#### AMENDED AND RESTATED

# EROSION AND SEDIMENT CONTROL PROGRAM RULES AND REGULATIONS

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# **Table of Contents**

Kule	<u>Page</u>	
1.	Authority	1
2.	Purpose	1
3.	Applicability	1
4.	Definitions	1
5.	Soil-Loss Tolerance Level	2
6.	Administration	3
7.	Violation	3
8.	Complaint	3
9.	Investigation of Complaint	4
10.	Determination of Soil Loss	4
11.	Committee and Board Action on Complaint	5
12.	Notice of Violation	5
13.	Development and Approval of Plan For Compliance	6
14.	Practices	6
15.	Administrative Order	7
16.	Cost-Share Assistance.	8
17.	Supplemental Orders	8
18.	Non-Compliance	8
Appen	dix A - Soil-Loss Tolerance Levels	10
Appen	dix B - Conservation Practices	15
Appen	dix C - Complaint Flow Chart	17

# SOUTH PLATTE NATURAL RESOURCES DISTRICT AMENDED AND RESTATED RULES AND REGULATIONS FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL ACT

#### 1. AUTHORITY

These rules and regulations are adopted pursuant to the authority granted in Section 2-4605, R.R.S. 1948, as amended.

#### 2. PURPOSE

The purpose of these rules and regulations is to provide an orderly method for implementing the Erosion and Sediment Control Act, sections 2-4601 et. seq. R.R.S. 1943, as amended to provide for the conservation and preservation of the land, water and other resources of the District, and to thereby:

- (a) Reduce damages caused from wind erosion;
- (b) Reduce storm water runoff and the danger of flooding;
- (c) Reduce Sediment Damage to lands within the District;
- (d) Reduce non-point pollution from sedimentation and related pollutants;
- (e) Preserve the value of land and its productive capability for present and future generations; and
- (f) Safeguard the health, safety and welfare of the District's citizens.

#### 3. APPLICABILITY

These rules and regulations apply to all lands within the District except to those lands which lie within the respective jurisdiction of a county or municipality, which has adopted and is implementing erosion and sediment control regulations in substantial conformance with the state erosion and sediment control program. Some non-agricultural land-disturbing activities are also excluded and are identified in Rule 4, Section (i), sub-sections (2), (3), (4) and (5).

#### 4. **DEFINITIONS**

- (a) **Alleged Violator** means the owner of record and the operator, if any, of land which is the subject of a complaint filed in accordance with Rule 8.
- (b) **Board** means the Board of Directors of the South Platte Natural Resources District.
- (c) **Committee** means the Natural Resources/Projects and Programs Committee of the South Platte Natural Resources District,
- (d) Conservation Agreement means an agreement between the owner and operator, if any, of a farm unit and the District in which the owner and operator, if any, agrees to implement all or a portion of a Farm Unit Conservation Plan or Erosion and Sediment Control Plan. The agreement shall include a schedule for implementation and may be conditioned on the District or other public entity furnishing technical, planning or financial assistance in the establishment of the soil and water conservation or erosion and sediment control practices necessary to implement the plan or portion of the plan.
- (e) **District** means the South Platte Natural Resources District.
- (f) **Excess Erosion** means the occurrence of erosion in excess of the applicable Soil-Loss Tolerance Level, which causes or contributes to an accumulation of sediment upon the lands of any other person to the detriment or damage of such other person.
- (g) **Farm Unit Conservation Plan** means a plan jointly developed by the owner, and if appropriate, the operator of a farm unit and the District. Such plan shall be based on the determined conservation needs of the farm unit and identification of practices which may be expected to prevent soil loss by erosion to the applicable Soil-Loss Tolerance Level. The plan may also, if practicable, identify alternative practices by which such objective may be attained.

- (h) **Erosion and Sediment Control Plan** means a plan, developed for a parcel of land used for non-agricultural purposes, which identifies the permanent or temporary practices which may be expected to either prevent sediment from leaving that parcel or prevent soil loss/erosion from that parcel in excess of the applicable Soil-Loss Tolerance Level.
- (i) **Non-Agricultural Land-Disturbing Activity** means a land change including, but not limited to, tilling, clearing, grading, excavating, transporting, or filling land which may result in soil erosion from wind or water and the movement of sediment and sediment-related pollutants into the waters of the state or onto lands in the state, but shall not include:
  - (1) Activities related directly to the production of agricultural, horticultural or silvicultural crops, including, but not limited to, tilling, planting, or harvesting of such crops;
  - (2) Installation of aboveground public utility lines and connections, fence posts, sign posts, telephone poles, electric poles, and other kinds of posts or poles;
  - (3) Emergency work to protect life or property; and
  - (4) Activities related to the construction of housing, industrial, and commercial developments on sites under two acres in size; and
  - (5) Activities related to the operation, construction, or maintenance of industrial or commercial public power district or public power and irrigation district facilities or sites when such activity is conducted pursuant to state of federal law or is part of the operational plan for such facility or site.
- (j) **Person** means any individual, partnership, limited liability company, firm, association, joint venture, public or private corporation, trust, estate, commission, board, institution, utility cooperative, municipality or other political subdivision of this state, interstate body, or other legal entity.
- (k) Sediment Damage means:
  - (1) The economic or physical damage to the land or other property of one person resulting from the deposition of sediment, by water or wind, or soil eroded from the lands of another person;
  - (2) The degradation of water quality and/or the reduced beneficial use of the water in the stream or lake involved resulting from soil sedimentation or the deposition of chemical laden sediments. For the purpose of this program, chemicals shall include, but is not limited to, any agricultural, municipal, or industrial chemicals or waste deposited on the soil.

