ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCE BOARD
AMENDING AND CREATING RULES

The Wisconsin Natural Resource Board adopts an order to **amend** s. NR 149.02(1)(Note) and **create** ch. NR 528 relating to the management of accumulated sediment from storm water management structures

WA-22-08

Analysis prepared by the Department of Natural Resources

1. Statutes Interpreted

ss. 289.43, 289.91 and 299.11, Stats.

2. Statutory Authority

ss. 227.11, 289.05, 289.06, 289.07 and 299.11, Stats.

3 Explanation of Agency Authority to Promulgate the Proposed Rule Under the Statutory Authority

Section 227.11, Stats., confers general agency rule-making authority. In ss. 289.05, 289.06 and 289.07, Stats., the department has the duty and authority to promulgate rules implementing ch. 289, Stats. In s. 299.11(1)(d)9., Stats., the Department has the authority to promulgate rules implementing ch. 299, Stats.

4. Related Statute or Rule

None

5. Plain Language Analysis

In response to an increasing volume of sediment to be removed from storm water ponds, coupled with the department's reduced staffing, the department developed an innovative and proactive approach to managing the sediment. Working with a technical advisory committee, made up of those affected by the rule, the department created a framework for self-regulation that minimizes the department's involvement. Under current rules, the person responsible for removing sediment from a sedimentation pond must pay a fee, apply to the department and obtain a written exemption prior to using the sediment for any purpose other than disposing of it in a landfill. The proposed rule sets up self-implementing procedures which allow the person responsible for the sediment to complete a worksheet to determine whether sampling is required and if so, has an environmental professional direct the sampling and analysis, evaluate the results, determine an appropriate use based on the information and sign a certification form documenting the steps taken and end use chosen. In situations where the sediment is removed from a pond draining a low-risk land use, sampling is not required and the person responsible for the sediment completes a shorter version of the certification form and documents how they will use the sediment. In most cases the department's involvement would be minimal and a fee not required.

6. Summary of and Preliminary Comparison to Existing or Proposed Federal Regulations Intended to Address the Activity to be regulated by the Proposed Rule Revisions

There are no federal regulations pertaining explicitly to the management of sediment accumulated in storm water and sediment control structures. The sediment is generated as a consequence of compliance with the Clean Water Act.

7. Comparison of Similar Rules in Adjacent States (Minnesota, Iowa, Illinois and Michigan)

Adjacent states have not developed specific rules to address the material that accumulates in storm water management structures. However, they do have rules to address other dredge materials and they use those rules to answer questions about where to go with accumulated sediment in storm water ponds.

Iowa has a permit by rule approach to land application of any material. This is currently a catchall for all material disposal and they are considering going to designating beneficial uses. Under the permit by rule approach, if the material meets a set of criteria they do not need a permit for disposal. The criteria include testing for petroleum content and following setback parameters similar to the federal 503 regulations which establish standards for the use and disposal of sewage sludge. This approach is similar to Wisconsin's intent to have a rule that provides enough information for the user to self certify that they have used or disposed of the material properly. Iowa has found that the permit by rule approach results in very few contacts or questions from the public.

Minnesota also has a general management approach for dredged material that the accumulated sediment from storm water ponds would fall into. The state recognizes that it would be beneficial to customize the rules to address accumulated sediment from storm water. Similar to the proposed DNR code, dredged material can be handled differently depending on the amount of sand in the material, how much material is being handled, what testing suggests about the contaminant levels and the potential disposal sites. For example, in Minnesota, no permit is needed for disposal of less than 3,000 cubic yards with 93% or more sands. The DNR rule proposes a de minimus of 100 cubic yards for material with 85% or more sands. For all other sediment Minnesota requires an extensive sediment characterization of the pollutant levels in the material and this information determines the management options and whether the disposal qualifies for a general or individual permit. The general permit sets thresholds and criteria that if met, allows a streamlined permit process. The proposed DNR code would not require a permit at all and the sediment manager would only contact the department if they were concerned about the results of the sediment characterization and had questions about what end use option to select. Minnesota also encourages consideration of use or reuse options rather than disposal in a landfill.

Michigan considers the material in storm water ponds and catch basin sumps to be process water once it comes time to clean it out. When the liquid portion is separated from the solid material it is covered under a set of rules that governs liquid industrial waste. In some cases it can be discharged to the sanitary sewer system, if approved by the local sewer authority, but other options are available. The solids are handled as a solid waste under a separate set of rules. Testing of certain parameters is required

before disposing of the material although the most likely disposal is to a landfill. The transporter of the material has to meet applicable transporter requirements.

Illinois has limited guidance on what to do with sediment that accumulates in storm water ponds. If the contents are strictly storm water and there is no septic or sewage mixed in, then it can be disposed of anywhere in an upland location, but not in the floodway. No sampling or any other testing or evaluation is required. Storm water pond sediment is not considered a solid waste unless the agency is aware of, or notified that, a spill of some contaminant occurred in the drainage basin. Anyone removing sediment from a storm water pond will be cautioned that they must check with the Army Corps of Engineers if they are close to a waterway to see if a permit is required.

