

**NEMAHA NATURAL RESOURCES DISTRICT
EROSION AND SEDIMENT CONTROL PROGRAM**

**RULES AND REGULATIONS
And
COMPLAINT PROCESS**

Proposed by the Board of Directors – August 11, 2016

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**NEMAHA NATURAL RESOURCES DISTRICT
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 Nemaha Natural Resources District.
- (c) **Committee** means the Programs and Projects Committee of the Nemaha 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 Nemaha 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 or federal law or is part of the operational plan for such facility or site.
- (j) **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.

(k) **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.

(l) **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

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 NRCS TECHNICAL GUIDES. 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.

(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 Rule 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 a complaint 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 United States Department of Agriculture, Natural Resources Conservation Service Field Office Technical Guide to estimate the average annual sheet and rill erosion, ephemeral 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 Tech. Guide may be applied to such smaller portion only if such portion is two acres or greater.

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 concerning the development of a plan and schedule for eliminating excess erosion and sedimentation from the land that generated the complaint. If appropriate at this time, alternative practices for inclusion in a plan may be suggested. 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 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 Natural Resources Conservation Service (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 approved 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) Strict conformance with a plan and agreement approved pursuant to this Rule shall be deemed compliance with these rules and regulations for the lands which are subject to the agreement.
- (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, may include:
 - (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 practices approved by the District.
 - (2) temporary soil and water conservation practices, such as 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 maintain a complete list of approved permanent and temporary soil and water conservation practices as part of its local erosion and sediment control program. See Appendix B.

- (b) Erosion and sediment control practices, which are applicable to activities other than 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 maintain a complete list of approved erosion and sediment control practices as part of its local erosion and sediment control program. See Appendix B.

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.
 - a. 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 an extension has been granted upon a showing of good cause
 - b. A reasonable time for initiating work needed to establish erosion and sediment control practices for nonagricultural land-disturbing activities shall not exceed five days after service or mailing of the order. Temporary practices shall be completed not longer than fifteen days after service or mailing of the order and permanent practices shall be completed 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:

- (1) 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;
- (2) 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;
- (3) 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
- (4) the person to whom the order is directed informs the District that he or she does not intend to comply.

APPENDIX A

Soil-Loss Tolerance Levels

The following pages summarize the various soil types, soil-loss limits of soils by county, for each of the counties which make up the Nemaha Natural Resources District.

See Soils Tables on accompanying pages.

