

## Chapter Trans 401

### CONSTRUCTION SITE EROSION CONTROL AND STORM WATER MANAGEMENT PROCEDURES FOR DEPARTMENT ACTIONS

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**Trans 401.01 Authority.** (1) This chapter is promulgated under the authority of ss. 30.2022, 84.01 (2) and (5), 84.03 (9) (a) and (10), 84.06 (1) and (2) (b), 85.02, 85.075, 85.16 (1), 85.19 (1), 86.07 (2), 86.25 (2), 86.32, 114.31 (7) and 227.11 (2), Stats.

(2) As specified in s. 30.2022 (1m), (1p), and (2), Stats., activities affecting waters of the state that are carried out under the direction and supervision of the department in connection with highway, bridge or other transportation project design, location, construction, reconstruction, maintenance and repair are not subject to the prohibitions or permit or approval requirements specified under ss. 29.601, 30.11, 30.123, 30.19, 30.195, 30.20, 59.692, 61.351, 62.231 or 87.30, Stats., or chs. 281 to 285 or 289 to 299, Stats., except s. 281.48, Stats., if the activity is accomplished in accordance with interdepartmental liaison procedures established by the department of natural resources and the department of transportation for the purpose of minimizing the adverse environmental impact, if any, of the activity.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: am. Register December 2002 No. 564, eff. 1-1-03; corrections made under s. 13.92 (4) (b) 7., Stats., Register March 2012 No. 675; correction in (2) made under s. 13.92 (4) (b) 7., Stats., Register December 2018 No. 756.

**Trans 401.03 Applicability.** (1) This chapter applies to the following actions:

(a) Any action directed and supervised by the department that relates to an airport, railroad, highway, bridge or other transportation facility construction or maintenance project for which plans are developed and that may cause a discharge to waters of the state, including selected sites.

(b) Any action by a person that relates to a utility facility project and that may cause a discharge to waters of the state. This chapter applies only to actions within the area described in a permit issued by the department of transportation. Actions outside the area of a permit issued by the department of transportation are subject to regulation by the department of natural resources.

(c) Construction or reconstruction of a highway designated under s. 86.32, Stats., as a connecting highway, or any improvement, as defined in s. 86.31 (1) (b), Stats., of a connecting highway.

(2) Notwithstanding sub. (1), this chapter does not apply to any of the following:

(a) An action directed and supervised by the department that is considered routine maintenance or that addresses an emergency. Routine maintenance activities shall employ best management practices described in s. Trans 401.06 (1), but no other provisions of this chapter apply to routine maintenance.

(b) An action not directed and supervised by the department

that involves the installation of a driveway by a person for residential use or agricultural use, as defined in s. 91.01 (1), Stats.

(c) An action taken under a bid first advertised before December 1, 2002, or, for projects for which no bid is advertised, taken under a contract signed before January 1, 2003.

(3) Notwithstanding sub. (1), post-construction performance standards under s. Trans 401.106 do not apply to any of the following:

(a) An action for which a final environmental impact statement is approved before January 1, 2003.

(b) An action for which a finding of no significant impact is made under ch. Trans 400 before January 1, 2003.

(c) An action that is documented in an environmental report, as defined in s. Trans 400.04 (10), completed before January 1, 2003, that fit the criteria or conditions for approval as a categorical exclusion in 23 CFR 771.117, April 1, 2000, or has met the review criteria of paragraph 23.a. of chapter 3 of federal aviation administration order 5050.4A issued on October 8, 1985.

(d) A project site that has undergone final stabilization within 2 years after January 1, 2003.

(e) Reconditioning or resurfacing, as defined in s. 84.013 (1) (b) and (d), Stats., of a highway.

(f) Minor reconstruction of a highway. In this paragraph, "minor reconstruction" means reconstruction, as defined in s. 84.013 (1) (c), Stats., of any length of highway that does not widen the roadbed by more than 100 feet, and for which the total length of relocated highway and any added through travel lane does not exceed 1.50 miles. Two or more adjoining added through travel lanes shall be counted as one added through travel lane for purposes of determining the length of the added through travel lanes. A relocation of a highway that includes added through travel lanes shall be counted as one unit for purposes of determining the length of the relocation and added through travel lanes. Pavement widening for purposes of adding a passing lane is not an added through travel lane. Notwithstanding the exemption under this paragraph, if minor reconstruction causes a highway to lie within a buffer area, as defined in s. Trans 401.106 (6) (a), or increases the area of the roadway that lies within a buffer area, the requirements under s. Trans 401.106 (6) apply to that buffer area.

(g) Construction of a transportation facility that replaces an existing transportation facility, or other existing residential, commercial, industrial or institutional land uses, if there is no increase in exposed parking lots or roads.

(h) A transportation facility with less than 10% connected imperviousness based on complete development of the transporta-

tion facility, provided the cumulative area of all parking lots and rooftops is less than one acre.

**Note:** Projects that consist of only the construction of bicycle paths or pedestrian trails generally meet this exception as these facilities have minimal connected imperviousness.

(i) Construction of a transportation facility that has less than one acre of land disturbing construction activity.

**Note:** Actions directed and supervised by the department that are regulated by and comply with this chapter and that are subject to the interdepartmental liaison cooperative agreement with the department of natural resources are considered to be in compliance with s. 283.33, Stats., and the requirements of ch. NR 216.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: am. (1) and (2), cr. (1) (c), (2) (c) and (3) Register December 2002 No. 564, eff. 1-1-03.

#### Trans 401.04 Definitions. In this chapter:

(1) “Best management practices” or “BMPs” means structural or nonstructural measures, practices, techniques or devices employed to avoid or minimize soil, sediment and pollutant movement, or to manage runoff.

**Note:** The Wisconsin Department of Transportation specifications and manuals listed below identify best management practices that apply under this chapter. However, best management practices other than those listed may be applicable to any given situation.

1. Sections 107.18, 107.19, 107.20, 628 and 631 of the Standard Specifications for Road and Bridge Construction of the Wisconsin Department of Transportation. Copies of these sections may be obtained from the Wisconsin Department of Transportation, Office of Construction, P. O. Box 7916, Madison, Wisconsin 53707-7916.

2. Sections P-151, P-152, P-158, P-159, Division VII and Division VIII of the Standard Specifications for Airport Construction of the State of Wisconsin, Department of Transportation. Copies of these sections and divisions may be obtained from the Wisconsin Department of Transportation, Bureau of Aeronautics, P. O. Box 7914, Madison, Wisconsin 53707-7914.

3. Chapters 10 and 13 of the Facilities Development Manual of the Wisconsin Department of Transportation, Division of Transportation Infrastructure Development. Copies of these chapters may be obtained from the Wisconsin Department of Transportation, Division of Transportation Infrastructure Development, P. O. Box 7965, Madison, Wisconsin 53707-7965.

4. Chapters 2 and 10 of the Highways Construction and Materials Manual of the Wisconsin Department of Transportation, Division of Transportation Infrastructure Development. Copies of these chapters may be obtained from the Wisconsin Department of Transportation, Division of Transportation Infrastructure Development, P. O. Box 7965, Madison, Wisconsin 53707-7965.

(2) “Borrow site” means an area outside of a project site from which stone, soil, sand or gravel is excavated for use at the project site, except the term does not include commercial pits.

(3) “Construction” or “maintenance” includes clearing and grubbing, demolition, excavating, pit trench dewatering, filling or grading.

(4) “Contractor” means a prime contractor and any subcontractor of the prime contractor.

(5) “Corrective action” means action that is taken in response to a discharge, or to the threat of a discharge, to minimize or prevent the discharge. “Corrective action” may include preventative maintenance of existing best management practices, or the implementation of new or different best management practices.

(6) “Department” means the Wisconsin department of transportation.

(7) “Design storm” means a hypothetical discrete rainstorm characterized by a specific duration, temporal distribution, rainfall intensity, return frequency and total depth of rainfall.

