

## MEMORANDUM FOR RECORD

### **SUBJECT: Department of the Army Record of Decision for the Standard Individual Permit Application for the Proposed Lower Bois d'Arc Creek Reservoir**

This document constitutes the 404(b)(1) Guidelines Evaluation, as applicable, Public Interest Review, and Record of Decision for the subject application.

**1.0 Introduction and Overview:** Information about the proposal subject to one or more of the Corps' regulatory authorities is provided in Section 1, detailed evaluation of the activity is found in Sections 2 through 11, and findings are documented in Section 12 of this memorandum.

On June 3, 2008, the North Texas Municipal Water District (NTMWD) submitted an application to the United States Army Corps of Engineers, Tulsa District, for a Department of the Army Permit under Section 404 of the Clean Water Act (CWA) to construct Lower Bois d'Arc Creek Reservoir (LBCR) in Fannin County, Texas. In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321 *et seq.*), the Corps issued a Public Notice (PN) for the proposed activity in 2008. After reviewing the comments received on the PN, the Corps determined that issuance of such a permit may have a significant impact on the quality of the human environment and, therefore, required the preparation of an Environmental Impact Statement (EIS). A Notice of Intent was published in 2009 to begin the EIS scoping process. Public meetings were held to determine what issues/concerns should be addressed within the EIS. Agencies were also invited to participate as cooperating agencies during this time. From 2008 to 2015, many hours were spent in the field for the collection of data by the Corps, the Corps' 3<sup>rd</sup> party EIS contractor, cooperating agencies, and the applicant. Many agency meetings were held to evaluate the collected data and to also evaluate technical information provided by the applicant.

The Corps prepared a Draft EIS (DEIS) which was released to the public in February 2015. The Corps then decided to prepare a Revised DEIS (RDEIS) in March 2017 as the best way to address substantive agency and public comments received on the original DEIS, disclose refinements to the project design, and provide updates to the analysis of environmental effects. The Final EIS (FEIS) contains additional refinement as well as comments on the RDEIS received from agencies and the public, and the Corps' responses to those comments (Appendices W and X). Chapter 1 of the FEIS, specifically, Section 1.4, NEPA Process, provides additional information on the steps the Corps followed to complete the NEPA compliance process. The Corps has completed an errata sheet to the FEIS to address the minor mistakes (i.e. typos, minor

incorrect data, grammar errors, etc.). The errata sheet will be attached to the FEIS and be part of the Administrative Record (AR).

- 1.1 Applicant: North Texas Municipal Water District (NTMWD), 505 East Brown Street, Post Office Box 2408, Wylie, TX 75098, Mr. Tom Kula, Executive Director. (Mr. Jim Parks, now retired, was the Executive Director of NTMWD at submission of the application. Mr. Kula replaced Mr. Parks in 2015.)
- 1.2 Activity location: In Bois d' Arc Creek, approximately 15 miles northeast of the City of Bonham, in Fannin County, Texas. The center of the dam is located at Latitude 33° 43' 05" and Longitude -95° 58' 56". The project site can be found on the Selfs, Texas 7.5 Minute USGS Quadrangle map. The extent of the proposed impoundment pool includes portions of the following 7.5 Minute USGS Quadrangle maps: Bonham, Dodd City, Lake Bonham, and Lamasco.
- 1.3 Description of activity requiring permit: The complete description (with figures) can be found in the FEIS, specifically, Chapter 2, Section 2.3.1.

The proposed project site is in Fannin County, Texas, within the Red River Basin watershed, approximately 15 miles northeast of the city of Bonham. Lake Bonham is immediately to the west of the upstream edge of the proposed reservoir, while the small towns of Honey Grove, Windom, and Dodd City are located along Route 56 several miles to the south of the project site. The proposed reservoir site is upstream of the Bois d'Arc Unit of the Caddo National Grasslands.

The drainage area of the proposed reservoir would be approximately 327 square miles, of which 29.6 square miles are upstream of Lake Bonham. At its full conservation elevation of 534 feet, the reservoir is expected to cover 16,641 acres, store 367,609 AF of water and be approximately 70 feet deep at its deepest point.

The proposed LBCR dam would be constructed as a zoned earthen embankment. The dam would be approximately 10,400 feet long (approximately two miles long) and would have a maximum height of approximately 90 feet. The design top elevation of the embankment would be 553.5 feet above mean sea level (msl). The construction footprint of the dam and reservoir would total approximately 17,068 acres.

The service spillway would be located at the right abutment of the dam. The crest of the weir would control the conservation pool level at elevation 534.0 feet msl, and the weir would have a discharge capacity of approximately 37,300 cubic feet per second (cfs) at the maximum design water surface, the probable maximum flood (PMF) elevation of 550.5 feet msl. The spillway structure would extend 958 feet downstream from the dam centerline. Water would be diverted by NTMWD through a multi-level intake tower located near the dam that would

transport the water to a pumping station located immediately downstream of the dam. Low-flow releases would be conveyed from the reservoir through the multi-level intake tower and low-level outlet works to be discharged to the service spillway chute. An emergency spillway would also be located in the eastern abutment of the dam. The spillway would be a 1,400-foot-wide uncontrolled broad crested weir structure with a crest elevation of 541 feet msl.

Selected trees and shrubs would be cleared from the proposed LBCR reservoir footprint prior to impoundment of water behind the dam. Standing woody material, including dead and living trees and shrubs five feet or more in height, as well as fallen trees five feet or more in length with a diameter of six inches or greater, would be cleared and removed in certain areas. After reservoir impoundment, large woody debris would continue to be removed as necessary for the safe operation of boats, boat ramps, swimming areas, water intake structures, and spillways.

Construction of the proposed LBCR would inundate the existing paved rural road labeled Farm-to-Market (FM) 1396 and the existing bridge over which it crosses Bois d'Arc Creek. NTMWD would be responsible for replacing the road and bridge. The preferred option would be to extend the existing rural road FM 897 two to three miles to the west of FM 1396 and build an entirely new bridge over the reservoir along that alignment. The existing FM 1396 and bridge crossing over Bois d'Arc Creek would be abandoned and inundated by the proposed LBCR.

As part of proposed LBCR, NTMWD would construct a raw water transmission pipeline from the reservoir site on Bois d'Arc Creek to the terminal storage reservoir (TSR) at the planned North water treatment plant (WTP) near Leonard, which is described under the No Action Alternative. The proposed pipeline and associated facilities include a raw water intake pumping station and electrical substation at the reservoir site and approximately 35 miles of 90- to 96-inch diameter raw water pipeline buried underground. An intake pumping station, an electrical substation, and a raw water pipeline from the proposed reservoir site to the North WTP would also be built.

The reservoir would be operated in compliance with the NTMWD's state water right permit [i.e., a Water Use Permit issued by Texas Commission of Environmental Quality (TCEQ) in June 2015], and as part of the overall NTMWD water supply system. If conditions allow, and if the system need exists, NTMWD would be authorized to divert water at a rate of 175,000 AFY, at a maximum diversion rate of 365.15 cfs (cubic feet per second) from any point on the perimeter of the reservoir.

- 1.3.1 Proposed avoidance and minimization measures: The application for the proposed project was submitted prior to the effective date of 33 CFR 332 (known as the 2008 Mitigation Rule) and thus was reviewed within the requirements set

forth in the Corps Regulatory Guidance Letter 02-02, Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. As such, the applicant did not provide an avoidance and minimization statement as part of their 2008 permit application. As part of the completed FEIS, an alternative analysis was performed to evaluate possible alternatives with less impacts to waters of the United States. The analysis will be discussed later within this document. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

- 1.3.2 Proposed compensatory mitigation: An aquatic resources mitigation plan has been prepared by NTMWD to comply with the federal policy of “no overall net loss of wetlands” and to provide compensatory mitigation, to the extent practicable, for impacts to other waters of the U.S. from construction of the proposed reservoir. If instead, the Corps decides to authorize another alternative, the amount of required compensatory mitigation potentially may change. Mitigation would be achieved through restoration actions planned for sites near the location of the proposed project. Mitigation would occur on-site at the proposed reservoir site, the off-site 15,000-acre Riverby Ranch, and the 1,900-acre Upper Bois d’Arc Creek site. The mitigation plan includes site protection, management, and financial assurances. The compensatory mitigation plan, resulting from construction of the proposed LBCR, would provide long-term protection through Corps approved deed restrictions.

All sites proposed as part of this mitigation plan would be managed long-term as compensatory mitigation areas associated with impacts to wetlands and other waters of the U.S. The long-term management of the mitigation site would be provided by NTMWD until the Corps has determined that the mitigation project is meeting its performance standards or is on an acceptable trajectory to meeting those standards. An adaptive management approach would be used to assess mitigation conditions to facilitate project success, with the final goal of native habitats that are stable and self-sustaining over time. If monitoring reports indicate that mitigation progress is falling short of success standards, consultation with the Corps and TCEQ would be initiated regarding the need for additional adaptive management measures to meet performance standards and overall mitigation goals and objectives. Once the Corps determines the mitigation project is fulfilling the compensatory mitigation requirements and the mitigation site is self-sustaining, NTMWD may seek to convey the mitigation site and long-term management to a public agency (i.e., state or federal resource agency) or a qualified private third-party steward or property manager.

NTMWD has made a commitment to mitigating for impacts to natural resources by already purchasing the approximately 15,000-acre Riverby Ranch mitigation site and portions of the 1,900-acre Upper Bois d’Arc Creek mitigation site that would be used for compensatory mitigation. Appendix C of the FEIS contains the detailed Revised Mitigation Plan. Appendix D contains the Reservoir Operation

Plan, which also includes additional mitigation measures. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

1.4 Existing conditions and any applicable project history: The proposed project site lies across the boundary between two Level IV Ecoregions, the Northern Blackland Prairie and the Northern Post Oak Savanna. The Blackland Prairies have finely textured clay soils and the natural vegetation is prairie. However, much of the Blackland Prairie has been converted to cropland or urban uses. The Northern Post Oak Savanna, part of the East Central Texas Plains (also known as the Claypan area) is an area of irregular plains that were originally covered by post oak savanna vegetation. Much of this area is currently being used for pasture and rangeland. The bottom of the Bois d'Arc valley is predominantly bottomland hardwoods. These bottomland woods have been subject to repeated cycles of timber cutting, both select cutting and clear cutting, to the point that the remaining timber stands are predominantly composed of less merchantable species (green ash, box elder, sugarberry, cedar elm, hackberry, and black willow). Additional information may be found in the FEIS, Chapter 3, and Section 3.5.2.3. Additional supporting information can be found in the FEIS Appendices, and the AR.