Soil Loss Tolerance Values (T-Factors) For Cass County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3840	Geary silty clay loam, 7 to 11 percent slopes, eroded	Geary	5
3921	Sogn-Rock outcrop complex, 11 to 30 percent slopes	Sogn	1
3948	Fillmore silt loam, terrace, occasionally ponded	Fillmore	4
3952	Fillmore silt loam, frequently ponded	Fillmore	3
4111	Hedville sandy loam, 7 to 20 percent slopes	Hedville	1
6460	Inglewood-Novina complex, occasionally flooded	Inglewood	5
6708	Thurman loamy fine sand, 11 to 20 percent slopes	Thurman	5
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7087	Sarpy-Haynie complex, occasionally flooded	Sarpy	5
7099	Zook silty clay loam, occasionally flooded	Zook	5
7155	Aksarben silty clay loam, terrace, 0 to 1 percent slopes	Aksarben	5
7156	Aksarben silty clay loam, terrace, 1 to 3 percent slopes	Aksarben	5
7205	Aksarben silty clay loam, 0 to 2 percent slopes	Aksarben	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Aksarben	5
7207	Aksarben silty clay loam, 6 to 11 percent slopes	Aksarben	5
7212	Burchard-Morrill clay loams, 6 to 11 percent slopes	Burchard	5
7230	Judson silt loam, 0 to 2 percent slopes	Judson	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7280	Tomek silt loam, 0 to 2 percent slopes	Tomek	5
7340	Filbert silt loam, 0 to 1 percent slopes	Filbert	3
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7507	Pawnee clay loam, 6 to 11 percent slopes, eroded	Pawnee	5
7530	Sharpsburg variant silty clay loam, 1 to 3 percent slopes	Sharpsburg variant	5
7641	Yutan silty clay loam, 2 to 6 percent slopes, eroded	Yutan	5
7644	Yutan silty clay loam, 6 to 11 percent slopes, eroded	Yutan	5
7645	Yutan silty clay loam, 11 to 17 percent slopes, eroded	Yutan	5
7646	Yutan, eroded-Judson complex, 6 to 11 percent slopes	Yutan	5
7647	Yutan, eroded-Aksarben silty clay loams, 2 to 6 percent slopes	Yutan	5
7668	Mayberry silty clay loam, 6 to 11 percent slopes, eroded	Mayberry	5
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	Wymore	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7710	Albaton silty clay, occasionally flooded	Albaton	5
7741	Haynie silt loam, occasionally flooded	Haynie	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7770	Colo silty clay loam, occasionally flooded	Colo	5
7773	Colo-Nodaway complex, frequently flooded	Colo	5
7852	Sarpy loamy fine sand, frequently flooded	Sarpy	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7868	Nodaway silt loam, channeled, occasionally flooded	Nodaway	5
7880	Onawa silty clay, occasionally flooded	Onawa	5
7892	Zook silty clay, occasionally flooded	Zook	5
8007	Ida silt loam, 17 to 30 percent slopes	Ida	5
8013	Ida-Steinauer complex, 17 to 60 percent slopes	Ida	5
8019	Marshall silty clay loam, 2 to 6 percent slopes	Marshall	5
8020	Marshall silty clay loam, 2 to 6 percent slopes, eroded	Marshall	5
8024	Marshall silty clay loam, 6 to 11 percent slopes	Marshall	5
8025	Marshall silty clay loam, 6 to 11 percent slopes, eroded	Marshall	5
8028	Marshall silty clay loam, 11 to 17 percent slopes, eroded	Marshall	5
8071	Monona silt loam, 11 to 17 percent slopes, eroded	Monona	5
8073	Monona silt loam, 17 to 30 percent slopes	Monona	5
8075	Monona silt loam, 2 to 5 percent slopes	Monona	5
8079	Monona silt loam, 6 to 11 percent slopes, eroded	Monona	5
8092	Monona-Ida silt loams, 11 to 17 percent slopes, eroded	Monona	5
8094	Monona-Ida silt loams, 30 to 60 percent slopes	Monona	5
8119	Pohocco silty clay loam, 11 to 17 percent slopes, eroded	Pohocco	5
8125	Pohocco silty clay loam, 6 to 11 percent slopes, eroded	Pohocco	5
8145	Pohocco-Pahuk complex, 6 to 11 percent slopes, eroded	Pohocco	5
8146	Pohocco-Pahuk complex, 11 to 17 percent slopes, eroded	Pohocco	5
8408	Alda-Platte complex, occasionally flooded	Alda	3
8442	Cass-Novina complex, occasionally flooded	Cass	4
8510	Lex-Platte complex, occasionally flooded	Lex	3
9705	Udorthents, silty	Udorthents	5
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Gage County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3391	Lancaster loam, 3 to 7 percent slopes	Lancaster	3
3641	Kezan silt loam, channeled, frequently flooded	Kezan	5
3642	Kezan silt loam, occasionally flooded	Kezan	5
3820	Butler silt loam, 0 to 1 percent slopes	Butler	3
3856	Edalgo silty clay loam, 11 to 20 percent slopes	Edalgo	3
4109	Hedville cobbly loam, 7 to 30 percent slopes	Hedville	1
4166	Kipson-Sogn complex, 3 to 30 percent slopes	Kipson	2
4167	Kipson-Sogn-Rock outcrop complex, 11 to 60 percent slopes	Kipson	2
4173	Lancaster loam, 7 to 11 percent slopes	Lancaster	3
4350	Chase silty clay loam, rarely flooded	Chase	5
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7061	Muscotah silty clay loam, occasionally flooded	Muscotah	5
7102	Wymore silty clay loam, terrace, 0 to 2 percent slopes	Wymore	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7226	Burchard clay loam, 2 to 6 percent slopes	Burchard	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7257	Deroin silty clay loam, 2 to 6 percent slopes, eroded	Deroin	5
7258	Deroin silty clay loam, 6 to 11 percent slopes, eroded	Deroin	5
7266	Burchard-Steinauer clay loams, 11 to 17 percent slopes, eroded	Burchard	5
7268	Burchard-Steinauer clay loams, 6 to 11 percent slopes, eroded	Burchard	5
7344	Malmo, eroded-Pawnee complex, 6 to 11 percent slopes	Malmo	4
7349	Malmo clay loam, 2 to 6 percent slopes, eroded	Malmo	4
7411	Cortland-Malmo complex, 6 to 11 percent slopes, eroded	Cortland	3
7419	Morrill loam, 11 to 17 percent slopes	Morrill	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7469	Padonia silty clay loam, 6 to 11 percent slopes	Padonia	3
7492	Filley fine sandy loam, 6 to 11 percent slopes	Filley	3
7493	Filley fine sandy loam, 11 to 17 percent slopes	Filley	3
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7611	Steinauer clay loam, 11 to 30 percent slopes	Steinauer	5
7619	Steinauer clay loam, 30 to 50 percent slopes	Steinauer	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7868	Nodaway silt loam, channeled, occasionally flooded	Nodaway	5
9906	Fluvaquents, silty, frequently flooded	Fluvaquents	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Johnson County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