8. Summary of the Factual Data and Analysis Methodologies That the Agency Used in Support of the Proposed Rules and How Any Related Findings Support the Regulatory Approach Chosen for the Proposed Rules

There is an increasing number storm water and sediment control structures coming on-line as a result of more comprehensive storm water control requirements imposed by the USEPA's revisions to the Clean Water Act (CWA). The department, in accord with its responsibilities as a delegated program, then promulgated revisions to ch. NR 216, effective August 1, 2004. To address the increase in both the number of structures and the volume of accumulated sediment, the department has developed a streamlined approach to sediment management featuring self-regulation. The department has identified stakeholders who will be affected by the proposed rule and formed a Technical Advisory Committee (TAC) comprised of representatives of these organizations and interests. The department has met with this TAC five times in 2007 and 2008 to obtain their input and advice in writing rule language for this streamlined approach to sediment management.

9. Any analysis and Supporting Documentation that the Agency Used in Support of the Determination of the Proposed Rule's Effect on Small Business.

The proposed rule for sediment management, ch. NR 528, is expected to reduce costs to small businesses. Currently, compliance with the department's existing rules, ch. NR 216, Wis. Adm. Code, is resulting in an increase in the number of storm water practices for small business. Routine maintenance of these sediment control structures generates accumulated sediment. Under existing solid waste rules, the NR 500 series, a person responsible for cleaning out a sedimentation pond may either transport the sediment to a licensed landfill or apply to the solid waste program for an exemption. By eliminating the need to apply for an exemption and removing the need for the department to approve the end use chosen by small business, the costs to small business will be reduced.

The proposed rule is also expected to reduce costs to small business by simplifying and clarifying the process and thereby providing known expectations for small business. Further, because the department's role is greatly reduced, costs owing to any delays that result from the current departmental review process for sediment management proposals are eliminated. Because of the proposed self regulation process, project timing would be completely under the control of the small business.

Likewise, because submittal of reports to the department is eliminated, costs normally associated with submitting these reports are eliminated. Instead, the self-certification

process provides a logical flow through the sediment evaluation and management process and all data and records are maintained by the small business. Further, costs associated with sediment sampling and lab analysis are reduced under the proposed rule because the number of parameters is greatly reduced in most cases. Even when more analysis is warranted because indications of contamination are detected, it is likely that the simplified requirements in the proposed rule will still reduce sediment evaluation costs. Current department rules do not specify how the sediment must be characterized so staff can be inconsistent in what they require and in an effort to be prudent, often choose an extensive list of compounds for which to analyze. The proposed rule includes a specific list that is considerably shorter and thus reduces sampling costs. For additional detail and analysis please see the "Small Business Analysis".

10. Anticipated Cost Incurred by the Private Sector

The impact to the private sector should be neutral to positive. The private sector affected by this rule would include home owner's associations, industrial, commercial and institutional property owners that own a storm water management structure. The owner would become the sediment manager when maintenance is required on the structure and sediment removed. Currently they need to take that material to a landfill or apply for an exemption with the department. The exemption process requires sampling and evaluation of the potential risk of the material and is handled on a case-by-case basis by regional staff. This rule will clarify the sampling and evaluation that is appropriate to do and will not require submittal to the department, saving time and money. The sediment manager can self-certify that they have followed the rule and guidance and used the accumulated sediment in a safe and environmentally friendly manner. This will result in either no change or more likely a net savings in time and money for the private sector.

11. Effect on Small Business

The rule revisions will have a neutral to net positive effect on small businesses since they would otherwise have to comply with existing requirements. Under existing rules a sediment manager, when cleaning out a storm water management structure, must either take the sediment to a licensed landfill or apply with the department for an exemption. This proposed rule would eliminate the requirement to apply for an exemption when the sediment manager determines that the sediment is clean enough to take to an end use site. Further, the proposed rule provides other end use options that will usually be less expensive than transporting the sediment to a licensed landfill and paying the landfill tipping fees.

12. Agency Contact Person

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SECTION 1. NR 149.02(Note) is amended to read:

Note: Administrative codes and programs requiring analyses to be performed by a certified or registered laboratory are chs. NR 110 – Sewerage Systems, 113 – Servicing Septic Systems, 123 – Well Compensation Program, 131 – Metallic Mineral Prospecting, 132 – Metallic Mineral Mining, 140 – Groundwater Quality, 145 – Private Wells, 150 – Environmental Analysis and Review Procedures, 157 – Management of PCBs, 158 – Hazardous Substance Discharge Notification, 182 – Metallic Mining Waste, 206 – Land Disposal of Municipal and Domestic Wastewaters, 210 – Sewage Treatment Works, 211 – General Pretreatment Requirements, 212 – Wasteload Allocated Effluent Limits, 214 – Land Treatment of Industrial Liquid Wastes, 216 – Storm water Management, 219 – Analytical Test Methods and Procedures, 347 – Sediment Sampling and Analysis, 507 – Environmental Monitoring for Landfills, 528 – Management of Accumulated Sediment from Storm Water Management Structures, 661 – Hazardous Waste Identification and Listing, 662 – Hazardous Waste Generator Standards, 664 – Hazardous Waste Treatment, Storage and Disposal Facility Standards, 665 – Interim License Hazardous Waste Treatment, Storage and Disposal Facility Standards, 700 – General Requirements for Investigation and Remediation of Environmental Contamination, 712 – Environmental Response Actions, 716 –Site Investigations,809 – Safe Drinking Water, 811 – Design of Community Water Supplies, 845 – County Administration of NR 812 (Private Wells), and HFS 46 – Group Day Care Centers for Children.

