

MEMORANDUM

TO: Programs, Projects and Operations Subcommittee

FROM: Martin P. Cleveland

SUBJECT: Turtle Creek Watershed PL566 Structure #2
Rehabilitation Assistance
Supplemental Watershed Plan and Environmental Assessment and Turtle Creek Watershed Agreement

DATE: July 5, 2006

Approximately five years ago, the USDA – Natural Resources Conservation Service (NRCS) initiated a dam rehabilitation assistance program to address the needs of aging dams throughout the United States, in particular those dams built through their Public Law (PL) 566 Program. The PL 566 Program has been designing/building dams for about 65 years.

The District owns/operates 83 dams, 50 of which were built via the PL 566 Program. The District's PL 566 dams built in the period from 1962 to 2006. In March 2005 the District initiated dam rehabilitation with NRCS on Turtle Creek Watershed PL 566 Structure #2 via execution of Memorandum of Understanding for rehabilitation assistance.

A Draft Supplemental Watershed Plan and Environmental Assessment (EA) for the referenced structures is enclosed. This plan must be approved by local sponsor (NRD) prior to it being forwarded to NRCS headquarters in Washington, DC.

Enclosed is the Papillion Creek Watershed Supplemental Watershed Agreement for structure #2 for your review. This agreement provides for rehabilitation (with cost share and estimated costs shown) for referenced dam (#2). The Dam is anticipated to be replaced with a broad crested weir chute spillway. This agreement is subject to NRCS and NRD funding.

The estimated total rehabilitation project costs to be paid by sponsor (NRD) and NRCS are as follows:

<u>Works of Improvement</u>	<u>Sponsors (NRD)</u>	<u>NRCS</u>	<u>Estimated Project Costs</u>
Rehabilitation Of Turtle Creek #2	\$ 134,400 (35%)	\$417,600 (65%)	\$ 552,000 (100%)

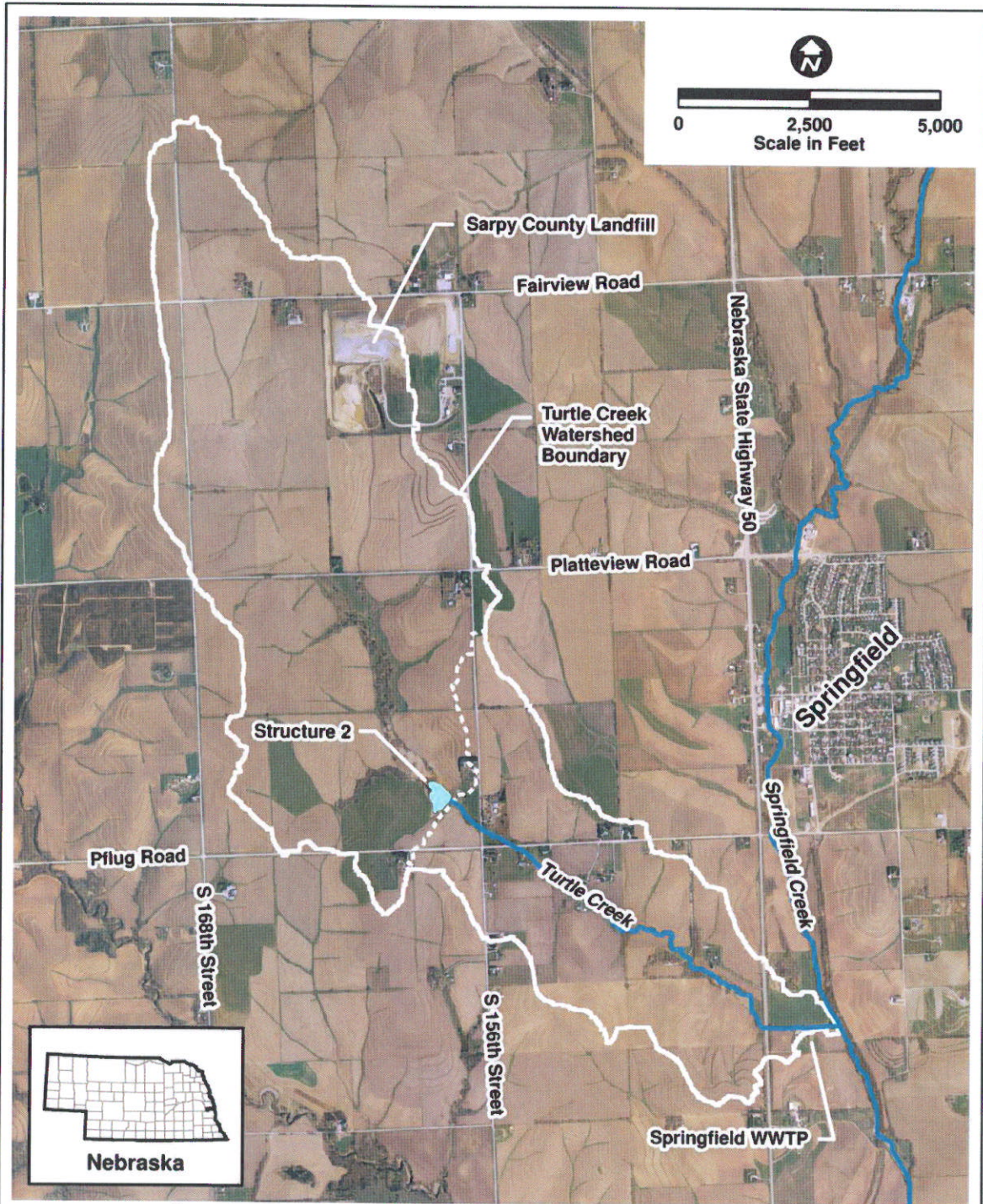
1/ Estimated Project Costs exclude \$168,000 in NRCS Engineering and Project Administration costs. NRCS pays 100% of planning and engineering costs.

