1st Reading Nov 6, 1991
Committee Nov 13, 1991
Tabled until 1/8/92 8-0
(Will be given new number)

ORDINANCE 91 - 56
To Amend Title 20 of the Bloomington Municipal Code
Entitled Zoning

WHEREAS, construction is constantly occurring in the City of Bloomington; and

WHEREAS, land-disturbing activities are associated with such construction; and

WHEREAS, such land-disturbing activities may cause the erosion of soil on site, and the subsequent deposition of sediments on adjacent properties and roadways, and eventually in streams, lakes, and wetlands:

NOW, THEREFORE BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF BLOOMINGTON, MONROE COUNTY, INDIANA, THAT:

SECTION I. Chapter 20.20 shall be created to read as follows:

Chapter 20.20

Soil Erosion Control

Sections:	20.20.01.00	Purpose and Intent
	20.20.02.00	Definitions
	20.20.03.00	Design Criteria, Standards and Specifications for Control Measure
	20.20.04.00	Maintenance of Control Measures
	20.20.05.00	Control of Erosion and Pollutants During Land Disturbance and Pollutants
	20.20.06.00	Permit Application, Control Plan, and Permit Issuance
	20.20.07.00	Inspection
	20.20.08.00	Enforcement
	20.20.09.00	Project Termination

20.20.01.00 PURPOSE AND INTENT

The quality of the waters of the City and County and surrounding counties should be protected 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. In addition, properties and roadways need to be protected from dangerous, unsightly or polluting deposition of water and sediments.

20.20.02.00 DEFINITIONS

"Applicant" means the developer, landowner or landuser who will utilize land and/or contract for work to be done on the land.

"Commercial Land Use" means use of land for the ultimate retail or wholesale of goods or services.

"Construction Site Control Measure" means a control measure used to meet the requirements of this chapter.

"Control Measure" means a practice or combination of practices to control erosion, sedimentation and attendant pollution.

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"**Control Plan**" means a written description of the number, locations, sizes and other pertinent information of control measures designed to meet the requirements of this chapter submitted for review and approved by the office of the City Engineer.

"**Erosion**" means the detachment and movement of soil, sediment or rock fragments by water, wind, ice or gravity.

"**Land Developing Activity**" means the construction of buildings, roads, parking lots, paved storage areas and similar facilities.

"**Land Disturbance Activity**" means any man-made change of the land surface, including but not limited to removing vegetative cover, excavating, logging, filling and grading, but not including agricultural land uses such as planting, growing, cultivating and harvesting of crops, and growing and tending of gardens.

"**Landowner**" means any person holding title to or having an interest in land.

"**Land User**" means any person leasing or renting land, or using land according to an arrangement made with the landowner, or any person operating on the land by encroachment.

"**Runoff**" means the rainfall, snowmelt, or irrigation water flowing over the ground surface.

"**Set of Two Year Design Storms**" means 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 have approximately a 50 percent chance of occurring once per year. The following values in Figure 1 shall be used.

STORM DURATION (Hours)	AVERAGE RAIN INTENSITY (Inches/Hour)	TOTAL RAIN (Inches)
0.5	2.0	1.0
1.0	1.3	1.3
2.0	.76	1.5
3.0	.55	1.7
4.0	.45	1.8
6.0	.34	2.0
12.0	.20	2.4
24.0	.12	2.9

Figure 1

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"Site" means the entire area included in the legal description of the land on which the land disturbance or land development activity is proposed in the permit application.

20.20.03.00 DESIGN, CRITERIA AND SPECIFICATIONS FOR CONTROL MEASURE

All control measures required to comply with this chapter shall meet the design criteria, standards, and specifications identified by the office of the City Engineer.

20.20.04.00 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.

