DRAFT
ENVIRONMENTAL ASSESSMENT

EMERGENCY STREAMBANK PROTECTION
US HIGHWAY 83 BY-PASS BRIDGE
ARKANSAS RIVER
GARDEN CITY, KANSAS

US Army Corps
Of Engineers
Tulsa District

MAY 2004

FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act of 1969, including guidelines in 33 Code of Federal Regulations, Part 230, the Tulsa District has assessed the environmental impacts of an emergency streambank erosion protection project on the Arkansas River to protect the integrity of the US Highway 83 By-pass bridge around Garden City, Kansas. The bridge is being threatened by erosion along the south bank upstream of the bridge. The project consists of the installation of bank armoring using graded riprap to divert flows away from the right abutment of the bridge. This assessment was prepared in accordance with U.S. Army Corps of Engineers Regulations, Part 230, Policy and Procedures for Implementing the National Environmental Policy Act. It has been determined from the enclosed Environmental Assessment that the project will have no significant adverse effects on the natural or human environment. Therefore, an environmental impact statement will not be prepared.

_____
Date

Robert L. Suthard, Jr.
Colonel, U.S. Army
District Engineer

Enclosure
Environmental Assessment

DRAFT

Environmental Assessment for Emergency Streambank Protection Arkansas River, Garden City, Kansas

U.S. Army Corps of Engineers
Southwestern Division
Tulsa District

May 2004

ENVIRONMENTAL ASSESSMENT ORGANIZATION

This Environmental Assessment (EA) evaluates the effects of a Section 14 Emergency Streambank Protection Project to protect the integrity of the US Highway 83 By-pass Bridge, Garden City, Kansas. This EA will facilitate the decision process regarding the proposed action and alternatives.

SECTION 1	*AUTHORITY, PURPOSE, AND SCOPE* provides the authority for the proposed action, summarizes the project purpose, provides relevant background information, and describes the scope of the EA.
SECTION 2	*ALTERNATIVES* examines alternatives for implementing the proposed action.
SECTION 3	*PROPOSED ACTION* describes the recommended action.
SECTION 4	*AFFECTED ENVIRONMENT* describes the existing environmental and socioeconomic setting.
SECTION 5	*ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION* identifies the potential environmental and socioeconomic effects of implementing the proposed action and alternatives.
SECTION 6	*RESTORATION PLAN* summarizes mitigation actions required to enable a Finding of No Significant Impact for the proposed alternative.
SECTION 7	*FEDERAL, STATE, AND LOCAL AGENCY COORDINATION* provides a listing of individuals and agencies consulted during preparation of the EA.
SECTION 8	*REFERENCES* provides bibliographical information for cited sources.
SECTION 9	*APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS* provides a listing of environmental protection statutes and other environmental requirements.
SECTION 10	*LIST OF PREPARERS* identifies persons who prepared the document and their areas of expertise.
APPENDICES	*A* Coordination/Correspondence *B* Section 404 Permit *C* Fish and Wildlife Coordination *D* Cultural Resources Coordination *E* Public Comments (final EA only) *F* Newspaper Public Notice (final EA only)

TABLE OF CONTENTS

Section **Page**

1.0 PURPOSE, NEED, AND SCOPE 1

2.0 ALTERNATIVES 1
- 2.1 No Action Alternative 1
- 2.2 Action Alternatives 4
- 2.3 Final Alternatives 5

3.0 RECOMMENDED PLAN 6

4.0 AFFECTED ENVIRONMENT 6
- 4.1 Location 6
- 4.2 Climate 6
- 4.3 Social and Economic Conditions 8
- 4.4 Natural Resources 9
- 4.5 Threatened and Endangered Species 12
- 4.6 Cultural Resources 13
- 4.7 Air Quality 13
- 4.8 Hazardous, Toxic, and Radiological Waste 14

5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION 14
- 5.1 Social and Economic Impacts 14
- 5.2 Natural Resource Impacts 17
- 5.3 Wetlands and Water Quality Permits 17
- 5.4 Threatened and Endangered Species 17
- 5.5 Cultural Resources 18
- 5.6 Water Quality 18
- 5.7 Air Quality 18
- 5.8 Noise 18
- 5.9 Hazardous, Toxic, and Radiological Waste 18
- 5.10 Cumulative Impacts 18

6.0 RESTORATION PLAN 18

7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION 20

8.0 REFERENCES 20

9.0 APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS 21

10.0 LIST OF PREPARERS 22

LIST OF FIGURES

Figure **Page**

1.0 Vicinity Map, US Highway 83 Emergency Protection Project 2
3.0 General Plan for the Garden City Project 7
6.0 Seed Mixture for Restoration 19

TABLE OF CONTENTS (Continued)

LIST OF TABLES

Table **Page**

5.0 Impact Assessment Matrix 15
9.0 Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements 21

LIST OF PHOTOS

Photo **Page**

1.0 Arkansas River approaching U.S. Highway 83 By-pass Bridge 3
1.1 Erosion damage to the base of the abutment 4
3.0 Leg one of revetment parallels right-of-way fence 8
4.4.1 Habitat at the project site 10
4.4.6 Dry riverbed at the project site 12

LIST OF APPENDICES

A Coordination/Correspondence 23
B Section 404 Permit 31
C Fish and Wildlife Coordination 51
D Cultural Resources Coordination 55
E Public Comments (final EA) 68
F Newspaper Public Notice (final EA) 69

DRAFT
ENVIRONMENTAL ASSESSMENT
US HIGHWAY 83 BY-PASS BRIDGE
EMERGENCY STREAMBANK PROTECTION PROJECT
GARDEN CITY, KANSAS

SECTION 1.0 PURPOSE, NEED, AND SCOPE

This study is being conducted under authority of Section 14 of the 1946 Flood Control Act, as amended, by Section 915 of Public Law 99-662. The purpose of the project is to protect the integrity of the US Highway 83 By-pass Bridge southeast of Garden City in Finney County, western Kansas (Figure 1.0). The river has intermittent flows but during flood events the river can carry high velocity, bankfull flows.

The erosion is caused by the lateral migration of the river. Photo 1.0 depicts how the river has migrated south and how it approaches the bridge abutment at a right angle before making a 90 degree turn to the north and continues parallel to the bridge until it makes a 90 degree turn east and passes under the bridge. Erosion has already impacted the base of the abutment (Photo 1.1). From the photo it also appears that the lateral migration of the river may have been accelerated by the operation of a sand plant just upstream of the bridge on the left bank of the river. The soils are sandy and easily erodable during high flow events. A large flow event could destroy the south bridge approach and bridge abutment in one occurrence. The project would protect the bridge from erosion by stabilizing the right bank of the Arkansas River upstream of the bridge abutment.

Without protection, the bridge would become unsafe and have to be closed. US Highway 83 is a major north-south traffic route in western Kansas. Since the by-pass serves as a major traffic route around the city, its closure would place a severe economic and logistical hardship on the city and the users. The forced rerouting of traffic would be through downtown Garden City. Twenty-five percent of the 3500 vehicles that use the bridge daily are tractor-trailers and the city streets of Garden City will not support that amount of tractor-trailer traffic.

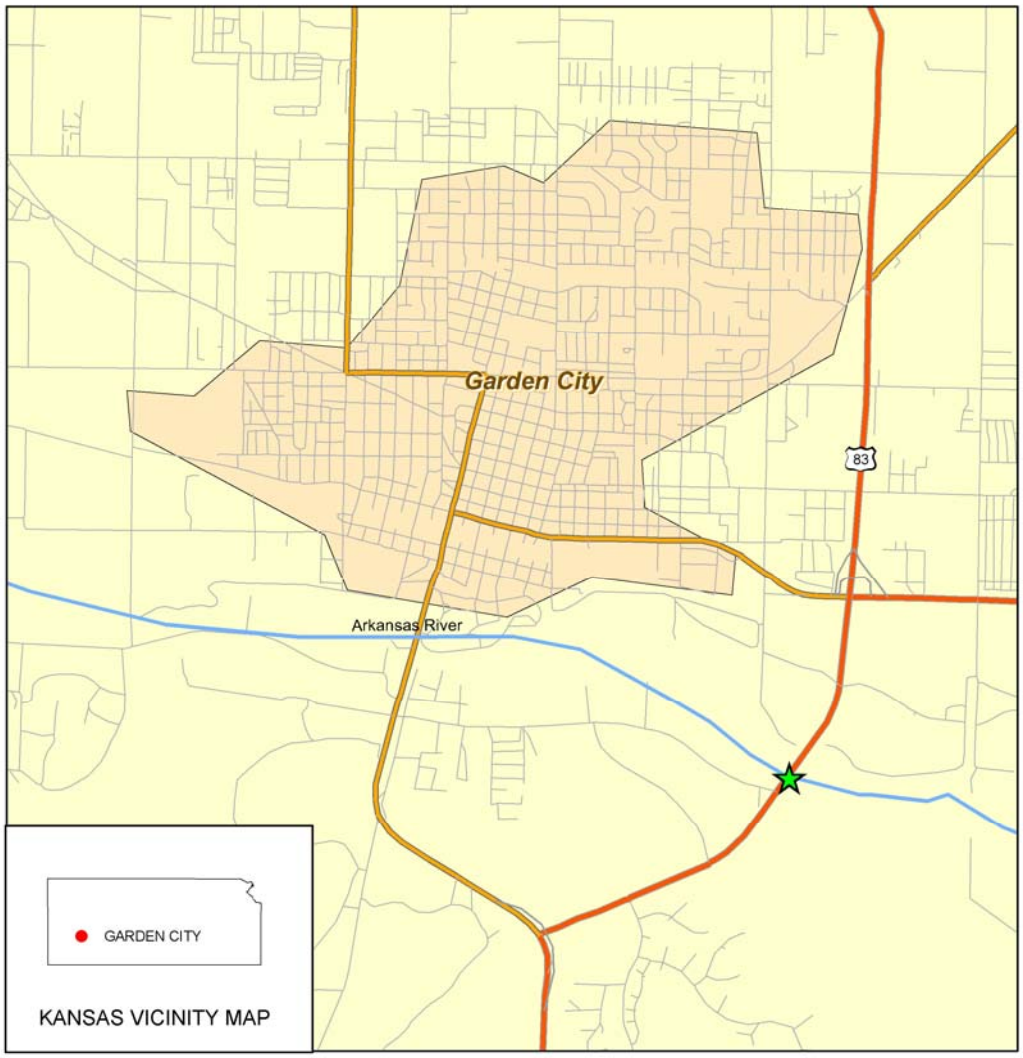
The National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190) requires all Federal agencies to address the environmental impacts of any major Federal action on the natural and human environment. Guidance for complying with the NEPA is contained in Title 40 of the Code of Federal Regulations (CFR), Parts 1500 through 1508, and in Engineering Regulation (ER) 200-2-2, *Procedures for Implementing NEPA*. The primary intent of NEPA is to ensure that environmental information is made available to public officials and citizens regarding major actions taken by Federal agencies. This environmental assessment was developed to assure that construction of the proposed project complies with the intent of NEPA.

SECTION 2.0 ALTERNATIVES

Alternatives to the Proposed Action included a no action plan, and several river training, bank armoring, and abutment protection methods.

2.1 No Action Alternative

The Council on Environmental Quality (CEQ) regulations implementing the provisions of the National Environmental Policy Act of 1969 (NEPA) require Federal agencies to consider a "no action" alternative. These regulations define the "no action" alternative as the continuation of existing conditions and their effects on the environment, without implementation of, or in lieu of, a proposed action. This alternative represents the existing condition and serves as the baseline against which to compare the effects of the other alternatives. This is an emergency streambank protection project and under existing conditions, without Federal assistance, it is highly probable that the erosion will destroy the approach and damage the bridge. It is possible that the next high flow



0 0.25 0.5 1 Miles

Key to Features

US Highway 83 By-pass Bridge

N
W E
S

Figure 1.0 Vicinity Map, US Highway 83 Emergency Protection Project, Garden City, Kansas

Photo 1.0 Arkansas River approaching US Highway 83 By-pass Bridge

Photo 1.1. Erosion damage to the base of the abutment.

event could damage the bridge abutment or cut around the bridge. The no action alternative would retain the existing condition and would not result in any project-related environmental impacts or losses of fish and wildlife habitat.

2.2 Action Alternatives

The development of alternatives to the no action condition considered a number of factors. Alternatives were developed to minimize impact to the channel bed because of the critical habitat designation of the stream reach for the endangered Arkansas River shiner. The alternatives considered included river training, bank armoring, and abutment protection methods.

A non-structural solution using only vegetation and/or slope grading was considered, but discounted. The lack of available land to cut back the slope and the sandy nature of the soil eliminated this type of erosion protection project from further consideration. The most effective and efficient protection was determined to be a structural approach. Vegetation was determined to be necessary where feasible to stabilize soils just above the structural features, to reduce soil loss from wind erosion and to increase acceptance of the project by other Federal and state agencies. Vegetation will be discussed in the Restoration Plan in Section 6.0.

2.2.1 River Training

Channelization; construction of bendway weirs; and construction of jetties, dikes, or rock vanes were considered and dropped from further study.

Channelization to direct flows to a better approach to the bridge would not be a long-term solution. Due to the sandy nature of the bed material the river would likely change course again after one or two high flow events. This reach of the river is designated critical habitat for the Arkansas River shiner and work in the channel was avoided as far as possible.

Bendway weirs are not feasible due to the channel geometry at the site. The radius of the bend is too small.

Jetties, dikes or rock vanes used in conjunction with stone toe protection would be feasible. However, the cost would be high due to the lack of acceptable stone in the area. The structures would have to be very large due to the channel geometry and hydraulic characteristics of the river.

2.2.2 Bank Armoring

A-jacks were considered but are not commonly used in rivers this large. Small A-jacks used for toe protection would need to be used in conjunction with other methods.

Bank armoring with graded riprap is commonly used. The bank slope would be too steep at the bridge abutment due to the lack of space between the riverbank and the bridge abutment. The length of bank armored would need to be too long to prevent flanking.

The use of gabions is technically feasible but would be more expensive than riprap.

2.2.3 Abutment Protection

Sheet pilings were considered. Sheet pilings driven below scour depth in the embankment around the abutment and used with toe protection would protect the bridge and highway approach but would be expensive.

A trench filled revetment excavated into the embankment and filled with riprap, then covered with soil would prevent erosion from reaching the bridge abutment. The section of the embankment taking the main impact of the existing flow of the river would be reshaped to deflect the flow. Compacted fill would replace the lost bank and the new surface would be armored with 24-inch riprap. The trench would wrap around the bridge embankment.

2.3 Final Alternatives

The alternatives listed above were screened through engineering design and analysis to determine structural stability. Screening level costs were then developed for four plans determined to be structurally stable. The highest cost plan was dropped and the following three alternatives were evaluated during the final cost comparison.

