



Model Ordinance for Agricultural Erosion Control

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Minnesota Board of Water and Soil Resources

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Background

The Model Ordinance reflects the culmination of discussions of members of the Soil Conservation Advisory Committee convened by the Minnesota Board of Water and Soil Resources (BWSR). The Committee was convened, in part, to prepare a model ordinance for adoption by counties or townships to address agricultural erosion. The BWSR was prompted to do so because of the numerous references made within county local water plans to either revise existing or adopt new local ordinances to address erosion and sediment control – many counties have specifically identified agricultural sources as an immediate concern. The BWSR is providing this model annotated ordinance to assist those counties (or townships) to adopt or amend such official controls.

While none of the member organizations or agencies have formally endorsed this model ordinance, their representatives openly reviewed and discussed this document. This document has also been reviewed by the Minnesota Office of the Attorney General.

Membership on the committee included:

- Association of Minnesota Counties
- Minnesota Farm Bureau Federation
- Minnesota Farmers Union
- Minnesota Association of Conservation District Employees
- Minnesota Association of County Planning and Zoning Administrators
- Minnesota Association of Soil and Water Conservation Districts
- Minnesota Association of Townships
- Minnesota Association of Watershed Districts
- Minnesota Department of Agriculture
- Minnesota Department of Natural Resources
- Minnesota Planning (Office of Strategic & Long-Range Planning)
- Minnesota Pollution Control Agency
- USDA Natural Resources Conservation Service

Advisory Committee facilitated by the Minnesota Board of Water & Soil Resources

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Introduction

Erosion is a natural process caused by the weathering of soils and bedrock. Some degree of erosion occurs everywhere naturally even though the rate may be virtually impossible to measure or perceive. However, the land disturbing activities of humans usually greatly accelerate the erosion process, often with detrimental consequences such as reduced soil productivity or adverse effects to adjacent lands or to water quality. In the past few decades, several nationwide assessments have been conducted in attempts to estimate the public costs for these detrimental consequences of erosion. For example, the Conservation Foundation estimated the costs of off-farm impacts from agricultural erosion to be \$2.2 billion in 1980. In its 1984 "Report to Congress: Nonpoint Sources in the U.S.," the Environmental Protection Agency (EPA) identified agriculture as a major polluter of the nation's water resources. In addition, the 1982 National Resources Inventory conducted by the Natural Resources Conservation Service estimated that an average of nearly 148 million tons of soil erodes annually from Minnesota's 23 million acres of cropland. This translates to an annual average erosion rate of nearly 6.5 tons per cropland acre, which exceeds the soil loss tolerance of every soil type in Minnesota.

Over the past two decades, soil erosion in Minnesota has not improved. The 2010 National Resources Inventory estimated that an average of 147 million tons of soil eroded from Minnesota's 21 million acres of cropland. This translates to an average soil loss of 7 tons per cropland acre, including both wind and water erosion. More importantly, the Inventory specified that nearly 13 million acres of Minnesota cropland has erosion control needs. If not adequately controlled, this rate of erosion will substantially reduce the productive capacity of our state's soil resources. In addition, as the studies of the Conservation Foundation and EPA suggest, the adverse effects of agricultural erosion to water quality are of concern in a state like Minnesota with a diversity of surface water resources.

All Minnesota counties are participating in the local water management programs administered by the Board of Water and Soil Resources (BWSR). As of August 1994, 55 of the 80 approved local water management plans prepared by counties have stated that erosion control regulations will be considered or definitely adopted before the year 2000. Thirty-seven (37) of these 55 counties have specifically identified agricultural sources of erosion to be among the first erosion sources to be regulated.

Minnesota counties and townships already have adequate statutory authority to voluntarily adopt and enforce official controls to regulate land use for the purpose of controlling erosion and sedimentation. For example, Minnesota Statutes sections 394.25 and 462.357 specifically mention "agriculture" and "soil conservation" as authorized purposes for establishing county and township (respectively) zoning ordinances. Other types of land use, such as "forestry" or "development", are also mentioned in both statutes. Local governments considering the use of official controls as a means of reducing erosion and its adverse effects should consider addressing all land-disturbing activities which may result in excessive erosion or associated adverse effects.

As of this writing in August 1994, only five (5) Minnesota counties (Fillmore, Goodhue, Mower, Olmsted and Winona) have adopted an ordinance to control erosion resulting from agricultural use of land. BWSR staff are aware that several townships have adopted erosion control or nuisance type ordinances, but the exact numbers are unknown. Regardless, BWSR believes that those counties (and townships) that will adopt an agricultural erosion control ordinance in the near future, will likely do so under statutory planning and zoning authorities. Consequently, the BWSR decided to convene an advisory committee to prepare a model ordinance pursuant to statutory planning and zoning authorities in order to provide adequate guidance to interested counties (and townships). The results of the advisory committee's efforts are provided in this annotated model ordinance for your use. While the focus of the advisory committee was limited to agricultural erosion for the reasons mentioned, all other types of land-disturbing activities should be considered during the development and adoption of any local erosion control ordinance.

The advisory committee encourages any county or township considering the adoption, in whole or part, of this model ordinance to contact the BWSR staff nearest you for additional assistance. The phone numbers of all BWSR offices are provided below.

Model Ordinance

MODEL ORDINANCE FOR AGRICULTURAL EROSION CONTROL¹

AN ORDINANCE REQUIRING CONFORMANCE WITH SPECIFIC PERFORMANCE STANDARDS FOR THE PURPOSE OF CONTROLLING AGRICULTURAL SOIL EROSION AND SEDIMENTATION AND THEIR ASSOCIATED IMPACTS WITHIN (NAME OF COUNTY OR TOWNSHIP).