(7m) “Directed and supervised by the department” means any of the following:

(a) An activity undertaken under a bid let by the department, unless the department let the bid at the request of a city, village, town or county to assist with a transportation facility that is or will be under the jurisdiction of that city, village, town or county, and the bid specifies either that this chapter does not apply or that the activity is subject to regulation by the department of natural resources.

(b) An activity undertaken under a contract to which the department is a party, unless the contract specifies that this chapter

does not apply and the department did not let the bid for that activity.

(c) An activity undertaken using funds awarded by the department under a grant agreement that specifies that the department is administering the project or that this chapter applies.

(d) The construction or maintenance of any highway or portion of a highway located on a federal-aid system, unless no state or federal funds are used, or unless all state and federal funds used are awarded under a grant agreement that does not specify that the department is directing and supervising, or administering, the project.

**Note:** The Department of Transportation sometimes engages in the activities described in this subsection to assist local units of government on local transportation facility construction projects. Providing such assistance, without more, does not mean the Department directs and supervises that local project, and the project does not become subject to this chapter because of that assistance. Activities not directed and supervised by the Department are subject to erosion control and stormwater management regulation by the Department of Natural Resources.

(8) “Discharge” means the movement of pollutants or sediments from a project site or selected site as a result of erosion or runoff.

(9) “Disturbed area” means an area on a project site or selected site where land disturbing activity has occurred.

(10) “Erosion” means the process by which the land’s surface is worn away by the action of wind, water, ice or gravity.

(12) “Erosion control implementation plan” or “ECIP” means the erosion control implementation plan required under s. Trans 401.08.

(13) “Erosion control plan” means the erosion control plan required under s. Trans 401.07.

(13m) “Highway” has the meaning given in s. 340.01 (22), Stats.

(14) “Infiltration system” means a device or practice that is designed specifically to encourage the entry and movement of surface water into or through underlying soil. “Infiltration system” does not include natural entry and movement of surface water into or through underlying soil in pervious areas such as lawns. “Infiltration system” does not include minimal entry and movement of surface water into or through underlying soil from practices such as swales or roadside channels that are designed for conveyance and pollutant removal only.

(15) “Inspector” means an employee or authorized representative of the department assigned to make inspections of work or materials.

(15m) “Land disturbing activity” means any manmade alteration of the land surface resulting in a change in the topography or existing vegetative or non-vegetative soil cover, that may result in increased runoff and lead to an increase in soil erosion and movement of sediment into waters of the state. “Land disturbing activity” includes clearing and grubbing, demolition, excavating, pit trench dewatering, and filling and grading activities, but does not include routine maintenance. “Land disturbing activity” does not include activities, such as tree trimming or brush removal, that involve only the cutting or removing of vegetation above the ground by a utility person.

(16) “Material disposal site” means an area that is outside of a project site, is used for the lawful disposal of surplus materials or materials unsuitable for use within the project site, and is under the direct control of the contractor. “Material disposal site” does not include a private landfill that is not managed by the contractor or a municipally owned landfill.

(17) “Permanent best management practices” means those best management practices that are intended to remain in place after final stabilization.

(18) “Person” means an individual, institution, business, cor-

poration, limited liability company, partnership, association, joint venture, governmental subdivision or agency, or any other legal entity, except the term does not include the department, or its officers or employees acting in their official capacities.

(19) “Pollutant” has the meaning given in s. 283.01 (13), Stats.

(20) “Pre-construction conference” means a conference scheduled between the department, prime contractor and other invited persons prior to the commencement of construction or maintenance activity at a site.

(21) “Prime contractor” means a person authorized or awarded a contract to perform, directly or using subcontractors, all the work of a project directed and supervised by the department.

(22) “Project” means an action covered by this chapter.

(23) “Project diary” means a diary of a project’s activities kept by a project engineer or inspector, including all inspection report forms and any erosion control inspection forms completed under s. Trans 401.10 (4).

(24) “Project engineer” means an employee or authorized representative of the department who is in charge of the engineering details and the field administration of a project.

(25) “Project site” means the area of a project on which land disturbing activity occurs, excluding borrow sites and material disposal sites.

(25m) “Routine maintenance” means an activity that involves less than 5 acres of land disturbance and that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of an existing transportation facility.

(26) “Runoff” means storm water or precipitation, including rain, snow or ice melt, that moves on land surface via sheet or channeled flow.

(27) “Runoff coefficient” means the fraction of total precipitation that will leave a project site or selected site as runoff based on land use, soil and drainage characteristics.

(28) “Section 404 permit” means a permit issued by the U.S. army corps of engineers under 33 USC 1344 of the clean water act, as amended.

(29) “Sediment” means settleable solid material that is transported by runoff, suspended within runoff or deposited by runoff away from its original location.

(30) “Sedimentation” means the act or process of depositing sediment.

(31) “Selected site” means any borrow site or material disposal site used exclusively for projects directed and supervised by the department. A site shall be considered to be used exclusively for department projects even if material excavated from the site are sold directly to consumers as incidental sales.

(33) “Stabilize” or “stabilization” means using best management practices to avoid or minimize soil, sediment and pollutant movement onto or off a site.

(34) “Suspension of work” means the partial or complete suspension of the operations and work of a project, including the operations and work at the project site or at selected sites, if any.

(35) “Temporary best management practices” means those best management practices that are not intended to remain in place after final stabilization.

(35d) “Time of concentration” means the time it takes for flow to reach the drainage basin outlet from the hydraulically most remote point in the drainage basin.

(35g) “Transportation facility” means a highway, a railroad, a public mass transit facility, a public-use airport, a public trail or

any other public work for transportation purposes such as harbor improvements, as defined in s. 85.095 (1) (b), Stats.

(35m) “Utility facility project” means the portion of an activity that cannot proceed without a permit issued by the department, and that relates to a pipe, pipeline, duct, wire line, conduit, pole, tower, or other fixed equipment or structure used for the transmission, conveyance or distribution of communications, electric power, light, heat, fuel, gas, oil, petroleum products, water, steam, fluids, sewerage, drainage, irrigation or similar facilities. A utility facility project is considered minor if all excavated soils will be replaced the same day as the excavation or immediately the next day and for which the cumulative disturbed area is less than one acre. “Utility facility project” does not include maintenance activities for which the department requires no additional permit.

(35r) “Utility person” means the person not employed by the department that has control over a utility facility project.

(36) “Waters of the state” has the meaning given in s. 283.01 (20), Stats.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: am. (1), (3), (5), (8), (9), (15) to (19), (21), (23) to (25), (27), (31), (35) and (36), r. and recr. (7), (14) and (29), cr. (7m), (13m), (15m), (25m), (26), (35d), (35g) and (35m), r. (11) and (32), renum. (26) to be (35r) and am. Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.05 Basic principles of erosion control and storm water management.** A project shall be planned and implemented in accordance with the following basic principles of erosion control and storm water management:

(1) Investigate the intended project site and design the project to avoid or minimize adverse effects that may be caused by erosion or a discharge to waters of the state.

(2) Design or select best management practices for the project to:

(a) Avoid or minimize on-site erosion damage in order to avoid or minimize off-site sediment or pollutant accumulation that may result from a discharge.

(b) Protect the perimeter area of the site and the disturbed areas from erosion and pollutant accumulation that may result from off-site runoff.

(c) Reduce runoff velocities and retain sediments and pollutants on the site to the maximum extent practicable.

(3) Minimize the size of the disturbed area exposed at any one time and the duration of the exposure.

(4) Stabilize the disturbed area as soon as practicable.

(5) Establish a thorough preventative maintenance program that can reasonably be implemented as appropriate within the context of the standard specifications for the type of project being developed or through the use of special contract provisions.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: am. (1), (2) (intro.) and (5), Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.06 Performance standards.** (1) GENERAL. Best management practices shall be employed to avoid or minimize soil, sediment and pollutant movement, or to manage runoff, onto or off a project site or selected site, including the avoidance or minimization of discharges to off-site areas, public sewer inlets and waters of the state.

