waters of the state. The department believes that a highway street-sweeping program is likely the most cost-effective manner of storm water management pollutant control for existing highways. However, street sweeping upon highways does have serious safety concerns with the high speed of vehicles in relation to the street sweeper. Therefore, serious care and consideration must be given in developing a street sweeping program for highways. If street sweeping is not a viable option, then alternative retrofit treatment systems should be evaluated.

Note municipalities that are permitted under subch. I of NR 216 will also be subject to the 20/40% total suspended solids standard. There may be opportunities for WisDOT and local governments to jointly finance a regional treatment system for some areas. This may lead to a more cost effective treatment alternative.

#### **H Subchapter V – Technical Standards Development Process for Non-Agricultural Performance Standards**

**H1 Comment:** (WLWCA/WALCE, several counties) We object to the lack of any meaningful process in the rule for the development of non-agricultural technical standards. We believe this does not meet the

statutory mandate under s. 281.16. Specifically, we believe the rule needs to require the following minimum process elements:

- Some form for broad public notice of work group formation and opportunity to submit recommendations to the work group,
- That all technical standards be based on the latest research, technology and field experiences (not political agendas),
- Some form of broad public notice and opportunity for review of draft technical standards,
- Publication of all technical standards "determined to be adequate",
- Regular review (every 5 years) and update of all published standards,
- Authorization for the department to delegate administrative duties of the process to others through an inter-organizational agreement.

**Response:** See response to Comment H5.

**H2 Comment:** (Dept. of Commerce) NR 151.30. What is meant by "establishes conditions to determine if technical standards adequately and effectively implement" performance standards? The statement would seem to imply that there are to be rules delineating specific criteria by or how adequacy or effectiveness is determined, but there are none. Rather, NR 151.31(2) lays out the administrative process for approving or denying. The phrase should be dropped.

**Response:** We agree and have made the change.

### **NR 151.31 Technical standards development process**

**H3 Comment:** (WTBA) The provisions contained in this section are of concern and highlight the difficulties faced by the regulated community when they are regulated by two different agencies for the same purpose. NR 151.31(2)(b) specifies that if the DNR determines that a proposed technical standard is not adequate to meet a performance standard, the standard may not be used to implement a performance standard. NR 151.31(3) provides in part that the DNR will accept technical standards developed by WisDOT on the effective date of the rule, unless the DNR determines that a technical standard is not adequate to meet a performance standard. These provisions give the DNR veto authority over WisDOT's existing technical standards and any technical standards that will be developed in the future. Beyond the question of whether the DNR has statutory authority for these provisions, such an approach is poor public policy. These provisions have the potential to put the regulated community in the middle of a dispute between two state agencies.

We also have a concern over NR 151.31(6). The threat of enforcement action in the context of transportation construction projects for implementing a technical standard that the DNR believes is "not adequate" is simply unfair and misguided. Contractors will be implementing plans that are verified by WisDOT to be designed to meet the performance standards. Under this provision, it appears the DNR could take enforcement action against the contractor, even if it was following the WisDOT-approved plan. The regulated community would pay the price because two state agencies do not agree on technical standards.

**Response:** The department would work through WisDOT to revise transportation technical standards that do not comply with subch. III or IV or NR 151 as indicated within s. NR151.31(1)(d)2 and 3. This indicates that the Department will request the state agency responsible to revise the technical standard, such as WisDOT and if that agency denies the request, then the department would initiate conflict resolution procedures between the respective departments to resolve the issue, as necessary. Section NR 151.31(6) does indicate that the department may initiate enforcement proceedings, where a standard identified by the department is used to meet the performance standards. This may occur against individual landowners or operators that are permitted by the department. However, where another state agency directs a contractor to perform work using inappropriate technical standards, the department would work through the state agency to resolve the situation.

**H4 Comment:** (WCA) The rule should outline when and how a council will be formed to oversee the development of non-agricultural technical standards. The rule should establish requirements for adequate notice and opportunity to submit recommendations and review proposed technical standards.