The **(official body)** of **(name of county or township)** ordains:

Section 1.0. **Finding of Fact.** The **(official body)** hereby finds that protection of the water and soil resources found within **(name of county or township)** is necessary for public good. Uncontrolled and inadequately planned use of natural resources adversely affects the public health, safety and general welfare by contributing to pollution, erosion, flooding and other environmental problems, and by creating nuisances, impairing the local tax base, and hindering the ability of the **(county or township)** to provide adequate community services.

Section 1.1. **Purpose.** The purposes of this ORDINANCE are to encourage and guide the agricultural use of land in accordance with its capabilities and to:

¹ Add other provisions, as necessary, to the overall scope of this ordinance to address other sources of excessive erosion or excessive sedimentation. Other activities might include (a) subdivisions and construction sites, and (b) forestry practices. The county (or township) is encouraged to include provisions for these activities using the following guidelines:

- 1) subdivisions and construction sites:
 - a) "Minnesota Construction Site Erosion and Sediment Control Planning Handbook," compiled by the Minnesota Board of Water and Soil Resources and the Association of Metropolitan Soil and Water Conservation Districts; and
 - b) "Protecting Water Quality In Urban Areas," compiled by the Minnesota Pollution Control Agency.
- 2) forestry practices:
 - a) "Water Quality In Forest Management," compiled by the USDA Forest Service - Chippewa and Superior National Forests, Minnesota Association of County Land Commissioners, Minnesota Department of Natural Resources, Minnesota Forest Industries, Minnesota Pollution Control Agency, Minnesota Timber Producers Association, and the University of Minnesota.

Regardless of the scope of ordinance your county (or township) determines to be appropriate, your administrator of the ordinance should note that there are no timelines specified within this model ordinance. The Soil Conservation Advisory Committee decided to omit all such specific requirements and encourage you to follow the timelines of similar procedures from other ordinances adopted and enforced in your county (or township).

- 1) control erosion of land-disturbing activities associated with all agricultural uses of land to rates no greater than soil loss tolerances²;
- 2) protect wetlands³, lakes, streams, and ditches from excessive sedimentation resulting from land-disturbing activities associated with agricultural use of land;
- 3) abate or minimize impacts of excessive sedimentation from agricultural use of land to adjoining lands; and
- 4) ensure proper maintenance of agricultural erosion control practice

Section 2.0. **Definitions.**⁴ For the purposes of this ORDINANCE, the following terms shall have the definitions given them in this section:

Section 2.1. **Administrator.** "Administrator" means the person designated to administer this official control for **(name of county or township)**.

Section 2.2. **Agricultural erosion control practices.** "Agricultural erosion control practices" means measures commonly used to control erosion resulting from agricultural use of land to rates no greater than soil loss tolerances or to abate or minimize excessive erosion and excessive sedimentation resulting from agricultural use of land.

² The county (or township) should initiate an agricultural erosion and sediment control program by the year 2000 which will ultimately achieve soil loss tolerances ("T") (preferably by at least the year 2020); such a local program should include adoption of an erosion control ordinance. Soil loss tolerance is defined on page 5 (section 2.21) of this model ordinance. The county (or township) may also consider using a "sliding scale" of compliance to achieve "T" as the performance standard for agricultural use of land. In other words, upon adoption, the county (or township) may include a provision similar to this:

1994 (date of adoption): performance standard = 2 x "T";

2004: performance standard = 1.5 x "T"; and

2014: performance standard = "T"

³ Use of the term "wetlands" should be consistent with Minnesota Statutes, section 103G.005, subpart 19. See section 2.22 of this model ordinance.

⁴ Each county (or township) is encouraged to adopt this "model" language so as to establish sound definitions for universal use, rather than possibly proliferating various interpretations of universally-used terms. As other provisions (see footnote ¹) are added to this ordinance, additional terms will need to be defined in this section.

Section 2.3. **Agricultural erosion control plan (plan)**⁵ "Agricultural erosion control plan" means a document, approved by the administrator and the conservation district board, which prescribes and describes the practices that, when implemented and properly maintained, will result in the prevention or abatement of excessive erosion and excessive sedimentation. An "Agricultural Erosion Control Plan" shall apply to those lands⁶ under agricultural use which do not comply with the provisions of this ORDINANCE and which lie within the jurisdiction of the **(county or township)** and under the control of the same land occupier(s).

Section 2.4. **Agricultural use.**⁷ "Agricultural use" means use of land for the production of livestock, dairy animals, dairy products, poultry or poultry products, fur-bearing animals,

⁵ "Agricultural erosion control plan" is purposely intended to be a term specific to the provisions of this ordinance. The advisory committee acknowledges the widespread use of similar, but distinctly different, erosion control planning terms such as:

- (a) "conservation farm plan" which refers to a whole-farm soil and water conservation plan typically prepared by the Natural Resources Conservation Service during the 1960s and 1970s, and recently referred to as a "resource management system plan"; or
- (b) "compliance plan" OR "HEL plan" OR "sodbuster plan" which refers to a plan prepared as a requirement of conservation compliance provisions of the 1990 Food, Agriculture, Conservation and Trade Act and the 1985 Food Security Act regarding an agricultural producer's participation in federal commodity programs administered by the Farm Service Agency.