Physical effects to land or property which are relatively short term in nature and which cause no economic damage and no lasting physical damage shall not constitute Sediment Damage for the purpose of these rules and regulations.

- (1) **Soil-Loss Tolerance Level** means the maximum amount of soil loss due to erosion by wind or water, expressed in terms of tons per acre per year, which is determined to be acceptable in accordance with the Erosion and Sediment Control Act. Soil loss from water erosion may include:
  - (1) Sheet and rill erosion which includes relatively uniform soil loss across the entire field slope, which may leave small channels located at regular intervals across the slope; and
  - (2) Ephemeral gully erosion which occurs in well-defined depressions or natural drainageways where concentrated overland flow results in the convergence of rills forming deeper and wider channels.
- (m) **T value** means the average annual tons per acre soil loss that a given soil may experience and still maintain its productivity over an extended period of time.

#### 5. SOIL-LOSS TOLERANCE LEVEL

United States Department of Agriculture (USDA) Soil Survey data provides values of soil loss tolerance (T) for various soil series across the District and are described as Soil-Loss Tolerance Levels in the USDA Natural Resources Conservation Service (NRCS) Field Office Technical Guide.

These Soil-Loss Tolerance Levels for the soils of the District have been adopted by the Board and are attached hereto as Appendix A. Each soil series listed may contain one or more soil mapping units-referred to in Rule 10. The permitted Soil-Loss Tolerance Levels for particular lands may not exceed the T value noted in Appendix A.

#### 6. ADMINISTRATION

- (a) The Board delegates the responsibility for administering these rules and regulations to the District Manager except to the extent Board action is specifically required by these rules and regulations or by law. The following duties shall be performed by or under the direction of the District Manager.
  - (1) Keep an accurate record of all complaints received, investigations made, and other official actions;
  - (2) Investigate all complaints made in writing to the District office relating to the application of these rules and regulations and report in writing all alleged violations to the Board; and
  - (3) Monitor compliance with all approved Farm Unit Conservation Plans, Erosion and Sediment Control Plans, and administrative orders issued by the Board.
- (b) Except to the extent jurisdiction has been assumed by a municipality or county in accordance with section 2-4606, and after a written and signed complaint has been made, the District Manager and such staff as he or she shall designate shall have the following powers and responsibilities:
  - (1) At any reasonable time, after notice to the owner and operator, if any, to enter upon any public or private lands within the area affected by these rules and regulations for the purpose of investigating complaints and to make inspections to determine compliance. The owner, operator, if any, and any other necessary technical personnel and representatives of the District may accompany the inspector;
  - (2) Upon reasonable cause, to report to the Board any violations of any administrative order issued by the Board pursuant to Section 2-4608, R.R.S. 1943, as amended, and these rules and regulations;
  - (3) At the direction of the Board, and in accordance with Rules 13(e) and 18, to commence any legal proceedings necessary to enforce these rules and regulations and any order issued pursuant to them.

#### 7. VIOLATION

A violation of these rules and regulations exists if:

- (a) Sediment Damage is occurring;
- (b) Average annual soil losses on the land which is the source of that sediment are exceeding the Soil-Loss Tolerance Level adopted in Rule 5;
- (c) The activity causing the soil loss is not an exempted Non-Agricultural Land-Disturbing Activity (Rule 4(i) (2) to (5); and
- (d) The land which is the source of the damage is not in strict compliance with a Conservation Agreement approved by the District.

#### 8. COMPLAINT

A complaint alleging that soil erosion is occurring in excess of the Soil-Loss Tolerance Level or that Sediment Damage is occurring, may be filed in the District office by:

- (a) Any owner or operator of land damaged by sediment;
- (b) Any authorized representative of a state agency or political subdivision whose roads or other public facilities are being damaged by sediment;
- (c) Any authorized representative of a state agency or political subdivision with responsibility for water quality maintenance if it is alleged that the soil erosion complained of is adversely affecting water quality; or

(d) Any District staff member, or other person authorized by the Board to file complaints.

Complaints shall be made in writing and signed on a form provided by the Director of Department of Natural Resources.

The flow chart for handling the complaint process is found in Appendix C.

#### 9. INVESTIGATION OF COMPLAINT

Upon receipt of a properly filed complaint, a representative of the District shall notify the Alleged Violator within ten (10) days that a complaint has been filed and that an investigation will be initiated to determine whether a violation of these rules and regulations has occurred. The investigation shall take place as soon as possible after the complaint has been filed and notice given. The Alleged Violator shall be given an opportunity to accompany the person conducting the investigation.

If a Farm Unit Conservation Plan or Erosion and Sediment Control Plan previously approved by the District is being implemented and maintained in strict conformance with a Conservation Agreement including the land subject to the complaint, the complaint shall be dismissed. The Alleged Violator, complainant, and Board shall be notified.

Upon completion of the investigation, the investigator shall file a report of his or her findings with the Committee and shall provide copies to the Alleged Violator and the complainant. The report shall include:

- (a) The location and estimated acreage involved in the alleged violation;
- (b) The investigator's conclusions concerning the existence of any Sediment Damage and a description of the location and nature of any Sediment Damage identified; and
- (c) The location of land(s) which the investigator concludes are the source of the sediment, the nature of the land use on such lands, and the estimated average annual soil losses from such land(s).

The investigator may utilize the services of professional staff, consultants, or technicians of other state or federal agencies, if necessary.

#### 10. DETERMINATION OF SOIL LOSS

Soil losses shall be determined by using the applicable portions of the then current version of the USDA NRCS Field Office Technical Guide to estimate the average annual sheet and rill erosion, ephemeral gully erosion or wind erosion.