1.5 Permit Authority: Section 404 of the Clean Water Act (33 USC 1344).

**2.0 Scope of review for National Environmental Policy Act (i.e. scope of analysis), Section 7 of the Endangered Species Act (i.e. action area), and Section 106 of the National Historic Preservation Act (i.e. permit area)**

2.1 Determination of scope of analysis for National Environmental Policy Act (NEPA):

The scope of analysis includes the specific activity requiring a Department of the Army permit. Other portions of the entire project are included because the Corps does have sufficient control and responsibility to warrant federal review.

Final description of scope of analysis: The scope of analysis for the proposed LBCR will be the footprint of the dam, the "normal" inundated area upstream from the dam (534 msl and below), the resultant floodplain between 534 and 541 msl, the new road Right of Way (ROW) for the realignment of FM 1396, and the ROW footprint associated with the raw water pipeline to a planned new water treatment plant located in Leonard, Texas.

2.2 Determination of the "Corps action area" for Section 7 of the Endangered Species Act (ESA): The "action area" for the proposed LBCR will be the footprint of the dam, the "normal" inundated area upstream from the dam (534 msl and below), the resultant floodplain between 534 and 541 msl, the new road ROW for the realignment of FM 1396, and the ROW footprint associated with the raw water pipeline to a planned new water treatment plant located in Leonard, Texas.

A rationale to include specified uplands areas around potential impacted waters can be found in Chapter 3, Section 3.5 of the FEIS. Additional supporting information can be found in the FEIS Appendices, and the AR.

2.3 Determination of permit area for Section 106 of the National Historic Preservation Act (NHPA):

The permit area includes only those areas comprising waters of the United States that will be directly affected by the proposed work or structures, as well as activities outside of waters of the U.S. because all three tests identified in 33 CFR 325, Appendix C(g)(1) have been met.

Final description of the permit area: The “permit area” for the proposed LBCR will be the footprint of the dam, the “normal” inundated area upstream from the dam (534 msl and below), the resultant floodplain between 534 and 541 msl, the new road ROW for the realignment of FM 1396, and the ROW footprint associated with the raw water pipeline to a planned new water treatment plant located in Leonard, Texas. A rationale to include specified uplands areas around potential impacted waters can be found in Chapter 3, Section 3.15 of the FEIS. Additional supporting information can be found in the FEIS Appendices, and the AR.

### 3.0 Purpose and Need

3.1 Purpose and need for the project as provided by the applicant and reviewed by the Corps: The following statement is directly from the applicant’s 2008 application; “The purpose of the project will be to impound waters of the Bois d’ Arc Creek and its tributaries to create a new water supply reservoir for the North Texas Municipal Water District. State population projections show the NTMWD service population will increase from 1.6 million to 3.3 million by 2060. This growing population is the driving force for increased demands for water, and the need to develop new sources of water supply. The Lower Bois d’ Arc Creek Reservoir will provide important new water supplies to help meet this increasing demand.”

As discussed in Chapter 1, Section 1.5, of the FEIS, “The purpose and need of the proposed federal action is to develop a new water supply to accommodate the projected near-term and long-term supply deficit within the NTMWD service area, including under drought and other reduced-availability situations.

In researching the potential of water supplies to meet this purpose and need, the Corps evaluated each water supply alternative in terms of its ability to meet all the following factors:

**Near-Term Supply:** The annual water supply firm yield should meet a growing predicted deficit within the NTMWD service area projected to reach 58,694 AFY

by 2025 and NTMWD's near-term annual recommended reserve requirement of 47,110 AF (10% of demand), for a total projected firm yield of at least 105,804 AFY by 2025 (see Table 1.1-1).

**Timing:** Because the above-stated water supply deficit is expected to occur no later than 2025, the new supply should be operational by 2025.

**Reliability:** The new water supply should enhance reliability within the NTMWD service area by increasing firm yield and reserves and adding to NTMWD's water supply portfolio a new water source solely within its control.

**Long-Term Supply:** In addition to the near-term 2025 needs, the new supply should contribute a meaningful portion of the NTMWD long-term water supply needs estimated through 2060."

- 3.2 Basic project purpose, as determined by the Corps: The USACE has determined that the basic project purpose in the present case is to develop a new water supply for the applicant (NTMWD) and its member cities and customers.
- 3.3 Water dependency determination: See Section 1.5.1 of the LBCR FEIS.
- 3.4 Overall project purpose, as determined by the Corps: The following statement is directly from Chapter 1, Section 1.5.1 of the FEIS, "The Corps considers the overall project purpose to be developing an additional and reliable water supply of at least 105,804 AFY by 2025, including under drought and other reduced-availability situations. The water supply should also provide a meaningful amount of the estimated NTMWD long-term needs through 2060."

#### **4.0 Coordination**

- 4.1 The results of coordinating the proposal on Public Notice (PN) are identified below, including a summary of issues raised, any applicant response and the Corps' evaluation of concerns.

Were comments received in response to the PN? Yes

The overall PN, Scoping, and EIS comment process is summarized in Section 1 of this Record of Decision (ROD). Additional information can be found in Chapter 1, Section 1.6 and Appendix X of the FEIS. Additional supporting information can be found in the FEIS Appendices, and the AR. The comments below will reference only the comments received on the FEIS.

Were comments forwarded to the applicant for response? Yes

Comments received on the 2008 PN, Scoping, DEIS, and RDEIS were forwarded to the applicant for their review. However, only FEIS comments considered as potentially new information were forwarded to the applicant for a response.

Thus, one commenter's comment was sent to the applicant for their review. Information regarding these comments is provided below.

Was a public meeting and/or hearing requested and, if so, was one conducted? Yes, a public meeting/hearing was requested and conducted. As discussed in the above paragraph, the overall PN, Scoping, and EIS comment process is summarized in Section 1 of this ROD and in Section 1.6 and Appendix X of the FEIS.

Comments received in response to the FEIS:

Chapter 1, Sections 1.4, 1.4.1, 1.4.2, and 1.4.3 of the FEIS, a DEIS, RDEIS, and a FEIS were completed to fulfill the NEPA requirements as part of the overall Section 404 Clean Water Act decision process. A Notice of Availability was published in the Federal Register for each of these referenced NEPA documents. Numerous comments were received on the DEIS and RDEIS by the Corps from cooperating agencies, the applicant, other Federal/State agencies, Municipal governments, Non-government organizations, and members of the public regarding the proposed action. All of these comments (and new information within these comments) were specifically reviewed by the Corps and by its 3<sup>rd</sup> party EIS contractor (and sub-contractors). The FEIS was written including this additional information and provided a detailed "response to comment" document (Appendix X of the FEIS). The document is coded by topic (subject matter), each comment specific to that topic, and the Corps specific response to the comment.

Due to the small number of the comments received on the FEIS, individual comments will be identified. However, they will not be re-written as part of this ROD unless the commenter provided information not previously known to the Corps or information which the Corps decision maker and/or reader need to reference. A very brief summation of cooperating agency engagement and the FEIS comments will be addressed below. However, all of the information within the FEIS, its Appendices, and the AR has been considered as part of this decision process.

Comment 1:

U.S. Environmental Protection Agency (USEPA): The USEPA was a cooperating agency for the Corps LBCR EIS. Numerous comments were received from the USEPA on the Draft EIS (DEIS) and the Revised DEIS (RDEIS). In a May 2017 comment letter, "the USEPA rated the RDEIS as an "EC-2", i.e., USEPA has identified environmental impacts, and we request additional information be included in the FEIS. The "EC" rating is based on the potential for adverse impacts to wetlands and streams. The "2" indicates the RDEIS does not contain sufficient information to fully assess impacts to wetlands and streams..." The USEPA comments on the DEIS were addressed by additional information provided in the RDEIS. Comments

received on the RDEIS were responded to with new information as part of the FEIS and Appendix X of the FEIS. The USEPA did not provide comments on the FEIS.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the USEPA comments can be found in the FEIS and Appendix X of the FEIS. As stated above no USEPA comments were received on the FEIS.

Comment 2:

U.S. Fish and Wildlife Service (USFWS) and U.S. Department of the Interior (DOI): The USFWS and DOI did not provide comments on the FEIS. The USFWS was a cooperating agency for the Corps LBCR EIS. Numerous comments were received by the USFWS on the DEIS. The USFWS comments on the DEIS were addressed by additional information provided in the RDEIS. The USFWS comments can be reviewed in Appendix X of the FEIS.

The DOI provided comments on the DEIS. These comments were addressed within additional information provided in the RDEIS and Appendix X of the FEIS.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the USFWS and DOI comments can be found in the FEIS and Appendix X of the FEIS. As stated above no USFWS or DOI comments were received on the FEIS.

Comment 3:

Texas Commission of Environmental Quality (TCEQ): The TCEQ did not provide comments on the FEIS. The TCEQ was a cooperating agency for the Corps LBCR EIS. Comments were received from the TCEQ on the DEIS and RDEIS. The TCEQ comments on the DEIS were addressed by additional information provided in the RDEIS. The TCEQ comments can be reviewed in Appendix X of the FEIS.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the TCEQ comments can be found in the FEIS and Appendix X of the FEIS. As stated above no TCEQ comments were received on the FEIS.

Comment 4:

Texas Parks and Wildlife Division (TPWD): The TPWD did provide comments on the FEIS. The TPWD was a cooperating agency for the Corps LBCR EIS. Numerous comments were received by the TPWD on the DEIS, RDEIS, and FEIS. The TPWD comments on the DEIS were addressed by additional information provided in the RDEIS. Comments received on the RDEIS were responded to with new information within the FEIS and are documented (comment/response) in Appendix X of the FEIS. The TPWD comments on the FEIS were not new nor did they provide any new information or concerns.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the TPWD comments can be found in the FEIS and Appendix X of the FEIS. As stated above no new TPWD comments were received on the FEIS, thus, per 40 CFR 1502 and 33 CFR 325, Appendix B, the Corps will not address these comments further within this ROD.

