

**Finding of No Significant Impact  
For  
Spring Creek Watershed Joint District No. 16  
Floodwater Retarding Dam R-1  
Sedgwick County, Kansas**

**Introduction**

The rehabilitation of Spring Creek Watershed Joint District No. 16, Floodwater Retarding Dam (FRD) R-1 (the Project) is a federally assisted action authorized for planning under the Authority of the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566), as amended by Section 313 of Public Law 106-472, The Small Watershed Rehabilitation Amendments of 2000, and in accordance with Section 102(2)(c) of the National Environmental Policy Act of 1969, Public Law 91-190, as amended (42 USC 43221 et seq.) These acts authorize the Natural Resources Conservation Service (NRCS) to provide technical and financial assistance to sponsoring local organizations. Sponsoring local organizations (SLO) of the Spring Creek Project are; Spring Creek Watershed Joint District No. 16, Sedgwick County Conservation District, and Reno County Conservation District.

FRD – R1 was designed as a low hazard class (A) dam. Construction was completed on August 7, 1972. The dam has been reclassified as a high hazard class (C) dam due to increased traffic on MacArthur Road downstream of the dam.

An environmental assessment was undertaken in conjunction with the development of the supplement to the original watershed plan. NRCS contracted with Kansas Livestock Association – Environmental Services to complete the supplemental watershed plan and environmental assessment and is hereafter referred to as the Project Team.

This assessment was conducted in consultation with local, State, Tribal Governments, and Federal agencies as well as with interested organizations and individuals. Data developed during the assessment is available for public review at the following location:

U.S. Department of Agriculture  
Natural Resources Conservation Service  
760 South Broadway  
Salina, Kansas 67401  
[www.ks.nrcs.usda.gov](http://www.ks.nrcs.usda.gov)

**Preferred Alternative**

The preferred alternative is to rehabilitate FRD – R1 to a NRCS high hazard class (C) dam. The existing dam consists of a rolled earthfill dam, a reinforced concrete principal spillway, and earthen auxiliary spillway. The principal spillway includes an 18-inch diameter, steel cylinder, reinforced concrete pipe barrel, a rectangular reinforced concrete riser and metal trash rack. The PL-83-566 purpose for the project is flood prevention.

The preferred alternative will modify FRD – R1 to meet current state and NRCS safety standards and to maintain flood damage reduction benefits. The modifications will include raising to top of dam, widening the auxiliary spillway, replacing principal spillway, replacing existing anti-seep collars with a drainage diaphragm system, and retrofitting the embankment and foundation drainage system. The modifications will extend the life of this structure for an additional 100 years.

**Effect of Preferred Alternative**

The Preferred Alternative results in the following:

- Maintaining the axis of the dam at approximately its present location.
- Raising the top of dam approximately 2.9 feet.
- Installing a new 30-inch diameter reinforced concrete pipe spillway with a standard open-top riser.
- Widening the auxiliary spillway to approximately 240 feet at its present location.
- Elevating the auxiliary spillway crest elevation 1.5 feet.
- Retrofitting upgrades to the foundation, embankment, outlet channel, and drainage system.

Widening the auxiliary spillway would reduce flood pool elevation during freeboard storm events, prevent overtopping of the dam, and prevent erosion of the spillway. Rehabilitation would bring the dam into compliance with federal and state criteria, and the threat of the dam failing during large storms would be reduced. The threat of loss of life or unsafe conditions from the dam failing would be reduced through rehabilitation designed to bring the dam into compliance with NRCS High Hazard Class (C) Dam safety criteria. Flood protection would continue for residents, motorists, and other persons using downstream facilities.

During implementation of the preferred alternative, there would be minor, temporary impacts to water quality due to an increase in turbidity in the pool and the stream during construction. A Stormwater Pollution Prevention Plan (SWPPP) and a National Pollutant Discharge Elimination System (NPDES) general permit for construction will be required for construction. The SWPPP will include the preparation of an erosion and sediment control plan and installation of temporary best management practices to minimize sediment discharge to the pool and the stream during and subsequent to disturbances associated with construction activities.

The preferred alternative extends flood protection for the 145-acre benefit area for the 100-year flood for an additional 100 years. The threat of property damage from the dam failure would be reduced through modifications designed to bring the dam into compliance with Kansas dam safety criteria. Flood protection would continue for private property, roads, and utilities in the breach inundation area.

The preferred alternative requires additional land rights for the enlarged auxiliary spillway, extended dam footprint, and expanded flood pool upstream from the dam. The land use in the benefit area will not be further affected by the preferred alternative.

If the Project disturbs an unmarked burial site or human skeletal remains, permits for excavation, study, display, and reinterment will be required.

The preferred alternative will have No Effect on Federal endangered or threatened species. Additionally, the Project does not impact Kansas State-listed species and, therefore, does not require a KDWP Action Permit.

The preferred alternative extends the current level of flood protection to the downstream transportation facilities from the 100-year flood for an additional 100 years. Traffic interruptions due to flooding are minimal due to the existing dam. Reduced potential of a breach of the existing structure and/or potential flood damage reduces short-term impacts on local transportation facilities and systems.

The wildlife habitat provided by the pool will be temporary lost during construction. Except for possible temporary, minor increases in turbidity near the construction area, which would be minimized by best management practices for control of erosion and sediment runoff, fish habitat would not be affected. By protecting the dam against failure, rehabilitation would ensure the continued, long-term presence of the fish and wildlife habitat in the pool and the availability of water for low-flow augmentation to support fish habitat downstream of the dam. Implementation of this alternative causes permanent loss of 0.5 acre of riparian woodland and 8.0 acres of grassland due to enlargement of the auxiliary spillway and 60 linear feet of stream channel. There could also be minor, temporary disturbances to wildlife due to noise from construction.

