SOUTHWEST REGION
Draft NEPA Screening Form for CCAA

I. Project Information

The Lower Colorado River Authority (LCRA), a conservation and reclamation district in the State of Texas, provides multiple services in the Colorado River basin, including managing water supplies, managing floods along the Highland Lakes, producing and delivering power, managing parks and recreation areas, and supporting community development. They manage 1,942 miles of rivers and canals and 10 lakes and reservoirs within the Colorado River watershed in Texas. The Lower Colorado River Authority Transmission Services Corporation (LCRA TSC) is a nonprofit corporation conducting electric transmission operations within Texas. They own and operate 5,500 circuit miles of electric transmission lines and maintain and operate equipment at approximately 430 electric substations across the state. The proposed Federal Action is the issuance of a section 10(a)(1)(A) Enhancement of Survival permit (Permit) pursuant to section 10(a)(1)(A) of the Endangered Species Act (ESA) of 1973, as amended (16 USC § 1532) and the implementation of a Candidate Conservation Agreement with Assurances (CCAA) developed in cooperation with LCRA, LCRA TSC, and the U.S. Fish and Wildlife Service (Service). The CCAA involves the LCRA and LCRA TSC's management, maintenance, and operations activities in the basin and a suite of conservation measures. The CCAA specifically addresses the resource and conservation needs of native freshwater mussels in the Colorado River basin.

A. Project Name: (i.e., the "CCAA")

Candidate Conservation Agreement with Assurances for the Texas pimpleback (*Cyclonaias petrina*), Texas fawnsfoot (*Truncilla macrodon*), Texas fatmucket (*Lampsilis bracteata*) and Balcones spike (*Fusconaia iheringi*) in the Lower Colorado River Basin below O.H. Ivie Reservoir.

B. Affected Species: (i.e., the "Covered Species")

Proposed Texas pimpleback (*Cyclonaias petrina*), proposed Texas fawnsfoot (*Truncilla macrodon*), proposed Texas fatmucket (*Lampsilis bracteata*), and the proposed Balcones spike (*Fusconaia iheringi*).

Additional native freshwater mussels and other aquatic species are expected to benefit from the conservation measures and can be added to the CCAA through an amendment to the CCAA and associated Permit.

C. Project Size (in stream miles and acres):

While the "Covered Area" includes all portions of the Lower Colorado River basin where the LCRA and LCRA TSC has management authority downstream of O.H. Ivie Reservoir, the CCAA identifies specific zones (identified stream reaches) where their activities could affect the Covered Species and where conservation measures will be applied (Covered Area estimates may overlap in stream reaches where multiple species are present):

River Zone	Stream Miles
Zone A-1 (Texas pimpleback)	419
Zone A-2 (Texas fawnsfoot)	198
Zone A-3 (Texas fatmucket)	101
Zone A-4 (Balcones spike)	399
	740 stream miles

Additional areas are identified in the CCAA including areas where suitable mussel habitat is present but with no documented presence of the Covered Species (Zone B), water conveyance canals that are unlikely to contain suitable habitat for the Covered Species (Zone C), and reservoirs that do not contain suitable habitat for the Covered Species (Zone D):

River Zone	Stream Miles
Zone B	315
Zone C-1	19
Zone C-2	868
Zone D	715
	1917 stream miles

D. Brief Project Description (including minimization and mitigation plans):

The CCAA describes conservation measures chosen specifically to maintain and/or increase resiliency, redundancy, and representation; while allowing for ongoing and continued water supply development activities to meet the growing demands of an increasing human population within the Colorado River basin over the 20-year term of the CCAA, which should result in a net conservation benefit for the covered species.

The purpose of the CCAA is to provide a mechanism for the LCRA and LCRA TSC to implement a variety of conservation measures to benefit the Covered Species within the Covered Area. Further, the Service would provide regulatory assurances to the LCRA and LCRA TSC that so long as the CCAA is implemented as agreed, the Service would not require additional conservation measures nor impose additional land, water, or resource-use restrictions, beyond those stated and agreed to in the CCAA.