(NRD) is required to secure land rights for these structures and this cost is credited towards sponsor's 35%.

It is Management's recommendation that the Subcommittee recommend to the Board that the Acting General Manager be authorized to execute the proposed Turtle Creek Watershed Agreement with NRCS for rehabilitation of PL 566 Grade Stabilization Structures #2, subject to changes deemed necessary by the Acting General Manager and approved to as to form by District Legal Counsel.

Enclosures

Z:\NRCS\28686_Dam_Rehab_Task_Order_2\map_docs\arcmap\Turtle_Creek_Project_Location_Map.mxd



Source: Aerial Photography, Metropolitan Area Planning Agency, flown by Horizons Inc. in April 2004.

HDR

Project Location Map **Turtle Creek Watershed Structure 2**

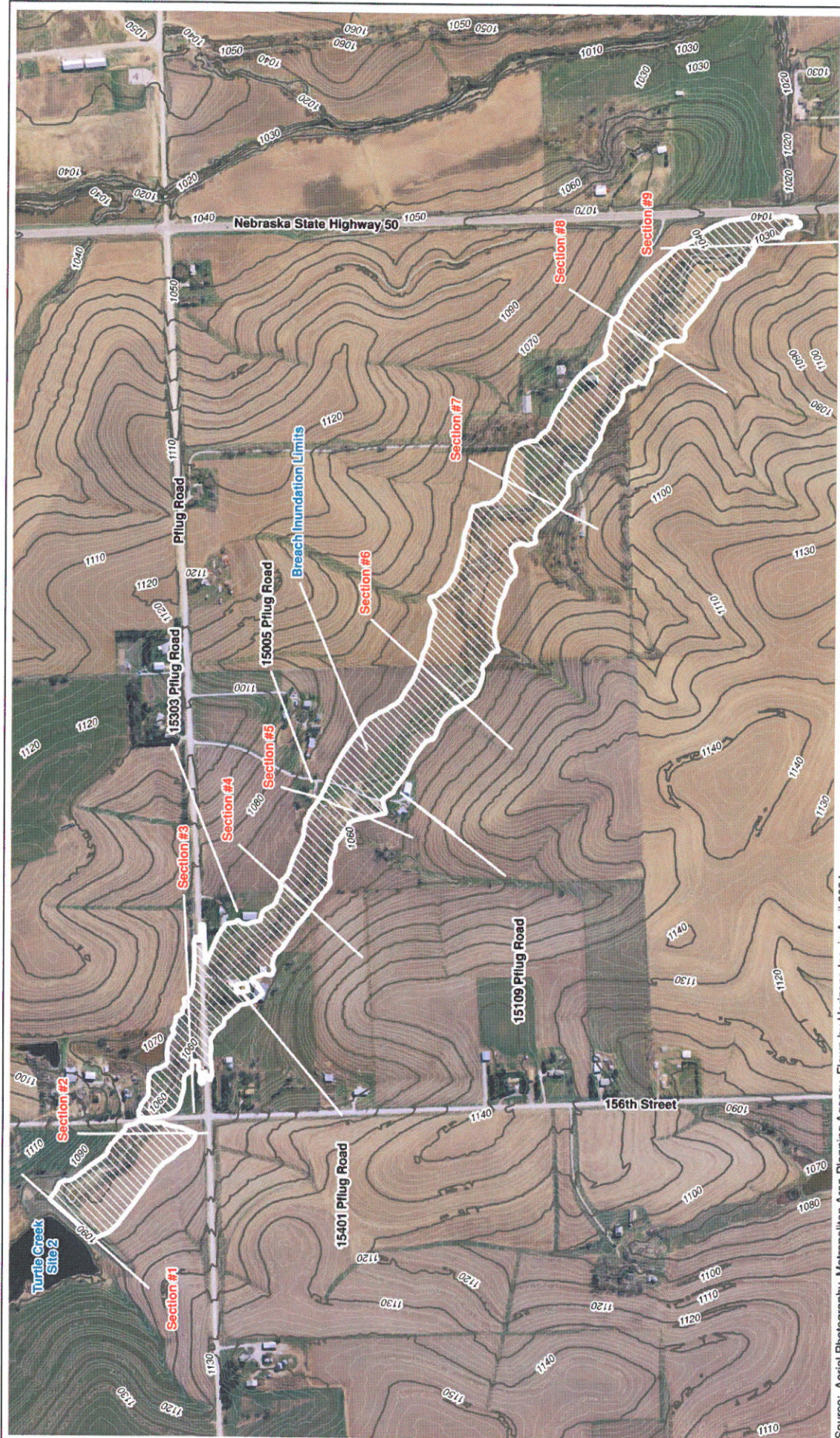
NRCS Watershed Rehabilitation Program

DATE

JUN 2006

FIGURE

S-1



Source: Aerial Photography, Metropolitan Area Planning Agency, Flown by Horizons Inc. in April 2004.