NOTE: These plans may also be referred to as "alternative conservation system plans" or "basic conservation system plans," depending upon the degree of erosion control provided.

However, it should also be noted that the requirements of an "agricultural erosion control plan" may be met IF one of the above types of "other" or similar plans were modified (as necessary) so as to fully meet the intent of an "agricultural erosion control plan" as defined and referenced throughout this ordinance.

⁶ The "lands" which must be addressed in an "Agricultural Erosion Control Plan" should be limited to those found to be in non-compliance with or in violation of any of the provisions of this ordinance. In other words, a cited land occupier may own or operate other lands within the same county (or township) which are not undergoing excessive erosion or excessive sedimentation. Furthermore, each violation should be addressed with the preparation and implementation of an "Agricultural Erosion Control Plan" specific to those "lands" which should be broadly defined or delineated as a single "operating unit," as defined by the Farm Service Agency. An example is provided in Appendix A to illustrate this concept. However, a county (or township) may wish to require that ALL lands under the "control" (i.e., owned or operated) of the cited land occupier within the county (or township) be addressed within one comprehensive "Agricultural Erosion Control Plan." Doing so would likely prevent future violations on lands other than those which may have been the cause of the violation which ultimately triggered the requirement to prepare and implement the "Agricultural Erosion Control Plan."

⁷ This is a modified definition of the term "agricultural use" from section 4.0 of the "Model Soil Erosion Ordinance," pursuant to Minnesota Statutes, sections 103F.401 – 103F.455. In the definition provided here, the term "forestry" has been purposely deleted; if the county (or township) chooses to also address forestry practices in the ordinance, the term should be included here and a separate definition of "forestry practices" should be provided. There are also other definitions for "agricultural use" which the county (or township) may consider using. Some of these alternative definitions are provided by:

- a) Minnesota Statutes, section 40A.02, subdivision 3 (which also includes references to "forest land," "wetlands," and "wildlife land"; this is part of the "Agricultural Land Preservation Program" statute);

horticultural or nursery stock including sod, fruit, vegetables, forage and cash grains, or bees and apiary products. Wetlands³ and pastured areas accompanying land in agricultural use are also in agricultural use.

Section 2.5. **Conservation district.** "Conservation district" means the **(name)** Soil and Water Conservation District organized and operating under Minnesota Statutes, Chapter 103C.

Section 2.6. **Drainage conveyance.** "Drainage conveyance" means any path, including but not limited to ditches, streams, overland flow channels, and storm sewer systems, travelled by water as it passes through any delineated watershed within **(name of county or township)**.

Section 2.7. **Erosion.**⁸ "Erosion" means the wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Section 2.8. **Excessive erosion.** "Excessive erosion" occurs when either or both of the following conditions exist: (a) estimated average annual rate of soil erosion for a particular parcel of land under agricultural use resulting from sheet and rill erosion or wind erosion is greater than the soil loss tolerance for any of the soil series comprising that particular parcel of land, or (b) evidence of active gully erosion on land under agricultural use.

Section 2.9. **Excessive sedimentation.** "Excessive sedimentation" means the rate or an amount of sedimentation from agricultural land that results in any observable detrimental effect, damage or result to adjoining lands, waters, or the atmosphere.

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- b) Minnesota Statutes, section 17.81, subdivision 4 (which largely serves as the basis for item (a));
 - c) Minnesota Statutes, section 473H.02, subdivision 3 (which is part of the "Metropolitan Agricultural Preserves Act");
 - d) Minnesota Rules, part 8400.0110, subpart 19 (which is part of the "Wetland Conservation Act");
 - e) Minnesota Statutes, section 273.111, subdivision 6 (which is part of the "Minnesota Agricultural Property Tax Law"); and
 - f) Minnesota Statutes, section 84.92, subdivision 1d (which also includes references to "harvesting of wood"; this definition is used by the Department of Natural Resources regarding the registration of "all-terrain vehicles" and, as such, is probably too vague for the purposes of the ordinance).

⁸ See "Glossary" section of a county soil survey or visit websoilsurvey.nrcs.usda.gov

Section 2.10. **Gully erosion.**⁹ "Gully erosion" means displacement of a large, single channel (gully) of soil by water due to the combination of concentrated flows from numerous rills. "Gully erosion" is characterized by its typical persistent and ever-enlarging nature and steep, unstable side slopes. "Gully erosion" cannot be obliterated by ordinary tillage practices.

Section 2.11. **Handbook of standards (handbook).** "Handbook of standards" means a handbook, adopted by (**name of county or township**) (pursuant to section 3.0), containing a compilation of the agricultural erosion control practices¹⁰ design specifications, and planning procedures used in the control of soil erosion resulting from the agricultural use of land.

Section 2.12. **Land-disturbing activity.** "Land-disturbing activity" means a physical disturbance resulting from agricultural use of the land surface that may result in excessive erosion or excessive sedimentation associated with activities that include clearing, grading, excavating, transporting, tilling, and filling of land or grazing of land by domestic livestock.

Section 2.13. **Land occupier.**¹¹ "Land occupier" means a person, firm, corporation, municipality, or other legal entity that holds title to or is in possession of lands in agricultural use, as an owner, lessee, or otherwise. "Land occupier" includes both the owner and the occupier of the land if they are not the same.

⁹ This is a modified definition of the term "gully" from the Soil Survey "Glossary". websoilsurvey.nrcs.usda.gov

¹⁰ For agricultural erosion control purposes, the Soil Conservation Advisory Committee recommends that the county (or township) adopt the Field Office Technical Guide of the U.S. Department of Agriculture - Natural Resources Conservation Service, as approved by the local soil and water conservation district, which contains detailed standards and specifications of erosion control practices.