**Response:** The department intends to utilize the Standards Oversight Council (SOC) for the development of technical standards for which the department is the custodian. The SOC process does include public noticing and the opportunity for the public to review and comment on the technical standards that it develops. However, the department does not have the authority to dictate to other state agencies, such as Commerce, how they develop their technical standards. We would support other state agencies utilizing the SOC process for standards development as well.

**H5 Comment:** (WisDOT) The technical standards development process is incomplete. The intent of NR 151.31 appears to have 4 crucial elements relative to WisDOT. 1) the DNR accepts existing technical standards used by WisDOT when the rule takes effect. 2) If the DNR believes that a technical standard does not meet a performance standard, the DNR may direct WisDOT to revise the technical standard. 3) The DNR will review and approve the revision proposed by WisDOT and any innovative technical standards developed by WisDOT. 4) The DNR will maintain a list of prohibited ineffective technical standards and will initiate enforcement proceedings against the use of these prohibited standards. Unfortunately, NR 151 does not spell out this process.

NR 151 gives the DNR only objecting authority. It does not require WisDOT to revise technical standards, submit technical standards to the DNR for review or approval (although it does require the DNR to review any technical standards submitted by WisDOT), prohibit WisDOT from using a technical standard that is not approved (unless the DNR has specifically disapproved its use), specify a process to WisDOT to follow in developing or revising technical standards (although it does specify a process to be used by the DNR to revise technical standards), provide a time limit for review, if any, by the DNR of innovative or revised technical standards, specify how revised technical standards first apply to projects, or specify whether a post-construction technical standard that is disapproved by the DNR after installation must be removed, modified or replaced (e.g. what if the approved depth or slope of swales proves inadequate?). Although NR 151.31(2)(c) states that innovative or revised technical standards first apply to "plans developed" after the determination, it is unclear whether this refers to the plan developed by the transportation facility authority under NR 151.22(1)(a), the implementation plan developed by the prime contractor under NR 151.22(2)(a), or to some other plan, such as a long-range building plan.

As a practical and legal matter, technical standards specified in an implementation plan that is incorporated into a construction project as required under NR 151.22(1)(b) cannot readily be revised in the middle of a project. WisDOT recommends, at a minimum, that executed contracts be allowed to stand without substitution of technical standards.

To fulfill its requirement under s. 281.16(2)(b), Stats., to disseminate technical standards, WNDNR directs state agencies to publish technical standards in the other agency's rules, manuals, or guidance documents. This may comply with the law, but it seems inappropriate for one state agency to direct another to publish technical standards.

WisDOT suggests that the DNR review the technical standards development process and, if necessary, rewrite it. WisDOT believes that the DNR lacks legal authority to impose approval requirements on technical standards developed or revised by WisDOT.

**Response:** The first draft of the non-agricultural technical standards process did include more requirements of other state agencies in developing technical standards than the current version. However, the department received significant feedback indicating that we do not have the legal authority to dictate the development process or approve other state agency technical standards. In fact, WisDOT has even indicated that it is not appropriate for DNR to specify to another state agency that it should publish its technical standard in any manner. DNR is thus limited to only requesting ways that other state agencies develop or revise its technical standards. Therefore, the department has not included requirements that other state agency technical standards must be developed in a particular manner (public review, committee representation, etc.), that the department must review and approve all technical standards prior to their implementation or that the department can require another state agency to revise its standards. If another state agency is responsible for the technical standard, the department only has the authority to say whether the technical standard meets the performance standard and can only request that the technical standard be revised to meet the performance standards. The department suggests that other state agencies include the department in its development process to help ensure that new or revised technical standard will meet the performance standards. If there is question as to whether the technical standard will meet

the performance standard, the standard should be submitted to the department for review prior to implementation if it is being utilized to meet a performance standard.

To comply with the statutory directive given to the department, technical standards developed to meet the non-agricultural performance standards must be disseminated. It makes the most sense that the state agency that develops the technical standard should also publish the standard in the appropriate manner. However, if another agency does not publish its technical standard, they may be sent to the department for publishing in satisfaction of its statutory obligation.

**H6 Comment:** (co. lake spec.) I object to the lack of a defined process for the development of non-agricultural technical standards. The process should include a provision for the opportunity to review draft technical standards and submit recommendations to the work group. Language should be included to allow DNR the authority to delegate the administrative duties of this process to others through an inter-organization agreement (e.g. Standards Oversight Council). This section should also include wording that all technical standards should be based on the latest research, technology and field experiences.