1. Bank Armoring with Riprap. The existing bank would be shaped to a 3H:1V slope and covered with gravel bedding and riprap. Cut and fill would be about even. The new toe would extend into the channel about 21 feet when completed. This would push the channel back near the pre-1995 location. Total implementation cost: $716,100. Annual benefits: $311,700. Annual cost: $51,286. Benefit-Cost Ratio: 6.1.

2. Trench Filled Revetment. A trench would be excavated into the embankment and filled with riprap. The trench would be located to deflect flows away from the bridge embankment and prevent flanking by erosion flows. The trench would be excavated to expected scour depth. The section of bank receiving impinging flow would be reshaped and armored with riprap. Total implementation cost: $634,700. Annual benefits: $311,700. Annual cost: $44,567. Benefit-Cost Ratio: 7.0.

3. Sheet Pilings. Sheet pilings would be placed to protect just the bridge and bridge embankment. The sheet pilings would extend about 700 linear feet. Total implementation cost: $1,299,100. Annual benefits: $311,700. Annual cost: $86,986. Benefit-Cost Ratio: 3.6.

The construction of the trench filled revetment was determined to be the alternative with the greatest net annual benefits and selected as the recommended plan.

SECTION 3.0 RECOMMENDED PLAN

A trench filled revetment is the recommended plan (Figure 3.0). It was determined that it would provide the greatest net benefits with annual benefits in excess of annual costs. It would consist of a trench filled revetment excavated into the embankment and filled with riprap to prevent erosion from reaching the bridge abutment.

The additional land required for project construction, operation, and maintenance is privately owned. The Kansas Department of Transportation, who is the non-federal sponsor, operates and maintains the right-of-way for U.S. Highway 83. The area along the toe of the riverbank where construction would take place is within the ownership of the State of Kansas and no interest in real estate would need to be acquired. Approximately 1.7 acres of additional right-of-way would need to be acquired for the area occupied by the rock filled trench.

The section of bank receiving impinging flow would be reshaped to deflect the flow and armored with riprap. Compacted fill would replace the lost bank and the new surface would be armored with 24-inch riprap. The revetment would wrap around the bridge embankment and redirect flows away from the bridge embankment. It would have three different legs. An upstream leg would lie about 60 feet inside the right-of-way fence (Photo 3.0) and extend parallel to the fence approximately 275 feet to the existing channel and leg two. Leg two would then extend diagonally towards the bridge another 264 feet where it would join leg three which would extend under and perpendicular to the bridge for another 140 feet. The length of the revetment would prevent flanking by erosional flows. Excavation would be to the expected scour depth.

Leg one and leg three would consist of an excavated trench filled with riprap and covered with one foot of topsoil. The trench would be excavated to a depth of 12 feet with 1V:1.5H side slopes and a three foot bottom width as shown in figure 3. The trench would be filled with 24-inch graded riprap. Topsoil would be placed over the rock filled trench and replanted with native vegetation. A more detailed description of the restoration of the project area is provided in SECTION 6.0 (RESTORATION PLAN).

Two similar designs would be used for leg two as shown in figure 3. The river bank would be graded to a 1V:3H slope. Filter cloth would then be placed and covered with a 9-inch aggregate bedding. Compacted fill would be used where needed to bring the structure to grade. The base of this section would be a nine-foot wide trench over-excavated six feet below the existing river bed, covered with filter cloth, and filled with 24-inch graded riprap. Embedded filter cloth would be placed in a one-foot deep trench along the top of this section.

The recommended plan would have insignificant environmental impacts. Construction would have minimal temporary adverse impacts to the biological resources along the excavated area by removing and disturbing vegetation and by displacing local fauna. The channel is dry during most of the year so the project would not impact aquatic species.

This plan was selected because it would have a benefit/cost ratio of 7.0, is expected to provide net annual benefits of $263,133, and meets the benefit/cost requirement for Federal interest. It would provide long-term protection for the bridge abutment and protect against loss of the bridge. The Kansas Department of Transportation supports this plan.

SECTION 4.0 AFFECTED ENVIRONMENT

4.1 Location

The project is located in Finney County in western Kansas on the U.S. Highway 83 bypass bridge over the Arkansas River at Garden City.

4.2 Climate

The climate of the upper Arkansas River in Kansas is semi-arid to subhumid. The mean annual temperature at Garden City is 53.6 °F, the mean January temperature is 28.3 °F, and the mean July temperature is 80.1 °F.

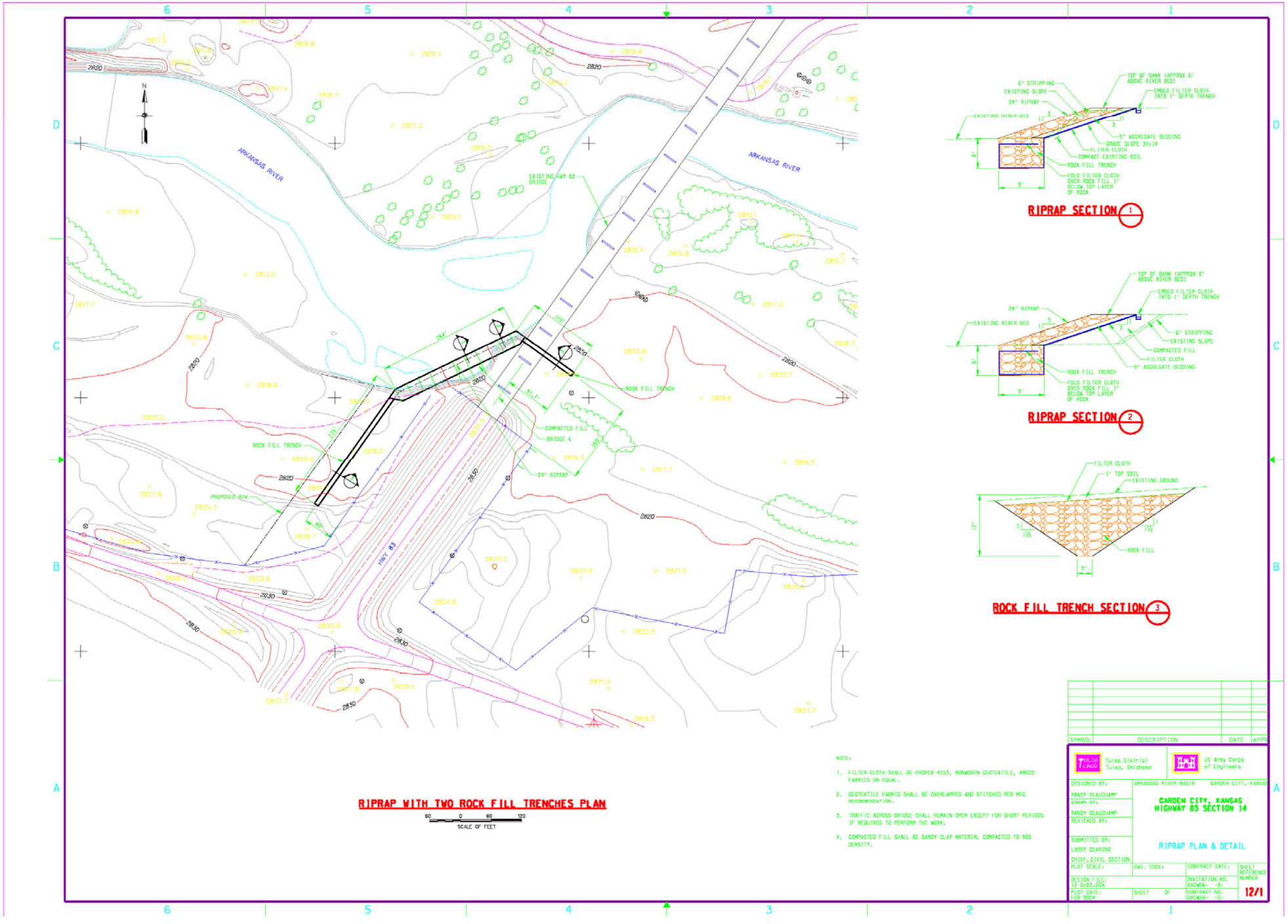


Figure 3.0. General Plan for the Garden City Project.

Photo 3.0 Leg one of revetment parallels right-of-way fence in foreground.

The mean annual precipitation recorded in the area between 1961 and 1990 varies from 17.9 inches at the KSU Experiment Station east of Garden City to 19.4 inches at the airport east-southeast of Garden City. The precipitation is generally lowest in the winter and highest in the months of May-July (0.35 inches in January to about 3.0 inches in May and June at Garden City). The precipitation does range substantially from year to year. The mean annual minimum precipitation during 1961-1990 was 11.4 inches at the KSU Experiment Station and 10.3 inches at the Garden City airport. The mean annual maximum precipitation during 1961-1990 was 27.7 inches at the Experiment Station and 30.8 inches at the airport. The average annual snowfall is about 19 inches.

The mean annual rate of potential evapotranspiration is high; mean annual values are approximately 28 to 30 inches. The mean potential evapotranspiration exceeds the mean precipitation by about 8 inches annually in the project area.

Garden City's elevation is about 2,900 feet above sea level. The prevailing wind is southerly. Summers are usually warm and moderated by steady wind and relatively low humidity. Winters are usually mild with short periods of very cold weather. Spring is the most varied season and is the period of heaviest rainfall due to severe thunderstorms and occasional tornadoes.

4.3 Social and Economic Conditions

The proposed project would have a direct impact on persons living and working in the City of Garden City. This area is considered the social area within which the primary impacts of the proposed project would occur.

The U.S. Census Bureau estimates that Garden City had a population of 28,451 in 2000, which is an 18% increase over the 1990 population of 24,097. Finney County had a population of 40,082 in the year 2000, a 22.5% increase above the 1990 Census count. The State of Kansas posted a population increase of 8.5% during the same period. According to the 2000 Census, the median resident age for Garden City was 28.6 years. Hispanic or Latino people comprised 43.9% of the total population with American Indian/Alaska Native making up 1.6%.

In 2000, there were 13,799 residents in the labor force in Garden City of which only 5.3 percent were unemployed. The State of Kansas unemployment rate was 4.2% during the same year. The majority of the area's employees worked in manufacturing, educational, health, and social services sectors. Manufacturing provided 23.9% of the employment for Garden City.

The 2000 per capita income (PCI) for residents in Garden City was $15,200. This compared with $20,506 PCI for the State of Kansas and $21,587 for the entire United States.

The social area is primarily residential, with an additional mix of industrial, commercial and agricultural operations. Today Garden City serves as a center of manufacturing, educational and health services, and the service industry. Garden City also served as a social and economic center when the region's economy was more agriculturally oriented.

4.4 Natural Resources

4.4.1 Terrestrial

The study area lies within the High Plains region of the Great Plains physiographic province. North of the Arkansas River floodplain the upland surface is nearly level and is covered by loess. Sand dunes are the dominant topographic features south of the Arkansas River floodplain and the topography can be described as rolling, hummocky, or undulating depending on the thickness of the dune sand and the complexity of the dunes. The project lies within the floodplain of the Arkansas River and drains an area that has a flat lowland topography with very little relief.

The predominant land use in the project area is agricultural. Much of the land is in irrigated cropland. Other agricultural uses are dryland farming, rangeland, and feedlots. Two large areas of grassland remain in Finney County south of the Arkansas River. This land use is a result of restrictions for crops related to topography and sandy soils and use for non-crop purposes such as residences and a game refuge. The major agricultural crops are corn, grain sorghum, alfalfa, and wheat. Urban land use is primarily in Garden City. Roads and railroads comprise a substantial portion of the land not in cropland and rangeland. Industrial land uses in the project area corridor include companies processing agricultural products, sand, oil and gas wells and facilities associated with petroleum production and distribution, and electrical energy production.

The project area is located in the sand-sage prairie grassland type. Only a few tree and shrub species occur in the project area. Dominant species include sand sage (*Artemisia filifolia*), and other less common species of sage such as silky wormwood (*Artemisia dracunculus*), white sage (*Artemisia ludoviciana*), and Carruth sage (*Artemisia carruthyii*). Shortgrass species together with the inclusion of several tallgrass species make this area unique. Species in the area include sand bluestem (*Andropogon hallii*), buffalograss (*Buchloe dactyloides*), blue grama (*Bouteloua gracilis*), sand dropseed (*Sporobolus cryptandrus*), sideoats grama (*Bouteloua curtipendula*), western wheatgrass (*Agropyron smithii*), alkali sacaton (*Sporobolus airoides*), and little bluestem (*Schizachyrium scoparium*). The project area is nearly devoid of trees and shrubs with only a few scattered cottonwood (*Populus spp.*), willow (*Salix spp.*), and salt cedar (*Tamarix ramosissima*). Tumbleweed (*Amaranthus graecizans*) is widespread. (Photo 4.4.1)

4.4.2 Soils

Soils in the project area are of the Las-Las Animas Association. They consist of calcareous, sandy soils that have a weakly developed profile. They formed under native grasses in calcareous, sandy alluvium on the flood plains of the Arkansas River. They are soils in and adjacent to the channel of the river. Two soil types occur at the

Photo 4.4.1 Habitat at the project site.

proposed project. They include Las Animas-Lincoln loamy sands and Lincoln soils. Neither is classified as prime farmland.

Las Animas-Lincoln loamy sand (Ll) occurs on 0 to 2 percent slopes, with a surface layer of loamy sand and a subsoil of brown sandy loam. Coarse sand and gravel underlie this soil at a depth of 18 to 60 inches. This soil is not suitable for cultivation, because of its low moisture-holding capacity and susceptibility to erosion. They are suitable for grazing where a proper stocking rate is strictly followed.

Lincoln soil (Lm) occurs on 0 to 2 percent slopes and formed in alluvium. They are sandier than the Las Animas soils. Their fertility and moisture-holding capacity is very low. In general these soils consist of fine sand and loamy fine sand. Coarse sand is at a depth of less than 18 inches. These soils support a sparse stand of mid grasses, tamarisk, and cottonwoods. They have only limited value for grazing because they are unstable and vegetation is extremely variable.

4.4.3 Prime Farmland

Soil that is prime or unique farmland as defined in the Farmland Protection Policy Act is classified as prime farmland. According to the U.S. Department of Agriculture, it is soil that is best suited for producing food, feed, forage, fiber, and oilseed crops. Neither Las Animas-Lincoln loamy sand nor Lincoln soil is classified as prime farmland.

4.4.4 Wild and Scenic Rivers

There are no streams within the project area that are classified as wild and scenic pursuant to the Federal Wild and Scenic Rivers Act, Public Law 90-542.

