

WASHINGTON COUNTY, WISCONSIN

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VOTE

2008 ORDINANCE 10

AN ORDINANCE to amend Sections 17.01, 17.02, 17.03, 17.05, 17.06, 17.07, 17.08, 17.09, 17.10, 17.11, 17.12, 17.13, 17.14, 17.15 and 17.16 relating to: Authority; Findings of Fact; Purpose and Intent; Applicability, Exemptions and Waivers; Application for Erosion and Runoff Control Permit or Preliminary Approval Letter; Plan Review Procedures; Erosion Control Plan Requirements; Stormwater Management Plan Requirements; Technical Standards and Specifications; Permit Requirements; Maintenance of Stormwater Management Facilities; Enforcement; Appeals; Severability; and Definitions.

The people of the County of Washington, represented in the Board of Supervisors, do ordain as follows:

SECTION 1. Section 17.01(2) of the code is amended to read:

17.01 AUTHORITY. (2)(AM 08-10) Under the authority of §92.07(15), Wis. Stats., the County Board hereby designates the Land Conservation Committee, through the Land and Water Conservation Division of the Planning and Parks Department, to administer and enforce the provisions of this chapter. Enforcement provisions are described further under sec. 17.13 ~~13~~ 14 of this chapter.

SECTION 2. Section 17.02(1) of the code is amended to read:

17.02 FINDINGS OF FACT. (1)(AM 08-10) The County Board finds that construction site erosion and uncontrolled stormwater runoff from land disturbing ~~and land development~~ construction activities have significant adverse impacts upon local water resources and the health, safety and general welfare of the community, and diminish the public enjoyment and use of natural resources. Specifically, soil erosion and stormwater runoff can:

SECTION 3. Section 17.03(1), (2) and (3) of the code are amended to read:

17.03 PURPOSE AND INTENT. (1)(AM 08-10) **Purpose.** The purpose of this chapter is to set forth requirements for land ~~development and land~~ construction disturbing activities aimed to minimize sedimentation, water pollution, flooding and related property and environmental damage caused by soil erosion and uncontrolled stormwater runoff during and after construction, in order to diminish the threats to public health, safety, welfare, and the natural resources of Washington County.

(2)(AM 08-10) **Intent.** This chapter is intended to regulate construction site erosion and stormwater management under the authority granted in §59.693, Wis. Stats., and is intended to meet the current construction site erosion control and post-construction stormwater management regulatory requirements of Subchapter III of both NR 151 and NR 216 Wis. Adm. Code. This chapter is not intended to limit activity or land divisions permitted under the applicable zoning and land division ordinances.

1 (3))AM 08-10) **Regional Stormwater Management.** The County recognizes that the
2 preferred method of permanently managing stormwater runoff from land ~~development~~ disturbing
3 construction activities is through the preparation and implementation of regional stormwater
4 management plans by watershed areas which are designed to meet the requirements of this chap-
5 ter. Accordingly, provisions have been incorporated into this chapter to allow for the implemen-
6 tation of this type of plan in lieu of complying with certain on-site stormwater management re-
7 quirements.

8
9 **SECTION 4.** Section 17.05(1), (2), (3) and (4) of the code are amended to read:

10 **17.05(AM 08-10) APPLICABILITY, EXEMPTIONS AND TECHNICAL**
11 **WAIVERS.** (1)(AM 08-10) **Construction Site Erosion Control.** Unless otherwise exempted
12 under sub.(3) below, or technically waived under sub.(4) below, an erosion and runoff control
13 permit under sec. 17.06 of this chapter shall be ~~required~~, obtained before any person commences
14 a land disturbing construction activity. ~~and all~~ The construction site erosion control provisions of
15 this chapter shall apply to all land disturbing construction activity that meet any of the following:

16
17 (a) Disturbs 4,000 square feet or more of total land surface area; or

18
19 * * *

20
21 (c) Disturbs 100 lineal feet of ~~road~~ roadway ditch, grass waterway or other
22 land area where surface drainage flows in a defined open channel; including the placement, re-
23 pair or removal of any underground pipe, utility or other facility within the cross-section of the
24 channel at flow capacity; or

25
26 (d) Other land disturbing construction activities, including the installation of
27 access drives, that the administering authority determines to have a high risk of soil erosion or
28 water pollution, or that may significantly impact an environmentally sensitive area. All determi-
29 nations made by the administering authority under this subsection shall be made in written or
30 electronic form, unless otherwise waived by the requesting entity.

31
32 (2)(AM 08-10) **Stormwater Management.** Unless otherwise exempted under sub.(3)
33 below, or technically waived under sub.(4) below, an erosion and runoff control permit under
34 sec. 17.06 below, shall be ~~required~~, obtained before any person commences a land disturbing
35 construction activity. ~~and all~~ The stormwater management provisions of this chapter shall apply
36 to all land ~~development~~ disturbing construction activity that meet any of the following:

37
38 (a) ~~Divides an existing tax parcel into 5 separate parcels of 5 acres each or~~
39 ~~less in total area within a common plan of development; Is a subdivision plat that meets the sub-~~
40 ~~division definition criteria under § 236.02(12), Wis. Stats.; or~~

41
42 (b) Involves the construction of any new public or private ~~roads~~ roadway; or

43
44 * * *

45
46 (d) Ultimately results in one acre or more in total land disturbing construction
47 activity; or

1 (d e) Other land ~~development~~ disturbing construction activities, including
2 access drives, that the administering authority determines may significantly increase downstream
3 runoff volumes, flooding, soil erosion, water pollution or property damage, or significantly im-
4 pact an environmentally sensitive area. All determinations made by the administering authority
5 under this subsection shall be made in written or electronic form, unless otherwise waived by the
6 requesting entity.

7
8 (3)(AM 08-10) **Exemptions.** (a) The following sites shall be exempt from all of the re-
9 quirements of this chapter:

10
11 1. All activities directly relating to the planting, growing and harvest-
12 ing of agricultural crops, including silviculture.

13
14 2. Any land disturbing ~~or land development~~ construction activity
15 conducted by or contracted for any State agency, as defined under §227.01(1), Wis. Stats., in-
16 cluding but not limited to ~~road~~ roadway construction projects administered by the Wisconsin De-
17 partment of Transportation. These activities must meet the erosion control and stormwater man-
18 agement requirements of the state.

19
20 (b) The following sites shall be exempt from sub.(1) above, which includes
21 the construction site erosion control provisions of this chapter only:

22
23 1. The construction of 1 and 2 family residential buildings under ~~Wis.~~
24 ~~Admin. Code COM 21.125~~ s. COMM 21.125, Wis. Adm. Code, unless requested by the town
25 building inspector or town board. These activities must meet the erosion control requirements of
26 the Wisconsin Uniform Dwelling Code.

27
28 2. Any land disturbing construction activity within the shore-
29 land/wetland/floodplain zone as defined by the Washington County Code that disturbs less than
30 one acre of total land surface, unless otherwise requested by the Washington County Planning,
31 Conservation and Parks Committee or Planning and Parks Department. These activities must
32 meet the erosion control requirements of the County shoreland/floodplain/wetland zoning ordin-
33 ance(s).

34
35 3. Nonmetallic mining activities that are covered under a nonmetallic
36 mining reclamation permit under NR 135 Wis. Adm. Code.

37
38 4. Placement of underground pipe or other utility that is plowed or
39 bored into the ground outside areas of channelized runoff.

40
41 (c) The following sites shall be exempt from sub. (2) above, which includes
42 the stormwater management provisions of this chapter only:

43
44 1. A redevelopment post-construction site with no increase in ex-
45 posed parking lots or roadways.

46
47 2. A post-construction site with less than 10% connected impervious-
48 ness based on complete development of the post-construction site, provided the cumulative area
49 of all parking lots and rooftops is less than one acre.

1
2 3. Nonpoint discharges from silviculture activities.

3
4 4. Routine maintenance for project sites under 5 acres of land distur-
5 bance if performed to maintain the original line and grade, hydraulic capacity or original purpose
6 of the facility.

7
8 5. Underground utility construction such as water, sewer and fiber op-
9 tic lines. This exemption does not apply to the construction of any above ground structures asso-
10 ciated with utility construction.

11
12 (e d) The following sites shall comply with all of the erosion control and
13 stormwater management requirements of this chapter, but shall be exempted from obtaining a
14 permit, providing a financial guarantee or paying a fee under sec. 17.06 of this chapter:

15 * * *

16
17
18 2. Any ~~road~~ roadway construction or other land disturbing or land de-
19 velopment activity by the County, or any town, city or village within the County. *[Note: The*
20 *Land and Water Conservation Division of the Planning and Parks Department will encourage*
21 *cooperative working agreements with other County departments and local units of government to*
22 *implement this provision.]*

23
24 ~~(4) —~~ **Waivers.** ~~(a) The administering authority shall waive any requirement of this~~
25 ~~chapter if the administering authority, or the Board of Adjustment under sec. 17.14 of this chap-~~
26 ~~ter, determines that:~~

27
28 1. ~~— The site will have no appreciable off-site impact;~~

29
30 2. ~~— Compliance is impractical or impossible due to site conditions, ur-~~
31 ~~ban street cross section requirements, or other circumstances beyond the control of the applicant;~~

32
33 3. ~~— Compliance would be in direct conflict with other regulations or~~
34 ~~related objectives of this chapter which would take precedent; or~~

35
36 4. ~~— The specific requirement is not necessary for a particular site to en-~~
37 ~~sure compliance with the erosion control and stormwater management requirements of sees.~~
38 ~~17.08 and 17.09 of this chapter.~~

39
40 ~~(b) — Any waiver granted shall be in written or electronic form and shall comply~~
41 ~~with the general requirements under sec. 17.08(1)(a) of this chapter relating to construction site~~
42 ~~erosion control and under sec. 17.09(1)(a) of this chapter relating to stormwater management.~~

43
44 (4)(AM 08-10) Technical Waiver. (a) Waiver Criteria. Following the provisions of
45 this subsection, the Administering Authority may waive a site or a portion of a site from meeting
46 certain technical requirements of this section if the Administering Authority determines that one
47 or more of the following applies:

1 1. Off-Site BMP(s). The requirement has been satisfied through the
2 use of off-site BMP(s). Off-site BMP(s) could be installed beyond the boundaries of the property
3 covered by the application as part of a regional stormwater management plan or through other le-
4 gal arrangements. However, to be eligible for this waiver, the off-site BMP(s) must treat runoff
5 from the site covered by the application; or

6
7 2. No Off-Site Impacts. The site will have no appreciable off-site
8 impacts or is internally drained and will not discharge runoff from the site after development oc-
9 curs; or

10
11 3. Site Conditions. It is impracticable to meet the requirement due to
12 site conditions such as: slopes; soils; proximity to existing or proposed structures or desirable
13 trees; limited site dimensions; existing or proposed land uses on site or on surrounding sites; the
14 potential for groundwater contamination; potential subsurface flow paths to existing or proposed
15 buildings, structures, or public infrastructure; public health or safety problems; or other factors
16 beyond the control of the applicant. No site shall be entitled to a waiver under this paragraph due
17 solely to the size of the proposed land disturbing construction activity in relation to the parcel
18 size; or

19
20 4. Compliance would be in direct conflict with other regulations or
21 related objectives of this chapter which would take precedent.