SECTION 2. NR 528 is created to read:

Chapter NR 528
MANAGEMENT OF ACCUMULATED SEDIMENT FROM STORM WATER MANAGEMENT STRUCTURES

NR 528.01 Purpose. The purpose of this chapter is to provide a streamlined process for the management of accumulated sediment removed from storm water management structures in a manner that protects public health, safety and the environment and reduces the need to dispose of accumulated sediment in landfills. This chapter is adopted under authority of s. 227.11, Stats., and ch. 289, Stats.

NR 528.02 Applicability. **(1)** Except as otherwise provided, this chapter governs the management of accumulated sediment from storm water management structures.

(2) This chapter applies to a sediment manager who is required or authorized to undertake the removal and subsequent management of the accumulated sediment derived from the operation and maintenance of storm water management structures.

(3) This chapter does not apply to any of the following materials:

(a) Sediment removed from underground structures such as catch basin sumps or other proprietary flow-through storm water sedimentation devices.

(b) Sediment removed from waste water treatment devices regulated under COMM 82.34.

(c) Material collected through street sweepings.

(d) Sediment managed subject to the permit requirements of s. 30.20, Stats., for removal of material from beds of navigable waters or s. 30.30 or 30.31, Stats., for harbor improvements.

(e) Hazardous waste regulated under chs. NR 660 to 679.

Note: The sediment manager or environmental professional may use knowledge or testing in accordance with NR 662.011 to determine if the accumulated sediment is subject to chs. 660 to 679. In general, accumulated sediment is not subject to regulation under chs. 660 to 679.

(f) Solid waste regulated under chs. NR 518 and 538.

(g) Sediment removed from temporary sediment control practices during the construction phase of a project.

(h) Contaminated soils regulated under chs. NR 700 to 722.

Note: Use of this code does not release the sediment manager from the requirement to obtain other permits as appropriate. Permits may include ch. NR 216, for land disturbance of one or more acres, ch. 30, Stats., for waterway and wetland activities such as dredging of ponds or culvert cleaning, and ch. 283, Stats., for general wastewater discharges such as Pit/Trench Dewatering and Carriage and Interstitial Water from Dredging Operations.

NR 528.03 Definitions. The following definitions as well as the definitions in ch. 289, Stats., and s. NR 500.03 are applicable to the terms used in this chapter.

(1) "Accumulated sediment" means settleable solid material contained in storm water runoff that is collected, retained and subsequently removed from storm water management structures.

(2) "Commercial" means those buildings for which the primary function involves the sale of goods or services.

(3) "Confined geotechnical fill" has the meaning specified in s. NR 538.03(2).

Note: Section NR 538.03(2) defines confined geotechnical fill to mean "a fill that is covered by an impervious surface such as concrete or asphalt."

(4) "Dedicated sediment management sites**"** means sites designed and operated for multiple applications of accumulated sediment from one or more storm water management structures where the accumulated sediment is landspread or treated.

(5) "Drainage area" means the land area from which the storm water management structure receives runoff.

(6) "End use" or "end use of accumulated sediment" means use in agriculture, landscaping, site stabilization, construction, transportation projects, fill, backfill, reclamation of disturbed sites including mine reclamation, the placement of accumulated sediment and similar uses.

(7) "Environmental professional" means a professional engineer registered pursuant to s. 443.04, Stats. or a professional soil scientist, geologist or hydrologist licensed under ch. 470, Stats.

(8) "Forebay" means a pond-like structure that receives storm water prior to its entrance into the main portion of the pond with the purpose of removing coarse-grained sediment.

(9) "General fill" means a location where accumulated sediment is used as fill in a natural topographic depression, an excavation such as an existing borrow area or an intentional excavation or to build up or shape the local landscape.

(10) "Industrial" means those buildings used for the manufacture, storage or distribution

of goods.

(11) "Institutional" means any public or private schools or colleges, churches, hospitals, or other government facilities not covered under commercial.

(12) "Landspreading of accumulated sediment" means the application of accumulated sediment in thin layers to the surface of the land or incorporation into subsurface soils.

(13) "Licensed landfill" means a solid waste disposal facility with a license obtained pursuant to ch. 289, Stats.

(14) "Multi-family residential" means housing for three or more attached dwelling units in a single building.

(15) "Sediment manager" means any person with responsibility for the management of the accumulated sediment and may include those holding fee title, an easement or other interest in a property, or their agent including contractors or subcontractors and others required or authorized to undertake removal and subsequent management of accumulated sediment, including data gathering, reporting and recordkeeping.

(16) "Storm water management structure" means a device that detains, retains and treats storm water runoff resulting in the accumulation of sediment, and pollutants carried in the runoff. Such structures are characterized by having an outlet that discharges to waters of the state but only in response to storm events and includes wet and dry detention ponds and infiltration basins but not landscape ponds on private property with no designed inlet or outlet.