4.4.5 Aquatic and Wetlands

Western Kansas is a region of low rainfall and high evapotranspiration (See Section 4.2 Climate). Essentially the Arkansas River at the project site is a dry riverbed throughout much of the year. There are no substantial tributaries to the Arkansas River from the Colorado-Kansas line to Garden City. During many years of the last three decades, the river has ceased to flow upstream of Finney County because of infiltration through the streambed, diversion from the river for irrigation, evaporation, and seepage into the underlying aquifers. During years with large snow melt from the Rocky Mountains and above average precipitation in eastern Colorado, high river flows can fill the channel.

The channel of the Arkansas River is higher than the channels of the Smoky Hill and Pawnee rivers to the north and the Cimarron River to the south. The Arkansas River enters the state at a much lower altitude than either the Smoky Hill or Cimarron but descends less rapidly eastward. The average gradient of the river as it crosses Finney County is about 7 feet to the mile. The width of the Arkansas River valley is about 3.5 miles near Garden City.

When there is water in the Arkansas River it is saline during both low and high flows. The salinity of the water derives from substantial concentrations of dissolved solids in the river water and by consumptive loss of water to evapotranspiration. The major dissolved constituents in Arkansas River water, in the order of decreasing concentrations, are sulfate, sodium, bicarbonate, calcium, magnesium, chloride, and silica.

There are no wetlands in the immediate project area.

The project falls within the scope of the Nationwide Permit for Bank Stabilization. A copy of the review pursuant to Section 404 of the Clean Water Act is in Appendix B.

4.4.6 Fish and Wildlife

Fish habitat at the project site is non-existent since the river is dry during a significant part of the year (Photo 4.4.6).

Amphibians that could occur in the project area include Great Plains toad (*Bufo cognatus*), plains spadefoot toad (*Spea bombifrons*), plains leopard frog (*Rana blairi*), western chorus frog (*Pseudacris triseriata*), Blanchard's cricket frog (*Acris crepitans*), and bullfrog (*Rana catesbeiana*). Common species of reptiles that could occur in the project area include the earless lizard (*Holbrookia maculata*), Texas horned lizard (*Phrynosoma cornutum*), six-lined racerunner (*Cnemidophorus sexlineatus*), Texas longnose snake (*Rhinocheilus lecontei tessellatus*), western hognosed snake (*Heterodon nasicus*), bull snake (*Pituophis melanoleucus*), ornate box turtle (*Terrapene ornata*), snapping turtle (*Chelydra serpentina*), and western painted turtle (*Chrysemys picta*).

Birds that are most likely to occur in the area include mourning dove, lesser prairie chicken, bobwhite quail, scaled quail, ring-necked pheasant, lark sparrow, Cassin's sparrow, western meadowlark, and Mississippi kites. In winter large flocks of migrating waterfowl utilize a 'duck pond' located on the Finney Game Refuge just southwest of the project site.

Mammals most likely to occur in the area include species typical of the sand-sage prairie such as mule deer (*Odocoileus hemionus*), whitetailed deer (*Odocoileus virginianus*), Ord's kangaroo rat (*Dipodomys ordii*), 13-lined ground squirrel (*Spermophilus tridecemlineatus*), spotted ground squirrel (*Spermophilus spilosoma*), coyote (*Canus latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis marsupialis*), striped skunk (*Mephitis mephitis*), eastern spotted skunk (*Spilogale putorius interrupta*), black-tailed jackrabbit (*Lepus californicus*), and cottontail rabbit (*Sylvilagus floridanus*). The nearby Finney Game Refuge is home to the oldest publicly owned bison (*Bison bison*) herd in the state of Kansas and supports a small colony of black-tailed prairie dogs (*Cynomys ludovicianus*).

Photo 4.4.6 Dry riverbed at project site.

4.5 Threatened and Endangered Species

The Federal Register (Vol. 66, No. 65 / Wednesday, April 4, 2001; Final Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner; Final Rule) lists the mainstem of the Arkansas River in Kansas from the Kansas State Highway 27 bridge in Hamilton County, Kansas, downstream to the Oklahoma state line as designated critical habitat for the Arkansas River Shiner. The Rule further states that the River ceases to flow between Syracuse and Garden City, Kansas, due to surface and groundwater withdrawals; that surface flow then resumes near Great Bend, Kansas; and that the lack of sufficient streamflow and ongoing water quality degradation renders much of the Arkansas River west of Great Bend at least seasonally unsuitable for Arkansas River shiner. The Rule designates 'Lateral Extent of Critical Habitat' as a 300-foot lateral corridor of riparian (ie, wetlands) habitat measured from bankfull; and lists 'Primary Constituent Elements' that identify physical and biological features that are essential to conservation of the species. The project site is less than 10 acres in size, with the footprint of the rock-filled trench being within 150 feet of the existing bridge approach; does not contain any riparian (wetland) habitat; and does not provide most of the primary constituent elements. The river in this area is dry during a significant part of the year.

State-listed threatened and endangered species known or likely to occur in Finney County includes the bald eagle, flathead chub (*Platygobio gracilis*), least tern, peregrine falcon, piping plover, snowy plover, Texas longnose snake, white-faced ibis, whooping crane, and eastern spotted skunk. Only two of those species, the Texas longnose snake and the eastern spotted skunk realistically could occur in the immediate project area.

The Texas longnose snake inhabits rocky canyons and open prairies with sandy soils in southwestern Kansas. They are almost exclusively nocturnal and are most active in the early evening. They burrow readily in loose soil but will enter crevices if available rather than by burrowing. They will utilize riparian habitat but not aquatic habitat. Food consists of snakes, lizards, lizard eggs, small mammals and large insects such as grasshoppers.

The Kansas Department of Wildlife and Parks has designated all suitable habitats within a riparian corridor along the main stem Arkansas River in Finney County as critical habitat for the eastern spotted skunk. The corridor's outermost boundary is along a line 0.5 mile landward from the ordinary high water mark on each bank.

Spotted skunks are smaller and more weasel-like in body shape than the more familiar striped skunk. The spotted skunks' strips are broken in pattern, giving it a 'spotted' appearance. Spotted skunks may occur in suitable habitat anywhere in the state. They seem to prefer forest edges and upland prairie grasslands, especially where rock outcrops and shrub clumps are present. In western counties, it relies heavily on riparian corridors where woody shrubs and woodland edges are present. Woody fencerows, odd areas, and abandoned farm buildings are also important habitat for spotted skunks.

4.6 Cultural Resources

In accordance with Section 106 of the National Historic Preservation Act of 1966 (as amended), in 2004 consultation was initiated with the Kansas State Historic Preservation Office (SHPO). Earlier in 2003, consultation for the general Garden City area, specifically relating to the Arkansas River ecosystem restoration from west of Garden City through the current Highway 83 bridge on the east side of town, was initiated with appropriate Native American tribes. These tribes included the Apache Tribe of Oklahoma, Cheyenne-Arapaho Tribes of Oklahoma, Comanche Tribe of Oklahoma, Kiowa Tribe of Oklahoma, and Wichita and Affiliated Tribes of Oklahoma.

In a letter dated April 5, 2004 the Kansas SHPO indicated that the project would have no effect on historic properties (Appendix D), thereby completing Section 106 coordination with the SHPO for the proposed project. Prior to correspondence with the SHPO, in the summer of 2003, the Comanche Tribe of Oklahoma contacted the Corps of Engineers, requesting further consultation. This consultation was conducted via telephone in early July 2003, when the Comanche tribal cultural resources representative requested further clarification of the proposed project effects, and the project area footprint for the ecosystem restoration project. Consultation revealed that the Comanche had historically utilized the Arkansas River for spiritual cleansing ceremonies, and that it was possible that during the course of project construction, certain associated materials used in these ceremonies might be identified. If such materials are encountered, the Comanche wish to be contacted. There were otherwise no objections to the progression of the project.

4.7 Air Quality

The U.S. Environmental Protection Agency (EPA) published a Conformity Rule on November 30, 1993, requiring all Federal actions to conform to appropriate State Implementation Plans (SIP's) that were established to improve ambient air quality. At this time, the Conformity Rule only applies to Federal actions in non-attainment areas. A non-attainment area is an area that does not meet one or more of the National Ambient Air Quality Standards for the criteria pollutants designated in the Clean Air Act (CAA).

Garden City is in a predominately rural area of western Kansas. There are no air quality monitoring stations in Garden City. The Kansas Department of Health and Environment has a Special Purpose Monitor (SPM) to monitor for particulates in Dodge City, which is approximately 55 miles east of the project site. The nearest State and Local Air Monitoring Station (SLAMS) is located in Wichita, which is over 200 miles east of the project site. The Wichita-Sedgwick County Health Department monitors air quality in Wichita and the surrounding area for both criteria pollutants and air toxins. National Ambient Air Quality Standards exist for six pollutants: carbon monoxide, ozone, particulate matter smaller than 10μm, sulfur dioxide, nitrogen oxides, and lead. These "criteria pollutants" are the only ones for which standards have been established. The EPA assigns designations, based on an area's meeting, or "attaining" these standards. The Wichita-Sedgwick County area is designated "In Attainment" for criteria pollutants and air toxins.

A conformity determination based on air emission analysis is required for each proposed Federal action within a non-attainment area. Since this geographical region is in attainment and meets the National Air Quality Standards for the criteria pollutants designated in the CAA, a conformity determination is not required.

4.8 Hazardous, Toxic, and Radiological Waste

Potential for discovery of hazardous material during construction of the Arkansas River Highway 83 Bridge, Streambank Protection Project, in Garden City, Kansas was evaluated through examination of historic and current land use, review of environmental databases, interviews with local regulatory personnel, and visual observations. Avoidance of HTRW during construction is desirable in order to minimize project delays, remediation costs, and environmental damage.

Lands in the project area are primarily composed of agricultural land. As such, these lands have not been subject to industrial development or other land use activities with associated potential for significant contamination. In addition, lands in close proximity to the project area share similar land uses and has a low potential for contaminant transport to the project. Accordingly, there is no reason to believe that environmental media in the project area have been significantly contaminated by past or current land practices or by releases from adjoining properties. No hazardous, toxic, or radiological waste was observed, and potential for encountering these materials does not appear likely.

A search of environmental databases revealed no documented areas of contamination near the project location. A search of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database revealed the presence of two CERCLIS-listed sites in Finney County, Kansas. However, both are located over three miles from the proposed project. Similarly, 11 sites listed on the Enforcement and Compliance History Online (ECHO) database were noted in Finney County. Of these sites, none are located in Garden City, Kansas and all are removed from the construction area. Equipment used in the sand operations on the river were noted in the area but not believed to be hazardous or toxic. Based on this information from environmental databases and documents there is a low probability of HTRW related problems from documented areas of local contamination.

In addition to searches of environmental databases, local personnel from the Garden City area and Finney County, Kansas area were contacted, in conjunction with the ongoing Ark River 1135 Project, for information related to potential areas of contamination that could affect project construction or operation. The US Highway 83 Bridge project is within the project area of the Ark River 1135 Project. These personnel included personnel from the Garden City Zoological Center and residents in Garden City, Kansas. All contacted individuals were unaware of any HTRW related issues near the site.

Finally, a site visit was conducted on May 28, 2003, in conjunction with the ongoing Ark River 1135 Project, and included a search for visual evidence of potential HTRW-related problems. This involved walking the project area as well as visual reconnaissance of surrounding areas. Areas of soil staining, evidence of unusual vegetative distress, drums of containerized waste, unusual topography (mounds or depressions), or other visual evidence of potential contamination were not noted at any location within the proposed Highway 83 Bridge project.

SECTION 5.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

A summary of environmental impacts is presented in Table 5.0, Impact Assessment Matrix.

5.1 Social and Economic Impacts

5.1.1 Future Without-Project Conditions

Under the without-project conditions, population trends of the past decade would likely continue. Job opportunities in Garden City and the demand for residential lands will be linked to future population dynamics in the area. US Highway 83 is a major north-south traffic route in western Kansas and carries a significant amount of large truck traffic. The Highway 83 Bypass routs most of this traffic around the City. In the absence of the bridge

Table 5.0
Impact Assessment Matrix

Name of Parameter	Magnitude of Probable Impact						
	Increasing Beneficial Impact			No Appreciable Effect	Increasing Adverse Impact		
	Significant	Substantial	Minor		Minor	Substantial	Significant
A. Social Effects							
1. Noise Levels				x			
2. Aesthetic Values				x			
3. Recreational Opportunities				x			
4. Transportation	x						
5. Public Health and Safety		x					
6. Community Cohesion (Sense of Unity)		x					
7. Community Growth and Development			x				
8. Business and Home Relocations				x			
9. Existing/Potential Land Use			x				
10. Controversy				x			
B. Economic Effects							
1. Property Values			x				
2. Tax Revenues		x					
3. Public Facilities and Services		x					
4. Regional Growth				x			
5. Employment				x			
6. Business Activity		x					
7. Farmland/Food Supply		x					
8. Flooding Effects				x			
C. Natural Resource Effects							
1. Air Quality				x			
2. Terrestrial Habitat				x			
3. Wetlands				x			
4. Aquatic Habitat				x			
5. Habitat Diversity and Interspersion				x			
6. Biological Productivity				x			
7. Surface Water Quality				x			
8. Water Supply				x			
9. Groundwater				x			
10. Soils				x			
11. Threatened and Endangered Species				x			
D. Cultural Resources Effects							
1. Historic Architectural Values				x			
2. Pre-Historic & Historic Archeological Values				x			

protection project the bridge would eventually fail and Garden City would experience a significant increase in truck traffic through the downtown area. The downtown streets are not designed to withstand this heavy traffic, which would result in redirected funding from maintenance of residential, commercial and industrial properties, with a potential reduction of population growth in the area. Heavy traffic through the downtown area would disrupt the lives of those conducting business, going to school and residing in the City. The health and safety of these individuals would be at greater risk with the increase in traffic.

The unemployment rate would remain higher than the state level. Manufacturing and education, health, and social services would remain an important part of the industrial segment of the economy, and management and retail trade would be expected to increase in their importance as part of the Finney County economy. Erosion would continue to pose a threat to the US Highway 83 Bypass Bridge. Loss of the bridge would disrupt traffic along Highway 83 Bypass, which is a heavily used road for the residents of Garden City. If this road becomes disrupted than the road will be closed and traffic will be diverted through downtown along the old highway system, which can make for less efficient travel.

Income of persons living in the area is expected to remain lower than the State and national averages. Erosion would continue to impose a safety hazard on those living and working in the area because of the potential for bridge failure and consequential increased traffic congestion through the downtown area. The additional costs associated with upgrade, repair, and maintenance of old Highway 83 through downtown would result in higher taxes and reduced disposable income. As employment opportunities remain higher in Garden City than peripheral areas, the income of residents of Garden City will likely be tied to employment in the manufacturing and educational, health, and social services. Property values would stabilize at lower levels without an efficient flow of traffic through and around Garden City.