Implementation of the conservation strategy and its conservation measures are expected to result in population increases and habitat improvements for the Covered Species. The anticipated conservation benefit is achieved through the implementation of a comprehensive conservation strategy based on priorities established by the Freshwater Mollusk Conservation Society (FMCS) and tailored to specific threats and hydrologic conditions in the Colorado River basin. Specifically, the identification of avoidance and minimization zones will reduce threats linked to physical disturbances associated with operations and maintenance activities. New construction activities will not be included in this CCAA. Applied research, long-term monitoring, and an adaptive management program tied to changed circumstances will reduce threats associated with periods of critical low flows by providing the LCRA with the capability to consider the ecological needs of Covered Species when the LCRA and LCRA TSC make management decisions.

The LCRA system of Highland Lake reservoirs provides the LCRA the flexibility to provide environmental flows in the lower Colorado River basin and adjust to regional drought conditions. The combination of reduced threats associated with physical disturbance and critical low flows will allow populations to naturally increase in terms of both number of individuals and extent of physical habitat occupied. Although the CCAA specifically provides net conservation to benefit the Covered Species, many of the implemented conservation measures will also result in beneficial impacts to other mussel species, fish, and native aquatic biota within the Colorado River basin.

The duration of the CCAA and the associated Permit is 20 years.

For the purposes of this CCAA, the Covered Area is defined as the portion of the Colorado River basin that contributes inflow to the Colorado River downstream of the intersection of McCullough, Brown, and Coleman counties and Areas within LCRA's Water Service Area, except those portions of Williams and Lampasas counties outside of the Colorado River Basin. It also includes portions of the LCRA's Water Service Area within Colorado, Wharton, and Matagorda Counties that are located outside of the Colorado River Basin. Please refer to the CCAA for a complete description of the natural history and biology of these four specie.

Goals and objectives for the CCAA are stepped down from the National Strategy for the Conservation of Native Freshwater Mollusks:

1. Understand the status and trends of mollusk populations to better manage and conserve. Field investigation will help collect additional data for species distributions and abundances. Long-term monitoring will assess trends in existing populations over time. These data will be provided to resource managers to monitor the current status of the Covered Species in the Colorado River basin over the duration of the Permit and notify experts of potential range expansions or retractions in the basin. The inclusion of a Conservation and Restoration Study for the Texas fatmucket and Texas pimpleback in the CCAA, expanding upon an on-going USFWS project in the Colorado Basin, will collect data and complete modeling exercises that will aid in the prioritization of areas for implementation of conservation and/or restoration action by the LCRA, LCRA TSC, the Service, or private landowners in the basin.
2. Minimize threats to mollusks and their habitats. The Conservation and Restoration Study for the Texas fatmucket and Texas pimpleback will improve understanding of habitat associations and assist in prioritizing conservation actions. Environmental flow protections promote conditions adequate for survival and long-term persistence of Covered Species and strive to assure water quantity. Avoidance and minimization measures reduce detrimental activities in areas of optimal habitat for Covered Species and prevent further fragmentation. Applied research aids in identifying habitat, water quality, and flow-related stressors important in structuring populations of Covered Species and will be used to guide adaptive management of environmental flows and avoidance/minimization zones. The creation of an Onion Creek Watershed Work Group will bring together partners to identify and find solutions to reducing threats to Texas fatmucket in

that watershed.