4163	Kipson-Benfield complex, 11 to 25 percent slopes	Kipson	2
7091	Wabash silty clay, occasionally flooded	Wabash	5
7095	Zoe-Zook silty clay loams, occasionally flooded	Zoe	3
7099	Zook silty clay loam, occasionally flooded	Zook	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7154	Kennebec-Nodaway silt loams, rarely flooded	Kennebec	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Aksarben	5
7226	Burchard clay loam, 2 to 6 percent slopes	Burchard	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7266	Burchard-Steinauer clay loams, 11 to 17 percent slopes, eroded	Burchard	5
7268	Burchard-Steinauer clay loams, 6 to 11 percent slopes, eroded	Burchard	5
7270	Dickinson fine sandy loam, 6 to 11 percent slopes	Dickinson	5
7271	Dickinson fine sandy loam, 11 to 20 percent slopes	Dickinson	3
7296	Malcolm silt loam, 6 to 11 percent slopes	Malcolm	5
7299	Malcolm silt loam, 11 to 25 percent slopes	Malcolm	5
7344	Malmo, eroded-Pawnee complex, 6 to 11 percent slopes	Malmo	4
7349	Malmo clay loam, 2 to 6 percent slopes, eroded	Malmo	4
7350	Malmo clay, 3 to 11 percent slopes, eroded	Malmo	4
7411	Cortland-Malmo complex, 6 to 11 percent slopes, eroded	Cortland	3
7418	Morrill clay loam, 6 to 11 percent slopes	Morrill	5
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7492	Filley fine sandy loam, 6 to 11 percent slopes	Filley	3
7493	Filley fine sandy loam, 11 to 17 percent slopes	Filley	3
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7511	Pawnee clay loam, 6 to 11 percent slopes	Pawnee	5
7515	Pawnee clay, 6 to 11 percent slopes, eroded	Pawnee	5
7549	Shelby clay loam, 11 to 17 percent slopes	Shelby	5
7596	Shelby clay loam, 17 to 30 percent slopes	Shelby	5
7610	Steinauer clay loam, 11 to 20 percent slopes	Steinauer	5
7611	Steinauer clay loam, 11 to 30 percent slopes	Steinauer	5
7669	Mayberry clay loam, 3 to 11 percent slopes	Mayberry	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7695	Wymore silty clay, 3 to 6 percent slopes, eroded	Wymore	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7863	Nishna silty clay, occasionally flooded	Nishna	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7868	Nodaway silt loam, channeled, occasionally flooded	Nodaway	5
9967	Sanitary landfill	Sanitary landfill	
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Lancaster County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3518	Lamo silty clay loam, occasionally flooded	Lamo	5
3561	Hobbs silt loam, occasionally flooded	Hobbs	5
3640	Kezan silt loam, frequently flooded	Kezan	5
3641	Kezan silt loam, channeled, frequently flooded	Kezan	5
3709	Crete silt loam, terrace, 0 to 1 percent slopes	Crete	5
3713	Butler silt loam, terrace, 0 to 1 percent slopes	Butler	3
3785	Crete silty clay loam, terrace, 1 to 3 percent slopes	Crete	5
3786	Crete silty clay loam, terrace, 3 to 7 percent slopes	Crete	5
3820	Butler silt loam, 0 to 1 percent slopes	Butler	3
3824	Crete silt loam, 0 to 1 percent slopes	Crete	5
3840	Geary silty clay loam, 7 to 11 percent slopes, eroded	Geary	5
3921	Sogn-Rock outcrop complex, 11 to 30 percent slopes	Sogn	1
3952	Fillmore silt loam, frequently ponded	Fillmore	3
4101	Crete variant silty clay loam, 1 to 4 percent slopes	Crete variant	2
4112	Hedville sandy loam, 7 to 30 percent slopes	Hedville	1
7015	Salmo silt loam, occasionally flooded	Salmo	5
7016	Salmo silty clay loam, channeled, frequently flooded	Salmo	5
7017	Salmo silty clay loam, occasionally flooded	Salmo	5
7049	Kenridge silty clay loam, occasionally flooded	Kenridge	5
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7067	Saltillo silt loam, occasionally flooded	Saltillo	5
7091	Wabash silty clay, occasionally flooded	Wabash	5
7094	Zoe silty clay loam, occasionally flooded	Zoe	5
7099	Zook silty clay loam, occasionally flooded	Zook	5
7155	Aksarben silty clay loam, terrace, 0 to 1 percent slopes	Aksarben	5
7205	Aksarben silty clay loam, 0 to 2 percent slopes	Aksarben	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Aksarben	5
7207	Aksarben silty clay loam, 6 to 11 percent slopes	Aksarben	5
7211	Burchard-Nodaway complex, 2 to 30 percent slopes	Burchard	5
7227	Burchard clay loam, 6 to 11 percent slopes	Burchard	5
7229	Burchard clay loam, 11 to 17 percent slopes	Burchard	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7232	Judson fine sandy loam, 2 to 6 percent slopes	Judson	5
7258	Deroin silty clay loam, 6 to 11 percent slopes, eroded	Deroin	5
7266	Burchard-Steinauer clay loams, 11 to 17 percent slopes, eroded	Burchard	5
7267	Burchard-Steinauer clay loams, 11 to 30 percent slopes	Burchard	5
7268	Burchard-Steinauer clay loams, 6 to 11 percent slopes, eroded	Burchard	5
7270	Dickinson fine sandy loam, 6 to 11 percent slopes	Dickinson	3
7273	Dickinson fine sandy loam, 6 to 11 percent slopes, eroded	Dickinson	3
7296	Malcolm silt loam, 6 to 11 percent slopes	Malcolm	5
7297	Malcolm silt loam, 6 to 11 percent slopes, eroded	Malcolm	5
7299	Malcolm silt loam, 11 to 25 percent slopes	Malcolm	5
7344	Malmo, eroded-Pawnee complex, 6 to 11 percent slopes	Malmo	4
7349	Malmo clay loam, 2 to 6 percent slopes, eroded	Malmo	4
7351	Malmo clay, 2 to 6 percent slopes, eroded	Malmo	4
7353	Malmo clay loam, 6 to 11 percent slopes, eroded	Malmo	4
7411	Cortland-Malmo complex, 6 to 11 percent slopes, eroded	Cortland	3
7418	Morrill clay loam, 6 to 11 percent slopes	Morrill	5
7420	Morrill clay loam, 11 to 17 percent slopes	Morrill	5
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill	5
7446	Morrill-Malmo, eroded, complex, 3 to 11 percent slopes	Morrill variant	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7466	Otoe silty clay, 6 to 11 percent slopes, eroded	Otoe	5
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7507	Pawnee clay loam, 6 to 11 percent slopes, eroded	Pawnee	5
7546	Shelby and Burchard clay loams, 11 to 17 percent slopes	Shelby	5
7585	Shelby clay loam, 7 to 12 percent slopes	Shelby	5
7611	Steinauer clay loam, 11 to 30 percent slopes	Steinauer	5
7614	Steinauer clay loam, 6 to 11 percent slopes, eroded	Steinauer	5
7616	Steinauer loam, 6 to 11 percent slopes	Steinauer	5
7617	Steinauer loam, 11 to 30 percent slopes	Steinauer	5