Land use for the Garden City area will continue to be a mixture of low, moderate and high-income residential properties, commercial development, and light industrial lands. The median house value in the Garden City area in 2000 was $81,700. Demand for new residential developments will increase the transition of agricultural lands into residential areas although at a pace that will be slower than in the metropolitan areas. Routing of traffic through the downtown area because of a failure of the US Highway 83 Bridge with its resultant traffic congestion and safety issues would result in an increase in the stress level of local citizens.

5.1.2 Future With-Project Conditions

The emergency streambank protection project will have a positive impact on the number of people living in the study area. Population trends of the past decade will continue. Safe and efficient travel to and from Garden City would continue to stimulate population growth in the area.

Project construction may slightly increase job opportunities in the area until construction is complete. Long-term area employment will increase slightly in response to additional residential construction, commercial employment, and the increased retail trade in the Garden City area. The overall aggregate employment rate of the Garden City area would not be significantly affected.

Short-term construction related employment would increase area incomes, as expenditures for materials and labor will be made during the flood control project construction. Long-term increases in income within the Garden City area will be realized as construction of residential and commercial property takes place in response to reduced flood hazards within the area.

Although land use for the Garden City area would continue to be a mixture of residential, commercial, industrial, and agricultural, increased quality urban growth would continue with protection of the bridge. Demand for new residential developments would increase the transition of developable lands into residential areas at a pace that would be slightly ahead of surrounding areas. The safety of Garden City area residents would be maintained by guarding against the loss of the bridge.

5.2 Natural Resource Impacts

5.2.1 Terrestrial

The proposed project would not result in the loss of any significant habitat or cause any significant adverse effects on the natural environment. No trees or shrubs would be removed by the project. Restoration will return the area to comparable-to or better-than existing habitat as discussed in Section 6.0.

5.2.2 Prime Farmland

There would be no impact on prime farmland since these soils do not occur in the project area.

5.2.3 Aquatic and Wetlands

There would be no impact on aquatic habitat or wetlands.

5.2.4 Wildlife

Construction activities would have minor, short-term impacts on the wildlife species at the immediate construction site. This disturbance would be temporary during construction. Rock structure along the riprap sections of the completed project would provide additional habitat for some species that utilized rock crevices.

5.3 Wetlands and Water Quality Permits

This emergency protection project involves the placing of riprap and a rock filled trench to protect the south abutment of the US Highway 83 Bypass Bridge. This project falls under a Nationwide Permit for Bank Stabilization (NWP 13), authorized pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Appendix B).

5.4 Threatened and Endangered Species

The U.S. Fish and Wildlife Service reports that the Arkansas River in Finney County, Kansas is designated critical habitat for the Federally listed Arkansas River Shiner. Based on a field review of the proposed project area it appears that the emergency protection of the US Highway 83 Bypass Bridge would have no adverse impact on the species. The project area is normally dry riverbed, does not contain a riparian (wetland) component, and does not contain the Primary Constituent Elements (Federal Register, Vol. 66, No. 65) that are essential to conservation of the species. Conversely, if the species existed in the project area the project could have a positive impact on the species because of improved water quality through reduced erosion of the bridge abutment. No other Federally listed threatened or endangered species would be affected by the proposed project.

The state threatened Texas longnose snake inhabits rocky canyons and open prairies with sandy soils in southwestern Kansas. This species could occur in the project area. They burrow readily in loose soil but will enter crevices if available rather than burrow. They will utilize riparian habitat but not aquatic habitat. This species should benefit from the presence of riprap in the area because of the creation of rock crevices, which is a favored habitat for the species.

The Kansas Department of Wildlife and Parks has designated all suitable habitats along the Arkansas River within Finney County as critical habitat for the state threatened eastern spotted skunk. In western counties, it relies heavily on riparian corridors where woody shrubs and woodland edges are present. Project impacts would not adversely affect woody shrubs and woodland edges utilized by the spotted skunk. Essentially the only habitat at the construction site that might be considered spotted skunk habitat would consist of a narrow strip of native vegetation (salt cedar and tumbleweed), beneath the banks of the river that would serve as a travel corridor beneath the bridge; although they could hunt for food anywhere in the prairies. Disruption would be temporary during construction. Restoration of the site (Section 6.0) should return the area to comparable-to or better-than existing spotted skunk habitat.

5.5 Cultural Resources

As outlined in section 4.6, Section 106 coordination (National Historic Preservation Act of 1966, as amended) is complete. The proposed project will have no effect on historic properties.

5.6 Water Quality

The section of the project site where riprap would be applied is normally a dry riverbed. Water quality should not be affected during construction of the project and should be improved during periods of flow/high flows by reducing erosion and siltation. The proposed project should not have an impact on the quality of groundwater.

5.7 Air Quality

Construction activity would have a minor temporary impact on air quality caused by heavy equipment operation and from fugitive dust (particulate) emissions in and around the project site. Construction contractors will comply with all appropriate Federal air quality regulations to limit the dispersal of particulate matter. A temporary increase in exhaust emissions would be expected during construction.

5.8 Noise

There would be an increase in noise from heavy equipment during construction, but this would be temporary and last only during the construction period.

5.9 Hazardous, Toxic, and Radiological Waste

Based on the findings of the HTRW survey discussed in Section 4.8, the potential for discovery and significant problems related to HTRW during project construction or operation is believed to be low.

5.10 Cumulative Impacts

No cumulative impacts are anticipated to occur as a result of the proposed project.

SECTION 6.0 RESTORATION PLAN

Implementation of the proposed plan would require removal of all vegetation along the two trenches and center riprap section. Construction equipment would cause additional soil disturbance. The two trenches would be excavated per design, filled with rock, and covered with filter cloth and approximately one foot of topsoil. The center section would be sloped, backfilled with compacted fill, covered with filter cloth, and riprapped with 24" riprap. The riprap would remain exposed. Construction activities would temporarily impact an approximate 100-foot wide strip of terrestrial habitat consisting of grasses and forbs along the length of the structure. No trees or shrubs would be removed by the project.

Following project completion, all compacted, disturbed, or exposed soil will be disked, fertilized, and seeded with the grass/forb mixture shown in Figure 6.0. This is a mixture of plants that are native to the area and prescribed by the Environmental Services Section of the Kansas Department of Transportation for environmental conditions in Finney County, Kansas. Two mixes are prescribed in Figure 6.0. A shoulder mix, consisting of four species of grass will be seeded on the road shoulder where a high degree of maintenance and mowing is required. The native mix will contain seven species of grasses, including the four species of the shoulder mix, and 15 species of forbs. The mixture will consist of a 60:40 ratio of grass to forbs. Mulch will be applied as necessary. Application rates for soil amendments and the seed mixture are shown in Figure 6.0.

Figure 6.0 Seed Mixture for Restoration.

PLS Rate: lbs./ac.		Bid Item	Shoulder Mix	Native Mix
Shldr	Native			
100		Fertilizer (15 - 30 - 15)		
2	1	Blue Grama Grass Seed (Lovington)	812,000 X 2.5 = 1,624,000	812,000 X 1 = 812,000
4	3	Canada Wildrye Grass Seed	113,000 X 5 = 565,000	113,000 X 3 = 339,000
	5	Sand Bluestem Grass Seed (Garden)		111,000 X 4 = 444,000
	0.5	Sand Lovegrass Seed (Bend)		1,403,000 X 0.5 = 701,500
6	4	Side Oats Grama Grass Seed (El Reno)	185,000 X 5 = 925,000	185,000 X 4 = 240,000
	1	Switchgrass Seed (Blackwell)		371,000 X 1 = 371,000
4	4	Western Wheatgrass Seed (Barton)	113,000 X 5 = 565,000	113,000 X 4 = 452,000
			Total Grass Seeds: 3,859,500	
		Native Wildflower Mix (Lump Sum)		
	0.4	Upright Coneflower		737,000 X .4 = 294,800
	0.2	Illinois Bundleflower		60,000 X .2 = 12,000
	0.3	Maximilian Sunflower		182,000 X .3 = 54,600
	0.5	Purple Prairieclover		293,000 X .5 = 146,500
	1	Showy Partridgepea		50,000 X 1 = 50,000
	0.5	Prairie Sunflower		150,000 X .5 = 75,000
	1	Indian Blanket		153,000 X 1 = 153,000
	1	Black Sampson (Angustifolia)		115,000 X 1 = 115,000
	1.5	Purple Poppy Mallow		82,000 X 1.5 = 123,000
	0.2	Compass Plant		92,000 X .2 = 18,400
	0.5	Pitchers Sage		149,000 X .5 = 74,500
	0.4	Dotted Gayfeather		221,000 X .4 = 88,640
	0.2	Silk Top Dalia		280,000 X .2 = 56,000
	0.1	Yarrow (White)		2,800,000 X .1 = 280,000
			Total Wildflower Seeds: 1,541,440	

Package and sow the Grass Seed Mix separately from the Wildflower Mix. Place the wildflower seed in the small seed box of the native grass drill.
All seed boxes shall have working agitators. The Engineer shall approve the seed calibrations prior to seeding.

SECTION 7.0 FEDERAL, STATE, AND LOCAL AGENCY COORDINATION

The draft environmental assessment (EA) was coordinated with the following agencies having legislative and administrative responsibilities for environmental protection. A copy of the correspondence from the agencies that provided comments and planning assistance for preparation of the draft EA are in the appendices. The mailing list for the 30-day public review period for this EA is in Appendix A.

U.S. Environmental Protection Agency
U.S. Fish and Wildlife Service
Natural Resources Conservation Service
Kansas Department of Health and Environment
Kansas Water Office
Kansas Department of Wildlife and Parks
Kansas State Historical Society

SECTION 8.0 REFERENCES

Bailey, R.G. 1980. *Ecoregions of the United States*. Miscellaneous Publication No. 1391. USDA, Forest Service, Washington, DC.

Soil Conservation Service. 1981. *Prime Farmland, Soil Survey Map Units, Kansas.* U.S. Department of Agriculture (USDA), Salina, Kansas. 34p.

Soil Conservation Service. 1965. *Soil Survey of Finney County, Kansas*. USDA, Manhattan, Kansas. 91p.

U.S. Bureau of Census. 2001. *2000 Census of Population and Housing, STF3*. www.census.gov/

Kansas Department of Agriculture. Division of Water Resources. Website. www.accesskansas.org/kda/dwr/

Greatplains.org, 2000. Great Plains International Data Network (GPIDN). *Atlas of the Great Plains*. Website. www.greatplains.org/resource/atlas

Kansas Geological Survey. Website. www.kgs.ukans.edu/kgs.html

Kansas Department of Wildlife and Parks. Website. www.kdwp.state.ks.us/

Kansas Water Office. Website. www.kwo.org

Federal Register. 2001. Department of the Interior. Fish and Wildlife Service. 50 CFR 17. *Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Arkansas River Basin Population of the Arkansas River Shiner; Final Rule.*

Table 9.0

Relationship of Plans to Environmental Protection Statutes and Other Environmental Requirements

Policies	Compliance of Alternatives
Federal	
Archeological and Historic Preservation Act, 1974, as amended, 16 U.S.C. 469, et seq.	All plans in full compliance
Clean Air Act, as amended, 42 U.S.C. 7609, et seq.	All plans in full compliance
Clean Water Act, 1977, as amended (Federal Water Pollution Control Act, 33 U.S.C. 1251, et seq.	All plans in full compliance
Endangered Species Act, 1973, as amended, 16 U.S.C. 1531, et seq.	All plans in full compliance
Federal Water Project Recreation Act, as amended, 16 U.S.C. 460-1-12, et seq.	All plans in full compliance
Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, et seq.	All plans in full compliance
Land and Water Conservation Fund Act, 1965, as amended, 16 U.S.C. 4601, et seq.	All plans in full compliance
National Historic Preservation Act, 1966, as amended, 16 U.S.C. 470a, et seq.	All plans in full compliance
National Environmental Policy Act, as amended, 42 U.S.C. 4321, et seq.	All plans in full compliance
Native American Graves Protection and Repatriation Act, 1990, 25 U.S.C. 3001-13, et seq.	All plans in full compliance
Rivers and Harbors Act, 33 U.S.C. 401, et seq.	N/A
Watershed Protection and Flood Prevention Act, 16 U.S.C. 1001, et seq.	N/A
Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, et seq.	N/A
Water Resources Planning Act, 1965	N/A
Floodplain Management (E.O. 11988)	All plans in full compliance
Protection of Wetlands (E.O. 11990)	All plans in full compliance
Environmental Justice (E.O. 12898)	All plans in full compliance
Farmland Protection Policy Act, 7 U.S.C. 4201, et seq	All plans in full compliance
Protection of Children From Environmental Health Risks and Safety Risks (E.O. 13045)	All plans in full compliance

Note: Full compliance - Having met all requirements of the statutes, Executive Orders, or other environmental requirements for the current stage of planning.

SECTION 10.0 LIST OF PREPARERS

This EA has been prepared to assess the impacts of an emergency streambank protection project on the US Highway 83 Bypass Bridge, Arkansas River, Garden City, Kansas. The following personnel contributed to the preparation of this document.

Scott A. Henderson - Acting Chief, Environmental Analysis and Compliance Branch; Engineer; 18 years U.S. Army Engineer District, Tulsa.

Jerry C. Sturdy - Biologist; 3 years U.S. Fish and Wildlife Service; 8 years U.S. Army Garrison, Fort Chaffee, Arkansas; 22 years U.S. Army Engineer Districts, Tulsa and Fort Worth.

Kenneth L. Shingleton, Jr. - Archaeologist; 7 years U.S. Army Engineer District, St. Louis; 3 years U.S. Army Engineer District, Tulsa.

Vicky L. Weatherly - GIS Specialist; 8 years U.S. Army Engineer District, Tulsa.

Shawneen O'Neill - General Engineer; 3 years U.S. Army Missile Command; Lead Planner, 9 years U.S. Army Engineer District, Tulsa

Randy Beauchamp - Civil Engineer; 13 years U.S. Army Engineer District, Tulsa.

Edwin J. Rossman, Ph.D. - Sociologist; 2 years University of North Texas; 21 years U. S. Army Engineer District, Tulsa.

