

## CHAPTER 2

### Construction Site Erosion Control

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#### **SEC. 13-2-1** AUTHORITY.

This Chapter is adopted pursuant to the guidelines in Sec. 62.2345, Wis. Stats.

#### **SEC. 13-2-2** FINDINGS AND PURPOSE.

- (a) **Findings.** The Common Council finds runoff from construction sites carries a significant amount of sediment and other pollutants to the waters of the state and the City of Thorp.
- (b) **Purpose.** It is the purpose of this Chapter to preserve the natural resources; to protect the quality of the waters of the state and City; and to protect and promote the health, safety and welfare of the people, to the extent practicable by minimizing the amount of sediment and other pollutants carried by runoff or discharge from construction sites to lakes, streams and wetlands.

**SEC. 13-2-3**      **APPLICABILITY OF REGULATIONS.**

This Chapter applies to land disturbing and land developing activities on land within the boundaries and jurisdiction of the City and the public and private lands subject to extraterritorial review under Ch. 236, Wis. Stats. All state funded or conducted construction is exempt from this Chapter.

*NOTE:            State funded or conducted construction activities must meet the requirements contained in the "State Plan for the Control of Construction Erosion and Stormwater Runoff", which contains similar requirements as contained in this Chapter, as a minimum.*

**SEC. 13-2-4**      **DEFINITIONS.**

- (a) **Agricultural Land Use.** Use of land for planting, growing, cultivating and harvesting of crops for human or livestock consumption and pasturing or yarding of livestock.
- (b) **Commercial Land Use.** Use of land for the retail or wholesale of goods or services.
- (c) **Construction Site Control Measure.** A control measure used to meet the requirements of Sec. 13-2-7(b).
- (d) **Control Measure.** A practice or combination of practices to control erosion and attendant pollution.
- (e) **Control Plan.** A written description of the number, locations, sizes and other pertinent information of control measures designed to meet the requirement of this Chapter submitted by the applicant for review and approval by the Common Council, or its designee.
- (f) **Erosion.** The detachment and movement of soil, sediment or rock fragments by water, wind, ice or gravity.
- (g) **Land Developing Activity.** The construction of buildings, roads, parking lots, paved storage areas and similar facilities.
- (h) **Land Disturbing Construction Activity.** Any man-made change of the land surface including removing vegetation cover, excavating, filling and grading but not including agricultural land uses such as planting, growing, cultivating and harvesting of crops; growing and tending of gardens; harvesting of trees; and landscaping modifications.
- (i) **Landowner.** Any person holding title to or having any interest in land.

- (j) **Land User.** Any person operating, leasing, renting, or having made other arrangements with the landowner by which the landowner authorizes uses of his land.
- (k) **Runoff.** The rainfall, snowmelt, or irrigation water flowing over the ground surface.
- (l) **Set of 1 Year Design Storms.** The following rain intensities and rain volumes or corresponding values specific to the community for the storm durations of 0.5, 1, 2, 3, 6, 12 and 24 hours that occur approximately one per year. The following are typical characteristics of these one year storms for most of Wisconsin.

<b>Storm Duration Rain (Hours)</b>	<b>Rain Intensity (Inches/Hour)</b>	<b>Average Total (Inches)</b>
0	1.8	0.9
1	1.1	1.1
2	0.7	1.3
3	0.5	1.5
6	0.3	1.7
12	0.2	2.0
24	0.1	2.3

- (m) **Site.** The entire area included in the legal description of the land on which the land disturbing or land development activity is proposed in the permit application.

**SEC. 13-2-5** DESIGN CRITERIA, STANDARDS AND SPECIFICATIONS FOR CONTROL MEASURES.

All control measures required to comply with this Chapter shall meet the design criteria, standards and specifications for the control measures based on accepted design criteria, standard and specifications identified by the Common Council, or its designee.

**SEC. 13-2-6** MAINTENANCE OF CONTROL MEASURES.

All sedimentation basins and other control measures necessary to meet the requirements of this Chapter shall be maintained by the applicant or subsequent landowner during the period of land disturbance and land development of the site in a satisfactory manner to ensure adequate performance and to prevent nuisance conditions.