Comment 5:

Texas Historical Commission (THC): The THC did not provide comments on the FEIS. The THC was not "specifically" a cooperating agency for the Corps LBCR EIS, however, THC is a signatory of the 2011 signed Programmatic Agreement (PA) between the Caddo Nation of Oklahoma, THC, NTMWD, and Corps. Comments were received by the THC on the DEIS and RDEIS. The THC comments on the DEIS were addressed by additional information provided in the RDEIS. A letter received from the THC on the RDEIS stated that the agency concurs with the finding of the FEIS and provided some minor editorial corrections which were addressed in the FEIS. The THC comments can be reviewed in Appendix X of the FEIS.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the THC comments can be found in the FEIS and Appendix X of the FEIS. As stated above no THC comments were received on the FEIS. The Corps will

continue to fulfill the agency obligations of the PA regardless of the final decision made within this document.

Comment 6:

United States Forest Service (USFS): The USFS did not provide comments on the FEIS. The USFS was a cooperating agency for the Corps LBCR EIS. Comments were received by the USFS on the DEIS. The USFS comments on the DEIS were addressed by additional information provided in the RDEIS. USFS comments can be reviewed in Appendix X of the FEIS.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the USFS comments can be found in the FEIS and Appendix X of the FEIS. As stated above no USFS comments were received on the FEIS.

Comment 7:

The Applicant, North Texas Municipal Water District (NTMWD): NTMWD did provide comments on the FEIS. Numerous comments were received by the NTMWD on the DEIS, RDEIS, and the FEIS. The NTMWD comments on the DEIS were addressed by additional information provided in the RDEIS. Comments received on the RDEIS were responded to with new information within the FEIS and Appendix X of the FEIS. The NTMWD also met with the Corps during the 30 day review period of the FEIS and provided comments regarding some minor discrepancies present within the FEIS.

Applicant's Response: Not Applicable

Corps Evaluation: Specific Corps evaluations and responses to the NTMWD comments can be found in the FEIS and Appendix X of the FEIS. The Corps has also prepared an errata sheet per 40 CFR 1503.4 for the FEIS to correct some of the minor technical errors found by the NTMWD within the FEIS.

Comment 8: Private Landowners potentially affected by the proposed action (Landowners): Comments were received on the FEIS from 8 Landowners. Potentially affected Landowners provided numerous comments on the DEIS, RDEIS, and FEIS. Their comments on the DEIS were addressed by additional information provided in the RDEIS. Comments received on the RDEIS were responded to with new information within the FEIS and are documented (comment/response) in Appendix X of the FEIS. The comments received on the FEIS were coded and the following codes represent the Landowners who submitted comments:

Mr. N.R.: This commenter did not provide any new information or concerns.

Mr. W.P.R.: This commenter did not provide any new information or concerns.

Mr. D.K.: This commenter did not provide any new information or concerns.

Mr. R.K.: This commenter did not provide any new information or concerns.

Mr. C.K.: This commenter did not provide any new information or concerns.

Mr. T.W.: This commenter did not provide any new information or concerns.

Mr. C.Y.: This commenter did not provide any new information or concerns.

Mr. D.R.: This commenter did not provide any new information or concerns.

Applicant's Response: The NTMWD provided additional technical information in writing which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the Landowners comments on the DEIS and the RDEIS can be found in the FEIS and Appendix X of the FEIS. Corps personnel met with the Landowners in person (at their request) after the publication of the RDEIS to listen to their information, concerns, and to view some of their properties. The Corps acknowledges that the Landowners could directly be affected by the issuance of a permit. The Corps also fully reviewed all of their FEIS comments. The review indicated that none of the referenced comments provided new information to the Corps, thus, these comments will not be discussed further within this ROD. Again, the FEIS, its Appendices, and the AR provides detailed information regarding Landowner comments/concerns which will be used for the Corps decision.

Comment 9:

Texas Conservation Alliance, Et al. (TCA): The TCA is a group of non-government organizations and is not a cooperating agency for the Corps LBCR EIS. Numerous comments were received by the TCA on the DEIS, RDEIS, and FEIS. The TCA comments on the DEIS were addressed within additional information provided in the RDEIS. Comments received on the RDEIS were responded to with new information within the FEIS and are documented (comment/response) in Appendix X of the FEIS. The TCA did comment on the FEIS and did provide potentially new information regarding the cost of reuse water titled "Direct Potable Reuse Pre-Feasibility Conceptual Opinion of Probable Cost," a study provided by an independent contractor and not previously reviewed by the Corps or its 3<sup>rd</sup> party EIS contractor.

Applicant's Response: The NTMWD provided additional technical information in writing which was included as part of the Corps' RDEIS and FEIS. At the

request of the Corps, NTMWD also provided a response to TCA comments received on the FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the TCA DEIS and RDEIS comments can be found in the FEIS and Appendix X of the FEIS. The Corps also requested information from the NTMWD regarding the TCA comments received on the FEIS. NTMWD (via its contractor) on December 29, 2017, provided information (in the form of a dated memorandum) regarding the referenced TCA comments. The Corps fully reviewed the TCA comments and the NTMWD information. It has been determined that the TCA information is not necessarily new but that it is another opinion from an independent TCA contractor for a ball park estimate (the terms “opinion” and “ball park” extracted from the actual TCA document) for capital and operating cost of a direct potable reuse water treatment plant. After review, the Corps concurs with the NTMWD information and associated calculations as stated in the FEIS as accurate.

Comment 10:

Irvine and Conner Law (ICL) firm: The ICL also submitted comments on the FEIS on behalf of the Landowners. ICL comments were received on the DEIS, RDEIS, and FEIS. The ICL comments on the DEIS were addressed by additional information provided in the RDEIS. The ICL RDEIS new comments were addressed by the new information in the FEIS. ICL comments can be reviewed in Appendix X of the FEIS.

Applicant’s Response: The NTMWD provided additional technical information which was included as part of the Corps’ RDEIS and FEIS.

Corps Evaluation: Specific Corps evaluations and responses to the ICL comments can be found in the FEIS and Appendix X of the FEIS. The FEIS comment review indicated that none of the referenced comments provided new information to the Corps, thus, these comments will not be discussed further within this ROD. Again, the FEIS, its Appendices, and the AR provides detailed information regarding ICL comments/concerns which will be used for the Corps decision.

Comment 11:

Private Citizen Comments coded “Mr. K.T.”: Mr. K.T. did provide comments on the FEIS. These FEIS comments were reviewed by the Corps.

Applicant’s Response: The NTMWD provided additional technical information which was included as part of the Corps’ RDEIS and FEIS.

Corps Evaluation: The FEIS comment review indicated that none of the referenced K.T. comments provided new information to the Corps, thus, these comments will not be discussed further within this ROD. These comments will be added to the AR.

Comment 12:

Private Citizen Comments coded "Mr. C.P.": Mr. C.P. did provide comments on the FEIS. These FEIS comments were reviewed by the Corps.

Applicant's Response: The NTMWD provided additional technical information which was included as part of the Corps' RDEIS and FEIS.

Corps Evaluation: The FEIS comment review indicated that none of the referenced C.P. comments provided new information to the Corps, thus, these comments will not be discussed further within this ROD. These comments will be added to the AR.

- 4.2 Were additional issues raised by the Corps including any as a result of coordination with other Corps offices? Yes  
If yes, provide discussion including coordination of concerns with the applicant, applicant's response and Corps' evaluation of the response:

Information review was provided by Corps engineers, hydrologists, archeologists, biologists, and attorneys. This information supported the FEIS and its Appendices. Additional supporting information can be found in the AR.

- 4.3 Were comments raised that do not require further discussion because they address activities and/or effects outside of the Corps' purview? Yes

If yes, provide discussion: The Corps received, investigated, and provided information regarding issues outside of our purview. Specific Corps evaluations and responses to this information can be found in the FEIS, Appendix X, and as part of the AR for the FEIS.

- 5.0 Alternatives Analysis** (33 CFR Part 325 Appendix B(7), 40 CFR 230.5(c) and 40 CFR 1502.14). An evaluation of alternatives is required under NEPA for all jurisdictional activities. An evaluation of alternatives is required under the Section 404(b) (1) Guidelines for projects that include the discharge of dredged or fill material. NEPA requires discussion of a reasonable range of alternatives, including the no action alternative, and the effects of those alternatives; under the Guidelines, practicability of alternatives is taken into consideration and no alternative may be permitted if there is a less environmentally damaging practicable alternative.

- 5.1 Site selection/screening criteria: In order to be practicable, an alternative must be available, achieve the overall project purpose (as defined by the Corps), and be feasible when considering cost, logistics and existing technology.

Criteria for evaluating alternatives as evaluated and determined by the Corps: Information regarding project alternatives can be found in Chapter 2 of the FEIS. NEPA requires analysis of “reasonable” alternatives. The Section 404(b)(1) Guidelines require a determination whether there are practicable alternatives. The following discussion incorporates the comprehensive and iterative NEPA alternatives analysis for the project, and provides supplemental analysis regarding practicable alternatives.

Criteria used in the FEIS to determine and evaluate reasonable alternatives were:

- **Near-Term Supply**
- **Timing**
- **Reliability**
- **Long-Term Supply**

Criteria used in this ROD to determine and evaluate practicable alternatives are:

- **Availability:** Is the alternative available for acquisition, zoned appropriately or is there potential for re-zoning, etc.?
- **Cost:** Is the cost reasonable?
- **Technology:** Is reasonable technology available?
- **Logistics:** Is the site suitable (utilities, topography, access, reliability, etc.) for the proposed activity?

5.2 Description of alternatives

See the alternatives analysis in Chapter 2 of the FEIS and the 404(b)(1) Guidelines Analysis below. The referenced FEIS alternatives information along with the Section 404(b)(1) Guidelines analysis in this ROD will be used to determine the Least Environmentally Damaging Practicable Alternative (LEDPA).

