

**Leelanau County**  
**Soil Erosion and Stormwater Runoff Control**  
**Ordinance**

adopted by resolution of the Board of County Commissioners  
in  
accordance with provisions of Section 5(2) of the  
Soil Erosion and Sedimentation Control Act  
(Part 91 of Act 451 of 1994)

**PREAMBLE**

This Ordinance, adopted by resolution of the Leelanau County Board of Commissioners, sets forth the administrative procedures, standards, and enforcement remedies which shall be used by the Leelanau County Soil Erosion Control Officer in meeting the requirements of the Soil Erosion and Sedimentation Control Act, Part 91 of Act 451 of 1994 as amended and this ordinance.

**I. Purpose and Objectives**

**A. Purpose**

The purpose of this Ordinance is to prevent the pollution, impairment, or destruction of a natural resource or the public trust in Leelanau County.

## **B. Objectives**

Specific objectives include the following:

1. To prevent accelerated soil erosion and to control stormwater runoff resulting from earth changes proposed within Leelanau County, both during and after construction.
2. To assure that property owners control the volume and rate of stormwater runoff originating from their property so that surface water and groundwater quality is protected, soil erosion minimized, and flooding potential reduced.
3. To preserve and use the natural drainage system for receiving and conveying stormwater runoff and to minimize the need to construct enclosed, below grade storm drain systems.
4. To preserve natural infiltration and the recharge of groundwater and to maintain subsurface flows which replenish lakes, streams and wetlands and maintain the quality of those waterways.
5. To restrict stormwater runoff entering and leaving development sites to non erosive velocities by requiring temporary and permanent soil erosion control measures.

6. To assure that soil erosion control and stormwater runoff control systems are incorporated into site planning at an early stage in the planning and design process.
7. To prevent unnecessary stripping of vegetation and loss of soils, especially adjacent to lakes, streams, watercourses, and wetlands.
8. To prevent construction activity that may cause mass movement, slumping, or erosion of land surfaces.
9. To eliminate the need for costly maintenance and repairs to roads, embankments, ditches, streams, lakes, wetlands, and stormwater control facilities which are the result of inadequate soil erosion and stormwater runoff control.
10. To reduce long term expenses and remedial projects which are caused by uncontrolled stormwater runoff and soil erosion.
11. To encourage the design and construction of stormwater control systems which serve multiple purposes, including but not limited to flood prevention, water quality protection, wildlife habitat preservation, education, recreation, and wetlands protection.
12. To reduce the detrimental impacts of stormwater flows on Downstream communities.
13. To allow for off site stormwater control facilities and measures if proposals meet the requirements of these regulations.

13. To assure that all stormwater control facilities will be properly designed, constructed, and maintained.
15. To provide for enforcement of this ordinance and penalties for violations.

### **III. Permit Requirements**

#### **A. Jurisdiction for Permit Administration**

1. The Soil Erosion Control Officer shall be the enforcing agency for regulated earth changes proposed within the boundaries of Leelanau County.
2. Earth changes carried out by government agencies as authorized public agencies shall be exempt from obtaining a permit under this ordinance, and shall notify the Soil Erosion Control Officer of any proposed earth change which is more extensive than normal maintenance.
3. Any City, Village or Charter Township can adopt their own ordinance that is at least as stringent as the subject matter described herein; and upon adoption will not be covered by this ordinance.

4. When earth changes are proposed on sites which are partially included in two or more counties, application review shall be the responsibility of the Michigan Department of Environmental Quality.

**B. Regulated Earth Changes**

Earth changes requiring a soil erosion and stormwater runoff control permit from the Soil Erosion Control Officer include the following:

**1. Earth changes connected with any of the following activities which disturb 1 or more acres of land, or are within 500 feet of a lake or stream, except for normal maintenance:**

a. Transportation facilities, including private streets, access roads, railroads, airports, common carrier pipelines, and mass transit facilities, except normal maintenance procedures such as earth or gravel road leveling and minor repairs or alterations to rights of way not affecting a lake or stream.

2. Mobile home park developments, multiplefamily residential developments, and site preparation for a single family residence.

3. Public buildings and service facilities, including but not limited to government buildings and facilities,

schools, vehicle maintenance facilities, and salt storage facilities.

