

[Draft] Environmental Assessment

For

a Candidate Conservation Agreement / Candidate Conservation Agreement with Assurances

for the Texas Hornshell (*Popenaias popeii*) and other Desert Riparian Species

in southeastern New Mexico and west Texas

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Table of Contents

1.0	INTRODUCTION	5
1.1	Description of the Proposed Action	6
2.0	PURPOSE AND NEED FOR ACTION	10
3.0	DESCRIPTION OF ALTERNATIVES.....	11
3.1	ALTERNATIVE A - No Action.....	11
3.2	ALTERNATIVE B - Development of a CCA and CCAA (Preferred Alternative).....	11
3.3	ALTERNATIVE C - Development of a CCA Only	13
3.4	ALTERNATIVE D - Development of a CCAA Only	13
3.5	ALTERNATIVE E – Development of a CCA, private lands CCAA, and a NM state lands CCAA	14
4.0	AFFECTED ENVIRONMENT	16
4.1	Soils.....	18
4.2	Vegetation	19
4.3	Wildlife	20
4.4	Listed, Proposed, and Candidate Species.....	20
4.5	Land Use and Ownership.....	21
5.0	ENVIRONMENTAL CONSEQUENCES	24
	Table 1. Summary of Impacts to Resources.....	24
5.1	Soils.....	27
5.1.1	Alternative A – No Action	27
5.1.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative)	28
5.1.3	Alternative C – Development of a CCA	28
5.1.4	Alternative D – Development of a CCAA	28
5.1.5	Alternative E – Development of a CCA, private lands CCAA, and a NM state lands CCAA	29

5.2	Vegetation.....	29
5.2.1	Alternative A – No Action.....	30
5.2.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative).....	30
5.2.3	Alternative C – Development of a CCA.....	31
5.2.4	Alternative D – Development of a CCAA.....	31
5.2.5	Alternative E – Development of a CCA, private lands CCAA, and NM state lands office CCAA	31
5.3	Wildlife.....	31
5.3.1	Alternative A – No Action.....	32
5.3.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative).....	32
5.3.3	Alternative C – Development of a CCA.....	33
5.3.4	Alternative D – Development of a CCAA.....	33
5.3.5	Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA	33
5.4	Listed, Proposed, and Candidate Species.....	33
5.4.1	Alternative A – No Action.....	34
5.4.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative).....	35
5.4.3	Alternative C – Development of a CCA.....	35
5.4.4	Alternative D – Development of a CCAA.....	36
5.4.5	Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA	36
5.5	Land Use and Ownership.....	36
5.5.1	Alternative A – No Action.....	37
5.5.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative).....	37
5.5.3	Alternative C – Development of a CCA.....	38
5.5.4	Alternative D – Development of a CCAA.....	38
5.5.5	Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA	38

5.6	Water Resources	39
5.6.1	Alternative A – No Action	40
5.6.2	Alternative B – Development of a CCA and CCAA (Preferred Alternative)	40
5.6.3	Alternative C – Development of a CCA	41
5.6.4	Alternative D – Development of a CCAA	41
5.6.5	Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA 41	
6.0	CUMULATIVE EFFECTS.....	41
7.0	CONCLUSION.....	42
8.0	COORDINATION AND PREPARATION.....	43
9.0	REFERENCES	44

1.0 INTRODUCTION

This [draft] Environmental Assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act [42 USC 4321 et seq.] (NEPA) to address the impacts on the environment from the implementation of the proposed Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA) for the Texas Hornshell (*Popenaias popeii*; TXHS) and other Desert Riparian Species (Rio Grande River Cooter [*Pseudemys gorzugi*], Gray Redhorse [*Moxostoma congestum*], Blue Sucker [*Cycleptus elongates*], and Pecos Springsnail [*Pyrgulopsis pecosensis*]) in southeastern New Mexico and west Texas.

For many years the U.S. Fish and Wildlife Service (Service) has worked with partners to help them develop CCAs on Federal lands to facilitate conservation of candidate species or species that may become candidate species in the hopes of avoiding the need to list the species under the Endangered Species Act of 1973, as amended (ESA). To provide an incentive on non-Federal lands for voluntary conservation of species that are candidates for listing, the Service adopted a policy and regulations for CCAAs under the authority of Section 10 of the ESA. Under a CCAA, a property owner voluntarily commits to implement specific conservation measures on non-Federal lands for species covered by the CCAA. In exchange, they receive a permit from the Service which provides assurances that additional conservation measures will not be required and additional land, water, or resource use restrictions under the ESA will not be imposed on them if the species becomes listed in the future, provided the CCAA is being properly implemented. These assurances provide considerable certainty to the property owner regarding their activity on non-Federal lands covered by the CCAA.