3. Increase understanding of physical, chemical, and biological characteristics of habitat to support sustainable assemblages of mollusks. Applied research aids in identifying habitat, water quality, and flow-related stressors important in structuring populations of Covered Species and will be used to guide adaptive management. The Conservation and Restoration Study will assist in understanding habitat requirements of the Texas Fatmucket and Texas Pimpleback and will be essential to the adaptive management process. Implementation of this greater understanding could then be applied during future augmentation or reintroduction efforts for those species in the basin. Avoidance measures conserve habitat through avoidance or minimization of detrimental activities in areas of optimal habitat for Covered Species.
4. Increase fundamental knowledge of the biology of mollusks so managers can more effectively conserve them. Proposed applied research studies will increase the knowledge of the biology of Covered Species at the individual and population level, and long-term monitoring will provide important data on the ecological needs of Covered Species. These data could be used to identify currently unrecognized threats to the Covered Species, inform propagation and introduction guidelines, and identify other potentially limiting factors to the long-term survival of the Covered Species, such as water quality or fish host availability limitations.
5. Conserve and restore viable populations and communities of mollusks. Population demographic data from long-term monitoring will assist in determining if populations are self-sustaining. The Conservation and Restoration Study will evaluate areas suitable for reintroduction of Texas fatmucket and Texas pimpleback. Should restoration or supplementation of existing populations be desired, successful captive propagation of Covered Species will be necessary to supply organisms.
6. Improve science-based consideration of the social and economic values of mollusk communities and functioning aquatic systems. Education and outreach activities will highlight the ecosystem services of freshwater mussels and the social and economic value of functioning aquatic systems.
7. Increase information sharing and communication among citizens and decision-makers at multiple levels regarding conserving mollusk resources. Information sharing will occur with state and federal agency personnel through an interagency workgroup, and communication with the public will occur through education and outreach opportunities.
8. Provide a suite of training opportunities to the greater conservation community and inspire future generations to work on the conservation of mollusks. Education and outreach activities will include presentations of conservation accomplishments to the greater conservation community and will also focus on educating youth and young professionals about mussel conservation through social media and other avenues.
9. Increase funding for mollusk conservation. The CCAA represents a long-term funding commitment by the LCRA and LCRA TSC to support mollusk conservation in the Colorado River basin through funding captive propagation studies at Service National Fish Hatcheries and applied research to better

understand the threats posed to freshwater mussels in the Colorado River basin.

10. Increase coordination and information sharing among local, state, national, and international partners in conserving mollusk resources. Coordination with state and federal agency personnel will occur through the Onion Creek Watershed Workgroup. Conservation successes of the program will be communicated to national partners in mollusk conservation.

The CCAA is likely to provide conservation benefit to the Covered Species through implementation of a comprehensive conservation strategy based on priorities established by national freshwater mollusk experts tailored to specific threats and hydrologic conditions in the Colorado River basin. The strategy includes research and monitoring to further knowledge of the Covered Species, avoidance to protect existing populations, education, and outreach to engage the public, and employs both collaborative conservation and adaptive management principles. It also includes the development of conservation zones to prioritize areas for implementation of specific conservation measures designed to reduce current and future threats to the Covered Species. Conservation measures include: compliance with existing environmental flow standards, where applicable, and continued research to refine these standards specific to freshwater mussels; avoidance of specific activities in areas known to harbor key populations of the Covered Species; additional applied research to examine the effects of various stressors to Covered Species; education and outreach to garner public interest in mussel conservation and habitat enhancements; applied research identifying factors limiting the survival of freshwater mussels in selected portions of the Colorado River basin; and supporting development of emergency short-term refugia protocols and captive propagation for the Covered Species.

The agreement will be monitored annually through annual coordination meetings and reporting.

II. Does the CCAA fit the following Department of Interior and Fish and Wildlife Service categorical-exclusion criteria?

The CCAA policy (81 FR 95164) states that "the Services expect that most CCAAs and associated enhancement-of-survival permits will result in minor or negligible effects on the environment and will be categorically excluded from individual NEPA analysis" (p. 95173). Specifically, this CCAA may fall under 43 CFR 46.210 (e) as the proposed activities within the CCAA consist of "nondestructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research, and monitoring activities".

A. Are the effects of the CCAA minor or negligible on federally listed, proposed, or candidate species and their habitats covered under the CCAA, prior to implementation of the minimization and mitigation measures? [516 DM 8.5(C)(1)]
Yes. Outside of the proposed action, which will result in a relatively low level of take that may occur under CCAA implementation, no federally listed species are expected to be affected by any actions described by the CCAA. The low level of take that may occur would consist of harm caused by the downstream effects of releases of water from stilling basins that is of high temperature, low dissolved oxygen or otherwise degraded, through sediments transported downstream following infrastructure maintenance, or mussels being inadvertently killed or injured during population surveys or long-term monitoring activities.