5.2.1 No action alternative: See the FEIS, Chapter 2.

5.2.2 Off-site alternatives

Off-site alternative 1: See the FEIS, Chapter 2.

Off-site alternative 2: See the FEIS, Chapter 2.

### 5.2.3 On-site alternatives

On-site alternative 1 (applicant's preferred alternative): See the FEIS, Chapter 2.

On-site alternative 2: See the FEIS, Chapter 2.

## 5.3 Evaluate alternatives and whether or not each is practicable under the Guidelines or reasonable under NEPA

### 5.3.1 Reasonableness of Alternatives under NEPA: Generally, see the comprehensive analysis of alternatives in FEIS, Chapter 2. In FEIS Sec. 2.6 the Corps considered and dismissed a wide range of alternatives from detailed consideration because they were not available to the applicant, or did not meet the project purpose and need. In FEIS Sec. 2.2-2.4, the Corps considered the no action alternative, the applicant's preferred alternative, and a variation on the preferred alternative.

As shown in FEIS Table 2.7-1, only two of the alternatives listed met all four criteria of the purpose and need: the Full-scale LBCR (Alternative 1) and the Downsized LBCR with Lake Texoma Blending (Alternative 2).

**Alternative 1:** The Applicant's Proposed Action (also identified as the Applicant's Preferred Alternative), meets the four criteria specified in Chapter 1, Section 1.5, Purpose and Need as follows:

**Near-term Supply:** Alternative 1 meets the near-term supply criterion. Its estimated firm yield of 120,665 AFY would exceed 105,804 AFY – the sum of the projected 2025 deficit of 58,694 AFY and the recommended 2025 reserve supply of 47,110 AFY (Table 1.1-1).

**Timing:** Alternative 1 meets the timing criterion and is expected to begin supplying water no later than 2025.

**Reliability:** Alternative 1 meets the reliability criterion. NTMWD already has a Water Use Permit from TCEQ and has sole access to this water source; it does not face competing interests or the need to cooperate or negotiate with other wholesale water providers for use of its share of the water source.

**Long-Term Supply:** Alternative 1 meets the long-term supply criterion. It would contribute a meaningful portion (about 40 percent) of the NTMWD long-term water supply needs estimated through 2060.

**Alternative 2:** Also meets the four criteria specified in Chapter 1, Section 1.5, Purpose and Need:

**Near-term Supply:** Alternative 2 meets the near-term supply criterion. Its estimated firm yield of 114,800 AFY would exceed 105,804 AFY – the sum of the projected 2025 deficit of 58,694 AFY and the recommended 2025 reserve supply of 47,110 AFY (Table 1.5-1).

**Timing:** Alternative 2 does not quite meet the timing criterion. It could be operational as early as 2026, one year after the stated deadline of 2025. However, due to inherent uncertainties and complexities in estimates of this kind, it was appropriate to include Alternative 2 as a reasonable alternative in the EIS.

**Reliability:** Alternative 2 meets the reliability criterion. NTMWD already has Water Use Permits from TCEQ for water diversions at Bois d 'Arc Creek and Lake Texoma; it does not face competing interests or the need to cooperate or negotiate with other wholesale water providers.

**Long-Term Supply:** Alternative 2 meets the long-term supply criterion. It would contribute a meaningful portion (about 38 percent) of the NTMWD long-term water supply needs estimated through 2060.”

“As discussed in Section 2.7, only two of the alternatives listed meet the purpose and need criteria stated in Chapter 1: the Proposed Action (proposed LBCR or Alternative 1) and a downsized version of the LBCR in combination with blended water from Lake Texoma (Alternative 2). In the Corps judgment, none of the other alternatives are reasonable.”

Two alternatives will therefore be examined in more detail within the ROD: Alternative 1 – the Applicant’s Proposed Action LBCR, and Alternative 2 – a downsized version of the LBCR in combination with Lake Texoma blending.

- 5.3.2 Practicable Alternatives under the Section 404(b)(1) Guidelines: An alternative is practicable only if it is: (1) available, and (2) capable of being done after taking into account cost, existing technology, and logistics in light of overall project purposes (see 40 C.F.R. § 230.10(a)(1)). Therefore, project purposes determine the practicable alternatives. As documented in the FEIS, a wide variety of other alternatives including other sites were ruled out due to failure to meet the project

purpose and need. For the two reasonable alternatives that were available, the Corps makes the following determinations:

**On-site alternative 1 (applicant's preferred alternative):**

**Availability:** The applicant has provided information that indicates availability of the potential proposed site would not be an issue. This is discussed in detail within the FEIS, Appendices, and the AR.

**Cost:** This Alternative would be the least expensive in cost to the applicant and to water customers. The estimated unit costs are \$427.00 per acre feet and \$1.31 per 1000 gallons of water (see Appendix O Section 4.1). The Corps concurs with the applicant's submitted cost estimations. Detailed information can be found in the FEIS, Appendices, and the AR.

**Technology:** Existing technology supports this alternative. Detailed information can be found in the FEIS, the Appendices, and the AR.

**Logistics:** Existing logistics fully supports this alternative. The Corps concurs with the applicant that there are very few viable options within the landscape of Northeast Texas to propose such a water supply reservoir. The applicant has shown that the proposed location of Alternative 1 within the existing topography will clearly meet the Purpose and Need. The Corps acknowledges that this alternative would impact a larger quantity of special aquatic sites (as compared to the other alternative) within the proposed footprint, however, the applicant has shown that this alternative utilizes the proposed site to its fullest potential (would provide a firm yield of water well past 2040) to provide the largest and most reliable new water supply to the region. This alternative meets the reasonableness and practicability criteria as described in the FEIS and this ROD. Detailed supporting information can be found in the FEIS, the Appendices, and the AR.

**On-site alternative 2:**

**Availability:** The applicant has provided information that indicates availability of the potential proposed site will not be an issue. This is discussed in detail within the FEIS, Appendices, and the AR.

**Cost:** This Alternative would be more expensive (than Alternative 1) in cost to the applicant and to water customers. The estimated unit costs are \$505.00 per acre feet and \$1.55 per 1000 gallons of water (see Appendix O Section 4.1). The Corps fully concurs with the applicant's submitted cost estimations. Another potential cost consideration is that the firm yield of this alternative will be fully

utilized in 2031. It is expected that additional cost (to the district/water customer) would be expected in the effort to find and implement a new water supply before and after the year 2031. Detailed supporting information can be found in the FEIS, Appendices, and the AR.

**Technology:** Existing technology supports this alternative. Detailed information can be found in the FEIS, the Appendices, and the AR.

**Logistics:** Existing logistics is an issue with this alternative. See Chapter 2, Section 2.4.6 of the FEIS regarding the difficulties with this alternative. The FEIS states, “The smaller capacity of the reservoir under alternative 2 would restrict NTMWD’s operational flexibility. Generally, operational flexibility refers to the ability to divert more water from a reservoir at certain times, as well as to divert less water at other times to allow the reservoir to refill. Under alternative 2, downsized LBCR water would be blended with Lake Texoma water at a minimum 3:1 ratio. Thus, a reduction in the authorized diversion of water from the smaller reservoir would also reduce the amount of Texoma water that could be blended, resulting in a potentially substantial reduction in supply. Moreover, alternative 2 has substantially smaller reserve supplies in storage to endure extended droughts, which would give NTMWD less reliability of supply. Overdrafting the reservoir (i.e., diverting more than the yield) is not a prudent operation strategy for the smaller reservoir of alternative 2.”

Whereas alternative 2 is considered reliable as a water source under the “reasonable” standard, the test for “practicability” applies a more rigorous examination of project-specific factors when examining the questions of availability (of water) and logistics that pertain to reliability.

It is also projected in Chapter 2, Figure 2.3-15, of the FEIS that the firm yield of alternative 2 will be fully utilized by 2031 as compared to a projected 85% (firm yield) of alternative 1 by 2040. Additional information provided in the FEIS, Table 2.7-1, informs the Corps that this alternative will not be available until 2026, meaning the alternative 2 additional water supply would be fully utilized within 5 years of its availability.

As stated, the Corps concurs with the applicant that there are very few viable options within the landscape of Northeast Texas to propose such a water supply reservoir. Due to the few options within the existing topography of Northeast Texas, viable reservoir sites should be evaluated and/or utilized to their fullest potential. If these sites are not used to their fullest potential, then potentially sites with even larger impacts to aquatic and terrestrial resources, or other significant environmental consequences, may be needed to provide future additional water supplies which would not have been necessary if “smaller viable” sites were used

to their fullest potential. The applicant has shown that the proposed location of alternative 2 within the existing topography could potentially meet the Purpose and Need if additional water is used for blending, however, the alternative would not fully utilize the available topography.

There is also a concern regarding the reliability of the timing of when alternative 2 can be available (this is discussed above). Due to alternative 2 requiring a revised TCEQ water right, the projected completion date of 2026 might not be met. This is discussed in Chapter 2, Section 2.4.6, of the FEIS. Detailed supporting information can be found in the FEIS, the Appendices, and the AR.

In conclusion, Alternative 1 is the only practicable alternative because it is the only alternative that fully meets both the near term and long term purpose and need of the applicant. Alternative 2 would have less impacts to waters of the U.S. and surrounding uplands, however, the resultant water supply would be limited (alternative 2 firm yield fully utilized by 2031), not reliable, and cost more to the applicant (and its customers) and potentially could limit the optimal available topography (viable reservoir sites) for future additional water supplies in Northeast Texas. The Corps concurs that the applicant has clearly demonstrated there is no practicable alternative that does not involve siting in a special aquatic site (see 40 CFR 230.10(a)(3)). Additional information can be found within the FEIS, the Appendices, and the AR.

- 5.4 Least environmentally damaging practicable alternative under the 404(b)(1) Guidelines (if applicable) and the environmentally preferable alternative under NEPA:

Because there is no practicable alternative other than Alternative 1, it is the Least Environmentally Damaging Practicable Alternative. The environmental consequences of the two reasonable alternatives, as well as the no action alternative, are presented in the FEIS, Table ES-1.