(2) REMOVAL OF TEMPORARY BEST MANAGEMENT PRACTICES. A prime contractor or utility person, as appropriate, shall remove or cause the removal of all temporary best management practices at a site when permanent best management practices have been installed to the satisfaction of the project engineer or inspector or when the project engineer or inspector determines that temporary best management practices are no longer required



for the purpose intended and orders their removal. The department shall remove or cause to be removed all temporary best management practices at a project site or selected site when permanent best management practices have been installed, if the department has accepted the project as final before the temporary best management practices are removed.

(3) **TRACKING.** Soils tracked by construction or maintenance equipment from a project site or selected site onto a public or private paved roadway or sidewalk shall be minimized to the maximum extent practicable. The contractor or utility person shall clean or remove soils tracked onto a public or private paved roadway or sidewalk in a manner consistent with this chapter within the period specified by the project engineer or, if no period is specified, within 24 hours after the occurrence, to prevent sedimentation of the tracked soils into waters of the state.

(4) **SEDIMENT CLEANUP AND REMOVAL.** The contractor shall clean up or remove sediment discharged as a result of a storm event in a manner consistent with this chapter and in a timely fashion as conditions allow at the direction of the project engineer. The utility person shall clean up or remove sediment discharged because of a storm event in a manner consistent with this chapter and in a timely fashion as conditions allow at the direction of the department's authorized representative. The contractor or utility person shall clean up or remove other off-site sediment discharged by construction or maintenance activity at the end of each work day. Costs incurred under this subsection because of a storm event shall be borne as provided in s. Trans 401.12.

(5) **PUBLIC SEWER INLET PROTECTION.** The contractor or utility person, in accordance with best management practices, shall protect downslope, off-site public sewer inlets reasonably subject to a discharge and downslope, on-site public sewer inlets.

(6) **BUILDING MATERIAL AND OTHER WASTE DISPOSAL.** The contractor or utility person shall properly manage and dispose of building materials and other wastes to prevent pollutants and debris from being carried off site by wind or runoff. No person may permit the discharge of any solid materials, including building materials, in violation of chs. 30 and 31, Stats., or section 404 permit requirements. The contractor or utility person shall dispose of building material and other solid wastes, including surplus materials from a project and materials not suitable for use on a project, in accordance with all applicable federal, state and local laws, regulations, rules and ordinances relating to the disposal of solid wastes.

**Note:** Contact the local fire department for directions on proper disposal of flammable, combustible, toxic materials and other hazardous substances.

(7) **GROUNDWATER LIMITATIONS.** When permanent infiltration systems are used, the department shall conduct appropriate on-site testing to determine if the seasonal high groundwater elevation or top of bedrock is within 5 feet of the bottom of the proposed infiltration system. If permanent infiltration systems are to be used and there is a well serving a community water system within 400 feet or a well serving a non-community or private water system within 100 feet, the groundwater flow must be identified in accordance with the provisions specified in either ch. NR 110 or 214.

(8) **DISCHARGE VELOCITY; SITE DEWATERING.** (a) The contractor or utility person shall place velocity dissipation devices at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive flow from a structure to a water course that maintains and protects the natural physical and biological characteristics and functions of the water course.

(b) 1. In this paragraph, "karst feature" means an area or surficial geologic feature subject to bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include

caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or swallets.

2. No contractor or utility person may knowingly direct site dewatering effluent into surface waters of the state or to a karst feature, unless the sediment in the effluent has been reduced to the maximum extent practicable and the discharge does not create an erosion problem downstream prior to entering a surface water of the state or a karst feature, or unless the department of natural resources has approved the action.

**Note:** This paragraph does not require the removal of sediment from dewatering effluent unless the effluent is going to surface waters or a karst feature. The preferred method of disposing of dewatering effluent without removing sediment is to direct the effluent to a pervious area, where water may infiltrate into the ground, instead of directing it into a surface water. Another method to dispose of effluent without removing sediment is to discharge the effluent to a sanitary sewer system. This method may be viable in urban areas where a sanitary sewer system is available, if the sewer authority allows such a discharge.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: r. (intro.), am. (1) to (4), (6) and (7), r. and recr. (5), renum. (8) to be (8) (a) and am., cr. (8) (b) Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.07 Erosion control plan. (1g) GENERAL RESPONSIBILITY.** (a) The department shall prepare the erosion control plan for a project site of a project directed and supervised by the department.

(b) A utility person shall prepare the erosion control plan for any utility facility project that is not considered a minor utility facility project, unless the department elects to prepare an erosion control plan for the utility facility project. An erosion control plan is not required for a minor utility facility project.

(1j) **GENERAL.** (a) The erosion control plan shall be developed as part of a project's design. Temporary best management practices in the erosion control plan shall be based on at least a 2-year 24-hour design storm or a 2-year design storm with a duration equal to the time of concentration. Permanent best management practices in the erosion control plan shall be based on at least a 10-year 24-hour design storm or a 10-year design storm with a duration equal to the time of concentration.

(b) The erosion control plan shall identify the best management practices to be employed before, during and after the completion of construction or maintenance activity, including the best management practices that will be employed to prevent pollution caused by storm water discharge after completion of the project. The department's erosion control plan shall require the use of best management practices, alone or in combination as appropriate, that are specified in the standardized erosion control reference matrix published under sub. (1m). The department may require the use of a best management practice not specified in the matrix only if all of the following apply:

1. The department determines through best professional judgment that those other best management practices will control erosion as effectively as the BMPs specified in the matrix published under sub. (1m).

2. The department specifies in writing the reason for selecting that other best management practice.

(c) The erosion control plan may be prepared in written or pictorial format, or both formats, as necessary and appropriate to convey the design, intent, use and placement of best management practices.

(d) 1. For projects directed and supervised by the department, if the department of natural resources, acting through the interdepartmental liaison procedures established under s. 30.2022, Stats., identifies areas or resources that require added safeguards, the erosion control plan shall include those areas or resources and the specific added safeguards as determined in consultation with the department of natural resources. This subdivision applies to any utility facility project that the department determines will be

completed in conjunction with or in advance of a transportation facility project that is directed and supervised by the department.

2. For a utility facility project not described in subd. 1., the utility person shall consult with the department of natural resources to identify any areas or resources that require added safeguards. When the department of natural resources identifies areas or resources that require added safeguards, the utility person shall include in the erosion control plan those areas or resources and the specific added safeguards as determined in consultation with the department of natural resources.

**Note:** Any activity involving a utility facility that does not require a permit issued by the department of transportation, and any action or area that is associated with a utility facility project but that is not authorized by a permit issued by the department of transportation, is subject to regulation by the department of natural resources.

(e) The erosion control plan may be developed as a separate project document or in segmented form throughout the project's documents, including plans, special provisions, specifications and drawings.

(f) For a utility facility project that is not considered minor, a utility person shall submit the erosion control plan to the department for its approval along with its request for a permit for the project. The erosion control plan shall include selected sites, if any. The department may not approve the erosion control plan unless the utility person provides some evidence that it has consulted with the department of natural resources as required under par. (d) 2. No person may implement an erosion control plan for a utility facility project, unless the department has approved the erosion control plan in writing.

**(1m) STANDARDIZED EROSION CONTROL REFERENCE MATRIX.** (a) The department of transportation, acting jointly with the department of natural resources, shall develop a standardized erosion control reference matrix that identifies best management practices that, when applied as specified in the matrix, meet the performance standards of this chapter, ch. NR 216 and ch. NR 151. The matrix shall address slope erosion and channel erosion and shall identify best management practices that prevent erosion, trap sediment, dissipate flow velocities, and direct the flow of runoff, and that minimize turbidity or silting of surface water caused by site erosion, discharge or runoff. The matrix may consider a variety of site conditions, including drainage area and slope distance. If the secretaries of both agencies, or their designees, recommend, in writing, the use of the matrix, the department of transportation shall publish the matrix in the facilities development manual. Once published, only the joint written statement of the secretaries of both agencies, or their designees, may amend the matrix.