**Response:** See response to H5 above.

**H7 Comment:** (Dept. of Commerce) NR 151.31(1). This does not preclude others from developing or revising technical standards and should not force people to utilize only "standards" (solutions) developed under this subchapter. We believe this section applies only to the DNR and its processes.

**Response:** The department has written s. NR 151.31(1) so that it applies not only to DNR but also to other state agencies such as Commerce. The state legislature directed DNR as the state's water quality agency to ensure that appropriate technical standards are being implemented to meet the non-agricultural performance standards. This section does not require that only standards developed under this subchapter be utilized. However, if another agency or party develops a technical standard that is to be used to meet the non-agricultural performance standards, then the department recommends that it be involved in its development. The department may not have authority over the development process that another organization may utilize in developing technical standards, but it does have authority to determine if the technical standard meets the non-agricultural performance standards and whether enforcement for non-compliance with an ineffective technical standard is appropriate. It is to other state agencies' benefit to work cooperatively with DNR in the development of their technical standards to meet the non-agricultural standards.

**H8 Comment:** (Dept. of Commerce) NR 151.31(1)(b). Delete the reference to "A state agency, federal agency or" and start the sentence with "Any person".

**Response:** We agree and have made this change.

**H9 Comment:** (Dept. of Commerce) NR 151.31(1)(d). Under the process described in this paragraph, it appears that standards can only be assigned to a state agency without recognition to other non-state organizations or entities. However, if this rule applies only to the DNR, any agency could determine that a new or revised technical standard is necessary.

**Response:** The purpose statement of this subchapter was amended to clarify that this subchapter applies to any state agency technical standard used to implement the non-ag performance standards and not non-state agency/organization technical standards. It is correct that a state agency could on its own choose to revise its technical standards without the department requesting them to do so.

**H10 Comment:** (Dept. of Commerce) NR 151.31(1)(d)3. What purpose does codifying such a provision serve?

**Response:** Codifying this provision clarifies how the department will work toward resolution with other state agencies with regard to disagreements on technical standard issues. There had been several comments requesting how the department would work with and enforce other agencies to implement the performance standards. This provision clarifies the department's process.

**H11 Comment:** (Dept. of Commerce) NR 151.31(2). This subsection refers to technical standards "implementing" performance standards. Technical standards can "achieve" performance standards. This should be revised.

**Response:** Correct. The department has made the change.

**H12 Comment:** (Dept. of Commerce) NR 151.31(2)(c). It is assumed that technical standards represent solutions that will achieve all or part of a performance standard. It is unclear why some existing technical standards would be cancelled out by new or revised standards, if the standard, particularly revisions that propose alternate products or materials, would only achieve equal results. It seems logical that this requirement should allow the existing standards to remain.

**Response:** It is correct that a technical standard by itself may be inadequate but in combination with another technical standard may be acceptable. Each technical standard would need to be evaluated on a case-by-case basis to determine if the old technical standard still has value. However, there will be cases where an old technical standard is not appropriate and it should not be utilized.

**H13 Comment:** (Dept. of Commerce) NR 151.31(3). It is unclear what this provision accomplishes. By what authority does the DNR exercise to supersede the jurisdiction and authority of another state agency relative to that agency's programs?

**Response:** Under s. 281.16(2)(b), Stats., the department has the authority to determine what technical standards meet the non-agricultural performance standards including those of another state agency. DNR believes that the legislature gave it this authority since it is the water quality agency of the state. As necessary, the department may request local governments to change their technical standards as appropriate as sites that do not comply with the performance standards would be subject to enforcement by the department.

**H14 Comment:** (Dept. of Commerce) NR 151.31(4). Are existing technical standards actually "approved" or just "accepted" under sub. (3)? If the existing technical standards are "approved", how is the approval documented?