- 6.0 Evaluation for Compliance with the Section 404(b)(1) Guidelines.** The following sequence of evaluation is consistent with 40 CFR 230.5.

- 6.1 The practicable alternative to the proposed discharge (construction of the LBCR dam) is consistent with 40 CFR 230.5(c), and has been evaluated in Section 5 above.
- 6.2 Candidate disposal site delineation (Subpart B, 40 CFR 230.11(f)). Each disposal site shall be specified through the application of these Guidelines:

Discussion: The disposal site is Bois d’Arc Creek. Complete site information can be found within the FEIS, the Appendices, and the AR.

6.3 Potential impacts on physical and chemical characteristics of the aquatic ecosystem (Subpart C 40 CFR 230.20). See Table 1:

Table 1 – Potential Impacts on Physical and Chemical Characteristics						
Physical and Chemical Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Substrate					X	
Suspended particulates/ turbidity					X	
Water			X			
Current patterns and water circulation						X
Normal water fluctuations						X
Salinity gradients	X					

Discussion:

Substrate: The substrate within the footprint of the proposed dam will be permanently altered to dry land. This discharge may adversely affect bottom-dwelling organisms at the site by smothering immobile forms or forcing mobile forms to migrate. Benthic forms present prior to a discharge are unlikely to recolonize within the footprint of the dam. The stream channel substrate should not change, however, the proposed reservoir will expand available substrate under the proposed reservoir footprint. The inundated vegetation existing within the new substrate should have a positive effect for aquatic organisms, and for the complex physical, chemical, and biological characteristics of the new substrate within the reservoir. The proposed project should not affect stream substrates outside of the proposed area of fill or reservoir.

Suspended particulates/turbidity: The water found within Bois d’ Arc Creek is predominantly well mixed, with normal high fluctuations occurring during heavy rain events within the watershed. The project, as proposed, with mitigation is expected to have minimal to minor effects on water chemistry. It is expected that water within the watershed should improve below the proposed dam. Therefore, there should be a minor long-term effect to suspended particulates/turbidity as a result of the proposed project.

Water: The proposed discharge (construction of the LBCR dam) should have a negligible effect to the water found within the watershed. The proposed fill associated with the proposed discharge is not expected to change the chemistry of the receiving water at the disposal site through the introduction of chemical constituents in suspended or dissolved form. Changes in the clarity, color, odor, and taste of water in the resultant reservoir should improve. Therefore, there should be a negligible effect on the water found within the Bois d' Arc Creek watershed.

Normal water fluctuations: The proposed discharge would permanently change water levels within the existing streams of the proposed reservoir footprint. Streams existing outside of the reservoir footprint should not be affected.

Salinity gradients: Not applicable to this proposed project.

Additional supporting information regarding the contents of Table 1 can be found within the FEIS, the Appendices, and the AR.

6.4 Potential impacts on the living communities or human uses (Subparts D, E and F):

6.4.1 Potential impacts on the biological characteristics of the aquatic ecosystem (Subpart D 40 CFR 230.30). See Table 2:

Table 2 – Potential Impacts on Biological Characteristics						
Biological characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Threatened and endangered species		X				
Fish, crustaceans, mollusk, and other aquatic organisms					X	
Other wildlife					X	

Discussion: Information regarding the above referenced biological resources can be found in Chapter 3, Section 3.5, Chapter 4, Sections, 4.5.2.6, 4.5.2.4., and 4.5.2.5 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

6.4.2 Potential impacts on special aquatic sites (Subpart E 40 CFR 230.40). See Table 3:

Table 3 – Potential Impacts on Special Aquatic Sites						
Special Aquatic Sites	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Sanctuaries and refuges		X				
Wetlands						X
Mud flats		X				
Vegetated shallows		X				
Riffle and Pool Complexes		X				
Coral reefs		X				

Discussion: Alternative 1 would result in permanent impacts to approximately 4,602 acres of forested wetlands, 1,223 acres of emergent wetlands, 49 acres of scrub shrub wetlands, 78 acres of open waters, and 219 acres of intermittent and ephemeral streams, in addition to impacts on upland habitats. The Corps acknowledges that the proposed project would have large impacts to wetlands within the watershed. However, with mitigation, the effects of these impacts should be offset (over time) to minor or possibly even negligible. Mitigation will be discussed in greater detail later in this document. Information regarding the above referenced aquatic resources can be found in Chapter 3.4 and 3.5 of the FEIS. Additional supporting information can be found within the FEIS, the revised mitigation plan, the Appendices, and the AR.

6.4.3 Potential impacts on human use characteristics (Subpart F 40 CFR 230.50). See Table 4:

Table 4 – Potential Impacts on Human Use Characteristics						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Municipal and private water supplies						X
Recreational and commercial fisheries					X	
Water-related recreation					X	

Table 4 – Potential Impacts on Human Use Characteristics						
Human Use Characteristics	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Aesthetics					X	
Parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves		X				

Discussion: The proposed activity could be both adverse and beneficial with regard to potential impacts to Human Use Characteristics. Specific discussions regarding these resources can be found in Chapter 5, Section 5.4 of the FEIS. Though some would consider the proposed project as potentially having an adverse effect to some of the above characteristics the Corps concurs with the applicant (from the information provided for the FEIS) that there will be a much greater benefit to these characteristics. The additional public water supply to the region would be a good example of a major benefit as discussed in the Purpose and Need Section of this document and Chapter 1 and 2 of the FEIS. Recreational fishing, water related recreation, aesthetics, parks, et.al., would all benefit from the proposed discharge. The reservoir would be open to public fishing and water related activities for all to enjoy. The aesthetics of the reservoir would be enjoyed by daily visitors and adjoining landowners. The reservoir and associated mitigation would provide a “corridor” of habitat connecting to the Caddo National Grass Lands. This corridor could potentially be used for public hiking or a travel corridor (habitat) for aquatic, avian, and terrestrial wildlife to live in. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

6.5 Pre-testing evaluation (Subpart G, 40 CFR 230.60):

The following has been considered in evaluating the biological availability of possible contaminants in dredged or fill material. See Table 5:

Table 5 – Possible Contaminants in Dredged/Fill Material	
Physical characteristics	
Hydrography in relation to known or anticipated sources of contaminants	
Results from previous testing of the material or similar material in the vicinity of the project	

Table 5 – Possible Contaminants in Dredged/Fill Material	
Known, significant sources of persistent pesticides from land runoff or percolation	
Spill records for petroleum products or designated (Section 331 of CWA) hazardous substances	
Other public records or significant introduction of contaminants from industries, municipalities, or other sources	
Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	

Discussion: The Corps has found no evidence of any past or potential sources of contaminants which could have an effect on the proposed fill material or the aquatic environment. There have been comments received from the Landowners alleging contaminants, however, no evidence of contamination was provided. Supporting information can be found in the FEIS, the Appendices, and the AR.

It has been determined that testing is not required because the discharge and extraction sites are adjacent, and the Corps has no credible information that potential sources of contaminants exist within the proposed reservoir site.

6.6 Evaluation and testing (Subpart G, 40 CFR 230-61):

Discussion: The proposed fill material will come from adjacent lands to the proposed dam site. Additional stone and concrete should come from Northeast Texas and be free from any potential contaminants. Supporting information can be found in the FEIS, the Appendices, and the AR.

6.7 Actions to minimize adverse impacts (Subpart H). The following actions, as appropriate, have been taken through application of 40 CFR 230.70-230.77 to ensure minimal adverse effects of the proposed discharge. See Table 6:

Table 6 – Actions to Ensure Adverse Effects are Minimized	
Actions concerning the location of the discharge	X
Actions concerning the material to be discharged	X
Actions controlling the material after discharge	X
Actions affecting the method of dispersion	X
Actions affecting plant and animal populations	X
Actions affecting human use	X

Discussion: There is significant discussion regarding the minimization of adverse effects within Chapter 3 and 4 of the FEIS. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

- 6.8 Factual Determinations (Subpart B, 40 CFR 230.11). The following determinations are made based on the applicable information above, including actions to minimize effects and consideration for contaminants. See Table 7:

Table 7 – Factual Determinations of Potential Impacts						
Site	N/A	No Effect	Negligible Effect	Minor Effect (Short Term)	Minor Effect (Long Term)	Major Effect
Physical substrate					X	
Water circulation, fluctuation and salinity						X
Suspended particulates/turbidity				X		
Contaminants			X			
Aquatic ecosystem and organisms						X
Proposed disposal site					X	
Cumulative effects on the aquatic ecosystem					X	
Secondary effects on the aquatic ecosystem			X			

Discussion: Water circulation and fluctuation would still occur within the watershed, however, would be altered from a lotic (flowing water) ecosystem to a lentic (still water) ecosystem. Lentic aquatic organisms are anticipated to thrive within the proposed LBCR which is considered a beneficial effect to the ecosystem. Significant supporting information can be found within the FEIS, the Appendices, and the AR. As a reminder to the reader, this ROD utilizes years of supporting information which was used to complete the FEIS, associated Appendices, and the AR. The AR contains field notes, technical data, meeting minutes, and other associated information that may not be directly referenced in the FEIS, but which, supports the information within the FEIS and this ROD.

- 6.9 Findings of compliance or non-compliance with the restrictions on discharges (40 CFR 230.10(a-d) and 230.12). Based on the information above, including the factual determinations, the proposed discharge has been evaluated to determine whether any of the restrictions on discharge would occur. See Table 8:

Table 8 – Compliance with Restrictions on Discharge		
Subject	Yes	No
1. Is there a practicable alternative to the proposed discharge that would be less damaging to the environment (a practicable alternative with less aquatic resource effects, or a practicable alternative with more aquatic resource effects that avoids other significant adverse environmental consequences?)		X
2. Will the discharge cause or contribute to violations of any applicable water quality standards?		X
3. Will the discharge violate any toxic effluent standards (under Section 307 of the Act)?		X
4. Will the discharge jeopardize the continued existence of endangered or threatened species or their critical habitat?		X
5. Will the discharge violate standards set by the Department of Commerce to protect marine sanctuaries?		X
6. Will the discharge cause or contribute to significant degradation of waters of the U.S.?		X
7. Have all appropriate and practicable steps (Subpart H, 40 CFR 230.70) been taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?	X	

Discussion: Supporting information can be found in the FEIS, the Appendices, and the AR.