Dam Breach Flood Inundation Map Turtle Creek Watershed Structure 2

NFCS Rehabilitation Program

DATE Feb. 2006
Revised June 2006

FIGURE

4

TURTLE CREEK WATERSHED

Watershed Agreement

For Grade Stabilization Structure (GSS) No. 2

Between the
Papio-Missouri River Natural Resources District
(Referred to herein as Sponsor)
and the
Natural Resources Conservation Service,
United States Department of Agriculture
(Referred to herein as NRCS)

Whereas, application has heretofore been made to the Secretary of Agriculture by the sponsors for assistance in preparing a plan for works of improvement for the Turtle Creek Watershed, State of Nebraska, under the authority of the Watershed Protection and Flood Prevention Act (16 U.S.C. 1001- et seq.); and

Whereas, the responsibility for administration of the Watershed Protection and Flood Prevention Act, as amended, has been assigned by the Secretary of Agriculture to NRCS; and

Whereas, there has been developed through the cooperative efforts of the sponsors and NRCS a plan for works of improvement for the Turtle Creek Watershed, State of Nebraska, hereinafter referred to as the watershed plan-Environmental Assessment, which plan is annexed to and made a part of this agreement;

Now, therefore, in view of the foregoing considerations, the Secretary of Agriculture, through NRCS, and the sponsors hereby agree on this plan and that the works of improvement for this project will be installed, operated, and maintained in accordance with the terms, conditions, and stipulations of said watershed agreement:

1. Rehabilitation of grade stabilization structure No. 2 of the Turtle Creek Watershed, State of Nebraska.
2. The term of this Watershed Agreement will be for a period of 100-years beginning with the completion of the structural measures proposed in this Watershed Agreement. The agreement may be amended at any time by mutual consent of all parties.
3. The amounts and percentages of total rehabilitation project costs to be paid by the Sponsor and by the NRCS are as follows:

<u>Works of</u>			<u>Total Eligible</u>
<u>Improvement</u>	<u>Sponsor</u>	<u>NRCS</u>	<u>Project Costs</u>
Rehabilitation	\$134,400	\$417,600	\$552,000 ¹
Of GSS No. 2	35.0%	65.0%	

1: Total Eligible Project Costs exclude \$168,000 in NRCS Engineering and Project Administration costs.

Total project costs include construction, land rights, relocation, project administration, and engineering services provided by the sponsor. Not included is technical assistance provided by NRCS or cost of permitting and ordinance.

4. Costs. The costs shown in this plan are preliminary estimates. Final costs to be borne by the parties hereto will be the actual costs incurred in the installation of works of improvement. Total project costs include construction, land rights, administrative and legal expenses, technical assistance, architectural and engineering fees, project inspection fees, and engineering contingencies. Not included are the costs of permitting and ordinances.

5. Landowner agreements. The sponsors will obtain agreements from owners of not less than 50 percent of the land above the structure. These agreements state that the owners will carry out conservation farm or ranch plans on their land. The sponsors will ensure that 50 percent of the land upstream of any retention reservoir site is adequately protected before construction of the dam.

6. Land treatment assistance. The sponsors will provide assistance to landowners and operators to ensure the installation of the land treatment measures shown in the watershed plan.

7. Land treatment Operation & Maintenance. The sponsors will encourage landowners and operators to operate and maintain the land treatment measures for the protection and improvement of the watershed.

8. Water and mineral rights. The sponsors will acquire or provide assurance that landowners or water users have acquired such water, mineral, or other natural resources rights pursuant to State law as may be needed in the installation and operation of the works of improvement. Any costs incurred shall be borne by the sponsor and these costs shall not be considered part of the total cost when calculating any cost share.

9. Permits. The sponsors will obtain and bear the cost for all necessary Federal, State, and local permits required by law, ordinance, or regulation for installation of the works of improvement. These costs shall not be considered part of the total cost when calculating any cost share.

10. Flood plains. The sponsors agree to participate in and comply with applicable Federal flood plain management and flood insurance programs before construction starts. (For flood prevention projects only)

11. NRCS assistance. This agreement is not a fund-obligating document. Financial and other assistance to be furnished by NRCS in carrying out the plan is contingent upon the fulfillment of applicable laws and regulations and the availability of appropriations for this purpose.

12. Additional agreements. A separate agreement will be entered into between NRCS and sponsors before either party initiates work involving funds of the other party. Such agreements will set forth in detail the financial and working arrangements and other conditions that are applicable to the specific works of improvement.

13. Amendments. This plan may be amended or revised only by mutual agreement of the parties hereto, except that NRCS may de-authorize or terminate funding at any time it determines that the sponsor has failed to comply with the conditions of this agreement. In this case, NRCS shall promptly notify the sponsor in writing of the determination and the reasons for the de-authorization of project funding, together with the effective date. Payments made to the sponsor or recoveries by NRCS shall be in accord with the legal rights and liabilities of the parties when project funding has been de-authorized. An amendment to incorporate changes affecting a specific measure may be made by mutual agreement between NRCS and the sponsor(s) having specific responsibilities for the measure involved.