The development of a conservation agreement (CCA or CCAA) provides a mechanism for implementing and monitoring conservation. Any conservation measures undertaken by Participating Cooperators as a result of a conservation agreement would be above and beyond those measures already prescribed by existing Federal and State regulations. A future decision to list the TXHS, or any of the other covered species, would take into consideration actions planned and/or implemented pursuant to the CCA or CCAA. However, such a decision would also need to consider threats facing these species now and into the foreseeable future throughout all or a significant portion of their current range.

In the western U.S. many species that are candidates for listing under the ESA occur on both Federal and non-Federal lands. In this setting, property owners whose operations rely on using a combination of land ownership types are concerned that assurances provided to them under a

CCAA do not apply to Federal lands, even if they implement conservation measures across all land ownership types where they operate. These property owners, as well as Federal lessees, operators, and permittees, are seeking greater certainty that if listing occurs, it will be less likely they will be required to change their activities on Federal lands in a way that could significantly impact their operations. In New Mexico, private property owners; Federal lessees, operators, and permittees; the Service; NM state lands office; and Bureau of Land Management (BLM) were concerned about activities on public/Federal lands that might affect the status of candidate species. This CCAA and CCA for the TXHS, Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail represents a collaborative effort between the Service, BLM, NM state lands office, and the Center of Excellence (CEHMM) to address these concerns.

The private lands CCAA is a voluntary agreement administered by CEHMM. The CCAA, which is designed to address the needs of these species on state and private lands within southeastern New Mexico and west Texas, will be a parent to the CCA, which is designed to address the activities of lessees, operators, and permittees on Federal land, and the NM state land office CCAA, which is designed to address the activities of lessees, operators, and permittees on NM state lands Certificates of Inclusion (CIs) will be used by CEHMM and the NM state land office pursuant to the CCAAs and Certificates of Participation (CPs) will be used by CEHMM and BLM pursuant to the CCA in order to facilitate voluntary cooperation of the oil and gas industry, water producing industry, livestock producers, Carlsbad Irrigation District, and other interested stakeholders, thereby providing conservation benefits to the TXHS, the Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail. When fully implemented, these agreements will provide guidance for the conservation and management of these species and their habitat by reducing or eliminating threats to the species within the Black and Delaware Rivers. Participants will implement conservation measures and contribute funding or provide in-kind services for conservation as part of their CPs/CIs. Funds contributed as part of the CCA and private lands CCAA may or may not be used on the enrolled property since other habitat areas may be a higher priority for implementation of conservation measures. Funds contributed as part of the NM state lands CCAA will be used on habitat areas that are a high priority for implementation of conservation measures on NM state land properties. The conservation measures implemented by Participants would consist of avoidance and minimization measures to remove or reduce threats to the species.

1.1 Description of the Proposed Action

The proposed action is the issuance of the Enhancement of Survival (EOS) permit(s) associated with CCAAs and the implementation of a CCA, private lands CCAA, and NM state lands CCAA that would result in the conservation of the TXHS, Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail (covered species) in southeastern New Mexico and

west Texas. The CCA and CCAA(s) cover the range of one of the four known living populations of the ESA candidate species TXHS in the Black and Delaware Rivers. Specifically, the covered area would include portions of Eddy County, NM and Culberson County, TX. As discussed above, the CCA and the CCAA(s) are separate agreements. The CCA would apply to participants on Federal lands or lands with Federal minerals, and the private lands CCAA would apply to participants on private lands, and the NM state lands CCAA would apply to participants on NM state lands. The following is a brief description of each of these agreements:

Private lands CCAA – CEHMM would apply to the Service for an EOS Permit pursuant to Section 10(a)1(A) of the ESA. The permit application would include a proposed CCAA for the TXHS, Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail. CEHMM would implement conservation measures for these species within the covered area by providing technical assistance through which cooperating private landowners can implement these measures for the covered species on their properties, or contribute funds to be spent on conservation in high priority areas across the covered area. CEHMM would enroll cooperating participants through issuance of CIs. In return for implementing the conservation measures, the Service would provide the enrollees assurances that, for the duration of the CCAA and its associated Section 10(a)1(A) EOS Permit, no additional conservation measures or additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CI would be required on enrolled lands by the Service for the covered species should they become listed in the future.

NM state lands CCAA – The NM state land office would apply to the Service for an EOS Permit pursuant to Section 10(a)1(A) of the ESA. The permit application would include a proposed CCAA for the TXHS, Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail. CEHMM and the NM State land office would implement conservation measures for these species within the covered area by providing technical assistance through which cooperating State lessees can implement these measures for the covered species on their properties, or contribute funds to be spent on conservation in high priority areas across the covered area. The NM state lands office and CEHMM would enroll cooperating participants through issuance of CIs. The NM state lands office, CEHMM, and NM state lands lessees, permittees, and operators (participating cooperators) would work collaboratively so that these participating cooperators would adopt the same practices and conservation measures on Federal and private lands as have been adopted on NM state lands. This integrated approach to conservation across a mix of land ownerships provides the greatest conservation for the species. In return for implementing the conservation measures, the Service would provide the enrollees assurances that, for the duration of the CCAA and its associated Section 10(a)1(A) EOS Permit, no additional conservation measures or additional land, water, or resource use restrictions beyond those voluntarily agreed to and described in the CI would be required