¹¹ See Minnesota Statutes, section 103F.401, subdivision 7.

The Soil Conservation Advisory Committee recommends that counties (or townships) encourage landowners who rent or lease their agricultural land to others to include a provision in their rental or lease agreements which would require the renter or lessee to prevent excessive erosion or excessive sedimentation on those lands. For further information regarding sample leases, contact:

The Minnesota Project
1885 University Avenue West #315
St Paul, MN 55104

The Land Stewardship Project
821 E. 35th Street #200
Minneapolis, MN 55407

Section 2.14. **Public waters.** "Public waters" means waters as defined in Minnesota Statutes, section 103G.005, subdivision 15 and inventoried¹² under Minnesota Statutes, section 103G.201.

Section 2.15. **Public waters wetlands.** "Public waters wetlands" means wetlands as defined in Minnesota Statutes, section 103G.005, subdivision 18.

Section 2.16. **Rill erosion.**¹³ "Rill erosion" means displacement of tiny or small channels of soil by water due to the initial concentration of surface flows from "sheet erosion." "Rill erosion" is characterized by its temporary nature and the fact that it is easily obliterated by ordinary tillage operations.

Section 2.17. **Sediment.** "Sediment" means the solid mineral or organic material deposited by the result of erosion.

Section 2.18. **Sedimentation.**¹⁴ "Sedimentation" means any one or more of the processes associated with the suspension, transport or deposition of sediment by water or wind.

Section 2.19. **Sheet erosion.**¹⁵ "Sheet erosion" means displacement of thin layers of soil by the action of rainfall and surface runoff acting over the whole soil surface. "Sheet erosion" is the sum of these processes: (a) raindrop splash which provides the detachment energy, and (b) surface flow which provides the transporting capacity.

¹² A copy of the inventory of "public waters" and "public waters wetlands" is available in the conservation district office as well as on the Department of Natural Resources Public Waters Inventory Program webpage.

http://www.dnr.state.mn.us/waters/watermgmt_section/pwi/index.html

¹³ This is a modified definition of the term "rill" from the Soil Survey "Glossary". websoilsurvey.nrcs.usda.gov

¹⁴ This is a modified definition of the term "sediment" from the Minnesota Statutes, section 103F.401, subdivision 9.

¹⁵ This is a modified definition of the term "sheet erosion" from the "Glossary" section of a county soil survey or visit websoilsurvey.nrcs.usda.gov

Section 2.20. **Soil.**¹⁶ "Soil" means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as natural medium for the growth of land plants.

Section 2.21. **Soil loss tolerance.**¹⁷ "Soil loss tolerance" ('T') means the maximum average annual rate of soil loss from sheet and rill erosion or wind erosion, expressed in tons per acre per year, that is allowed yet still sustain the productive capacity of soil to produce food and fiber over the long term.

Section 2.22. **Wetlands.**³ "Wetlands" means lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must:

- 1) have a predominance of hydric soils;
- 2) be inundated or saturated by surface water or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and under normal circumstances, support a prevalence of hydrophytic vegetation; and
- 3) under normal circumstances, support a prevalence of hydrophytic vegetation.

Section 3.0. **Adoption of Handbook of Standards. (Name of County or township)** hereby adopts the **(name of handbook and all other supplemental technical practices/procedures; see section 2.11¹⁸)**, dated **(date)** and as amended thereafter, as the

¹⁶ See Minnesota Statutes, section 103F.401, subdivision 10.

¹⁷ A soil survey has been completed for nearly every Minnesota County. Use the online Web Soil Survey websoilsurvey.nrcs.usda.gov to identify the soils found within your county (or township). Soil loss tolerance ("T") values are identified and described in the Field Office Technical Guide, <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/fotg/>. Your county (or township) may decide to specifically reference each of these documents within this definition. If so, your county (or township) board should adopt, as well as the local conservation district board, these documents as well as any revisions thereto via resolution(s), as necessary.

¹⁸ Portions of the following guidebooks should be considered for incorporation by reference into the ordinance:

- 1) "Field Office Technical Guide," compiled by the USDA Natural Resources Conservation Service;
- 2) "Predicting Rainfall Erosion Losses: A guide to conservation planning," Agriculture Handbook No. 37, compiled by the USDA; and
- 3) "Agriculture and Water Quality," compiled by the Minnesota Pollution Control Agency. The county (or township) and the local conservation district board must initially adopt these documents via approved resolutions and should approve via resolution all future amendments to each adopted document.

minimum acceptable set of practice specifications and planning procedures for implementing the provisions of the ORDINANCE.

Section 4.0. Excessive Erosion and Excessive Sedimentation Prohibited.¹⁹

Agricultural use which is otherwise lawful is not lawful if the land on which it is occurring is subject to excessive erosion or is the source of excessive sedimentation, unless the land occupier is conforming to an approved agricultural erosion control plan.

Section 5.0. Complaints. When the administrator has reason to believe from complaint²⁰ or otherwise²¹ that excessive erosion or excessive sedimentation is occurring or has occurred, the administrator shall notify the land occupier and request the conservation

¹⁹ The county (or township), in cooperation with the local conservation district and townships (or the county), is encouraged to provide education programs for land occupiers to inform them about the need for this ordinance, the general provisions of this ordinance, the extent of erosion on lands under agricultural use, the types of agricultural erosion control practices available, and the financial assistance programs available to apply those practices.