**Response:** The technical standards would be accepted (not approved) under s. NR 151.31(3).

## **I NR 152**

**I1 Comment:** (WTBA) We support the goal of having uniform regulations and believe that the appropriate manner in which to achieve this goal is through state regulation. We contend that the state has preempted the area of erosion control as it relates to transportation projects and request that transportation projects be exempted from these proposed ordinances just as land disturbing construction activity regulated by the Department of Commerce is exempted. Since erosion control and storm water management are currently regulated under NR 216, Trans. 401, and, if adopted, NR 151, exclusion of transportation sites will avoid duplicative regulation and encourage, rather than discourage, uniformity of regulation.

**Response:** The Department of Commerce is exempted because s. 281.33 clearly exempts them. This is not true for transportation facilities. There are many transportation projects that would not be covered by NR 216 or Trans. 401, and it is in the best interest of the community to control erosion from these sites. There may also be independent authority for municipalities to control erosion from transportation projects. The model ordinance will remain silent and it will be up to the local community to exempt transportation facilities if they choose to. There is an exclusion in the models for activities conducted by a state agency where there is a memorandum of understanding with DNR. DOT administered projects fall under this exclusion.

**I2 Comment:** (WLWCA/WALCE, several counties) We object to the promulgation of this code, especially now. After an 18-year delay in DNR action to the statutory mandate, it can wait a little longer. We would support statutory changes to allow developing model ordinances outside of the administrative rule making process, as with the nonmetallic mining and agricultural nonpoint programs. If this is not accomplished, we ask for a 1-year delay in this rule promulgation to allow adequate time for public review and comment.

**Response:** The ordinances have been through two rounds of public comment. We received many detailed comments to these models and we made the changes we can to improve them. Prior to rule writing, the model stormwater management ordinance was developed and then launched by Waukesha County as a test case. The public review process for the county's ordinance provided useful information and resulted in a number of changes to the model ordinance. S. 281.33 requires that DNR develop these model ordinances and take it through the legislative review process. We wish to move forward on this effort now while the rest of the rules are in development for a consistent, complete package.

**I3 Comment:** (WLWCA/WALCE, several counties) We strongly support and recommend the development of a third model ordinance that combines erosion control and storm water management into a single ordinance and permit process. This has proven to reduce bureaucracy and better integrate the two planning processes. Sedimentation is a primary issue for storm water management planning, especially with infiltration practices.

**Response:** While we can appreciate the desire to have a model that combines the two, we believe the majority of the communities will have separate ordinances. We have made changes to the organization of the two models so that they will be easier to combine if a community chooses to do so.

**I4 Comment:** (WLWCA/WALCE, several counties, RPC) Remove the term "zoning" from the models since these are not zoning ordinances.

**Response:** The governing statute used this term and directed DNR to develop "zoning" ordinances to cover erosion control and storm water. We are complying with the statute.

**I5 Comment:** (WLWCA/WALCE, several counties) We believe the purpose of the models should be to establish minimum criteria for local ordinances, not to push for statewide uniformity. One size fits all ordinances do not work for nonpoint pollution control in widely varying landscapes and political climates.

**Response:** Model ordinances can be modified by the local community. We have indicated what we think is best in general terms, but there will be unique circumstances locally that will require changes. A community is more than welcome to adjust the model to suit their needs.

**I6 Comment:** (WLWCA/WALCE, several counties) The two model ordinances contain many inconsistencies and other problems (examples listed under each model).

**Response:** Where inconsistencies have been pointed out we have made the change. We have also attempted to make the two ordinances more parallel in structure and this has identified a number of inconsistencies as well, which we have corrected.

**I7 Comment:** (DATCP) The full impact of these ordinances is not clear. Before March 10, 2003, the ordinance applies to only construction sites of five acres or more. Thereafter the threshold drops to one or more acres. On the farm, this could include preparation of a site (clearing, excavating, filling or grading) for most earthen storage pits. It would also include preparation for a feedlot. These construction activities could be more appropriately regulated through specific ordinances related to manure storage facilities and livestock. Even if these sites separately do not add up to one acre, they can be counted together if they are part of an overall plan for development. The overall plan for development can include such construction as impervious pads for loading of petroleum and chemicals.