on enrolled lands by the Service for the covered species should they become listed in the future. All contributed funds would be used to implement conservation measures in high priority areas on NM state lands. The CCAA represents a collaborative effort between the Service, NM state lands office, and CEHMM. . In the absence of the development of a NM state lands office CCAA, state lands could still be enrolled under the private lands CCAA; however, if both CCAAs are developed, state lands can only be enrolled under the NM state lands office CCAA to avoid duplicate enrollment.

CCA - A separate CCA for the covered species would be developed with the BLM and CEHMM to address the conservation of these species on Federal lands within the covered area. CEHMM would enroll participating cooperators through issuance of CPs. The BLM, CEHMM, and federal lessees, permittees, and operators (participating cooperators) would work collaboratively so that these participating cooperators would adopt the same practices and conservation measures on Federal lands as have been adopted on non-Federal lands (as specified under the CCAA). This integrated approach to conservation across a mix of land ownerships provides the greatest conservation for the species, and thus the greatest certainty that additional conservation measures beyond those in the CCA will not be required (USFWS 2008). Participating cooperators in the CCA can also contribute funds to be used to implement conservation measures in other high priority areas. The CCA represents a collaborative effort between the Service, BLM, and CEHMM.

Under the CCA/CCAA, some examples of actions that may be taken on the ground include the following:

- Avoid all new surface disturbance in habitat occupied by the TXHS within the Black and Delaware Rivers (Zone A).
- Exercise good faith efforts to avoid new surface disturbance within the Black and Delaware Rivers, Blue Springs, and their associated USGS 100-year floodplain (Zone B).
- Site new projects to take advantage of existing and available infrastructure and improvements.
- Exercise good faith efforts to avoid obstructing or disrupting the natural flow of ephemeral drainages to the Black and Delaware Rivers (Zone C).
- Implement erosion control measures to prevent erosion in Zones B and C in accordance with the Reasonable and Prudent Practices for Stabilization (“RAPPS”).
- Utilize technologies that minimize the surface disturbance (like underground borings for pipelines), where feasible.

- Maintain minimum streamflow in the Black River in Zones A, B, and C. Commercial water withdrawers and agriculture and ranching industry participants shall cease pumping water from the Black River upon receiving notice that flow in the Black River has dropped below minimum flow.
- Avoid using low-water crossings when other routes are available.
- Incrementally clear invasive shrubs and replant with native plants in Zone A.

Due to differing land uses as well as differing surface and mineral ownerships, parcels can be enrolled in multiple agreements or multiple times in one agreement. Parcels can be enrolled by different participants who are performing actions on the same property. For example, on private or State lands, a property could be enrolled in the CCAAs by the landowner (or state grazing lessee) who is grazing cattle on the property, as well as be enrolled by a company that has oil and gas wells on the same parcel. Their individual CIs will only reflect their actions and the conservation measures which pertain to those actions. This is also possible on Federal lands, where the parcel may be enrolled by the rancher lessee as well as an oil and gas lessee. Parcels may also be enrolled in both agreements where surface and mineral ownerships differ. A parcel that is private property with Federal mineral rights may be enrolled in the CCAA by the landowner and enrolled in the CCA by an oil and gas lessee using the Federal mineral rights. The landowner will have a CI and the lessee will have a CP reflecting their actions on the land and relevant conservation measures.

Three committees will be composed of stakeholders and interested parties to assist in decision making for the CCA and CCAAs. The Executive Committee, composed of two representatives from each signatory to the CCA or CCAAs that have sufficient level of experience with endangered or threatened species issues, will make final decisions and approvals on topics presented by the Stakeholder Committee, Implementation Committee, and Technical Working Group and take recommendations from the other committees. The Stakeholder Committee, composed of one representative from CEHMM and at least 8 individuals equally selected from each of the four industry sectors [oil and gas, agriculture and ranching, water withdrawers, and Carlsbad Irrigation District(CID)], will review issues that impact enrolled participants, discuss options to make changes, and propose solutions to the Executive Committee. The Implementation Committee, composed of biologists from the Service, BLM, CEHMM, NM state lands office, state wildlife agencies, and other supporting agencies, will be responsible for developing and reviewing proposals for restoration activities, prioritizing funding, and reviewing conservation measures and CPs/CIs to ensure the greatest benefit is occurring for the covered species. A Technical Working Group comprised of a network of technical experts from various agencies will be created to aid the Stakeholder and Implementation Committees in making recommendations for species and habitat enhancement by providing guidance on technical issues and helping to assess conservation priorities and science needs into the future.