20.20.05.00 CONTROL OF EROSION AND POLLUTANTS DURING LAND DISTURBANCE AND POLLUTANTS

20.20.05.01 **APPLICABILITY.** This chapter applies to the following sites of land development or land disturbance activities:

a) Those involving grading, removal of protective ground cover of vegetation, excavation, landfilling, landscaping or other building construction expected to affect a surface of 1000 square feet or more;

b) Those involving excavation or filling or a combination of excavation and filling expected to affect 400 cubic yards or more of dirt, sand, or other excavation or fill material;

c) Those involving street, highway, road or bridge construction, enlargement, relocation, or reconstruction;

d) Those involving the laying, repairing, replacing, or enlarging of an underground pipe or facility for a distance of 300 feet or more.

20.20.05.02 A Memorandum of Agreement will be prepared with each utility doing business within the City of Bloomington, upon passage of this ordinance, regarding its rights and responsibilities during necessary land disturbance activities.

20.20.05.03 Erosion and Pollutant Control Requirements. The following requirements shall be met on all sites described in Section 20.20.05.01.

a) Site Dewatering. Sediment-laden water flowing from the site shall be detained by temporary sediment basins. Also, water shall not be discharged in a manner that causes erosion in the receiving channels.

b) 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 of and not allowed to be carried by runoff into a receiving channel, storm sewer

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system or onto adjacent properties.

c) 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. Any sediment reaching a public or private road shall be removed by street cleaning (not flushing) by those responsible before the end of each work day.

d) Drain Inlet Protection. All storm inlets shall be protected with straw bales, filter fabric, or an equivalent barrier meeting accepted design criteria, standards and specifications.

e) Site Erosion Control. The following criteria (1 - 4) apply only to land development or land disturbance activities that result in runoff leaving the site.

1. 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 Section 20.20.05.03(e)(3). Sheetflow runoff from adjacent areas greater than 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 two year design storms. Diverted runoff shall be conveyed in a manner that will not erode the conveyance and receiving channels. (Note: Soil Conservation Service guidelines for allowable velocities in different types of channels should be followed.)

2. All activities on the site shall be conducted in a sequence that minimizes the area of bare soil exposed at any one time.

3. Runoff from the entire disturbed area on the site shall be controlled by meeting either subparagraph a and either b or c, whichever is applicable.

a. All disturbed ground left inactive for 14 or more days shall be stabilized by seeding or sodding or by mulching or covering, or other equivalent control measures appropriate for the season. Steep slopes must be treated immediately.

b. For sites with 10 acres or more 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 1 percent of the area draining to the basin and at least three feet of depth and shall be constructed in accordance with accepted design specifications. Sediment shall be removed to maintain a depth of three feet. The basin shall be designed to trap sediment greater than 15 microns in size, based on the set of two year design storms having durations from 0.5 minutes to 24 hours. The basin

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discharge rate shall also be sufficiently low as to not cause erosion along the discharge channel.

c. For sites with less than 10 acres disturbed at one time, filter fences, straw bales or equivalent measures shall be placed along all sideslopes 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. For vacant land held for development, grass or other vegetative ground cover is required.

4. Any soil or dirt storage piles containing more than 10 cubic yards of material shall not be located with a downslope drainage length of less than 25 feet to a roadway or drainage control. If remaining for more than seven days, storage piles shall be stabilized by mulching, vegetative cover, tarps or other means. Erosion from piles which will be in existence for less than seven days shall be controlled by placing straw bales or filter fence barriers around the pile. In-street utility repair or construction soil or dirty storage piles located closer than 25 feet to a roadway or drainage channel must be covered with tarps or suitable alternative control, if exposed for more than seven days, the storm drain inlets must be protected with straw bales or other appropriate filtering barriers. The seven day limit may be extended to no more than 14 days, with consent and permission of the office of the City Engineer.