(b) The department shall review the matrix published under par. (a) at least annually. In performing the review, the department shall consult with the department of natural resources, with an association representing a majority of county highway departments in this state, with a trade association representing transportation facility construction contractors who contract with this state, and with a trade association representing a majority of utility service providers in this state. In performing the review, the department shall consider the best management practices and site conditions described in the matrix, and each best management practice that was required in an erosion control plan during the preceding 12 months that was not specified in the matrix. If upon completing its review the department determines that the matrix should be amended, it shall present its recommendations to the secretary of the department and to the secretary of natural resources.

**(2) CONTENT.** The erosion control plan for a project shall include, at a minimum, the following items:

(a) The quarter, quarter-quarter, section, township, range, and the county in which the site is located.

(b) A description of the site and the nature of the construction or maintenance activities.

(c) A description of the intended sequence of major land disturbing activities.

(d) Estimates of the total area of the site and the total area of the site that is expected to be disturbed by construction or maintenance activities.

(e) Estimates, including calculations, if any, of the runoff coefficient of the site before and after construction or maintenance activities are completed.

(g) Wherever permanent infiltration devices will be employed, the depth to seasonal high groundwater, as determined under s. Trans 401.06 (7), depth to top of bedrock, whichever depth is less, and any existing data describing the surface soil and subsoil at the project site.

(h) The name of the immediate receiving waters, if any, from the United States geological survey 7.5 minute series topographic maps or other appropriate source.

(i) A site map that includes the following items:

1. Existing topography and drainage patterns, roads and surface waters.

2. Boundaries of the site.

3. Drainage patterns and approximate slopes anticipated after major grading activities.

4. Areas of soil disturbance.

5. Location of major structural and non-structural best management practices identified in the plan.

6. Location of areas where best management practices will be employed for stabilization.

7. Areas that will be vegetated following construction or maintenance activities.

8. Location, area and extent of wetland acreage on the site and locations where storm water is discharged to a surface water or wetland.

(j) A description of appropriate best management practices that will be employed at the site. The description shall include, when appropriate, the following minimum requirements:

1. The preservation of existing vegetation where attainable and the stabilization of disturbed portions of the project site.

2. Description of structural practices to divert flow away from exposed soils, to store flows or to otherwise limit runoff and discharges from the project site. Unless specifically approved in writing by the department, structural measures shall be installed on upland soils.

3. Management of overland flow at the project site.

4. Trapping of sediment in channelized flow.

6. Protection of downslope drainage inlets where they occur.

7. Minimization of tracking at the site.

8. Clean up of off-site sediment deposits.

9. Proper disposal of building and waste material at the project site.

10. Stabilization of drainage ways.

11. Installation of permanent stabilization practices as soon as possible after final grading.

12. Minimization of dust to the maximum extent practicable.

**(3) AMENDMENTS; UTILITY FACILITY PROJECTS.** (a) No utility person may amend an erosion control plan unless the amendment is approved in writing by the department.

(b) Subject to the written approval of the department, the util-

ity person shall amend the erosion control plan for a project whenever any of the following occurs:

2. There is a change in design, construction, operation or maintenance at the project site or selected site that has the reasonable potential for a discharge to waters of the state and that has not been addressed in the plan.

3. The best management practices required by the plan fail to avoid or minimize adverse impacts to waters of the state caused by a discharge.

4. There is a change in a borrow site or material disposal site that the plan has not addressed.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: renum. (intro.), (1) and (2) (j) 5. to be (1g), (1j) and Trans 401.08 (2) (a) 2m. and am. (1g) and (1j), cr. (1m) and (3) (b) 4., am. (2) (intro.), (c), (i) (intro.), 5. to 8., (j) (intro.) to 3. and 9., (3) (a), (b) (intro.), 2. and 3., r. (2) (f), (3) (b) 1. and (c), r. and recr. (2) (g), Register December 2002 No. 564, eff. 1-1-03; correction in (1j) (d) 1. made under s. 13.92 (4) (b) 7., Stats., Register March 2012 No. 675.

#### **Trans 401.08 Erosion control implementation plan.**

(1) GENERAL. (a) The prime contractor shall prepare an ECIP for a project, shall provide the ECIP to the appropriate region office of the department of transportation, and shall either deliver personally or send the ECIP by registered or certified mail, return receipt requested, to the appropriate regional liaison of the department of natural resources and to the department of transportation, at least 14 days before the pre-construction conference, or at a time and manner agreed upon by the department of transportation, department of natural resources and prime contractor.

(am) The prime contractor shall select best management practices from the matrix published under s. Trans 401.07 (1m) (a) when preparing an ECIP. The prime contractor may not employ best management practices that are not specified in the matrix unless the department of transportation has specifically approved that use in writing.

(ar) 1. The department of transportation may not hold a pre-construction conference until at least 14 days after the prime contractor delivered or mailed the ECIP to the department of natural resources, unless either of the following occurs before the pre-construction conference is held:

a. The region director of the department of transportation has notified the regional director of the department of natural resources in writing that the department of transportation intends to hold the pre-construction conference.

b. The department of natural resources consents to the pre-construction conference.

2. If the department of transportation holds a pre-construction conference within 14 days after the prime contractor delivered or mailed the ECIP to the department of natural resources, the department of natural resources shall have 14 days after the prime contractor delivered or mailed the ECIP to the department of natural resources to review the ECIP and deliver written comments to the department of transportation and to the prime contractor. At the earliest practicable time, but not more than 7 days after receiving such written comments, the department of transportation shall hold a conference with the prime contractor, the department of natural resources and any other affected parties to consider the department of natural resources' comments.

(c) The prime contractor shall follow the ECIP to implement the erosion control plan for a project and to implement best management practices for the project site and any selected sites.

(d) The ECIP shall be prepared in a detailed, written and pictorial format that identifies the schedule, timing and methodology for a prime contractor's implementation of the project's erosion control plan.

(e) The ECIP shall detail any changes to the project's erosion control plan that are approved in writing by the department. The detailed changes in a department-approved ECIP supersede contradictory provisions of the erosion control plan.

(f) The ECIP shall include information on how and when best management practices will be implemented in anticipation of the sizes and locations of the areas on which land disturbing activity occurs, and shall address best management practices for each stage of land disturbing activity at a project site or selected site.

(g) The ECIP shall require the removal of temporary best management practices in accordance with s. Trans 401.06 (2).

(h) No person may implement an ECIP before its written approval by the department in consultation with the department of natural resources.

(2) CONTENT. (a) The ECIP shall include, at a minimum, the following items to complement the project's erosion control plan:

1. The name, address, telephone number, and principal contact of the contractor responsible for installation and maintenance of best management practices at the project sites.

2. A description of the intended timetable and sequence of major land disturbing activities.

2m. Staging construction and maintenance to limit disturbed areas subject to erosion.

3. A description of best management practices and a schedule for implementing them at the project sites.

4. A description of any additions, amendments, deletions or modifications to the erosion control plan or to any of the contract documents that pertain to erosion control and storm water management for the project sites.

(b) The ECIP shall also include, at a minimum, a narrative and pictorial description of each of the selected sites, if any, the total area of each selected site and the area of each selected site that is expected to undergo excavation, and attendant best management practices for the selected sites. If the combined area of the project site and all selected sites on which land disturbing activity is likely to occur is 5 or more acres, as determined by the department, the prime contractor shall include in the ECIP the following items for each of the selected sites:

1. If known, the name and mailing address of the selected site.

2. The quarter, quarter-quarter, section, township, range, and the county in which the selected site is located.

3. The name, address, telephone number, and principal contact of the contractor or other person responsible for installation and maintenance of best management practices at the selected site.

4. A narrative description of the site and the nature of the activities to be performed at the selected site.

5. A description of the intended sequence of major land disturbing activities.

6. An estimate of the total area of the selected site that is expected to be disturbed by construction activities.

7. Estimates, including calculations, if any, of the runoff coefficient of the selected site before and after completion of construction activities.

9. Wherever permanent infiltration devices will be employed, the depth to groundwater, as determined by the department under s. Trans 401.06 (7), and any existing data describing the surface soil and subsoil at the selected site.

10. The name of the immediate receiving waters, if any, from the United States geological survey 7.5 minute series topographic maps or other appropriate source.