The soil losses normally will be calculated on a soil survey mapping unit basis. If it is determined that soil loss in excess of the applicable Soil-Loss Tolerance Level is occurring in the portion of one or more mapping units under the ownership and control of the Alleged Violator, they may not be averaged with other non-violating units for the purpose of determining overall soil loss.

If it is determined that the Sediment Damage complained of is resulting from erosion from a land parcel smaller than the soil mapping unit, the soil loss equation in the Field Office Technical Guide may be applied to such smaller portion.

The cover and crop management factor, "C", used in calculating erosion may incorporate a cropping history of up to five years. Crop rotation patterns longer than five years but not more than ten years may be used for the purpose of planning future compliance with Soil-Loss Tolerance Levels but exceeding the limits may not be planned for more than two consecutive years. Soil losses from irrigation and gully erosion may also be determined by using acceptable scientific procedures and

may, if deemed appropriate by the Board, be added to soil losses for sheet and rill, ephemeral and wind erosion. Soil losses from streambank erosion shall not be calculated and these rules and regulations are not applicable to this type of erosion. Application of the soil loss equation formulas will be made by someone whose qualifications to make such determinations can be supported in court.

#### 11. COMMITTEE AND BOARD ACTION ON COMPLAINT

The Committee shall assist the District staff in administering these rules and regulations and make determinations as to whether a probable violation of these rules and regulations has or has not occurred. Such determination shall be based upon the investigator's report completed pursuant to Rule 9 and an on-site inspection by the Committee, if warranted. The Committee may also request that both the Alleged Violator and the complainant appear before them to discuss the complaint. The Committee shall report its findings to the Board, the Alleged Violator and the complainant with a recommendation of further action as follows:

- (a) If the staff and Committee determine that no violation of these rules and regulations has occurred, it shall recommend and the Board may approve dismissal of the complaint. The complainant shall be given the opportunity to appear before the entire Board before the Board acts on the recommendation.
- (b) If the Committee determines that a Farm Unit Conservation Plan previously approved by the District is being implemented and maintained in strict conformance with a Conservation Agreement including the land subject to the complaint, it shall recommend and the Board may approve dismissal of the complaint.
- (c) If the Committee determines that the land which is identified in the complaint is being used for non-agricultural purposes, and is under an Erosion and Sediment Control Plan that has been approved by the District, is in conformance with any NPDES (National Pollution Discharge Elimination System) permit issued by the Nebraska Department of Environmental Quality (NDEQ), or any political subdivision of the state designated by NDEQ to issue such permits, it shall recommend and the Board may approve dismissal of the complaint.
- (d) If the Committee determines that a probable violation of these rules and regulations has occurred, it shall proceed in accordance with Rule 12.

#### 12. NOTICE OF VIOLATION

If the Committee determines that a probable violation of these rules and regulations has occurred, the Alleged Violator shall be informed of its findings by letter delivered in person or sent by registered or certified mail. The letter shall specify the options available to the Alleged Violator, including:

- (a) The Alleged Violator shall be given an opportunity to contact the District within ten days after receipt of notice to request the development of a plan and schedule for eliminating Excess Erosion and sedimentation from the land that generated the complaint. The District may specify alternative practices for inclusion in a plan. Information on cost-share programs and an indication of whether cost-share money is available may also be supplied.
- (b) The Alleged Violator shall be given an opportunity to contest the Committee's findings at a regularly scheduled Board meeting or, if desired, a Board hearing to be held no sooner than fifteen days after receipt of notice. Notice of the Board or hearing date shall be given. The Alleged Violator may request a formal public hearing within ten (10) days of receipt of notice. The District's rules for formal adjudicatory hearings shall govern the conduct of all such hearings.
- (c) The Alleged Violator shall be further notified that if he or she does not respond to the notice and does not appear at the Board meeting for which notice was given, the Board shall proceed in accordance with Rule 15 in his or her absence to make a final determination on the complaint and issue an administrative order if the Board concludes that a violation has occurred.