After accounting for the comprehensive conservation program, the CCAA is expected to result in impacts to proposed species and their habitats so minor as to be considered negligible as the cumulative incidental take associated with these activities are not expected to be great enough to compromise the viability of the populations of Texas pimpleback, Texas fawnsfoot, Texas fatmucket, and Balcones spike in the Colorado River basin. The CCAA is designed to provide a net conservation benefit to covered proposed species, and other native aquatic species, as described above. The CCAA will result in avoidance of harm to Covered Species habitat and harm to individuals resulting from implementation of the CCAA is expected to be minimal and rare.

The Service anticipates that implementation of the CCAA will result in a net conservation benefit to proposed species and their habitats. Proposed mussels do not fully occupy the Covered Area, but we do expect proposed mussels to expand in population size and extent by the end of the 20-year CCAA and permit term. The Service, the LCRA, and the LCRA TSC expect that not more than 12% of the potential habitats within the designated zones within the covered area will be adversely affected by the CCAA during the agreement term, not to exceed a total of 218 stream miles over the 20 years of the CCAA and permit, and those habitat effects are not expected to become permanent.

B. Are the effects of the CCAA minor or negligible on all other components of the human environment, including environmental values and environmental resources (e.g. air quality, geology and soils, water quality and quantity, socio-economic,

cultural resources, recreation, visual resources, etc.), prior to implementation of the minimization and mitigation measures? [40 CFR 1508.14; 43CFR 46.205]
Yes. Implementation of the CCAA is expected to result in only minor or negligible effects to the human environment, including environmental values and environmental resources. In fact, the CCAA is specifically designed to provide a net conservation benefit to the Covered Species and other native aquatic organisms, as described above, and contains conservation measures that encourage a healthy environment, including but not limited to improved water quality and quantity, and avoidance of important aquatic habitats. Further, many of the Covered Activities under the CCAA are currently ongoing or would otherwise occur with or without the CCAA; therefore, those effects are negligible. Because the CCAA implementation primarily involves management of water resources in their natural state and restoration of riparian zones, air quality, geology and soils are not expected to be negatively affected. In instances of updates and repairs being completed to existing infrastructure, these activities will occur in already disturbed areas where structures currently exist and will not expand the disturbances footprint. Proposed conservation actions, including on-going environmental flow protection, are expected to maintain existing water quality and anticipated to have no effects on socio-economic, cultural, recreation, or visual resources in the Colorado River basin. Therefore, implementation of the CCAA is not expected to have any detrimental effects to air quality, geology and soils, water quality and quantity, socio-economic, cultural resources, recreation, or visual resources.

C. Would the incremental impacts of this CCAA, considered together with the impacts of other past, present and reasonably foreseeable future actions (regardless of what agency or person undertakes such other actions) *not* result, over time, in a cumulative effect to the human environment (the natural and physical environment) which would be considered significant? [40 CFR 1508.7; 43CFR 46.205]
Yes. The CCAA involves water and aquatic species resource management actions that are currently being undertaken or are planned to be expanded in the future. These actions are taken to avoid negative effects to the natural and physical environment. Implementation of the CCAA is expected to result in a net conservation benefit to the Covered Species and other aquatic species, and the conservation measures described in the CCAA are not expected to result in a significant cumulative effect to the human environment. Rather, conservation measures are anticipated to improve and maintain the health of the human environment over the 20-year term of the CCAA by improving water quality and water quantity available in the Colorado River basin. Future infrastructure construction by LCRA or LCRA TSC would be independent of the approval and permitting of the CCAA, as it would be a separate action that might result in an effect to the human environment, and as such would be permitted separately; however, if future infrastructure is constructed, its management is contemplated in the CCAA and expected to contribute to the conservation measures described in the CCAA. The management of any future infrastructure is part of the Service's permitting decision and the likelihood of the CCAA providing a net conservation benefit. The incremental effects of the CCAA are not expected to be additive such that past, ongoing, and future actions are not in themselves significant, nor would those actions result in significant effects because of the CCAA.