²⁰ Any complaint should include the following information:

- 1) the name and address of the complainant;
- 2) the name and address of the allegedly offending land occupier(s);
- 3) the location of the tract of land under agricultural use upon or from which excessive erosion, excessive sedimentation, or their associated adverse effects are occurring or have resulted;
- 4) the date the alleged violation occurred;
- 5) the water or adjoining land that is affected by the land-disturbing activities associated with the agricultural use of land controlled by the allegedly offending land occupier(s); and
- 6) a description of the nature of those land-disturbing activities and the resulting adverse effects.

Minnesota Statutes, section 13.44, requires that the county (or township) hold in confidence the complainant's identity and related information and that such information not be revealed to the alleged offender.

²¹ The county (or township) is encouraged to consider all alleged violations through any of the following procedures:

- a) initiation of a complaint (the content of which should resemble that described in annotation by any person; or
- b) notification of the administrator by any appointed or elected county or township or conservation district official suspecting a violation upon conducting routine official business;
- c) notification of the administrator if an erosion assessment conducted by (name of county or township) or the conservation district indicates that a potential violation is occurring; or
- d) voluntary initiation by a land occupier who desires an agricultural erosion control plan to be prepared and implemented for any lands under agricultural use which are under his/her control.

The administrative procedures listed are suggestions. The county (or township) is encouraged to provide for a complaint process but also to not limit the initiation of enforcement actions to only a complaint process.

The county (or township) may wish to expand or otherwise specify those persons who may so notify the administrator.

The "erosion assessment" may be one conducted by the county (or township) or the conservation district as part of implementing the county's local water plan or perhaps one conducted by the conservation district as part of administering some program, such as the targeting requirements of the State Cost-Share Program.

A "voluntary" option was included in these procedures to provide an opportunity for any land occupier who willingly seeks correction of an erosion or sedimentation problem on his/her lands to do so on a formal basis. By doing so, the land occupier is able to formally document his/her intent to correct a possible violation, thereby providing an opportunity to hopefully avoid a potentially confrontational situation with a complainant.

district to determine the rate of erosion and sedimentation that is occurring or has occurred, and to identify any adverse effects that are resulting or have resulted due to excessive erosion or excessive sedimentation from the land-disturbing activity, and to prepare a report²² of its findings and recommendations and present it to the administrator. In acting on the request, the conservation district may enter public or private land to gather information, after reasonable advance notice to the land occupier of the date and time of the inspection so that the land occupier has the opportunity to be present.²³

If the administrator determines, based on the conservation district report, that the land disturbing activity is resulting in excessive erosion or excessive sedimentation, the administrator shall request the land occupier to develop an agricultural erosion control plan.²⁴

Section 6.0. Agricultural Erosion Control Plan. The plan must outline the agricultural erosion control practices to be installed which will prevent excessive erosion, or abate excessive sedimentation, or abate the adverse effect to an adjoining individual's welfare,

²² The administrator should request assistance from the conservation district to make a determination of the erosion or sedimentation rates that occurred as well as identifying any adverse effects that resulted. Conservation district staff are familiar with erosion prediction and recognizing sedimentation and, therefore, are most qualified to make such a determination. The conservation district's report to the administrator should provide the following information:

- (1) a description of the extent of erosion occurring or that had occurred,
- (2) a description of the extent of sedimentation occurring or that had occurred;
- (3) an identification and description of any adverse effects occurring or that had occurred as a result of the erosion or sedimentation, and
- (4) if recommended, the agricultural erosion control practice alternatives available to correct the erosion or sedimentation problem or to abate the adverse effects.

The conservation district should use the most current and appropriate methods of estimating sheet, rill, wind, and gully erosion rates according to references and procedures as described in the "Field Office Technical Guide" of the local Natural Resources Conservation Service office. Furthermore, the conservation district should specify each type of erosion present and compute a separate estimate of erosion rate for each type. It is not appropriate to add erosion rates of different types of erosion to total a "cumulative rate" and use that information as a basis for pursuing enforcement actions against an alleged offender.

²³ If the allegedly offending land occupier refuses to allow the administrator and/or the assisting conservation district staff onto the land parcel in question to conduct an investigation, the administrator should immediately seek a search warrant to obtain access to the property in question. While this action should be avoided if possible, it is nevertheless a necessity to be given access to the property in question to properly and adequately assess the situation and collect the data needed to accurately estimate erosion rates or to document sedimentation occurrences.

²⁴ The Soil Conservation Advisory Committee recommends that the county (or township) encourage the landowner to request the assistance of the local conservation district in preparing the agricultural erosion control plan. Alternative or additional sources of competent technical assistance may be available from either the local field office of the U.S. Department of Agriculture - Natural Resources Conservation Service or from a Certified Professional in Erosion and Sediment Control (as certified by the Soil and Water Conservation Society).

safety, or property resulting from land-disturbing activities associated with the agricultural use of land by the land occupier.

The agricultural erosion control plan shall be consistent with the approved local water management plan of **(name of county or township)** and shall be consistent with the goals of any existing land use control relating to agricultural land preservation, or shoreland, floodplain, or wild and scenic river management.