- d. Recreational facilities, including but not limited to parks, golf courses, beaches above the ordinary high water mark, campgrounds or trails, including public or private facilities.
- e. Utilities, including but not limited to underground pipelines or cables, except pole installation, service lines and other earth changes of a minor nature, and emergency repairs.
- f. Oil, gas, and mineral wells, except the installation of those wells under permit from the supervisor of wells and wherein the owner operator is found by supervisor of wells to be in compliance with the conditions of the Soil Erosion and Sedimentation Control Act (Part 91 of P.A. 451). Access roads to well production sites shall be subject to permit requirements.
- g. Non agricultural water impoundments and waterway construction or improvements.
- h. Logging activities including access roads, except the principal area where trees are being cut.

i. Extraction of sand, gravel, peat, clay,  
topsoil including access roads.

k. Earth changes on agricultural lands, including  
road construction and building construction,  
but not including plowing and tilling of  
soil for the purpose of crop production.  
Agricultural reshaping shall enter an  
agreement with the Leelanau Conservation  
District.

2. Earth changes for environmentally sensitive  
residential sites.

3. Industrial or commercial development sites,  
regardless of size, location, or environmental  
sensitivity.

4. a. All subdivision developments as defined by  
section 102 of Act 288, P.A. 1967, as  
amended,  
regardless of size, location, or  
environmental  
sensitivity.

b. All Site Condominium developments as defined by  
section 559.01 et seq. of the Michigan Compiled  
Laws of Act 59, P.A. 1978, as amended  
regardless of size, location, or environmental  
sensitivity.

**C. Identification of Environmentally sensitive sites**

1. Property owners are responsible for determining whether their sites are environmentally sensitive as defined in this Ordinance (Definition AA, pages 30 - 31 ).
  
2. Township, village, and city agencies, and/or the Conservation District shall be requested to provide assistance to property owners in identifying earth changes and environmentally sensitive sites subject to review by the Soil Erosion Control Officer.

**D. Permit Application Submittal**

1. All applications for soil erosion and stormwater runoff control permits shall include one copy of the proposed soil erosion and stormwater runoff control plan unless more copies are requested by the Soil Erosion Control Officer. Copies of the permit application form shall be made available by the Leelanau County Soil Erosion Control Officer.
  
2. Permit applications shall be submitted to the Leelanau County Soil Erosion Control Officer.
  
3. Application for a permit shall be made prior to the start of any earth change including construction of access roads, driveways, and stump removal, or grading. Permit approval shall be given prior to the initiation

of any work activity. Any unauthorized work shall be considered a violation of these procedures regardless of any later actions taken toward compliance. Soil test borings, vegetative cutting for land surveys, percolation tests, and normal maintenance shall not be considered a start of work under these regulations.

4. The application review period begins upon receipt of a completed application.

#### **E. Sequential Applications**

1. On projects which are so large or complex that a plan encompassing all phases of the project cannot reasonably be prepared prior to initial groundbreaking, application for permit on successive major incremental earth change activities may be allowed. Requests for sequential applications shall be approved by the Soil Erosion Control Officer prior to submittal of a permit application.
2. Approval of sequential applications shall take place in phases. Initially, the overall conceptual plan for the entire development shall be submitted for review and approval. Subsequently, detailed plans for sections of the total project shall be submitted for review and approval.

3. All permits processed and issued for phases of a project shall be clearly defined as to the nature and extent of work covered. Each phase of the project must be reviewed and permitted prior to construction.

**F. Permit Approval or Disapproval**

1. If the Soil Erosion Control Officer determines that the proposed soil erosion and stormwater runoff control plan complies with the standards in this ordinance, a permit shall be issued specifying the work approved. If the proposed plan does not comply with these standards, the permit request shall be modified or denied.
2. Upon request, the Soil Erosion Control Officer shall furnish the applicant or other interested person with a statement in writing of the reasons for permit denial or approval.
3. If necessary, the Soil Erosion Control Officer may request additional information from the applicant.

**G. Permit Expiration or Revocation**

1. Permits shall terminate automatically if construction has not commenced within one year of the date of issuance. The permit holder may request a one year

extension if there are valid reasons to support such an extension.

2. Any permit issued by the Soil Erosion Control Officer under this Ordinance may be revoked or suspended, after notice and an opportunity for a hearing, for any of the following causes:

- a. A violation of a condition of the permit.
- b. Obtaining a permit by misrepresentation or failure to fully disclose relevant facts in the application or soil erosion and stormwater runoff control plan.
- c. A change in a condition that requires a temporary or permanent change in the activity.

#### **H. Administrative Fee Schedule**

1. Permit fees shall be directly related to the actual costs of administering the soil erosion control and stormwater management permit program including site inspection costs and permit administration costs.

2. The fee schedule shall be for this program shall be approved by the County Board of Commissioners.

**I. Penalties for Initiating Earth Change Activities without a Permit**

Any earth change activities without a valid permit or in violation of a permit or permit conditions shall be considered a violation of this Ordinance and subject to fines and other penalties as provided in this Ordinance.