2.0 PURPOSE AND NEED FOR ACTION

The purpose of the proposed action granting a CCA to CEHMM and the BLM and a CCAA and associated EOS permit to CEHMM for private landowners and a CCAA and associated EOS permit to NM state lands office is to conserve the covered species with the hope that such conservation will be sufficient to preclude the need to list these species pursuant to the ESA. However, because approval of this CCA and CCAAs does not predetermine the outcome of FWS's final listing determination, these agreements will allow Participants to continue their work unimpeded with a high degree of certainty that additional conservation measures or limitations above and beyond those contained in the agreement will not be required by the Service, and will not be imposed upon them, should one or more of the species become listed in the future. The purpose includes the following:

- Issuing CEHMM an EOS permit for the CCAA for covered species (effective upon a final listing rule for any of the covered species) related to conservation activities that have the potential to result in take, pursuant to the ESA section 10(a)(1)(A) and its implementing regulations and policies;
- Under Alternative E, issuing the NM state lands office an EOS permit for the CCAA for covered species (effective upon a final listing rule for any of the covered species) related to conservation activities that have the potential to result in take, pursuant to the ESA section 10(a)(1)(A) and its implementing regulations and policies;
- Developing, coordinating, and implementing conservation actions to reduce and/or eliminate known threats to the covered species in the covered area in New Mexico and Texas;
- Maintaining viable populations in occupied habitat;
- Supporting ongoing efforts to re-establish populations of the species in unoccupied but suitable habitats;
- Encouraging protection and development of suitable habitat by giving Participants incentives to implement specific conservation measures (as described in their CI or CP);
- Providing Participants assurances for the duration of the CCAA(s) that additional conservation measures above and beyond those contained in the agreement will not be required and that additional land, water, or resource use limitations will not be imposed upon them should one or more of the species become listed in the future, so long as Participants properly implement their CIs; and
- Allowing industrial and agricultural development to continue while protecting and improving habitat conditions for the species.

The need for the action is to conserve species within the Black and Delaware Rivers that are candidates for listing pursuant to the ESA (TXHS) and species that are listed as New Mexico or Texas state endangered or threatened species (Rio Grande Cooter, Gray Redhorse, Blue Sucker,

and Pecos Springsnail), provide incentives and funding for voluntary conservation, and provide a method of obtaining either a high degree of certainty (CCA) or assurances (CCAAs) that by participating in voluntary conservation and following conservation measures that create net benefit for the covered species Participants will be able to continue covered actions on their lands without fear of additional restrictions or regulation should any of the covered species become listed under ESA.

3.0 DESCRIPTION OF ALTERNATIVES

3.1 ALTERNATIVE A - No Action

Under the No Action Alternative, the Service, BLM, NM state lands office and CEHMM would not enter into a conservation agreement (CCA or CCAAs) with willing participants. These participating cooperators [i.e. state and private property owners (CCAAs); Federal lessees, permittees, and operators (CCA)] would have little economic or legal incentive to voluntarily initiate conservation or management activities to benefit the covered species. In addition, conservation measures above and beyond those directed by existing Federal, State, and local laws, policies, or regulations would not be implemented. The conservation and management of populations of the covered species on BLM lands would continue to be guided by those prescriptions identified in the Resource Management Plan Amendment (RMPA) (BLM 1998, 2013).

Under Alternative A, the covered species would not gain additional protections to what currently exists. The TXHS is listed as threatened under Texas state law and threatened under the New Mexico Wildlife Conservation Act and has an approved 2007 New Mexico Department of Game and Fish (NMDGF) recovery plan; however, there is no regulation of occupied or potentially occupied lands. The Rio Grande River Cooter is listed as threatened under the New Mexico Wildlife Conservation Act, but there is little to no regulation of occupied or potentially occupied lands. The Rio Grande River Cooter is not a state-listed species in Texas. The Gray Redhorse is listed as threatened under the New Mexico Wildlife Conservation Act, but it is not a state-listed species in Texas. The Blue Sucker is listed as endangered under the New Mexico Wildlife Conservation Act and threatened under Texas state law; however, there is little to no regulation of occupied or potentially occupied habitat. The Pecos Springsnail, which does not occur in Texas, is listed as threatened under the New Mexico Wildlife Conservation Act, but little to no regulation of occupied or potentially occupied lands occur on the private property it resides on. On private lands, where the state or federal government has no authority to protect or direct the management of listed species' habitat, conservation activities would continue to be implemented entirely at the discretion of the landowner.