Soil Loss Tolerance Values (T-Factors) For Lancaster County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
7620	Steinauer clay loam, 20 to 40 percent slopes	Steinauer	5
7644	Yutan silty clay loam, 6 to 11 percent slopes, eroded	Yutan	5
7645	Yutan silty clay loam, 11 to 17 percent slopes, eroded	Yutan	5
7646	Yutan, eroded-Judson complex, 6 to 11 percent slopes	Yutan	5
7647	Yutan, eroded-Aksarben silty clay loams, 2 to 6 percent slopes	Yutan	5
7666	Mayberry silty clay loam, 3 to 6 percent slopes, eroded	Mayberry	5
7668	Mayberry silty clay loam, 6 to 11 percent slopes, eroded	Mayberry	5
7669	Mayberry clay loam, 3 to 11 percent slopes	Mayberry	5
7680	Wymore silty clay loam, 0 to 1 percent slopes	Wymore	5
7681	Wymore silty clay loam, 1 to 3 percent slopes	Wymore	5
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	Wymore	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7695	Wymore silty clay, 3 to 6 percent slopes, eroded	Wymore	5
7697	Wymore silty clay loam, 6 to 11 percent slopes	Wymore	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7770	Colo silty clay loam, occasionally flooded	Colo	5
7773	Colo-Nodaway complex, frequently flooded	Colo	5
7774	Colo-Nodaway silty clay loams, frequently flooded	Colo	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7868	Nodaway silt loam, channeled, occasionally flooded	Nodaway	5
7890	Zook silt loam, occasionally flooded	Zook	5
8013	Ida-Steinauer complex, 17 to 60 percent slopes	Ida	5
9708	Urban land-Judson complex, 1 to 3 percent slopes	Urban land	
9709	Urban land-Kennebec complex, 0 to 2 percent slopes	Urban land	
9710	Urban land-Pawnee-Mayberry complex, 2 to 6 percent slopes	Urban land	
9721	Urban land-Wymore complex, 0 to 2 percent slopes	Urban land	
9722	Urban land-Wymore-Aksarben complex, 2 to 6 percent slopes	Urban land	
9728	Urban land-Crete-Aksarben complex, 0 to 2 percent slopes	Urban land	
9967	Sanitary landfill	Sanitary landfill	
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Nemaha County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3920	Sogn-Kipson complex, 7 to 30 percent slopes	Sogn	1
7057	Kennebec-Nodaway silt loams, occasionally flooded	Kennebec	5
7083	Sarpy loamy fine sand, occasionally flooded	Sarpy	5
7087	Sarpy-Haynie complex, occasionally flooded	Sarpy	5
7091	Wabash silty clay, occasionally flooded	Wabash	5
7095	Zoe-Zook silty clay loams, occasionally flooded	Zoe	5
7099	Zook silty clay loam, occasionally flooded	Zook	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7205	Aksarben silty clay loam, 0 to 2 percent slopes	Aksarben	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Aksarben	5
7229	Burchard clay loam, 11 to 17 percent slopes	Burchard	5
7230	Judson silt loam, 0 to 2 percent slopes	Judson	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7263	Gymer silty clay loam, 6 to 11 percent slopes, eroded	Gymer	5
7297	Malcolm silt loam, 6 to 11 percent slopes, eroded	Malcolm	5
7350	Malmo clay, 3 to 11 percent slopes, eroded	Malmo	4
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill variant	5
7495	Pawnee and Mayberry clay loams, 3 to 11 percent slopes, eroded	Pawnee	5
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7555	Benfield-Kipson silty clay loams, 6 to 11 percent slopes, eroded	Benfield	3
7556	Benfield-Kipson silty clay loams, 11 to 30 percent slopes	Benfield	3
7585	Shelby clay loam, 7 to 12 percent slopes	Shelby	5
7596	Shelby clay loam, 17 to 30 percent slopes	Shelby	5
7641	Yutan silty clay loam, 2 to 6 percent slopes, eroded	Yutan	5
7644	Yutan silty clay loam, 6 to 11 percent slopes, eroded	Yutan	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7692	Wymore silty clay loam, 3 to 11 percent slopes, eroded	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7695	Wymore silty clay, 3 to 6 percent slopes, eroded	Wymore	5
7701	Ackmore silt loam, occasionally flooded	Ackmore	5
7704	Grable very fine sandy loam, occasionally flooded	Grable	3
7710	Albaton silty clay, occasionally flooded	Albaton	5
7730	Blencoe silty clay, clayey substratum, rarely flooded	Blencoe	5
7741	Haynie silt loam, occasionally flooded	Haynie	5
7746	Haynie silty clay, overwash, occasionally flooded	Haynie	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7770	Colo silty clay loam, occasionally flooded	Colo	5
7795	Moville silt loam, occasionally flooded	Moville	4
7806	Percival-Albaton silty clays, occasionally flooded	Percival	3