Elizabeth D. Bashaw - Student Economist; 1 year U.S. Army Engineer District, Tulsa

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APPENDIX A

COORDINATION/CORRESPONDENCE

Mailing List for Garden City Emergency Streambank Protection Project Draft EA

Senator Sam Brownback
225 North Market St.
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Wichita, KS 67202

Senator Pat Roberts
155 North Market St.
Suite 120
Wichita, KS 67202

Congressman Jerry Moran
1 N. Main, Suite 525
P.O. Box 1128
Hutchinson, KS 67504

Senator Stephen Morris
Kansas Senate
Room 120-S
State Capitol Building
Topeka, KS 66612

Representative Larry Powell
Kansas House of Representatives
Room 182-W
State Capitol Building
Topeka, KS 66612

Mr. William Gill
U.S. Fish and Wildlife Service
Kansas State Office
315 Houston, Suite E
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Mr. J. Michael Hayden
Secretary
Kansas Department of Wildlife and Parks
900 SW Jackson St., Suite 502
Topeka, KS 66612

Mr. James B. Gulliford
Regional Administrator, Region 7
U.S. Environmental Protection Agency
901 N. 5th Street
Kansas City, KS 66101

Mr. Bob Halloran, City Manager
City of Garden City
301 N. 8th, Box 499
Garden City, KS 67846

Mr. Harold L. Klaege
State Conservationist
USDA Natural Resource Conservation Service
760 South Broadway
Salina, KS 67401-4642

Mr. Scott Vogel
Chief, Environmental Services
Environmental Services Section
Docking State Office Building
Topeka, KS 66612

Mr. Clyde D. Graeber
Secretary
Kansas Department of Health and Environment
1000 SW Jackson
Topeka, KS 66612

Mr. John Wine
Chairman
Kansas Corporation Commission
1500 SW Arrowhead Road
Topeka, KS 66604-2425

Mr. David L. Pope
Chief Engineer
Kansas Department of Agriculture
Division of Water Resources
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283

Mr. Dennis Carlson
District Forester
Kansas Forest Service
9 West 28th Suite B
Hutchison, KS 67502-3453

Mr. Joe Harkins
Acting Director
Kansas Water Office
901 S. Kansas Avenue
Topeka, KS 66612

Mr. Paul M. Liechti
Kansas Biological Survey
2041 Constant Avenue
Lawrence, KS 66047

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. James B. Gulliford
Regional Administrator
U.S. Environmental Protection Agency
726 Minnesota Avenue
Kansas City, KS 66101

Dear Mr. Gulliford:

This is to inform you that the Tulsa District has been requested by the Kansas Department of Transportation to study the feasibility of a streambank protection project to protect the State Highway 83 Bypass Bridge at Garden City, Kansas. Erosion caused by the lateral movement of the Arkansas River is threatening the integrity of the bridge. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would provide protection for the bridge. The study is being conducted under authority of Section 14 of the Flood Control Act of 1946, as amended. The Act provides authority to the US Army Corps of Engineers to plan and construct emergency streambank projects to protect endangered highways and bridge approaches.

Garden City is located along the Arkansas River in Finney County, Kansas. The streambed in the vicinity is normally dry, however the contributing drainage above Garden City is 24,703 square miles in size and one large rain event has the potential to damage the bridge. Alternatives will be considered that include nonstructural and/or structural features. Nonstructural measures will include a "no action" plan and a vegetative armoring plan. Structural plans include river training, bank armoring, and abutment protection methods.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

Larry D. Hogue, P.E.
Chief, Planning, Environmental and
Regulatory Division

enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Clyde D. Graeber
Secretary
Kansas Department of Health and Environment
Charles Curtis State Office Building
1000 SW Jackson
Topeka, KS 66612

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Chief, Planning, Environmental and
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enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Harold L. Klaege
State Conservationist
Natural Resource Conservation Service
760 South Broadway
Salina, KS 67401

Dear Mr. Klaege:

This is to inform you that the Tulsa District has been requested by the Kansas Department of Transportation to study the feasibility of a streambank protection project to protect the State Highway 83 Bypass Bridge at Garden City, Kansas. Erosion caused by the lateral movement of the Arkansas River is threatening the integrity of the bridge. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would provide protection for the bridge. The study is being conducted under authority of Section 14 of the Flood Control Act of 1946, as amended. The Act provides authority to the US Army Corps of Engineers to plan and construct emergency streambank projects to protect endangered highways and bridge approaches.

Garden City is located along the Arkansas River in Finney County, Kansas. The streambed in the vicinity is normally dry, however the contributing drainage above Garden City is 24,703 square miles in size and one large rain event has the potential to damage the bridge. Alternatives will be considered that include nonstructural and/or structural features. Nonstructural measures will include a "no action" plan and a vegetative armoring plan. Structural plans include river training, bank armoring, and abutment protection methods.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

Larry D. Hogue, P.E.
Chief, Planning, Environmental and
Regulatory Division

enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Al LeDoux, Director
Kansas Water Office
901 S. Kansas Avenue
Topeka, KS 66612

Dear Mr. LeDoux:

This is to inform you that the Tulsa District has been requested by the Kansas Department of Transportation to study the feasibility of a streambank protection project to protect the State Highway 83 Bypass Bridge at Garden City, Kansas. Erosion caused by the lateral movement of the Arkansas River is threatening the integrity of the bridge. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would provide protection for the bridge. The study is being conducted under authority of Section 14 of the Flood Control Act of 1946, as amended. The Act provides authority to the US Army Corps of Engineers to plan and construct emergency streambank projects to protect endangered highways and bridge approaches.

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We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

Larry D. Hogue, P.E.
Chief, Planning, Environmental and
Regulatory Division

enclosure

United States Department of Agriculture
Natural Resources Conservation Service
107 Layton
Dodge City, KS 67801-2498

Phone: 620-227-2392
FAX: 620-227-6020
www.ks.nrcs.usda.gov

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January 21, 2004

Mr. Larry D. Hogue, P.E.
Department of Army
Corp of Engineers, Tulsa District
1645 South 101st East Avenue
Tulsa, Oklahoma 74128-4609

Re: Erosion Remediation, US 83 Bypass Bridge
Garden City, Kansas

Dear Mr. Hogue:

Thank you for the opportunity to comment on the proposal to remediate erosion damage to the Highway 83 Bypass Bridge at Garden City, Kansas. The soils in this area are sandy and tend to be very unstable in regard to the effects of the river. However, none of the soils in the area are considered prime farmland, or even soils of statewide importance. Since prime farmlands are not present, prime farmland as related to the Farmland Policy Protection Act (FPPA) is not involved in this project.

If I can be of further assistance, please let me know.

Sincerely,

Jim Wright

Jim Wright
Assistant State Conservationist

cc: Amanda D. Shaw, District Conservationist, NRCS, Garden City, Kansas
Rod Egbarts, Resource Conservationist, NRCS, Salina, Kansas

The Natural Resources Conservation Service provides leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

FEB 09 2004

Mr. Larry D. Hogue, P.E.
Chief, Planning, Environmental, and Regulatory Division
Department of the Army
Corps of Engineers, Tulsa District
1645 South 101 East Avenue
Tulsa, Oklahoma 74128-4609

Dear Mr. Hogue:

RE: State Highway 83 Bypass Bridge at Garden City, Kansas

This is to inform you that the Environmental Protection Agency (EPA) has received your document dated December 23, 2003 concerning the improvement project mentioned above.

Thank you for keeping us informed on the proposed project. The EPA has a great deal of catalogued information that may be of use in studying the environmental impacts of the project. On the world wide web, http://www.epa.gov/surf3/locate/index.html, is a web site of environmental information organized by watershed.

Another site, http://www.epa.gov/enviro/index_java.html, is a site containing extensive information collected by the EPA from most departments within the Agency, including hazardous waste sites, superfund sites, toxic release and water discharge permits, and others. We encourage you to access the above sites during the preparation of the Environmental Assessment.

Again, thank you for the opportunity to comment on this project. If you have any questions or require further technical assistance, you may contact me at 913-551-7656.

Sincerely,

Stephen K. Smith
NEPA Reviewer
Environmental Services Division

APPENDIX B

SECTION 404 PERMIT

CESWT-PE-R 19 March 2004

MEMORANDUM FOR CESWT-PE-P (Shawneen O'Neill)

SUBJECT: Section 404 Review for the Proposed Streambank Protection Project, Arkansas River, HWY 83 Bridge, Garden City, Kansas

1. Regulatory has reviewed the proposed bank stabilization project in Garden City. The proposed project is located along the right descending bank of the Arkansas River in the Southwest 1/4 of Section 21, Township 24 South, Range 32 West, Finney County, Kansas.

2. The proposed project consist of a rock fill trench section along 264 linear feet of the Arkansas River and other upland ripraping. The trench would be lined with filter cloth and 24-inch riprap, and topped with 1 foot of top soil.

3. The project as proposed falls within the scope of the enclosed Nationwide Permit for Bank Stabilization (encl 1), provided the conditions and 401 water quality certification (encl 2) issued by the State of Kansas are met. Please return the enclosed "Permittee Construction schedule" (encl 3) form.

4. This action has been assigned Identification No. 13663; please refer to this number should there be further correspondence. If you have any questions, contact Helen Williams at 918-669-7009.

LARRY D. HOGUE, P.E.
Chief, Planning, Environmental,
and Regulatory Division

3 Encl
as

Nationwide Permit for Bank Stabilization (NWP 13)

Bank stabilization activities necessary for erosion prevention provided the activity meets all of the following criteria:
a. No material is placed in excess of the minimum needed for erosion protection;
b. The bank stabilization activity is less than 500 feet in length;
c. The activity will not exceed an average of 1 cubic yard per running foot placed along the bank below the plane of the ordinary high water mark or the high tide line;
d. No material is placed in any special aquatic site, including wetlands;
e. No material is of the type, or is placed in any location, or in any manner, to impair surface water flow into or out of any wetland area;
f. No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored trees and treetops may be used in low energy areas); and,
g. The activity is part of a single and complete project.

Bank stabilization activities in excess of 500 feet in length or greater than an average of 1 cubic yard per running foot may be authorized if the permittee notifies the District Engineer (DE) in accordance with the "Notification" General Condition 13 and the DE determines the activity complies with the other terms and conditions of the NWP and the adverse environmental effects are minimal both individually and cumulatively. This Nationwide Permit (NWP) may not be used for the channelization of waters of the United States.

This NWP is authorized pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. This NWP (33 CFR 330) became effective March 18, 2002, following publication in the Federal Register.

General Conditions: The following general conditions must be followed for any authorization by this NWP to be valid:
1. Navigation. No activity may cause more than a minimal adverse effect on navigation.
2. Proper Maintenance. Any structure or fill authorized shall be properly maintained, including maintenance to ensure public safety.
3. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the U.S. during periods of low flow or no flow.
4. Aquatic Life Movements. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low-flow conditions.
5. Equipment. Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.
6. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the U.S. Army Corps of Engineers (Corps) or by the state or tribe in its Section 401 Water Quality Certification (see enclosure).

For all discharges proposed for authorization under any NWP into the following habitat types or specific locations, the applicant shall notify the appropriate DE in accordance with the NWP General Condition 13. The Corps will coordinate with the resource agencies as specified in NWP General Condition 13(e).
a. Wetlands, typically referred to as pitcher plant bogs, that are characterized by an organic surface soil layer and include vegetation such as pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.).
b. Swamps dominated by bald cypress (Taxodium distichum) and tupelo gum (Nyssa aquatica) tree species.
7. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System; or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status; unless the appropriate Federal agency, with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation, or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service (USFWS)).
8. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.
9. Water Quality. In certain states and tribal lands, an individual 401 Water Quality Certification must be obtained or waived (See 33 CFR 330.4(c) and enclosure).
10. Coastal Zone Management. Not Applicable.

11. Endangered Species.
a. No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. Non-Federal permittees shall notify the DE if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or is located in the designated critical habitat and shall not begin work on the activity until notified by the DE that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that may affect Federally-listed endangered or threatened species or designated critical habitat, the notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. As a result of formal or informal consultation with the USFWS, the DE may add species-specific regional endangered species conditions to the NWPs.
b. Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS or their world wide web pages at http://www.fws.gov/r9endspp/endspp.html.
12. Historic Properties. No activity which may affect historic properties listed, or eligible for listing, in the National Register of Historic Places is authorized, until the DE has complied with the provisions of 33 CFR, Part 325, Appendix C. The prospective permittee must notify the DE if the authorized activity may affect any historic properties listed, determined to be eligible, or which the prospective permittee has reason to believe may be eligible for listing on the National Register of Historic Places, and shall not begin the activity until notified by the DE that the requirements of the National Historic Preservation Act have been satisfied and that the activity is authorized. Information on the location and existence of historic resources can be obtained from the State Historic Preservation Office and the National Register of Historic Places (see 33 CFR 330.4(g)). For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the notification must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.
13. Notification.
a. Timing. Where required by the terms of the NWP, the prospective permittee must notify the DE with a preconstruction notification (PCN) as early as possible. The DE must determine if the notification is complete within 30 days of the date of receipt and can request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the DE will notify the prospective permittee that the notification is still incomplete and the PCN review process will not commence until all of the requested information has been received by the DE. The prospective permittee shall not begin the activity:
(1) Until notified in writing by the DE that the activity may proceed under the NWP with any special conditions imposed by the District or Division Engineer; or
(2) If notified in writing by the District or Division Engineer that an individual permit is required; or
(3) Unless 45 days have passed from the DE's receipt of the complete notification and the prospective permittee has not received written notice from the District or Division Engineer. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).
b. Contents of Notification. The notification must be in writing and include the following information:
(1) Name, address and telephone numbers of the prospective permittee;
(2) Location of the proposed project;
(3) Brief description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP (Sketches usually clarify the project and when provided result in a quicker decision.);
(4) For activities that may adversely affect Federally-listed endangered or threatened species, the PCN must include the name(s) of those endangered or threatened species that may be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work; and
(5) For activities that may affect historic properties listed in, or eligible for listing in, the National Register of Historic Places, the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property.

2

c. Form of Notification: The standard individual permit application form (Form ENG 4345) may be used as the notification but must clearly indicate that it is a PCN and must include all of the information required in (b)(1)-(5) of General Condition 13. A letter containing the requisite information may also be used.

d. DE's Decision: In reviewing the PCN for the proposed activity, the DE will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. The prospective permittee may submit a proposed mitigation plan with the PCN to expedite the process. The DE will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. If the DE determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the DE will notify the permittee and include any conditions the DE deems necessary. The DE must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee is required to submit a compensatory mitigation proposal with the PCN, the proposal may be either conceptual or detailed. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the DE will expeditiously review the proposed compensatory mitigation plan. The DE must review the plan within 45 days of receiving a complete PCN and determine whether the conceptual or specific proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the DE to be minimal, the DE will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the DE determines that the adverse effects of the proposed work are more than minimal, then the DE will notify the applicant either:

(1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

(2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level; or

(3) that the project is authorized under the NWP with specific modifications or conditions.

Where the DE determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation proposal that would reduce the adverse effects on the aquatic environment to the minimal level. When conceptual mitigation is included, or a mitigation plan is required under item (2) above, no work in waters of the U.S. will occur until the DE has approved a specific mitigation plan.

e. Agency Coordination: The DE will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

For activities requiring notification to the DE that result in the loss of greater than 1/2 acre of waters of the U.S., the DE will provide immediately (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy to the appropriate Federal or state offices (USFWS, state natural resource or water quality agency, Environmental Protection Agency, and State Historic Preservation Officer). These agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the DE notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the DE will wait an additional 15 calendar days before making a decision on the notification. The DE will fully consider agency comments received within the specified timeframe, but will provide no response to the resource agency. The DE will indicate in the administrative record associated with each notification that the resource agencies' concerns were considered. Applicants are encouraged to provide the Corps multiple copies of notifications to expedite agency notification.

f. Wetland Delineations: Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic site. There may be some delay if the Corps does the delineation. Furthermore, the 45-day period will not start until the wetland delineation has been completed and submitted to the Corps, where appropriate.