**7.0 General Public Interest Review (33 CFR 320.4 and RGL 84-09)**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest as stated at 33 CFR 320.4(a). To the extent appropriate, the public interest review below also includes consideration of additional policies as described in 33 CFR 320.4(b) through (r). The benefits which reasonably may be expected to accrue from the proposal are balanced against its reasonably foreseeable detriments.

7.1 All public interest factors have been reviewed and those that are relevant to the proposal are considered and discussed in additional detail. See Table 9 and any discussion that follows.

Table 9: Public Interest Factors	Effects					
	None	Detrimental	Neutral (mitigated)	Negligible	Beneficial	Not Applicable
1. Conservation:				X		
2. Economics: See below for discussion.					X	
3. Aesthetics: See below for discussion.					X	
4. General Environmental Concerns:			X			
5. Wetlands:			X			
6. Historic Properties:			X			
7. Fish and Wildlife Values: See below for discussion			X			
8. Flood Hazards:				X		
9. Floodplain Values:				X		
10. Land Use:				X		
11. Navigation:	X					
12. Shoreline Erosion and Accretion:				X		
13. Recreation: See below for discussion.					X	
14. Water Supply and Conservation: See below for discussion.					X	
15. Water Quality:				X		
16. Energy Needs:				X		
17. Safety:				X		
18. Food and Fiber Production:				X		
19. Mineral Needs:	X					
20. Consideration of Property Ownership: See below for discussion.		X				
21. Needs and Welfare of the People: See below for discussion.					X	

Additional discussion of effects on factors above: The following is a summarized explanation of effects that have been determined by the Corps to be beneficial or detrimental:

**Economics:** It is expected that construction activity for the proposed LBCR would significantly increase employment opportunities within Fannin and surrounding counties during the construction phase. Additional water supplies would also allow Northeast Texas to continue to be competitive in bringing in new industry within the NTMWD service area. This information is discussed in detail within Chapter 3, Section 3.13.2, Appendix E, and the AR.

**Aesthetics:** Landscape appearance and scenery can be important public land amenities, not just as recreational opportunity settings, but also as elements of the region's identity. The proposed LBCR is anticipated to attract the public (for its scenic values) as new residents and/or recreational visitors. This information is discussed in detail within Chapter 3, Section 3.13.1, the Appendices, and the AR.

**Fish and Wildlife Values:** A bald eagle survey of the proposed reservoir footprint was performed by the applicant after the completion of the FEIS (November-December 2017). During the survey, an active bald eagle nest was found within the boundary of the proposed reservoir. The applicant has stated that there are no planned impacts to the area around the nest tree. Though future impacts to the area are considered minimal, the Corps will condition any potential permit to assure the permittee is in compliance with the Bald and Golden Eagle Protection Act.

**State Listed Threatened and Endangered Species:** These species are addressed in Chapter 4, Section 4.5.2.7 of the FEIS. The Corps has received numerous comments regarding three state-listed mussel species. The FEIS states that "potential habitat" does exist for these mussels, however, no positive collection of such mussels (by the applicants sampling or any state/federal wildlife agency) has occurred within the proposed reservoir footprint. Thus, since none of the sampling studies showed "presence" of the mussels the Corps concurs that there are no potential impacts to these three mussel species.

**Recreation:** The recreational value of natural resources can link residents to an area or attract new residents to an area. Environmental amenities like a reservoir can contribute to the region's identity, as well as the area's quality of life. This information is discussed in detail within Chapter 3, Section 3.13.1, the Appendices, and the AR.

Water Supply and Conservation: As discussed in Chapter 1, Section 1.1.1 of the FEIS, “NTMWD serves one of the fastest-growing areas of Texas (Kiel and Gooch, 2015), and indeed, the entire country (Potter and Hoque, 2014). Demographic projections show the population of NTMWD’s service area more than doubling from about 1.75 million in 2020 to 3.7 million by 2070 (Region C Water Planning Group, 2015). The proposed LBCR would provide a new water supply to help meet the increasing water demands of this growing population.” The Corps concurs that the proposed new water supply would benefit the region.

Consideration of Property Ownership: Currently, NTMWD owns in fee, approximately 85% of the land within the proposed LBCR footprint. However, as referenced in Chapter 4, Section 4.13, of the FEIS, “NTMWD is required to negotiate with property owners in an effort to reach an agreement on the amount of compensation for property required for this project, which is based on the market value of the land at that time. If negotiations are unsuccessful, NTMWD must acquire the property required for the project through eminent domain proceedings, and Texas law sets forth specific procedures to determine the final compensation.” The Corps acknowledges that the use of eminent domain could be detrimental to those individual landowners. As also referenced in the same Section of the FEIS, “The “Bois d’Arc Goodbye” documentary highlights concerns voiced by a few residents regarding the displacement of multi-generational residents, farmers, and ranchers; loss of farming, ranching, family businesses, and rural heritage; and that the culture of the area would change against wishes of longtime residents due to influx of outsiders who do not share values, therefore eroding the social cohesion of the area (USACE, 2010c).” Additional supporting information regarding this subject can be found in Chapter 4, Section 4.13 of the FEIS, its Appendices, and the AR.

Needs and Welfare of the People: As discussed in Chapter 1, Section 1.1.1 of the FEIS, “NTMWD serves one of the fastest-growing areas of Texas (Kiel and Gooch, 2015), and indeed, the entire country (Potter and Hoque, 2014). Demographic projections show the population of NTMWD’s service area more than doubling from about 1.75 million in 2020 to 3.7 million by 2070 (Region C Water Planning Group, 2015). The proposed LBCR would provide a new water supply to help meet the increasing water demands of this growing population.” Additional supporting information can be found in the FEIS, the Appendices, and the AR.

As a reminder to the reader, this ROD utilizes years of supporting information which was used to complete the FEIS, associated Appendices, and the AR. The AR contains field notes, technical data, meeting minutes, and other associated information that may not be in the FEIS, but which, supports the information within the FEIS and this decision document.

7.1.1 Climate Change. A complete discussion regarding climate change can be found in Chapter 5, Section 5.4.5 of the FEIS. Additional supporting information can be found in the FEIS appendices and the AR.

7.2 The relative extent of the public and private need for the proposed structure or work:

As stated in section 3.4 of this document and within the FEIS, the following statement is directly from the LBCR FEIS, "The Corps considers the overall project purpose to be developing an additional and reliable water supply of at least 105,804 AFY by 2025, including under drought and other reduced-availability situations. The water supply should also provide a meaningful amount of the estimated NTMWD long-term needs through 2060." Additional supporting information can be found in the FEIS, the Appendices, and the AR.

7.3 If there are unresolved conflicts as to resource use, explain how the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work was considered.

Discussion: There were no unresolved conflicts identified as to resource use.

7.4 The extent and permanence of the beneficial and/or detrimental effects that the proposed work is likely to have on the public and private use to which the area is suited:

Detrimental effects are expected to be more than minimal and permanent.

Beneficial effects are expected to be more than minimal and permanent.

The Corps has determined that with mitigation the long term beneficial effects of the proposed project will outweigh the detrimental effects of the project for the citizens in Fannin County and the State of Texas. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

**8.0 Mitigation**(33 CFR 320.4(r), 33 CFR Part 332, 40 CFR 230.70-77, 40 CFR 1508.20 and 40 CFR 1502.14)

8.1 Avoidance and Minimization: When evaluating a proposal including regulated activities in waters of the United States, consideration must be given to avoiding and minimizing effects to those waters. Avoidance and minimization measures are described above in Sections 1 and 3.

Were any other mitigative actions including project modifications discussed with the applicant implemented to minimize adverse project impacts? (see 33 CFR 320.4(r)(1)(i)) Yes

The applicant's original proposal included a pipeline segment from the North WTP to a discharge point on Pilot Grove Creek upstream of Lavon Lake. This pipeline would have allowed delivery of LBCR raw untreated water to Lavon Lake and thus to NTMWD's existing WTP there, increasing the versatility within their water supply system. Bois d'Arc Creek is not known at the present to contain any invasive species of concern that could be transferred through raw water. However, it was determined that this feature could contribute to the introduction and spread of known and presently unknown invasive species, either plants or animals, in the raw water if, in the future, the waters of the impounded reservoir were colonized by an invasive species. This pipeline would then represent a risk of spreading invasive species into Lavon Lake and the entire Trinity River watershed. Consequently, this feature of the proposal was eliminated from further consideration and discussion prior to the publication of the DEIS in light of the severe environmental and economic risks associated with the potential transfer of invasive species from one reservoir to another in the raw water.

Additional wetland modeling (HGM, see detailed discussion in Chapter 2, Section 2.5.2, of the FEIS, Appendix C and K-1&2, and the AR) was required by the Corps to better assess potential impacts to forested wetlands present within the proposed reservoir footprint. The results of the assessment required the applicant to propose additional mitigation lands to offset the proposed impacts of the project. Additional stream modeling (RGA, see detailed discussion in Chapter 2, Section 2.5.2, of the FEIS, Appendix C and L-1, and the AR) was required in 2016 to verify streams previously not specifically measured during the original 2008 RGA modeling. These streams actually scored lower than was previously extrapolated by the applicant's 2008 RGA analysis. A thorough explanation of the proposed mitigation plan can be found in Appendix C of the FEIS. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

8.2 Is compensatory mitigation required to offset environmental losses resulting from proposed unavoidable impacts to waters of the United States? Yes

Provide rationale: As stated in section 6.4.2 of this document, the proposed project has impacts to wetlands, streams, and open waters within the proposed footprint of the reservoir. Due to these proposed impacts, a significant amount of compensatory mitigation is being offered by the Applicant to offset these impacts. A thorough explanation of the proposed mitigation plan can be found in Appendix C of the FEIS. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

### 8.3 Type and location of compensatory mitigation

As written in Chapter 2, Section 2.5 of the FEIS, specific mitigation plan objectives are to mitigate for unavoidable adverse impacts to waters of the U.S. in the project area, which include forested wetlands, emergent wetlands, scrub shrub wetlands, open water, and streams, that would occur as a result of constructing the proposed LBCR. This mitigation would be achieved through wetland restoration and enhancement and stream restoration and enhancement at the nearby mitigation sites, Riverby Ranch and the Upper Bois d'Arc Creek (BDC) mitigation site. On the reservoir site, the creation of the lake would offset impacts to open waters and some of the stream impacts, and it would allow for creating emergent wetlands in shallow areas around the lake (littoral wetlands). The development of the reservoir also would enhance Bois d'Arc Creek downstream of the proposed reservoir site through reductions in the frequency of destructive high flow events and the passage of sustainable environmental flows to maintain and enhance existing downstream habitats.