7858	Sarpy-Haynie complex, frequently flooded	Sarpy	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7870	Nodaway-Colo complex, occasionally flooded	Nodaway	5
7871	Nodaway-Colo silt loams, occasionally flooded	Nodaway	5
7877	Onawa silt loam, occasionally flooded	Onawa	3
7878	Onawa silt loam, overwash, occasionally flooded	Onawa	5
7880	Onawa silty clay, occasionally flooded	Onawa	5
7890	Zook silt loam, occasionally flooded	Zook	5
7899	Wabash silty clay, frequently flooded, depressional	Wabash	5
8019	Marshall silty clay loam, 2 to 6 percent slopes	Marshall	5
8094	Monona-Ida silt loams, 30 to 60 percent slopes	Monona	5
8096	Monona-Kipson complex, 30 to 70 percent slopes	Monona	5
8116	Pohocco silt loam, 2 to 6 percent slopes, eroded	Pohocco	5
8118	Pohocco silt loam, 6 to 11 percent slopes, eroded	Pohocco	5
8123	Pohocco silty clay loam, 2 to 6 percent slopes, eroded	Pohocco	5
8125	Pohocco silty clay loam, 6 to 11 percent slopes, eroded	Pohocco	5
8131	Pohocco, eroded-Ida silt loams, 11 to 17 percent slopes	Pohocco	5
8132	Pohocco, eroded-Ida silt loams, 17 to 30 percent slopes	Pohocco	5
8135	Pohocco, eroded-Ida silt loams, 6 to 11 percent slopes	Pohocco	5
9704	Udorthents silty clay loam	Udorthents	5
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Otoe County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3921	Sogn-Rock outcrop complex, 11 to 30 percent slopes	Sogn	1
4164	Kipson-Benfield complex, 7 to 20 percent slopes	Kipson	2
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7057	Kennebec-Nodaway silt loams, occasionally flooded	Kennebec	5
7087	Sarpy-Haynie complex, occasionally flooded	Sarpy	5
7091	Wabash silty clay, occasionally flooded	Wabash	5
7094	Zoe silty clay loam, occasionally flooded	Zoe	5
7095	Zoe-Zook silty clay loams, occasionally flooded	Zoe	3
7099	Zook silty clay loam, occasionally flooded	Zook	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7154	Kennebec-Nodaway silt loams, rarely flooded	Kennebec	5
7205	Aksarben silty clay loam, 0 to 2 percent slopes	Aksarben	5
7206	Aksarben silty clay loam, 2 to 6 percent slopes	Aksarben	5
7212	Burchard-Morrill clay loams, 6 to 11 percent slopes	Burchard	5
7230	Judson silt loam, 0 to 2 percent slopes	Judson	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7270	Dickinson fine sandy loam, 6 to 11 percent slopes	Dickinson	3
7271	Dickinson fine sandy loam, 11 to 20 percent slopes	Dickinson	3
7296	Malcolm silt loam, 6 to 11 percent slopes	Malcolm	5
7297	Malcolm silt loam, 6 to 11 percent slopes, eroded	Malcolm	5
7299	Malcolm silt loam, 11 to 25 percent slopes	Malcolm	5
7344	Malmo, eroded-Pawnee complex, 6 to 11 percent slopes	Malmo	4
7350	Malmo clay, 3 to 11 percent slopes, eroded	Malmo	4
7418	Morrill clay loam, 6 to 11 percent slopes	Morrill	5
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill	5
7446	Morrill-Malmo, eroded, complex, 3 to 11 percent slopes	Morrill variant	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7507	Pawnee clay loam, 6 to 11 percent slopes, eroded	Pawnee	5
7511	Pawnee clay loam, 6 to 11 percent slopes	Pawnee	5
7515	Pawnee clay, 6 to 11 percent slopes, eroded	Pawnee	5
7546	Shelby and Burchard clay loams, 11 to 17 percent slopes	Shelby	5
7549	Shelby clay loam, 11 to 17 percent slopes	Shelby	5
7585	Shelby clay loam, 7 to 12 percent slopes	Shelby	5
7596	Shelby clay loam, 17 to 30 percent slopes	Shelby	5
7610	Steinauer clay loam, 11 to 20 percent slopes	Steinauer	5
7641	Yutan silty clay loam, 2 to 6 percent slopes, eroded	Yutan	5
7644	Yutan silty clay loam, 6 to 11 percent slopes, eroded	Yutan	5
7668	Mayberry silty clay loam, 6 to 11 percent slopes, eroded	Mayberry	5
7669	Mayberry clay loam, 3 to 11 percent slopes	Mayberry	5
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	Wymore	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7695	Wymore silty clay, 3 to 6 percent slopes, eroded	Wymore	5
7710	Albaton silty clay, occasionally flooded	Albaton	5
7741	Haynie silt loam, occasionally flooded	Haynie	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7770	Colo silty clay loam, occasionally flooded	Colo	5
7773	Colo-Nodaway complex, frequently flooded	Colo	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7870	Nodaway-Colo complex, occasionally flooded	Nodaway	5
7871	Nodaway-Colo silt loams, occasionally flooded	Nodaway	5
7878	Onawa silt loam, overwash, occasionally flooded	Onawa	5
7880	Onawa silty clay, occasionally flooded	Onawa	5