14. Prohibitions. No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this plan, or to any benefit that may arise there from; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

15. Operation and Maintenance (O&M). The sponsors will be responsible for the operation, maintenance, and any needed replacement of the works of improvement by actually performing the work or arranging for such work, in accordance with an O&M Agreement. An O&M agreement will be entered into before federal funds are obligated and continue for the project life. Although the sponsors' responsibility to the Federal Government for O&M ends when the agreement expires, the sponsors acknowledge that continued liabilities and responsibilities associated with works of improvement may exist beyond the project life.

16. Emergency Action Plan. The sponsors shall prepare an Emergency Action Plan (EAP) for each dam or similar structure where failure may cause loss of life or as required by state and local regulations. The EAP shall meet the minimum content specified in GM 180 Part 500.52. EAPs shall be reviewed and updated by the sponsors annually.

17. Nondiscrimination provisions. The program conducted will be in compliance with the nondiscrimination provisions as contained in Titles VI and VII of the Civil Rights Act of 1964, as amended, the Civil Rights Restoration Act of 1987 (Public Law 100-259) and other nondiscrimination statutes, namely, Section 503 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and in accordance with regulations of the Secretary of Agriculture (7 C.F.R. 15, Subparts A & B), which provide that no person in the United States shall, on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Agriculture or any agency thereof.

18. Certification Regarding Drug-Free Workplace Requirements (7 CFR 3017, Subpart F).

By signing this watershed agreement, the sponsors are providing the certification set out below. If it is later determined that the sponsors knowingly rendered a false certification, or otherwise violated the requirements of the Drug-Free Workplace Act, the NRCS, in addition to any other remedies available to the Federal Government may take action authorized under the Drug-Free Workplace Act.

Controlled substance means a controlled substance in Schedules I through V of the Controlled Substances Act (21 U.S.C. 812) and as further defined by regulation (21 CFR 1308.11 through 1308.15);

Conviction means a finding of (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes;

Criminal drug statute means a Federal or non-Federal criminal statute involving the manufacturing, distribution, dispensing, use, or possession of any controlled substance;

Employee means the employee of a grantee directly engaged in the performance of work under a grant, including: (i) all direct charge employees; (ii) all indirect charge employees unless their impact or involvement is insignificant to the performance of the grant; and, (iii) temporary personnel and consultants who are directly engaged in the performance of work under the grant and who are on the grantee's payroll. This definition does not include workers not on the payroll of the grantee (e.g., volunteers, even if used to meet a matching requirement; consultants or independent contractors not on the grantees' payroll; or employees of sub-recipients or subcontractors in covered workplaces).

Certification:

A. The sponsors certify that they will or will continue to provide a drug-free workplace by:

- (1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

- (2) Establishing an ongoing drug-free awareness program to inform employees about -
- (a) The danger of drug abuse in the workplace;
 - (b) The grantee's policy of maintaining a drug-free workplace;
 - (c) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (d) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
- (3) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (1);
- (4) Notifying the employee in the statement required by paragraph (1) that, as a condition of employment under the grant, the employee will:
- (a) Abide by the terms of the statement; and
 - (b) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- (5) Notifying the NRCS in writing, within ten calendar days after receiving notice under paragraph (4) (b) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
- (6) Taking one of the following actions, within 30 calendar days of receiving notice under paragraph (4) (b), with respect to any employee who is so convicted—
- (a) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
 - (b) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.
- (7) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (1), (2), (3), (4), (5), and (6)

B. The sponsors may provide a list of the site(s) for the performance of work done in connection with a specific project or other agreement.

C. Agencies shall keep the original of all disclosure reports in the official files of the agency.

19. Certification Regarding Lobbying (7 CFR 3018)

(1) The sponsors certify to the best of their knowledge and belief, that:

- (a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the sponsors, to any person for influencing or attempting to influence an officer or employee of an agency, Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(c) The sponsors shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

(2) This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, of the U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

20. Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions (7 CFR 3017).

- (1) The sponsors certify to the best of their knowledge and belief, that they and their principals:
- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
- (2) Where the primary sponsors are unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this agreement.

21. Signatures

The Sponsor and NRCS further agree to all other terms, conditions, and stipulations of said watershed agreement not modified herein.

Papio-Missouri River Natural Resources District
8901 S. 154th St.
Omaha, NE 68138-3621

By _____

Title _____

Date _____

The signing of this Watershed Agreement as supplemented was authorized by a resolution of governing body of the Lower Platte South Natural Resources District adopted at a meeting held on _____ (Date).

Secretary Address Zip Code

Natural Resources Conservation Service
United States Department of Agriculture

Approved by:

State Conservationist

Date

DRAFT WATERSHED PLAN AND ENVIRONMENTAL ASSESSMENT

**REHABILITATION OF GRADE STABILIZATION
STRUCTURE 2
TURTLE CREEK WATERSHED
SARPY COUNTY, NEBRASKA
JUNE 21, 2006**



Draft

**WATERSHED PLAN AND ENVIRONMENTAL ASSESSMENT
for the
REHABILITATION OF GRADE STABILIZATION STRUCTURE 2**

**TURTLE CREEK WATERSHED
SARPY COUNTY, NEBRASKA**

Prepared by
**U.S. Department of Agriculture, Natural Resources Conservation Service
Papio-Missouri River Natural Resources District
and
HDR Engineering, Inc.**

Prepared under the Authority of the Watershed Protection and Flood Prevention Act, Public Law 83-566, as amended by Section 313 of Public Law 106-472, The Small Watershed Rehabilitation Amendments of 2000, and in accordance with Section 102 (2) (c) of the National Environmental Policy Act of 1969, Public Law 91-190, as amended (42 USC 43221 et seq.).