11. A site map that includes the following items:
  - a. Existing topography and drainage patterns, roads and surface waters.
  - b. Boundaries of the site.
  - c. Drainage patterns and approximate slopes anticipated after major grading activities.
  - d. Areas of soil disturbance.
  - e. Location of major structural and non-structural best management practices identified in the plan.
  - f. Location of areas where stabilization will be employed.
  - g. Areas that will be vegetated following construction or maintenance activities.
  - h. Wetlands, area and extent of wetland acreage on the site and locations where storm water is discharged to a surface water or wetland.
12. A description of appropriate best management practices that will be employed at the selected site to prevent sediments and pollutants from reaching waters of the state. The plan shall clearly describe the appropriate best management practices for each major activity identified and the timing during the construction process that the measures will be implemented. The description of best management practices shall include, when appropriate, the following minimum requirements:
  - a. Description of permanent or temporary best management practices, including a schedule for implementing them. Site plans shall ensure the preservation of existing vegetation wherever practicable and the stabilization of disturbed portions of the selected site.
  - b. Description of structural practices to divert runoff away from exposed soils, to store flows or to otherwise limit runoff and the discharge of pollutants from the selected site. Unless specifically approved in writing by the department, structural measures shall be installed on upland soils.
  - c. Management of overland flow at the selected site.
  - d. Trapping of sediment in channelized flow.
  - e. Staging construction to limit bare areas subject to erosion.
  - f. Protection of downslope drainage inlets where they occur.
  - g. Minimization of tracking at the site.
  - h. Clean up of off-site sediment deposits.
  - i. Proper disposal of building and waste material at the site.
  - j. Stabilization of drainage ways.
  - k. Installation of permanent stabilization practices as soon as possible after final grading.
  - L. Minimization of dust to the maximum extent practicable.
13. An estimate of the starting and completion dates of construction activity.
14. A description of the procedures to maintain, in good and effective operating condition, vegetation, best management practices and other protective measures.

**(3) AMENDMENTS.** Subject to the written approval of the department, a prime contractor shall amend the ECIP whenever the project engineer determines:

(a) There is a change in design, construction, operation or maintenance at a project site or selected site that has the reasonable potential for a discharge to waters of the state and that has not been addressed in the ECIP. The department shall pay for changes under this paragraph that are necessitated by department action. The prime contractor shall pay for all other changes under this paragraph, unless the department agrees to pay for the change.

(b) The best management practices required by the plan fail to reduce adverse impacts to waters of the state caused by a dis-

charge. Subject to s. Trans 401.12, the department shall pay for changes under this paragraph.

(c) An amendment approved under this subsection supersedes any contradictory provisions of the erosion control plan.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: (2) (a) 2m. renum. from Trans 401.07 (2) (j) 5., r. (intro.), (1) (b) and (2) (b) 8., am. (1) (a), (c) to (h), (2) (a) 1. to 4., (b) (intro.), 1. to 7., 11. (intro.), e. and g., 12. (intro.) to c., 14. and (3) (intro.) to (b), cr. (1) (am), (ar) and (3) (c), r. and recr. (2) (b) 9., Register December 2002 No. 564, eff. 1-1-03; corrections in (1) (a), (ar) 1. a. made under s. 13.92 (4) (b) 6., Stats., Register February 2013 No. 686.

**Trans 401.09 Maintenance of best management practices. (1g) GENERAL RESPONSIBILITY.** A prime contractor or utility person, as appropriate, shall implement, install and maintain best management practices at a site as required in the contract documents, as defined in s. Trans 401.12 (1) (a).

**(1m) BEFORE AND DURING CONSTRUCTION OR MAINTENANCE ACTIVITY.** Before and during the period of construction or maintenance activity, the prime contractor or utility person shall implement, install and maintain, or cause to be performed, all best management practices required by the erosion control plan, the ECIP and the requirements of this chapter. The prime contractor or utility person shall also implement any corrective action that is ordered under s. Trans 401.105. A utility person shall notify the appropriate department representative at least 24 hours before the installation of best management practices.

**(2) AFTER CONSTRUCTION OR MAINTENANCE ACTIVITY.** (a) Upon the department's written acceptance of permanent best management practices at a site, or upon the department's granting of partial acceptance for a portion of work, the prime contractor's responsibility to maintain those accepted best management practices, or that portion of work for which partial acceptance is granted, shall cease except for any responsibility for defective work or materials or for damages caused by its own operations.

(b) In the case of a utility facility project, a utility person shall promptly notify the department upon completion of all construction or maintenance activities and the installation of all permanent best management practices at a project site. Within a reasonable time after that notification by the utility person, the department shall inspect the project site to ensure that the permanent best management practices are adequate and functioning properly. If the inspection of the project site reveals that the best management practices are not adequate or not functioning properly, the utility person, upon notification from the department or based on its own inspection, shall promptly take the appropriate corrective action. Where the utility person takes corrective action based on its own inspection of a project site, the utility person shall immediately notify the department of that corrective action.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: renum. (intro.) and (1) to be (1g) and (1m) and am., am. (2) Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.10 Inspections. (1) GENERAL.** The project engineer or inspector shall inspect the project site and any selected site of a project described in s. Trans 401.03 (1) (a) or (c). A utility person shall, and the department's authorized representative may, inspect the site of a utility facility project. The inspection shall determine whether best management practices for a project required by the erosion control plan, the ECIP and other contract documents, as defined in s. Trans 401.12 (1) (a), are properly implemented, installed, and functioning, determine whether the best management practices for a project site or selected site are adequate for the purposes intended and for the site conditions, and identify any corrective action that is necessary. The project engineer or inspector shall invite the prime contractor, or his or her designee, to accompany the project engineer or inspector during inspections described in sub. (2) at least one

hour before commencing the inspection. The project engineer or inspector is not required to wait more than one hour after such invitation, or past the time stated for the inspection, before commencing the inspection. A utility person shall allow a department representative to accompany the utility person during any inspection of a utility facility project. An inspector who inspects a site shall provide a copy of the completed inspection report form to the project engineer immediately following the inspection. Within 24 hours after completing an inspection, the person who performs the inspection shall deliver a copy of the completed inspection report to the appropriate department representative. Inspections shall continue at the frequency required in sub. (2) until the installation of permanent stabilization of disturbed areas is completed and the temporary best management practices are removed.

**Note:** Inspectors are encouraged to provide reasonable advance notice. One hour is the minimum required advance notice. More time may be appropriate to provide the prime contractor a real opportunity to accompany an inspector.

**(2) WHEN REQUIRED.** Inspections shall be conducted at least once per week during the time construction or maintenance activity is being pursued on a project site or selected site, and at all of the following times:

(a) Within 24 hours after every precipitation event that produces 0.5 inches of rain or more during a 24-hour period, or that results in any discharge, to determine the appropriate corrective action, if any. The department of transportation shall notify the department of natural resources within 24 hours after learning of any prohibited discharge from a project site or selected site into waters of the state.

(b) At each stage, as new portions of a project site or selected site are disturbed.

(c) Upon completing the installation of permanent best management practices to stabilize disturbed areas at a project site or selected site.

(d) At the completion of the project. The inspection to be performed at the completion of the project shall be made before the department provides the prime contractor with written notice of final acceptance of the project.

**(4) REPORT.** The department shall prescribe an inspection report form for documenting the findings of an erosion control inspection for use statewide on all projects directed and supervised by the department other than utility facility projects. The inspector shall document each inspection on the inspection report form. The inspection report is considered part of a project diary. The department shall publish the inspection report form in the construction and materials manual, and the form takes effect upon publication. The inspection report and any form required for use on utility facility projects shall contain all of the following:

(a) The date or dates of inspection.

(ag) The names of the inspector, prime contractor or utility person, and erosion control subcontractor.

(am) The project identification number or permit number.

(b) Any comments concerning the effectiveness of in-place best management practices.

(c) 1. A statement of whether each type of best management practice required by the ECIP complies with that plan. The inspection report shall specify the location and deficiency of any best management practices that do not comply with the erosion control plan, the ECIP and any other contract documents, as defined in s. Trans 401.12 (1) (a).