**Response:** We intend to keep the construction of agricultural buildings and facilities under NR 216. Erosion and sediment control devices will be needed for these projects during the construction phase. The 1-acre level will bring in many more projects than have been affected in the past. These sites are still responsible for contributing large amounts of sediment during construction and need to be controlled. However, agricultural facilities and practices have been excluded from the model ordinances.

**I8 Comment:** (co. plan dept.) While both model ordinances provide for modification to an approved plan by the permittee, we find no language that expressly allows the permitting agency to initiate changes to the plan. A plan is a future course of action with a presumed outcome. If the permitting agency determines that the outcome of the original plan is proving inadequate, they should have the right to initiate plan modifications. This seems an odd oversight.



**Response:** We agree. We have included language to address this concern.

**I9 Comment:** (LCD) What can be written in NR 152 to convince people that adopting this ordinance would be helpful to them? You need to explain the rationale for BMPs and why they are being implemented.

**Response.** The purpose statement in the models covers the rationale. This would also be appropriate in an educational process that will have to accompany the implementation of these rules. There are incentives built into the grants programs to encourage municipalities to adopt these ordinances. In addition, as Phase II is implemented, there may be a provision for municipalities to become locally qualified programs. This will streamline the permit process for developers. If these incentives don't work, hopefully we will reach them through education.

#### **Appendix A: Construction Site Erosion Control Zoning Ordinance**

**I10 Comment:** (WLWCA/WALCE, several counties) Example of Construction Site Erosion Control Ordinance problems:

a) No table of contents - makes it difficult to review.

**Response:** We have developed a table of contents.

b) Purpose – does not cover other off-site damage or wind erosion.

**Response:** These models were developed as required in s. 281.33 to address water quality concerns. If the local unit of government would like their ordinance to have a broader purpose, and they have the authority to do that, then they can add this to their ordinance.

c) Jurisdiction language is inconsistent with state statutes relating to newly annexed areas.

**Response:** We have updated the language.

d) The jurisdiction statements create new applicability criteria for "land divisions".

**Response:** This language was suggested by legal counsel for the League of Wisconsin Municipalities in 1989 when the ordinance was first developed. We have contacted the legal counsel and have modified the language to address the concerns of this comment.

e) Reference to infiltration practices makes no sense.

**Response:** Agree. This language has been removed.

f) Plan review periods of 45 days and 30 days are too long.

**Response:** We have removed these time periods in the model rather than select a particular number like the 14 business days in NR 216. Plan review takes longer to complete than permit coverage under NR 216, which doesn't require plan review. We believed 45 and 30 days were reasonable times for the administering authority to give itself to complete a proper review. If locally the administering authority didn't need that much time, then they could have changed these numbers. However, in this draft we will leave them blank for the administering authority to decide.

g) Local ordinances don't mandate inspection schedules on themselves (once per month).

**Response:** We have changed this to a note so that it can be informational but not binding.

h) The stop work order allows 10 days for compliance.

**Response:** We have removed the reference to a time period. If locally, the community chooses to include a time period, they can, but we agree that these actions should take effect immediately.

i) No requirement for review by a technical authority.

**Response:** While this is certainly a desired approach to reviewing plans we felt this was a local decision and should not be presented as a requirement in the model ordinance.

j) Special assessments are not legal for a county.

**Response:** This comment made us look at the governing statute and we realized that it had changed since the models were originally drafted. We have cited the correct statute, which as you say is not an option available to the counties. The statute reference limits this to cities, towns and villages. We have added a note to this effect

**I11 Comment:** (co. plan dept.) The amount of time allowed between the notification to a landowner that he is operating without a permit and when a request can be made for a cease and desist order is 10 days. This is too long. We suggest 0 days. The model seems overly generous in this regard in several places. We request all these timed activities be reconsidered. The model storm water ordinance treats this issue very differently—no intervals—raising again the consistency issue again.

**Response:** We have removed the timelines for this activity. We have also reviewed all the timelines and kept only the ones that we believe are still appropriate.

**I12 Comment:** (individual) S.04. Applicability of the construction site performance standards should be expanded to cover minimum requirements for construction sites in s. 281.33, Stats. The requirements for work on sites smaller than 5 (1) acre could be less than the requirements for the larger sites.