- 1) The agricultural erosion control plan shall address the following criteria²⁵:
 - a) Preventing excessive erosion and excessive sedimentation damages;
 - b) Scheduling implementation of the approved agricultural erosion control practices;
 - c) Controlling stormwater discharge to minimize downstream erosion potential;
 - d) Stabilizing waterways and outlets;
 - e) A description and quantification of the types of erosion occurring or that had occurred,
 - f) Properly working in or crossing water body(ies);
 - g) Properly maintaining agricultural erosion control practices; and
 - h) If applicable, managing irrigation water to provide for adequate growth and production without causing excessive erosion, excessive sedimentation, or their associated adverse effects.

- 2) The agricultural erosion control plan shall include:²⁶
 - a) Location map;
 - b) Location, description and date of implementation of agricultural erosion control practices to be installed;
 - c) Property boundary and designation of applicable whole fields, including their individual boundaries;
 - d) Soils mapped;
 - e) Existing and final contours (if applicable);
 - f) Existing and final drainage flow patterns and receiving water boundary(ies);

²⁵ The criteria listed are recommended as the minimum criteria to be required in an agricultural erosion control plan. Your county (or township) may modify these criteria, or add other criteria as necessary, to best suit the needs of your area.

²⁶ The items listed are recommended as the minimum content to be required in an agricultural erosion control plan. Your county (or township) may modify these items, or add other items as necessary, to best suit the needs of your area.

- g) Existing public waters and public waters wetlands;
- h) Proposed cropping rotations, pasture lands, and other lands designated, as applicable;
- i) Critical erosion area(s);
- j) Marginal cropland area(s);
- k) Above-ground and underground utilities; and
- l) Description of the necessary maintenance of each prescribed agricultural erosion control practice.

Section 6.1. **Review of Agricultural Erosion Control Plan.** The administrator shall consult with and seek the approval of the conservation district in review of the agricultural erosion control plan for determination of the technical adequacy and effectiveness of the proposed plan.

Section 6.2. **Approval of Agricultural Erosion Control Plan.** If the administrator determines that the agricultural erosion control plan meets the requirements of this ORDINANCE, the administrator shall notify the land occupier of the **(county or township's)** approval of the plan, contingent upon the satisfactory implementation and completion of the approved agricultural erosion control plan. The approved plan or approved revision(s) thereof shall contain provisions deemed necessary to ensure the proper maintenance of all agricultural control practices.²⁷

Section 6.3. **Denial of Agricultural Erosion Control Plan.** If the administrator determines that the agricultural erosion control plan proposed by the land occupier does not meet the requirements of this ORDINANCE, the administrator shall not approve the proposed plan. The land occupier(s) may seek to revise the plan and resubmit a request for plan approval. The proposed revisions to the plan must be compatible with the provisions of this ORDINANCE. The revised plan must be sent to the administrator for review pursuant to section 6.1. The revised plan should be accompanied by a request to reconsider the proposed plan for approval.

²⁷ Your county (or township) may wish to also add the following sentence at the end of section 6.2:

"After approval of the plan, a notice shall be recorded, In the office of the (county name) County Recorder, on the title of the land subject to the approved agricultural erosion control plan so as to give notice that an agricultural erosion control plan was approved under this ORDINANCE and that It is in effect."

Section 7.0. **Review of Plan Implementation.** The administrator, in cooperation with the conservation district, shall make reviews of the land occupier's progress to implement the agricultural erosion control plan. If the administrator should find that insufficient progress is occurring, the administrator shall immediately notify the land occupier(s) of the problem and request compliance. If the land occupier(s) refuses to comply with this ORDINANCE, the administrator shall treat the matter as a violation of this ORDINANCE and proceed pursuant to section 8.0.

Section 7.1. **Certification of Completion of Agricultural Erosion Control Plan.** After all of the required agricultural erosion control practices described in the plan have been installed by the land occupier(s), the administrator, in consultation with the conservation district, shall conduct a review to ensure that all required practices have been properly installed and maintained.

If the administrator determines that the plan has been adequately executed, the administrator shall issue a certificate of completion.

If the administrator determines that the land occupier(s) has not adequately executed the plan, as approved, the administrator shall require the land occupier(s) to initiate and complete agricultural erosion control practices to rectify the deficiencies and to bring the land-disturbing activities into compliance with the provisions of this ORDINANCE.

Section 8.0. **Violations.** Any land occupier who fails to develop an approved plan or fails to implement an approved plan pursuant to the provisions of this ORDINANCE is guilty of a misdemeanor and may be subject to a civil fine not to exceed that prescribed by Minnesota Statutes, section 609.03, for misdemeanor offenses. In addition, the **(county or township)** may seek injunctive or other judicial relief.

In an administrative or criminal proceeding, it is a defense that the excessive erosion or excessive sedimentation did not result from a land-disturbing activity or that it resulted from a rainfall or wind event of an intensity or duration whose erosive effects are beyond the ability of soil erosion control practices that are referenced in the Handbook of Standards.

Section 9.0. **Remediation Required.** Whenever the administrator has determined, based upon a report prepared by the conservation district pursuant to section 5.0, that any roadway, right-of-way, or drainage conveyance under the jurisdiction of the (county or township) has been adversely affected by excessive sedimentation resulting from land-disturbing activities associated with the agricultural use of land under the control of an offending land occupier, the administrator and the **(county's or township's)** attorney shall seek remediation²⁸ of the adverse effects. Remediation shall consider, but not be limited to, any of the following actions or combinations of actions:

- 1) requesting the county engineer to direct or oversee the excavation of the sediment deposited due to land-disturbing activities from the land in question and under the control of the offending land occupier and adjacent to the adversely affected (county or township) roadway, right-of-way, or drainage conveyance;
- 2) requesting the county engineer to direct or oversee the restoration of the adversely affected (county or township) roadway, right-of-way, or drainage conveyance to its intended design specifications;
- 3) requesting the county engineer to direct or oversee the transport of the excavated sediment to a mutually agreed-to location on the offending land occupier's land; or
- 4) billing all costs for remediation directly to the offending land occupier with notification that all costs are to be paid in full to the (county or township) treasurer within (number) calendar days.

