RECORD OF DECISION
FINAL SUPPLEMENT TO THE FINAL ENVIRONMENTAL STATEMENT FOR THE AUTHORIZED RED RIVER CHLORIDE CONTROL PROJECT WICHITA RIVER ONLY PORTION (APRIL 2003)

The U.S. Army Corps of Engineers (USACE), Tulsa District prepared a Supplement to the Final Environmental Statement for the Authorized Red River Chloride Control Project Wichita River Only Portion (SFES) to address potential environmental impacts associated with chloride control measures in the Wichita River Basin, Texas. The proposed chloride control project is a Federal endeavor to reduce the natural occurring levels of chlorides in the Wichita River. Natural mineral concentrations from the upper reaches of the Wichita River Basin render downstream waters unusable for most beneficial purposes. The goal of the project is to improve the quality of the water resources to the extent that they would be more readily usable for municipal, industrial, and agricultural purposes. The project sponsor is the Red River Authority (RRA) of Texas. Administration policies do not support the control of chlorides to improve water quality for municipal, industrial, or agricultural irrigation through implementation of Corps projects. The Administration's policies would also require a non-Federal sponsor to share in the initial costs of implementation and assume operation and maintenance costs. Thus, the Corps will pursue construction of the project only as funds are specifically provided by Congress.

A final environmental statement (FES) for the Red River Chloride Control Project (RRCCP), dated July 1976 and of which the Wichita River was a portion, was filed with the Environmental Protection Agency on 18 May 1977, and published in the Federal Register on 27 May 1977. Economic reevaluations have been completed several times since 1976 and have confirmed the proposed project's effectiveness. The USACE was approved to undertake a reevaluation of the Wichita River Basin features to be titled "Wichita River Basin Project Reevaluation" (Reevaluation). Due to changes in the proposed project following FES filing for the RRCCP, a supplement to the FES was required to comply with the intent of the National Environmental Policy Act (NEPA) as defined in paragraph 1502.9, 40 Code of Federal Regulations (CRF). The NEPA scoping process was initiated and a Notice of Intent to prepare the Wichita River supplement to the FES was published in the Federal Register on 22 July 1998.

The SFES for the Wichita River only portion of the project was prepared to address significant environmental issues and project design changes including: (a) deletion of brine collection at Areas VI, IX, XIII, and XIV, (b) changes in brine disposal locations for Area VII, (c) changes in the pool size at Truscott Brine Disposal Reservoir, (d) changes in proposed land use at Crowell Mitigation Area, and (e) changes in methods of collection and disposal at Areas VII and X. The SFES addresses potential environmental impacts of implementation and operation of chloride control measures on the hydrological, biological, and water quality components of the North, Middle and South Forks of the Wichita River, Texas; the lower Wichita River; the upper Red River downstream of its confluence with the Wichita River to Lake Texoma and Lakes Kemp, Diversion, and Texoma. The supplement also addresses the potential environmental impacts associated with increased selenium concentrations at Truscott Brine Disposal Reservoir, impacts on Federally-listed threatened and/or endangered species, fish and wildlife mitigation, and unquantifiable/undefined impacts.

The authority to construct this project is contained in the following:

- Section 203, Flood Control Act of 1966, Public Law 89-789, Arkansas-Red River Basins, Texas, Oklahoma and Kansas, Part 1, 7 November 1966.
- Section 201, Flood Control Act of 1970, Public Law 91-611, Arkansas-Red River Basins Water Quality Control Study, Texas, Oklahoma and Kansas, Part II, 31 November 1970.
- Section 74, Water Resources Development Act of 1974, Public Law 93-251, 7 March 1974.
- Section 153, Water Resources Development Act of 1976, Public Law 94-587, 22 October 1976.
- Section 1107, Water Resources Development Act of 1986, Public Law 99-662, 17 November 1986, General Design Phase I Plan Formulation, Volumes I and II (DM 25), November 1980.

The Reevaluation and SFES for the Authorized Red River Chloride Control Project, Wichita River Only Portion and the process leading to a selected alternative involved consideration of a wide variety of alternatives, including a "no-action" alternative, 14 USACE alternatives, and 12 U.S. Fish and Wildlife Service (USFWS)/Texas Parks and Wildlife (TPWD) alternatives.