#### 13. DEVELOPMENT AND APPROVAL OF PLAN FOR COMPLIANCE

- (a) If the Alleged Violator contacts the District pursuant to Rule 12 (a) and indicates a desire to jointly develop either a Farm Unit Conservation Plan or an Erosion and Sediment Control Plan for eliminating Excess Erosion on or sedimentation from the land that generated the complaint, Board action on the complaint shall be delayed until further action is taken by the Committee pursuant to (b) or (d) of this Rule. The District Manager and the Alleged Violator shall promptly secure the assistance of the NRCS or such other professional resource planners as are deemed necessary to assist in preparation of such a plan and shall attempt to prepare a mutually acceptable plan in accordance with the NRCS Field Office Technical Guide. Any plan developed in accordance with this section shall identify, as applicable, the soil and water conservation practice(s) or erosion and sediment control practice(s) to be applied or utilized and shall be accompanied by a proposed Conservation Agreement setting forth a schedule for compliance.
- (b) Any plan developed by the Alleged Violator and the District Manager shall be presented to the Committee. If the Committee agrees to the proposed plan and to the accompanying Conservation Agreement, the Board may thereafter approve such plan and agreement. The complainant shall be notified of such action and shall be provided copies of the approve plan and Conservation Agreement. In considering the schedule for compliance contained within the Conservation Agreement, the Board may approve a longer time for compliance than would be permissible if an order were issued pursuant to Rule 15, but shall not do so without consideration of the nature and extent of any additional Sediment Damages the complainant is likely to suffer until the plan has been fully implemented.
- (c) Any person owning or operating private agricultural, horticultural, or silvicultural lands who has a Farm Unit Conservation Plan approved by the District and is implementing and maintaining the plan in strict compliance with a Conservation Agreement or any person whose normal agricultural, horticultural, and silvicultural practices are in conformance with the applicable Soil-Loss Tolerance Level shall, for purposes of such land, be deemed to be in compliance with the requirements of the Erosion and Sediment Control Act and the District's approved Erosion and Sediment Control Program.
- (d) If no mutually acceptable plan and Conservation Agreement have been prepared by the Alleged Violator and the District Manager within an acceptable time period or if the Committee concludes at any time that progress is not being made and is no longer likely on preparation of such a plan, the complaint shall be again referred to the Board and the Alleged Violator shall be so notified in person or by registered or certified mail and shall be given the information and option described in Rule 12(b). For purposes of this rule, acceptable time period shall mean (1) 90 days for alleged violations involving agricultural, horticultural, or silvicultural activities and (2) 15 days for alleged violations involving a Non-Agricultural Land-Disturbing Activity.
- (e) Following refusal of a landowner to discontinuing an activity causing erosion which constitutes a violation in Rule 7, and to establish a plan and schedule for eliminating Excess Erosion pursuant to these rules, and if the immediate discontinuance of such activity is necessary to reduce or eliminate damage to neighboring property, the District may petition the District court for an order to the owner and, if appropriate, the operator, to immediately cease and desist such activity until Excess Erosion can be brought into conformance with the Soil-Loss Tolerance Level or sediment resulting from Excess Erosion is prevented from leaving the property.

#### 14. PRACTICES

Practices designed to reduce or control soil erosion and/or Sediment Damage may be approved in

developing a plan under Rule 13 and may be required by the District in an administrative order pursuant to Rule 15.

- (a) Soil and water conservation practices, applicable only to land used for agricultural, horticultural, or silvicultural purposes, includes, but is not limited to:
  - (1) Permanent practices, such as the planting of perennial grasses, legumes, shrubs, or trees, the establishment of grassed waterways, the construction of terraces, grade control structures, tile outlets, and other permanent soil and water practices approved by the District; and
  - (2) Temporary soil and water conservation practices, including the planting of annual or biennial crops, use of strip-cropping, contour planting, conservation tillage or residue management system, and other cultural practices approved by the District.

The District shall reference a complete list of approved permanent and temporary soil and water conservation practices as part of its local erosion and sediment control program as noted in Appendix B, and as maintained in the NRCS Field Office Technical Guide.

- (b) Erosion and sediment control practices, which are applicable to activities <u>other than</u> agricultural, horticultural, or silvicultural activities, may include:
  - (1) The construction or installation and maintenance of permanent structures or devices necessary to carry to a suitable outlet away from any building site, any commercial or industrial development or any publicly or privately owned recreational or service facility not served by a central storm sewer system, any water which would otherwise cause erosion in excess of the applicable Soil-Loss Tolerance Level and which does not carry or constitute sewage or industrial or other waste to a suitable outlet away from any development or facility not served by a central storm sewer system;
  - (2) The use of temporary devices or structures, temporary seeding, mulching (including fiber mats, plastic, straw), diversions, silt fences, sediment traps or other measures adequate either to prevent erosion in excess of the applicable Soil-loss tolerable levels or to prevent excessive downstream sedimentation from land, which is the site of or is directly affected by any Non-Agricultural Land-Disturbing Activity; or
  - (3) The establishment and maintenance of vegetation upon the right-of-way of any completed portion of any public street, road, highway or the construction or installation thereon of permanent structures or devices or other measures adequate to prevent erosion on the right-of-way in excess of the applicable Soil-Loss Tolerance Level.

The District shall reference a complete list of approved erosion and sediment control practices as part of its local erosion and sediment control program as noted in Appendix B, and maintained in the NRCS Field Office Technical Guide.

#### 15. ADMINISTRATIVE ORDER

If, after Board consideration of the complaint at a meeting or hearing for which the Alleged Violator has been given notice in accordance with Rule 12, the Board finds that Sediment Damage has occurred, that average annual erosion on the land which is the source of the damage is occurring in excess of the applicable Soil-Loss Tolerance Level(s), and that a conservation plan or Erosion and Sediment Control Plan has not been developed nor is being implemented according to a Conservation Agreement, it shall issue an administrative order to the violator stating:

- (a) The date of the order;
- (b) The identity of the source of the violation and its location;
- (c) The authority of the Board to issue such order;
- (d) The specific findings, including (i) the estimated average annual soil loss and the extent to which erosion exceeds the applicable Soil-Loss Tolerance Level and, (ii) the nature of the Sediment Damage or water quality impairment resulting from such excessive erosion;

- (e) If desired by the Board, the alternative soil and water conservation practices or erosion and sediment control practices required to bring the land into conformance with these rules and regulations. When the erosion is the result of agricultural, horticultural, or silvicultural activities, the soil and water conservation practices required shall be those necessary to bring the land into conformance with the applicable Soil-Loss Tolerance Level. Where the erosion complained of is the result of a Non-Agricultural Land-Disturbing Activity, the Board may authorize the violator to either bring the land into conformance with applicable Soil-Loss Tolerance Level or to prevent sediment resulting from excessive erosion from leaving the land;
- (f) Any requirements concerning the operation, utilization, or maintenance of the alternative practices identified;
- (g) The deadlines for commencing and completing work necessary to comply with this order.
  - (1) The time for initiating work needed to establish the necessary soil and water conservation practices shall not exceed six months after service or mailing of the order to the violator and shall be completed no later than one year after service or mailing of the order to the violator unless and extension has been granted upon a showing of good cause.
  - (2) A reasonable time for initiating work needed to establish erosion and sediment control practices for nonagricultural land-distributing activities shall not exceed five days after service or mailing of the order. Temporary practices shall be implemented not longer than fifteen days after service or mailing of the order and permanent practices shall be implemented no longer than forty-five (45) days after service or mailing of the order unless an extension has been granted upon a showing of good cause. An extension shall only be granted after review and affirmative action of the Board.
- (h) The action to be taken by the Board if the violator does not comply.