(17) "Waters of the state" means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, water courses, drainage systems and other surface water or groundwater, natural or artificial, public or private within the state or under its jurisdiction, except those waters which are entirely confined and retained completely upon the property of a person.

NR 528.04 Locational criteria, performance standards, erosion control measures and ceiling levels. The sediment manager shall ensure that the management option selected for the accumulated sediment is implemented in accordance with all of the following applicable criteria:

(1) LOCATIONAL CRITERIA. (a) Except as provided in par. (b), a site where accumulated sediment is used or deposited shall meet the locational criteria in Table 1.

(b) The locational criteria in Table 1 do not apply to sediment from a drainage area that meets all the criteria in s. NR 528.06 (2) or to sediment used in an end use in accordance with s. NR 528.07 (3) or to sediment managed under s. NR 528.07 (7).

Table 1
Locational Criteria for Management of Accumulated Sediment

	Bedrock or Ground-water Table	Public Water Supply Well	Private Water Supply Well	Lake, Wetland, Pond, or Any Navigable Waterway or Sinkhole	Residence	School, Health – care Facility
Separation Distance in Feet	3	1,200	250	200	250	1,000[1] surface spread 500 incorporated

[1] The 1,000 foot separation applies when the pathogen or indicator organism level exceeds the criteria specified in s. NR 204.07(6) and application to the surface of the land is the desired management option; if incorporated into the soil, then 500 feet is appropriate. However, if the pathogen or indicator organism level is below the criteria, the setback distance for a residence may be used.

(2) PERFORMANCE STANDARDS. (a) No person may use or dispose of accumulated sediment at a site if there is a reasonable probability that the sediment end use will cause any of the following:

1. A significant adverse impact on wetlands as defined in ch. NR 103.
2. A take of an endangered or threatened species prohibited by s. 29.604, Stats.
3. A detrimental effect on any surface water.
4. A detrimental effect on groundwater quality that will cause or exacerbate an exceedance of any preventive action limit or enforcement standard at a point of standards application as defined in ch. NR 140. The point of standards application is defined by s. NR 140.22 (1).

(b) The accumulated sediment end use shall comply with all applicable department approvals, federal, state and local requirements and be conducted in accordance with this subsection.

Note: Compliance with this section does not release the sediment manager from the requirement to obtain other permits as appropriate. Permits may include ch. NR 216, for land disturbance of one or more acres, ch. 30, Stats., for waterway and wetland activities such as dredging of ponds or culvert cleaning, and ch. 283, Stats., for general wastewater discharges such as Pit/Trench Dewatering and Carriage and Interstitial Water from Dredging Operations.

(3) EROSION CONTROL MEASURES. The sediment manager shall ensure that measures are taken to control run-on and runoff, minimize the area disturbed by the project, minimize loss of fugitive dust and retain sediment on the site during and after the placement of the accumulated sediment. Runoff control measures shall be effectively inspected and maintained. Any area where topsoil is exposed shall be seeded and mulched or otherwise stabilized within 48 hours of placement. Where applicable, the requirements in ch. NR 216 shall be followed.

(4) CEILING LEVELS. If the sample results obtained in accordance with s. NR 528.06 (3) (b) exceed any of the ceiling levels listed in Table 2, the sediment manager shall ensure that the accumulated sediment is disposed of in a licensed landfill.

Table 2
Ceiling Levels Governing Management of Accumulated Sediment

Parameter	Ceiling Level ppm or mg/kg on a dry weight basis unless otherwise specified
Total Arsenic	8
Total Cadmium	10
Total Chromium	100
Total Lead	250
pH	Less than 5 or greater than 10 standard units
Electrical conductivity	8 deciSiemens/meter (dS/m)[1] at 25°C

[1] deciSiemens/meter (dS/m) and mmhos per centimeter are equivalent; dS/m is the modern nomenclature.

NR 528.05 Management decisions. (1) The sediment manager shall determine from the options listed in s. NR 528.07 an appropriate end use for the accumulated sediment based on consideration of all of the following factors:

(a) Evaluation of sediment sample data in s. NR 528.06 (4).

(b) Completion and evaluation of the appropriate portions of the certification form supplied by the department.

(c) Factors specific to the site where sediment is generated as identified in s. NR 528.06 (3) (b) 5.

(d) Factors specific to the site proposed for end use of the accumulated sediment.

(e) Any other factors relevant to the minimization of risk to public health, safety or the environment.

(2) No sediment may be used in a manner which is likely to cause any significant risk to public health, safety or the environment.

NR 528.06 Sediment evaluation, certification requirements and end use determination. Except in cases where the accumulated sediment will be disposed of in a licensed landfill, the sediment manager shall evaluate the characteristics of the drainage area from which the accumulated sediment is removed, sample the accumulated sediment, where applicable, evaluate the sample results, choose an end use and create and maintain a record by completing the required certification form as set out in this section.

(1) CERTIFICATION FORM. The sediment manager shall ensure that the applicable portions of the certification form supplied by the department are accurately and completely filled out and certified.