Under the "no-action" alternative, the unconstructed chloride control features would not be completed while the existing structures would be maintained and operated. The "no-action" alternative was ultimately rejected because it would not adequately address the project's purpose and need. However, the "no-action" alternative was carried forward as a baseline for comparison to other alternatives.

Fourteen (14) alternatives were developed by the USACE for achieving lower concentrations of chlorides in the Wichita River. The objective of the 14 USACE action alternatives was to improve water quality in the Wichita River to a point where it would be economically useful for municipal, industrial, and agricultural water supply. A summary of the USACE action alternatives is provided in the following table.

USACE CHLORIDE CONTROL ALTERNATIVES

ALT. NO.	ALTERNATIVE COMPONENTS
1	Construct low water dam collection facilities at Area VII. Deep well inject Area VII brine. Continue to pump Area VIII brine to Truscott Brine Reservoir. Deep well inject Area X brine collected from constructed facilities.
2	Construct low water dam collection facilities at Area VII. Deep well inject Area VII brine. Continue to pump Area VIII brine to Truscott Brine Reservoir. Pump Area X brine to Truscott Brine Reservoir. No changes to Truscott Brine Reservoir embankment.
3	Construct low water dam collection facilities at Area VII. Pump area brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Deep well inject Area X brine. Raise Truscott Brine Reservoir embankment by 17.2 feet.
4	Construct low water dam collection facilities at Area VII. Deep well inject Area VII brine. Pump Area VIII brine to Truscott Reservoir. Indefinitely defer construction at Area X. No changes to Truscott Brine Reservoir embankment.

5	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Pump Area X brine to Truscott Brine Reservoir. Raise Truscott Brine Reservoir embankment by 33.2 feet.
6	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Indefinitely defer construction at Area X. Raise Truscott Brine Reservoir embankment by 17.2 feet.
7	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Continue operation of the outfall spray field at Truscott Brine Reservoir assuming 25 percent flow reduction. Pump Area X brine to Truscott Brine Reservoir. Raise Truscott Brine Reservoir embankment by 17.2 feet.
7a	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Construct pipeline from Area X to Truscott Brine Reservoir and pump Area X brine to Truscott Brine Reservoir. Construct spray fields at intake and outfall of each pipeline (Area VII, Area VIII (existing) and Area X). Potentially raise top of Truscott Brine Reservoir dam by 2.4 feet using a stemwall. (at a later date)
8	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Continue operation of the Area VIII outfall spray field at Truscott Brine Reservoir assuming 25 percent flow reduction. Indefinitely defer construction at Area X. Raise top of Truscott Brine Reservoir dam by 2.4 feet using stemwall.
8a	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Construct spray fields at intake and outfall of each pipeline (Area VII, Area VIII (existing) and Area X). Continue pumping Area VIII brine to Truscott Brine Reservoir. Indefinitely defer construction at Area X. No changes to Truscott Brine Reservoir embankment.
9	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue pumping Area VIII brine to Truscott Brine Reservoir. Continue operation of the Area VIII outfall spray field at Truscott Brine Reservoir assuming 25 percent flow reduction. Indefinitely defer construction at Area X. Raise top of Truscott Brine Reservoir embankment by 4.4 feet.
10	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Continue operation of the Area VIII outfall spray field at Truscott Brine Reservoir assuming 25 percent flow reduction. Indefinitely defer construction at Area X. Raise Truscott Brine Reservoir dam 4.4 feet for extra storage.
11	Construct low water dam collection facilities at Area VII. Pump Area VII brine to Truscott Brine Reservoir. Continue to pump Area VIII brine to Truscott Brine Reservoir. Indefinitely defer construction at Area X. Raise top of Truscott Brine Reservoir embankment 19.2 feet for extra storage.
12	Indefinitely defer construction at Area VII. Continue to pump Area VIII brines to Truscott Brine Reservoir. Pump Area X to Truscott Brine Reservoir. No changes to Truscott Brine Reservoir embankment.

An additional 12 alternatives were developed by the USFWS with the TPWD. The objectives of the 12 USFWS/TPWD alternatives were to lower chloride control impacts by reducing brines pumped to Truscott and eliminating potential selenium impacts, as well as replacing stream habitat and lessening the impact of zero flow days on refugia fish populations. A summary of these alternatives is provided in the following table. Numbers in parentheses refer to the numbering scheme used in the Reevaluation Report.