22
23 (b) Application for Technical Waiver. A technical waiver under sub. (a)
24 above may only be granted by the Administering Authority upon the applicant submitting all of
25 the following items to the Administering Authority, which shall constitute a completed applica-
26 tion:

27
28 1. A written request describing the provisions of this subsection for
29 which a waiver is being requested and an explanation of why;

30
31 2. A site plan in accordance with sec. 17.09(5)(b) of this chapter, in-
32 cluding the delineation of the area and size (in acres) to which the waiver would apply and any
33 other stormwater BMP(s) required to meet this chapter or as recommended in a regional storm-
34 water management plan;

35
36 3. The necessary technical documentation to demonstrate that the site
37 meets one or more of the criteria for which a waiver is being applied, including documentation of
38 the applicable provisions of any regional stormwater management plan that may be involved;

39
40 4. For off-site BMP(s) under sub. (a)1. above:

41
42 a. Documentation that the necessary BMP(s) have been prop-
43 erly installed, including as-built plans, construction certification and design summaries in accor-
44 dance with sec. 17.11(4) of this chapter;

45
46 b. A copy of the recorded maintenance agreement in accor-
47 dance with sec. 17.12 of this chapter and any other easements or legal arrangement that may be
48 involved to ensure the long-term maintenance of the off-site BMP(s).

1 c. Documentation of payment of any applicable fees that may
2 be required by a unit of government charged with implementing a regional stormwater manage-
3 ment plan. Fees may be through a stormwater utility district or other unit of government and
4 would usually be based on an equitable distribution of costs for land acquisition, engineering de-
5 sign, construction, certification and maintenance of stormwater BMP(s) implemented through the
6 regional stormwater management plan.

7
8 5. Other materials that the Administering Authority determines to be
9 necessary to make a determination under this subsection or to comply with this chapter.

10
11 (c) Review Procedure. The Administering Authority shall review all technical
12 waiver application materials submitted under sub. (b) above, determine compliance with this sec-
13 tion and notify the applicant of a decision within 20 working days of the submittal date, in accor-
14 dance with the procedures under 17.07(2) below. In consideration of all waiver requests, the
15 Administering Authority shall ensure that the applicant meets the requirements of this section to
16 the maximum extent practicable.

17
18 (d) Appeal. If the applicant does not agree with any written determination of
19 the Administering Authority under this subsection, the applicant may appeal the decision pur-
20 suant to the procedures in sec. 17.15 of the Washington County Code.

21
22 **SECTION 5.** Section 17.06(2) and (3) of the code are amended to read:

23 **17.06 APPLICATION FOR EROSION AND RUNOFF CONTROL PERMIT OR**
24 **PRELIMINARY APPROVAL LETTER. (3 2)(AM 08-10) Preliminary Approval Letter.**

25 (a) Purpose and Intent. A preliminary approval letter is an optional step in the permit process
26 that is strongly encouraged for subdivisions and other large or complex land ~~development~~ dis-
27 turbing construction activities. It is designed to assist the applicant in preparing general site
28 plans and obtaining other applicable permits or zoning approvals prior to finalizing detailed con-
29 struction plans for a proposed project. It will also act to notify other review authorities that the
30 applicant has agreed to meet the requirements of an erosion and runoff control permit and pro-
31 vides a preliminary plan of what will likely be required. An erosion and runoff control permit is
32 still required prior to the start of any proposed land disturbing ~~or land development~~ construction
33 activity. The administering authority shall issue an erosion and runoff control permit after de-
34 termining that the final erosion control and stormwater management plans are in substantial
35 compliance with the preliminary plans and after the applicant has met all other requirements of
36 sub.~~(2) above~~ (3) below.

37
38 (b) Application. To request a preliminary approval letter, the following in-
39 formation ~~must~~ shall be submitted to the administering authority:

40
41 * * *

42
43 4. A preliminary stormwater management plan in accordance with
44 sec. 17.09(6) of this chapter, for those land ~~development~~ disturbing construction activities that
45 meet any of the applicability criteria of sec. 17.05(2) of this chapter.

46
47 ~~(2 3)~~(AM 08-10) **Erosion and Runoff Control Permit.** An erosion and runoff control
48 permit is required for all sites that meet the applicability provisions of secs. 17.05(1) or 17.05(2)
49 of this chapter and are not exempt under sec. 17.05(3) of this chapter or technically

1 waived under sec. 17.05(4) of this chapter. To request an erosion and runoff control permit un-
2 der this chapter, the following information shall be submitted to the administering authority:

3 * * *

4
5
6 (c) A site map in accordance with sec. 17.08(4) and/or 17.09(5) of this chap-
7 ter.

8
9 (e d) A final erosion control plan in accordance with sec. 17.08 of this chapter
10 for those land disturbing construction activities that meet any of the applicability criteria in sec.
11 17.05(1) of this chapter;

12
13 (d e) A final stormwater management plan in accordance with sec. 17.09(5) of
14 this chapter and a draft maintenance agreement in accordance with sec. 17.12 of this chapter for
15 those land ~~development~~ disturbing construction activities that meet any of the applicability crite-
16 ria of sec. 17.05(2) of this chapter; or the documentation required under sec. 17.09(2) of this
17 chapter related to a regional stormwater management plan; and

18
19 (e f) A financial guarantee, in accordance with sec. 17.11(3) of this chapter.

20
21 **SECTION 6.** Section 17.07(1) and (2) of the code are amended to read:

22 **17.07 PLAN REVIEW PROCEDURES.** (1)(AM 08-10) **For Applications That On-**
23 **ly Involve Erosion Control Plans for Less Than One Acre of Disturbed Area.** (a) The pro-
24 cedures under this subsection shall only apply to applications which meet all of the following cri-
25 teria:

26 * * *

27
28
29 (b) Within 10 working days of receipt of a completed application form, fee
30 and final erosion control plan, the administering authority shall:

31
32 1. Determine if the requirements of this chapter have been met, in-
33 cluding sec. 17.08(4)(a) of this chapter relating to the requirements of a final erosion control
34 plan; and

35 * * *

36 * * *

37
38
39 (e) For any resubmittal of plans and supporting information by the applicant,
40 the administering authority shall have an additional 10 working days from the date of receipt to
41 review the resubmitted information in accordance with pars.(b) through (d) above.

42
43 (2)(AM 08-10) **For All Other Applications for an Erosion and Runoff Control Per-**
44 **mit or Preliminary Approval Letter.** (a) The procedures under this subsection shall apply to
45 all other applications that meet at least one of the applicability criteria under sec. 17.05 of this
46 chapter, but do not meet all of the criteria under sub.(1) above, for erosion control plans for less
47 than one acre.

48 * * *

1 (e) For any resubmittal of plans and supporting information by the applicant,
2 the administering authority shall have an additional 20 working days from the date of receipt to
3 review the resubmitted information in accordance with pars. (b) through (d) above.
4

5 **SECTION 7.** Section 17.08(1), (2), (3) and (4) of the code are amended to read:

6 **17.08 EROSION CONTROL PLAN REQUIREMENTS.** (1)(AM 08-10) **General**
7 **Requirements.** (a) An erosion control plan shall ensure, to the extent practical, that soil erosion,
8 siltation, sedimentation and other off-site impacts from land disturbing activities are minimized.
9 Measures shall be taken, using approved best management practices, to minimize sediment from
10 being carried off-site by water or wind during the construction phase, such as: diversions, silt
11 fence, straw bales, downspout extenders, soil treatment, temporary mulch, sediment traps, sedi-
12 ment basins, etc. All temporary best management practices shall be maintained until the site is
13 stabilized. Some best management practices, such as sediment basins, may be designed to also
14 serve as a permanent stormwater best management practice after the site is stabilized.
15

16 (b) All erosion control plans and associated best management practices ~~de-~~
17 ~~signs prepared under this chapter shall comply with the plan requirements of this section and the~~
18 ~~technical standards and specifications described in sec. 17.10 of this chapter. shall comply with~~
19 the planning, design, implementation and maintenance requirements of this chapter.
20

21 (2)(AM 08-10) **Guiding Principles.** To satisfy the requirements of this section, all pro-
22 posed land disturbing construction activities shall, to the extent practical:
23

24 * * *

25
26 (b) Minimize soil compaction, the loss of trees and other natural vegetation
27 and the size of the disturbed area;
28

29 (c) Minimize, through project phasing and proper construction sequencing,
30 the time the disturbed soil surface is exposed to erosive forces; and ~~*{Note: See sec. 17.11(2)(c) of*~~
31 ~~*this chapter for special conditions relating to construction scheduling and the issuance of a per-*~~
32 ~~*mit.}*~~;
33

34 (d) Emphasize the use of erosion control measures that prevent soil detach-
35 ment and erosion rather than trying to intercept its transport or repair damage done.
36

37 (3)(AM 08-10) **Specific Erosion Control Requirements and Performance Standards.**
38 Unless otherwise technically waived under sec. 17.05(4) of this chapter, the following minimum
39 requirements shall be met on all sites subject to the applicability criteria under sec. 17.05(1) of
40 this chapter and shall be addressed in the erosion control plan submitted by the applicant, if ap-
41 plicable. The administering authority is authorized to exceed the minimum requirements stated
42 below for any site that the administering authority determines is a high risk of soil erosion or may
43 significantly impact an environmentally sensitive area, and that further controls are practical.
44

45 (a) Sediment Reduction. An erosion control plan shall by its design to the
46 maximum extent practicable, achieve a reduction of 80% of the sediment load carried in runoff,
47 on an average annual basis, as compared with no sediment or erosion controls, until the
48

1 site is stabilized. Erosion and sediment control best management practices may be used alone or
2 in any combination to meet the 80% sediment reduction goal. Plans that comply with the guiding
3 principles described in sub. (2) above and the specific erosion control plan requirements de-
4 scribed below shall be determined by the Administering Authority as meeting the 80% sediment
5 reduction goal.

6
7 1. Notwithstanding par. (a), if BMP(s) cannot be designed and im-
8 plemented to reduce the sediment load by 80%, on an average annual basis, the plan shall include
9 a written and site-specific explanation as to why the 80% reduction goal is not attainable and the
10 sediment load shall be reduced to the maximum extent practicable.

11
12 (b) Construction Material Handling. The use, storage and disposal of chemi-
13 icals, cement and other compounds and materials used on the construction site shall be managed
14 during the construction period, to prevent their entrance into waters of the state. However,
15 projects that require the placement of these materials in waters of the state, such as constructing
16 bridge footings of BMP installations, are not prohibited by this paragraph.

17
18 (a c) Access Drives and Tracking. Each site shall provide an access drive(s)
19 and parking area, of sufficient dimensions and design, surfaced with a material that will prevent
20 erosion and minimize tracking or washing of soil onto public or private roadways. All
21 non-paved access drives shall be designed so that stormwater runoff from adjacent areas does not
22 flow down the drive surface. Culverts shall be sized for calculated peak flows produced by the
23 10-year 24-hour design storm and shall meet all other State and local requirements relating to
24 road roadway access.

25
26 (b d) Diversion of Upslope Runoff. Any significant amount of runoff from up-
27 slope land area, rooftops or other surfaces that drains across the proposed land disturbance shall
28 be diverted around the disturbed area, if practical. Any diversion of upslope runoff shall be done
29 in a manner that prevents erosion of the flow path and the outlet.

30
31 (e e) Cut and Fill Slopes. Any cuts and fills shall be planned and constructed to
32 minimize the length and steepness of slope, and stabilized in accordance with the approved ero-
33 sion control plan timelines and technical standards of this chapter.

34
35 (d f) Open Channels. Any open channels shall be designed and constructed to
36 carry the calculated peak flows for a 10-year 24-hour design storm, and stabilized in accordance
37 with the approved technical standards identified in sec. 17.10 of this chapter. ~~erosion control plan~~
38 timelines and technical standards of this chapter.