3.2 ALTERNATIVE B - Development of a CCA and CCAA

Alternative B would involve the development of conservation agreements (CCA and CCAA) between the Service, BLM, CEHMM, and participating cooperators to address the conservation needs of the covered species in southeastern New Mexico and West Texas. Private lands and state lands could enroll through the CCAA and federal lands could be enrolled through the CCA. CEHMM would be responsible for enrolling participating cooperators through the CP/CI. A CP/CI is the mechanism for participating cooperators to voluntarily become part of a conservation agreement while the covered species are not listed or in candidate status. The procedure would entail each participating cooperator signing a CP/ CI for a particular parcel of land (enrolled property), and agreeing to either implement conservation measures or provide funding to implement conservation for the species their actions may affect. Even though the landowner, lessee, operator, or permittee may change over time, the CP/CI would remain tied to the enrolled property described in the certificate if the new landowner, lessee, operator, or permittee was interested in maintaining the agreement.

Since the Implementation Team would work cooperatively to determine which conservation measures are the highest priority, it is important to note that funds or in-kind work associated with a CP/CI would not need to be used on the enrolled property as described under its corresponding certificate since that area may not encompass the highest priority area identified for conservation actions by the Implementation Team.

Participating cooperators would benefit from voluntarily enrolling in the conservation agreement in several ways. Under a CCA, in the event that any of the covered species become listed under the ESA, the participating cooperator would receive a high degree of certainty that the biological opinion would be unlikely to change from the conference opinion. As a result, it would be unlikely that more stringent restrictions or additional conservation measures would be required on Federal lands. The participating cooperator enrolled in the CCA on federal lands or on private or state lands with Federal minerals would continue working under the terms of the CP without the additional requirement of a new Section 7 consultation, requiring more time to complete or until a programmatic Section 7 consultation was completed. Under a CCAA, the participating cooperator would receive assurances that no additional restrictions would be required on private or State land and an additional Section 10 application and permit would not be required.

Participating cooperators would agree to protect and enhance existing populations and habitats, restore degraded habitat, create new habitat, augment existing populations of TXHS and other covered species, restore historic populations, fund research studies, or undertake other activities to improve the status of the covered species within the covered area. The management activities included in the CCA and CCAA would reduce and/or eliminate threats to the species. The CCA and CCAA include a base suite of conservation measures, and each CP/CI can be negotiated on a case-by-case basis to add additional conservation measures or additional details on how the conservation measures would be implemented. While it would not be necessary to conduct all

conservation measures on every property enrolled under the CCA and CCAA, approved conservation measures in each CP/CI would be undertaken as necessary to reduce and/or eliminate a particular threat. CEHMM may use contributed funds to conduct conservation actions within the Black and Delaware River watersheds or other high priority areas within the covered area. Such funds may be used if landowners agree, in writing, to allow the implementation of the specified conservation action on their lands or specific to their rights. The goal would be to implement the highest priority conservation measures needed (regardless of land ownership), to reduce and/or eliminate threats to the species as determined by the Implementation Team. As new information or empirical data becomes available, conservation measures can be modified or added to future CP/CIs, and existing CP/CIs with written approval from Participant, through adaptive management.

The ultimate goal of the conservation agreement would be to facilitate conservation of the covered species in southeastern New Mexico and west Texas. Conservation measures to benefit the covered species would include, but not be limited to, improving habitat and increasing populations, decreasing new and existing habitat disturbance in important zones, maintaining minimum stream flows, and conducting research conducive to adaptive management of the covered species.

3.3 ALTERNATIVE C - Development of a CCA Only

Alternative C would involve the development of a CCA between the Service, BLM, CEHMM, and participating cooperators to address the conservation needs of the covered species on Federal lands in southeastern New Mexico and west Texas (approximately 38% of the covered area). This alternative would be the same as Alternative B, excluding the development of the companion CCAA. As a result, there would not be an agreement in place to address the conservation needs of the covered species on private and State lands where there would be no Federal minerals. Private landowners would not be given the opportunity to implement proactive conservation measures in return for assurances from the Service that additional restrictions would not be required of them should any of the covered species become listed in the future. As a result, for any future actions, private landowners would be required to apply and obtain a Section 10 permit or wait until a programmatic habitat conservation plan or safe harbor agreement was completed. This may result in delays to their proposed activities.

3.4 ALTERNATIVE D - Development of a CCAA Only

Alternative D would involve the development of a CCAA between the Service, CEHMM, and participating cooperators to address the conservation needs of the covered species only on private and State lands in southeastern New Mexico and west Texas (approximately 62% of the covered area). This alternative would be the same as Alternative B, excluding the development of the CCA. As a result, there would not be an agreement in place to address the conservation needs of the covered species on Federal lands. Federal lessees, operators, and permittees, who currently conduct activities within a large portion of the area occupied by the covered species, would likely be less inclined to implement proactive conservation measures on Federal lands in order to increase the likelihood that additional restrictions would not be required of them should any of the covered species become listed in the future. As a result, for any future actions they propose on Federal lands or private/State lands with Federal minerals containing the covered species, a standard or programmatic section 7 consultation process would be required with the Service, potentially resulting in delays to proposed activities.