2. Any reasonable corrections needed to restore, maintain or increase the effectiveness of existing best management practices.

3. The prime contractor is not required to make any correc-

tions as a result of an inspection unless an erosion control order is issued under s. Trans 401.105.

4. A utility person shall take any corrective action that is consistent with the permit issued by the department and that is ordered, verbally or in writing, by the department or the department's authorized representative.

(d) Written notes commemorating any verbal communications between the project engineer, inspector, contractor or utility person regarding erosion control and storm water management.

**(4m) REPORT AVAILABLE TO CONTRACTOR.** Within 24 hours after completing an inspection, the project engineer or inspector shall post the completed inspection report prepared under sub. (4) on the site to which the report relates.

**(5) REVIEW.** The department shall make copies of the written inspection reports either separately or as part of the project diary, available for review by other agencies and the public.

**(6) RECORDS.** After a project is completed and the final inspection has been made, the department shall maintain copies of the written inspection reports and erosion control orders in the project's files, or with the project's permit application or approval document, if any, for a period of not less than 3 years after the date the department accepted the completed project.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: r. (intro.), (2) (intro.), (a) (intro.) and (b), am. (1), (4) (intro.), (b), (d), (5) and (6), renum. (2) (a) 1. to 3. and (4) (c) to be (2) and (4) (c) 2. and am., renum. (3) to be Trans 401.105 and am., cr. (4) (ag), (am), (c) 1., 3., 4. and (4m) Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.105 Corrective action. (1)** (a) An inspector who believes that changes or corrections are needed to best management practices may, by written order delivered to the prime contractor, temporarily suspend work until the project engineer is notified and decides all questions at issue. The prime contractor shall respond to the order in a manner consistent with the contract documents, as defined in s. Trans 401.12 (1) (a). The project engineer shall, by written notice, inform the prime contractor whenever an inspection of a project site or selected site reveals the need for changes or corrections to best management practices.

(b) The department shall prescribe an erosion control order form for use whenever a corrective action is ordered on any project directed and supervised by the department. The department shall publish the form in the construction and materials manual. The project engineer shall include a copy of the completed inspection report with every erosion control order issued.

**Note:** Erosion control order forms may be obtained upon request by writing to the Department's Division of Transportation Infrastructure Development, Bureau of Environment, P. O. Box 7965, Room 451, Madison, WI 53707-7965, or by calling (608) 267-3615.

**(1m)** An authorized representative of the department shall inform the utility person, verbally or in writing, whenever an inspection of the project site by the department reveals the need for changes or corrections to best management practices. A utility person shall comply with any corrective action order, written or verbal, issued by the department's authorized representative within the time specified in the order or, if no time is specified, within 24 hours after receiving the order. Upon completing the corrective action, the utility person shall notify the appropriate department representative of the corrective action taken and the date completed.

**(2)** Upon receipt of an erosion control order form ordering changes or corrections to existing best management practices, the prime contractor shall implement, or cause to be implemented, the necessary corrective action within the time specified in the order or, if no time is specified, within 24 hours after receiving the order. The prime contractor shall deliver the erosion control order form to the project engineer upon completion of the correc-



tive action and shall include on the form a description of the corrective action implemented and the date completed.

(3) The department may approve or reject any completed corrective action by inspecting the affected area within 16 hours after the prime contractor or utility person delivers the completed erosion control order form to the project engineer or, for utility facility projects, to the department's authorized representative. The department shall consider all matters required in an erosion control order satisfactorily completed after that 16 hours has elapsed, or at 12 noon on the day the 16 hours expires, whichever is later, unless within the later of those 2 times the department has inspected and rejected the corrective action implemented. If a discharge occurs after the prime contractor or utility person delivers the erosion control order form under this section but before the later of those 2 times, the prime contractor or utility person shall have an opportunity to demonstrate that the corrective action was completed as required prior to the discharge. If the department does not reject any completed corrective action within the time specified in this subsection, the department may compel corrective action at the affected area only by issuing a new erosion control order.

(4) Notwithstanding any time period permitted under this section for completing corrective action, a prime contractor is considered not in compliance with the contract documents, as defined in s. Trans 401.12 (1) (a), for any area or matter described in the erosion control order form as requiring changes or corrections until such time as the change or correction is satisfactorily completed, as determined under sub. (3).

(5) Written notices are considered delivered to a prime contractor for purposes of this section when the written notice is presented to the head representative of the prime contractor then available on the project site or selected site, or when written notice is delivered to the prime contractor's principal place of business, whichever occurs earlier. Written notices are considered delivered to a project engineer or to the department when the written notice or form is presented to the project engineer or to the authorized department representative then available on the project site, or when written notice is delivered to the project engineer's principal place of business, whichever occurs earlier.

**History:** CR 02-081: renum. from Trans 401.10 (3) and am., cr. (1m) Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.106 Post-construction performance standard. (1) DEFINITIONS.** In this section:

(a) "Average annual rainfall" means the rainfall determined by the following year and location for the location nearest the project site: Madison, 1981 (Mar. 12-Dec. 2); Green Bay, 1969 (Mar. 29-Nov. 25); Milwaukee, 1969 (Mar. 28-Dec. 6); Minneapolis, 1959 (Mar. 13-Nov. 4); Duluth, 1975 (Mar. 24-Nov. 19).

(b) "TR-55" means the United States Department of Agriculture, Natural Resources Conservation Service (formerly Soil Conservation Service), Urban Hydrology for Small Watersheds, Second Edition, Technical Release 55, June 1986, or Technical Release 55 for Windows (Win TR-55), 2002.

**Note:** TR-55 is on file with the offices of the Legislative Reference Bureau, the Secretary of State, and the Department of Transportation, Office of General Counsel. Copies may be obtained by writing to the U.S. Department of Agriculture, Natural Resources Conservation Service, Conservation Engineering Division, 14<sup>th</sup> and Independence Avenue, SW., Room 6136-S, Washington, DC 20250. The phone number for the division is: 202-720-2520, and the fax number is: 202-720-0428. TR-55 is available electronically at:

<ftp://ftp.wcc.nrcs.usda.gov/wntsc/H&H/other/TR55documentation.pdf>

(2) **PLAN.** The department shall develop and implement a written plan that includes the requirements of subs. (3) to (10) for each transportation facility. This plan may be part of the erosion control plan.

(3) **TOTAL SUSPENDED SOLIDS.** Best management practices

shall be designed, installed and maintained to control total suspended solids carried in runoff from the transportation facility as follows:

(a) For transportation facilities first constructed on or after January 1, 2003 by design, reduce the suspended solids load to the maximum extent practicable, based on an average annual rainfall, as compared to no runoff management controls. A reduction in total suspended solids by at least 80% meets the requirements of this paragraph.

(b) For highway reconstruction and non-highway redevelopment, by design, reduce to the maximum extent practicable the total suspended solids load by at least 40%, based on an average annual rainfall, as compared to no runoff management controls. A 40% or greater total suspended solids reduction shall meet the requirements of this paragraph. In this paragraph, "redevelopment" means the construction of residential, commercial, industrial or institutional land uses and associated roads as a substitute for existing residential, commercial, industrial or institutional land uses.

(c) Notwithstanding pars. (a) and (b), if the design cannot achieve the applicable total suspended solids reduction specified, the design plan shall include a written and site-specific explanation why that level of reduction is not attained and the total suspended solids load shall be reduced to the maximum extent practicable.

(4) **PEAK DISCHARGE.** (a) By design, BMPs shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development site conditions for the 2-year 24-hour design storm or to the 2-year design storm with a duration equal to the time of concentration applicable to the transportation facility. Pre-development conditions shall assume "good hydrologic conditions" for appropriate land covers as identified in TR-55 or an equivalent methodology. The meaning of "hydrologic soil group" and "runoff curve number" are as determined in TR-55. However, when pre-development land cover is cropland, rather than using TR-55 values for cropland, the runoff curve numbers in Table 2 below shall be used.