A copy of the dismissal or administrative order shall be delivered to the owner and to the operator, if any, of the land in question by personal service or certified or registered mail.

#### 16. COST-SHARE ASSISTANCE

To prevent Excess Erosion and sediment from leaving the land due to any agricultural or nonagricultural land-disturbing activity, cost-share assistance may be available from the District. Such assistance, if available, may be used for any erosion or sediment control practice. The lack of available cost-sharing assistance does not offset the requirement that the owner and, if appropriate, the operator of such land comply with the terms of an approved plan of compliance or an administrative order.

#### 17. SUPPLEMENTAL ORDERS

The Board may issue supplemental orders, as necessary, to extend the time of compliance with an administrative order if, in its judgment, the failure to commence or complete work as required by the administrative order is due to factors beyond the control of the person to whom the order is directed and the person can be relied upon to commence and complete the necessary work at the earliest possible time.

#### 18. NON-COMPLIANCE

Subject to any limitations imposed by the Board, the District Manager may cause the District to commence legal proceedings by filing a petition in the name of the District in the District court in which a majority of the land is located requesting a court order requiring immediate compliance with the administrative order or any supplemental order issued previously, if he or she has reasonable cause to believe after inspection that an administrative order issued previously by the Board is not being complied with because:

(a) The work necessary to comply with the order is not commenced on or before the date specified in the order or in any supplemental orders;

#### South Platte Natural Resources District Erosion and Sediment Control Program Rules and Regulations

- (b) The work is not being performed with due diligence, is not satisfactorily completed by the date specified in the order, or is not being operated, utilized, or maintained in accordance with requirements set forth in the order;
- (c) The work is not of a type or quantity specified by the District, and when completed, it will not or does not reduce soil loss to within the applicable Soil-Loss Tolerance Level for the identified land or, in the case of Non-Agricultural Land-Disturbing Activity, will not or does not prevent sediment resulting from excessive erosion from leaving the land involved; or
- (d) The person to who the order is directed informs the District that he or she does not intend to comply.

#### **APPENDIX A**

#### **Soil Loss Tolerance Levels**

See Soil Loss Tolerance Levels (T-values) for Cheyenne, Deuel and Kimball Counties on the accompanying pages.

Disclaimer: The Soil Loss Tolerance Levels listed for each county are current as of the board's adoption of these rules and regulations. The District encourages individuals to confirm the Soil Loss Tolerance Levels in this document to the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) Field Office Technical Guide for accuracy.

# Soil Loss Tolerance Values (T-Factors) For Cheyenne County

Map Unit Symbol	Map Unit Name	<b>Dominant Component</b>	T-Factor
1006	Bankard loamy fine sand, channeled, frequently flooded	Bankard	5
1030	Glenberg fine sandy loam, 0 to 2 percent slopes	Glenberg	5
1076	Ralton loam, very rarely flooded	Ralton	5
1118	Bankard loamy sand, occasionally flooded	Bankard	5
1183	Las Animas loam, channeled, frequently flooded	Las Animas	3
1184	Las Animas loam, frequently flooded	Las Animas	5
1196	Las loam, occasionally flooded	Las	5
1300	Bayard fine sandy loam, 1 to 3 percent slopes	Bayard	5
1301	Bayard fine sandy loam, 3 to 6 percent slopes	Bayard	5
1302	Bayard fine sandy loam, 6 to 9 percent slopes	Bayard	5
1303	Bayard fine sandy loam, 9 to 20 percent slopes	Bayard	5
1326	Bayard fine sandy loam, 0 to 1 percent slopes	Bayard	5
1327	Bayard fine sandy loam, 0 to 3 percent slopes	Bayard	5
1361	Bridget very fine sandy loam, 0 to 1 percent slopes	Bridget	5
1362	Bridget very fine sandy loam, 1 to 3 percent slopes	Bridget	5
1363	Bridget very fine sandy loam, 3 to 6 percent slopes	Bridget	5
1364	Bridget very fine sandy loam, 6 to 9 percent slopes	Bridget	5
1371	Chappell-Alice-Broadwater complex, 0 to 3 percent slopes	Chappell	3
1372	Chappell-Bayard-Broadwater complex, 0 to 2 percent slopes	Chappell	3
1500	Altvan fine sandy loam, 1 to 3 percent slopes	Altvan	3
1502	Altvan loam, 1 to 3 percent slopes	Altvan	3
1503	Altvan loam, 3 to 6 percent slopes	Altvan	3
1506	Altvan-Dix complex, 3 to 9 percent slopes	Altvan	3
1508	Altvan-Eckley complex, 3 to 9 percent slopes	Altvan	3
1509	Altvan-Eckley-Satanta complex, 3 to 9 percent slopes	Altvan	3
1510	Altvan-Eckley-Tassel complex, 3 to 9 percent slopes	Altvan	3
1571	Dix gravelly loam, 9 to 50 percent slopes	Dix	2
1572	Dix gravelly loam, 3 to 9 percent slopes	Dix	2
1578	Eckley and Altvan soils, 9 to 50 percent slopes	Eckley	2
1584	Goshen silt loam, 0 to 1 percent slopes	Goshen	5
1617	Keith loam, 0 to 1 percent slopes	Keith	5
1618	Keith loam, 1 to 3 percent slopes	Keith	5
1621	Keith loam, 3 to 6 percent slopes	Keith	5
1650	Kuma loam, 0 to 1 percent slopes	Kuma	5
1661	Lodgepole silt loam, frequently ponded	Lodgepole	5
1725	Rosebud loam, 0 to 1 percent slopes	Rosebud	3
1726	Rosebud loam, 1 to 3 percent slopes	Rosebud	3
1727	Rosebud loam, 3 to 6 percent slopes	Rosebud	3
1736	Rosebud-Canyon complex, 3 to 9 percent slopes	Rosebud	3
1739	Rosebud-Canyon loams, 1 to 3 percent slopes	Rosebud	3
1744	Rosebud-Hemingford loams, 0 to 1 percent slopes	Rosebud	3
1815	Satanta loam, gravelly substratum, 0 to 1 percent slopes	Satanta	4
1816	Satanta loam, gravelly substratum, 1 to 3 percent slopes	Satanta	4
1817	Satanta loam, gravelly substratum, 3 to 6 percent slopes	Satanta	4
1820	Satanta-Altvan complex, 3 to 6 percent slopes	Satanta	5
1825	Satanta-Johnstown-Altvan loams, 1 to 3 percent slopes	Satanta	4
1838	Sidney loam, 3 to 6 percent slopes	Sidney	4
1839	Sidney-Canyon complex, 3 to 9 percent slopes	Sidney	4
1840	Sidney-Canyon loams, 3 to 9 percent slopes	Sidney	4
1854	Ulysses loam, 1 to 3 percent slopes	Ulysses	5
1855	Ulysses loam, 3 to 6 percent slopes	Ulysses	5
1893	Valent loamy fine sand, 6 to 9 percent slopes	Valent	5
2306	McCook very fine sandy loam, 0 to 1 percent slopes	McCook	5
3201	Johnstown loam, 0 to 2 percent slopes	Johnstown	4
5100	Alliance loam, 0 to 1 percent slopes	Alliance	4
5101	Alliance loam, 1 to 3 percent slopes	Alliance	4
5102	Alliance loam, 3 to 6 percent slopes	Alliance	4
5108	Alliance-Rosebud loams, 1 to 3 percent slopes	Alliance	4
5120	Busher fine sandy loam, 3 to 6 percent slopes	Busher	4