3.5 ALTERNATIVE E – Development of a CCA, private lands CCAA, and a NM state lands CCAA

Alternative E would involve the development of conservation agreements (CCA, private lands CCAA, and NM state land office CCAA) between CEHMM and the Service, BLM and/or NM state land office, and participating cooperators to address the conservation needs of the covered species in southeastern New Mexico and West Texas. Private lands could be enrolled under the CCAA, state lands could be enrolled under the NM state land office CCAA, and federal lands could be enrolled under the CCA. Under this Alternative, state lands could only be enrolled in the NM state lands office CCAA, but not the private lands CCAA, preventing the possibility of duplicate enrollments. CEHMM along with the BLM on the CCA, and the NM state lands office on the state lands CCAA would be responsible for enrolling participating cooperators through a CP/CI in the CCA and/or CCAAs. A CP/CI is the mechanism for participating cooperators to voluntarily become part of a conservation agreement while the covered species are not listed or in candidate status. The procedure would entail each participating cooperator signing a CP/CI for a particular parcel of land (enrolled property), and agreeing to either implement conservation measures or provide funding to implement conservation for the species their actions may affect. Even though the landowner, lessee, operator, or permittee may change over time, the CP/CI would remain tied to the enrolled property described in the certificate if the new landowner, lessee, operator, or permittee was interested in maintaining the agreement.

Since the Implementation Team would work cooperatively to determine which conservation measures are the highest priority, it is important to note that funds or in-kind work associated with a CP/CI would not need to be used on the enrolled property as described under its corresponding certificate since that area may not encompass the highest priority area identified

for conservation actions by the Implementation Team. Although funds from the CCA and CCAAs will be used in the highest priority areas identified for conservation actions by the Implementation Team, use of any funds associated with the state lands CCAA must be used on high priority areas on state lands.

Participating cooperators would benefit from voluntarily enrolling in the conservation agreement in several ways. Under a CCA, in the event that any of the covered species become listed under the ESA, the participating cooperator would receive a high degree of certainty that the biological opinion would be unlikely to change from the conference opinion. As a result, it would be unlikely that more stringent restrictions or additional conservation measures would be required on Federal lands. The participating cooperator enrolled in the CCA on federal lands or on private or state lands with Federal minerals would continue working under the terms of the CP without the additional requirement of a new Section 7 consultation, requiring more time to complete or until a programmatic Section 7 consultation was completed. Under a CCAA, the participating cooperator would receive assurances that no additional restrictions would be required on private or State land and an additional Section 10 application and permit would not be required.

Participating cooperators would agree to protect and enhance existing populations and habitats, restore degraded habitat, create new habitat, augment existing populations of TXHS and other covered species, restore historic populations, fund research studies, or undertake other activities to improve the status of the covered species within the covered area. The management activities included in the CCA and CCAAs would reduce and/or eliminate threats to the species. The CCA and CCAAs include a base suite of conservation measures, and each CP/CI can be negotiated on a case-by-case basis to add additional conservation measures or additional details on how the conservation measures would be implemented. While it would not be necessary to conduct all conservation measures on every property enrolled under the CCA and CCAAs, approved conservation measures in each CP/CI would be undertaken as necessary to reduce and/or eliminate a particular threat. CEHMM may use contributed funds to conduct conservation actions within the Black and Delaware River watersheds or other high priority areas within the covered area. Such funds may be used if landowners agree, in writing, to allow the implementation of the specified conservation action on their lands or specific to their rights. The goal would be to implement the highest priority conservation measures needed (regardless of land ownership), to reduce and/or eliminate threats to the species as determined by the Implementation Team. The goal for funds from the state lands CCAA would be to implement the highest priority conservation measures needed on state lands to reduce and/or eliminate threats to the species as determined by the Implementation Team. As new information or empirical data becomes available, conservation measures can be modified or added to future CP/CIs, and existing CP/CIs with written approval from Participant, through adaptive management.

The ultimate goal of the conservation agreement would be to facilitate conservation of the covered species in southeastern New Mexico and west Texas. Conservation measures to benefit

the covered species would include, but not be limited to, improving habitat and increasing populations, decreasing new and existing habitat disturbance in important zones, maintaining minimum stream flows, and conducting research conducive to adaptive management of the covered species.

4.0 AFFECTED ENVIRONMENT

The conservation agreements (CCA and CCAAs) would cover the Black and Delaware Rivers, which include habitat for all of the covered species as well as the range of one of the four remaining populations of the ESA candidate species TXHS in the U.S. This includes approximately 600 mi² in the southeastern corner of New Mexico in a portion of Eddy County and approximately 300 mi² in west Texas in a portion of Culberson County (Figure 1). The major land resource area (MLRA) that occurs in this area is the Southern Desertic Basins, Plans, and Mountains (MLRA 42) and the land resource unit is the Chihuahuan Desert Grassland (LRU 42.3) (USDA 2006). This resource area is categorized by intermontane desert basins and broad valleys bordered by bajadas, alluvial fans, and terraces. It is an area supporting desert grass-shrub vegetation. Nearly one-third of this area is made up of public lands and more than two-thirds of the area is rangeland with a low carrying capacity. The major resource concerns are wind erosion, water erosion, salinization of cropland, species diversity, and undesirable invasive species.