**Table 2**  
**Maximum Pre-Development Runoff Curve Numbers**  
**for Cropland Areas**

Hydrologic Soil Group	A	B	C	D
Runoff Curve Number	56	70	79	83

**Note:** The curve numbers in Table 2 represent mid-range values for soils under a good hydrologic condition where conservation practices are used and are selected to be protective of the resource waters.

(b) This subsection does not apply to:

1. A transportation facility where the change in hydrology due to development does not increase the existing surface water elevation at any point within the downstream receiving surface water by more than 0.01 of a foot for the 2-year 24-hour storm or for a 2-year design storm with a duration equal to the time of concentration.

**Note:** Hydraulic models, such as HEC-2 or an equivalent methodology, may be used to determine the change in surface water elevations.

2. A highway reconstruction site.

(5) **INFILTRATION.** (a) Except as provided in pars. (d) to (g), BMPs shall be designed, installed and maintained to infiltrate runoff to the maximum extent practicable in accordance with one of the following:

1. Infiltrate sufficient runoff volume so that the post-construction infiltration volume shall be at least 60% of the pre-con-

struction infiltration volume, based on an average annual rainfall. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.

2. Infiltrate 10% of the post-development runoff volume from the 2-year 24-hour design storm with a type II distribution. Separate curve numbers for pervious and impervious surfaces shall be used to calculate runoff volumes and not composite curve numbers as defined in TR-55. However, when designing appropriate infiltration systems to meet this requirement, no more than 2% of the project site is required as an effective infiltration area.

(b) Pre-development condition shall be the same as specified in sub. (4) (a).

(c) Before infiltrating runoff, pretreatment shall be required for parking lot runoff and for runoff from new road construction in commercial, industrial and institutional areas that will enter an infiltration system. The pretreatment shall be designed to protect the infiltration system from clogging prior to scheduled maintenance and to protect groundwater quality in accordance with par. (g). Pretreatment may include, but is not limited to, oil and grease separation, sedimentation, biofiltration, filtration, swales or filter strips.

**Note:** To minimize potential groundwater impacts it is desirable to infiltrate the cleanest runoff. To achieve this, a design may propose greater infiltration of runoff from low pollutant sources such as roofs, and less from higher pollutant source areas such as parking lots.

(d) The following are prohibited from meeting the requirements of this subsection, due to the potential for groundwater contamination:

1. Areas associated with tier 1 industrial facilities identified in s. NR 216.21 (2) (a), including storage, loading, rooftop and parking.

2. Storage and loading areas of tier 2 industrial facilities identified in s. NR 216.21 (2) (b).

**Note:** Runoff from tier 2 parking and rooftop areas may require pretreatment before infiltration.

3. Fueling and vehicle maintenance areas.

4. Areas within 1000 feet upgradient or within 100 feet downgradient of karst features.

5. Areas with less than 3 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock.

6. Areas with runoff from industrial, commercial and institutional parking lots and roads and residential arterial roads with less than 5 feet separation distance from the bottom of the infiltration system to the elevation of seasonal high groundwater or the top of bedrock.

7. Areas within 400 feet of a well serving a community water system as specified in ch. NR 811 or within 100 feet of a well serving a non-community or private water system as specified in ch. NR 812 for runoff infiltrated from commercial, industrial and institutional land uses or regional devices for residential development.

8. Areas where contaminants of concern, as defined in s. NR 720.03 (2), are present in the soil through which infiltration will occur.

9. Any area where the soil does not exhibit any of the following characteristics between the bottom of the infiltration system and seasonal high groundwater and top of bedrock:

a. At least a 3-foot soil layer with 20 percent fines or greater. In this subdivision paragraph, “percent fines” means the percentage of a given sample of soil, which passes through a #200 sieve.

b. At least a 5-foot soil layer with 10 percent fines or greater.

In this subdivision paragraph, “percent fines” means the percentage of a given sample of soil, which passes through a #200 sieve.

c. Where the soil medium within the infiltration system does not filter pollutants from water at least as effectively as the soils described in subd. 9. a. or b.

(e) Projects undertaken in the following areas are not required to meet the requirements of this subsection:

1. Areas where the infiltration rate of the soil is less than 0.6 inches/hour measured at the bottom of the infiltration system.

2. Parking areas and access roads less than 5,000 square feet for commercial and industrial development.

3. Areas in which a new project is replacing existing residential, commercial, industrial or institutional land uses or associated roads, or both.

4. Undeveloped areas of less than 5 acres located within existing urban sewer service areas and surrounded by existing, residential, commercial, industrial or institutional land uses.

5. Any area during periods when the soil at that area is frozen.

6. Roads in commercial, industrial and institutional land uses, and arterial residential roads.

7. Highways.

(f) Where alternate uses of runoff are employed, such as for toilet flushing, laundry or irrigation, such alternate use shall be given equal credit toward the infiltration volume required by this subsection.

(g) 1. Infiltration systems designed in accordance with this subsection shall, to the extent technically and economically feasible, minimize the level of pollutants infiltrating to groundwater and shall maintain compliance with the preventive action limit at a point of standards application as determined under ch. NR 140. However, if specific information indicates that compliance with a preventive action limit is not achievable at that location, then the infiltration system may not be installed or shall be modified to prevent infiltration to the maximum extent practicable.

2. Notwithstanding subd. 1., the discharge from BMPs shall remain below the enforcement standard at the point of standards application, as determined under ch. NR 140.

**(6) BUFFER AREAS.** (a) In this subsection, “buffer area” means an area of land that commences at the ordinary high-water mark of lakes, streams and rivers, or at the delineated boundary of wetlands, and that is the greatest of the following applicable widths, as measured horizontally from the ordinary high-water mark or delineated wetland boundary:

1. For outstanding resource waters and exceptional resource waters, and for wetlands in areas of special natural resource interest as specified in s. NR 103.04, 75 feet.

2. For perennial and intermittent streams identified on a United States geological survey 7.5-minute series topographic map, or a county soil survey map, whichever is more current, 50 feet.

3. For lakes, 50 feet.

4. For highly susceptible wetlands, 50 feet. Highly susceptible wetlands include the following types: fens, sedge meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet meadows, shallow marshes, deep marshes and seasonally flooded basins. Wetland boundary delineation shall be made in accordance with s. NR 103.08 (1m). This paragraph does not apply to wetlands that have been completely filled in accordance with all applicable state and federal regulations. The buffer area for wetlands that have been partially filled in accordance with all applicable state and federal regulations shall be

measured from the wetland boundary delineation after fill has been placed.

5. For less susceptible wetlands, 10 percent of the average wetland width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded wetlands dominated by invasive species such as reed canary grass.

6. For concentrated flow channels with drainage areas greater than 130 acres, 10 feet.

(ag) In par. (a) 1., 4. and 5., determinations of the extent of the buffer area adjacent to wetlands shall be made on the basis of the sensitivity and runoff susceptibility of the wetland in accordance with the standards and criteria in s. NR 103.03.

(am) In this subsection, "buffer area" does not include any area of land adjacent to any stream enclosed within a pipe or culvert, such that runoff cannot enter the enclosure at this location.

(b) 1. Beginning with land acquired on or after January 1, 2003 for a transportation facility, no impervious surface that is part of a transportation facility may be constructed within a buffer area, unless the department determines, in consultation with the department of natural resources, that there is no practical alternative. If there is no practical alternative to locating an impervious part of a transportation facility within a buffer area, the transportation facility may be constructed in the buffer area only to the extent the department, in consultation with the department of natural resources, determines is reasonably necessary, and the department shall state in the erosion control plan or in the plan prepared under sub. (2) why it is necessary to construct the transportation facility within a buffer area.

2. If a transportation facility is constructed within a buffer area, adequate sod or self-sustaining vegetative cover, such as grasses, forbs, sedges and duff layers of leaves and woody debris, of 70% or greater shall be established and maintained in the area that is the width of the buffer area, or the greatest width practical, and throughout the length of the buffer area in which the transportation facility is located. The adequate sod or self-sustaining vegetative cover required under this subdivision shall be sufficient to provide for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland flow areas under sheet flow conditions. Non-vegetative materials, such as rock riprap, may be employed on the bank as necessary to prevent erosion such as on steep slopes or where high-velocity flows occur.