39
40 (e g) Inlet Protection. All inlets to storm drains, culverts and other stormwater
41 conveyance systems shall be protected from siltation until final site stabilization.

42
43 (f h) Outlet Protection. All outlets for site dewatering and stormwater convey-
44 ance systems, including pipe or open channels entering a stormwater management facility, shall
45 be protected from erosion through channel lining or other stabilization measures.

46
47 (g) Site Erosion Control. ~~Measures shall be taken, using approved best man-~~
48 agement practices, to minimize sediment from being carried off site by water or wind during the
49 construction phase, such as: diversions, silt fence, straw bales, downspout extenders,

1 soil treatment, temporary mulch, sediment traps, sediment basins, etc. All temporary best man-
2 agement practices shall be maintained until the site is stabilized. Some best management prac-
3 tices, such as sediment basins, may be designed to also serve as a permanent stormwater best
4 management practice after the site is stabilized.

5
6 (i) Dust Control. Prevent excessive dust from leaving the construction site
7 through construction phasing and timely stabilization or the use of best management practices
8 such as site watering and mulch – especially with very dry or fine sandy soils.

9
10 (h j) Site Dewatering. Water pumped from the site shall be treated by sediment
11 basins or other approved measures to prevent soil erosion and water pollution.

12
13 (I k) Waste and Material Disposal. All waste and unused building materials
14 (including garbage, debris, cleaning wastes, wastewater, toxic materials, or hazardous materials)
15 shall be properly disposed of and not allowed to be carried off-site by runoff or wind.

16
17 (j l) Topsoil. Enough topsoil from the disturbed area must be saved to ensure
18 that a minimum of 4 to 6 inches is reapplied for all areas to be seeded or sodded. If adequate
19 topsoil does not exist on the site to meet this requirement, it shall be imported. If the disturbed
20 area is to be used for the growing of agricultural crops in the future, the original depth of topsoil
21 shall be restored.

22
23 (k) ~~Subsoil. For disturbed areas that are to be used for the growing of agricul-~~
24 ~~tural crops, trees or other woody vegetation in the future, a minimum of 1 foot of original subsoil~~
25 ~~shall remain or be reapplied prior to the application of topsoil to provide an adequate root zone.~~

26
27 (m) Overland Flow. Trap sediment in overland flow before discharge from the
28 site using best management practices such as silt fence and vegetation filter strips.

29
30 (l n) Soil Stockpiles. Soil stockpiles shall be located no closer than ~~75~~ 25 feet
31 from lakes, streams, wetlands, ditches, drainage ways, curbs/gutters or other stormwater convey-
32 ance system, unless otherwise approved by the administering authority. Measures shall be taken
33 to minimize erosion and runoff from any soil stockpiles that will likely remain for more than 5
34 working days. Any soil stockpile that remains for more than 30 days shall be covered or treated
35 with stabilization practices such as temporary or permanent seeding and mulching.

36
37 (m o) Sediment Cleanup. All off-site sediment deposits occurring as a result of
38 construction work or a storm event shall be cleaned up by the end of each day. Flushing shall not
39 be allowed.

40
41 (n p) Final Site Stabilization. All previous cropland areas where land disturbing
42 construction activities will not be occurring under the proposed grading plan, shall be stabilized
43 within 30 days of permit issuance. All disturbed areas shall be treated with stabilization meas-
44 ures such as seeding, mulching, soil treatment, erosion netting, matting, sodding, etc. within 3
45 working days of final grading. Large sites shall be treated in stages as final grading is completed
46 in each stage. Any soil erosion that occurs after final grading and/or the application of stabiliza-
47 tion measures must be repaired and the stabilization work redone.

1 (e q) Temporary Site Stabilization. For any disturbed area that remains inactive
2 for greater than 7 ~~10~~ working days, or where grading work extends beyond the permanent seed-
3 ing deadlines established by the Land Conservation Committee, the administering authority may
4 require the site to be treated with temporary stabilization measures such as soil treatment, tempo-
5 rary seeding and/or mulching in addition to other erosion control measures as part of an approved
6 erosion control plan. Frozen soils do not exclude the site from this requirement.

7
8 (p r) Removal of Practices. When the disturbed area has been stabilized by
9 permanent vegetation or other means, temporary best management practices such as silt fences,
10 straw bales and sediment traps shall be removed and these areas stabilized.

11
12 (4)(AM 08-10) **Final Erosion Control Plan Contents.** (a) Sites of Less than One Acre
13 of Total Land Disturbance. The following shall be the minimum requirements for items to be in-
14 cluded in a final erosion control plan:

15
16 1. A scaled drawing of the site with a north arrow, delineation of the
17 proposed land disturbance, existing and proposed buildings, ~~roads~~ roadways, access drives, prop-
18 erty boundaries, drainage ways, water bodies, trees, culverts, and other structures within 50 feet of
19 the proposed land disturbance;

20
21 * * *

22
23 4. A description and location of all permanent best management prac-
24 tices proposed to be used to stabilize the site within 3 working days following construction; ~~and~~

25
26 5. The name(s), address and day time phone number(s) of the per-
27 son(s) charged with installing and maintaining all best management practices and thus subject to
28 the enforcement provisions of sec. 17.13 ~~14~~ 14 of this chapter; and

29
30 (b) Sites of One Acre or Greater in Total Land Disturbance. The following
31 shall be the minimum requirements for items to be included in an erosion control plan:

32
33 1. Existing Site Map and Data. A map and supporting data of exist-
34 ing site conditions at a scale of one inch equals no more than 100 feet showing the following
35 items on the site and within 50 feet in each direction of the site boundaries:

36
37 * * *

38
39 h. Boundaries and soil symbol for each soil mapping unit, as
40 published in the Soil Survey of Washington County; ~~*Note: This item may be on a separate map*~~
41 ~~*at smaller scale showing key locations of proposed land disturbing or land development activi-*~~
42 ~~*ty*~~;

43
44 i. Location and description of trees and other ~~vegetative~~ vege-
45 tation cover types;

46
47 * * *

1 k. Locations and dimensions of any buildings, ~~roads~~ road-
2 ways, parking areas, fence lines, access lanes, rock outcrops, tile drains, utilities and other physi-
3 cal features or structures;

4
5 2. Site Development Plan. A site development plan, using the same
6 map scale as the existing site map, shall include the following map items and supporting docu-
7 mentation:

8
9 a. Locations and dimensions of all proposed land ~~develop-~~
10 ~~ment and land~~ disturbing construction activities, including proposed cuts, fills and 2 foot contours
11 of final grade;

12 * * *

13
14
15 e. A construction schedule, including the sequence and antic-
16 ipated starting and completion date for each construction step and the installation of best man-
17 agement practices needed to meet the requirements of this ~~ordinance~~ chapter;

18 * * *

19
20
21 g. The name(s), address and daytime phone number(s) of the
22 person(s) charged with the responsibility of installing and maintaining all best management prac-
23 tices until the completion of a satisfactory final inspection by the administering authority under
24 sec. 17.11(5) of this chapter. ~~[Note: All persons so designated shall be subject to the enforce-~~
25 ~~ment provisions of sec. 17.13 of this chapter, should they fail to insure compliance with this~~
26 ~~chapter.]~~

27
28 **SECTION 8.** Section 17.09(1), (2), (3), (4) and (5) of the code are amended to read:

29 **17.09 STORMWATER MANAGEMENT PLAN REQUIREMENTS.** (1)(AM 08-
30 10) **General Requirements.** (a) A stormwater management plan, prepared in accordance with
31 this chapter shall maintain, as nearly as practical, the site's natural drainage patterns and assumed
32 pre-development peak flows and infiltration rates. In addition, measures shall be taken to pre-
33 vent or minimize the pollution of surface waters and groundwater resources, damage to down-
34 stream property and local flooding as a result of permanent stormwater discharges from the pro-
35 posed land development.

36
37 (b) Stormwater ponds and infiltration devices shall not be located closer to
38 water supply wells than allowed by the department of Natural Resources in Wis. Adm. Code NR
39 811 and NR 812.

40
41 (b c) All stormwater management plans and associated best management prac-
42 tices ~~designs prepared under this chapter shall comply with the plan requirements of this section~~
43 ~~and technical standards and specifications described in sec. 17.10 of this chapter.~~ shall comply
44 with the planning, design, implementation and maintenance requirements of this chapter.

45
46 (2)(AM 08-10) **Exception - Regional Stormwater Management Plans.** (a) In lieu of
47 submitting a preliminary or final stormwater management plan for an individual site, an applicant
48 may submit documentation of the following:

1 1. A regional stormwater management plan, that:

2
3 a. Includes the entire area of the proposed land development
4 disturbing construction activity;

5
6 (3)(AM 08-10) **Guiding Principles.** To satisfy the requirements of this section, unless
7 otherwise technically waived under sec. 17.05(4) of this chapter, all proposed land development
8 disturbing construction activities shall, to the extent practical:

9
10 (4)(AM 08-10) **Specific Stormwater Management Requirements and Performance**
11 **Standards.** Except where provided for under sub.(2) above, or technically waived under sec.
12 17.05(4) of this chapter, ~~all land development activities subject to the provisions of this subsec-~~
13 ~~tion shall provide on-site stormwater management plans, practices and facilities that meet the fol-~~
14 ~~lowing minimum requirements: the following minimum requirements shall be met on all sites~~
15 ~~subject to the applicability criteria under 17.05(2) of this chapter and shall be addressed in the~~
16 ~~stormwater management plan submitted by the applicant, if applicable. The Administering Au-~~
17 ~~thority is authorized to exceed the minimum requirements stated below for any site that the Ad-~~
18 ~~ministering Authority determines is a high risk of soil erosion or may significantly impact an en-~~
19 ~~vironmentally sensitive area, and that further controls are practical.~~

20
21 (a) Total Suspended Solids. ~~(b) Stormwater Quality.~~ The first 1/2 inch of
22 stormwater runoff (commonly referred to as the " first flush ") shall, to the extent practical, be
23 treated to remove suspended solids, nutrients, organic matter, trace metals, hydrocarbons and
24 other pollutants associated with the planned land development activity. At a minimum, any best
25 management practice that relies on ponding runoff and settling the suspended solids shall be de-
26 signed for settling, on an average annual basis, 80 percent of the total estimated suspended solids
27 load. The administering authority may require a higher level of controls if the administering au-
28 thority determines that the site has a high risk of water pollution or may otherwise significantly
29 impact an environmentally sensitive area, and that further controls are practical. A stormwater
30 management plan, by design, shall meet the following post-development total suspended solids
31 reduction targets, based on average annual rainfalls, as compared to no runoff management con-
32 trols.

33
34 1. For new land development, 80% reduction in total suspended sol-
35 ids load;

36
37 2. For redevelopment, 40% reduction of total suspended solids load;

38
39 3. For in-fill development that occurs prior to October 1, 2012, 40%
40 reduction total suspended solids load;

41
42 4. For in-fill development that occurs after October 1, 2012, 80% re-
43 duction of total suspended solids load.

44
45 5. Notwithstanding sub 1 - 4, if the design cannot achieve the appli-
46 cable total suspended solids reductions specified, the stormwater management plan shall include
47 a written and site-specific explanation why that level of reduction is not attained and the
48

1 total suspended solids load shall be reduced to the maximum extent practicable. In such case a
2 technical waiver in accordance with sec. 17.05(4) must be obtained for sites not meeting sub 1 - 4
3 above.