Based on the location of effects and habitat for the covered species, the project area will be dissected into four riparian management zones or conservation areas (Figure 1):

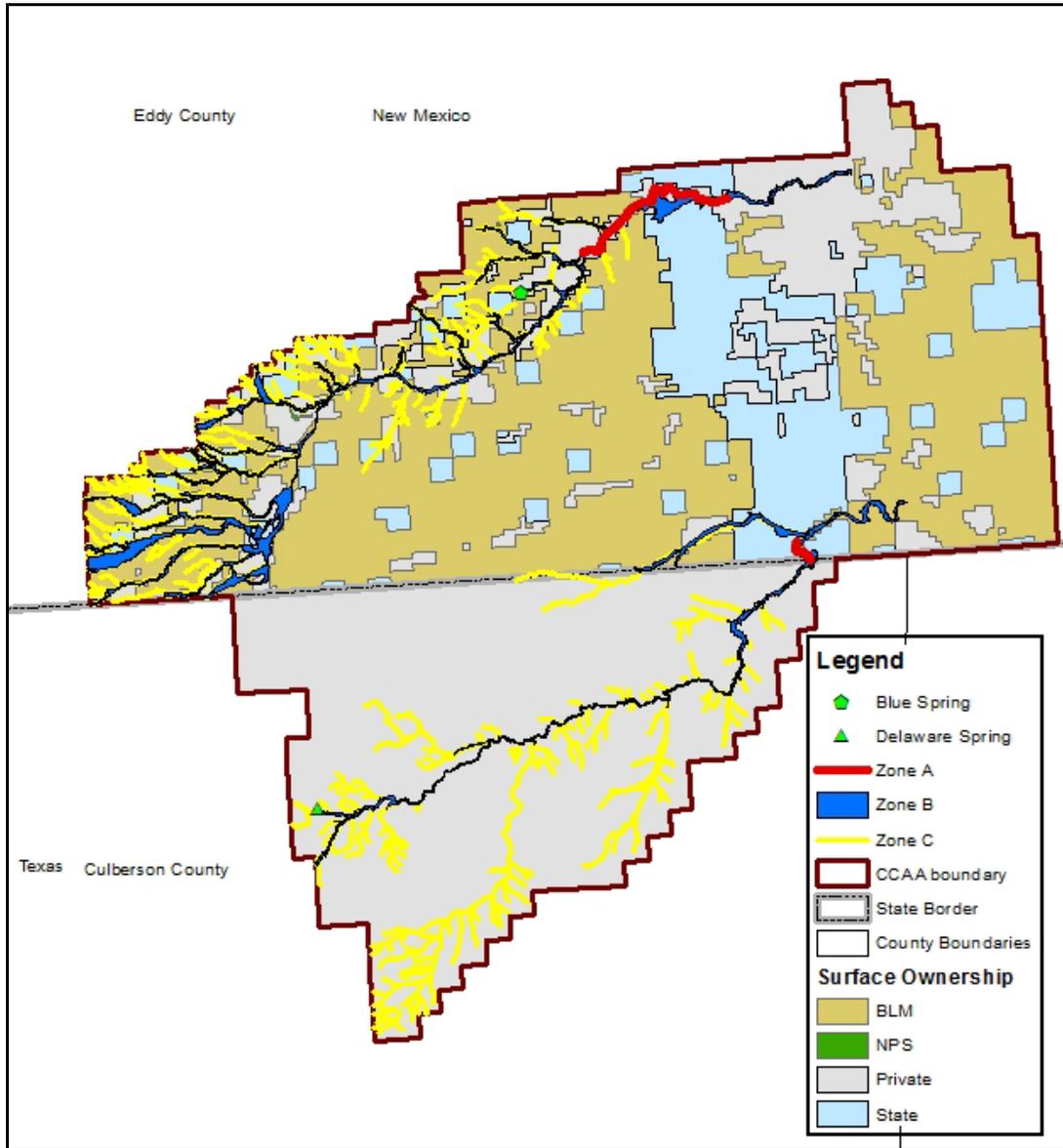
Zone A: Occupied TXHS habitat within the wetted portion of the Black and Delaware Rivers.

Zone B: The Black and Delaware Rivers (excluding occupied portions covered in Zone A), Blue Springs, and their associated USGS 100-year floodplain

Zone C: Ephemeral drainages to the Black and Delaware Rivers, including Owl Draw

Zone D: CCAA project area boundary

Figure 1. Covered Area for the Texas Hornshell Candidate Conservation Agreement and Candidate Conservation Agreement(s) with Assurances.