For submitting comments or requesting additional information, contact:

Stephen K. Chick
State Conservationist
Natural Resources Conservation Service
Federal Building, Room 152
100 Centennial Mall North
Lincoln, NE 68508-3866
Tele. 402-437-5300

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

SUMMARY

Watershed Plan and Environmental Assessment for Turtle Creek Watershed Sarpy County, Nebraska 1st Congressional District

Sponsoring Local Organization (SLO)

Papio-Missouri River Natural Resources District

Proposed Action

The proposed action (the Project) is the rehabilitation of Turtle Creek Watershed Structure 2 (see Exhibit S-1, Project Map) for the SLO under the Natural Resources Conservation Service (NRCS) Watershed Rehabilitation Program.

Purpose and Need for Action

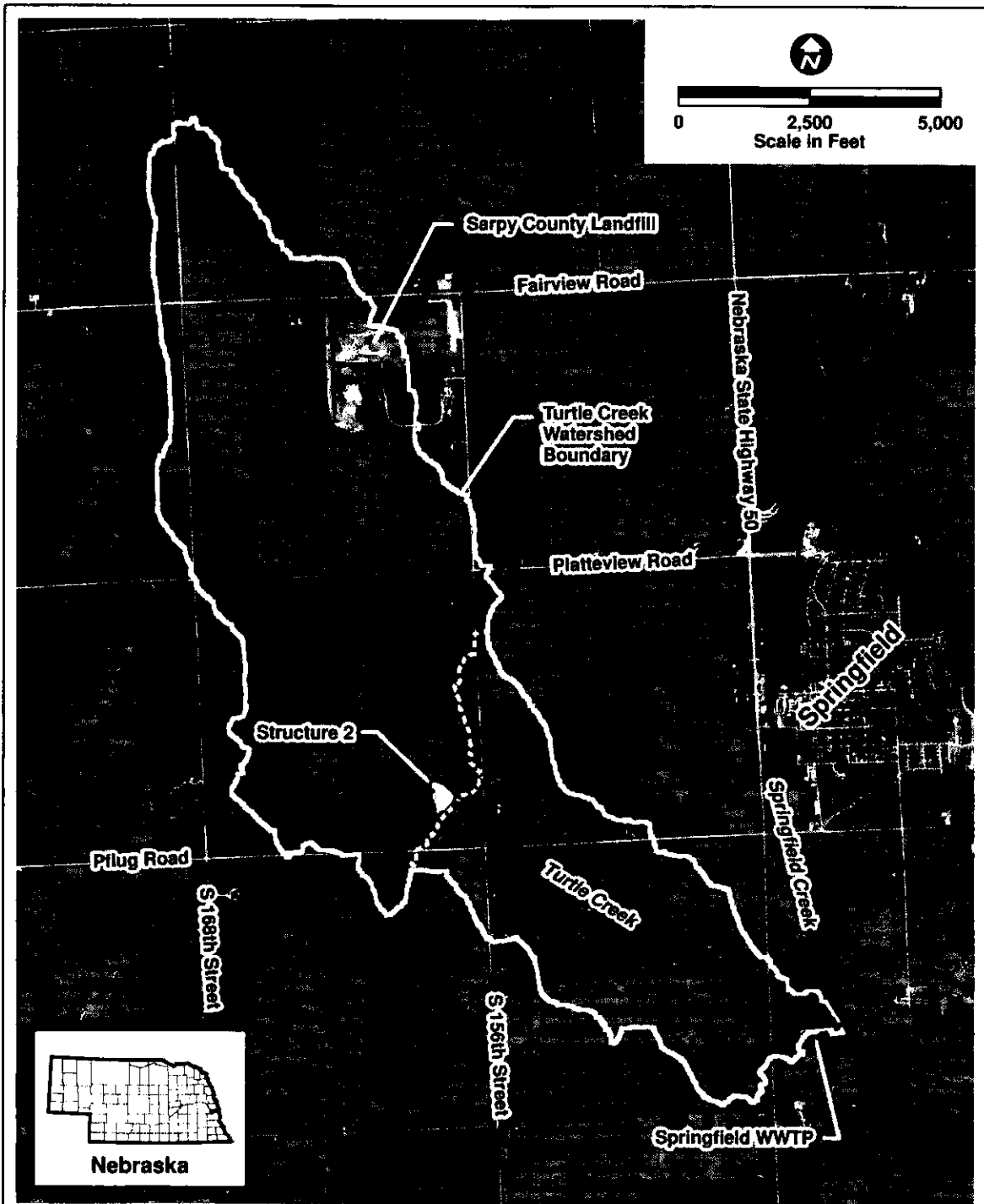
The purpose of this Federal action is to continue to provide grade stabilization protection in a manner that minimizes the risk of loss of human life and is both cost efficient and environmentally acceptable.

Rehabilitation of the structure will provide continuation of grade control for an additional 100 years, minimize the risk of loss of life, and address identified problems.