4
5 ~~(a) — Peak Flows. (b) Peak Discharge. 1. To minimize streambank erosion and~~
6 ~~the failure of downstream conveyance systems, the post-development peak flow discharge rates~~
7 ~~of stormwater runoff shall not exceed the calculated pre-development discharge rates for both the~~
8 ~~2-year 24-hour and the 10-year 24-hour design storms in accordance with the standards in sec.~~
9 ~~17.10(1) of this chapter. Additional peak flow controls may be required under sub.(4)(c) below.~~
10 ~~[Note: This will require a multiple staged outlet in some stormwater management facilities.]~~

11
12 2. This subsection of the chapter does not apply to any of the follow-
13 ing:

14
15 a. A post-construction site where the change in hydrology due
16 to development does not increase the existing surface water elevation at any point within the
17 downstream receiving water by more than 0.01 of a foot for the 2-year, 24-hour storm event.

18
19 b. A redevelopment post-construction site.

20
21 c. An in-fill development area less than 5 acres.

22
23 (c) Infiltration. BMP(s) shall be designed, installed, and maintained to infil-
24 trate runoff in accordance with the requirements listed in the following sections. Infiltration
25 areas shall be designed to minimize impacts on: roadways; public infrastructure or private later-
26 als; existing or proposed building sites, foundations or basements.

27
28 1. For residential developments, infiltrate the runoff volume from the
29 pre development 2-year 24 hour design storm with a type II distribution to the maximum extent
30 practicable. However, when designing appropriate infiltration systems to meet this requirement,
31 no more than 2% of the project site is required as an effective infiltration area. Should either of
32 the volumes in sub 2.a. or 2.b. be more restrictive than this section, the greater volume shall be
33 used.

34
35 2. When site constraints do not allow for appropriate infiltration sys-
36 tems, technical waivers may be sought in accordance with sec. 17.05(4); however, one of the fol-
37 lowing infiltration minimums shall be met when practicable:

38
39 a. Infiltrate sufficient runoff volume so that the post-
40 development infiltration volume shall be at least 90% of the pre-development infiltration volume,
41 based on an average annual rainfall. However, when designing appropriate infiltration systems to
42 meet this requirement, no more than 1% of the project site is required as an effective infiltration
43 area, or

44
45 b. Infiltrate 25% of the post-development runoff volume from
46 the 2-year, 24-hour design storm with a type II distribution. Separate runoff curve numbers for
47 pervious and impervious surfaces shall be used to calculate runoff volumes, not com

1 posite curve numbers, as defined in TR-55. However, when designing appropriate infiltration
2 systems to meet this requirement, no more than 1% of the project site is required as an effective
3 infiltration area.

4
5 3. For non-residential development, including commercial, industrial
6 and institutional development, infiltrate the runoff volume from the post development 1-year 24
7 hour design storm with a type II distribution to the maximum extent practicable. However, when
8 designing appropriate infiltration systems to meet this requirement, no more than 4% of the
9 project site is required as an effective infiltration area. Should either of the volumes in sub 4.a.
10 or 4.b. be more restrictive than this section, the greater volume shall be used.

11
12 4. When site constraints do not allow for appropriate infiltration sys-
13 tems, technical waivers may be sought in accordance with sec. 17.05(4); however, one of the fol-
14 lowing infiltration minimums shall be met when practicable:

15
16 a. Infiltrate sufficient runoff volume so that the post-
17 development infiltration volume shall be at least 60% of the pre-development infiltration volume,
18 based on an average annual rainfall. However, when designing appropriate infiltration systems to
19 meet this requirement, no more than 2% of the project site is required as an effective infiltration
20 area, or

21
22 b. Infiltrate 10% of the post-development runoff volume from
23 the 2-year, 24-hour design storm. Separate curve numbers for pervious and impervious surfaces
24 shall be used to calculate runoff volumes, not composite curve numbers, as defined in TR-55.
25 However, when designing appropriate infiltration systems to meet this requirement, no more than
26 2% of the project site is required as an effective infiltration area.

27
28 5. Modeling. Refer to sec. 17.10(1)(a) for details on calculating ru-
29 noff volumes from pre and post-development conditions.

30
31 6. Pretreatment. Pretreatment shall be required before infiltrating
32 parking lot and roadway runoff from commercial, industrial and institutional areas. The pre-
33 treatment shall be designed to protect the infiltration system from clogging prior to scheduled
34 maintenance and to protect groundwater quality in accordance with sub. 10 below. Pretreatment
35 options may include, but are not limited to, oil/grease separators, sedimentation or bioretention
36 basins, filtration swales or filter strips. All designs shall comply with the technical standards in
37 sec. 17.10(2) of this chapter.

38
39 7. Infiltration Exclusions. The runoff from the following areas are
40 prohibited from meeting the requirements of this paragraph.

41
42 a. Areas associated with Tier 1 industrial facilities identified
43 in s. NR 216.21(2)(a), Wis. Adm. Code, including storage, loading, rooftops and parking.

44
45 b. Storage and loading areas of Tier 2 industrial facilities
46 identified in s. NR 216.21(2)(b), Wis. Adm. Code. Runoff from Tier 2 parking and rooftops may
47 be infiltrated but may require pretreatment.

1 c. Runoff from fueling and vehicle maintenance areas, not in-
2 cluding rooftops and canopies.

3
4 d. Infiltration of runoff within 1,000 feet upgradient or within
5 100 feet downgradient of Karst features.

6
7 e. Infiltration of runoff from any area except rooftops with
8 less than 3 feet separation distance from the top of the filtering layer to the elevation of seasonal
9 high groundwater or the top of bedrock.

10
11 f. Infiltration of runoff from industrial, commercial and insti-
12 tutional parking lots and roadways and residential arterial roadways with less than 5 feet separa-
13 tion distance from top of the filtering layer to the elevation of seasonal high groundwater or the
14 top of bedrock.

15
16 g. Areas within 400 feet of a community water system well as
17 specified in s. NR 811.16(4), Wis. Adm. Code, or within 100 feet of a private well as specified in
18 s. NR 812.08(4), Wis. Adm. Code, for runoff infiltrated from commercial, industrial and institu-
19 tional land uses or regional devices for residential development, not including rooftop runoff.

20
21 h. Areas where contaminants of concern, as defined in s. NR
22 720.03(2), Wis. Adm. Code are present in the soil through which infiltration will occur.

23
24 8. Infiltration Exemptions. The following are not required to meet the re-
25 quirements of this paragraph:

26
27 a. Areas where the infiltration rate of all available soils is less
28 than 0.6 inches/hour measured at the site.

29
30 b. Parking areas and access roadways less than 5,000 square
31 feet for commercial and industrial development.

32
33 c. Redevelopment post-construction sites.

34
35 d. In-fill development areas less than 5 acres.

36
37 e. Infiltration areas during periods when the soil on the site is
38 frozen.

39
40 f. Roadways in commercial, industrial and institutional land
41 uses, and arterial residential roadways.

42
43 9. Alternate runoff uses. Where storage and reuse of runoff are em-
44 ployed, such as to support green roofs, landscape watering, toilet flushing, laundry or irrigation,
45 such alternate uses shall be given equal credit toward the infiltration volume required by this sec-
46 tion.

47
48 10. Groundwater protection.

1 a. Infiltration systems designed in accordance with this sub-
2 section shall, to the extent technically and economically feasible, minimize the level of pollutants
3 infiltrating to groundwater and shall maintain compliance with the preventive action limit at a
4 point of standards application in accordance with ch. NR 140 Wis. Adm. Code. However, if site-
5 specific information indicates that compliance with a preventive action limit is not achievable,
6 the infiltration BMP may not be installed or shall be modified to prevent infiltration to the max-
7 imum extent practicable.

8
9 b. The discharge from BMP(s) shall remain below the en-
10 forcement standard at the point of standards application.

11
12 c. No stormwater BMP shall be installed that meets the defini-
13 tion of an injection well under ch. NR 812.05 Wis. Adm. Code.

14
15 d. All stormwater BMP(s) shall comply with the provisions of
16 any applicable wellhead protection plan for a community water supply under ch. NR 811 Wis.
17 Adm. Code.

18
19 (d) Protective Areas. Protective area means an area of land that commences at
20 the top of the channel of lakes, streams and rivers, or at the delineated boundary of wetlands, and
21 that is the greatest of the following widths, as measured horizontally from the top of channel or
22 delineated wetland boundary to the closest impervious surface. However, in this section, “pro-
23 jective area” does not include any area of land adjacent to any stream enclosed within a pipe or
24 culvert, such that runoff cannot enter the enclosure at this location.

25
26 1. For outstanding resource waters as listed in s. NR 102.10, Wis.
27 Adm. Code and exceptional resource waters listed in s. NR 102.11, Wis. Adm. Code, and for
28 wetlands in areas of special natural resource interest as specified in s. NR 103.04 Wis. Adm.
29 Code, 75 feet.

30
31 2. For perennial and intermittent streams identified on a United States
32 Geological Survey 7.5-minute series topographic map, or a county soil survey map, 50 feet.

33
34 3. For lakes, 50 feet.

35
36 4. For highly susceptible wetlands, as determined by the Administer-
37 ing Authority, 50 feet. Highly susceptible wetlands include the following types: fens, sedge
38 meadows, bogs, low prairies, conifer swamps, shrub swamps, other forested wetlands, fresh wet
39 meadows, shallow marshes, deep marshes and seasonally flooded basins. Wetland boundary de-
40 lineations shall be made in accordance with ch. NR 103 Wis. Adm. Code. This paragraph does
41 not apply to wetlands that have been completely filled in accordance with all applicable state and
42 federal regulations. The protective area for wetlands that have been partially filled in accordance
43 with all applicable state and federal regulations shall be measured from the wetland boundary de-
44 lineation after fill has been placed.

45
46 5. For less susceptible wetlands, 10 percent of the average wetland
47 width, but no less than 10 feet nor more than 30 feet. Less susceptible wetlands include degraded
48 wetlands dominated by invasive species such as reed canary grass.

1 6. In subd. (4)(d)4 & (4)(d)5, determinations of the extent of the pro-
2 TECTIVE area adjacent to wetlands shall be made on the basis of the sensitivity and runoff suscepti-
3 bility of the wetland in accordance with the standards and criteria in Chapter NR 103 Wis. Adm.
4 Code.

5
6 7. For concentrated flow channels with drainage areas greater than
7 130 acres, 10 feet.

8
9 (e) Requirements within Protective Areas. The following requirements shall
10 be met for all land disturbing construction activity located within a protective area:

11
12 1. Conflicting ordinances. The Washington County Ordinance Chap-
13 ter 23, Shoreland, Wetland and Floodplain Zoning also requires setback from a waterbody. The
14 type of development shall determine which chapter will apply. If a site is regulated by both chap-
15 ters than the most restrictive setback or protective area shall apply.

16
17 2. Impervious surfaces shall be kept out of the protective area, except
18 for boathouses and walkways authorized under shoreland and floodplain zoning. The erosion
19 control plan shall contain a written site-specific explanation for any parts of the protective area
20 that are disturbed during construction.

21
22 3. Where land disturbing construction activity occurs within a protec-
23 tive area, and where no impervious surface is present, adequate sod or self-sustaining non-
24 invasive, flood and drought tolerant vegetation cover of 70% or greater shall be established and
25 maintained. The adequate sod or self-sustaining vegetation cover shall be sufficient to provide
26 for bank stability, maintenance of fish habitat and filtering of pollutants from upslope overland
27 flow areas under sheet flow conditions. Non-vegetation materials, such as rock riprap, may be
28 employed on the bank as necessary to prevent erosion, such as on steep slopes or where high ve-
29 locity flows occur.