**SEC. 13-2-7 CONTROL OF EROSION AND POLLUTANTS DURING  
LAND DISTURBANCE AND DEVELOPMENT.**

(a) **Applicability.** This Section applies to the following sites of land development or land disturbing activities:

- (1) Those requiring a subdivision plat approval or the construction of houses or commercial, industrial or institutional buildings on lots of approved certified surveys.
- (2) Those requiring a certified survey approval or the construction of houses of commercial, industrial or institutional building on lots of approved certified surveys.
- (3) Those involving grading, removal of protective ground cover or vegetation, excavation, land filling or other land disturbing activity affecting a surface area of four thousand (4,000) square feet or more.
- (4) Those involving excavation or filling or a combination of excavation and filling affecting four hundred (400) cubic yards or more of dirt, sand or other excavation or fill material.
- (5) Those involving street, highway, road or bridge construction, enlargement, relocation or reconstruction.
- (6) Those involving the laying, repairing, replacing or enlarging of an underground pipe or facility for a distance of three hundred (300) feet or more.

*NOTE: The above applicability criteria are specifically stated in 1983 Wisconsin Action 416 for inclusion in this Chapter. Utility companies responsible for energy repair work should enter into a "memorandum of agreement" with the Common Council, or its designee, clearly stating their responsibilities if their activities may be included under any of the above applicability criteria.*

(b) **Erosion and Other Pollutant Control Requirements.** The following requirements shall be met on all sites described in Subsection (a).

- (1) Site Dewatering. Water pumped from the site shall be treated by temporary sedimentation basins, grit chambers, sand filters, up-slope chambers, hydrocyclones, swirl concentrators, or other appropriate controls designed and used to remove particles of one hundred (100) microns or greater for the highest dewatering pumping rate.

## Construction Site Erosion Control

If the water is demonstrated to have no particles greater than one hundred (100) microns during dewatering operations, then no control is needed before discharge, except as determined by the Common Council, or its designee. Water may not be discharged in a manner that causes erosion of the site or receiving channels.

**NOTE:**

*There are several ways to meet this particle size performance objective, depending on the pumping rate. As an example, if the pumping rate is very low (1 gal/min), then an inclined or vertical enlargement pipe (about 8" in diameter for 1 gal/min) several feet long would be an adequate control device to restrict the discharge of one hundred (100) micron, and larger, particles. As the pumping rate increases, then the "device" must be enlarged. At a moderate (100 gal/min) pumping rate, a vertical section of corrugated steel pipe, or concrete pipe section, or other small "tank" (about 4½ feet across for a 100 gal/min pumping rate) several feet tall would be adequate. With these pipe sections or small tanks, inlet baffles would be needed to minimize turbulence. With very large pumping rates (10,000 gal/min), sediment basins (about 35 feet in diameter for a pumping rate of 10,000 gal/min) at least three (3) feet in depth with a simple (but adequately sized) pipe outlet would be needed. More sophisticated control devices (such as swirl concentrators or hydro-cyclones) could be specially fabricated that would generally be smaller than the simple sedimentation devices described above, but they would not be required.*

- (2) Waste and Material Disposal. All waste and unused building materials (including garbage, debris, cleaning wastes, wastewater, toxic materials, or hazardous materials) shall be properly disposed and not allowed to be carried by runoff into a receiving channel or storm sewer system.
- (3) Tracking. Each site shall have graveled roads, access drives and parking areas of sufficient width and length to prevent sediment from being tracked onto public or private roadways.
- (4) Drain Inlet Protection. All storm drain inlets shall be protected with a straw bale, filter fabric, or equivalent barrier meeting accepted design criteria, standards and specifications.
- (5) Site Erosion Control. The following criteria apply only to land development or land disturbing activities that result in runoff leaving the site:
  - a. Channelized runoff from adjacent areas passing through the site shall be diverted

around disturbed areas, if practical. Otherwise, the channel shall be protected as described below in Subsection (b)(5)c3. Sheetflow runoff from adjacent areas greater than ten thousand (10,000) square feet in area shall also be diverted around disturbed areas unless shown to have resultant runoff velocities of less than 0.5 ft/sec across the disturbed area for the set of one (1) year design storms. Diverted runoff shall be conveyed in a manner that will not erode the conveyance and receiving channels.