8019	Marshall silty clay loam, 2 to 6 percent slopes	Marshall	5
8034	Marshall-Ponca silt loams, 11 to 17 percent slopes	Marshall	5
8073	Monona silt loam, 17 to 30 percent slopes	Monona	5
8075	Monona silt loam, 2 to 5 percent slopes	Monona	5
8096	Monona-Kipson complex, 30 to 70 percent slopes	Monona	5
8101	Monona-Shelby-Kipson complex, 30 to 70 percent slopes	Monona	5
8125	Pohocco silty clay loam, 6 to 11 percent slopes, eroded	Pohocco	5
8135	Pohocco, eroded-Ida silt loams, 6 to 11 percent slopes	Pohocco	5
8150	Ponca-Dow silt loams, 6 to 11 percent slopes, eroded	Ponca	5
8151	Ponca-Dow silt loams, 11 to 17 percent slopes, eroded	Ponca	5
9967	Sanitary landfill	Sanitary landfill	
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Pawnee County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3640	Kezan silt loam, frequently flooded	Kezan	5
3709	Crete silt loam, terrace, 0 to 1 percent slopes	Crete	3
3820	Butler silt loam, 0 to 1 percent slopes	Butler	3
4163	Kipson-Benfield complex, 11 to 25 percent slopes	Kipson	2
4165	Kipson-Benfield silty clay loams, 7 to 17 percent slopes	Kipson	2
4166	Kipson-Sogn complex, 3 to 30 percent slopes	Kipson	2
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7090	Wabash silty clay loam, occasionally flooded	Wabash	5
7091	Wabash silty clay, occasionally flooded	Wabash	5
7102	Wymore silty clay loam, terrace, 0 to 2 percent slopes	Wymore	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7154	Kennebec-Nodaway silt loams, rarely flooded	Kennebec	5
7227	Burchard clay loam, 6 to 11 percent slopes	Burchard	5
7229	Burchard clay loam, 11 to 17 percent slopes	Burchard	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7266	Burchard-Steinauer clay loams, 11 to 17 percent slopes, eroded	Burchard	5
7268	Burchard-Steinauer clay loams, 6 to 11 percent slopes, eroded	Burchard	5
7295	Malcolm complex, 11 to 25 percent slopes	Malcolm	5
7296	Malcolm silt loam, 6 to 11 percent slopes	Malcolm	5
7298	Malcolm complex, 6 to 11 percent slopes	Malcolm	5
7344	Malmo, eroded-Pawnee complex, 6 to 11 percent slopes	Malmo	4
7346	Malmo soils, 3 to 11 percent slopes, eroded	Malmo	4
7349	Malmo clay loam, 2 to 6 percent slopes, eroded	Malmo	4
7350	Malmo clay, 3 to 11 percent slopes, eroded	Malmo	4
7352	Malmo clay loam, 3 to 11 percent slopes, eroded	Malmo	4
7411	Cortland-Malmo complex, 6 to 11 percent slopes, eroded	Cortland	3
7414	Mayberry loam, 3 to 11 percent slopes	Mayberry	5
7418	Morrill clay loam, 6 to 11 percent slopes	Morrill	5
7419	Morrill loam, 11 to 17 percent slopes	Morrill	5
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill	5
7432	Morrill soils, 6 to 11 percent slopes, severely eroded	Morrill variant	5
7434	Morrill loam, 3 to 6 percent slopes	Morrill	5
7444	Morrill soils, 11 to 17 percent slopes, severely eroded	Morrill variant	5
7447	Morrill loam, 6 to 11 percent slopes	Morrill	5
7468	Otoe soils, 3 to 6 percent slopes, eroded	Otoe	5
7494	Pawnee and Malmo soils, 6 to 11 percent slopes, eroded	Pawnee	5
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7509	Pawnee loam, 0 to 3 percent slopes	Pawnee	5
7515	Pawnee clay, 6 to 11 percent slopes, eroded	Pawnee	5
7546	Shelby and Burchard clay loams, 11 to 17 percent slopes	Shelby	5
7549	Shelby clay loam, 11 to 17 percent slopes	Shelby	5
7551	Benfield silty clay loam, 3 to 11 percent slopes, eroded	Benfield	3
7553	Benfield soils, 3 to 11 percent slopes, severely eroded	Benfield	3
7585	Shelby clay loam, 7 to 12 percent slopes	Shelby	5
7596	Shelby clay loam, 17 to 30 percent slopes	Shelby	5
7610	Steinauer clay loam, 11 to 20 percent slopes	Steinauer	5
7613	Steinauer clay loam, 6 to 11 percent slopes	Steinauer	5
7619	Steinauer clay loam, 30 to 50 percent slopes	Steinauer	5
7669	Mayberry clay loam, 3 to 11 percent slopes	Mayberry	5
7681	Wymore silty clay loam, 1 to 3 percent slopes	Wymore	5
7683	Wymore silty clay loam, 3 to 6 percent slopes	Wymore	5
7684	Wymore silty clay loam, 3 to 6 percent slopes, eroded	Wymore	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7692	Wymore silty clay loam, 3 to 11 percent slopes, eroded	Wymore	5
7693	Wymore silty clay loam, 2 to 6 percent slopes	Wymore	5
7695	Wymore silty clay, 3 to 6 percent slopes, eroded	Wymore	5
7736	Colo and Kennebec soils, occasionally flooded	Colo	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7868	Nodaway silt loam, channeled, occasionally flooded	Nodaway	5
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
9999	Water	Water	