USFWS/TPWD WICHITA RIVER CHLORIDE CONTROL ALTERNATIVES

ALT. NO.	ALTERNATIVE COMPONENTS
13 (4a1)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII to Raggedy Creek. Continue to pump Area VIII brines to Truscott Brine Reservoir. Defer construction at Area X indefinitely.
14 (4a2)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII to Paradise Creek. Continue to pump Area VIII brines to Truscott Brine Reservoir. Defer construction at Area X indefinitely.
15 (4a3)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII to Beaver Creek. Continue to pump Area VIII brines to Truscott Brine Reservoir. Defer construction at Area X indefinitely.
16 (4b1)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Raggedy Creek. Continue to pump Area VIII brine to Truscott Brine Reservoir. Construct pipeline and pump Area X brines to Raggedy Creek.
17 (4b2)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Paradise Creek. Continue to pump Area VIII brine to Truscott Brine Reservoir. Construct pipeline and pump Area X brines to Paradise Creek.
18 (4b3)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Beaver Creek. Continue to pump Area VIII brine to Truscott Brine Reservoir. Construct pipeline and pump Area X brines to Beaver Creek.
19 (4c1)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Raggedy Creek. Construct new pipeline from Area VIII to Raggedy Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Defer construction at Area X indefinitely. Drain Truscott Brine Reservoir.
20 (4c2)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Paradise Creek. Construct new pipeline from Area VIII to Paradise Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Defer construction at Area X indefinitely. Drain Truscott Brine Reservoir.
21 (4c3)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Beaver Creek. Construct new pipeline from Area VIII to Beaver Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Defer construction at Area X indefinitely. Drain Truscott Brine Reservoir.
22 (4d1)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Raggedy Creek. Construct new pipeline and pump brines from Area VIII to Raggedy Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Construct new pipeline and pump brines from Area X to Raggedy Creek. Drain Truscott Brine Reservoir.

23 (4d2)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Paradise Creek. Construct new pipeline and pump brines from Area VIII to Paradise Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Construct new pipeline and pump brines from Area X to Paradise Creek. Drain Truscott Brine Reservoir.
24 (4d3)	Construct low water dam collection facilities at Area VII. Construct pipeline and pump Area VII brine to Beaver Creek. Construct new pipeline and pump brines from Area VIII to Beaver Creek. Abandon existing Area VIII pipeline to Truscott Reservoir. Construct new pipeline and pump brines from Area X to Beaver Creek. Drain Truscott Brine Reservoir.

There is no one alternative that definitively can be identified as the "environmentally preferred alternative." During the evaluation process, environmental resource values were fully integrated into the decision-making process. The extensive environmental coordination and evaluation process, documented in both the SFES and the Reevaluation Report, considered a wide range of potential impacts that might conceivably be associated with chloride control. The evaluations considered construction and operational factors and also considered short term, long term, and cumulative factors. As a result of a number of scientific studies and evaluations described in the SFES, the Corps concluded that by implementing appropriate and reasonable mitigation measures as presented in the SFES and by developing and implementing an extensive Environmental Operational Plan (Appendix A of the SFES), Alternative 7a could best meet both technical and environmental project goals. The USFWS and TPWD participated throughout the reevaluation analysis and provided 12 alternative plans that were evaluated and considered. These alternatives would not generally control naturally occurring chlorides. Rather, the alternatives would create additional brine streams for the purpose of expanding the habitat of saline tolerant fish species by pumping a portion of one to three major brine sources in the Wichita River Basin into freshwater streams in the Wichita or Pease River Basins. Some of the USFWS/TPWD alternatives also include closure of substantial portions of the project that were completed in 1987 and are currently in operation. The saline tolerant species are not considered threatened or endangered and the expansion of their habitat would eliminate a like amount of freshwater stream habitat, which in this arid region is considered significantly more valuable. These alternatives would also not fulfill the objectives of the chloride control authorization or meet the needs of the sponsor, and were not viewed to be acceptable by the sponsor, impacted landowners, or the affected public. These alternatives could not be implemented due to social or economic or environmental issues. The USFWS and TPWD continue to recommend further consideration of these alternatives.