The floodplain would not be affected by the preferred alternative.

Seeding activities associated with construction could potentially introduce invasive species. Vegetative establishment associated with the planned activities shall be conducted consistent with The Kansas Seed Law.

The pool upstream from the dam with the preferred alternative will provide nesting, feeding and resting habitat for migratory birds. Migratory birds and their nesting activities will be temporarily disturbed if construction takes place between April 1 and July 15 (disturbance may be prevented by avoiding construction at that time). If construction begins prior to and continues through nesting season, migratory birds will likely nest in other locations thereby minimize adverse effects.

All soils present in the project area considered Prime farmland. This alternative will inundate approximately 20 acres of prime farmland infrequently for short periods and remove 8 acres of prime farmland for construction.

Implementation of this alternative causes permanent loss of 0.5 acre of riparian woodland.

Implementation of this alternative will remove 60 linear feet of stream channel for construction and inundate an additional 375 linear feet of stream channel infrequently for short periods at the new top of Dam elevation. (Frequency of inundation is less than 1% chance and the duration of inundation is estimated at 5 to 10 hours. Neither the frequency nor duration of this impact will change the existing vegetation or physical structure of these native habitats.)

Implementation of this alternative would fill approximately 0.4 acres of wetlands downstream from the dam. Additionally this alternative would inundate approximately 4.9 acres of wetlands infrequently for short periods during extreme storm events. The frequency of inundation would be less than 1% chance and the duration of inundation would be from 5 to 10 hours. Neither the frequency nor duration of this impact will change the existing vegetation or physical structure of these native habitats.

Construction of FRD – R1 in 1972 had long-term direct effects on the environment through the excavation of the site, filling of the structure, and development of a permanent impoundment behind the dam that now provides flood control, incidental recreational opportunities, fish and wildlife habitat, and other incidental benefits.

Since construction, the dam has indirectly affected the natural environment by permanent flooding of the 19.37-acre area of the normal pool, by temporary inundation of the floodplain upstream of the dam during rain events, and by trapping sediment that would otherwise move downstream during rain events. The dam has also altered the hydrology of downstream channel

by reducing downstream peak flows during storm events, and consequently protecting property and people in otherwise flood prone areas.

Rehabilitation of the dam under the alternatives considered would not change the hydrology downstream except for protecting the downstream area from catastrophic flooding that could occur if the dam were to fail. Consequently, there would be no long-term, cumulative effects from the rehabilitation project.

Future actions in the watershed not related to this project include continued changes to upstream and downstream land use as a result of residential, industrial, and commercial development. Rehabilitation of the Dam would not affect future development, but it would allow the dam to safely pass storm flows under extreme rainfall conditions.

### **Alternatives**

No significant adverse environmental impacts will result from the rehabilitation of FRD – R1 to a High Hazard Class (C) Dam.

The planned action is the most practical means of addressing public health and safety issues and continuing to provide flood protection benefits.

Other alternatives considered were No Action/Future without Federal Project; Federal Decommissioning; and Rehabilitation to Low Hazard Class (A) Dam and Breach Proofing in the Inundation Area.

### **Consultation – Public Participation**

Multiple public meetings were held to receive input, discuss problems and opportunities, and issue updates on progress. The following are summaries and general comments received during and after the meetings.

**September 16, 2009 – Project Team/NRCS/SLO.** The Project Team and NRCS met with the SLO to receive input on plan development and the schedule of activities. The SLO provided preliminary guidance on the Project Purpose and Need.

**October 7, 2009 – Public Forum.** A public scoping open forum was held at Garden Plain, Kansas to discuss the rehabilitation of the Dam. A public notice was published in the Wichita Eagle (a daily newspaper published in Wichita, Kansas), and postcard meeting notices were sent to public, local and state officials. Thirteen people attended.

**December 9, 2009 – Project Team/NRCS/SLO.** The Project Team and NRCS met with the SLO to receive input on plan development and the schedule of activities. The SLO provided final guidance on the Project Purpose and Need.

**January 27, 2010 – Public Forum.** A public scoping open forum was held at Garden Plain, Kansas to discuss the rehabilitation of the Dam. A public notice was published in the Wichita Eagle (a daily newspaper published in Wichita, Kansas), and postcard meeting notices were sent to public local and state officials. Approximately 25 people attended; 14 signed the register. The SLO allowed public input at all District Board Meetings prior to and during the planning process. A draft of the Supplemental Watershed Plan and Environmental Assessment was sent to all interested parties from the public scoping meetings and also made available to the general public upon individual request.

The following is a list of federal, state, and local agencies and organizations consulted for the planned project.

- Osage Nation of Oklahoma

- Wichita and Affiliated Tribes [in Oklahoma]
- U.S. Environmental Protection Agency
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- Kansas Department of Agriculture, Division of Water Resources
- Kansas Department of Wildlife and Parks
- Kansas State Historic Preservation Office
- State Association of Kansas Watersheds
- Sedgwick County Conservation District
- Sedgwick County Code Enforcement Department
- Sedgwick County Public Works Department

A draft of the Supplemental Watershed Plan and Environmental Assessment was made available for review and comment. Comments received after the comment period were considered and are included in the administrative record.

**Conclusion**

Based on the environmental assessment summarized above, I find that the proposed action is not a major Federal action significantly affecting the quality of the human environment, and I have determined that an environmental impact statement for the Spring Creek Watershed Plan is not required.

  
\_\_\_\_\_  
ERIC B. BANKS  
State Conservationist

11-18-10  
Date