**IV. Issuance of Building Permits**

A. A general law township, charter township, city, village or county agency shall not issue a land use permit or building permit for an earth change subject to permit requirements until a soil erosion and stormwater runoff control permit has been issued by the Soil Erosion Control Officer.

B. The land owner shall notify the general law township, charter township, city, village, county agency or other governmental agency with jurisdiction after a permit decision has been made.

**V. Other Permits and Approvals of Other Government Agencies**

A. Approvals under this Ordinance shall not relieve a property owner of the need to obtain other permits or approvals from federal, state, county, and local agencies.

B. If requirements of federal, state, county, and local officials vary, the most stringent requirements shall be followed.

#### **VI. Soil Erosion and Stormwater Runoff Control Plan**

A soil erosion and stormwater runoff control plan shall be prepared for any earth change subject to permit requirements. The plan shall be designed to effectively reduce accelerated soil erosion and sedimentation during construction and after construction is completed.

##### **A. Residential Development or Environmentally Sensitive Site Plans for Earth Changes**

A residential or environmentally sensitive site plan shall show the following:

1. Location of the site.
2. Site characteristics, such as location of lake, stream, wetlands or existing buildings.
3. Proposed earth change activity.
4. Erosion control measures proposed.

If there are severe development limitations in regards to the existing site characteristics, the Soil

Erosion Control Officer may require that a residential or environmentally sensitive site plan be prepared by one of the following registered professionals: civil engineer, land surveyor, architect, and/or landscape architect.

B. Other Land Uses, Section III B, Site Plans for Earth Changes

The submitted site plans shall show the following:

1. A map or maps at a scale of not more than 200 feet to the inch or as otherwise determined by the Soil Erosion Control Officer, including a legal description and site location sketch which includes the proximity of any proposed earth change to lakes or streams or both; predominant land features; and contour intervals or slope description.
2. A soils survey or written description of the soil types of the exposed land area contemplated for the earth change.
3. A description and the location of the physical limits of each proposed earth change.
4. Location of all lakes, streams, and protected wetlands partially or completely contained within the boundaries of the site or within 50 feet of the site boundary.

5. A description and the location of all existing and proposed on site stormwater management facilities and measures.
6. The timing and sequence of each proposed earth change.
7. A description and the location of all proposed temporary soil erosion control facilities and measures.
8. A description and the location of all proposed permanent soil erosion control facilities and measures.
9. Stormwater runoff calculations.
10. A program for the continued maintenance of all permanent soil erosion and stormwater runoff control facilities and measures as listed in Section IX.
11. Other information which the Soil Erosion Control Officer requires to review the impact of the proposed earth change in relationship to the standards and requirements of this ordinance.

### **3. Subdivision Plat Site Plan**

Applicants for subdivision plat approval shall submit the same information as in Section VI B of this ordinance and may need to submit additional information including but not limited to the following: off site watershed boundaries, existing and proposed easements, and proposed

drainage system including water movement onto and out of the proposed plat.

**D. County Road Commission**

The Road Commission as an authorized public agency under Part 91 of Public Act 451 of 1994, shall be reviewed by the Michigan Department of Environmental Quality.

The Road Commission will annually review the planned projects for the next twelve months (prior to the field season) with the Soil Erosion Control Officer.

**VII. General Standards for Approval of Soil Erosion and Stormwater Control Plans**

1. The Soil Erosion Control Officer shall approve or disapprove soil erosion and stormwater runoff control permit applications and plans in accordance with published guidelines.
2. All earth changes subject to review under the requirements of this Ordinance shall be designed, constructed, and maintained to provide for the detention of flood waters and to protect water quality.
2. Measures required for soil erosion and stormwater runoff control shall take into consideration natural features, proximity of the site to lakes, streams, and protected

wetlands, extent of impervious surfaces, potential for soil erosion and flooding, and the size of the site.

4. Stormwater conveyance, storage, and infiltration facilities shall be designed to provide for non erosive velocities of stormwater runoff.
5. Alterations to natural drainage patterns shall not create or increase downstream flooding or sedimentation.
6. When a proposed earth change is located in an area where a watershed plan has been approved by the County Board of Commissioners, the standards for stormwater detention and retention volumes, discharge rates, and stormwater facility locations specified in the approved Watershed Plan shall be deemed to meet the requirements of this Ordinance.

## **VIII. Off Site Stormwater Control**

### **A. Waiver option**

1. In lieu of on site stormwater facilities and measures, the use of off site stormwater facilities and measures, together with on site soil erosion control, may be proposed. In such cases, the applicant shall request a waiver of the requirements for on site

stormwater runoff control. The waiver request shall be submitted to the Soil Erosion Control Officer with a permit application and a soil erosion and stormwater runoff control plan, including information specified in Section VI of this Ordinance. This waiver option does not allow for changes in requirements for on site soil erosion control.