<u>20.20.06.00</u> <u>PERMIT APPLICATION, CONTROL PLAN, AND PERMIT ISSUANCE</u>

No developer, landowner or land user may commence a land disturbance or land development activity subject to this chapter without receiving approval of a control plan for the site and a permit from the office of the City Engineer. For each project, at least one developer, landowner or land user desiring to undertake a land disturbance or land development activity subject to this chapter shall submit an application for a permit and a control plan and pay an application fee to the City of Bloomington. By submitting an application, the applicant is authorizing the City of Bloomington Engineering Department to enter the site to obtain the information required for review of the control plan. Site plan must be drawn to scale showing erosion control features. The services of a professional engineer may be employed at the discretion of the developer.

20.20.06.01 CONTENT OF THE CONTROL PLAN FOR LAND DISTURBING ACTIVITIES COVERING ONE ACRE OR MORE.

The following shall be required in each control plan for land disturbing activities.

a) <u>Existing Site Map</u>. A map of existing site conditions on a scale of at least one inch equals 100 feet, showing the site and immediately adjacent area containing:

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1. Site boundaries and adjacent lands which accurately identify site location;

2. Lakes, streams, wetlands, ponds, channels, ditches, karst features, and other water courses on and immediately adjacent to the site. (Note: Requires the completion of a groundwater management plan which shall specify surface and subsurface drainageways, flows, and rates, and establishes a mechanism to accommodate stormwater flows and prevent sedimentation or blockage of natural drainage passages).

3. 100 year floodplains, flood fringes and floodways;

4. Location of the predominant soil types;

5. Vegetative cover;

6. Location and dimensions of stormwater drainage patterns on and immediately adjacent to the site;

7. Locations and dimensions of utilities, structures, roads, highways, and paving; and

8. Site topography at a contour interval not to exceed two feet.

b) Plan of Final Site Conditions. A plan of final site conditions on the same scale as the existing site map showing the site changes.

c) Site Construction Plan. A site construction plan including:

1. Locations and dimensions of all proposed land disturbing activities;

2. Locations and dimensions of all temporary soil or dirt stockpiles;

3. Locations and dimensions of all construction site management control measures necessary to meet the requirements of this chapter;

4. 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

5. Provisions for maintenance of the construction site control measures during construction.

20.20.06.02 CONTENT OF CONTROL PLAN STATEMENT FOR LAND DISTURBING ACTIVITIES COVERING LESS THAN ONE ACRE, BUT MEETING THE APPLICABILITY REQUIREMENTS STATED IN CHAPTER 20.16.05

An erosion control plan statement (with simple map)

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shall be submitted to briefly describe the site erosion controls (including the site development schedule) that will be used to meet the requirements of this chapter.

20.20.06.03 REVIEW OF CONTROL PLAN.

Within five working days of receipt of the application control plan statement, the office of the City Engineer shall review the application and/or control plan to determine if the requirements of this chapter are met. The office of the City Engineer may request comments regarding the plan or statement from other departments or agencies. If the requirements of this chapter are met, the office of the City Engineer shall approve the plan, inform the applicant and issue a permit. If the conditions are not met, the office of the City Engineer shall inform the applicant in writing and either may request needed information or disapprove the plan. Within 30 days of receipt of the newly submitted information, the office of the City Engineer shall again determine if the plan meets this Chapter's requirements. If the plan is disapproved again, the office of the City Engineer shall inform the applicant in writing of the reasons for the disapproval. Appeal from this decision may be brought to the Board of Zoning Appeals, as provided for by Indiana Code Section 36-7-4-918.1.

20.20.06.04 PERMITS

a) Duration. Permits shall be valid for a period of 180 days, or run concurrently with the building permit or other construction authorizations, whichever is longer. The City Engineer may extend the period one or more times for up to an additional 180 days. The City Engineer may require additional control measures as a condition of the extension if they are necessary to meet the requirements of this chapter.

b) Surety Bond. As a condition of approval for issuance of the permit, the City Engineer shall 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. The amount of surety shall be provided by the developer or project engineer and approved by the City Engineer. Surety bonds will not be released until project is in compliance with erosion control measures, including the establishment of a vegetative cover appropriate for the season. Surety bonds are not necessary for individually-built single family housing.

c) Permit Conditions. All permits shall require the permittee to:

1. Notify the City of Bloomington Engineering Department within two working days of commencing any land disturbing activity.