*NOTE:*

*Soil and Conservation Service guidelines for allowable velocities in different types of channels should be followed.*

- b. All activities on the site shall be conducted in a logical sequence to minimize the area of bare soil exposed at any one time.
- c. Runoff from the entire area disturbed on the site shall be controlled by the meeting either of the following:
  - 1. All disturbed ground left inactive for seven (7) or more days shall be stabilized by seeding or sodding (only available prior to September 15th) or by mulching or covering, or other equivalent control measure.
  - 2. For sites with more than ten (10) acres disturbed at one time, or if a channel originates in the disturbed area, one or more sedimentation basins shall be constructed. Each sedimentation basin shall have a surface area of at least one (1%) percent of the area draining to the basin and at least three (3) feet of depth and constructed in accordance with accepted design specifications. Sediment shall be removed to maintain a depth of three (3) feet. The basin shall be designed to trap sediment greater than fifteen (15) microns in size, based on the set of one (1) year design storms having durations from 0.5 to 24 hours. the basin discharge rate shall also be sufficiently low as to not cause

- erosion along the discharge channel or the receiving water.
3. For sites with less than ten (10) acres disturbed at one time, filter fences, straw bales, or equivalent control measures shall be placed along all sideslope and downslope sides of the site. If a channel or area of concentrated runoff passes through the site, filter fences shall be placed along the channel edges to reduce sediment reaching the channel
  - d. Any soil or dirt storage piles containing more than ten (10) cubic yards of material should not be located with a downslope drainage length of less than twenty-five (25) feet to a roadway or drainage channel. If remaining for more than seven (7) days, they shall be stabilized by mulching, vegetative cover, tarps or other means. Erosion from piles which will be in existence for less than seven (7) days shall be controlled by placing straw bales or filter fence barriers around the pile. In-street utility repair or construction soil or dirt storage piles located closer than twenty-five (25) feet of a roadway or drainage channel must be covered with tarps or suitable alternative control if exposed for more than seven (7) days, and the storm drain inlets must be protected with straw bales or other appropriate filtering barriers.

**SEC. 13-2-8** PERMIT APPLICATION, CONTROL PLAN, AND PERMIT ISSUANCE.

- (a) **Permit Application.** No landowner or land user may commence a land disturbance or land development activity subject to this Chapter without receiving prior approval of a control plan for the site and a permit from the Public Works Director. At least one landowner or land user controlling or using the site and desiring to undertake a land disturbing or land developing activity subject to this Chapter shall submit an application for a permit and a control plan and pay an application fee to the City Clerk. By

submitting an application, the applicant is authorizing the Public Works Director to enter the site to obtain information required for a review of the control plan.

(b) **Content of the control Plan for Land Disturbing Activities Covering More than One Acre.**

- (1) Existing Site Map. A map of existing site conditions on a scale of at least one (1) inches equals one hundred (100) feet showing the site and immediately adjacent areas:
  - a. Site boundaries of adjacent lands which accurately identify site location;
  - b. Lakes, streams, wetlands, channels, ditches and other water courses on and immediately adjacent to the site. (Note: The local unit of government should identify sensitive local waters that may need to be further addressed by the control plan.);
  - c. 100 year floodplains, flood fringes and floodways;
  - d. Location of the predominant soil types;
  - e. Vegetative cover;
  - f. Location and dimension of stormwater drainage systems and natural drainage patterns on and immediately adjacent to the site;
  - g. Locations and dimension of stormwater drainage systems and natural drainage patterns on and immediately adjacent to the site;
  - h. Site topography at a contour interval not to exceed five (5) feet.
- (2) Plan of Final Site Conditions. A plan of final site conditions on the same scale as the existing site map showing the site changes.
- (3) Site Construction Plan. A site construction plan including:
  - a. Locations and dimensions of all proposed land disturbing activities;
  - b. Locations and dimension of all temporary soil or dirt stockpiles;
  - c. Locations and dimensions of all construction site management control measures necessary to meet the requirements of this Chapter.
  - d. Schedule of anticipated starting and completion date of each land disturbing or land developing activity including the

installation of construction site control measures needed to meet the requirements of this Chapter; and

- e. Provisions of maintenance of the construction site control measures during construction.
- (c) **Content of Control Plan Statement for Land Disturbing Activities Covering Less Than One Acres, But Meeting the Applicability Requirements Stated in Sec. 13-2-7(a).** An erosion control plan statement (with simple map) shall be submitted to briefly describe the site and erosion controls (including the site development schedule) that will be used to meet the requirements of the Chapter.
- (d) **Review of Control Plan.** Within forty-five (45) days of receipt of the application, control plan (or control plan statement), and fee, the Public Works Director shall review the application and control plan to determine if the requirements of this Chapter are met. The Public Works Director shall approve the plan, inform the applicant and issue a permit. If the conditions are not met, the Public Works Director shall inform the applicant in writing and may either require needed information or disapprove the plan. Within thirty (30) days of receipt of needed information, the Public Works Director shall again determine if the plan meets the requirements of this Chapter. If the plan is disapproved, the Public Works Director shall inform the applicant in writing of the reasons for the disapproval.
- (e) **Permits.**
- (1) Duration. Permits shall be valid for a period of one hundred eighty (180) days, or the length of the building permit or other construction authorizations, whichever is longer, from the date of issuance. The Public Works Director may extend the period one or more times for up to an additional one hundred eighty (180) days. The Building Inspector may require additional control measures as a condition of the extension if they are necessary to meet the requirements of this Chapter.
  - (2) Surety Bond. As a condition of approval and issuance of the permit, the Public Works Director may require the applicant to deposit a surety bond or irrevocable letter of credit to guarantee