**B. Shared Off Site Stormwater Control Facilities**

1. Off site stormwater control areas may be shared between two or more property owners or developments, provided that maintenance agreements have been approved by the Soil Erosion Control Officer and easements have been obtained and recorded.

2. Stormwater management easements are required for all areas used for off site stormwater control unless an exception has been granted by the Soil Erosion Control Officer. Easements shall be recorded with the Leelanau County Register of Deeds prior to approval of the final development plan by the Soil Erosion Control Officer.

**C. Applicable Standards**

1. General Standards specified in Section VII of this Ordinance shall be used in reviewing proposed soil erosion and stormwater runoff control plans for offsite stormwater facilities and measures.

**IX. Maintenance**

- 1. All soil erosion and stormwater runoff control facilities and measures shall be maintained in accordance with permit conditions.
- B. The persons) or organization(s) responsible for maintenance shall be designated in the Soil Erosion and Stormwater Runoff Control Plan or the permit application submitted to the Soil Erosion Control Officer Options include:
  - a. The owner of the property.
  - b. Property owners association or other nonprofit organization, provided that provisions for financing necessary maintenance are included in deed restrictions or other contractual agreements.
- C. Maintenance agreements shall specify responsibilities for financing maintenance and emergency repairs, including but not limited to the procedures specified in Section XIII and XIV of this Ordinance.
- D. The Soil Erosion Control Officer will make the final decision of what maintenance option is appropriate in a given situation. Natural features, proximity of site to lakes, streams and protected wetlands, extent of impervious surfaces, size of the site and potential need for ongoing maintenance activities will be considered when making this decision.

**X. Stormwater Management Easements**

A. Stormwater management easements shall be provided by the property owner if necessary for: (1) access for facility inspections and maintenance, or (2) preservation of stormwater runoff conveyance, infiltration, and detention areas and facilities, including flood routes for the 100 year storm event. The purpose of the easement shall be specified in the maintenance agreement signed by the property owner.

B. Stormwater management easements are required for all areas used for off site stormwater control, unless a waiver is granted by the Soil Erosion Control Officer.

C. Easements shall be recorded with the Leelanau County Register of Deeds prior to issuance of a certificate of compliance by the Soil Erosion Control Officer. (Part XI, section c).

**XI. Compliance Assurances**

**A. Performance Guarantees**

1. Applicants proposing subdivision plats, road construction projects, or other developments identified by the Soil Erosion Control Officer with a high potential for soil erosion shall be required to post a cash escrow, letter of credit, or other

acceptable form of performance security in an amount determined by the Soil Erosion Control Officer.

2. Letters of credit, if used as a performance guarantee, shall extend for a minimum of one year with the option of renewal. Letters of credit will be returned to the applicant when the site is certified by the licensed professional who designed the site plan and the site is completely stabilized to meet requirements set forth by the Soil Erosion Control Officer

## **2. Construction Certification by Registered Professional**

For any sites that required a professional site plan, a certification letter shall be submitted after soil erosion and stormwater runoff control facilities have been installed to affirm that construction has been completed in accordance with the approved soil erosion and stormwater runoff control plan. This certification letter can be prepared by one of the following registered professionals: civil engineer, land surveyor, architect, and/or landscape architect unless it was specified by the Soil Erosion Control Officer that a civil engineer prepare a plan, it would need to be a civil engineer that approves the plan.

If there are changes during the course of construction, the Soil Erosion Control Officer may require final "as built" drawings for final approval of the site work.

### **C. Certificate of Compliance**

Upon receipt and approval of the certification letter, the Soil Erosion Control Officer shall issue a certificate of compliance to the property owner.

## **XII. Inspections**

A. Authorized representatives of the Soil Erosion Control Officer may enter at reasonable times upon any property to conduct on site inspections. Such inspections may take place before, during and after any earth change activity for which a permit has been issued.

B. If upon inspection, site conditions are found not to be as stated in the permit or approved Soil Erosion and Stormwater Runoff Control Plan, the permit will be invalid. No earth disrupting work shall be undertaken, or continued, until revised plans have been submitted and a valid permit issued.

C. Requests for revisions must be submitted to and approved by the Soil Erosion Control Officer in writing before being effective unless approved by the

field inspector on the site. If approved, a revised site plan shall be submitted for review and approval.