The USACE selected alternative is Alternative 7a. Alternative 7a is the National Economic Development (NED) plan. The plan produces the greatest net economic development benefits and is technically sound, economically justified, environmentally sustainable, and best meets the authorized objectives of chloride control. Alternative 7a consists of three low-flow brine dams (Areas VII, VIII, and X) for collection of brine, five evaporation spray fields for brine volume reduction before and after pumping, three brine pumping plants, and three brine pipelines to transport brine from the low-flow brine dams to the one brine disposal reservoir (existing

Truscott Brine Reservoir) for holding and evaporating concentrated brine. Implementation of Alternative 7a assumes that an experimental chloride control project (Area V) at Estelline Springs, Texas, located in the Red River Basin (but not in the Wichita River Basin) would continue operation. Also included are mitigation measures for terrestrial and aquatic mitigation.

The currently existing features of Alternative 7a consist of:

- Area VIII low-flow brine dam - operating,
- Area X low-flow brine dam – completed,
- Area X pump house - completed,
- Area VIII experimental evaporation field - operating,
- Area VIII pumping plant and Area X pump house - operating,
- Area VIII pipeline - operating,
- Truscott Brine Lake - operating,
- Area V experimental project - operating (assumed future conditions), and
- Crowell Mitigation Area - operating (for wildlife and recreation).

The unconstructed features of Alternative 7a consist of:

- Area VII low-flow brine dam,
- Areas VII, VIII, and X evaporation fields,
- Area X pumps and Area VII pumping plant,
- Areas VII and X pipelines, and
- Aquatic mitigation at Lake Kemp.

The basis for selection of Alternative 7a included consideration of a number of factors involving relationship to Congressional direction and project goals, economic evaluation, and environmental sustainability. Foremost in this decision was consideration of a myriad of environmental issues raised by commenting natural resource agencies including the USFWS, TPWD, and Oklahoma Department of Wildlife Conservation (ODWC). These issues, the USACE evaluation of potential impacts associated with these matters, and findings and conclusions regarding environmental impacts are thoroughly documented in the SFES and response to public and agency comments as well as the project Reevaluation Report.

The purpose and need for chloride control is to improve the quality of the Wichita River water resources to the extent that they would be usable for municipal, industrial, and agricultural purposes. The Wichita River system is ideally located to provide a supplemental water supply to a multi-county region of North Texas which is expected to collectively require an additional source supply by 2015. In addition, some communities have an immediate need for a supplemental source supply to accommodate present water supply shortages. In summary, supplemental water supplies are contingent upon improved water quality.

Alternative 7a would control about 83 percent of the natural chloride load discharged from the three primary brine sources on the North, Middle and South Forks of the upper Wichita River Basin. That equates to a reduction of 409 tons per day of chlorides in the Wichita River. At Lake Kemp, the results would include a 76 percent reduction of chloride concentrations. A

comparison of chloride concentrations at Lake Kemp without chloride versus implementation of Alternative 7a indicates:

- If natural chlorides are not controlled, chloride concentrations would generally range from 696 milligrams per liter (mg/l) to 1,985 mg/l. The concentrations would be below 1,312 mg/l only 50 percent of the time. Chloride concentrations at Lake Kemp would likely never meet the secondary drinking water standard (300 mg/l) set by the Texas Commission on Environmental Quality.

- With implementation of Alternative 7a, chloride concentrations would generally be expected to range from 166 mg/l to 489 mg/l. The concentrations would be expected to be below 318 mg/l 50 percent of the time. Chloride concentrations at Lake Kemp would be expected to meet the Texas secondary drinking water standard 40 percent of the time and be only 18 mg/l over the standard an additional 10percent of the time.

During the evaluation process, environmental resource values were fully integrated into the decision-making process. The extensive environmental coordination and evaluation process, documented in both the SFES and the Reevaluation Report, considered a wide range of potential impacts that might conceivably be associated with chloride control. The evaluations considered construction and operational factors and also considered short term, long term, and cumulative factors. As a result of a number of scientific studies and evaluations described in the SFES, the USACE concluded that by implementing appropriate and reasonable mitigation measures as presented in the SFES and by developing and implementing an extensive Environmental Operational Plan (Appendix A of SFES), Alternative 7a could best meet both technical and environmental project goals.