If the offending land occupier does not remit full payment to the **(county or township)** treasurer within the specified time limit, the **(county or township)** shall determine the land so benefitted and assess against the land the cost of the remediation. Such assessments shall be made only against that portion of the tract of land to which the remediation order pertained.

Section 10.0. **Appeals.**²⁹

Section 11.0. **Variances.**³⁰

²⁸ Remediation may include use of statutory authority of drainage authorities as described in Minnesota Statutes, section 103E.72B, subdivision 3. "Drainage authorities," as used here, means "the (county) board or joint county drainage authority having jurisdiction over a drainage system or project" (Minnesota Statutes, section 103E.005, subdivision 9).

²⁹ If the county (or township) already has a comprehensive zoning ordinance, the "appeals" procedures described therein will be sufficient. If the county (or township) is adopting this model ordinance as a free-standing ordinance, the administrator should consult the county (or township) attorney for assistance in preparing appropriate appeals procedures for counties pursuant to Minnesota Statutes Chapter 394 (or for townships pursuant to Minnesota Statutes Chapter 462).

Section 12.0. **Severability.**³¹ If any section, subsection, sentence, clause, phrase, or other portion of this ORDINANCE is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity of the remaining portions of this ORDINANCE, it being the intent of the **(official body)** that this ORDINANCE shall stand, notwithstanding the invalidity of any section, subsection, sentence, clause, phrase, or other portion thereof.

Section 13.0. **Effective Date.** This ORDINANCE shall take effect and be in full force the day after its passage and official publication. Passed by the **(official body)** this **(date)**.

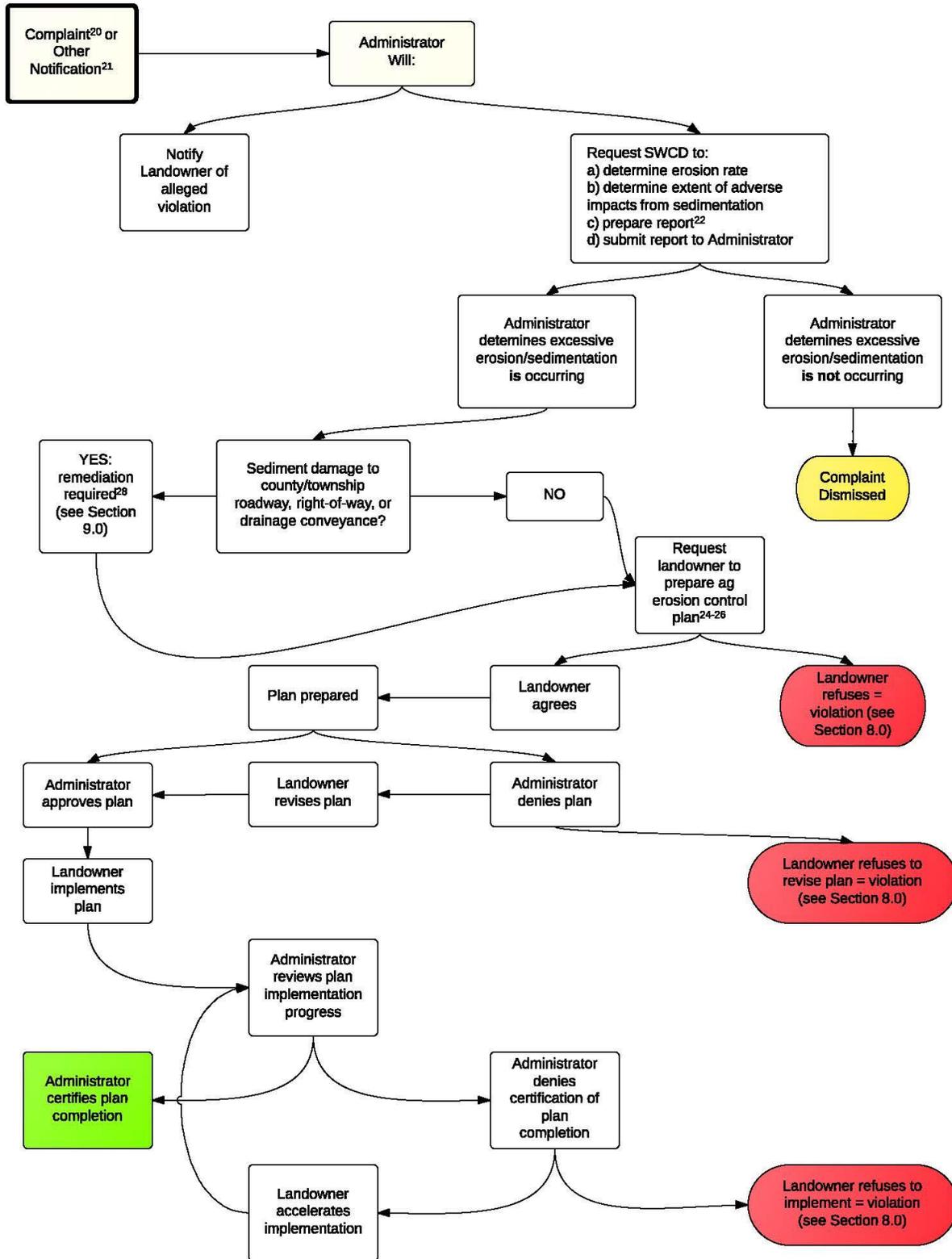
ATTEST:

APPROVED:

³⁰ As with footnote ²⁹, if the county (or township) already has a comprehensive zoning ordinance, the "variance" procedures described therein will be sufficient. If the county (or township) is adopting this model ordinance as a free-standing ordinance, the administrator should consult the county (or township) attorney for assistance in preparing appropriate variance procedures for counties pursuant to Minnesota Statutes Chapter 394 (or for townships pursuant to Minnesota Statutes Chapter 462).