III. Do any of the exceptions to categorical exclusions (extraordinary circumstances) listed in 43 CFR 46.215 apply to this CCAA?

Would implementation of the CCAA:

A. Have significant impacts on public health or safety?
No. Implementation of the CCAA is not expected to result in any significant negative impacts to public health or human safety. Water quality and air quality are not expected to be adversely affected. Instead, conservation measures are anticipated to improve or maintain the ability of the LCRA to deliver clean water to customers and provide clean flowing water for freshwater mussels and other aquatic organisms in important conservation areas. The CCAA will have no effect on how the United States Army Corps of Engineers (USACE) or LCRA dams are managed in terms of flood or other emergency responses. CCAA activities will be conducted consistent with applicable Federal, State, and local laws and regulations.

B. Have significant impacts on such natural resources and unique geographic characteristics as: historic or cultural resources; visual and auditory resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990) or floodplains (Executive Order 11988); national monuments; migratory birds, or other ecologically significant or critical areas?
No. Implementation of the CCAA is not expected to result in any significant impacts to natural resources and unique geographic characteristics. The activities and conservation measures are not expected to affect any cultural areas, parks or refuge lands, wilderness areas, wild or scenic rivers, national natural landmarks, drinking water aquifers, prime farmlands, wetlands, floodplains, national monuments, migratory birds, or other ecologically significant areas. None of the above referenced natural resources or unique geographic characteristics are located within or along the streambeds where the LCRA's conservation actions will take place. LCRA and LCRA TSC have committed to coordinating with the State Historic Preservation Office prior to initiating any ground disturbance activities to ensure that those activities will not affect any known historical areas.

Specifically, Covered Activities are not expected to result in any major ground disturbance that could adversely affect natural or cultural resources. No National Wildlife Refuge, Forest Service, Bureau of Land Management lands exist along the stream reaches identified as conservation zones in the CCAA. The Lyndon B. Johnson National Historical Park is located adjacent to designated Conservation Zone A-4 in the Pedernales River within the CCAA. No ground disturbance activities within the park are covered as part of the agreement and additional conservation activities covered by the CCAA will not adversely affect this area. No stream segments in the covered area have been designated as wilderness area or national natural landmarks. Proposed activities will not impact drinking water aquifers as they do not involve pumping or excavation into aquifers. No prime farmland areas or wetlands will be affected as no ground disturbance,

dredging, or filling is anticipated in areas that are not already disturbed. Implementation of the CCAA is not anticipated to result in adverse effects to floodplains or result in increased flood risks because the proposed activities do not deviate from the LCRA's currently implemented flood management actions. Migratory birds and riparian vegetation will likely benefit from the CCAAs conservation measures.

C. Have highly controversial environmental effects (defined at 43 CFR 46.30), or involve unresolved conflicts concerning alternative uses of available resources? [see NEPA section 102(2)(E)]

No. Many of the Covered Activities are ongoing. Highly controversial environmental effects are not anticipated. There was potential for past conflict concerning delivery of water to municipalities and downstream users, but the LCRA has developed its Water Management Plan to avoid those conflicts, and the implementation of the CCAA is expected to reduce the potential for future conflicts through the continuation of environmental flow protections. The conservation measures proposed by the LCRA and LCRA TSC are wholly within their statutory authority and represent a logical extension of their conservation activities in the basin.

D. Have highly uncertain and potentially significant environmental effects, or involve unique or unknown environmental risks?

No. Highly uncertain or potentially significant environmental risks are not anticipated because the CCAA includes measures (flood management planning, environmental flow protections, adaptive management provisions) that reduce uncertainty in the Colorado River basin, and benefit stream habitats. Species reintroductions may occur in the basin in the future, perhaps within the 20-year term of the CCAA. However, those reintroductions will be separate actions authorized by the Service and will be evaluated at that time as they are independent of the approval and permitting of the CCAA. No unique or unknown environmental risks are anticipated as the applicant has a long history of environmental management in the Colorado River basin and identified no such risks.