2. Notify the City Engineering Department of completion of any control measures within seven days after their installation.

3. Obtain permission in writing from

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the City Engineering Department to modify the control plan.

4. Install all control measures as identified in an approved control plan.

5. Maintain all road drainage systems, stormwater drainage systems, control measures and other facilities identified in the control plan.

6. Repair any siltation or erosion damage to adjoining surfaces and drainageways resulting from land developing or disturbing activities.

7. Inspect the construction control measures at least once each week and make needed repairs, and inspect after each rain of 0.5 inches or more.

8. Allow the City of Bloomington Engineering Department to enter the site for the purpose of inspecting for compliance with the control plan or for performing any work necessary to bring the site into compliance with the control plan; and

9. Keep a copy of the control plan on site; and

10. Certify at project's completion that all utilities have been installed on site and erosion control measures that were damaged or destroyed have been repaired or restored by the utility companies involved.

20.20.07.00 INSPECTION

The City of Bloomington Engineering Department shall inspect construction sites at least once a month during the period starting March 1 and ending October 31 and at least one time during the period starting November 1 and ending February 28 to ensure compliance with the control plan.

20.20.08.00 ENFORCEMENT

1. The City Engineer may post a stop work order if:

a. Any land disturbing or land developing activity regulated under this chapter is being undertaken without a permit;

b. The control plan is not being implemented in a good faith manner as determined by the City of Bloomington Engineering Department, or;

c. The conditions and specifications of the permit are not being met.

2. If the permittee does not cease the activity or comply with the control plan or permit conditions within 24 hours, the City Engineering Department may revoke the permit.

3. When no permit has been issued, if the landowner or land user does not cease the activity within 24 hours, after demand by the City Engineering Department, the City Engineer may request the Legal Department to obtain a cease and desist order.

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4. The City of Bloomington Engineering Department may retract the stop-work order or the revocation upon adequate notice that the conditions are in compliance.

5. Twenty-four hours after posting a stop-work order, the City of Bloomington Engineering Department may issue a notice of consent to the permittee or landowner or land user to perform work necessary to comply with this chapter.

20.20.09.00 PROJECT TERMINATION

An orderly and timely termination of a project with land disturbing activities shall be planned between all persons involved with a site. When a project has been completed, the person holding their permit shall petition, in writing, the City Engineer, for approval of erosion control measures which are to remain on the site. The City Engineer shall subsequently inspect the site to evaluate the adequacy of these control measures.

1. If the erosion control measures are approved, the surety bond shall be released promptly. However, any maintenance responsibilities shall remain with the person owning or occupying the land.

2. If the erosion measures are not approved, the City of Bloomington Engineering Department shall notify, in writing, the person holding the permit, regarding the unacceptable features. After a minimum period of two (2) weeks during which corrective measures are taken, a petition, again in writing, may be sent asking the City of Bloomington Engineering Department to evaluate the adequacy of the erosion control measures. If, in good faith, the City of Bloomington Engineering Department again decides that the erosion control measures are inadequate, the City of Bloomington may delay the release of the surety bond for up to two (2) months. After an agreed upon time period of two (2) months or longer has elapsed without corrective measures taken, the City of Bloomington Engineering Department may use the surety bond to finance changes or additions to the erosion control measures needed to complete the project.