Description of the Preferred Alternative

The Rehabilitation to Grade Stabilization Structure Alternative would rehabilitate Turtle 2 to a full-flow grade stabilization structure and extend its life for 100 years. The existing principal spillway would be removed, the auxiliary spillway would be abandoned, the top of dam would be lowered to remove storage capacity and a broad-crested weir chute spillway would be built. Existing embankment removed from the structure would be placed in the existing auxiliary spillway and graded to drain.

Z:\NRCS\26886_Dam_Rehab_Task_Order_2\map_docs\arcmap\Turtle_Creek_Project_Location_Map.mxd



Source: Aerial Photography, Metropolitan Area Planning Agency, flown by Horizons Inc. in April 2004.

HDR

**Project Location Map
Turtle Creek Watershed Structure 2**

NRCS Watershed Rehabilitation Program

DATE

JUN 2006

FIGURE

S-1

Resource Information

Table S-1 provides relevant information for the Project.

Table S-1
Resource Information

Resource	Structure 2
Latitude and Longitude	96° 9' 34.30" W; 41° 4' 37.08" N
8-Digit Hydrologic Unit Code	10200202 Lower Platte (102300) Lower Platte (06)
Climate	Continental and temperate, characterized by hot summers; cold winters; mild, wet springs; and mild, dry falls. Mean temperature: January = 21° F July = 79° F
Annual Precipitation	25 to 36 inches
Topography	Rolling to hilly, with small valleys with narrow floodplains
Watershed Size (acres)	Structure 2 – 1,315 acres Turtle Creek Watershed – 1,922 acres
Land ownership	100% public, 3.9 acres SLO easement
Population/Demographics (Sarpy County)	Population: 122,595 Demographics: White – 87% Hispanic – 4% African American – 4% American Indian and Alaska Native – 0% Asian – 2% Native Hawaiian and other Pacific Islander – 0% Some other race – 0% Two or more races – 2%
Average Farm Size (Sarpy County)	296 acres

Sources: Douglas/Sarpy County Soil Survey; U.S. Census, 2000; USDA 2002 Census of Agriculture.

Structure 2 is located within the jurisdiction of Sarpy County, but the lower portion of Turtle Creek is located within the planning jurisdiction of the City of Springfield. The 2005 Draft Sarpy County Comprehensive Plan projected that the drainage area above and below Structure 2 would become fully urbanized by 2030. The uppermost portion of the watershed north of Platteview Road is projected to be developed as low density residential (lots \geq 2 acres). The remainder of the watershed above and below Structure 2 is projected to be developed as medium density residential (0.25-acre lots). Medium density residential land use is planned above Structure 2.

**Table S-2
Summary of Land Use**

Land Use Classification	Structure 2 (acres ¹)		Turtle Creek Drainage Basin (acres ¹)	
	Exist.	Future	Exist.	Future
Agricultural	1,315	0	1,922	0
Medium Density Residential (0.25-acre lots)	0	538	0	1,145
Low Density Residential (lots \geq 2 acres)	0	777	0	777
Total (acres)	1,315	1,315	1,922	1,922

Notes:

¹ Rounded to the nearest acre.

Alternative Plans Considered

A range of alternatives to satisfy the purpose of the Project was initially considered and included both structural and non-structural concepts. Table S-3 summarizes the alternatives considered in conjunction with the rehabilitation of Structure 2. A range of sediment storage values, from 50 to 100 years, was evaluated. After consideration of costs, project objectives, and site constraints, the longest reasonable and practical sediment storage period of 100 years was selected.

**Table S-3
Range of Alternatives Considered**

Alternative	Summary of Alternative	Screening of Alternative	Studied in Further Detail
Rehabilitation to Original Hazard Classification with Downstream Breach Inundation Property Acquisition	This alternative would rehabilitate the structure to its original Low Hazard Class, provide a 100-year design life, secure land and properties within the breach inundation area to remove existing hazards and prohibit development in perpetuity, and remove and replace two existing downstream drainage structures that are overtopped or would likely fail during a breach event.	The total estimated cost for this alternative is \$1,633,000. This alternative would meet the purpose and need for the Project, is technically reliable, but appears cost prohibitive.	No, found not reasonable due to cost. This alternative was not carried forward for detailed study.
Construction of Levee in Downstream Breach Inundation	This alternative would rehabilitate the structure to its original Low Hazard Class with a 100-year design life, construct an earthen levee to contain the breach flows, and upgrade existing roadway drainage structures.	This alternative would include the cost of the Rehabilitation to Original Hazard Class with Downstream Breach Inundation Property Acquisition Alternative (minus purchase of properties protected by the levee), plus the cost to purchase downstream properties not protected by the levee and to construct an earthen levee. A detailed estimate was not developed after initial cost estimates for this alternative were significantly higher than other feasible alternatives.	No, found not reasonable due to cost. This alternative was not carried forward for detailed study.