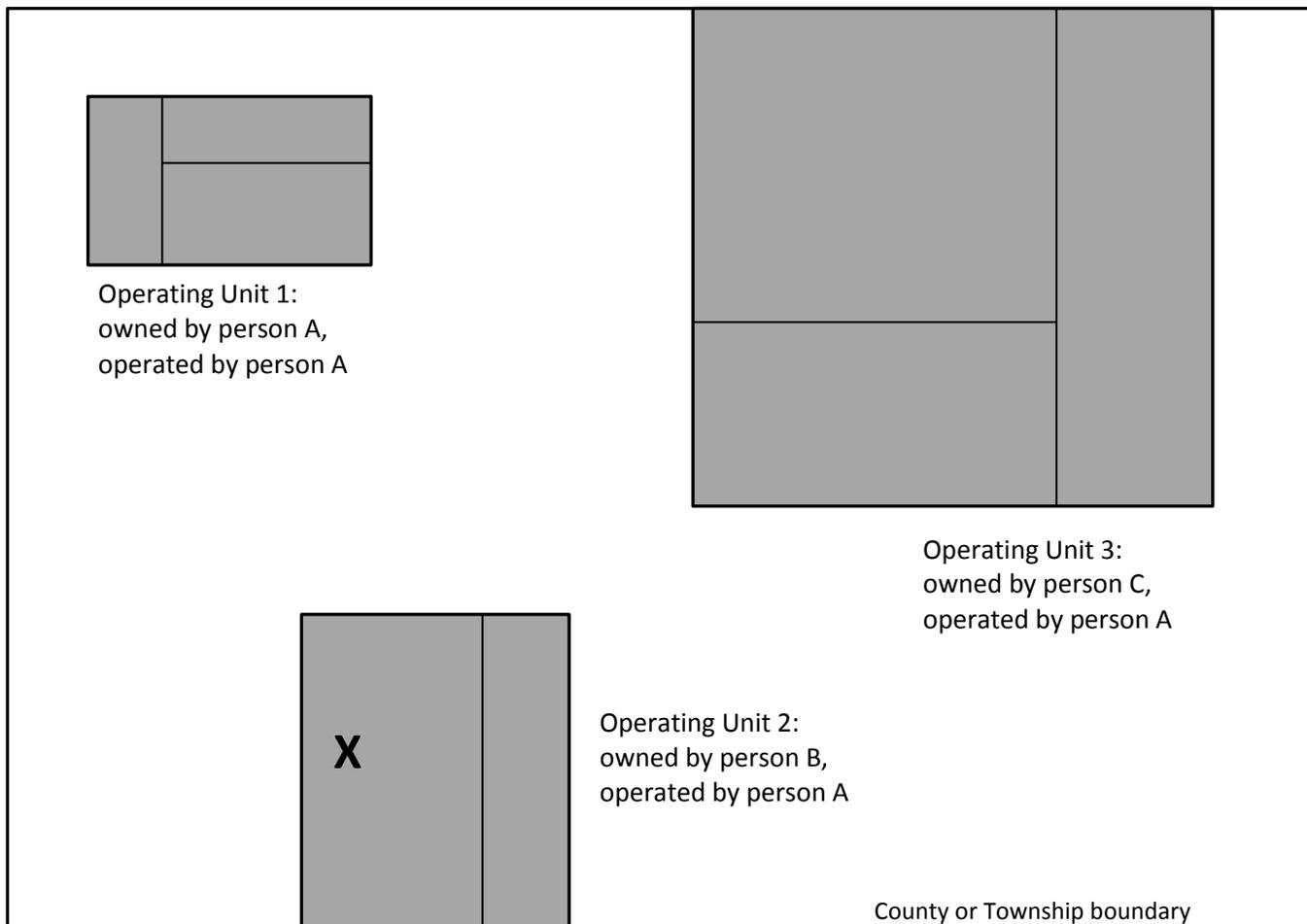
³¹ As with footnotes ²⁹ and ³⁰ if the county (or township) already has a comprehensive zoning ordinance, the "severability" clause described therein will be sufficient. If the county (or township) is adopting this model ordinance as a free-standing ordinance, the county (or township) is encouraged to include this section and its text, as described.

Ordinance Process



Appendix A

Lands Contained Within an Agricultural Erosion Control Plan (Refer to footnote ⁶; see section 2.3)



X = area cited in a complaint (in Operating Unit 2)

Operating Unit 2 will be reviewed for evidence of excessive erosion or excessive sedimentation. Even though person A operated the three designated units, only Operating Unit 2 is reviewed since it contains the specific land parcel identified in the complaint. If excessive erosion or excessive sedimentation is confirmed, an agricultural erosion control plan must be prepared and implemented for Operating Unit 2.