Due to greater economic, technical, and regulatory viability, Alternative 7a was found to best serve the purpose and need for the proposed action. Consequently, Alternative 7a is the selected plan. The other alternatives would not serve the purpose and need for one or more of the following reasons:

- They would not meet NED requirements (costs > benefits),
- They would not provide substantial reduction of brine flows (chloride and TDS concentrations) to meet water quality standards consistently,
- They would not provide consistent water quality in a cost effective manner, or
- They could not be completed due to technical, regulatory, or other feasibility issues.

Throughout project formulation, the USACE attempted to employ all practicable means to avoid or minimize environmental harm resulting from the proposed plan. This included proposed mitigation for those impacts determined to be in need of such action based on science-based study and evaluation. For environmental issues for which the USACE concluded that mitigation was not required, but for which considerable uncertainty or controversy exists, the USACE has agreed to fund and implement an extensive monitoring program for potentially-affected environmental components. The purpose of such a program would be to verify conclusions regarding anticipated impacts or, in the case of unanticipated impacts, provide a means of avoiding, minimizing, or compensating for adverse effects. Though criticized by several

commenting resource agencies, the USACE believes this approach provides for the greatest degree of balance among science-based evaluation, environmental protection, and fiscal responsibility. In accordance with this approach, both an Environmental Operational Plan (EOP) and a Mitigation Plan (MP) have been included in the SFES (Appendices A and B, respectively).

The EOP provides for collection of baseline data and post-project implementation monitoring and, in some instances, proposes threshold values for corrective action for the following environmental components: (a) stream water quality monitoring at twelve gaging sites throughout the Wichita and Red River Basin, (b) Lake Kemp water quality monitoring, (c) Upper Wichita River ecosystem monitoring with an emphasis on endemic fish assemblages, (d) selenium monitoring and breeding bird surveys at Truscott Brine Lake and brine collection facilities, and (e) preliminary design of a process-based multi-agency Selenium Action Plan for addressing selenium-related concerns. An implementation schedule and associated costs are likewise provided in the EOP.

The MP specifically addressed mitigation measures to be implemented as needed for terrestrial resources, aquatic resources in the Wichita River and at Lake Kemp, and conceivable measures which might be employed in response to selenium impacts (if any) at Truscott Brine Disposal Reservoir. These measures are summarized below.

Crowell Mitigation Area was originally designed and authorized as a brine disposal reservoir for Areas VII and IX. However, the area formerly identified and purchased for construction of Crowell Brine Lake would, under the selected plan, now be utilized for terrestrial mitigation needs. Mitigation would be required for lands converted to spray fields, pipeline conveyance, pump stations, and other features to be constructed.

The Crowell Mitigation Area is located on Canal Creek, a tributary of the Pease River. The location is about 8 miles northwest of the town of Crowell in Foard County, Texas. Authorized mitigation for the proposed project included: fee acquisition, fencing, developing approximately 10,000 acres at the reservoir, and making those lands available to the TPWD. The completed acquisition, increased through the acquisition of uneconomic remnants, has 11,954 acres of mitigation lands under Federal ownership. Several management opportunities are being investigated, but as yet have not been determined.

The goal of the chloride control measures is to reduce brine loadings to the Wichita River. One consequence of the chloride control measures is, therefore, the conversion of brine aquatic habitat to less saline habitat. Neither concentration nor flow reductions are anticipated to adversely impact fish communities. Therefore, no mitigation is recommended.

The USACE agrees that mitigation could be required for Lake Kemp fishery losses related to operation of chloride control structures. The USACE recognizes that impacts to some species may be unmitigable; however, year class losses to some species can be partially mitigated through supplemental stocking in years when losses can be validated by scientific fishery surveys conducted by TPWD as part of their ongoing fishery management activities and reservoir operations. Habitat manipulation and alternation can be implemented to help mitigate for recruitment and availability of shoreline habitat loss. Brush rows strategically placed in

selected coves would be provided to help with successful recruitment of sport fish. Also, if warranted, periodic stockings of individuals of affected species (largemouth bass) could assist in mitigating this potential impact of the selected plan. Specific mitigation measures would need to be developed and implemented on a local level with coordination through the USACE, USFWS, and TPWD. Implementation of these features is therefore part of the selected plan.