30
31 4. Best management practices such as filter strips, swales, or wet de-
32 tection basins, that are designed to control pollutants from non-point sources may be located in
33 the protective area, but shall not encroach into wetlands, floodplains, primary or secondary envi-
34 ronmental corridors.

35
36 5. Protective Area Exemptions. The following sites are exempted
37 from meeting this subsection.

38 a. Redevelopment post-construction sites.

39 b. In-fill development areas less than 5 acres.

40
41 c. Structures that cross or access surface waters such as boat
42 landings, bridges and culverts;

43
44 d. Structures constructed in accordance with sec. 23.09(13)
45 Washington County Ordinance; or §59.692(1v), Wisconsin Statutes; and
46
47
48

1 e. Sites where runoff does not enter the surface water, except
2 to the extent that vegetation ground cover is necessary to maintain bank stability.

3
4 (f) Fueling and Vehicle Maintenance Areas. Fueling and vehicle maintenance
5 areas shall have BMP(s) designed, installed and maintained to reduce petroleum within runoff,
6 such that the runoff that enters waters of the state contains no visible petroleum sheen.

7
8 (e g) Protection of Wetlands. Stormwater discharges shall minimize the hydro-
9 logic changes and pollutant loadings to wetlands, to the extent practical, in order to preserve the
10 wetland functional values. All discharges to wetlands shall require the same protection as pars.
11 (a) and (b) above, unless otherwise approved by any other applicable regulatory agency and the
12 administering authority in accordance with technical standards adopted under sec. 17.10 of this
13 chapter. If any land disturbing construction activity is proposed in a wetland as part of a final
14 stormwater management plan, the administering authority may require all other applicable per-
15 mits to be obtained prior to the issuance of an erosion and runoff control permit.

16
17 (d) ~~Protection of Groundwater Quality. 1. Stormwater discharges shall pre-~~
18 ~~vent the introduction of pollutants in the groundwater at concentrations that will likely exceed~~
19 ~~groundwater preventive action limits or enforcement standards established by the Department of~~
20 ~~Natural Resources in Wis. Admin. Code NR 140. Pretreatment shall be provided for all storm-~~
21 ~~water management facilities that will likely violate this subsection, as determined by the Wiscon-~~
22 ~~sin Department of Natural Resources or stated in the technical standards adopted under sec.~~
23 ~~17.10 of this chapter.~~

24
25 2. ~~Stormwater structures shall not be installed that meet the definition~~
26 ~~of an injection well under Wis. Admin. Code NR 812.05.~~

27
28 3. ~~Stormwater ponds and infiltration devices shall not be located~~
29 ~~closer to water supply wells than allowed by the Department of Natural Resources in Wis. Ad-~~
30 ~~min. Code NR Chs. 811 and NR 812.~~

31
32 4. ~~If a wellhead protection plan has been approved for any area in-~~
33 ~~cluded in the proposed land development, the administering authority shall consult with the ap-~~
34 ~~propriate authority to ensure compliance with any recommendations or regulations contained in~~
35 ~~that plan.~~

36
37 (h) Site Drainage. Measures shall be implemented to ensure proper site drai-
38 nage, prevent property damage and protect public health and safety, including the following min-
39 imum requirements:

40
41 1. Drainage easement. Perpetual drainage easements or other deed
42 restrictions shall be recorded on the property to preserve major stormwater flow paths and per-
43 manent stormwater BMP locations. Covenants in these areas shall not allow buildings, other
44 structures, prevent any grading, filling or other activities that interrupt or obstruct flows in any
45 way. Covenants shall also specify maintenance responsibilities and authorities in accordance
46 with sec. 17.12.

47
48 2. Site grading. Site grading shall ensure, to the maximum extent
49 practicable, positive flows away from all buildings, roadways, driveways and septic systems, be

1 coordinated with the general stormwater drainage patterns for the area, and minimize adverse
2 impacts on adjacent properties.

3
4 3. Subsurface drainage. No discharge of groundwater from tile lines,
5 septic tanks or other means shall be allowed onto another persons land or any public space
6 without the written approval of the owner or unit of government. The Administering Authority
7 shall be notified of any drain tiles that are uncovered during construction, which the Administer-
8 ing Authority may require to be restored or connected to other drainage systems.

9
10 4. Structure protection and safety. For buildings designed for human
11 occupation on a regular basis, the following additional requirements shall apply:

12
13 a. The lowest elevation of the structure that is exposed to the
14 ground surface that is hydrological connected to any stormwater BMP shall be a minimum of two
15 (2) feet above the maximum water elevation produced by the 100-year, 24 hour design storm, in-
16 cluding flows through any stormwater BMP that may temporarily or permanently store water at a
17 depth of greater than one (1) foot not including conveyance systems; and

18
19 b. For internally drained areas the maximum water elevation
20 shall be determined using the volume produced by the 100-year 24 hour design storm with a
21 NRCS runoff curve number of 98 for the entire watershed, to reflect frozen ground conditions.

22
23 c. The structure shall be setback at least 20 feet from any
24 stormwater BMP that may temporarily or permanently store water at a depth of greater than one
25 (1) foot not including conveyance systems. Setback distance shall be measured from the closest
26 edge of water at the elevation produced by the 100-year, 24-hour design storm.

27
28 5. Additional Requirements. The Administering Authority may es-
29 tablish more stringent requirements than the minimums set forth in this section, such as address-
30 ing thermal impacts of stormwater or chronic wetness conditions, if the Administering Authority
31 determines that an added level of protection is needed.

32
33 (e) i) Flooding. All stormwater management facilities shall have the capacity to
34 safely handle the calculated peak flow rates for a 100-year 24-hour design storm without structur-
35 al failure, bank erosion, loss of freeboard or other problems. At a minimum, an emergency
36 spillway must be provided to carry these flows. Additional control measures, such as infiltration
37 practices or maintaining pre-development peak flows for the 100-year design storm, may be re-
38 quired if the administering authority determines that the proposed land development activity has
39 a high risk of creating or significantly compounding downstream flooding or chronic wetness
40 problems.

41
42 ~~(f) Soil Investigations. Soil profile investigations shall be conducted at each~~
43 ~~site proposed for the construction of a stormwater management facility. Each excavation shall~~
44 ~~extend a minimum of 3 feet below the proposed bottom of the facility or any component of the~~
45 ~~facility, such as infiltration trenches. An adequate number of excavations shall be conducted to~~
46 ~~examine all soil types present in the immediate area of the proposed facility, as determined by the~~
47 ~~administering authority. Each soil investigation site shall be located on the site develop~~
48

1 ~~ment plan, under sub.(5)(b) below along with the elevation, to the nearest tenth of a foot, of the~~
2 ~~original ground surface. A soil tester, certified in the State of Wisconsin, or the administering~~
3 ~~authority is required to log the soil profile and groundwater elevation(s). The administering au-~~
4 ~~thority may require an inspection of the soil profile when it is logged by another party.~~

5
6 (5)(AM 08-10) **Final Stormwater Management Plan Contents.** The following shall be
7 the minimum requirements for items to be included in a final stormwater management plan:

8
9 * * *

10
11 (b) Site Development Plan. A site development plan, using the same map
12 scale as the existing site map, shall include all of the following map items and supporting docu-
13 mentation:

14
15 1. Locations and dimensions of all proposed land ~~development~~ dis-
16 turbing construction activities, including proposed cuts, fills and 2-foot contours;

17
18 * * *

19
20 3. Location of all proposed stormwater conveyance systems and grade
21 stabilization structures, including grade lines, cross-sections, flow/velocity computations based
22 on a 10-year 24-hour design storm, and the delineation of proposed subwatersheds for each
23 reach; *[Note: For watershed areas that extend outside of the boundaries of the site map, other*
24 *sealed maps may be used.]*;

25
26 * * *

27
28 6. Results of investigations of soils and groundwater required under
29 ~~sub.(4)(e) above~~ sec. 17.10(5) of this chapter, including location and elevation of each investiga-
30 tion site, for the placement and design of stormwater management facilities;

31
32 * * *

33
34 8. A detailed construction inspection plan, outlining the critical ele-
35 ments in the plan that need to be surveyed or inspected by a representative of the project engi-
36 neer, the Administering Authority or the municipality, and the timing and notification require-
37 ments involved. Examples of critical elements for a construction inspection plan include, but are
38 not limited to: checking subgrade elevations or the placement of footings, pipes or other struc-
39 tures prior to covering, soil testing, material inspections and final grade checks before seeding.
40 Inspections conducted by the Administering Authority or the municipality do not waive the per-
41 mit holder's responsibility for construction oversight and verification.

42
43 8 9. Certification, from a professional engineer registered in the State of
44 Wisconsin, that all calculations and designs included in the final stormwater management plan
45 have been reviewed and approved as being in accordance with the requirements of this chapter.

1 9 10. The name(s), address, ~~and~~ daytime phone and FAX number of the
2 contact person during the plan review process, the construction supervisor, and the engineer that
3 will certify construction of all stormwater management facilities under sec. 17.11(4) of this chap-
4 ter;

5
6 ~~10~~ 11. For sites where changes are proposed in stormwater flow paths, or
7 where proposed stormwater discharges may otherwise have a significant negative impact on
8 downstream property owner(s), the administering authority may require the applicant to obtain
9 written authorization or complete other legal arrangements with the affected property owner(s);
10 and

11
12 ~~11~~ 12. Other items deemed necessary by the administering authority to en-
13 sure compliance with the requirements of this chapter.

14
15 **SECTION 9.** Section 17.10(1), (2), (3), (4), (5) and (6) of the code are amended to read:

16
17 **17.10 TECHNICAL STANDARDS AND SPECIFICATIONS.** (1)(AM 08-10) **Hy-**
18 **drologic and Hydraulic Computations.** (a) Models. All computations of runoff volumes and
19 peak flow rates used in the development of erosion control and stormwater management plans in
20 accordance with this chapter shall be based on the principles of Technical Release 55 (TR-55),
21 "Urban Hydrology for Small Watersheds", published by the Natural Resources Conservation
22 Service (NRCS), United States Department of Agriculture, June 1986 revision, using Type II de-
23 sign storms. ~~To determine compliance with this chapter (for Washington County), the following~~
24 ~~design storms values shall be used:~~ Models such as SLAMM, P8 or other models approved by
25 the Administering Authority may be used to evaluate the efficiency of the design in reducing to-
26 tal suspended solids to meet this chapter. Models such as RECARGA or other models, approved
27 by the Administering Authority, may be used to evaluate the efficiency of the design in meeting
28 the infiltration requirements of this chapter.