Alternative	Summary of Alternative	Screening of Alternative	Studied in Further Detail
Improvements to Channel in Downstream Breach Inundation	This alternative would rehabilitate the structure to its original Low Hazard Class with a 100-year design life, improve the downstream channel capacity to convey the breach flows without inundating adjacent houses, and upgrade existing roadway drainage structures.	This alternative would include the cost of the Rehabilitation to Original Hazard Class with Downstream Breach Inundation Property Acquisition Alternative (minus purchase of properties protected by the levee), plus the cost to purchase downstream properties to construct an earthen levee. A detailed estimate was not developed after initial cost estimates for this alternative were significantly higher than other feasible alternatives.	No, found not reasonable due to cost. This alternative was not carried forward for detailed study.
No-Action/Future Without Federal Project	This alternative is the most likely course of action should the SLO receive a short-term legal mandate to fix or remove the dam and should no Federal funding be available for rehabilitation. A "sponsor's breach" would remove the principal spillway riser and conduit and involve the construction of a breach through the embankment to allow unimpeded flow of Turtle Creek.	The total estimated cost for this alternative is \$188,000. This alternative does not meet purpose and need for the Project, but is required to be carried forward.	Yes. This alternative was carried forward for detailed study.
Federal Decommissioning	This alternative would result in the complete removal of the constructed embankment and deposited sediment, reconnection and restoration of the stream and floodplain, construction of concrete drop structures and a drainage channel, and seeding.	The total estimated cost for this alternative is \$1,204,000. This alternative would meet the purpose and need for the Project, is technically reliable, and appears justifiable by tangible benefits.	Yes. This alternative was carried forward for detailed study.
Rehabilitation to High Hazard Classification	This alternative would rehabilitate the structure to High Hazard Class requirements and extend its life for 100 years.	The total estimated cost for this alternative is \$1,092,000. This alternative would meet the purpose and need for the Project, is technically reliable, and appears justifiable by tangible benefits.	Yes. This alternative was carried forward for detailed study.
Rehabilitation to Grade Stabilization Structure	This alternative would rehabilitate the structure to full-flow grade stabilization structure requirements and extend its life for 100 years. Flows would not be stored, but would flow through the structure.	The total estimated cost for this alternative is \$552,000. This alternative would meet the purpose and need for the Project, is technically reliable, and appears justifiable by tangible benefits.	Yes. This alternative was carried forward for detailed study.
National Economic Development (NED) Alternative	The NED Alternative is the alternative or combination of alternatives that reasonably maximizes the net economic benefits consistent with protecting the nation's resources.	The NED Alternative for this Project is Rehabilitation to Grade Stabilization Structure	Yes. This alternative was carried forward for detailed study.

Project Costs

Table S-4 summarizes the allocation of Project construction costs between the SLO and NRCS for the Rehabilitation to Grade Stabilization Structure Alternative.

**Table S-4
Allocation of Total Estimated Eligible Project Costs,
Rehabilitation to Grade Stabilization Structure Alternative**

Works of Improvement	SLO	PL 83-566 Funds	Total Estimated Eligible Project Costs ^{1,2}
Rehabilitation of Structure 2	\$134,400	\$417,600	\$552,000,

Notes:

¹ Estimated Project Cost excludes \$168,000 in NRCS Engineering and Project Administration costs.

² Cost share on Structure 2 is 65 percent PL 83-566 funds and 35 percent SLO. The cost share percentages are computed for and administered during construction.

Project Benefits

Project benefits are continued grade stabilization.

Net Beneficial Effects

Economic benefits and impacts associated with Structure 2 were calculated based on the grade stabilization benefits the structure was intended to provide.

The National Economic Development (NED) alternative is the alternative that has the highest net economic benefits while protecting the nation's natural resources. Table S-5 compares each alternative relative to potential benefits derived or reduced for each.

**Table S-5
Economic Benefits¹ and Comparison of Alternatives**

Alternative	Average Annual Cost ²	Average Annual Benefits	Benefit-Cost Ratio (Most Probable Value) ³
No-Action/Future Without Federal Project	\$9,700	\$0	0
Federal Decommissioning	\$66,500	\$69,000	1.04
Rehabilitation To High Hazard Classification	\$59,900	\$69,000	1.15
Rehabilitation To Grade Stabilization Structure	\$31,300	\$69,000	2.20

Notes:

¹ Average annual values based on a February 2006 price base.

² Average annual cost includes installation, operation and maintenance..

³ The benefit-cost ratio is the benefit of an activity per dollar of cost. The higher the ratio number, the greater the benefits are compared to the cost of the Project.

Period of Analysis

The period of analysis is 100 years.

Project Life

The Project life is based on a 100-year design life for Structure 2.

Environmental Impacts

Table S-6 describes the resource elements that were identified during scoping and summarizes the potential impacts related to the Rehabilitation to Grade Stabilization Structure Alternative.

Table S-6
Summary of Resource Concerns and Impacts of the
Rehabilitation to Grade Stabilization Structure Alternative