In order to establish appropriate metrics based on ecological quality, biological assessment methodologies often use measures of quality (instead of acres) to compare ecological habitat losses that are anticipated from a project with the types of ecological habitat gains that could be created through mitigation actions. Specific plan objectives are to mitigate for impacts to:

4,035 Functional Capacity Units (FCU) of forested wetlands;  
514 Habitat Units (HU) of emergent wetlands;  
23 HUs of scrub shrub wetlands;  
78 acres of open water; and  
192,377 Stream Quality Units (SQU) of streams.

The impacts to 49 acres (23 HUs) of scrub shrub wetland at the reservoir site would be mitigated by restoring 150 acres (103.5 HUs) of scrub shrub wetlands habitat at the Riverby Ranch mitigation site. In addition to restoring 150 acres of scrub shrub wetlands, NTMWD proposes to preserve 98 acres of existing scrub shrub wetlands at Riverby Ranch for a total scrub shrub mitigation area of 248 acres.

Mitigation would occur in three areas:

- 1) on-site mitigation at the proposed reservoir site;
- 2) near-site mitigation on the nearly 15,000-acre Riverby Ranch; and
- 3) near-site mitigation on the 1,900-acre Upper BDC mitigation site. Important points to note are:

Mitigation provided for forested wetlands would be 4,675 FCUs, as well as 957 HUs for emergent wetlands, 103.5 HUs for scrub shrub, 16,036 acres for open water, and 175,476 SQUs for streams (153,146 SQUs at Riverby Ranch and 22,330 SQUs at the Upper Bois d’Arc Creek site). Most of the proposed aquatic and terrestrial mitigation would occur on the Riverby Ranch, a contiguous, nearly 15,000-acre tract of land located downstream of the proposed reservoir site and partially within the Bois d’Arc Creek watershed (the remainder located directly within the adjacent Red River Basin). The remaining terrestrial mitigation area is located adjacent to the project site. Note that terrestrial mitigation is included in the Revised Mitigation Plan solely to comply with state requirements associated with NTMWD’s state water right permit and is not required by the USACE as part of the mitigation for the requested 404 permit. These mitigation sites are proximal to each other and to lands enrolled in the Pintail Farms WRP area and the nearby Caddo Grasslands.

8.3.1 Is the impact in the service area of an approved mitigation bank? No

If yes, does the mitigation bank have appropriate number and resource type of credits available? N/A

8.3.2 Is the impact in the service area of an approved in-lieu fee program? No

If yes, does the in-lieu fee program have the appropriate number and resource type of credits available? N/A

8.3.3 Selected compensatory mitigation type/location(s). See Table 10:

Mitigation bank credits	
In-lieu fee program credits	
Permittee-responsible mitigation under a watershed approach	X
Permittee-responsible mitigation, on-site and in-kind	X
Permittee-responsible mitigation, off-site and/or out of kind	X

8.3.4 Does the selected compensatory mitigation option deviate from the order of the options presented in §332.3(b)(2)-(6)? N/A

If yes, provide rationale for the deviation, including the likelihood for ecological success and sustainability, location of the compensation site relative to the impact site and their significance within the watershed, and/or the costs of the compensatory mitigation project (see 33 CFR §332.3(a)(1)): N/A.

As stated earlier in this document, the project LBCR application was submitted prior to the implementation of 33 CFR 332, thus, under the guidance provided by Corps HQ and the decision of the District Engineer, this project and the associated proposed compensatory mitigation is being reviewed under the Corps Regulatory Guidance Letter 02-02, Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

- 8.4 Amount of compensatory mitigation: The amount of proposed mitigation is large and complex. The specific details of the proposed mitigation plan can be found in Appendix C of the FEIS. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

Rationale for required compensatory mitigation amount: Please reference the information in the FEIS, the Appendices, and the AR.

- 8.5 For permittee responsible mitigation identified in 9.3.3 above, the final mitigation plan must include the items described in 33 CFR 332.4(c)(2) through (c)(14) at a level of detail commensurate with the scale and scope of the impacts. As an alternative, the district engineer may determine that it would be more appropriate to address any of the items described in (c)(2) through (c)(14) as permit conditions, instead of components of a compensatory mitigation plan. Presence of sufficient information related to each of these requirements in the applicant’s mitigation plan is indicated by “Yes” in Table 11. “No” indicates absence or insufficient information in the plan, in which case, additional rationale must be provided below on how these requirements will be addressed through special conditions or why a special condition is not required:

As detailed above, this proposed project is NOT being considered under the requirements of 33 CFR 332, thus, this section does not necessarily apply. However, many of the requirements/information detailed below have been submitted by the Applicant and is explained within the mitigation plan, thus, the supplied information will be recorded within the table below.

Table 11 – Permittee-Responsible Mitigation Plan Requirements		
Requirement	Yes	No
Objectives	X	
Site selection	X	
Site protection instrument	X	
Baseline information	X	
Determination of credits		X

Table 11 – Permittee-Responsible Mitigation Plan Requirements		
Requirement	Yes	No
Mitigation work plan	X	
Maintenance plan	X	
Performance standards	X	
Monitoring requirements	X	
Long-term management plan	X	
Adaptive management plan	X	
Financial assurances	X	
Other		X

For any “No”, provide rationale on how the subject component(s) of the compensatory mitigation plan will be addressed as special conditions or why no special conditions are required: A determination of credits is not required due to no availability of a mitigation bank or In-lieu program. “Other” is not applicable.

**9.0 Consideration of Cumulative Impacts**

(40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor direct and indirect but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider how the direct and indirect environmental effects caused by the proposed activity requiring DA authorization (i.e., the incremental impact of the action) contribute to cumulative effects, and whether that incremental contribution is significant or not.

9.1 Identify/describe the direct and indirect effects caused by the proposed activity:

Please reference Chapter 5 of the FEIS. As a reminder to the reader, this ROD utilizes years of supporting information which was used to complete the FEIS, associated Appendices, and the AR. The AR contains field notes, technical data, meeting minutes, and other associated information that may not be in the FEIS, but which supports the information within the FEIS and this decision document.

9.2 The geographic scope for the cumulative effects assessment is:

Please reference Chapter 5 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

9.3 The temporal scope of this assessment covers: Please reference Chapter 4 and 5 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

9.4 Describe the affected environment: Please reference Chapter 3 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

9.5 Determine the environmental consequences: Please reference Chapter 4 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

9.6 Discuss any mitigation to avoid, minimize or compensate for cumulative effects:  
  
Please reference the proposed mitigation plan, which can be found in Appendix C of the FEIS. Additional supporting information can be found in the FEIS, the Appendices, and the AR.

9.7 Conclusions regarding cumulative impacts:

See Chapter 5 of the FEIS for this information. Additional supporting information may be found within the FEIS appendices and the AR.

Compensatory mitigation will be required to help offset the impacts to eliminate or minimize the proposed activity's incremental contribution to cumulative effects within the geographic area described in Section 9.2. Mitigation required for the proposed activity is discussed in Section 8.0.

## **10.0 Compliance with Other Laws, Policies, and Requirements**

10.1 **Section 7(a)(2) of the Endangered Species Act (ESA):** Refer to Section 2.2 for description of the Corps action area for Section 7.

10.1.1 Has another federal agency been identified as the lead agency for complying with Section 7 of the ESA with the Corps designated as a cooperating agency and has that consultation been completed? No

If yes, identify that agency, the actions taken to document compliance with Section 7 and whether those actions are sufficient to ensure the activity(s) requiring DA authorization is in compliance with Section 7 of the ESA:

The Corps is the lead agency.

10.1.2 Are there listed species or designated critical habitat present or in the vicinity of the Corps' action area? No. The Corps has determined that it has fulfilled its responsibilities under Section 7(a)(2) of the ESA

Effect determination(s), including no effect, for all known species/habitat, and basis for determination(s):

Please reference Chapter 3 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR.

10.1.3 Consultation with either the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service was initiated and completed as required. Please reference Chapter 3 of the FEIS. Additional supporting information can be found within the FEIS, the Appendices, and the AR. Based on a review of the above information, the Corps has determined that it has fulfilled its responsibilities under Section 7(a)(2) of the ESA. The documentation of the consultation is incorporated by reference.

10.2 **Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), Essential Fish Habitat (EFH).** N/A, there is no essential fish habitat in this district's area of responsibility.

10.2.1 Has another federal agency been identified as the lead agency for complying with the EFH provisions of the Magnuson-Stevens Act with the Corps designated as a cooperating agency and has that consultation been completed? Not applicable.

If yes, identify the agency, the actions taken to document compliance with the Magnuson Stevens Act and whether those actions are sufficient to ensure the activity(s) requiring DA authorization is in compliance the EFH provisions.

Not applicable.

10.2.2 Did the proposed project require review under the Magnuson-Stevens Act?

Not applicable.

10.2.3 If yes, EFH species or complexes considered: Not applicable.

Effect(s) determination and basis for that determination(s): Not applicable.

10.2.4 Consultation with the National Marine Fisheries Service was initiated and completed as required (see the attached ORM2 Summary sheet for consultation type, begin date, end date and closure method of the consultation). Based on a

review of the above information, the Corps has determined that it has fulfilled its responsibilities under EFH provisions of the Magnuson-Stevens Act.

Not applicable.

**10.3 Section 106 of the National Historic Preservation Act (Section 106):** Refer to Section 2.3 for permit area determination.