**Response:** While we don't believe the model ordinance is required to address those smaller size sites, we have changed the language to allow a local unit of government to include smaller sites where they see fit. We have retained the 5 and 1 acre sizes for consistency of statewide programs. A community must control pollutants from construction sites at least down to these values if they want to be a qualifying community in the future.

**I13 Comment:** (individual) S.04, P. 5 Line 14 -- Move this note to Line 24.

**Response:** Good point. We've made the move.

**I14 Comment:** (DATCP) S.05(1). and S.05(2). Redirect regulation of agricultural land uses and activities to more appropriate regulatory channels. Exclude agriculture from regulation under the model ordinance by defining agricultural land uses in this section to cover all agricultural land uses including construction of buildings or facilities used for agriculture, and encourage alternative mechanisms for regulation of agriculture by developing a note that advises local governments to use more appropriate and specific regulatory authority to control construction runoff related to agriculture land uses.

There are 2 reasons why a model ordinance should not cover agricultural construction. 1) NR 216.41 creates a state permit system requiring that landowners, including farmers, develop construction erosion plans and file a notice of intent to undertake construction. This state system covers the same construction activity as the proposed local ordinance. 2) Local governments can reduce construction runoff by incorporating controls into established permitting processes for agricultural facility construction and operation. For example, about 75% of the counties have a permitting scheme for construction of manure storage facilities. These ordinances can require erosion control as part of the conditions for a facility construction permit, including meeting specifications outlined in the Wisconsin Construction Site Best Management Practice Handbook. These ordinances could be expanded to require that agricultural producers meet planning requirements similar to those set out in S.09(2) EROSION AND SEDIMENT CONTROL PLAN STATEMENT. Other local regulations authorized by ch. 92, Stats., including s. 92.15, can be similarly modified to address construction runoff issues. Under existing livestock ordinances, a permit for the construction of a feedlot is subject to a stop order if erosion becomes severe. Proposed livestock ordinances require, as permit conditions, that feedlot construction projects meet the Wisconsin Construction Site Best Management Practice Handbook.

**Response:** Agricultural buildings and facilities are currently covered by NR 216 as you indicated but are excluded from the model ordinance.

**I15 Comment:** (co. plan dept.) In our oversight of subdivision development, we have encountered numerous occasions when erosion control BMPs have been needlessly disturbed or destroyed by subcontractors, the worst of which has been damage done by utility crews. While developers and builders feel they have control over their electricians, plumbers or landscapers, they frequently shy away from challenging or complaining to crews from, or contracted by, large utilities. It is appropriate that an

ordinance established under NR 151 holds the permit holder responsible for what happens on site, yet many permit holder feel they are not in a position to control their site when it comes to utilities. With increased public scrutiny of erosion control on their site, many builders and developers are looking for some help in safeguarding their BMPs. We would be pleased to see some language in NR 151 and the model ordinance that would help us assist them. The elimination of S.07(1)(d) – "Those involving the laying, repairing, replacing or enlarging of an underground pipe or facility for a distance of 300 feet or more:" does not help.

**Response:** While we have not brought back in the actual situation your comment refers to, we have modified the model ordinance to allow local units of government to control other sources and smaller sites as appropriate. We do not feel that the model must address those size sites since the process identified in s. 281.33 has been superseded by s. 281.16, the development of performance standards. However, we would encourage municipalities to include such situations if they have posed a problem in the past and have added a note to that effect.

**I16 Comment:** (individual) S.08, P 10 Line 25 -- The permit application should include basic information such as the name and contact information for the landowner, contractor or other contact person, and also the proposed start and ending dates for the project.

**Response:** We have made that change.

**I17 Comment:** (WAL) P. 10, (c). If construction materials and debris should not be allowed to enter a separate storm sewer, wouldn't this be even more true of letting it get into a combined sewer? Why exclude this? Is it already covered elsewhere?

**Response.** Certainly construction materials and debris should not enter a combined sewer system either. However, these systems are considered point sources and discharge to a treatment plant while the performance standards address non-point sources that discharge to waters of the state. Requirements for combined sewers are covered by other statutes.

**I18 Comment:** (individual) S.08, P.11 Line 26 -- This requirement should be more consistent with the requirements under ch. NR 216.