Identified Resource Concern	Summary of Concern	Effects Summary for Rehabilitation to Grade Stabilization Structure (Preferred/NED) Alternative
Human Health and Safety/Public Health and Safety	Even though the primary purpose of the structure is to provide grade stabilization there are safety concerns associated with a potential breach and downstream inundation.	Human health and safety/public health and safety (health and safety) would increase by removing the threat of a breach inundation. The constructed breach would eliminate the structure's ability to store runoff, eliminating normal and flood storage capabilities of the structure, thereby eliminating the hazard of flooding due to an unexpected failure of the structure. The incidental flood control benefits would also be eliminated. As such, the downstream flooding conditions would be similar to those that existed prior to the construction of the structure.
Existing Structure 2	Current dam safety criteria and the need to meet High Hazard Class dam requirements.	The weir would eliminate the structure's ability for floodwater storage, thereby eliminating the hazard of flooding due to an unexpected failure of the structure. This would no longer be a hazard class dam structure.
Water Quality	Concern regarding urbanization on impact to water quality is outside of the scope of this Project. Water quality as it relates to sedimentation is a potential concern.	Reduces existing water quality enhancement opportunity due to lack of floodwater retarding capacity.
Erosion and Sedimentation	As the primary purpose of the structure is grade stabilization control, control of erosion and sedimentation is a concern.	The grade stabilization function of the structure would be maintained, thereby preventing gully formation and its associated sediment production. This alternative would continue to provide sediment storage up to the normal pool elevation. The sediment storage function above the normal pool elevation would not be retained and thus the sediment-laden water would be transported directly downstream.
Flood Control	While the primary purpose of the existing structure is grade stabilization control, incidental flood control opportunities also occur.	Provides no incidental flood control opportunities.
Recreation	Structure 2 provides passive recreational opportunities. The surface water acreage is not great enough to support aquatic recreation opportunities.	After construction, the recreational opportunities would be consistent with the current opportunities available.
Transportation	Some alternatives could have short-term effects on local transportation systems.	Construction-related activities such as ingress and egress to site and disposal of removed principal spillway materials.

NRCS Planning Requirements	Summary of Planning Consideration	Effects Summary for Rehabilitation to Grade Stabilization Structure (Preferred/NED) Alternative
Cultural Resources	The Nebraska State Historic Preservation Office (SHPO) is being contacted. The area of potential effect will be identified for each alternative and reviewed by the NRCS Cultural Resources Specialist who will coordinate with the State Historic Preservation Officer as needed.	Construction in previously undisturbed areas would need to be evaluated for potential affects. No known cultural resources have been identified through scoping/planning.
Endangered and Threatened Species	The U.S. Fish and Wildlife Service, Mountain-Prairie Region has a listing of potential species and habitat by county. For Sarpy County, the five species listed are: bald eagle (<i>Haliaeetus leucocephalus</i>), interior least tern (<i>Sterna antillarum athalassos</i>), pallid sturgeon (<i>Scaphirhynchus albus</i>), piping plover (<i>Charadrius melodus</i>), and the western prairie fringed orchid (<i>Platanthera praeclara</i>). Also, the impoundment of water due to the Project could result in a potential depletion to Platte River flows.	<u>Bald eagle</u> : No effect. No active nest or winter roost sites are known within 1 mile of the Project area. <u>Western prairie fringed orchid</u> : No effect. No habitat in area of potential effect. Habitat: natively vegetated subirrigated meadow, floodplain, lower stream terraces, and sidehill seep type wetlands in a native tallgrass prairie or subirrigated meadow. <u>Interior least tern and piping plover</u> : No effect. No habitat in area of potential effect. Also see information below regarding effects to Platte River. <u>Pallid Sturgeon and Platte River flows</u> : No effect. The analysis of instream flow depletions of the Platte River was performed and for the critical months of February through July the average monthly depletions to Platte River flow as a result of implementation of this alternative would be net loss of 0.5 acre-feet per year. There are no adverse effects to species as relating to the Platte River flows (as per the July 2001 letter of concurrence from USFWS of "No Adverse Effect" for projects resulting in less than 25 acre-feet per year threshold).
Fish and Wildlife Resources	Alternatives involving stream modifications will need to have a consultation completed with the U.S. Fish and Wildlife Service and full considerations given to their recommendations. Fish and wildlife habitat and populations are present in the Project area and compliance with the Fish and Wildlife Coordination Act is required.	Effects on wildlife or habitats would be measurable or perceptible but localized within a small area. <u>Aquatic Habitat</u> : There would be no effect to aquatic habitat as a result of this alternative as the normal pool will remain unchanged from existing conditions. <u>Riparian Areas</u> : Approximately 100 feet of existing channel will require stabilization in the form of rip rap as a result of this alternative. However, no long term effects to the associated riparian area would be anticipated as re-vegetation is anticipated to occur.
Migratory Birds	Migratory birds may use the areas surrounding the existing project for nesting.	To avoid impacts, needed vegetation clearing would be proposed to occur outside of the primary nesting period of April 1 to July 15.
Prime and Unique Farmlands	Some prime farmland is present in the Project area. No unique farmland is present.	Impacts are below the threshold of concern as identified by the score on Form AD-1006 "Farmland Conversion Impact Rating".

Riparian Area	Riparian areas exist within the Project area.	See "Fish and Wildlife Resources"
Wetlands - NRCS Policy	Wetlands are present. A total of 14.2 acres of artificial wetlands and 0.15 linear wetlands were identified.	A temporary loss of 0.03 acres linear wetlands would be expected as a result of construction and placement of rip rap along the downstream channel. No long-term loss to wetlands would occur.
Wetlands - Other & Clean Water Act	Wetlands, as waters of the U.S., and other waters of the U.S., such as stream channels, are present. Waters of the U.S., including wetlands, drainages, lakes, natural ponds, and impoundments, are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. Wetlands in the area consist of palustrine systems.	No permanent loss of wetlands or stream channel would occur.

Mitigation

Any mitigation requirements would be determined by the U.S. Army Corps of Engineers (USACE) through the Section 404 Permit process. No mitigation is expected after preliminary in-house review.

Major Conclusions

The Rehabilitation to Grade Stabilization Structure Alternative had the highest benefit-cost ratio, and presented insignificant environmental effects.

Areas of Controversy

None.

Issues to be Resolved

None.