10.3.1 Has another federal agency been identified as the lead federal agency for complying with Section 106 of the National Historic Preservation Act with the Corps designated as a cooperating agency and has that consultation been completed? No

If yes, identify that agency, and whether the undertaking they consulted on included the Corps undertaking(s). Briefly summarize actions taken by the lead federal agency.

Not applicable.

10.3.2 Known historic properties present? Yes. Please reference the signed Programmatic Agreement between the NTMWD, The Caddo Nation of Oklahoma, the THC, and the Corps. Additional consultation is necessary to ensure compliance of the regulated activity with Section 106 of the NHPA.

Effect determination and basis for that determination: Please reference Chapter 3 of the FEIS. Additional information can be found within the FEIS, the Appendices, and the AR.

10.3.3 Consultation was initiated and completed with the appropriate agencies, tribes, and/or other parties for any determinations other than “no potential to cause effects”. The consultation regarding 106 NHPA will not be completed until the requirements of the referenced PA are fulfilled by the signatories. Based on a review of the information above, the Corps has determined that it has fulfilled its responsibilities under Section 106 of the NHPA. Compliance documentation incorporated by reference.

The Corps will be in compliance with Section 106 of the NHPA, as long as the requirements of the PA are met.

**10.4 Tribal Trust Responsibilities**

10.4.1 Was government-to-government consultation conducted with Federally-recognized Tribe(s)? Yes

Provide a description of any consultation (s) conducted including results and how concerns were addressed. Numerous meetings have been held with the Caddo Nation during the formulation of the FEIS and they will continue to occur per the PA. The Caddo Nation of Oklahoma is a signatory of the PA and consultation will be completed per the requirements within the referenced PA. The Corps has determined that it has fulfilled its tribal trust responsibilities.

10.4.2 Other Tribal including any discussion of Tribal Treaty rights? N/A

**10.5 Section 401 of the Clean Water Act – Water Quality Certification (WQC)**

10.5.1 Is a Section 401 WQC required, and if so, has the certification been issued, waived or presumed? An individual water quality certification is required and was issued by the TCEQ on January 12, 2018.

**10.6 Coastal Zone Management Act (CZMA)**

10.6.1 Is a CZMA consistency concurrence required, and if so, has the concurrence been issued, waived or presumed? N/A, a CZMA consistency concurrence is not required.

**10.7 Wild and Scenic Rivers Act**

10.7.1 Is the project located 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? No

**10.8 Effects on Corps Civil Works Projects (33 USC 408)**

10.8.1 Does the applicant also require permission under Section 14 of the Rivers and Harbors Act (33 USC 408) because the activity, in whole or in part, would alter, occupy or use a Corps Civil Works project? No, there are no federal projects in or near the vicinity of the proposal.

If yes, provide date that decision was made and whether permission was granted or denied : Not Applicable

**10.9 Corps Wetland Policy (33 CFR 320.4(b))**

10.9.1 Does the project propose to impact wetlands? Yes

10.9.2 Based on the public interest review herein, the beneficial effects of the project outweigh the detrimental impacts of the project.

10.10 **Other (as needed):** Migratory Bird Treaty Act and The Bald and Golden Eagle Protection Act. Any permittee shall be responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. See information in Section 7.1 above. Please reference the FEIS, the Appendices, and the AR for additional information.

## 11.0 Special Conditions

11.1 Are special conditions required to protect the public interest, ensure effects are not significant and/or ensure compliance of the activity with any of the laws above? Yes

11.2 Required special condition(s)

Special condition(s): Permittee Construction Schedule: Prior to commencing construction, you shall complete and return the "Permittee Construction Schedule" form. Should construction be initiated prior to 30 days from validation of this permit, return the completed form as soon as possible. If you prefer, you may telephone 918 669 7549 to inform this office regarding the construction start date. A copy of the "Permittee Construction Schedule" form will accompany the validated permit and final authorization letter.

Rationale: To provide notification to the Corps that work has begun on the project.

Special condition(s): Compliance Certification: Following completion of the authorized activity, you shall submit a signed certification regarding the completed work and any required mitigation. A copy of the "Permittee Compliance Certification" form will accompany the validated permit and final authorization letter.

Rationale: To provide notification to the Corps that the authorized work is complete.

Special condition(s): Floodplain Management: You shall contact the Texas Water Development Board (or appropriate State of Texas Floodplain Manager) to obtain the appropriate floodplain permit required for the project and maintain compliance with such permit during construction.

Rationale: To adhere to state/local floodplain requirements.

Special condition(s): Erosion Control Measures (ECM): The ECM such as silt screen barriers shall be implemented and maintained during construction. Barriers shall remain in place and effective until sufficient vegetation coverage on exposed areas is established. Upon inspection of erosion control barriers, if there is any damage to the barrier, it shall be replaced or repaired within 24

hours of discovery. All exposed earthen areas, disturbed or newly created by the construction, shall be seeded immediately, replanted, or provided equivalent protection against subsequent erosion.

Rationale: To prevent and reduce erosion during construction of the project.

Special Condition(s): Mitigation Plan: You shall implement the Mitigation Plan (prepared by Freese and Nichols, Inc.) dated January 2017 and comply with the following:

a. Preservation of Mitigation Area: You shall deed restrict mitigation properties with a perpetual deed restriction, protecting against future development and/or disturbances. The location and acreages of properties are described as Figure 1, 4, 6, and 7 within the referenced Mitigation Plan. The attached deed restriction template shall be used. Complete, sign, and file (certified) the deed restriction at the Fannin and Lamar County Clerk Office. Provide a copy to this office within 30 days of the permit execution date.

Once each mitigation site has satisfied the performance standard requirements set forth in the referenced Mitigation Plan and in accordance with the conditions of this permit, you shall either: (1) enter into a conservation easement, or some other similar agreement approved by this office, for the mitigation properties with a Corps-approved third party easement holder/property manager; or (2) transfer title to that mitigation property (and/or site) to a federal or state land management agency (this action must also be approved by the Corps).

b. Mitigation Monitoring: You shall provide an annual monitoring report to this office no later than December 1st of each year for first 7 years, every other year from year 8 to year 15, and once more in year 20. This shall begin the 1st growing season after mitigation construction begins. Reference the Mitigation Plan for the content of the mitigation reports. If performance measures are not being met, then you shall provide a remediation strategy to attain the required measures.

c. Financial Assurances: You shall provide a signed (executed) resolution for financial assurances as set forth in Appendix J of the Mitigation Plan. This resolution shall reference the Mitigation Plan dated January 2017 and be signed by the appropriate legal authority of the NTMWD.

d. Temporary Irrigation Lines: Temporary irrigation lines are permissible, however, all such lines shall be removed from the mitigation properties once you are satisfied that temporary irrigation is no longer necessary for the mitigation plantings. The placement/removal of lines shall be coordinated with this office prior to implementation.

e. Mitigation Properties Survey: You shall complete an as-built survey of each mitigation property once construction is completed. The survey shall show the location and size (in acres) of each aquatic area (wetlands and streams) within the property. This survey shall be submitted to this office for review and approval.

Rationale: To provide perpetual protection to the mitigation properties.

Special condition(s): Monitoring for Stream Impacts: During construction of the dam and after construction is completed, you shall monitor the impacted tributaries for destabilization within 4000ft downstream of the project. The monitoring period shall extend 5 years after the reservoir has fully reached the pool elevation of 534 msl. If stream destabilization occurs during this period, you shall notify this office immediately in writing. This report shall assess the condition of the stream. You shall include photographs of the stream channel and degraded area. After notification is made, you may be required by this office to submit a proposal to correct the destabilization of the stream channel.

Rationale: To assure project will not permanently destabilize the downstream channel during and after construction.

Special condition(s): Reservoir Clearing Plan: The applicant shall submit a Final Reservoir Clearing Plan (Reference Appendix T of the FEIS) to the Corps for approval before clearing begins within the reservoir footprint. Clearing/Grubbing within the Dam footprint may begin without the required Corps approved Final Clearing Plan.

Rationale: To make sure that unnecessary clearing of trees/habitat does not occur within the reservoir footprint.

Special condition(s): Migratory Birds and Bald and Golden Eagles: You shall be responsible for ensuring your action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Rationale: To ensure the protection of migratory birds and bald eagles.

Special condition(s): Section 106 of the NHPA: The requirements of the signed 2011 Programmatic Agreement between you, Caddo Nation of Oklahoma, Texas Historical Commission, and the Corps shall be adhered to prior to ANY commencement of construction activities within areas known to contain identified cultural and/or historical sites.

Rationale: To protect cultural resources and maintain compliance with Section 106 of the NHPA.

## 12.0 Findings and Determinations

12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

12.2 Presidential Executive Orders (EO):

12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.

12.2.2 EO 11988, Floodplain Management: Alternatives to location within the floodplain, minimization and compensatory mitigation of the effects were considered above.

12.2.3 EO 12898, Environmental Justice: The Corps has determined that the proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities.

12.2.4 EO 13112, Invasive Species: The evaluation provided above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.

12.2.5 EO 13212 and EO 13302, Energy Supply and Availability: The proposal is not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.

12.3 Findings of No Significant Impact: Not Applicable to this ROD.

Section 12.3 is not applicable to this Record of Decision as the Corps has previously determined that this project bears the potential for significant impact on the quality of the human environment and has required and completed an EIS in compliance with NEPA.

12.4 Compliance with the Section 404(b)(1) Guidelines: Having completed the evaluation above, I have determined that the proposed discharge complies with the Guidelines, with the inclusion of the appropriate and practicable special conditions to minimize pollution or adverse effects to the affected ecosystem.

12.5 Public interest determination: Having reviewed and considered the information above, I find that the proposed project is not contrary to the public interest.

**PREPARED BY:**

/S/

\_\_\_\_\_  
Edward M. Parisotto  
Supervisory Regulatory Project Manager

January 29, 2018  
Date:\_\_\_\_\_

**REVIEWED BY:**

/S/

\_\_\_\_\_  
Andrew R. Commer  
Chief, Regulatory Office

January 29, 2018  
Date:\_\_\_\_\_

**APPROVED BY:**

/S/

\_\_\_\_\_  
CHRISTOPHER A. HUSSIN  
Colonel, EN  
Commanding

January 29, 2018  
Date:\_\_\_\_\_