Soil Loss Tolerance Values (T-Factors) For Richardson County

Map Unit Symbol	Map Unit Name	Dominant Component	T-Factor
3540	Kezan silt loam, frequently flooded	Kezan	5
3840	Geary silty clay loam, 7 to 11 percent slopes, eroded	Geary	5
4165	Kipson-Benfield silty clay loams, 7 to 17 percent slopes	Kipson	2
4166	Kipson-Sogn complex, 3 to 30 percent slopes	Kipson	2
7050	Kennebec silt loam, occasionally flooded	Kennebec	5
7083	Sarpy loamy fine sand, occasionally flooded	Sarpy	5
7090	Wabash silty clay loam, occasionally flooded	Wabash	5
7091	Wabash silty clay, occasionally flooded	Wabash	5
7099	Zook silty clay loam, occasionally flooded	Zook	5
7153	Kennebec silt loam, rarely flooded	Kennebec	5
7203	Aksarben silty clay loam, 2 to 6 percent slopes, eroded	Aksarben	5
7204	Aksarben silty clay loam, 6 to 11 percent slopes, eroded	Aksarben	5
7205	Aksarben silty clay loam, 0 to 2 percent slopes	Aksarben	5
7231	Judson silt loam, 2 to 6 percent slopes	Judson	5
7259	Deroin silty clay loam, 6 to 11 percent slopes, severely eroded	Deroin	5
7346	Malmo soils, 3 to 11 percent slopes, eroded	Malmo	4
7350	Malmo clay, 3 to 11 percent slopes, eroded	Malmo	4
7352	Malmo clay loam, 3 to 11 percent slopes, eroded	Malmo	4
7422	Morrill clay loam, 6 to 11 percent slopes, eroded	Morrill variant	5
7431	Morrill soils, 6 to 11 percent slopes, eroded	Morrill	5
7432	Morrill soils, 6 to 11 percent slopes, severely eroded	Morrill variant	5
7447	Morrill loam, 6 to 11 percent slopes	Morrill	5
7448	Morrill soils, 11 to 17 percent slopes	Morrill	5
7463	Otoe silty clay loam, 3 to 11 percent slopes, eroded	Otoe	5
7464	Otoe silty clay loam, 6 to 11 percent slopes, eroded	Otoe	5
7495	Pawnee and Mayberry clay loams, 3 to 11 percent slopes, eroded	Pawnee	5
7496	Pawnee and Mayberry clay loams, 6 to 11 percent slopes, eroded	Pawnee	5
7497	Pawnee and Malmo clay loams, 3 to 11 percent slopes, eroded	Pawnee	5
7501	Pawnee clay loam, 4 to 8 percent slopes, eroded	Pawnee	5
7551	Benfield silty clay loam, 3 to 11 percent slopes, eroded	Benfield	3
7554	Benfield-Kipson silty clay loams, 3 to 9 percent slopes, severely eroded	Benfield	3
7596	Shelby clay loam, 17 to 30 percent slopes	Shelby	5
7641	Yutan silty clay loam, 2 to 6 percent slopes, eroded	Yutan	5
7643	Yutan silty clay loam, 3 to 11 percent slopes, eroded	Yutan	5
7644	Yutan silty clay loam, 6 to 11 percent slopes, eroded	Yutan	5
7680	Wymore silty clay loam, 0 to 1 percent slopes	Wymore	5
7681	Wymore silty clay loam, 1 to 3 percent slopes	Wymore	5
7689	Wymore silty clay loam, 0 to 2 percent slopes	Wymore	5
7691	Wymore silty clay loam, 3 to 11 percent slopes	Wymore	5
7692	Wymore silty clay loam, 3 to 11 percent slopes, eroded	Wymore	5
7710	Albaton silty clay, occasionally flooded	Albaton	5
7741	Haynie silt loam, occasionally flooded	Haynie	5
7742	Haynie and Albaton soils, occasionally flooded	Albaton	5
7743	Haynie and Sarpy soils, occasionally flooded	Haynie	5
7750	Nodaway silt loam, occasionally flooded	Nodaway	5
7867	Nodaway silt loam, channeled, frequently flooded	Nodaway	5
7871	Nodaway-Colo silt loams, occasionally flooded	Nodaway	5
7880	Onawa silty clay, occasionally flooded	Onawa	5
8006	Ida silt loam, 11 to 17 percent slopes, eroded	Ida	5
8008	Ida silt loam, 17 to 30 percent slopes, eroded	Ida	5
8011	Ida soils, 30 to 60 percent slopes	Ida	5
8016	Marshall silty clay loam, 0 to 2 percent slopes	Marshall	5
8019	Marshall silty clay loam, 2 to 6 percent slopes	Marshall	5
8025	Marshall silty clay loam, 6 to 11 percent slopes, eroded	Marshall	5
8067	Monona silt loam, 1 to 6 percent slopes	Monona	5
8070	Monona silt loam, 11 to 17 percent slopes	Monona	5
8073	Monona silt loam, 17 to 30 percent slopes	Monona	5
8078	Monona silt loam, 6 to 11 percent slopes	Monona	5
8114	Pohocco silt loam, 11 to 17 percent slopes, eroded	Pohocco	5
8116	Pohocco silt loam, 2 to 6 percent slopes, eroded	Pohocco	5
8118	Pohocco silt loam, 6 to 11 percent slopes, eroded	Pohocco	5
8125	Pohocco silty clay loam, 6 to 11 percent slopes, eroded	Pohocco	5
8131	Pohocco, eroded-Ida silt loams, 11 to 17 percent slopes	Pohocco	5
8132	Pohocco, eroded-Ida silt loams, 17 to 30 percent slopes	Pohocco	5
9827	Slickspots-Wabash complex	Zoe	5
9970	Aquolls	Aquolls	5
9971	Arents, earthen dam	Arents	
9975	Mine or quarry	Mine or quarry	
9976	Borrow pit	Pits	
9983	Gravel pit	Pits	
9986	Miscellaneous water, sewage lagoon	Water	
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. The lists are not mutually exclusive in that some practices are on more than one list. 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 resource 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 most of these practices.

1. Permanent Soil and Water Conservation Practices for Controlling Erosion and Sedimentation on Agricultural Lands

Permanent soil and water conservation practices are activities which often are part of an on-going (longer than one year) resource management system and may be recommended and adopted as part of a conservation plan. For those practices found on both this list and the "Temporary Soil and Water Conservation Practices" lists, the District will determine on a case by case basis whether the practice is required as a permanent or temporary measure.

- Channel Vegetation
- Critical Area Planting
- Diversions
- Field Borders
- Field Windbreaks
- Gabions
- Grade Stabilization Structures
- Grassed Waterways or Outlets
- Pasture and Hayland Planting
- Sediment Retention Basins
- Terraces
- Tree Plantings
- Underground Outlets
- Water and Sediment Control Structures

2. Temporary Soil and Water Conservation Practices for Controlling Erosion and Sedimentation on Agricultural Lands

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 no, or lower, capital investments, and the availability of cost share assistance is not required.