(2) DRAINAGE AREA EVALUATION. The sediment manager shall certify in accordance with sub. (1) whether or not the drainage area meets all of the following criteria:

(a) Has less than 15 % commercial, multi-family residential, institutional and industrial land uses combined, excluding green space such as parks, cemeteries, golf courses and lawns.

(b) Has no areas of suspected contamination that may adversely affect sediment management.

(c) Has no other existing conditions or known historical events that may adversely affect sediment management.

(d) Has no reported hazardous substance spills regulated under s. 292.11, Stats., since construction or since accumulated sediment was last removed.

(3) SAMPLING. If the drainage area does not meet the criteria in sub. (2), the sediment manager shall ensure that the sediment is properly sampled and analyzed, each time, prior to its removal from the storm water management structure. Routine sediment sampling and handling shall be performed in accordance with par. (a). Sediment sample analysis shall be performed in accordance with par. (b). All sediment sampling, handling and analysis shall be performed under the supervision of an environmental professional in accordance with par. (c). The sediment manager may elect to use previous sampling results in lieu of new sediment sampling and analysis if the drainage area has not changed significantly since the sediment was last tested.

(a) *Sample collection*. Representative accumulated sediment samples shall be obtained by meeting all of the following criteria:

1. Samples shall be obtained using proper handling, storage and delivery procedures required by the laboratory where the samples will be analyzed.
2. Samples shall be obtained that are representative of the entire volume of sediment to be removed and managed using all of the following:
a. One sample shall be obtained in each surface acre or portion of a surface acre in storm water management structures that are 4 acres or less. This sample may consist of multiple samples composited together to obtain a representative sample.
b. At least one sample per quadrant shall be obtained when the storm water management structure is greater than 4 acres.
c. A greater number of samples shall be obtained when necessary to represent the variability in the sediment due to factors such as sediment transport within the structure, changes in land use in the drainage area and the duration of time during which the sediment has been accumulating.
d. Samples shall be taken to the depth of the anticipated sediment removal.
3. Samples shall be obtained to provide a volume of sediment adequate to meet the analytical requirements based on the parameters to be analyzed for and the methods of analysis to be performed by the laboratory where the samples will be analyzed.

Note: Additional information on how to perform sediment sampling can be found in existing USEPA Guidance for its Biosolids Rule, CFR Part 503. Please see Methods and Manner of Sampling. http://www.epa.gov/owm/mtb/biosolids/503pe/503pe_6.pdf

(b) *Sample analysis*. Samples collected in par. (a) shall be analyzed for all of the constituents in this paragraph. Constituents listed in subd. 3. and 5. shall be analyzed at a laboratory certified or registered in accordance with ch. NR 149:
1. Percent solids, percent organic matter, electrical conductivity as a saturated paste and pH to provide information on physical characteristics.
2. Total Kjeldahl nitrogen, total nitrate nitrogen, total phosphorus and total potassium to provide information on nutrient content. Nutrient content shall be expressed as mg/kg on a dry weight basis.
3. Total arsenic, cadmium, copper, chromium, lead, nickel and zinc to ensure these are not present at elevated levels and as indicator parameters showing the potential presence of other heavy metals and possible need for additional sampling. Results shall be calculated on a dry weight basis.
4. Pathogen or indicator organism, as referenced in ss. NR 204.06(2)(b)4. or 204.07(6),showing the potential presence of other pathogens and possible need for additional pathogen sampling and analysis.

Note: Effective with the incorporation of this rule, the current pathogen indicator organism is fecal coliform. The maximum allowable density is 1,000 expressed as MPN/gTS (most probable number per gram of total solids on a dry weight basis).

5. Additional parameters beyond those required under subds. 1. to 4. if deemed necessary by the sediment manager based on all of the following factors:

a. The present and past land uses in the drainage area served by the storm water management structure such as commercial, multi-family residential, institutional and industrial.

b. Any other known or suspected sources of contamination.

c. Existing conditions or known historical events that may affect the likelihood of safe sediment management.

d. Reported hazardous substance spills under s. 292.11, Stats., in the drainage area since construction or since accumulated sediment was last removed.

e. Sample data indicating significantly elevated levels of contaminants above background concentrations for indicator parameters in subds. 3. and 4. that may affect management in s. NR 528.05.

f. Any other applicable administrative code requirements.

Note: Additional parameters may include priority pollutants or TCLP constituents.

(c) *Oversight.* Sample collection and evaluation pursuant to this subsection shall be performed by or under the supervision of an environmental professional.

(4) SEDIMENT SAMPLE DATA EVALUATION. The sediment manager shall ensure that the sediment sample data collected in accordance with sub. (3) (b) 1. to 4. are evaluated by an environmental professional in accordance with sub. (3) (c) and compared with the ceiling levels in s. NR 528.04 (4) Table 2 and, based on the results of the evaluation, that all of the following applicable steps are taken:

(a) If any of the ceiling levels in s. NR 528.04(4) Table 2 are exceeded, the accumulated sediment shall be disposed of in a licensed landfill.

(b) If the indicator parameter levels do not exceed the ceiling levels in s. NR 528.04(4) Table 2, but show elevated levels of contaminants, follow-up sampling shall be performed in accordance with sub. (3) (b) 5., results evaluated, an appropriate end use determined in accordance with sub. (5) and the certification form supplied by the department completed.