**XIII. Stop Work Orders and Emergency Actions**

A. If necessary to assure compliance with the permit requirements, standards, and other provisions of this Ordinance, or to protect public health safety and welfare, the Soil Erosion Control Officer may issue a stop work order for the purpose of preventing or minimizing accelerated soil erosion, stormwater runoff, or other conditions posing imminent and substantial danger to public health, safety, welfare, or natural resources.

3. If necessary to protect public safety or water resources, including lakes, streams, protected wetlands, and other receiving bodies of water, the Soil Erosion Control Officer may initiate emergency action to abate imminent and substantial danger and risk, subject to Section XIV B of this Ordinance.

D. Except as otherwise provided through maintenance agreements, the property owner may be held responsible for reimbursing Leelanau County for all costs incurred as a result of emergency action, including administrative costs, provided that a finding is made

that the property owner violated provisions of this Ordinance, a permit, or an approved maintenance agreement, subject to Section XIV B of this Ordinance.

- D. The stop work order, when issued, shall require all specified earth change activities to be stopped. A copy of the stop work order shall immediately be submitted to other state and local agencies with regulatory jurisdiction.
- E. If the Soil Erosion Control Officer determines that soil erosion and sedimentation of the waters of this state has or will reasonably occur from a parcel of land in violation of this Ordinance, it may seek to enforce the ordinance by notifying the person who owns the land, by mail, with return receipt requested, of its determination. The notice shall contain a description of specific soil and sedimentation control measures which, if implemented by the property owner, would bring the owner into compliance.
- F. A person who owns land subject to this ordinance shall implement and maintain soil erosion and stormwater runoff control measures in conformance with this Ordinance within ten (10) days after the notice of violation has been given as specified in Section E above.

#### **XIV. Enforcement Action**

##### **A. General Provisions**

1. All earth changes in Leelanau County, including earth changes exempt from permit requirements, are subject to the enforcement provisions and penalties of this ordinance.
2. A person who owns land on which an earth change has been made that may result in or contribute to soil erosion or sedimentation of the waters of the state shall implement and maintain soil erosion and sedimentation control measures that will effectively reduce soil erosion or sedimentation from the land on which the earth change has been made.
3. The Soil Erosion Control Officer shall notify the Michigan Department of Environmental Quality of all violations of the Michigan Soil Erosion and Sedimentation Control Act (Part 91 of Act 451) as amended, or rules, as well as violations of this ordinance, including violations attributable to an earth change created by an authorized agency.
4. Each act of violation, and every day upon which any violation shall occur or continues to occur, shall constitute a separate offense.

5. A person who has not complied with this ordinance and who, after notice, refuses to implement and maintain soil erosion control and stormwater runoff control measures and facilities in conformance with these regulations shall be subject to a fine of not more than \$2500.00 or ninety (90) days in jail, or both, plus the cost of prosecution.

**B. County Installation of Soil Erosion and Stormwater Runoff**

**Control Measures**

1. Soil erosion control or stormwater runoff control measures or facilities may be constructed or maintained by the Soil Erosion Control Officer and/or a hired consultant or contractor, at the property owner's expense, if the necessary provisions for the correction of a violation are not successfully implemented within ten (5) calendar days after the notice of violation is mailed.
  
2. The Soil Erosion Control Officer shall not expend more than \$10,000.00 for the cost of work, materials, or labor without prior notice to the property owner. If more than \$10,000.00 is to be expended under this section, the work shall not begin until at least twenty (10) days after the notice of violation has been mailed as described in Section XIII G of this Ordinance.

3. All expenses incurred by the Soil Erosion Control Officer to construct and maintain measures and facilities to bring the site into compliance shall be reimbursed by the property owner. The County shall have a lien for the expenses incurred. For single family or multiplefamily residential properties, the lien shall have priority over all liens and encumbrances filed or recorded after the date of such expenditure. For other types of property, the lien for such expenses shall be collected and treated in the same manner as provided for property tax liens under Act 206 of 1893.
  
4. A person who has not complied with Section XIV A.2. and who, after notice, refuses to implement and maintain soil erosion and stormwater runoff control measures in conformance with this ordinance shall be subject to a civil fine of not more than \$2500.00. A fine collected under this section shall be paid to the Leelanau County or other enforcing agency responsible for the enforcement in the city, township, or village where the land is located.
  
5. A default in the payment of a civil fine or costs ordered under this Ordinance or an installment of the fine or costs may be remedied by any means authorized under the revised judicature act of 1961, Act No. 236

of the Public Acts of 1961, being sections 600.101 to 600.9947 of the Michigan Compiled Laws.

## **XV. Appeals**

### **A. Right of Appeal**

1. Any person aggrieved by the action or inaction of the Soil Erosion Control Officer related to this Ordinance may appeal to the Leelanau County Soil Erosion Control Appeals Board.
  