29
30 (b) Rainfall Depths. To determine compliance with this chapter (for Wash-
31 ington County), the following design storms values shall be used:

32

Design Storm	1-year 24-hour	2-year 24-hour	10-year 24-hour	100-year 24-hour
Rainfall Depth	2.3 inches	2.7 inches	3.9 inches	5.5 inches

33
34 (b) c) Runoff Curve Numbers. All computations of pre-development conditions
35 as required under sec. 17.09(4)(a) ~~b~~ of this chapter shall use those TR-55 runoff curve numbers
36 assigned for a "good" hydrologic condition for each land cover type. For lands where the
37 pre-development land use was cropland, the following TR-55 curve number values shall be used
38 as maximums:
39

Soil Hydrologic Group	A	B	C	D
NRCS Runoff Curve Number	56	70	78 <u>79</u>	82 <u>83</u>

~~(e d) All velocity and peak flow computations for open channels and storm sewer pipe flows shall be based on Mannings Formula. Average Annual Rainfalls. All modeling involving average annual rainfall or runoff volumes shall use rainfall data from the Milwaukee area between March 28k and December 6, 1969 as the typical annual rainfall pattern for Washington County.~~

~~(d e) Flow routing, culvert design, weir and orifice flow and other related hydraulic computations used to design stormwater management facilities shall be based on standard applicable engineering formulas. Rainfall Distribution. All peak flow calculations shall be Type II rainfall distribution patterns, as defined in NRCS methodologies.~~

~~(e f) Any data or design method proposed to be used for hydrologic or hydraulic computations other than those listed above shall be approved in advance in writing by the administering authority. Other Methods. All velocity and peak flow computations for open channels and storm sewer pipe flows shall be based on Manning's Formula. Flow routing, culvert design, weir and orifice flow and other related hydraulic computations used to design stormwater management facilities shall be based on standard applicable engineering formulas. Any design data or methodology proposed to be used for hydrologic or hydraulic computations other than those prescribed in this chapter shall be approved by the Administering Authority.~~

~~(2)(AM 08-10) **Best Management Practice Design Standards.** The design of all best management practices used to meet the requirements of this chapter shall comply with the following technical standards: (a) The design, installation and maintenance of all BMP(s) used to meet the requirements of this chapter shall comply with the technical standards identified, developed or disseminated by the Wisconsin Department of Natural Resources under subchapter V of ch. NR 151, Wis. Adm. Code.~~

~~(a) — The Wisconsin Construction Site Best Management Practice Handbook, published by the Wisconsin Department of Natural Resources;~~

~~(b) — Chapter IV of the Field Office Technical Guide, published by the United States Department of Agriculture — Natural Resource Conservation Service; and~~

~~(c) — Other technical standards published or adopted by the above noted agencies, the Wisconsin Standards Oversight Council or the Land Conservation Committee.~~

~~(b) Where BMP standards have not been identified or developed under sub. (2) above, the Administering Authority may approve the use of other available standards, such as those from other states or the USDA-Natural Resources Conservation Service.~~

* * *

1 (4)(AM 08-10) **Construction Specifications.** ~~The construction or installation of all best~~
2 ~~management practices and other structures shall comply with all the construction specifications~~
3 ~~adopted by the Land Conservation Committee, including standard seeding or sodding deadlines~~
4 ~~for site stabilization.~~ The construction or installation of all BMP(s) and BMP components shall
5 comply with all applicable manufacturers and industry standards and specifications, including but
6 not limited to those published by American Society for Testing and Materials (ASTM) and the
7 USDA – Natural Resources Conservation Service (NRCS).

8
9 (5)(AM 08-10) **Soil Evaluations.** All soil profile evaluations and forms submitted for
10 review to the Administering Authority under the provisions of this chapter shall be conducted by
11 a qualified professional in accordance with s. COMM 85.20 and s. COMM 85.30 Wis. Adm.
12 Code. Evaluation report forms submitted for review to the Administering Authority shall be
13 completed in accordance with s. COMM 85.40 Wis. Adm. Code or on forms supplied by the
14 Administering Authority. Determination of soil saturation with groundwater monitoring wells
15 shall be done in accordance with s. Comm 85.60 or ch. NR 141 Wis. Adm. Code. The number,
16 location or depth of a soil profile evaluation shall be based on the applicable standards under sub.
17 (2) above. In the event that the standard does not indicate the soil profile evaluation require-
18 ments the Administering Authority shall make the determination based on the design of the BMP
19 and the likely variability of the on-site soils.

20
21 (5 6)(AM 08-10) **Availability.** Copies of all technical standards, guidelines and specifi-
22 cations adopted by the Land Conservation Committee shall be available for review and distribu-
23 tion through the Land and Water Conservation Division of the Planning and Parks Department.
24 Fees may be charged for copies of these items in accordance with a fee schedule established by
25 the Land Conservation Committee.

26
27 (6 7)(AM 08-10) **Future Revisions or Updates.** The technical standards, guidelines and
28 specifications referenced in this section are made a part of the chapter and shall be updated pe-
29 riodically in order to keep current with field experiences, research, technological advances and
30 the development of related technical standards by other agencies and units of government. Any
31 future revision or update of the technical standards or specifications incorporated herein are also
32 made part of this chapter unless otherwise acted upon by the Land Conservation Committee.

33
34 **SECTION 10.** Section 17.11(1), (2), (3) and (4) of the code are amended to read:

35 **17.11 PERMIT REQUIREMENTS.** (1)(AM 08-10) **General Conditions.** For all
36 permits issued under this chapter, the permit holder shall:

37
38 * * *

39
40 (b) Complete all activities in accordance with the plan(s) and construction
41 schedule approved by the administering authority. Any significant changes made during imple-
42 mentation without prior approval by the administering authority shall be subject to enforcement
43 action under sec. 17.13 14 of this chapter.

44
45 * * *

1 (d) Authorize the administering authority access to the property to perform ins-
2 pectations and to carry out any necessary enforcement activities under sec. 17.13 14 of this chap-
3 ter.

4
5 (e) Inspect all best management practices after each rain event of 0.5 inch or
6 more, or at least once each week, and make any needed repairs. The permit holder shall maintain
7 best management practices until the financial guarantee under sub.(3) below is released by the
8 administering authority. The permit holder shall provide a qualified representative to conduct in-
9 spections and maintain an inspection log for the site. The inspection log shall include the name
10 of the inspector, the date and time of inspection, a description of the present phase of construc-
11 tion, the findings of the inspection, including an assessment of the condition of erosion and se-
12 diment control measures and the installation of stormwater management BMP(s), and an action
13 needed or taken to comply with this chapter. The inspection log shall also include a record of
14 BMP maintenance and repairs conducted. The permit holder shall maintain a copy of the inspec-
15 tion log at the construction site and shall be made available to the Administering Authority upon
16 request.

17
18 (2)(AM 08-10A) **Permit Issuance and Duration.** (a) The administering authority shall
19 establish an expiration date for all permits issued under this chapter. The expiration date shall
20 not exceed 18 months and shall be based on the construction schedules submitted by the appli-
21 cant under subs. 17.08(4)(b)† 2.e. and 17.08(4)(b)† 2.i. of this chapter, and the technical stan-
22 dards and specifications adopted by the Land Conservation Committee under sec. 17.10 of this
23 chapter.

24
25 * * *

26
27 (c) In accordance with the technical standards and specifications in sec. 17.10
28 of this chapter, the administering authority may withhold issuance, suspend or revoke an erosion
29 and runoff control permit, or require a change in the proposed construction schedule as a condi-
30 tion of a permit under sub. (1) above, if the administering authority determines that all of the fol-
31 lowing apply:

32
33 1. The proposed or actual land disturbing construction activity will
34 exceed standard deadlines for seeding and sodding;

35
36 (3)(AM 08-10) **Financial Guarantee.** (a) Purpose and Type. A bond, escrow or letter
37 of credit in a form approved by the administering authority shall be required for all erosion and
38 runoff control permits issued to ensure compliance with this chapter.

39
40 * * *

41
42 (d) Conditions for Release. 1. The administering authority shall release the
43 financial guarantee only after determining full compliance with the requirements of the permit and
44 this chapter, including the following:

45
46 * * *

1 3. The administering authority shall withhold from the financial guar-
2 antee amount released to the permit holder, any costs incurred by the County to complete instal-
3 lation or maintenance of best management practices through enforcement action, as described in
4 sec. 17.13 14 of this chapter, or prior to the transfer of maintenance responsibilities through an
5 approved maintenance agreement, or other unpaid fees or costs incurred by the County asso-
6 ciated with the administration of this section.

7
8 (4)(AM 08-10) **Construction Certification.** (a) A professional engineer, licensed in the
9 State of Wisconsin, ~~shall be in responsible charge and certify that the construction of all storm-~~
10 ~~water management facilities, and other best management practices as determined by the adminis-~~
11 ~~tering authority, comply with the plan(s) approved by the administering authority and the tech-~~
12 ~~nical standards and specifications of sec. 17.10 of this chapter.~~ shall verify that the engineer or
13 qualified representative has successfully completed all site inspections outlined in the construc-
14 tion inspection report that the stormwater management BMP(s) were constructed and comply
15 with the approved plans and applicable technical standards and specification of sec. 17.10 of this
16 chapter, or otherwise satisfy all the requirements of this chapter. If warm season or wetland
17 plantings are involved, a landscape architect or other qualified professional shall verify the plant-
18 ing process and its successful establishment.

19
20 (b) "As-built Plans and Survey". An as-built survey shall be certified as accu-
21 rate by a registered land surveyor or an engineer licensed in the State of Wisconsin. "As-built"
22 plans shall be submitted for all stormwater management facilities and other permanent best man-
23 agement practices or practice components as deemed necessary by the administering authority to
24 ensure compliance with this chapter. As-built plans shall document, on maps and drawings of
25 the same scale and quality as the site development plan, actual location, elevations, materials,
26 construction specifications and other items and be certified by the project engineer.

27
28 **SECTION 11.** Section 17.12(2) of the code is amended to read:

29 **17.12 MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES.**

30 (2)(AM 08-10) **Agreement Provisions.** The maintenance agreement shall, at a minimum, con-
31 tain all of the following information and provisions:

32 * * *

33
34
35 (f) Authorization ~~for~~ to access to the property by employees of the Washing-
36 ton County Land and Water Conservation Division of the Planning and Parks Department, the
37 local unit of government, ~~and other applicable authority~~ their Administering Authority, assigns or
38 designees to conduct regular inspections of the facility, monitor its performance and mainten-
39 ance, and notify the designated entity when maintenance or repair activities are necessary; ~~[Note:~~
40 ~~Some or all of these activities may be carried out in accordance with a intergovernmental work-~~
41 ~~ing agreement under §66.0301, Wis. Stats.]~~

42 * * *

43
44
45 (j) Language confirming that the entire agreement shall remain binding
46 among all parties to and within the agreement, until changes are mutually agreed to in writing by
47 all parties. Any changes made to the agreement must maintain the minimum items listed in this
48 subsection and the long term maintenance of the stormwater management facility; and

1 **SECTION 12.** Section 17.13(1), (2) and (3) of the code are amended to read:

2 **17.13(AM 08-10) ILLICIT DISCHARGES. (1)(AM 08-10) Prohibitions.** (a) Dis-
3 charges. Except for stormwater and other discharges specifically exempted under sub. (b) below,
4 no discharge, spilling or dumping of substances or materials shall be allowed into receiving water
5 bodies or onto driveways, sidewalks, parking lots or other areas that drain into the storm drainage
6 system.

7
8 (b) Connections. The construction, use, maintenance or continued existence
9 of illicit connections to the storm drainage system is prohibited. This prohibition expressly in-
10 cludes, without limitation, illicit connections made prior to the adoption of this chapter, regard-
11 less of whether the connection was permissible under law or practice applicable or prevailing at
12 the time of connection.

13
14 (2)(AM 08-10) Exemptions. The following activities are exempt from the provisions of
15 this section unless found to have an adverse impact on the stormwater:

16
17 (a) Discharges authorized by a permit issued by the Wisconsin Department of
18 Natural Resources.

19
20 (b) Discharges resulting from fire fighting activities.