Note: Copies of the certification form may be obtained from the department of natural resources, bureau of waste and materials management, 101 South Webster Street, Natural Resources Building, P.O. Box 7921, Madison, Wisconsin 53707-7921, (608) 266-2111, DNRwastematerials@Wisconsin.gov.

(c) If the indicator parameter levels do not indicate elevated levels of contaminants, the sediment manager shall ensure that an appropriate end use is determined in accordance with sub. (5) and the certification form supplied by the department is completed.

Note: Technical support resources provided by the department may be referred to for assistance in evaluating the data when addressing elevated levels of contaminants.

(5) END USE DETERMINATION. The sediment manager shall ensure that the appropriate end use of accumulated sediment is determined using all of the following applicable steps:

(a) The sediment manager shall complete the appropriate sections of the certification form provided by the department and certify whether or not the drainage area from which the sediment is removed meets the criteria in sub. (2).

(b) If all the criteria in sub. (2) are met, the sediment is not required to be sampled and the locational criteria in s. NR 528.04 (1) are not required to be met.

(c) If the criterion in sub. (2) (a) is not met, but the criteria in sub. (2) (b) to (d) are met, the sediment shall be sampled pursuant to sub. (3) and the appropriate sections of the certification form provided by the department shall be completed. If the sample data indicates elevated levels of contaminants, additional parameters shall be sampled for in accordance with sub. (3) (b) 5. and the appropriate sections of the certification form provided by the department shall be completed.

(d) If the criteria in sub. (2) (b), (c) or (d) are not met, sources of contamination in the drainage area shall be further evaluated, additional sampling shall be considered in accordance with sub. (3) (b) 5. and the appropriate sections of the certification form provided by the department shall be completed.

NR 528.07 End uses of accumulated sediment. The sediment manager shall ensure that an end use is chosen for the accumulated sediment in accordance with this section.

(1) LICENSED LANDFILL DISPOSAL. (a) If the sediment manager determines that the accumulated sediment will be disposed of in a licensed landfill, the sediment does not need to be evaluated or sampled under s. NR 528.06.

Note: The landfill operator should be contacted to determine whether the landfill requires the sediment be sampled before it is accepted at the landfill. The sediment may be appropriate for use as daily or final cover in accordance with the landfill's approved plan of operation.

(b) If any of the ceiling levels in s. NR 528.04 (4) Table 2 are exceeded, the accumulated sediment shall be disposed of in a licensed landfill.

(2) GENERAL FILL. (a) The accumulated sediment may be used as general fill in a designed excavation or to improve a site by restoring original contours, filling depressions, improving or stabilizing borrow areas or other disturbed sites.

Note: Examples of uses may include reclamation of abandoned mines, fill in a topographic depression, or other uses that build up or shape the local landscape, mitigate safety or erosion hazards or otherwise improve disturbed sites.

(b) All of the following steps shall be taken to stabilize the site:

1. Complete placement and preparation of the sediment and any needed topsoil, substitute soil or cover material within 6 months or less of initiating placement in the project year.

2. Stabilize the cover, topsoil, substitute soil or sediment to prevent erosion due to wind and water, perform all revegetation, mulching or other equivalent stabilization activities prior to the end of the growing season and minimize the exposure of the sediment to the environment by employing one or more of the following measures:

a. Place an impermeable cover.

b. Place a topsoil layer of no less than 6 inches.

c. Use the accumulated sediment in lieu of or in combination with topsoil, provided it is capable of supporting a vegetative cover.

3. Revegetate, mulch or otherwise stabilize the sediment within 48 hours of completing the sediment disposal.

(c) Control erosion during and after the placement of sediment in accordance with s. NR 528.04(3).

(3) CONFINED GEOTECHNICAL FILL. The accumulated sediment may be used as confined geotechnical fill for a variety of uses such as subbase under paved lots and subbase or subgrade for building construction.

Note: Examples of confined geotechnical fill uses may include construction and maintenance of non-department of transportation projects, bridge abutment backfill or other similar uses in which the sediment is covered by an impervious surface such as concrete, asphalt, a building or similar material and thus not exposed to the environment.

(4) LANDSPREADING. The sediment manager shall ensure that the appropriate sections of the certification form provided by the department are completed and the other requirements in s. NR 528.06 are complied with. When landspreading the accumulated sediment, all of the following shall apply:

(a) *Site evaluation*. The site where the accumulated sediment is proposed to be landspread shall be evaluated to ensure that the site is suitable. The site evaluation shall include the soil factors in Table 3 and may include assessment of organic matter content, cation exchange capacity, soil permeability and any other characteristics or factors that would affect the mobility and attenuation of pollutants present in the sediment. The site shall meet the locational criteria in s. NR 528.04 (1) Table 1.