SECTION II. Section 19.08.030 Conditions of land -- drainage and subsoil shall be repealed and re-enacted to read as follows:

No land shall be subdivided for residential use if such land is considered by the Plan Commission to be unsuitable for such use by reason of flooding or improper drainage, objectionable earth and rock formation topography or any other feature harmful to the health and safety of possible residents and the community as a whole. The Plan Commission shall review all proposed subdivisions to determine whether the subdivision lies in a flood hazard area as defined in Section 20.04.01.00 of this code. If the Plan Commission finds the subdivision to be so located, it shall forward pertinent plans and materials to the Indiana Department of Natural Resources for comments. The Plan Commission may require appropriate changes and modifications in order to assure that it is consistent with the need to minimize flood damages and soil erosion; all public utilities and facilities, such as sewer, gas, electrical and water systems are located and constructed to minimize or eliminate flood damage; adequate drainage is provided so as to reduce exposure to flood hazards; and that on-site waste disposal systems, if provided, will be so located as to avoid impairment of them or contamination from them during the occurrence of the regulatory flood. Provisions for the storm drainage system shall be designed to conform to the regulations in Section 20.20.02.00.

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SECTION III. Section 19.08.200 Storm Drainage shall be repealed and re-enacted to read as follows:

No land shall be subdivided until a storm water drainage plan has been approved by the Commission. The storm water drainage plan shall conform to the following criteria:

1. Except as provided below, the drainage system shall consist of concrete curbs and gutters along all streets and of storm water sewer pipe and appurtenances, including inlets, catch basins and culvert headwalls, where required by the Commission.

2. The existing natural drainage system shall be utilized to the maximum extend possible. The development shall not adversely affect the natural drainage system.

3. Except for required storm water retention and sedimentation control facilities, or approved decorative and recreational ponds, finished land grades shall be such that there is no ponding of water and that surface water will not cause erosion.

4. The natural vegetation shall be utilized where possible to prevent the concentration of surface water runoff.

5. Any planned drainage construction shall be integrated into the drainage pattern of surrounding properties.

6. Except for swales used to carry drainage to storm sewer inlets, natural drainage ways, and storm water retention facilities, the construction of open ditches shall be prohibited.

7. The storm drainage system shall be designed to accommodate the two year design storm criteria of Section 20.20.02. Structures shall be protected from the 100-year design interval storm.

8. Any increase in rate of discharge from the site shall be consistent with the capacity of downstream drainage facilities.

SECTION IV. Section 21.04.090(e) Conservation Requirements last sentence shall be amended to add the following:

"as provided for in Chapter 20.20."

SECTION V. Section 17.08.050(d) Fees shall be amended to add the following:

PERMIT FEE	DESCRIPTION	FEE TABLE
Soil Erosion Prevention Permit	Any land disturbing activity under the provision of Chapter 20.20 of this Code.	$5.00 per disturbed acre or part thereof; $20.00 minimum

SECTION VI. **SEVERABILITY.** If any section, sentence, or provision of this ordinance, or the application thereof to any person or circumstances shall be declared invalid, such invalidity shall not affect any of the other sections, sentences, provisions, or applications of this ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared to be severable.

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SECTION VII. This ordinance shall be in full force and effect from and after passage by the Common Council of the City of Bloomington, approval of the Mayor and promulgation according to law.

PASSED and ADOPTED by the Common Council of the City of Bloomington, County of Monroe, Indiana, upon this _____ day of _____, 1991.

_____
JOHN FERNANDEZ, Council President
Bloomington Common Council

ATTEST:

_____
PATRICIA WILLIAMS, City Clerk

PRESENTED by me to the Mayor of the City of Bloomington, Monroe County, Indiana, upon this _____ day of _____, 1991.

_____
PATRICIA WILLIAMS, City Clerk

SIGNED and APPROVED by me upon this _____ day of _____, 1991.

_____
TOMILEA ALLISON, Mayor
City of Bloomington

SYNOPSIS

This ordinance provides for erosion control measures to be followed during construction or earth-disturbing activities in order to minimize sediment deposition. Permit and inspection regulations are stated, including the deposit of a surety bond or letter of credit by the permit applicant. The ordinance also amends several sections in Chapters 17, 19, and 21 to correlate with this new chapter.

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