2. The affected Township Zoning Board of Appeals will have jurisdiction to hear a variance of the setbacks suggested when a zoning variance is concurrently considered.

## **XVI. Severability**

- A. If any section, clause, provision or portion of this ordinance is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the ordinance shall not be affected.
  
- B. Amendments may be made following the adopted procedures of the Leelanau County Board of Commissioners.

## **XVII. Effective Date**

The ordinance shall take effect on \_\_\_ and after publication according to statute.

, Chairperson

Leelanau County

Board of Commissioners

## II. Definitions

The following terms and phrases shall have the meaning given herein, unless the context otherwise requires:

- A. Accelerated soil erosion** The increased movement of soils that occurs as a result of human activities and development.
- B. Agricultural Erosion Control Agreement** A document signed by Leelanau Conservation District and the agricultural land owner that details steps involved in earthchange activities to control offsite erosion.
- C. Appeals Board** The Leelanau County Appeals Board.
- D. Authorized public agency** State, local or county agency designated pursuant to Section 11 of the Michigan Soil Erosion and Sedimentation Control Act, Part 91 of Act 451 of 1994 for the purpose of enforcing soil erosion control requirements with regard to earth changes undertaken by that agency.
- E. Best management practice (BMP)** Structural device, measure, facility, or activity which helps to achieve soil erosion

and stormwater management control objectives at a designated site.

**F. Board of County Commissioners** Leelanau County Board of Commissioners.

**G. Channel** The portion of a natural stream which conveys normal flows of water, or a ditch or channel excavated for the flow of water.

**8. Commercial** All land uses except for one family and two family detached dwellings and appurtenant structures. The use of property in connection with or for the purchase, sale, display, or exchange of goods, merchandise, or personal services, as well as the maintenance or operation of businesses or recreational or amusement enterprises.

**I. Conservation District** Leelanau Conservation District.

**J. Control Plan** Soil Erosion and Stormwater Runoff Control Plan.

**K. Conveyance facility** A surface or subsurface structure or channel which transports stormwater runoff.

**L. County drain** Drains established and/or constructed pursuant to the Michigan Drain Code (Act 40. of 1956, as amended).

**M. Depression storage** The portion of precipitation trapped in depressions in the ground surface.

**N. Design standard (or engineering design standard)** A specification that prescribes the type of design, location, mode of construction, mode of operation, or

other engineering detail for soil erosion or stormwater control facilities.

**O. Design storm** A rainfall event that has a specific statistical probability of occurring in any given year. For example, a 2 year design storm is a storm with a 50 percent chance of occurring during the year. Design storm figures are used to calculate the runoff volume and peak discharge rate through a detention or retention basin or other stormwater management facility.

**P. Designated use** The use of a stream segment assigned by the Michigan Water Resources Commission as part of the regulatory process of establishing water quality control standards. Uses may be public drinking water supply, irrigation, recreational use, fishing, or other categories, as established by the Water Resources Commission.

**Q. Detention basin** A structure or facility, natural or artificial, which stores stormwater on a temporary basis and releases it at a controlled rate. A detention basin may drain completely after a storm event, or it may be a body of water with a fixed minimum and maximum water elevation between runoff events.

**R. Discharge** The rate of flow of water through an outlet structure at a given point and time, measured in cubic feet per second (cfs).

**S. Disturbed area** An area of land subjected to erosion due to the removal of vegetative cover and/or earthmoving activities, including filling.

20. **Drain Commisssioner** Leelanau County Drain Commisssioner or the authorized representative of the Drain Commisssioner.

21. **Drainage** The interception and removal of groundwater or surface water by natural or artificial means.

**V. Drainage well** A bed of stone or hole in the ground constructed for the purpose of trapping stormwater for infiltration into the ground.

**W. Downstream** Lands and waters which receive stormwater runoff and other surface water flows from a designated site. Downstream lands and waters are downgradient from the designated site.

**X. Drainage system** All facilities, channels, and areas which serve to convey, filter, store, and/or receive stormwater, either on a temporary or permanent basis.

**Y. Earth change** A human made change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the state. The term "earth change", as used in this ordinance, shall not apply to the practice of plowing and tilling soil for the purpose of crop production.

**Z. Enforcing agency** A public agency designated to enforce permit requirements of the Michigan Soil Erosion and Sedimentation Control Act Part 91 of P.A. 451, as amended.