Table 3
Soil Factors for Site Evaluation

Soil Factor[1]	**Acceptability for Landspreading Accumulated Sediment**			
	Unacceptable	Poor	Adequate	Preferred
pH standard units	Less than 5.3 or greater than 8.0	5.3 to 5.6 or 7.7 to 7.9	5.7 to 5.9 7.3 to 7.6	6.0 to 7.2
Texture		Silty clay[2], clay[2], sand[3], loamy sand[3]	Sandy loam, silty clay loam, sandy clay	Loam, silt loam, silt, clay loam, sandy clay loam

[1] Obtain from soil survey, not in-field test
[2] Acceptable only when incorporated
[3] Acceptable only with increased site management determined by the sediment manager

(b) *Application rate and depth.* The application rate of accumulated sediment may not exceed 5 dry tons per acre per year and may not exceed 15 dry tons per acre total loading during the life of the landspreading site. The depth of the application may not exceed 18 inches.

1. Neither the 5 dry tons per acre per year application rate limitation or the 15 dry tons per acre landspreading site life limit apply when accumulated sediment is used as a component

of a marketable soil amendment product pursuant to a contract or used to facilitate nonmetallic mine reclamation as part of an approved reclamation plan.

2. The 5 dry tons per acre annual limit and the total loading limit of 15 dry tons per acre landspreading life may be adjusted based on soil sampling results, plant tissue monitoring data, landspreading site records or other data. All data necessary to justify the exceedances and extended use shall be collected and evaluated and all data and records shall be maintained in accordance with s. NR 528.08.

(c) *Nutrient content.* The nitrogen and phosphorous content shall be provided to the receiver of the accumulated sediment if the receiver has a nutrient management plan for the acreage where the accumulated sediment will be landspread.

Note: Farmers required to follow a nutrient management plan need information on nutrient content in order to comply with NRCS Standard 590 available at: http://efotg.nrcs.usda.gov/references/public/WI/590.pdf.

(d) *Uniform application*. The application of accumulated sediment to the land surface shall be uniform when surface applied, as well as during injection or incorporation.

(e) *Application limitations.* Accumulated sediment may not be applied under any of the following situations:

1. On frozen or saturated ground.

2. When precipitation capable of producing runoff is forecast within 24 hours of the time of planned application, during or immediately after a precipitation event.

3. On slopes greater than 6 %.

(f) *Pathogens.* In all cases where a pathogen risk exists due to the presence of pathogens, as indicated by evidence of the pathogen or indicator organism and level per s. NR 528.06(3)(b)4., the following management practices shall be implemented:

1. At a minimum, accumulated sediment shall be incorporated into the surface soil to a depth of at least 6 inches by disking or an equivalent process and may include other measures such as signage, restriction on site access or other appropriate measures.

2. The following waiting periods and access restrictions shall apply beginning on the date when the landspreading activity is completed:

a. When lands are used for the production of forage crops, landspreading shall occur only after harvest has occurred and before any new growth reaches 6 inches.

b. When lands are used for food crops intended for human consumption, a period of at least 14 months shall elapse prior to emergence of the food crop.

c. When lands are used for grazing, at least 30 days shall elapse prior to allowing access to non-dairy animals and at least 60 days shall elapse before allowing access to dairy animals.

d. When lands are subject to public access or used for the harvest of crops grown for fiber or any other forage or crop production, not covered in this subd. 2. a. to c., a period of at least 30 days shall elapse before the site may be accessed or used.

(5) DEDICATED SEDIMENT MANAGEMENT SITE. The end use of landspreading or sediment treatment at a dedicated management site may be chosen if the sites are owned or leased by a municipality or other responsible unit of government. The sediment manager shall assume any additional site management, site monitoring and recordkeeping responsibilities that are necessary to minimize risk to public health, safety and the environment.

(a) When sediment is used at a dedicated site, the sediment manager shall ensure that the appropriate portions of the certification form provided by the department are completed. Based on the information obtained in accordance with s. NR 528.06, the sediment manager may choose to use the accumulated sediment for productive purposes including the growth of herbaceous or woody plants for harvest or for treatment to reduce contaminants in the accumulated sediment in accordance with this subsection.

(b) All of the following restrictions shall apply to dedicated sediment management sites:

1. The locational criteria in s. NR 528.04 (1) shall be met**.**

2. The sediment shall be applied to a depth of 18 inches or less below ground surface.

3. When the dedicated site is used for sediment treatment so as to attenuate or reduce contaminants in the accumulated sediment, only non-food chain crops or woody plants for harvest or phyto-remediation purposes may be grown.

4. In cases where the annual application rate or lifetime loading limit in sub. (4) (b) are not exceeded, the provisions of sub. (4) (b) 2. do not apply. In cases where the 5 dry tons per acre annual application rate limitation or the 15 dry tons per acre site life limit are exceeded, the sediment manager shall ensure that sub. (4) (b) 2. is followed as well as take any additional measures or practices that may be necessary to ensure safe long-term site use. These may include practices such as the collection and evaluation of contaminants in soils, plant tissue, other environmental receptors or monitoring devices. The sediment manager shall track the sediment application rates and cumulative site loading totals for contaminants in soil or other receptors as appropriate. The sediment manager shall ensure that any additional measures are implemented that may be necessary such as enhanced site management practices to control run-on and runoff and erosion control practices. At a minimum, the erosion control requirements of s. NR 528.04 (3) shall be met.

5. Accumulated sediment may be applied on frozen ground and on slopes greater than 6 % or more provided the sediment management is performed in compliance with s. NR 528.04 (3) and adequate and permanent run-on and run-off controls are in place and maintained.