E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?

No. Approval of the CCAA does not establish a precedent for future action nor does it represent a decision in principle about future actions with potentially significant environmental effects. The CCAA reflects possible minor changes to how the LCRA manages water in the Colorado River basin and does not include the establishment of any permanent changes to the landscape. Many of the Covered Activities are ongoing actions. Potential future infrastructure construction is contemplated and is independent of the approval and permitting of the CCAA. Any new construction is outside the scope of the CCAA and will be analyzed separately if a reservoir is constructed in the future and is not contingent upon the CCAA. Management of any future infrastructure would support the goal of the LCRA or LCRA TSC and the CCAA to be able to deliver water to maintain wetted stream reaches important for mussels in the event of extended drought conditions.

F. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects?

No. Approval of the CCAA is not expected to result in cumulatively significant

environmental effects because the Covered Activities under the agreement include on-going daily operations and maintenance of existing facilities. If new activities or construction projects are proposed, they will be analyzed separately as independent projects.

G. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places?

No. Implementation of the CCAA is not expected to significantly impact any listed or eligible Historic Places because the only historical structures in the designated stream zones are bridges, or historical markers, which are not expected to be affected by the implementation of the CCAA (i.e., management of stream zones and species conservation efforts). We are coordinating with Texas SHPO on this matter and do not expect any significant impacts to cultural resources. The CCAA does not propose any actions that are likely to affect any historic places.

H. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?

No. No other proposed or listed species occur in the action area (i.e., designated stream zones) or are otherwise expected to be impacted by the actions and conservation measures described in the CCAA (i.e., previously listed species or species proposed to be listed are not aquatic and otherwise do not occur in the designated stream zones). The action area includes proposed occupied and unoccupied critical habitat units for the four covered species, but is not anticipated to have significant impacts as the covered activities do not include new construction activities or disturbance of previously undisturbed areas.

Although some relatively low level of take is likely to occur under CCAA implementation, accounting for the minimization and avoidance measures in combination with the conservation program, this CCAA is expected to result only in impacts to proposed species so minor as to be negligible under NEPA. The CCAA and the conservation plan described therein is anticipated to provide a net conservation benefit to the covered proposed species identified in the CCAA. Further, take of the Covered Species, if they were to become listed, is expected to be negligible under NEPA. No other proposed or listed species are otherwise expected to be impacted by the actions and conservation measures described in the CCAA (i.e., previously listed species or species proposed to be listed are not aquatic and otherwise do not occur in the designated stream zones).

I. Violate a Federal law, or a State, local, or tribal law, or a requirement imposed for the protection of the environment.

No. No provisions of the CCAA are expected to violate any federal, state, local or tribal law or environmental requirement. Instead, the CCAA acknowledges existing state requirements related to the LCRA's role in managing waters in the Colorado River basin. CCAA activities will be conducted consistent with applicable Federal, State, and local laws and regulations. Activities proposed in the CCAA would have no effects on wetlands, floodplains, or water development projects. No impacts would occur to projects

that are subject to the jurisdiction of the Fish and Wildlife Coordination Act.

J. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).
No. Implementation of the CCAA is not expected to have any effect on low income or minority populations.

K. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).
No. Implementation of the CCAA is not expected to have any effect on any Indian sacred sites on Federal lands because none are in the action area. Implementation of the CCAA will not result in alterations to sacred sites or access to sacred sites because none are in the area.

L. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).
No. Implementation of the CCAA is not expected to contribute to the introduction or spread of non-native invasive species because the CCAA has provisions to monitor and prevent the spread of aquatic invasive species, which are part of the ongoing activities of the LCRA.

Other supporting documents:

2022. Lower Colorado River Authority. Candidate Conservation Agreement with Assurances for the Texas pimpleback (*Cyclonaias petrina*), Texas fawnsfoot (*Truncilla macrodon*), Texas fatmucket (*Lampsilis bracteata*), and Balcones spike (*Fusconaia iheringi*) in the Lower Colorado River Basin below O.H. Ivie Reservoir. 165 pages.