**AA. Environmentally sensitive sites** Includes any single family or multiple family residential site with one or more of the following characteristics:

1. Sites where driveways have been planned with a slope greater than 10 percent (1 foot vertical to 10 feet horizontal).
2. Sites with heavy clay soils (commonly termed hardpan clay), and soils classified as hydric soils. (hydrologic group D)
3. Sites which may cause sedimentation or flood onto adjacent land areas if earth changes occur.
4. Sites located within 100 feet of a regulated wetland.
5. Other sites identified by local units of government as having a high potential for environmental degradation including flooding as a result of soil erosion or stormwater runoff on site or off site.

**BB. Erosion** See "soil erosion" definition.

**CC. Excess runoff** Surface runoff that cannot be accommodated satisfactorily by the natural or planned drainage systems.

30. **Extended detention basin** Detention basin designed to provide substantial removal of suspended solids and particulates, typically achieved by holding stormwater for 24 hours or more.
- EE. Fill material** Soil, sand, gravel, clay, or any other nonpolluting material which displaces soil or water or reduces water retention potential in a lake, pond, stream, or wetland.
- FF. Flood** An overflow of surface water onto lands not normally covered by water. Floods have these essential characteristics: the inundation of land is temporary and results from unusually heavy precipitation; and the land is inundated by overflow for a lake, pond, stream, and/or wetland, or is flooded by natural runoff.
- GG. Floodplain** The area of land adjoining a lake or stream which is inundated when the flow exceeds the capacity of the normal channel. For mapping purposes, floodplains are designated according to the frequency of the flood event, such as the 100 year floodplain or 500 year floodplain.
- HH. Grading** Any stripping, clearing, stumping, excavating, filling, stockpiling, or any combination thereof, including the land in its excavated or filled condition.
- II. Impervious area** Impermeable surfaces, such as paved or gravel driveways, parking areas, or roads which prevent the infiltration of water into the soil.

**JJ Industrial use** Any manufacturing, fabrication, assembly, printing, or improvement of articles or merchandise: warehousing, wholesaling, or storage of goods, vehicles, or materials; research and medical laboratories: mining and activities related to mineral extraction and processing: and other business enterprises not classified as commercial.

**KK. Infiltration** The downward movement or seepage of water from the surface to the subsoil and/or groundwater. The infiltration rate is expressed in terms of inches per hour.

**LL. Infiltration facility** A structure or area which allows stormwater runoff to gradually seep into the ground, e.g. french drains, seepage pits, infiltration basin, dry well, or perforated pipe.

**MM. Lake** A permanent body of open water which is five acres or more in size.

40. **Land use** A use of land which may result in an earth change, including but not limited to subdivision, site condominium, residential, commercial, industrial, recreational, agricultural practices, private and public highway, road and/or stream crossing construction, and drainage construction.

41. **Landscaping** Mowing, seeding, sodding, and other landscaping activities which is not an earth change.

PP. **Maintenance agreement** A binding agreement between the landowner and Leelanau County which sets forth the location and design of best management practices, as well as the terms and requirements for stormwater and erosion control facility maintenance recorded with the County Register of Deeds.

QQ. **Material** Soil, sand, gravel, clay, or any other organic or inorganic material which is not municipal defined by Act 641 of 1978, as amended.

44. **Non erosive velocity** A rate of flow of stormwater runoff, measured in feet per second, which does not erode soils. Non erosive velocities vary for individual sites, taking into account topography, soil type, and runoff rates.

44. **Normal maintenance** Landscaping, repairs, road leveling, minor excavation or filling at a developed site, or other activities determined by the Soil Erosion Control Officer to be exempt from permit requirements, provided that such activities do not violate standards in this ordinance.

44. **Off site facility** Stormwater management or erosion control facility which is located partially or completely off of the development site.

44. **Ordinary high water mark** The line between upland and bottomland which persists through successive changes in water levels, below which the presence and action of the water is so

common or recurrent that the character of the land is marked distinctly from the upland and is apparent in the soil itself, the configuration of the surface of the soil and the vegetation. On an inland lake which has a level established by law, it means the high established level. Where water returns to its natural level as the result of the permanent removal or abandonment of a dam, it means the natural ordinary high water mark.

44. **Outfall** The point where water flows out from a conduit, drain, or stream.

44. **Outlet** A stream or facility receiving the flow from a basin, drain, or other stormwater management facility. visible evidence of a continued flow or continued occurrence of water.

XX. **Peak rate of discharge (peak flow)** The maximum calculated rate of stormwater flow at a given point in a channel, watercourse, or conduit resulting from a predetermined frequency storm or flood, measured in cubic feet per second (cfs).

YY. **Permit** Soil erosion and stormwater runoff control permit.

ZZ. **Person** Any individual, firm, partnership, association, public or private corporation, company, organization or legal entity of any kind, including governmental agencies.