6. Sediment may not be applied when precipitation capable of producing runoff is forecast within 24 hours of the time of planned application, or during or immediately after a precipitation event.

7. In all cases where a pathogen risk exists due to the presence of pathogens, as indicated by evidence of the pathogen or indicator organism and level per s. NR 528.06(3)(b)4., then the waiting periods in sub. (4) (f) apply.

8. In all cases where a pathogen risk exists due to the presence of pathogens, no grazing is allowed and no human food chain crops may be grown where the sediment has been applied.

9. In all cases where a pathogen risk exists, permanent public access controls shall be put in place and access restricted during any year when the sediment application occurs.

(c) The sediment manager shall ensure that an affidavit is filed indicating that the site was used for a dedicated sediment management site in the registrar of deeds office in the county where the site is located.

(d) The sediment manager shall ensure that all appropriate completed certification forms, all sediment sampling results and all monitoring data and site use and sediment loading records are retained in accordance with s. NR 528.08.

(6) SMALL QUANTITY, COARSE GRAINED SEDIMENT MANAGEMENT. The sediment manager may choose to manage certain kinds of coarse grained sediment as provided under this subsection.

(a) If the annual volume of accumulated sediment to be managed is 100 cubic yards or less and comprised primarily of coarse-grained material such as that found in the forebay, the sediment manager shall complete the appropriate sections of the certification form provided by the department and indicate the following criteria are met:

1. The volume of accumulated sediment to be managed is 100 cubic yards or less.

2. No more than 15 % of the material, as a percentage by weight, passes a No. 200 sieve.

(b) If the criteria in par. (a) are met, no chemical testing is required and the sediment shall be managed in accordance with s. NR 528.04 (1) and (2). If either par. (a) 1. or 2. are not met, the accumulated sediment may not be used in accordance with this subsection and shall be managed in accordance with this section and ss. NR 528.04 to 528.06 and 528.08.

(c) The sediment manager shall maintain responsibility for managing the accumulated sediment.

(d) The sediment manager shall retain records in accordance with s. NR 528.08.

(7) END USE UNDER OTHER CONTROL. Accumulated sediment may be used under the control of another program in accordance with this subsection. End use of accumulated sediment pursuant to this subsection is not subject to the other provisions of this chapter provided equivalent protectiveness is afforded, including the provisions of ss. NR 528.04 (2) to (4).

(a) Accumulated sediment may be used in accordance with a department of transportation facility construction and maintenance project contract of specific duration that requires compliance with department of transportation standard specifications for site restoration and stabilization. Sampling in accordance with s. NR 528.06 (3) is not required when there is another requirement such as a contract or permit that requires sampling encompassing the s. NR 528.06 (3) requirements. Sampling pursuant to s. NR 528.06 (3) shall be performed if the contract or permit does not require sampling encompassing these requirements.

Note: The requirements of the WDOT concerning the restoration of disturbed sites are found in sections of the standard specifications including those addressing erosion control, seeding, final clean-up and may be found in: WDOT Standard Specifications, see http://roadwaystandards.dot.wi.gov/standards/stndspec/index.htm

(b) Accumulated sediment may be used in accordance with a ch. NR 135 nonmetallic mine reclamation permit issued pursuant to an applicable nonmetallic mining reclamation ordinance. Sampling in accordance with s. NR 528.06 (3) is not required when there is another document such as a contract or permit that requires sampling encompassing the s. NR 528.06 (3) requirements. Sampling pursuant to s. NR 528.06 (3) shall be performed if the contract or permit does not require sampling encompassing these requirements.

NR 528.08 Record retention. All completed certification forms, all sediment sampling results, other site monitoring results and site management records shall be retained by the sediment manager in accordance with this section.

(1) ON-LINE SYSTEM. The department may develop an on-line system to receive and store the records.

(a) If an on-line voluntary system is established, a sediment manager who chooses to use the on-line system no longer needs to retain the records.

(b) If the department requires the use of the on-line system, the records no longer need to be retained by the sediment manager.

(2) RETENTION TIME. If an on-line system is not established, or if a voluntary on-line system is established and the sediment manager chooses not to use it, the records shall be retained for 20 years. These records shall be provided to the department upon request.

NR 528.09 Department assistance. To assist sediment managers in making the determinations required in this chapter, the department may provide outreach, training, certification forms, written and on-line technical assistance documents or other resources deemed appropriate.

NR 528.10 Sediment management program evaluation and compliance. The department may consult and work with those who implement accumulated sediment uses and are interested in substantiating the effectiveness, safety and environmental protectiveness of the chosen sediment management practice. Sediment managers shall provide data documenting their operation to assist with the evaluation upon request by the department. The department may also request information necessary to determine compliance with this chapter. Sediment managers shall provide site access to department staff upon request.

SECTION 3. EFFECTIVE DATE. The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

SECTION 4. BOARD ADOPTION. The rule was approved and adopted by the State of Wisconsin Natural Resources Board on June 24, 2009.

Dated at Madison, Wisconsin October 6, 2009

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By /S/ Matthew J. Frank
Matthew J. Frank, Secretary

(SEAL)