## South Platte Natural Resources District Erosion and Sediment Control Program Rules and Regulations

5138	Busher-Tassel complex, 3 to 9 percent slopes	Busher	4
5140	Busher-Tassel complex, 9 to 20 percent slopes	Busher	4
5150	Canyon fine sandy loam, 6 to 30 percent slopes	Canyon	2

### Soil Loss Tolerance Values (T-Factors) For Cheyenne County

Map Unit Symbol	Map Unit Name	<b>Dominant Component</b>	T-Factor
5155	Canyon-Bayard complex, 6 to 20 percent slopes	Canyon	2
5157	Canyon-Rock outcrop complex, 12 to 60 percent slopes	Canyon	2
5605	Broadwater loamy sand, frequently flooded	Broadwater	5
5606	Broadwater loamy sand, channeled, frequently flooded	Broadwater	5
5607	Broadwater loamy sand, channeled, occasionally flooded	Broadwater	5
5626	Duroc silt loam, terrace, 0 to 1 percent slopes	Duroc	5
5824	Duroc loam, terrace, gravelly substratum, 0 to 1 percent slopes	Duroc	4
5845	Mitchell very fine sandy loam, 3 to 6 percent slopes	Mitchell	5
5846	Mitchell very fine sandy loam, 6 to 9 percent slopes	Mitchell	5
5847	Mitchell very fine sandy loam, 9 to 20 percent slopes	Mitchell	5
5917	Ashollow-Tassel complex, 9 to 30 percent slopes	Ashollow	5
5927	Blueridge-Altvan complex, 6 to 30 percent slopes	Blueridge	5
5934	Creighton very fine sandy loam, 1 to 3 percent slopes	Creighton	5
5935	Creighton very fine sandy loam, 3 to 6 percent slopes	Creighton	5
5942	Duroc loam, 0 to 1 percent slopes	Duroc	5
5943	Duroc loam, 1 to 3 percent slopes	Duroc	5
5949	Dwyer loamy fine sand, 9 to 17 percent slopes	Dwyer	5
5965	Jayem fine sandy loam, 0 to 3 percent slopes	Jayem	5
5966	Jayem fine sandy loam, 3 to 6 percent slopes	Jayem	5
6022	Tassel-Busher complex, 3 to 30 percent slopes	Tassel	2
6030	Tassel-Ashollow-Rock outcrop complex, 20 to 60 percent slopes	Tassel	2
6032	Tassel-Blanche complex, 9 to 30 percent slopes	Tassel	2
6034	Tassel-Busher-Rock outcrop complex, 9 to 60 percent slopes	Tassel	2
6041	Tassel-Blanche sandy loams, 3 to 9 percent slopes	Tassel	2
6049	Rock outcrop-Epping complex, 9 to 60 percent slopes	Rock outcrop	
6053	Rock outcrop-Tassel complex, 20 to 60 percent slopes	Rock outcrop	
6105	Sarben loamy very fine sand, 3 to 9 percent slopes	Sarben	5
6205	Epping-Mitchell complex, 3 to 20 percent slopes	Epping	2
9967	Sanitary landfill	Sanitary landfill	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