21
22 (c) Discharges from uncontaminated ground water, potable water source, roof
23 drains, foundation drain and sump pump, air conditioning condensation, springs, lawn watering,
24 individual residential car washing, water main and hydrant flushing and swimming pools if the
25 water has been dechlorinated.

26
27 (3)(AM 08-10) Notice of Violation. Whenever the Administering Authority finds a vi-
28 olation of this section, the Administering Authority may order compliance by written notice of
29 violation to the responsible party. Such notice may require without limitation:

30
31 (a) The elimination of illicit connections or discharges;

32
33 (b) That violating discharges, practices, or operations shall cease and desist;

34
35 (c) The abatement or remediation of stormwater pollution or contaminated
36 hazards and the restoration of any affected property;

37
38 (d) Any responsible party that fails to comply with a notice of violation under
39 this section shall be subject to further enforcement action under the provisions of sec. 17.14 be-
40 low.

41
42 **SECTION 13.** Section 17.14(1) and (2) of the code are amended to read:

43 **17.13 14 (AM 08-10) ENFORCEMENT. (1)(AM 08-10) Administering Authority.**
44 The administering authority is authorized to administer and enforce compliance with this chapter.
45 The administering authority shall have the following powers and duties:

46
47 * * *

1 (f) ~~Assist the Board of Adjustment with the appeal process by providing the~~
2 ~~necessary information for their consideration and action.~~

3
4 (2)(AM 08-10) **Prohibited Practices.** It shall be deemed a violation, and be subject to
5 enforcement action, for any person, firm, association, corporation or other entity subject to the
6 requirements of this chapter to do in any of the following:

7
8 (a) Commence ~~in any land disturbing or land development~~ construction activi-
9 ty prior to:

- 10
11 1. Obtaining an erosion and runoff control permit; or
12
13 2. Notifying the administering authority in writing a minimum of 24
14 hours in advance of commencement of the activity; or
15
16 3. Installing those best management practices identified in the ap-
17 proved plan(s) to be installed prior to any land disturbing ~~or land developing~~ construction activi-
18 ty.

19 * * *

20
21
22 (d) Fail to comply with a notice of violation under sec. 17.13(3) of this chap-
23 ter.

24
25 **SECTION 14.** Section 17.14 of the code is amended to read:

26 **17.14 15 (AM 08-10) APPEALS.** (1) **Authority.** The Board of Adjustment shall act as
27 the review and appeal authority for any order, requirement, decision or determination by the ad-
28 ministering authority under this chapter.

29
30 **SECTION 15.** Section 17.15 of the code is amended to read:

31 **17.15 16 (AM 08-10) SEVERABILITY.** If any section, clause, provision or portion of
32 this chapter is judged unconstitutional or invalid by a court of competent jurisdiction, the re-
33 mainder of the ~~ordinance~~ chapter shall remain in force and not be affected by such judgment.

34
35 **SECTION 16.** Section 17.16(1), (2) and (4) through the end of the code are amended to
36 read:

37 **17.16 17 (AM 08-10) DEFINITIONS.** The terms used in this chapter shall have the fol-
38 lowing meaning:

39
40 (1)(AM 08-10) **"Administering authority"** for purposes of Washington County, means
41 the County Conservationist or his or her designee; and for purposes of other governing entities
42 (towns, villages, cities) within Washington County, means a governmental employee or con-
43 tracted firm that is designated by the governing body to administer this chapter.

44
45 (2) (AM 08-10) **"Affected"** as used in sec. 17.13 ~~14~~ 14(3)(e) of this chapter, means that a
46 regulated activity has significantly:

47 * * *

1 (4) (AM 08-10) "average annual rainfall" means a calendar year of precipitation, ex-
2 cluding snow, which is considered typical.

3
4 (4 5) (AM 08-10) "Best management practice" means a practice, technique or measure
5 that is an effective, practical means of preventing or reducing soil erosion and/or water pollution
6 from runoff both during and after land development activities. These can include structural, ve-
7 getative or management practices. (or "BMP") means structural or non-structural measures,
8 practices, techniques or devices employed to avoid or minimize soil, sediment or pollutants car-
9 ried in runoff to waters of the state.

10
11 (5 6) (AM 08-10) "Common plan of development" means all lands included within the
12 boundary of one or more certified surveys or other land divisions where multiple, separate and
13 distinct land development activity may occur at different times. means all lands included within
14 the boundary of a certified survey map or subdivision plat created for the purpose of development
15 or sale of property where integrated, multiple, separate and distinct land developing activity may
16 take place at different times by future owners.

17
18 (7) (AM 08-10) "Connected Impervious" means an impervious surface that is directly
19 connected to a separate storm sewer or water of the state via an impervious flowpath.

20
21 (6 8) (AM 08-10) "Construction site erosion control" means preventing or reducing
22 soil erosion and sedimentation from land disturbing construction activity.

23
24 (9) (AM 08-10) "Conveyance System" means a device or practice such as a swale, pipe,
25 or ditch that is designed specifically to pass the stormwater from one place to another. A con-
26 veyance system does not include a practice designed for post-construction stormwater manage-
27 ment, i.e. infiltration basin, infiltration trench, infiltration swale, bioretention basin, rain garden,
28 or wet detention basin.

29
30 (7 10) (AM 08-10) "Design storm" means a hypothetical ~~depth of rainfall that would~~
31 occur for the stated return frequency (e.g. 2-year or 10-year) and duration (e.g. 24-hour). All val-
32 ues are based on the historical rainfall records for the area and are available for reference in many
33 publications. [Note: See sec. 17.10(1) of this chapter for a table of applicable design storms for
34 Washington County.] discrete rainstorm characterized by a specific duration, temporal distribu-
35 tion, rainfall intensity, return frequency and total depth of rainfall

36
37 (11) (AM 08-10) "Dewatering" means the removal of trapped water from a construction
38 site to allow land development or utility installation activities to occur.

39
40 (12) (AM 08-10) "Effective infiltration area" means the area of the infiltration system
41 that is used to infiltrate runoff and does not include the area used for site access, berms or pre-
42 treatment.

43
44 (8)(13) (AM 08-10) "Environmentally sensitive area" means any area that, due to the
45 natural resources present or the lack of filtering capacity, is significantly more susceptible to the
46 negative impacts of sedimentation and other pollutants associated with erosion and urban runoff.
47 Examples include direct hydrologic connections to lakes, stream, wetlands or other water re-
48 sources, very coarse or shallow soils to groundwater or bedrock, or areas inhabited by endan-
49 gered resources and environmental corridors.

1 (14) (AM 08-10) "Erosion" means the process by which the land's surface is worn away
2 by the action of water, wind, ice or gravity.

3
4 (15) (AM 08-10) "Filtering layer" means soil that has at least a 3-foot deep layer with
5 at least 20% that passes through a #200 sieve (fines); or at least a 5-foot deep layer with at least
6 10% that passes through a #200 sieve (fines); or another medium exists with an equivalent level
7 of protection, as determined by the Administering Authority.

8
9 (9)(16) (AM 08-10) "Final grading" means the placement of topsoil over disturbed
10 areas in accordance with the requirements of sec. 17.08(3) of this chapter.

11
12 (17) (AM 08-10) "Groundwater recharge areas" means lands identified in a document
13 published by the Southeastern Wisconsin Regional Planning Commission as groundwater re-
14 charge areas; or where, prior to any land disturbing construction activity, precipitation or runoff
15 could only leave the area by infiltrating the ground, thereby recharging the groundwater.

16
17 (18) (AM 08-10) "Illicit connection" means any drain or conveyance, whether on the
18 surface or subsurface, which allows an illegal non-stormwater discharge to enter the storm drain
19 system, including but not limited to: sewage, process wastewater and wash water, any connec-
20 tions to the storm drain system from indoor drains and sinks, regardless of whether said drain or
21 connection had been allowed, permitted, or approved by a government agency, prior to the adop-
22 tion of this chapter.

23
24 (19) (AM 08-10) "Impervious surface" means an area that releases as runoff all or a
25 large portion of the precipitation that falls on it, except for frozen soil. Rooftops, sidewalks,
26 driveways, parking lots and streets are examples of surfaces that typically are impervious. For
27 purposes of this chapter, typical gravel driveways and other examples listed shall be considered
28 impervious unless specifically designed to encourage infiltration or storage of runoff.

29
30 ~~(10) "Impervious surface" means any land cover that prevents rain or melting snow~~
31 ~~from soaking into the ground, such as roofs (including overhangs), roads, sidewalks, patios,~~
32 ~~driveways and parking lots. For purposes of this chapter, all road, driveway or parking surfaces,~~
33 ~~including gravel, shall be considered impervious, unless specifically designed to encourage infil-~~
34 ~~tration and approved by the administering authority.~~

35
36 (14)(20) (AM 08-10) "Impractical" means that complying with a specific requirement
37 would cause undue economic hardship and that special conditions exist which are beyond the
38 control of the applicant and would prevent compliance.

39
40 (21) (AM 08-10) "In-fill development" means land development that occurs where
41 there was no previous land development and is surrounded by other existing land development.

42
43 (12)(22) "Infiltration" means the entry and movement of precipitation or runoff into or
44 through process by which rainfall or runoff seeps into the soil.

1 (23) (AM 08-10) "Infiltration system(s)" means a device or practice such as a basin,
2 trench, rain garden or swale designed specifically to encourage infiltration, but does not include
3 natural infiltration in pervious surfaces such as lawns, redirecting of rooftop downspouts onto
4 lawns or minimal infiltration from practices, such as swales or roadway side channels designed
5 for conveyance and pollutant removal only.

6
7 (13)(24) (AM 08-10) **"Intercept soil transport"** means the process of trying to prevent
8 delivery of sediment by installing a silt fence or some other form of sediment trap in the flow
9 path to slow flows and settle the suspended soil particles.

10
11 (25) (AM 08-10) "Karst features" means an area or surficial geologic feature subject to
12 bedrock dissolution so that it is likely to provide a conduit to groundwater, and may include
13 caves, enlarged fractures, mine features, exposed bedrock surfaces, sinkholes, springs, seeps or
14 swallets.

15
16 (14)(26) (AM 08-10) **"Land Conservation Committee"** means the committee of the
17 Washington County Board of Supervisors that is created under the authority of §92.06, Wis.
18 Stats., with the powers and duties specified in the Ch.15 of ~~this~~ the Washington County code.

19
20 (15)(27)(AM 03-42) **"Land and Water Conservation Division of the Planning &**
21 **Parks Department"** means the County department that is charged with implementing the soil
22 and water conservation policies and programs of the Washington County Land Conservation
23 Committee, including this chapter.

24
25 ~~(16) "Land disturbing activity" means any construction related activity that exposes~~
26 ~~soil to the erosive forces of wind, rain and snow melt. Land disturbing activities include remov-~~
27 ~~ing vegetative cover, grading, excavating and filling. It does not include the planting, growing~~
28 ~~and harvesting of agricultural crops or mining activity that is otherwise regulated through a local~~
29 ~~mine reclamation ordinance.~~

30
31 ~~(17)"Land development activity" means any construction related activity that results in~~
32 ~~the addition or replacement of impervious surfaces such as rooftops, roads, parking lots and other~~
33 ~~structures.~~

34
35 (28) (AM 08-10) "Land disturbing construction activity" (or "disturbance") means
36 any man-made alteration of the land surface resulting in a change in the topography or existing
37 vegetation or non-vegetation soil cover, that may result in runoff and lead to an increase in soil
38 erosion and movement of sediment into waters of the state. Land disturbing construction activity
39 includes clearing and grubbing, demolition, excavation, pit trench dewatering, filling and grading
40 activity.