- AAA. **Pollution** Degradation of water quality, preventing the use of water for some specific purpose, caused by a natural or human made substance.
- BBB. **Pond** A permanent or temporary body of open water which is more than one acre in size and less than five acres in size.
- CCC. **Protected wetland** A wetland which meets one or more of the following criteria: (1) a wetland which is within 500 feet of a lake or stream, (2) a wetland which is five (5) or more acres in size, or (3) a wetland subject to regulation by a township, village, city, or county.
- DDD. **Receiving body of water** Any lake, pond, stream, wetland, or groundwater into which stormwater runoff is directed.
- EEE. **Regional detention basin** A basin to detain water flow from a number of development sites or a small watershed.
- FFF. **Retention basin** A wet or dry stormwater holding area, either natural or manmade, which does not have an outlet to adjoining watercourses or wetlands other than an emergency spillway.
- GGG. **Runoff** Stormwater runoff.
- HHH. **sediment** Mineral or organic solid particulate matter that has been removed from its site of origin by (a) soil erosion; (b) suspension in water: and/or (c) wind or water transport.

- III. **Sedimentation** The process or action of depositing sediment.
- JJJ. **Site** Any tract, lot, or parcel of land or combination of tracts, lots or parcels of land proposed for development.
- KKK. **Soil Erosion** The wearing away of land by the action of wind, water, gravity or a combination thereof.
- LLL. **Soil erosion control facilities and measures** Any structure, facility, barrier, berm, vegetative cover, basin, or other measure which serves to control soil erosion in accordance with the purposes and standards of this Ordinance.
- Temporary measures** Installations designed to control soil erosion during construction or until soils in the contributing drainage area are stabilized.
- Permanent measures** Installations designed to control soil erosion after a project is completed.
- MMM. **Soil erosion and stormwater runoff control plan** **Maps** and written information for a proposed land use or earth change which describe the way in which soil erosion and stormwater runoff will be controlled, during and after completion of construction.
- NNN. **Soil erosion and stormwater runoff control permit** Signed, written statement issued under this Ordinance authorizing the applicant to engage in specified earth changes.
- OOO. **Stop work order** A notice issued by the Soil Erosion Control

Officer or an authorized agent of the Soil Erosion Control Officer to the permittee to require the permittee to cease grading or development activities.

**PPP. Storage facility** A basin, structure, or area, either natural or manmade, which is capable of holding stormwater for the purpose of reducing the rate of discharge from the site.

**QQQ. Storm drain** A conduit, pipe, natural channel or humanmade structure which serves to transport stormwater runoff.

**RRR. Storm frequency** The average period of time during which a storm of a given duration and intensity can be expected to be equaled or exceeded.

**SSS. Stormwater control facilities and measures** Any facility, structure, channel, area, or vegetative cover, or measure which serves to control stormwater runoff in accordance with the purposes and standards of these regulations.

**TTT. Stormwater runoff** Waters from rains falling within a tributary drainage basin, flowing over the surface of the ground or collected in channels, watercourses, or conduits, measured in depth of inches.

**UUU. Stream** A river, stream, or creek which may or may not be serving as a drain which has definite banks, a bed, and

**VVV. Stream bank** The usual boundaries, not the flood boundaries, of a stream channel.

- WWW. Stripping** Any activity which removes or significantly disturbs the vegetative surface cover, including clearing and grubbing operations.
- XXX. Swale** Low lying grassed area with gradual slopes which transports stormwater, either on site or off site.
- YYY. Vegetative cover** Grasses, shrubs, trees, and other vegetation which hold and stabilize soils.
- ZZZ. Water quality standards** Minimum standards established by the Michigan Water Resources Commission for water quality protection.
- AAAA. Watercourse** Any natural or human made waterway, drainageway, drain, river, stream, diversion, ditch, gully, swale, or ravine having banks, a bed, and a definite direction or course, either continuously or intermittently flowing.
- BBBB. Watershed** A land area, also known as a drainage area, which collects precipitation and contributes runoff to a receiving body of water or point along a watercourse.
- CCCC. Wetland** Land characterized by the presence of water at a frequency and duration sufficient to support and that under normal circumstances does support wetland vegetation or aquatic life and is commonly referred to as a bog, swamp, or marsh. A wetland will contain a predominance, not just an occurrence, of wetland vegetation, aquatic life, or hydric soil.

**DDDD. Wetland vegetation** Plants, including but not limited to trees, shrubs, and herbaceous plants, that exhibit adaptations to allow, under normal conditions, germination or propagation and to allow growth with at least their root systems in water or saturated hydric soil.

1