14. Compliance Certification. Every permittee who has received NWP verification from the Corps will submit a signed certification regarding the completed work and any required mitigation. The certification will be forwarded by the Corps with the authorization letter and will include:

a. A statement that the authorized work was done in accordance with the Corps authorization, including any general or specific conditions;

3

b. A statement that any required mitigation was completed in accordance with the permit conditions; and
c. The signature of the permittee certifying the completion of the work and mitigation.
15. Use of Multiple NWPss. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the U.S. authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit (e.g. if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the U.S. for the total project cannot exceed 1/3 acre).
16. Water Supply Intakes. No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may occur in the proximity of a public water supply intake except where the activity is for repair of the public water supply intake structures or adjacent bank stabilization.
17. Shellfish Beds. No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4.
18. Suitable Material. No activity, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, may consist of unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.) and material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the CWA).
19. Mitigation. The DE will consider the factors discussed below when determining the acceptability of appropriate and practicable mitigation necessary to offset adverse effects on the aquatic environment that are more than minimal.
a. The project must be designed and constructed to avoid and minimize adverse effects to waters of the U.S. to the maximum extent practicable at the project site (i.e., on site).
b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
c. Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland impacts requiring a PCN, unless the DE determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. Consistent with National policy, the DE will establish a preference for restoration of wetlands as compensatory mitigation, with preservation used only in exceptional circumstances.
d. Compensatory mitigation (i.e., replacement or substitution of aquatic resources for those impacted) will not be used to increase the acreage losses allowed by the acreage limits of some of the NWPs. For example, 1/4 acre of wetlands cannot be created to change a 3/4 acre loss of wetlands to a 1/2 acre loss associated with NWP 39 verification. However, 1/2 acre of created wetlands can be used to reduce the impacts of a 1/2 acre loss of wetlands to the minimum impact level in order to meet the minimal impact requirement associated with NWPs.
e. To be practicable, the mitigation must be available and capable of being done considering costs, existing technology, and logistics in light of the overall project purposes. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferably in the same watershed.
f. Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., easements, deed restrictions) of vegetated buffers to open waters. In many cases, vegetated buffers will be the only compensatory mitigation required. Vegetated buffers should consist of native species. The width of the vegetated buffers required will address documented water quality or aquatic habitat loss concerns. Normally, the vegetated buffer will be 25 to 50 feet wide on each side of the stream, but the DEs may require slightly wider vegetated buffers to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the Corps will determine the appropriate compensatory mitigation (e.g., stream buffers or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where vegetated buffers are determined to be the most appropriate form of compensatory mitigation, the DE may waive or reduce the requirement to provide wetland compensatory mitigation for wetland impacts.
g. Compensatory mitigation proposals submitted with the "notification" may be either conceptual or detailed. If conceptual plans are approved under the verification, then the Corps will condition the verification to require detailed plans be submitted and approved by the Corps prior to construction of the authorized activity in waters of the U.S.
h. Permittees may propose the use of mitigation banks, in-lieu fee arrangements, or separate activity-specific compensatory mitigation. In all cases that require compensatory mitigation, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.
20. Spawning Areas. Activities, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that

4

result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

21. Management of Water Flows. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows (unless the primary purpose of the fill is to impound waters) and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions. Stream channelizing will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

This condition is only applicable to projects that have the potential to affect waterflows. While appropriate measures must be taken, it is not necessary to conduct detailed studies to identify such measures or require monitoring to ensure their effectiveness. Normally, the Corps will defer to state and local authorities regarding management of water flow.

22. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to the acceleration of the passage of water, and/or restricting its flow shall be minimized to the maximum extent practicable. This includes structures and work in navigable waters of the U.S. or discharges of dredged or fill material.

23. Waterfowl Breeding Areas. Activities, including structures and work in navigable waters of the U.S. or discharges of dredged or fill material, into breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

24. Removal of Temporary Fills. Any temporary fills must be removed in their entirety and the affected areas returned to their preexisting elevation.

25. Designated Critical Resource Waters. Critical resource waters include National Wild and Scenic Rivers, critical habitat for Federally-listed threatened and endangered species, state natural heritage sites, and outstanding National resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the DE after notice and opportunity for public comment. The DE may also designate additional critical resource waters after notice and opportunity for comment.

b. For NWPs 13, notification is required in accordance with General Condition 13, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The DE may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

26. Fills Within 100-Year Floodplains. For purposes of this General Condition, 100-year floodplains will be identified through the existing Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps or FEMA-approved local floodplain maps. The permittee must comply with any applicable FEMA-approved state or local floodplain management requirements.

27. Construction Period. For activities that have not been verified by the Corps and the project was commenced or under contract to commence by the expiration date of the NWP (or modification or revocation date), the work must be completed within 12 months after such date (including any modification that affects the project).

For activities that have been verified and the project was commenced or under contract to commence within the verification period, the work must be completed by the date determined by the Corps.

For projects that have been verified by the Corps, an extension of a Corps approved completion date maybe requested. This request must be submitted at least 1 month before the previously approved completion date.

Further Information.

1. The DEs have authority to determine if an activity complies with the terms and conditions of an NWP.
2. The NWPs do not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.
3. The NWPs do not grant any property rights or exclusive privileges.
4. The NWPs do not authorize any injury to the property or rights of others.
5. The NWPs do not authorize interference with any existing or proposed Federal project.

For additional information concerning the NWP, please contact the Regulatory Branch, Tulsa District, U.S. Army Corps of Engineers, 1645 South 101st East Avenue, Tulsa, OK 74128-4609, or telephone 918-669-7400.

5

KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

March 15, 2002

Mr. Lawrence Cavin
Attention: Mark Frazier
Regulatory BR/Operations Division
U.S. Army Corps of Engineers
700 Federal Building
Kansas City, MO 64106-2896

RE: Kansas Clean Water Act Section 401 Certification for Section 404 of the Clean Water Act Nationwide Permits issued by the U.S. Department of Army Corps of Engineers, Per Public Notice issued January 15, 2002, Part II of the Federal Register (67FR 2020- 2095.)

Mr. Cavin:

Per your request for the Kansas Section 401 Water Quality Certification by letter, dated January 29, 2002, we have enclosed and will email the above referenced information. Said 401 Water Quality Certification was reorganized to clarify KDHE expectations and requirements. Additions and revisions to the previous 401 certification issued May 31, 2000, included but are not limited to:

1. References to the applicant retaining 401 on site during construction
2. USACE websites with the applicable information,
3. Conditions to minimize riparian area disturbance
4. Added a statewide emergency response and technical assistance number to local, KDHE and national numbers.
5. Specific contact number for hydrostatic testing where NWP #3, #12, and #18 are applicable.

An updated map referred to in said certification was emailed to Mr. Mark Frazier and has been posted on USACE website. KDHE has added a link to the USACE Kansas City District regulatory web page.

c:\Lisa\Letters & Memos\March\2002\Cavin-M15.wpd

DIVISION OF ENVIRONMENT
Bureau of Water
1000 SW Jackson, Suite 420
(785) 296-4195
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Topeka, KS 66612-1367
FAX (785) 296-5509

Encl 2

Please call me at 785/296-5567 or send email to dsnethen@kdhe.state.ks.us if I can be of any further service. Mr. Scott Satterthwaite can also be contacted in regards to this communication at 785/296-5573 or by email at ssatert@kdhe.state.ks.us. Thank you for your interest and assistance in protecting the waters of Kansas.

Sincerely,

Donald D. Snethen, P.E., Chief
Watershed Management Section
Bureau of Water

DDS/lmd

Be a clean water neighbor.

Kansas Water Quality Certification
Section 404 Nationwide Permits
Kansas Department of Health and Environment

Final: March 15, 2002

I Authority

This certification is prepared pursuant to Clean Water Act Section 401 and Kansas Administrative Regulation 28-16-28f(c)(1).

II Certification

All activities authorized by the U.S .Department of Army Corps of Engineers Nationwide Permits published January 15, 2002, are not expected to result in violations of Kansas Water Quality Standards found at Kansas Administrative Regulations 28-16-28b through 28f, provided the person conducting the Corps of Engineers authorized activity adheres to the conditions set out by this certification. Descriptions of Nationwide Permits can be found at: **www.nwk.usace.army.mil/regulatory/regulatory.htm**.

III **Limitations of this Certification:** All Section 404 activities within the borders of Indian owned and operated lands (see Attachment 1 map) are not covered by this certification. Individuals proposing projects which impact those waters are responsible for contacting the appropriate individual at the following numbers:

Prairie Band Potawatomie Indians, Planning Department, 785/966-2946

Kickapoo Tribe in Kansas, Environmental Office, 785/486-2601

Iowa of Tribe of Kansas and Nebraska, 785/595-3258

Sac and Fox Tribe of Missouri, 785/742-7471

Environmental Protection Agency Region VII Indian Lands Contact, 913/551-7539

IV General Conditions

1. **Certification Retainment:** The applicant shall retain this water quality certification on the project site through the duration of the project to accommodate inspection.

2. **Kansas Water Pollution Control General Permit for Stormwater Runoff from Construction Activities:** This certification does not relieve the applicant of the responsibility to determine if the project is subject to the requirements of **General NPDES Permit** to secure such permit as necessary. Questions and inquiries may be directed to:

   Kansas Department of Health and Environment, Bureau of Water
   Industrial Program Section, 1000 SW Jackson Street, Suite 420
   Topeka, Kansas 66612-1367. Phone 785/296-5549
   FAX: 785/296-5509, or http://www.kdhe.state.ks.us/stormwater/index.html

3. **Project Water Quality Protection Plan:** Any person wishing to use a Section 404 Nationwide General Permit shall prepare and follow a written project water quality protection plan (PWQPP.) The (PWQPP) shall identify components of the permitted activity (i.e. solid waste handling, fuel storage and leaks, sediment from construction etc.) which may or will result in the discharge of pollutants to waters of the state. For each component which may discharge pollutants to waters of the state, the plan shall set out the physical, structural and management measures to be implemented to prevent or minimize the discharge of pollutants to waters of the state.

   The permittee is required to submit the PWQPP to KDHE only if the project impacts Outstanding Natural Resource, Exceptional State or Special Aquatic Life Use Waters per condition #4 below.

4. **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters:** In the event the permitted activity occurs in or within one half (½) mile of an Outstanding National Resource Water, defined pursuant to **K.A.R. 28-16-28b**(mm) and **K.A.R. 28-16-28c(a)B(3)**, an Exceptional State Water pursuant to **K.A.R. 28-16-28b** (w)and **K.A.R. 28-16-28c(a)B(2)**, or a Special Aquatic Life Support Use Water designated pursuant to K.A.R. 28-16-28d(2)(A), **the person responsible for initiating the activity shall submit a copy of the PWQPP to the Watershed Management Section - Kansas Department of Health and Environment.** A list of **Outstanding National Resource Waters, Exceptional State and Special Aquatic Life Support Use Waters** (Attachment 1, includes map and county abbreviations) subject to this provision are listed in the Corps of Engineers Regional Conditions (see Corps of Engineers website):

   www.nwk.usace.army.mil/regulatory/nwp_information/ks_nwp_regional_conditions.pdf.

   The permittee should also be aware of the following Kansas water quality protection regulations associated with special waters:

   K.A.R. 28-16-28c(a)B(2)-"Wherever state surface waters constitute exceptional state waters, discharges shall be allowed only if existing uses and existing water quality are maintained and protected."

   K.A.R. 28-16-28c(a)B(3)-"Wherever state surface waters constitute an outstanding national resource water existing uses and existing water quality shall be maintained and protected. New or expanded discharges shall not be allowed into outstanding national resource waters."

5. **Solid Waste Disposal:** All solid waste materials produced during the execution of the project shall be disposed in accordance with the provisions of Kansas Solid Waste Management Statutes and regulations and applicable local regulations. Direct inquiries to KDHE, Bureau of Waste Management 1000 SW Jackson Street, Suite 320, Topeka, Kansas 66612-1366 Phone: 785/296-1600. FAX: 785/296-1592 or www.kdhe.state.ks.us/waste/index.html.

6. **Equipment Staging Areas and Project Closure:** Upon completion of the project, disturbed areas shall be expeditiously stabilized with temporary and permanent vegetation, bio-artificial ground cover or other appropriate non-polluting material. Fertilizer application to establish and maintain vegetation shall be done in a manner that will not contribute to the current nutrient load to any of the surface waters impacted by the project. The person responsible for the permitted activity shall monitor and maintain cover materials until such time as the site is stabilized. Project closure procedures shall be documented in the Project Water Quality Protection Plan per condition No. IV. 3.

7. **Riparian Areas:** Minimize removal or disturbance of riparian areas (areas adjacent to water bodies). KDHE encourages the use of vegetation consistent with adjoining vegetation materials to minimize impacts from improper handling of fertilizers and pesticides.

8. **Discharge of Floatable Materials:** Pursuant to K.A.R. 28-16-28(b)(1),((3) and (4), the person responsible for executing the permitted activity shall assure good house keeping is practiced at the site to minimize the discharge of floatable materials such as personal refuse including food containers, packing materials, and other litter. Appropriate measures shall be taken to capture and/or recover any floatable materials discharged to waters of the state originating with the permitted project.

9. **Fuel, Chemical and Materials Storage:** Fuel, chemical and other materials stored at the project site shall be stored in a manner that minimizes the discharge of product to waters of the state. Spill minimization and prevention measures and procedures shall be documented in the Water Quality Protection Plan.

10. **Spill Response and Reporting:**

    1.) **Spill response and cleanup:** In the event a spill of fuel, chemical or other water quality degrading materials stored or transported on the site occurs, the permittee shall or with the assistance of professional response personnel, expeditiously control or contain the spill and initiate clean up procedures. The applicant shall immediately contact 911. Spill response and cleanup actions shall be documented in the PWQPP. The applicant should also contact the appropriate Kansas Department of Health and Environment District Office (see map Attachment 2, go to **www.kdhe.state.ks.us/befs/#districts or look in your local phone directory**) to confirm cleanup activities. Finally, KDHE strongly encourages the permittee to establish and post a sign that includes phone contact numbers for the appropriate local emergency response unit, KDHE district office, and the project manager/owner.

2.) **Reporting:** The Kansas Department of Health and Environment shall be notified of all fuel spills or unauthorized discharge of pollutants immediately. Contact KDHE at 785/296-1679, anytime for spill reporting requirements. The Kansas Adjutant Generals Office should also be contacted (785/296-8013) as well as the National Spill Response Center (1-800-424-8802).