41
42 (29) (AM 08-10) "Manning's Formula" is an empirical formula for open channel flow,
43 or flow driven by gravity developed by Robert Manning. The formula in English units is $V =$
44 $(1.49/n) * (R^{2/3} * S^{1/2})$ where V = Velocity (ft/s), n = Manning's roughness coefficient, R =
45 hydraulic radius in feet ($R = A/P$, A = cross sectional area of flow (ft²), P = wetted perimeter of
46 flow (ft)) S = bed slope (ft/ft).

1 (30) (AM 08-10) **"Maximum Extent Practicable (MEP)"** means a level of implement-
2 ing best management practices in order to achieve a performance standard specified in this chap-
3 ter which takes into account the best available technology, cost effectiveness and other compet-
4 ing issues such as human safety and welfare, endangered and threatened resources, historic prop-
5 erties and geographic features. MEP allows flexibility in the way to meet the performance stan-
6 dards and may vary based on the performance standard and site conditions.

7
8 (18)(31) **"No appreciable off-site impact"** means that the impact of any land disturbing
9 ~~or land development~~ construction activity on off-site property or natural resources would be neg-
10 ligible due to site conditions, such as internal drainage or a very large ~~vegetative~~ vegetation buf-
11 fer area surrounding a small building project.

12
13 (32) (AM 08-10) **"Off-site BMP"** means best management practice(s) that are located
14 outside of the boundaries of the site covered by a permit application. Off-site BMPs are usually
15 installed as part of a regional stormwater management plan approved by a local government.

16
17 (33) (AM 08-10) **"P8"** is a pollutant loading model approved by the WIDNR for predict-
18 ing the generation and transport of stormwater runoff pollutants and run-off volume in urban wa-
19 tersheds, and evaluation of the efficiency of the design in reducing total suspended solids. (Pro-
20 gram for Predicting Polluting Particle Passage thru Pits, Puddles, & Ponds)

21
22 (49)(34) (AM 08-10) **"Peak flow"** means the highest flow rate of runoff, measured in
23 cubic feet per second, that would normally result from a given design storm.

24
25 (20)(35) (AM 08-10) **"Permanent best management practice"** means any best man-
26 agement practice that is designed to remain in place after the development is complete. They are
27 designed to stabilize the site or to permanently manage stormwater runoff.

28
29 (21) **"Practical"** means ~~that complying with a specific requirement does not cause un-~~
30 ~~due economic hardship and that special conditions do not exist which are beyond the control of~~
31 ~~the applicant and would prevent compliance.~~

32
33 (36) (AM 08-10) **"Pollutant"**, as per s. 283.01(13) Wisconsin Statutes, means any
34 dredged spoil, solid waste, incinerator residue, sewage, garbage, refuse, oil, sewage sludge, mu-
35 nitions, chemical wastes, biological materials, radioactive substance, heat, wrecked or discarded
36 equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into
37 water.

38
39 (37) (AM 08-10) **"Pollution"** as per s. 283.01(14) Wisconsin Statutes, means man-made
40 or man-induced alteration of the chemical, physical, biological or radiological integrity of water.

41
42 (22)(38) (AM 08-10) **"Pre-development condition"** means the conditions of the land
43 surface, including ~~vegetative~~ vegetation cover and natural drainage patterns, prior to the proposed
44 land ~~development~~ disturbing construction activity. For purposes of this chapter, all pre-
45 development conditions shall assume good land management and good "hydrologic condition",
46 as stated in TR-55.

1 (39) (AM 08-10) **"Preventive action limit"** has the meaning given in s. NR 140.05(17),
2 Wis. Adm. Code.

3
4 (40) (AM 08-10) **"RECARGA"** is a computer model developed by the University of
5 Wisconsin-Madison (Atchison and Severson 2004) that is used as a design tool for evaluating the
6 performance of bioretention facilities, rain garden facilities, and infiltration basins.

7
8 (41) (AM 08-10) **"Redevelopment"** means areas where development is replacing older
9 development of similar impervious conditions.

10
11 (23)(42) (AM 08-10) **"Regional stormwater management plan"** means a published
12 document that establishes a planned course of action for managing stormwater runoff from an en-
13 tire drainage area or watershed, including future land ~~development~~ disturbing construction activi-
14 ties within the watershed. A regional stormwater management plan will recommend the use of
15 best management practices for individual development sites and for selected points within the
16 watershed to meet the goals and objectives of the plan.

17
18 (43) (AM 08-10) **"Responsible party"** means any person or entity holding fee title to
19 the property or acting as the owners representative, including any person, firm, corporation or
20 other entity performing services, contracted, subcontracted or obligated by other agreement to de-
21 sign, implement, inspect, verify or maintain the BMPs and other approved elements of erosion
22 control and stormwater plans and permits under this chapter.

23
24 (24)(44) (AM 08-10) **"Roads" "Roadway"** as used in sec. 17.05(2)(b) of this chapter,
25 means any private or public access drive that serves more than 2 residences or businesses.

26
27 (25)(45) (AM 08-10) **"Runoff"** means any stormwater or precipitation including rain,
28 snow, ice melt, or similar water that moves on the land surface via sheet or channelized flow.
29 ~~rain or melting snow that flows over the ground surface.~~ (Also referred to as stormwater runoff.)

30
31 (26)(46) (AM 08-10) **"Shoreland, wetland and floodplain zones"** as defined in Wash-
32 ington County Code Chapter 23, Shoreland, wetland and floodplain zoning. The shoreland zone
33 generally includes all lands within 300 feet of a navigable stream or 1,000 feet from a lake shore.
34 The wetland and floodplain zoning districts may extend beyond the shoreland zone.

35
36 (47) (AM 08-10) **"Site"** means the entire area included in the legal description of which
37 the land disturbing construction activity will occur.

38
39 (48) (AM 08-10) **"SLAMM"** is a pollutant loading model approved by the WIDNR for
40 predicting the generation and transport of stormwater runoff pollutants and run-off volume in ur-
41 ban watersheds, and evaluation of the efficiency of the design in reducing total suspended solids.
42 (Source Loading and Management Model)

43
44 (27)(49) (AM 08-10) **"Soil detachment"** means the first step in the soil erosion process,
45 or the dislodging of the soil particle from raindrop impact, water flow or wind. After de
46

1 tachment, the soil particle can be suspended and carried in runoff or wind to another site. Soil
2 detachment is reduced by providing a ~~vegetative~~ vegetation or synthetic cover over the soil sur-
3 face or through the application of soil treatment measures designed for this purpose.

4
5 (28)(50) (AM 08-10) "**Stabilized**" means that vegetation is well established or other sur-
6 facing material is in place and the risk of further soil erosion is minimal.

7
8 (51) (AM 08-10) "**Stop Work Order**" means an order issued by the Administering Au-
9 thority which requires that all construction activity on the site be stopped – except best manage-
10 ment repair/installation as required by the Administering Authority.

11
12 (52) (AM 08-10) "**Storm drainage system**" means a publicly-owned facility by which
13 stormwater is collected and/or conveyed, including but not limited to any roadways with drainage
14 systems, municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention
15 and detention basins, natural and human-made or altered drainage channels, reservoirs, and other
16 drainage structures.

17
18 (53) (AM 08-10) "**Stormwater**" has the meaning as the term "runoff".

19
20 (29)(54) (AM 08-10) "**Stormwater mManagement**" means any measures taken to per-
21 manently reduce or minimize the negative impacts of stormwater runoff quantity and quality
22 from urban areas after land ~~development~~ disturbing construction activities.

23
24 (30)(55) (AM 08-10) "**Stormwater mManagement fFacility**" means any structural best
25 management practice, such as a retention pond, infiltration basin or other physical structure, that
26 is designed to collect and permanently manage the quantity and/or quality of stormwater runoff.

27
28 (34)(56) (AM 08-10) "**Subsoil**" means the "B" horizon in any natural soil profile. Natu-
29 ral soil profiles are described in detail in the Soil Survey of Washington County.

30
31 (57) (AM 08-10) "**Technical standard**" means a document that specifies design, pre-
32 dicted performance and operation and maintenance specifications for a material, device or me-
33 thod.

34
35 (32)(58) "**Temporary best management practice**" means any best management prac-
36 tice that is intended to reduce soil erosion and/or sediment in runoff during the construction
37 phase only, and is intended to be removed after the site is stabilized.

38
39 (59) (AM 08-10) "**Top of channel**" means an edge, or point on the landscape landward
40 from the ordinary high-water mark of a surface water of the state where the slope of the land be-
41 gins to be less than 12% continually for at least 50 feet. If the slope of the land is 12% or less
42 continually for the initial 50 feet landward from the ordinary high-water mark, the top of the
43 channel is the ordinary high-water mark.

44
45 (33)(60) (AM 08-10) "**Topsoil**" means the "A" horizon found in any natural soil profile
46 not formed from organic material. Natural soil profiles are described in detail in the Soil Survey
47 of Washington County.

1 (34)(61) (AM 08-10) "**Total suspended solids load**" means the total weight of material,
2 including sediment and other solids, that is assumed to be carried in the runoff water and dis-
3 charged from the site based on runoff models for urban lands. For best management practice de-
4 sign purposes, a 5 micron particle size is usually selected as a target to achieve 80% total sus-
5 pended solids removal rate, as required in sec. 17.09(4) of this chapter.

6
7 (35)(62) (AM 08-10) "**Watershed**" means the total area of land where runoff drains to a
8 specific point on the landscape. It is also referred to as the drainage area.

9
10 (36)(63) (AM 08-10) "**Wetland functional values**" means the type, quality and signi-
11 ficance of the ecological and cultural benefits provided by the wetland, such as: flood storage,
12 water quality protection, groundwater recharge and discharge, shoreline protection, fish and wild-
13 life habitat, floral diversity, aesthetics, recreation and education.

14
15 (37)(64) (AM 08-10) "**Working day**" means ~~a day when the administering authority and~~
16 ~~other local businesses are routinely and customarily open for business, not including Saturdays,~~
17 ~~Sundays or scheduled holidays~~ any day except Saturday and Sunday and holidays designated in s.
18 230.35(4)(a) Wis. Stats. When used in sec. 17.08 of this chapter, relating to specific erosion con-
19 trol requirements, the term working days shall not include any days that site stabilization activi-
20 ties could not reasonably be carried out due to inclement weather conditions.

21
22 **SECTION 17. EFFECTIVE DATE.** This ordinance shall become effective upon pas-
23 sage by the Board of Supervisors and publication as provided by law.

24
25 **SECTION 18. SUMMARY.** This ordinance amendment contains substantial revisions
26 and conforms Chapter 17 to updated state regulations in the area of erosion control and stormwa-
27 ter management in Washington County.

28
29
30 VOTE REQUIREMENT FOR PASSAGE: Majority

31 APPROVED: Introduced by members of the PLANNING,
32 (signed by Kimberly A. Nass) CONSERVATION and PARKS COMMITTEE

33 Kimberly A. Nass, County Attorney as filed with the County Clerk.

34 Dated **6/10/08** (signed by John W. Stern)

35 Considered **6/10/08** John W. Stern, Chairperson

36 Adopted **6/10/08**

37 Ayes **27** Noes **0** Absent **3**

38 Voice Vote _____

39 Countersigned:

40
41 _____
42 Herbert J. Tennies

County Board Chairperson

1 (No fiscal effect.)