**Response:** While the wording won't be exact, we have modified the language to incorporate the concepts in NR 216.

**I19 Comment:** (co. plan dept.) S09 (a)(f)13 -- While minimizing dust to the maximum extent practicable may be desirable in many cases, we have little if any guidance concerning standards or BMPs. While it might be useful to reserve the authority to require this, in practice the lack of guidelines may make for an uncomfortable permit situation.

**Response:** This same language has existed in NR 216 since it was first drafted. Dust control may have greater relevance to other parts of the country that are more arid than Wisconsin. However, the term maximum extent practicable (MEP) is used frequently in NR 151 and is defined to include many factors. As the administering authority, the local unit of government will determine what MEP means at a given site for dust control.

**I20 Comment:** (individual) S.09, P. 15 Line 4. The ordinance should specify the maximum acreage that can still use this approach.

**Response:** We have changed the language in another part of the code to allow local control of smaller sites and have referenced that section in this section.

**I21 Comment:** (individual) S.09, P 15 Line 12. The review should be completed within 15 days instead of 45 days to make it consistent with NR 216.

**Response:** NR 216 does not require review and is therefore too short a time to expect a local unit of government to complete a proper review of a plan. While we believe 45 days is a reasonable time we have chosen to leave it up to the administering authority to select this time period.

**I22 Comment:** (individual) S.09, P. 15 Line 25. This ordinance does not contain any provisions for requiring or allowing plan amendments. Such provisions should be added.

**Response:** We agree and have included language to this effect that parallels language in NR 216.

**I23 Comment:** (individual) S.11, line 19, p. 16. Ten days is far too long to wait for this action.

**I24 Comment:** (individual) S.11, P. 16 Line 31 -- 14 days is too long to wait for this action.

**Response:** We have eliminated the reference to any specific number of days.

#### **Appendix B: Model Storm Water Management Zoning Ordinance**

**I25 Comment:** (co. plan dept.) The term "land disturbing construction activities" appears 10 times in the model storm water ordinance, yet it has no definition. It is defined in the model erosion control ordinance. Terms containing the word "agriculture" need to be carefully evaluated, both within and among programs. Our county has a strong agriculture base. If we are less than extremely careful with what we mean when we use the term agriculture, we can expect little support for a local ordinance.

**Response:** We included a definition for land disturbing construction activities. We excluded agricultural facilities and practices.

**I26 Comment:** (WLWCA/WALCE, several counties) Example of Stormwater Management Ordinance problems (in addition to I28a,c,d that also apply here):

- 10% impervious exemption is too broad - may pose other stormwater problems.

**Response:** We believe this creates a reasonable threshold for meeting fairly rigorous performance standards for post-construction development.

- Exemption of "minor highway reconstruction" -- can't regulate state/federal highways through local ordinances.

**Response:** The ordinance cannot supersede a law that prohibits local regulation of state and federal construction. However, other road construction may be appropriate to include. The language is silent on transportation construction so it can be specifically included or exempted as the administering authority sees fit.

- Transportation facilities language - looks like you are writing technical standards in an ordinance. Also makes no sense for local roads and does not apply to state and federal highways in local codes.

**Response:** We have offered the reference to swale treatment as an option for the local municipalities and the ordinance is silent on any specifics related to transportation facilities. This should be included as appropriate, at the local level.

- Application review in \_\_ "business days" (not consistent with erosion control)

**Response:** We agree they should be consistent and have made the change.

**I27 Comment:** (WAL) P. 22 We appreciate the push for comprehensive, area-wide storm water planning.

**Response.** Agreed

**I28 Comment:** (individual) S.04. To be consistent with the applicability requirements under s. 281.33. Stats., either delay implementation of the model until year 2003 or add additional applicability criteria to be in force between now and 2003 to pick up sites less than 5 acres as required by s. 281.33, Stats.

**Response:** We do not believe that we need to be consistent with s. 281.33. These requirements have been superseded by s. 281.16.

**I29 Comment:** (individual) S.05, P. 24 Line 23 -- Add a definition for "Land Disturbing Construction Activity."

**Response:** We have included the definition.