11. **Drinking Water Intakes:** The person responsible for the permitted activity shall avoid adverse impacts on public water supplies. Whenever permitted activities occur within one mile upstream of a public drinking water supply - surface water intake, the applicant shall contact the official in charge of the public drinking water supply to apprize the drinking water supply official of the permitted activity. The person responsible for the permitted activity shall consider the suggestions and recommendations of the public water supply official when preparing the PWQPP.

12. **Treated Wastewater Effluent Mixing Zones:** As a general guideline any Section 404 activity within one-half (½) mile upstream or one-half (½) mile downstream of a permitted wastewater effluent discharge may impact the effluent mixing zone. The person responsible for the permitted activity shall determine if the project will adversely impact the wastewater effluent mixing zones and take appropriate measures to avoid altering or changing the mixing zone. This may include but is not limited to:

1) The construction or placement of a recreation oriented facility or structure (i.e. boat ramp, walkway) which may require modification of the beneficial use designation to accommodate contact or non-contact recreation, thereby increasing the effluent limitations for the permit.

2) Any activity which may alter or remove the stream channel geometry or natural oxygenation abilities of the stream such as bridge construction, channelization, stream channel substrate modification etc.

The person responsible for the permitted Section 404 activity shall advise and describe to the waste water discharge permittee and KDHE any potential mixing zone impacts and the measures the person responsible for the Section 404 activity will take to minimize adverse impacts on the mixing zone. Inquiries should be directed to Kansas Department of Health and Environment, Bureau of Water - Municipal Programs Section, 1000 SW Jackson Street, Suite 420, Topeka, Kansas 66612-1367. Phone: 785/296-5527 FAX: 785/296-5509.

V. SPECIAL CONDITIONS FOR SPECIFIC NATIONWIDE PERMITS

1. **Nationwide Permit #7. Outfall Structures and Maintenance (construction):** Controls shall be in place to stabilize all areas of the bed and bank around the pipe or adjacent to the outfall structure and associated intake structures that may be affected by outfall or stream flows, respectively.

2. **Nationwide Permits #3-Maintenance; #12-Utility Line Activities; and #18-Minor Discharges (pipelines included):** Hydrostatic tests for pipeline activities shall be approved prior to discharge of water used for the test. Please contact Kansas Department of Health and Environment, Bureau of Water - Industrial Program Section, 1000 SW Jackson Street, Suite 420, Topeka, Kansas 66612-1367. Phone 785/296-5553 FAX :785/296-5509, to inquire.

VI Enforcement and Penalties

This certification does not relieve the applicant of the responsibility for any discharge to waters of the state. The Kansas Department of Health and Environment retains the option of revoking this certification any time an inappropriate discharge may occur. As provided for by K.S.A. 65-171(f), failure to comply with the conditions of this certification may subject the responsible party to fines of $10,000 per violation with each day the violation occurs constituting a separate violation.

VII Variance

If the applicant believes the conditions of this certification will result in impairment of important social and economic development, the applicant is advised of the variance provisions of K.A.R. 28-16-28b(hhh) and K.A.R. 28-16-28f(e).

VIII For Additional Information

For a copy of the Kansas Surface Water Quality Standards, Guidelines for Preparing a Project Water Quality Protection Plan. *This includes standing National Resource Waters, Exceptional State Waters* and *Special Aquatic Life Use Support Waters*, please contact Kansas Department of Health and Environment, Bureau of Water-Watershed Management Section at 785/296-4195 or FAX 785/296-5509. This information can also be obtained by written communication directed to:

Kansas Department of Health and Environment
Bureau of Water - Watershed Management Section
1000 SW Jackson Street, Suite 420
Topeka, Kansas 66612-1367

FIELD KEY FOR SUBJECTIVE EVALUATION OF TERRESTRIAL WILDLIFE HABITATS

Each habitat type or community present within the evaluation area will be rated. The rating will be a numerical value between 0.0 and 10.0. The criteria keys are only guides to obtain uniformity in evaluating different tracts. The criteria key will serve as a standardized check list for identifying habitat communities and placing a value on their quality. When professional judgement that determines the habitat characteristics are different than those indicated, narrative description can be developed in the field and a quality rating made.

WOODLAND KEY

Evaluate for composition and distribution of components throughout stand.

Species Groups	Points
(Nut, Mast, Fruit, Seed, Evergreen)	6 to 10
4-5 species groups	3 to 6
Nut or mast + 2 other spp. groups	1 to 3
2-3 spp. groups	1 to 3
1 species group	1

Plant Form	Score each plant form as
Trees over 12" dbh	Abundant = 3 points
Trees over 25' tall	Common = 2 points
Trees 3'-25' tall	Sparse = 1 point
Trees up to 3' tall	Absent = 0 points
Shrubs	
Vines	
Grass	
Forbs	
Debris and/or Standing Dead, Snags	
Den Trees	

$\frac{\text{Total Points}}{4}$ + IV = R

STREAM KEY

Components		Component Points
Streambank Habitat =	Excellent	4.0
	Good	3.0
	Fair	2.0
	Poor	1.0
Water Availability	No permanent pools or flow	0.0-0.5
	w/permanent pools only	1.0-1.5
	w/permanent flow	1.5-2.0
Aquatic Habitat Diversity	Good - Excellent	2.0
	Poor - Fair	1.0
Floodplain Diversity	Traverses 2 or + habitats	2.0
	Traverses 1 habitat	1.0

Channelization - If present, subtract up to 2 points depending on channel condition and how much channelization has influenced the previous components

Total Points = R

RANGELAND KEY

Components	R
Decreasers reproducing stand Plants in healthy condition Herb. increasers not conspicuous Woody increasers may be conspicuous	9.5 - 10.0
Decreasers conspicuous, can recover Woody invaders may be established, others reproducing markedly Woody increasers may be conspicuous	6.5 - 9.0
Decreasers not conspicuous Annuals/invaders conspicuous Increasers established	3.5 - 6.0
Decreasers absent Invaders established Desirable wildlife food/cover nearly absent	1.0 - 3.0

Component Value + IV = R

ODD AREA KEY

Components	Component Points
Woody Vegetation	
Abundant trees, shrubs, vines; all age; excellent food/cover	5.0
Woody spp. abundant; even-all age; food/cover good/excellent	4.0
Woody spp. common; even-all age; food/cover good	3.0
Woody spp. sparse, even-all age; food/cover fair	2.0
Woody spp. sparse; cover poor	1.0
Woody spp. absent	0
Herbaceous Vegetation	
Abundant perennial native grass & forbs; food/cover excellent	5.0
Abundant native vegetation; food/cover good	4.0
Native vegetation common; annuals/increasers established; food/cover fair	3.0
Native vegetation sparse; introduced grasses may be established; food/cover fair-poor	2.0
Introduced vegetation abundant; food/cover poor	1.0

Total Points + IV = R

WETLAND KEY

Components	Component Points
Protection from livestock	0.0 - 2.0
Emergent vegetation present	0.0 - 2.0
Open water present	0.0 - 2.0
Water present every year	3.0
Water level controlled	1.0
Total Points + IV = R	

PASTURE KEY

Components	Rating
Grass in good con. *w/some desirable forbs present:	
Warm season pasture	5.0 - 6.0
Cool season pasture	4.5
Grass in fair cond. w/more of the less desirable forbs present:	
Warm season	4.0
Cool season	3.5
Grass in excellent cond. w/few forbs:	
Warm season	3.5
Cool season	3.0
Grass in poor cond. w/abundance of poor quality herbaceous or bare ground:	
All pastures	1.0
Same condition as above w/more desirable ann. grass, forbs, and some small woody:	
All pastures	2.0
Any of the above w/some established woody:	Add 0.5
Ratings higher than 6.0 for warm season and 5.0 for cool season must be documented.	
*Based upon degree of management and grasses present.	
Total Points + IV = R	

IMPOUNDMENT KEY

Components	Component Points
1/3 shoreline protected from livestock	1.0
1/2 - 2/3 shoreline protected from livestock	2.0
2/3 shoreline protected from livestock	3.0
Beneficial aquatic vegetation present	0.0 - 3.0
Permanent water present	1.0
Water quality	0.0 - 2.0
Control of water level possible	1.0
Total Points + IV = R	

CROPLAND KEY

Regardless of crop grown, cropland undergoes major disturbances (tilling, harvesting) annually resulting in poor terrestrial wildlife habitat during some part of every year. A high cropland R can only be achieved if it provides food, some cover, and has a high level of interspersion. Knowledge of local farm practices and professional judgement will be used to rate.

Components	Rating
Cropland with 4 or more adjacent habitats	
Row crop or alfalfa	5.0
All other crops	4.0
Cropland w/2-3 adjacent habitats	
Row crop or alfalfa	4.0
All other crops	3.0
Cropland w/0-2 adjacent habitats	
Row crop or alfalfa	2.0
All other crops	1.0
NOTE: Ratings higher than 5.0 must have their rationale documented on the field record form.	

INTERSPERSION

The Interspersion Value (IV) is a separate entity for each evaluated habitat tract except CROPLAND and STREAM. Determine the number of different habitat communities (types) that are adjacent to the evaluated habitat tract and add the applicable IV to the criteria value to determine the habitats quality rating (R). In no case can R exceed 10.0.

INTERSPERSION KEY

Adjacent Habitats	IV
4 + additional types	+ 1.5
2-3 additional types	+ 1.0
1 additional type	+ 0.5
All one habitat	+ 0.0

Subjective guideline for judgement ratings: Exc. = 9 - 10; Good = 6 - 8; Fair = 3 - 5; Poor = 1 - 2

ATTACHMENT 2

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT DISTRICT OFFICES

NORTHWEST DISTRICT
(785)625-5664
2301 E. 13th
Hays, KS 67601-2651
Ken Brook, DEA

SOUTHWEST DISTRICT
(316)225-0596
302 W. McArtor Road
Dodge City, KS 67801-6098
Al Guernsey, DEA

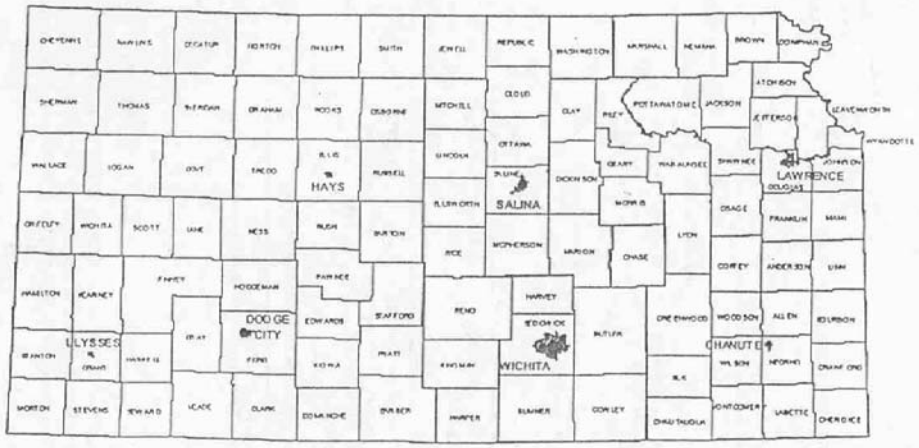
ULYSSES SATELLITE OFFICE
(316)356-1075
325 Oklahoma
Ulysses, KS 67880

NORTH CENTRAL DISTRICT
(785)827-9639
2501 Market Place
Ste. D & E
Salina, KS 67401-7699
Rick Brunetti, DEA

SOUTH CENTRAL DISTRICT
(316)337-6020
130 S. Market
Wichita, KS 67202-3802
Mark Bradbury, DEA

NORTHEAST DISTRICT
(785)842-4600
800 W. 24th Street
Lawrence, KS 66046-4417
Julie Coleman, DEA

SOUTHEAST DISTRICT
(316)431-2390
1500 W. 7th Street
Chanute, KS 66720
David Stutt, DEA



BEFS 6/98

County	*Exceptional State Waters	*Special Aquatic Life Use Waters
		west to NW corner of Sec. 24, T.34S., R.24E., then due south to Kansas/Oklahoma (Sec. 13 T.35S., R.24E.), then due east to Kansas Missouri order (Sec. 13, T.35S., 25E.), then north to point of origin. And: (11)All wetlands within those portions of Cherokee and Labette counties encompassed by a line that extends from Kansas/Missouri border at NE corner of Sec. 24, T.31S., R.25E. due west to NW corner of Sec. 20, T.31S., R.25E., then due south to NW corner of Sec. 17, T.33S., R.25E., then due west to NW corner of Sec. 14, T.33S., R.21E., then due south to Kansas/Oklahoma border (Sec. 14, T.35S., R.21E.), then due east to Kansas/Missouri border(Sec. 13, T.35S., R.25E.), then due south to point of origin.
Cheyenne		Arikaree River, South Fork Republican River
Clark	Cimarron River, (21) St. Jacob's Well: NW1/4 SW1/4 Section 19 Township 32S Range 24W	Bluff Ck, Cavalry Ck, Cimarron River, Kiowa Ck, Middle Kiowa Ck, West Kiowa Ck, Rattlesnake Ck, (21) St. Jacob's Well, Clark State Fishing Lake
Clay		Republican River
Cloud	(6)all surface waters within Jamestown Waterfowl Management Area	Republican River
Coffey		Frog Ck, Long Ck, Neosho River, Wolf Ck, South Big Ck
Commanche	Cimarron River	Nescatunga Ck (west branch), Cimarron River, Kiowa Ck, Middle Kiowa Ck, West Kiowa Ck
Cowley	Walnut River, Grouse Ck, Beaver Ck, Otter Ck	Arkansas River, Grouse Ck, Walnut River, Spring Ck
Crawford		Brush Ck, Cow Ck, East Cow Ck, First Cow Ck
Dickinson	Lyon Ck	Lime Ck, Lyon Ck, West Branch Lyon Ck, unnamed tributary to Lime Ck, unnamed tributary to Lyon Ck, unnamed tributary to West Branch Lyon Ck, Carry Ck, (22) Herington Reservoir
Doniphan		Missouri River, Cedar Ck, Brush Ck
Douglas		Kansas River, West Fork Tauy Ck, (23) Clinton Reservoir; (18)All wetlands within Sec. 18, T.13S., R.20E. of Douglas county.
Edwards		Rattlesnake Ck
Elk	Caney River, Fall River	Grouse Ck, Fall River, Caney River
Ellis	Saline River	
Ellsworth	Smoky Hill River	
Finney		Arkansas River
Ford		Rattlesnake Ck
Franklin		Marais des Cygnes River, Pottawatomie Ck, Ottawa Ck, West Fork Tauy Ck
Geary	Lyon Ck	Lyon Ck, Republican River, Kansas River, Kings Ck and tributaries; (12)Konza Prairie Natural Area; designation applies to all surface waters within natural area.

