RECORD OF DECISION
REMOVAL AND DISPOSAL OF SEDIMENT AND RESTORATION OF WATER STORAGE AT JOHN REDMOND RESERVOIR, KANSAS

The Final Programmatic Environmental Impact Statement (FPEIS) Prepared for the Removal and Disposal of Sediment and Restoration of Water Storage at John Redmond Reservoir, Kansas, dated September 2014, provides National Environmental Policy Act (NEPA) documentation supporting the removal and disposal of sediment at John Redmond Reservoir, Coffey County, Kansas. The purpose of the proposed action is to partially restore original conservation pool storage and associated aquatic habitat lost to sedimentation for the benefit of regional water supply users, public recreation, and the John Redmond Reservoir aquatic ecosystem. Using hydraulic dredging techniques, the proposed action will remove accumulated sediment from the conservation pool and transport sediment to upland confined disposal facilities (CDFs) in close proximity to the reservoir. Dredging and disposal activities will be conducted in a phased approach and fully-funded and implemented by the State of Kansas through the Kansas Water Office (KWO) under authority to modify a federal project pursuant to 33 U.S.C., Section 408.

A broad range of alternatives were developed and screened to determine viable alternatives to carry forward for detailed impact analysis in the FPEIS. Alternatives considered but screened from further analysis for reasons documented in the FPEIS include: (1) sediment removal through less extensive dredging to only prevent additional storage loss but not increase conservation pool storage capacity, (2) sediment removal through flushing of sediments during high flow periods, (3) construction of new water supply reservoir(s) in the Neosho River Basin, (4) construction of a pipeline transferring water from the Missouri River Basin to the Neosho River Basin, and (4) direct land application and reuse of CDFs.

Alternatives selected for further detailed analyses in the FPEIS included the following:

Alternative 1: Proposed (preferred) Action: *Dredge and dispose of sediments from the conservation pool at a rate and quantity sufficient to ensure availability of 55,000 acre-feet of conservation storage.* This alternative would allow for dredging and disposal of sediments to ensure adequate storage for municipal and industrial water supply consistent with KWO needs and to support other authorized project purposes. Sediment removal would be conducted with a barge-mounted, portable hydraulic dredge with a cutter head ranging from 16- to 20-inches and dredged materials transport to CDFs via above-ground pipeline. Only sediment deposited since lake construction would be removed to ensure original project construction characteristics and contours are maintained. In the first 12- to 17-months, dredging equipment would be deployed, the first 3 CDFs (totaling 180 surface acres) constructed, and approximately 600,000 cubic yards of sediment removed and deposited in the first three CDFs. Initial CDFs would include those specifically identified in the FPEIS as CDFs "A" and "B" both of which are on Federal fee lands below John Redmond Dam, and a third

CDF ("E") located below John Redmond Dam and constructed partially on Federal fee and partially on private property. Following disposal and drying of dredged materials, CDF sites would be restored to original land use and monitored to ensure previous land uses are supported and maintained. Specific environmental impacts associated with these initial activities are addressed in the FSEIS and summarized in Table 4-4 of the FSEIS. Also during the first 5 years, an additional 2.4 million cubic yards of material would be removed and disposed of in yet-to-be determined numbers and locations of CDFs totaling approximately 320 surface acres on private property. Final project phasing would include maintenance dredging and disposal to ensure desired storage capacity over a period of 60 to 372 months. While evaluated on a programmatic level, site-specific impacts to these future activities are yet to be determined and will require further, site-specific impact analysis. Project phasing, associated periods of analyses, and additional NEPA analyses required for approval consideration of additional activities beyond those analyzed in the FPEIS for this alternative are identified in Table 1-1 of the FPEIS.

Mitigation measures to be employed by the State of Kansas would include avoidance of high quality fish and wildlife habitat in selection of CDF sites, implementation of standard construction best management practices (BMPs), and safeguards against introduction of invasive species during project construction. Specific mitigation measures to be employed by the KWO include restoration of CDF sites following their use for dredge material disposal. After their temporary use, land use would be restored by collapsing CDF berms and re-grading accumulated soils to promote drainage. This would be followed by seeding of native grasses and other vegetation and return of these areas to a more natural state. In many cases, this restoration will result in habitat quality conditions exceeding those present pre-dredging.

Alternative 2: *Dredge and dispose of sediments to restore the John Redmond conservation pool to near original capacity.* This alternative would involve dredging and disposal of sediments of a quantity sufficient to restore the pool to near original capacity and configuration. Restoration of the pool would require removal of approximately 42 million cubic yards of sediment using methods similar to those described under Alternative 1. Over time, approximately 38 100-acre CDFs could be required for disposal of sediments under this alternative. This alternative would be excessively expensive for the Kansas Water Office to implement and would exceed the desired 55,000 acre-feet of conservation storage.

Alternative 3: *No action.* Under the no action alternative, no sediment removal from John Redmond Reservoir or disposal of dredged materials would occur. Sediment would continue to accumulate in the reservoir at or near current rates, reducing conservation pool storage capacity available for project purposes.

The environmentally preferable alternative is the no action alternative. This alternative would forego environmental impacts associated with the dredging activity

itself as well as those associated with construction and use of CDFs for material disposal. However, this alternative does not address the purpose and need for the action as documented in the FPEIS.

All appropriate laws, executive orders, regulations, and guidance were considered in the evaluation of alternatives and selection of the recommended actions. Information considered in my determination includes the reviews of other Federal, State, and local agencies, Native American Tribal governments, the public, and associated reviews by my technical team All practicable means to avoid or minimize environmental harm from the alternative selected have been adopted. Based on review of the FPEIS, I approve the implementation of the specific initial activities associated with the preferred alternative as summarized above and listed under "Phase 1" of Table 1-1 of the FPEIS.

I find the proposed action -- at this stage of project development -- to be technically feasible, in compliance with environmental laws and regulations, and in the public interest. Consistent with the programmatic approach, I specifically approve the dredging of 600,000 cubic yards of accumulated sediment, construction of three specific CDFs wholly or partially located on Government-owned fee lands at John Redmond Reservoir (identified as CDFs A, B, and E in the FPEIS), disposal of dredged material in these three CDFs, discharge of CDF effluent into the Neosho River in accordance with all required permit conditions, and restoration and monitoring of these CDF sites once the initial dredging phase is complete. If CDF discharge is alternatively required to be pumped back into John Redmond Reservoir, employing additional pipeline and booster pumping, all actions including pipeline crossing of the Neosho River will require additional environmental review, employ all practicable BMPs, and discharge to the reservoir will meet required permit/authorization conditions, Consistent with the programmatic approach and phased periods of analyses used in the FPEIS (Table 1-1), further consideration of approval for additional sediment removal, construction and use of additional CDFs on private property, and restoration of these additional CDF facilities will be dependent upon further impact assessment documented in future and tiered environmental analyses under NEPA.

This Record of Decision completes the National Environmental Policy Act process for this stage of project implementation.

David C. Hill
Brigadier General, U.S. Army
Commanding

18 MAY 2015