Mitigation, if necessary for avoiding selenium impacts would be implemented in accordance with the Selenium Action Plan (Appendix A of SFES). With respect to selenium remediation, several general categories of potential remedial measures are conceivable. Site-specific relevance as well as technical or economic feasibility would vary for these measures and may or may not be appropriate for this project.

If such measures were employed, the range of potential remedial measures for alleviating selenium concerns at Truscott Brine Disposal Reservoir or other proposed project features could range from very simple and inexpensive to more complex, costly solutions. If ever required, these measures would be recommended by a multi-agency selenium action panel.

Agency coordination during SFES preparation for this project has been characterized by controversy regarding potential environmental impacts. Primarily, areas of technical disagreement have existed between the USACE and three commenting resource agencies (USFWS, TPWD, and ODWC). While many issues have been resolved through coordination, based on comment letters received on the final SFES (Attachment A), it appears that a number remain. These differing opinions are well documented in resource agency comments and USACE responses for both the draft SFES (contained in Appendix D of the final SFES) and final SFES (Attachment B to this Record of Decision). Areas of disagreement generally center around the following issues:

- USACE assumptions regarding brush control implementation in the Wichita River Basin and influence on SFES impact evaluations
- Potential for golden algae impacts associated with releases from brine collection facilities
- Inclusion / elimination of Area X in the proposed plan
- Selenium-related impacts at Truscott Brine Lake
- Impacts of chloride reduction on turbidity, productivity, and sport fish in Lake Texoma, Oklahoma and Texas
- Issues regarding Oklahoma water quality standards and chloride reduction
- Salinity- and flow-related impacts to native prairie fish assemblages of Upper Wichita River Basin
- Issues regarding "piecemealing" of the RRCCP and analysis of cumulative impacts
- Usefulness of the EOP / adaptive management process
- Impacts to State of Texas Dundee Fish Hatchery
- Appropriate level of mitigation for impacts at Lake Kemp

Despite these areas of controversy, it is the USACE opinion that all above issues have been thoroughly considered and evaluated, often based upon studies specifically requested by the USFWS, TPWD, and ODWC. The USACE is of the opinion that impact assessments for these issues have been thoroughly evaluated based on science-based analyses and that thorough

explanations for the basis of these findings appear both in the SFES and very detailed responses to agency comments (Appendix D of final SFES). The resource agency's comments have remained relatively unchanged throughout the coordination period regardless of additional studies performed by the USACE, thorough coordination of the issues, and detailed response to all concerns. Many agency comments appear to stem from previous conceptions that are not supported by current studies, Corps positions, or project design. The USACE therefore respectfully disagrees with the USFWS, TPWD, and ODWC regarding severity of impacts for issues listed above.

As part of NEPA requirements, a Notice of Intent (NOI) was published in the Federal Register on July 22, 1998 announcing the intent to prepare a Supplement to the 1976 FES and providing a description of the Wichita River chloride control project. A scoping process involving solicitation of ideas and input from the public concerning the Reevaluation was initiated. Two public information workshops were hosted by the USACE in December of 1998 – one in Wichita Falls, Texas and the other in Durant, Oklahoma. Key issues were identified for evaluation through the NEPA process.

The plan of study, including assumptions and methodologies was presented to the natural resource agencies early in the scoping process. During the fall of 2001, the USFWS and the TPWD stated concerns about chloride control measures for the Reevaluation under evaluation by the USACE. In an August 2001 letter to the USACE, the USFWS stated their two biggest concerns and identified new concepts for chloride control. In a September 2001 letter to the RRA, the TPWD presented two primary, three secondary, and one continuing concern with respect to the proposed Reevaluation alternatives. In October 2001, the USFWS provided the USACE with a similar summary of the agency's initial impression of potential chloride control project impacts. Numerous conversations and several meetings between the USACE, USFWS, and TPWD were also completed during this time.