County	*Exceptional State Waters	*Special Aquatic Life Use Waters
Shawnee		Kansas River,
Stafford		Rattlesnake Ck Peace Ck, unnamed tributary to North Fork Ninnescah River, (3)Quivera Salt Marsh
Stevens	Cimarron River, North Fork Cimarron River	Cimarron River
Sumner	Chikaskia River	Chikaskia River, Arkansas River, Spring Ck, Ninnescah River; (8) Slate Creek Wetlands: classification applies to all surface waters within state owned portions of wetlands.
Wabaunsee	Mill Ck, East Branch Mill Ck, West Branch Mill Ck	Mill Ck, East Branch Mill Ck, Middle Branch Mill Ck, South Branch Mill Ck, Kansas River, Locust Ck
Wallace		Capper Draw, Coon Ck, Depperschmidt Draw,Eagle Tail Ck, Pond Ck, Rose Ck, Smoky Hill River, Willow Ck, Ladder Ck, Twin Butte Ck
Wichita		Chalk Ck, Ladder Ck
Wilson	Fall River	Verdigris River, Fall River
Woodson		Neosho River, Woodson County State Fishing Lake, South Owl Ck, (7) Circle Lake & Leonards Lake; (9)All wetlands within Sec. 3 and Sec. 11, T.26S., R.14E.
Wyandotte		Little Turkey Ck, Kansas River, Missouri River

The following counties currently do not contain waters classified as ESW, SALU or ONRW: Brown, Decatur, Gove, Graham, Gray, Harvey, Haskell, Hodgeman, Jackson, Lane, Mitchell, Ness, Norton, Osborne, Ottawa, Pawnee, Rawlins, Rooks, Saline, Seward, Sheridan, Sherman, Smith, Stanton, Thomas, Trego, and Washington.

*** Kansas Regulations for Special Waters in Kansas**

Outstanding National Resource Water, K.A.R. 28-16-28b (mm), "means any of the surface waters or surface water segments of extraordinary recreational or ecological significance identified in the surface water register, as defined in K.A.R. 28-16-28b(zz), and afforded the highest level of water quality protection under the anti-degradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b)."

Exceptional State Waters, K.A.R. 28-16-28b (w), "means any of the surface waters or surface water segments that are of remarkable quality or of significant recreational or ecological value, are listed in the surface water register as defined in K.A.R. 28-16-28b(zz), and afforded the highest level of water quality protection under the anti-degradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b)."

Special Aquatic Life Use, K.A.R. 28-16-28d (a)(2)(A), "means surface waters that contain combinations of habitat types and indigenous biota not found commonly in the state, or surface waters that contain representative populations of threatened or endangered species."

K.A.R. 28-16-28c(a)B(2)-"Wherever state surface waters constitute exceptional state waters, discharges shall be allowed only if existing uses and existing water quality are maintained and protected."

K.A.R. 28-16-28c(a)B(3)-"Wherever state surface waters constitute outstanding national resource waters existing water quality shall be maintained and protected. New or expanded discharges shall not be allowed into outstanding national resource waters."

Finally, the Kansas Surface Water Standards K.A.R. 28-16-28 can be found at : http://www.kdhe.state.ks.us/$regs *(page 46 on acrobat reader)*

PERMITTEE CONSTRUCTION SCHEDULE WORKSHEET

* MAIL TO ADDRESS ON REVERSE WITHIN 30 DAYS OF "DATE OF ISSUANCE"

PERMIT NO.: 13663

PERMITTEE NAME: Kansas Department of Transportation (Agent: Shawnee Oneil, U.S. Army Corps of Engineers)

DATE OF ISSUANCE: March 19, 2004

----------(fold here so that address shows on outside)--------

Please provide the following information:

Anticipated/Known Construction Start Date: _____

Anticipated Completion Date: _____

I have read and understand the obligations and requirements of this authorization.

_____ _____

SIGNATURE OF PERMITTEE DATE

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(FOR AGENCY USE ONLY - DO NOT WRITE BELOW THIS LINE)

PROJECT MANAGER: Ms. Helen J. Williams

RECEIVED IN CESWT-PE-R: _____

INSPECTION NEEDED: Y / N

CONSTRUCTION INSPECTION SCHEDULED: _____

FINAL INSPECTION SCHEDULED: _____

APPENDIX C

FISH AND WILDLIFE

COORDINATION

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. William Gill
U.S. Fish and Wildlife Service
315 Houston, Suite E
Manhattan, KS 66502-6172

Dear Mr. Gill:

This is to inform you that the Tulsa District has been requested by the Kansas Department of Transportation to study the feasibility of a streambank protection project to protect the State Highway 83 Bypass Bridge at Garden City, Kansas. Erosion caused by the lateral movement of the Arkansas River is threatening the integrity of the bridge. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would provide protection for the bridge. The study is being conducted under authority of Section 14 of the Flood Control Act of 1946, as amended. The Act provides authority to the US Army Corps of Engineers to plan and construct emergency streambank projects to protect endangered highways and bridge approaches.

Garden City is located along the Arkansas River in Finney County, Kansas. The streambed in the vicinity is normally dry, however the contributing drainage above Garden City is 24,703 square miles in size and one large rain event has the potential to damage the bridge. Alternatives will be considered that include nonstructural and/or structural features. Nonstructural measures will include a "no action" plan and a vegetative armoring plan. Structural plans include river training, bank armoring, and abutment protection methods.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning this proposed action.

Your comments are requested in accordance with the Fish and Wildlife Coordination Act and the Endangered Species Act. If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

Larry D. Hogue

Larry D. Hogue, P.E.
Chief, Planning, Environmental and
Regulatory Division

enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

December 23, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. J. Michael Hayden,
Secretary
Kansas Department of Wildlife and Parks
900 SW Jackson St., Suite 502
Topeka, KS 66612

Dear Mr. Hayden:

This is to inform you that the Tulsa District has been requested by the Kansas Department of Transportation to study the feasibility of a streambank protection project to protect the State Highway 83 Bypass Bridge at Garden City, Kansas. Erosion caused by the lateral movement of the Arkansas River is threatening the integrity of the bridge. We are beginning the process of preparing an Environmental Assessment addressing the affect of various alternatives that would provide protection for the bridge. The study is being conducted under authority of Section 14 of the Flood Control Act of 1946, as amended. The Act provides authority to the US Army Corps of Engineers to plan and construct emergency streambank projects to protect endangered highways and bridge approaches.

Garden City is located along the Arkansas River in Finney County, Kansas. The streambed in the vicinity is normally dry, however the contributing drainage above Garden City is 24,703 square miles in size and one large rain event has the potential to damage the bridge. Alternatives will be considered that include nonstructural and/or structural features. Nonstructural measures will include a "no action" plan and a vegetative armoring plan. Structural plans include river training, bank armoring, and abutment protection methods.

We are preparing documentation for compliance with the National Environmental Policy Act of 1969 and would appreciate comments from your agency concerning fish and wildlife species of concern that might occur in the project area.

If you have any questions or require additional information, please contact Mr. Jerry Sturdy at 918-669-4397.

Sincerely,

Larry D. Hogue, P.E.
Chief, Planning, Environmental and
Regulatory Division

Restoration for the project was coordinated with the U.S. Fish and Wildlife Service, Manhattan, Kansas; and the Kansas Parks and Wildlife Department. Recommendations provided by personnel from those agencies were incorporated into Section 6.0. RESTORATION PLAN.

APPENDIX D

CULTURAL RESOURCES COORDINATION

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 22, 2004

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Ms. Mary R. Allman
State Historic Preservation Officer
Historic Preservation Office
Kansas State Historical Society
6425 SW 6th Avenue
Topeka, KS 66615-1099

Dear Ms. Allman:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed streambank protection project for Garden City, located in Finney County, Kansas.

Garden City has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to address erosion problems that are currently threatening the State Highway 83 Bypass Bridge. Enclosed are pictures of the proposed project area, and a preliminary design of streambank protection features, which will include shoreline riprap and a rock-filled trench near the upstream side of the southern highway embankment.

We request your recommendations on how best to proceed with this undertaking for the purposes of identifying and evaluating cultural resources within the project area.

Thank you for your assistance. If you have any questions, please contact Mr. Ken Shingleton, Archaeologist, at 918-669-7661.

Sincerely,

Scott Henderson for

Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

KANSAS

KSR&C No. 04-03-227

Kansas State Historical Society
Dick Pankratz, *Director, Cultural Resources Divison*

KATHLEEN SEBELIUS, GOVERNOR

April 5, 2004

Larry D Hogue PE
Chief, Planning Environmental & Regulatory Div
Dept of the Army
COE Tulsa District
1645 S 101st E Ave
Tulsa OK 74128-4609

RE: COE Streambank Protection Project, Garden City, Highway 83 Bypass – Project S21-T24S-R22W
Finney County

Dear Mr. Hogue:

The Kansas State Historic Preservation Office has reviewed its cultural resources files for the area of the above referenced project in accordance with 36 CFR 800. The project as proposed should have no effect on properties listed on the National Register of Historic Places or otherwise identified in our files. This office has no objection to implementation of the project.

Any changes to the project area that include additional ground disturbing activities will need to be reviewed by this office prior to beginning construction. If construction work uncovers buried archeological materials, work should cease in the area of the discovery and this office should be notified immediately.

This information is provided at your request to assist you in identifying historic properties, as specified in 36 CFR 800 for Section 106 consultation procedures. If you have questions or need additional information regarding these comments, please contact Will Banks 785-272-8681 (ex. 214) or Jennifer Epperson (ex. 225). Please refer to the Kansas Review & Compliance number (KSR&C#) above on all future correspondence relating to this project.

Sincerely,

Terry Marmet
Acting State Historic Preservation Officer

Richard Pankratz

Richard Pankratz, Director
Cultural Resources Division

RDP/cg

6425 SW Sixth Avenue • Topeka, KS 66615-1099
Phone 785-272-8681 Ext. 217 • Fax 785-272-8682 • Email dpankratz@kshs.org • TTY 785-272-8683
www.kshs.org

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 10, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Alonzo Chalepah, Chairman
Apache Tribe of Oklahoma
P.O. Box 1220
Anadarko, OK 73005

Dear Chairman Chalepah:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed environmental restoration project for Garden City, located in Finney County, Kansas.

Garden City, Kansas, has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to perform environmental restoration along the banks and adjacent areas of the Arkansas River. Under Section 1135(b) of the Water Resources Development Act of 1986 (as amended), USACE has the authority to assist in the development of environmental restoration projects. As the result of a reconnaissance phase study of project area, recommendations have been developed that will be further explored during the preparation of a feasibility report on the proposed project.

As presently defined, the proposed environmental restoration work in the vicinity of Garden City (Sections 19-21, T24S R32W; Sections 8, 9, 13-17, and 22-24, T24S R33W) consists of reestablishing riparian habitat along the existing river corridor and creating playa lake type wetlands in the upland habitat off the channel (see enclosed map). In accordance with Section 106, the Tulsa District will be conducting archaeological investigations of potentially affected areas. If historic properties are identified, they will be evaluated for eligibility to the National Register of Historic Places.

Please review these areas surrounding Garden City, Kansas for information that you may be willing to share with us on archaeological sites, historic properties, sacred sites, or traditional cultural properties that may be significant to you. Information you may be able to provide will assist us in assessing the effects of the proposed project on cultural resources.

Any information or comments you are able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

Louis E. Vogele, Jr.

for Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 10, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Robert Tabor, Chairman
Cheyenne-Arapaho Tribes of Oklahoma
P.O. Box 38
Concho, OK 73022

Dear Chairman Tabor:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed environmental restoration project for Garden City, located in Finney County, Kansas.

Garden City, Kansas, has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to perform environmental restoration along the banks and adjacent areas of the Arkansas River. Under Section 1135(b) of the Water Resources Development Act of 1986 (as amended), USACE has the authority to assist in the development of environmental restoration projects. As the result of a reconnaissance phase study of project area, recommendations have been developed that will be further explored during the preparation of a feasibility report on the proposed project.

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Sincerely,

Louis E. Vogele, Jr.

for Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 10, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Johnny Wauqua, Chairman
Comanche Indian Tribe of Oklahoma
P.O. Box 908
Lawton, OK 73502

Dear Chairman Wauqua:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed environmental restoration project for Garden City, located in Finney County, Kansas.

Garden City, Kansas, has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to perform environmental restoration along the banks and adjacent areas of the Arkansas River. Under Section 1135(b) of the Water Resources Development Act of 1986 (as amended), USACE has the authority to assist in the development of environmental restoration projects. As the result of a reconnaissance phase study of project area, recommendations have been developed that will be further explored during the preparation of a feasibility report on the proposed project.

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Any information or comments you are able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

Louis E. Vogele, Jr.

for Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 10, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Billy Evans-Horse, Chairman
Kiowa Indian Tribe of Oklahoma
P.O. Box 369
Carnegie, OK 73015

Dear Chairman Evans-Horse:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed environmental restoration project for Garden City, located in Finney County, Kansas.

Garden City, Kansas, has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to perform environmental restoration along the banks and adjacent areas of the Arkansas River. Under Section 1135(b) of the Water Resources Development Act of 1986 (as amended), USACE has the authority to assist in the development of environmental restoration projects. As the result of a reconnaissance phase study of project area, recommendations have been developed that will be further explored during the preparation of a feasibility report on the proposed project.

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Any information or comments you are able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

Louis E. Vogele, Jr.

for Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

DEPARTMENT OF ARMY
CORPS OF ENGINEERS, TULSA DISTRICT
1645 SOUTH 101ST EAST AVENUE
TULSA, OKLAHOMA 74128-4609

March 10, 2003

Planning, Environmental, and Regulatory Division
Environmental Analysis and Compliance Branch

Mr. Gary McAdams, President
Wichita and Affiliated Tribes
P.O. Box 729
Anadarko, OK 73005

Dear President McAdams:

The purpose of this letter is to initiate consultation under Section 106 of the National Historic Preservation Act of 1966 (as amended) concerning a proposed environmental restoration project for Garden City, located in Finney County, Kansas.

Garden City, Kansas, has requested the assistance of the U.S. Army Corps of Engineers (USACE), Tulsa District, to perform environmental restoration along the banks and adjacent areas of the Arkansas River. Under Section 1135(b) of the Water Resources Development Act of 1986 (as amended), USACE has the authority to assist in the development of environmental restoration projects. As the result of a reconnaissance phase study of project area, recommendations have been developed that will be further explored during the preparation of a feasibility report on the proposed project.

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Any information or comments you are able to provide will be appreciated. If you have any questions, please contact Ken Shingleton at 918-669-7661.

Sincerely,

Louis E. Vogele, Jr.

for Larry D. Hogue, P.E.
Chief, Planning, Environmental,
and Regulatory Division

Enclosure

APPENDIX E

PUBLIC COMMENTS

APPENDIX F

NEWSPAPER PUBLIC NOTICE