**Note:** Vegetative cover may be measured using the line transect method described in the University of Wisconsin-Extension publication number A3533, titled "Estimating Residue Using the Line Transect Method". Seeding of non-aggressive vegetative cover is recommended in the buffer areas. Vegetation that is flood and drought tolerant and that has an extensive root system is preferable.

3. Best management practices such as filter strips, swales or wet detention basins, that are designed to control pollutants from non-point sources may be located in the buffer area.

4. This subsection does not apply to:

a. Areas in which a new project, other than a highway, is replacing existing residential, commercial, industrial or institutional land uses.

b. Transportation facilities that cross or access surface waters, such as boat landings, bridges and culverts.

c. Transportation facilities from which runoff does not enter the surface water, except to the extent that vegetative ground cover is necessary to maintain bank stability.

**(7) FUELING AND VEHICLE MAINTENANCE AREAS.** Fueling and vehicle maintenance areas shall, to the maximum extent practicable, have BMPs designed, installed and maintained to reduce petroleum within runoff, such that the runoff that enters waters of the state contains no visible petroleum sheen.

**(8) LOCATION AND REGIONAL TREATMENT EXCLUSION.** (a)

BMPs may be located on a project site, or off a project site as part of a regional storm water device, practice or system.

(b) Runoff within a non-navigable surface water that flows into a BMP, such as a wet detention pond, is not required to meet the performance standards of this section. Permanent BMPs may be located in non-navigable surface waters.

(c) Except as provided in par. (d), post-construction runoff from a transportation facility first constructed after January 1, 2003 shall meet the requirements of this section before entering a navigable surface water.

(d) Post-construction runoff from any development within a navigable surface water that flows into a BMP is not required to meet the requirements of this section if all of the following apply:

1. The BMP was constructed prior to January 1, 2003 and the BMP either received a permit issued under ch. 30, Stats., or the BMP did not require a ch. 30, Stats., permit.

2. The BMP is designed to treat runoff from upland development that is constructed after the BMP was constructed.

(e) The discharge of runoff from a BMP, such as a wet detention pond, is subject to this chapter.

**(9) TIMING.** The BMPs required under this section shall be installed before the project site has undergone final stabilization.

**(10) SWALE TREATMENT.** (a) Except as provided in par. (b), transportation facilities that use swales for runoff conveyance and pollutant removal satisfy all of the requirements of this section, if the swales are designed to the maximum extent practicable to do all of the following:

1. Be vegetated. However, where appropriate, non-vegetative measures may be employed to prevent erosion or provide for runoff treatment, such as rock riprap stabilization or check dams.

**Note:** It is preferred that tall and dense vegetation be maintained within the swale due to its greater effectiveness at enhancing runoff pollutant removal.

2. Carry runoff through a swale for 200 feet or more in length that is designed with a flow velocity no greater than 1.5 feet per second based on a 2-year 24-hour design storm or on a 2-year design storm with a duration equal to the time of concentration. If a swale of 200 feet in length cannot be designed with a flow velocity of 1.5 feet per second or less, the flow velocity shall be reduced to the maximum extent practicable.

**Note:** The swale design may include check dams to slow runoff flows and improve pollutant removal. Transportation facilities with continuous features such as curb and gutter, sidewalks or parking lanes do not comply with the design requirements of this subsection. However, a limited amount of structural measures such as curb and gutter may be allowed as necessary to account for other concerns such as human safety or resource protection.

(b) Notwithstanding par. (a), the department shall consult with the department of natural resources' liaison to the department of transportation to determine whether other provisions of this section are necessary to achieve water quality standards. This paragraph applies only to a transportation facility that has an average daily traffic of 2,500 or more, and from which the initial surface water of the state that runoff from the transportation facility directly enters is any of the following:

1. An outstanding resource water.

2. An exceptional resource water.

3. Waters listed in section 303(d) of the federal Clean Water Act, 33 USC 1344, as amended, that are identified as impaired in whole or in part, due to nonpoint source impacts.

4. Waters for which targeted performance standards are promulgated under s. NR 151.004.

**History:** CR 02-081: cr. Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.107 Developed urban area performance standard.** (1) The department shall develop and implement a storm water management plan to control pollutants from trans-



portation facilities that are owned and operated by the department and located within municipalities regulated under subch. I of ch. NR 216. The plan shall do the following to the maximum extent practicable:

(a) Beginning not later than March 10, 2008, implement a storm water management plan that is designed to attain at least a 20% reduction in total suspended solids in runoff that enters waters of the state as compared to no storm water management controls.

(b) Beginning not later than March 10, 2013, implement a storm water management plan that is designed to attain at least a 40% reduction in total suspended solids in runoff that enters waters of the state as compared to no storm water management controls.

(2) The department shall inform and educate appropriate department staff and any transportation facility maintenance authority contracted by the department of transportation to maintain transportation facilities described in sub. (1) (intro.) regarding nutrient, pesticide, salt and other deicing material and vehicle maintenance management activities in order to prevent runoff pollution of waters of the state.

**History:** CR 02-081: cr. Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.11 Enforcement.** The project engineer shall enforce this chapter, except that for utility facility projects a representative of the department shall enforce this chapter. This authority shall include ordering the suspension of work on a project, including work at the project site or at any selected sites, for the period of time considered necessary in the interest of public safety or convenience, or for the period of time considered necessary due to the failure of a contractor or utility person to comply with any of the requirements of this chapter, including the failure of a prime contractor or utility person to implement within the prescribed time period a corrective action ordered under s. Trans 401.105. An inspector, by written order delivered to the prime contractor, or by written or verbal order delivered to a utility person, may temporarily suspend work until the project engineer or appropriate department representative is notified and decides all questions at issue.

**History:** Cr. Register, October, 1994, No. 466, eff. 11-1-94; CR 02-081: am. Register December 2002 No. 564, eff. 1-1-03.

**Trans 401.12 Liability for prohibited discharge. (1)** In this section:

(a) "Contract documents" means the written agreement between the department and the prime contractor that sets forth the obligations of the parties to the contract, including the invitation for bids, proposal, contract form and contract bond, standard

specifications, supplemental specifications, interim supplemental specifications, special provisions, addenda, general plans, detailed plans, erosion control plan, ECIP, notice to proceed, permits issued by the department, and any contract change orders and agreements required to complete the construction of the work in an acceptable manner, including authorized extensions and erosion control orders.

(b) "Progress schedule" means the schedule that establishes completion dates for activities required in the contract documents, and interim completion dates, including revisions and updates to that schedule.

(2) Except as provided in sub. (3), activity necessitated by a prohibited discharge from a project or selected site shall be considered a department-directed revision to the contract and the department shall pay all costs associated with the discharge in accordance with contract documents.

(3) (a) The prime contractor shall pay all costs associated with a prohibited discharge from a project site or selected site if any of the following apply:

1. The prime contractor was not in compliance with the contract documents at the time of the prohibited discharge, and the failure to comply was a substantial contributing factor in causing, failing to prevent, or worsening the discharge. An inspection report prepared under s. Trans 401.10 that identifies non-compliance with the ECIP is not considered non-compliance with an ECIP unless an erosion control order is issued under s. Trans 401.105 and the changes or corrections required by the erosion control order have not been satisfactorily completed.

2. The performance under the contract documents has fallen behind the progress schedule and the prime contractor has not submitted to the project engineer a revised progress schedule within 5 days after receiving a written request from the project engineer to revise the progress schedule. This subdivision applies only if the failure to comply with the progress schedule was a substantial contributing factor in causing, failing to prevent, or worsening the discharge.

(b) 1. This subsection does not apply to any of the following prohibited discharges:

a. Discharges occurring after the project has been completed and accepted as final in the manner prescribed in the contract documents.

b. Discharges occurring from any portion of work for which the department has granted partial acceptance as provided in the contract documents.

2. This section does not apply to prohibited discharges from a utility facility project.

**History:** CR 02-081: cr. Register December 2002 No. 564, eff. 1-1-03.