Concepts proposed by the USFWS and the TPWD were reiterated in a December 2001 letter from the USFWS to the USACE. Eventually, the concerns were developed into 12 proposed alternatives. These USFWS / TPWD alternatives were evaluated by the USACE as part of this project. The USACE received a final Coordination Act Report (CAR), dated 8 May 2002 developed by resource agencies for the selected plan.

The USACE published a Draft SFES in June 2002. A notice announcing the availability of the document (Notice of Availability) for review appeared in the Federal Register on 28 June 2002. The public and agencies were allowed 90 days (initial 45 days plus two extensions) from the date that the Notice of Availability was published to comment.

Approximately one-quarter way through the comment period two formal public hearings were advertised and held to solicit additional input with regard to the draft document and the proposed plan. Key issues raised in the form of verbal and written comments received during the comment period included:

- Need for clarification between existing and natural water quality conditions.

- Need for additional analysis of water quality issues under natural (no chloride control) conditions as well as the existing condition (with operation of Areas V and VIII).
- Need for clarification of man-made chloride versus natural chloride sources, their respective contributions to chloride load, and results of man-made chloride control.
- Concerns with Lake Kemp level fluctuations resulting from projected increases in end use and decreased inflow due.
- Concerns with zero-flow days and the sustainability of aquatic resources.
- Concerns relative to impacts of reduced chlorides on Texoma turbidity, primary productivity and sport fisheries.
- Concerns with possible selenium accumulation within Truscott Brine Lake water and sediments and the effect the selenium accumulation could have on aquatic and/or aquatic-dependant avian species which utilize Truscott Brine Lake.
- Requesting that the Corps fund the design and construction of improvements to the Dundee State Fish Hatchery.
- Concerns relative to the potential for increased golden algae outbreaks and fish kills due to aquatic nutrient increases in agricultural stream segments.
- Recommendations for management of the Crowell Mitigation Area with the TPWD.
- Support for the proposed plan and resulting water quality improvements that would allow full utilization of Lakes Kemp and Diversion.
- Need for clarification relative to brush management including its implementation, funding, management, and affects on stream flow.

The USACE met with the USFWS in informal consultation on a number of occasions following issuance of the draft SFES. During these meetings, the USACE and USFWS discussed environmental concerns as identified in comments and responses regarding the draft SFES.

The USACE prepared a Final SFES in April, 2003. The Notice of Availability for this document was published by the USEPA in the Federal Register on 27 June 2003. In accordance with NEPA, final agency and public comments were received by the USACE for a wait period of 30 days, ending 28 July 2003. A total of seven (7) comment letters (two indicating no comment) were received for the final SFES. The Reporting Officers considered the expressed concerns and the Tulsa District Engineer Reporting Officer responded in writing to the commenting parties. The comments were given full consideration, but they did not result in changes to the final selected plan.

Based on the information presented in both the Final Supplement to the Final Environmental Statement for the Authorized Red River Chloride Control Project Wichita River Only Portion, (dated April, 2003) as well as the Reevaluation Report, I have determined that Alternative 7a as described in these documents best meets the needs for chloride control in the Wichita River Basin, is technically sufficient, economically justified, and environmentally sustainable. I also find that the final SFES for the project is in full compliance with the National Environmental Policy Act and that the project has been thoroughly coordinated with appropriate resource agencies and the public.

While I am fully aware of stated concerns of several resource agencies regarding environmental impacts, I find that these concerns have been thoroughly addressed by a reasonable degree of

scientific study and analysis and conclusions regarding impacts and mitigation presented in the SFES are appropriate.

Alternative 7a was identified as the best implementable plan on the basis that it provides the most favorable combination of cost effectiveness and environmental acceptability, incorporating features to avoid or minimize adverse environmental effects in accordance with the Federal and State certifications.

Administration policies do not support the control of chlorides to improve water quality for municipal, industrial, or agricultural irrigation through implementation of Corps projects. The Administration's policies would also require a non-Federal sponsor to share in the initial costs of implementation and assume operation and maintenance costs. Thus, the Corps will pursue construction of the project only as funds are specifically provided by Congress.

All practicable means to avoid, minimize, or mitigate adverse environmental effects have been incorporated into Alternative 7a. The public will best be served by implementing the improvements identified and described in the Reevaluation Report and Final SFES.

Date: 5 March 2004

CARL A. STROCK
Major General, USA
Director of Civil Works