- a good faith execution of the approved control plan and any permit conditions.
- (3) Permit Conditions. All permits shall require the permittee to:
- a. Notify the Public Works Director within forty-eight (48) hours of commencing any land disturbing activity;
  - b. Notify the Public Works Director of completion of any control measures within fourteen (14) days after their installation;
  - c. Obtain permission in writing from the Public Works Director prior to modifying the control plan;
  - d. Install all control measures as identified in the approved control plan;
  - e. Maintain all road drainage systems, stormwater drainage systems, control measures and other facilities identified in the control plan;
  - f. Repair any situation or erosion damage to adjoining surfaces and drainageways resulting from land developing or disturbing activities;
  - g. Inspect the construction control measures after each rain of 0.5 inches or more and at least once each week and make needed repairs;
  - h. Allow the Public Works Director to enter the site for the purpose of inspecting compliance with the control plan or for performing any work necessary to bring the site into compliance with the control plan; and
  - i. Keep a copy of the control plan on the site.

**SEC. 13-2-9 INSPECTION.**

The Building Inspector shall inspect construction sites at least once a month during the period starting March 1 and ending October 31 and a least two (2) times during the period starting November 1 and ending February 28 to ensure compliance with the control plan. If land disturbing or land development activities are being carried out without a permit, the Public Works Director shall enter the land pursuant to the provisions of Section 66.122 and 66.123, Wis. Stats.

**SEC. 13-2-10 ENFORCEMENT.**

- (a) The Public Works Director may post a stop-work order if:
  - (1) Any land disturbing or land developing activity regulated under this Chapter is being undertaken without a permit;
  - (2) The control plan is not being implemented in a good faith manner; or
  - (3) The conditions of the permit are not being met.
- (b) If the permittee does not cease the activity or comply with the control plan or permit conditions within ten (10) days, the Common Council may revoke the permit.
- (c) If the landowner or land user where no permit has been issued does not cease the activity within ten (10) days, the Public Works Director may request the City Attorney to obtain a cease and desist order.
- (d) The Public Works Director or the Board of Appeals upon appeal may retract the stop-work order or the revocation.
- (e) Ten (10) days after posting a stop-work order, the Public Works Director may issue a notice of intent to the permittee or landowner or land user of the Public Works Director's intent to perform work necessary to comply with this Chapter. The Public Works Director may go on the land and commence the work after fourteen (14) days from issuing the notice of intent. The costs of the work performed by the Public Works Director plus interest at the rate authorized by the Public Works Director shall be billed to the permittee or the landowner. In the event a permittee or landowner fails to pay the amount due, the City Clerk-Treasurer shall enter the amount due on the tax rolls and collect as a special assessment against the property pursuant to Section 66.60(16), Wis. Stats. Any person violating any of the provisions of this Chapter shall be subject to a forfeiture as provided in Section 1-1-7. Each day a violation exists shall constitute a separate offense.
- (f) Compliance with the provisions of this Chapter may also be enforced by injunction.

**SEC. 13-2-11 APPEALS.**

- (a) **Appeals.** The Board of Appeals shall hear and decide appeals where it is alleged that there is error in any order, decision or determination made by the Common Council, or its designee, in administering this Chapter. Upon appeal, the Board of Appeals may authorize variances from the provisions of this Chapter which are not contrary to the public interest and where owing to special conditions a literal enforcement of the provisions of this Chapter will result in unnecessary hardship. The Board of Appeals shall use the rules, procedures, duties and powers authorized by statute for zoning boards of appeals in hearing and deciding appeals and authorizing variances.
- (b) **Who May Appeal.** Any applicant, permittee, landowner or land user may appeal any order, decision or determination made by the Building Inspector in administering this Chapter.