#### Soil Loss Tolerance Values (T-Factors) For Deuel County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
1050	Lexsworth loam, very rarely flooded	Lexsworth	3
1076	Ralton loam, very rarely flooded	Ralton	5
1182	Las Animas loam, occasionally flooded	Las Animas	5
1183	Las Animas loam, channeled, frequently flooded	Las Animas	3
1371	Chappell-Alice-Broadwater complex, 0 to 3 percent slopes	Chappell	3
1414	Glenberg fine sandy loam, rarely flooded	Glenberg	5
1509	Altvan-Eckley-Satanta complex, 3 to 9 percent slopes	Altvan	3
1618	Keith loam, 1 to 3 percent slopes	Keith	5
1621	Keith loam, 3 to 6 percent slopes	Keith	5
1650	Kuma loam, 0 to 1 percent slopes	Kuma	5
1651	Kuma loam, 1 to 3 percent slopes	Kuma	5
1662	Lodgepole silt loam, occasionally ponded	Lodgepole	5
1820	Satanta-Altvan complex, 3 to 6 percent slopes	Satanta	4
1821	Satanta-Ascalon complex, 0 to 1 percent slopes	Ascalon	4
1825	Satanta-Johnstown-Altvan loams, 1 to 3 percent slopes	Satanta	4
1830	Sulco-McConaughy loams, 9 to 30 percent slopes	Sulco	5
1831	Sulco-McConaughy loams, 6 to 9 percent slopes, eroded	Sulco	5
1832	Sulco-McConaughy loams, 3 to 6 percent slopes, eroded	Sulco	5
1838	Sidney loam, 3 to 6 percent slopes	Sidney	4
1839	Sidney-Canyon complex, 3 to 9 percent slopes	Sidney	4
1840	Sidney-Canyon loams, 3 to 9 percent slopes  Sidney-Canyon loams, 3 to 9 percent slopes	Sidney	4
1850		Sulco	5
1886	Sulco-McConaughy complex, 3 to 6 percent slopes, eroded	Valent	5
1889	Valent fine sand, 3 to 9 percent slopes	,	5
	Valent fine sand, rolling	Valent Valent	
1900	Valent sand, rolling and hilly		5
3203	Johnstown-Satanta-Richfield loams, 0 to 2 percent slopes	Johnstown	4
4235	Calamus sand, very rarely flooded	Calamus	5
5100	Alliance loam, 0 to 1 percent slopes	Alliance	4
5108	Alliance-Rosebud loams, 1 to 3 percent slopes	Alliance	4
5605	Broadwater loamy sand, frequently flooded	Broadwater	5
5648	Jankosh loam, rarely flooded	Jankosh	3
5822	Duroc loam, terrace, 0 to 1 percent slopes	Duroc	5
5823	Duroc loam, terrace, 1 to 3 percent slopes	Duroc	5
5858	Scoville loamy fine sand, 0 to 3 percent slopes	Scoville	5
5917	Ashollow-Tassel complex, 9 to 30 percent slopes	Ashollow	5
5927	Blueridge-Altvan complex, 6 to 30 percent slopes	Blueridge	5
5942	Duroc loam, 0 to 1 percent slopes	Duroc	5
5946	Duroc silt loam, 1 to 3 percent slopes	Duroc	5
5965	Jayem fine sandy loam, 0 to 3 percent slopes	Jayem	5
6094	Sarben loamy fine sand, 0 to 3 percent slopes	Sarben	5
6095	Sarben loamy fine sand, 3 to 6 percent slopes	Sarben	5
8494	Gothenburg soils, occasionally flooded	Gothenburg	5
8521	Merrick sandy clay loam, very rarely flooded	Merrick	5
8563	Platte loam, occasionally flooded	Platte	2
9967	Sanitary landfill	Sanitary landfill	
9983	Gravel pit	Pits	
9999	Water	Water	