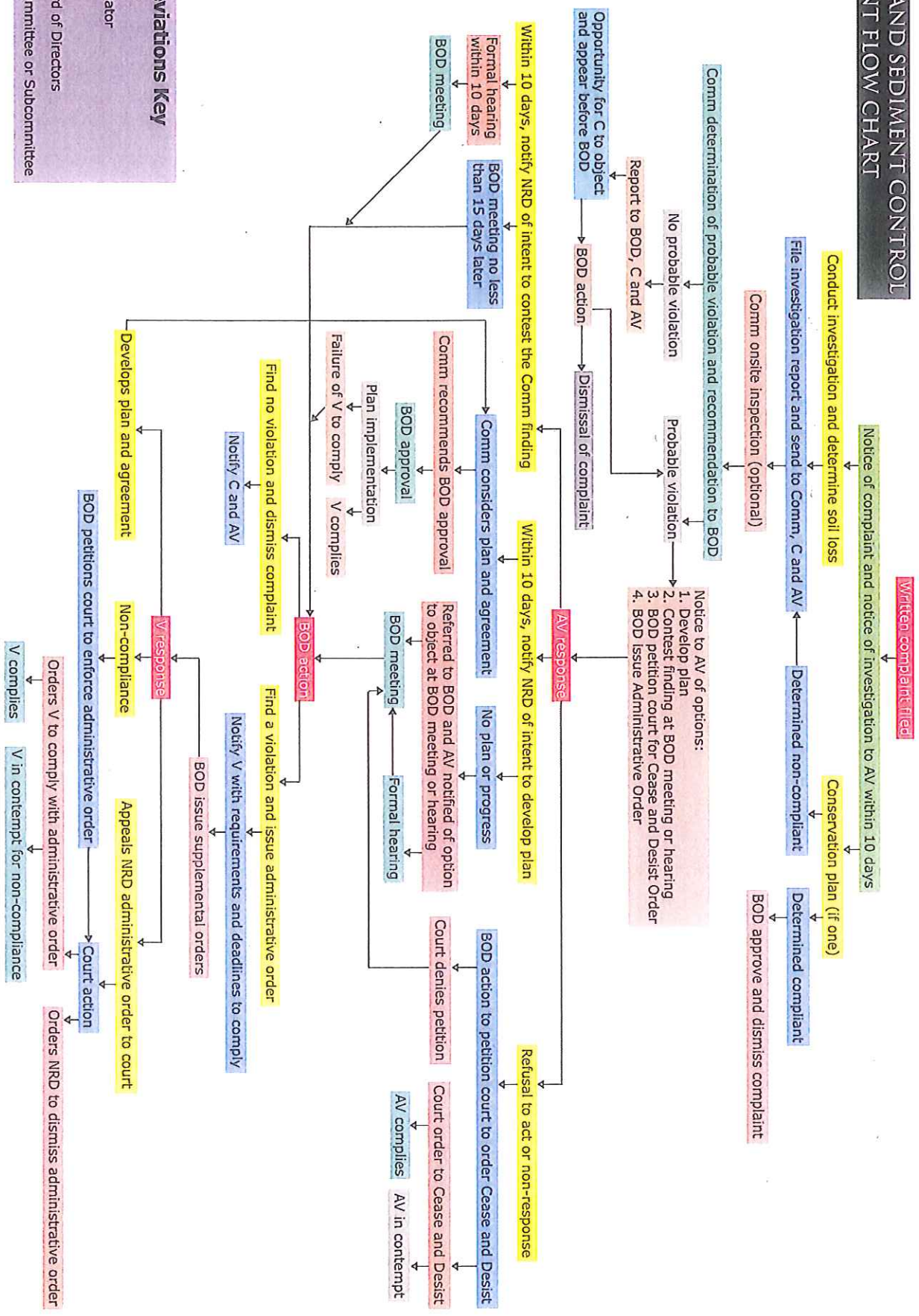
- Conservation Cropping Systems
- Conservation Tillage Systems
- Contour Farming
- Cover and Green Manure Crop
- Crop Residue Management
- Livestock Exclusion
- Mulching
- Pasture and Hayland Management
- Contour Strip Cropping

3. Erosion and Sediment Control Practices for Controlling Erosion and Sedimentation on Land Not used for Agriculture, Horticulture, or Silvicultural Purposes

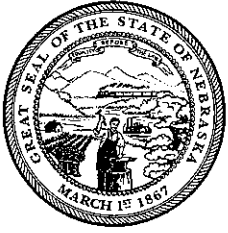
There are many land disturbing activities which, are not related to agriculture, horticulture, or silviculture. Erosion and sedimentation as a result of these activities can be a significant problem. The following practices include permanent and temporary structure and devices that may be required to treat erosion on, *and* sedimentation from, these lands, but cost share assistance need not be made available.

- Channel Vegetation
- Check Dams
- Chutes/Flumes
- Cover Crops
- Critical Area Planting
- Dams
- Dikes
- Diversions
- Gabions
- Grade Stabilization Structures
- Grassed Waterways or Outlets
- Interceptor or Perimeter Swales
- Lining of Waterways or Outlets
- Mulching
- Riprap
- Roadside Seeding
- Sandbag Sediment Barriers
- Silt Fences
- Straw Bale Sediment Barriers
- Stream Channel Stabilization
- Terraces
- Tree Plantings
- Underground Outlets
- Water and Sediment Control Structures

EROSION AND SEDIMENT CONTROL COMPLAINT FLOW CHART



Abbreviations Key
 C = Complainant
 AV = Alleged Violator
 V = Violator
 BOD = NRD Board of Directors
 Comm = NRD Committee or Subcommittee



Pete Ricketts
Governor

STATE OF NEBRASKA

DEPARTMENT OF NATURAL RESOURCES
Gordon W. "Jeff" Fassett, P.E.
Director

IN REPLY TO:

September 9, 2016

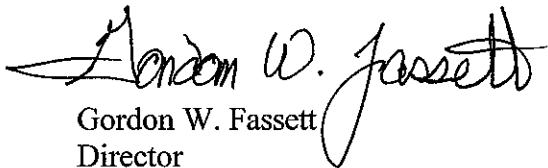
Robert Hilske, General Manager
Nemaha NRD
62161 Highway 136
Tecumseh, NE 68450-8043

Dear Mr. Hilske:

Thank you for filing the Nemaha NRD's amended Erosion and Sediment Control program. After review, the Nebraska Natural Resources Commission, on September 8, 2016, recommended approval.

My staff and I have also reviewed your district's program and I find it to be reasonable, attainable, and in conformance with the state Erosion and Sediment Control program. Therefore, in accordance with § 2-4605, I hereby approve the Nemaha NRD's amended Erosion and Sediment Control program.

Sincerely,


Gordon W. Fassett
Director