#### Soil Loss Tolerance Values (T-Factors) For Kimball County

Map Unit Symbol	Map Unit Name	<b>Dominant Component</b>	T-Factor
1186	Las Animas loam, channeled, occasionally flooded	Las Animas	3
1301	Bayard fine sandy loam, 3 to 6 percent slopes	Bayard	5
1307	Bayard very fine sandy loam, 1 to 3 percent slopes	Bayard	5
1326	Bayard fine sandy loam, 0 to 1 percent slopes	Bayard	5
1327	Bayard fine sandy loam, 0 to 3 percent slopes	Bayard	5
1362	Bridget very fine sandy loam, 1 to 3 percent slopes	Bridget	5
1372	Chappell-Bayard-Broadwater complex, 0 to 2 percent slopes	Chappell	3
1414	Glenberg fine sandy loam, rarely flooded	Glenberg	5
1500	Altvan fine sandy loam, 1 to 3 percent slopes	Altvan	3
1501	Altvan loam, 0 to 1 percent slopes	Altvan	3
1508	Altvan-Eckley complex, 3 to 9 percent slopes	Altvan	3
1510	Altvan-Eckley-Tassel complex, 3 to 9 percent slopes	Altvan	3
1511	Altvan-Satanta fine sandy loams, 1 to 3 percent slopes	Altvan	3
1512	Altvan-Satanta loams, 0 to 1 percent slopes	Altvan	3
1524	Brownson-Rosebud-Canyon loams, 0 to 3 percent slopes	Brownson	2
1578	Eckley and Altvan soils, 9 to 50 percent slopes	Eckley	2
1617	Keith loam, 0 to 1 percent slopes	Keith	5
1618	Keith loam, 1 to 3 percent slopes	Keith	5
1650	Kuma loam, 0 to 1 percent slopes	Kuma	5
1660	Lodgepole loam, occasionally ponded	Lodgepole	5
1661	Lodgepole silt loam, frequently ponded	Lodgepole	5
1725	Rosebud loam, 0 to 1 percent slopes	Rosebud	3
1726	Rosebud loam, 1 to 3 percent slopes	Rosebud	3
1735	Rosebud-Blanche complex, 1 to 3 percent slopes	Rosebud	3
1739	Rosebud-Canyon loams, 1 to 3 percent slopes	Rosebud	3
1744	Rosebud-Hemingford loams, 0 to 1 percent slopes	Rosebud	3
1745	Rosebud-Tassel sandy loams, 0 to 3 percent slopes	Rosebud	3
1809	Satanta fine sandy loam, 1 to 3 percent slopes	Satanta	4
1843	Sidney-Canyon loams, 6 to 9 percent slopes, eroded	Sidney	4
5100	Alliance loam, 0 to 1 percent slopes	Alliance	4
5101	Alliance loam, 1 to 3 percent slopes	Alliance	4
5102	Alliance loam, 3 to 6 percent slopes	Alliance	4
5607	Broadwater loamy sand, channeled, occasionally flooded	Broadwater	5
5800	Albinas-Cheyenne loams, rarely flooded	Albinas	4
5866	Tripp loam, 0 to 1 percent slopes	Tripp	5
5867	Tripp loam, 1 to 3 percent slopes	Tripp	5
5942	Duroc loam, 0 to 1 percent slopes	Duroc	5
5949	Dwyer loamy fine sand, 9 to 17 percent slopes	Dwyer	5
5950	Dwyer loamy sand, 0 to 3 percent slopes	Dwyer	5
5965	Jayem fine sandy loam, 0 to 3 percent slopes	Jayem	5
5966	Jayem fine sandy loam, 3 to 6 percent slopes	Jayem	5
6023	Tassel and Dix and Altvan soils, 9 to 30 percent slopes	Dix	5
6030	Tassel-Ashollow-Rock outcrop complex, 20 to 60 percent slopes	Tassel	2
6032	Tassel-Blanche complex, 9 to 30 percent slopes	Tassel	2
6041	Tassel-Blanche sandy loams, 3 to 9 percent slopes	Tassel	2
9967	Sanitary landfill	Sanitary landfill	
9971	Arents, earthen dam	Arents	
9976	Borrow pit	Pits	
9983	Gravel pit	Pits	
9999	Water	Water	

#### APPENDIX B

#### **Recommended Practices for Controlling Erosion and Sedimentation**

The following practices are listed in three general categories: permanent agricultural, temporary agricultural, and non-agricultural. All practices on the lists are deemed to be suitable under proper circumstances, for controlling erosion and sedimentation within the District. Many are potential components of resources management systems for lands in the District. Actual application depends on the particular circumstances and needs being addressed. NRCS has plans, specifications, or technical guides for these practices. NRCS practice codes are indicated in parentheses following the practice name.

1. <u>Permanent Soil and Water Conservation Practices for Controlling Erosion and Sedimentation on Agricultural Lands</u>

Permanent soil and water conservation practices are activities which often are part of an on-going (longer than one year) resources management system and may be recommended and adopted as part of a conservation plan. Cost-share assistance may be available to aid in permanent practice installation.

Contour Buffer Strips (332)

Critical Area Planting (342)

Diversion (362)

Fence (382)

Field Border (386)

Filter Strip (394)

Forage and Biomass Planting (512)

Grade Stabilization Structure (410)

Grassed Waterway (412)

Range Planting (550)

Streambank and Shoreline Protection (580)

Structure for Water Control (587)

Terrace (600)

Tree/Shrub Establishment (612)

Underground Outlet (620)

Water and Sediment Control Basin (256)

Windbreak/Shelterbelt Establishment (380)

Windbreak/Shelterbelt Renovation (650)

2. <u>Temporary Soil and Water Conservation Practices for Controlling Erosion and Sedimentation on</u>
Agricultural Lands

#### South Platte Natural Resources District Erosion and Sediment Control Program Rules and Regulations

Temporary soil and water conservation practices range from one-time only actions to activities which could continue for a number of years. Those on-going activities generally involve management decisions where a practice may be maintained, modified, or eliminated on an annual basis, rather than practices involving more permanent construction or installation activities. These practices generally require little or no capital investments and the availability of cost-share assistance is not required.

Conservation Cover (327)

Conservation Crop Rotation (328)

Contour Farming (330)

Cover Crop (340)

Forage Harvest Management (511)

Herbaceous Weed Control (315)

Herbaceous Wind Barriers (603)

Irrigation Water Management (449)

Mulching (484)

Nutrient Management (590)

Prescribed Burning (338)

Prescribed Grazing (528)

Residue and Tillage Management, No-Till (329)

Residue and Tillage Management, Reduce Till (345)

Stream Habitat and Improvement Management (395)

# 3. <u>Erosion and Sediment Control Practices for Controlling Erosion and Sedimentation on Land Not Used for</u> Agriculture, Horticulture, or Silvicultural Purposes

Three are many land-disturbing activities which are not related to agriculture, horticulture, or silviculture. Erosion and sedimentation as a result of these activities can be a significant problem. The following practices include permanent and temporary structures and devices that may be required to treat erosion on, and sedimentation from, these lands, but cost-share assistance need not be made available. In addition to the practices listed above in 2 and 3, the following practices may be implemented on non-agriculture land.

Access Control (472) Heavy Use Area Protection (561) Subsurface Drain (606) Waste Separation Facility (632)

# **APPENDIX C**