The TXHS occupies undercut banks, crevices, ledges, travertine shelves in small-grained materials such as clay, silt, or sand in the Black and Delaware Rivers. The TXHS population in the Delaware River was reintroduced from the Black River population in 2013 and 2015 by NMDGF. This species needs clean, flowing water with low salinity and is highly susceptible to surface water pollution and high salinity. They are restricted to the Black and Delaware Rivers due to the higher salinity of the Pecos River (Lang 2001, Carman 2007, Miyamoto et al. 2008).

The Gray Redhorse occurs in clear streams and is associated with deep (>0.8 meters (m)) low current velocity (<0.1 meters per second (ms^{-1})) pools (Bean et al. 2009). This species is a host

fish for the TXHS that currently only exists in the lower Black River from Blue Spring to the Pecos River confluence due to Golden Algae blooms in the Pecos River. The Gray Redhorse is currently listed as “endangered” by the NMDGF. Threats to the species include range fragmentation, contamination of surface waters, modified flow regimes, and Golden Algae blooms (NMDGF 2014). Depletion of surface waters is a major cause of decline in the Gray Redhorse (Bean et al. 2009; Hoagstrom 2001).

The Blue Sucker, another host fish for the TXHS, has declined drastically due to Golden Algae outbreaks in the Pecos River. It is likely extirpated from the Pecos River and the status of the population in the Black River is unknown (NMDGF 2014). It is currently listed as “endangered” by NMDGF and “threatened” by Texas Parks and Wildlife Department (TPWD). The main threats to the species include range fragmentation by dams, contamination, Golden Algae blooms, and loss of water quality in the Black River drainage (NMDGF 2014).

The Rio Grande River Cooter, also known as the Western River Cooter, is a large sedentary turtle occurring in large, deep pools of rivers, and is found in the Black, Delaware, and Pecos rivers. It is currently listed as “threatened” by NMDGF and the Center of Biological Diversity petitioned the FWS in 2012 to consider this species for protection under the ESA. Threats to the species include recreation (hunting and fishing), predation, wildfires, and runoff pollution (NMDGF 2014).

The Pecos Springsnail is a tiny mollusk that is currently only known to exist at Blue Springs alongside the Black River. It was previously found at Castle Springs alongside the Black River, but has since been extirpated from that area (NMDGF 2014). The Pecos Springsnail is currently listed as “threatened” by NMDGF. Threats to the species include water diversion, drought, underground withdrawal of water, pollution, and poor range management (NMDGF 1996).

Resources considered for analysis under this EA included soils; vegetation; wildlife; listed, proposed, and candidate species; land use and ownership; air quality; noise pollution; water resources; cultural resources; and socioeconomics. Of these, the resources selected for further evaluation include soils; vegetation; wildlife; listed, proposed, and candidate species; land use and ownership; and water resources. The remaining resources were excluded from further consideration because the proposed actions would be expected to have either no effect to these resources or the effects to these resources would be insignificant.

4.1 Soils

The soils within the covered area can generally be described as loamy, sloping east towards the Pecos River. The primary soil mapping units within the project area are Reeves-Holloman-Gypsum land, Upton-Reagan-Ector, Tonuco-Simona-Pajarito, and Pima-Harkney-Arno-Anthony with smaller amounts of Tencee-Rock Outcrop-Reagon-Ector, Rock outcrop-Lozier-Ector, and Pajarito-Kermit-Berino. Few of these soils are highly erodible soils. These soils are primarily

Aridisols, although a small portion of the covered area contains Mollisols. Aridisols are gypsum and calcium carbonate-containing soils found in arid regions. They are characterized by being dry most of the year and having limited leaching. Aridisols contain subsurface horizons in which clays, calcium carbonate, silica, salts, and/or gypsum have accumulated. These areas are used mainly for range, wildlife, and recreation. Mollisols are soils found in prairies or grasslands with pronounced dry seasons. They contain a dark, humus-rich surface layer containing high concentrations of calcium and magnesium. These soils are used mainly as cropland.

4.2 Vegetation

The covered area, residing within the Chihuahuan Desert, primarily consists of Chihuahuan Desert Grassland and Chihuahuan Basins and Playas Ecoregions (Griffith et al 2006). The covered area supports a diversity of plant communities adapted to life in the arid climate of the southwest. These communities are affected by a number of factors including soil composition, topography, temperature, precipitation, elevation, river flow levels, and land management practices. Vegetation within the covered area can be classified into two broad communities: riparian areas along the Black, Delaware, and Pecos rivers and Chihuahuan Desert scrub. A small section of agricultural fields also exist in the northeast section of the covered area where the Black River meets the Pecos River.

The riparian areas along the Black, Delaware, and Pecos Rivers are the transitional zones between the wetted portion of the river and the upland Chihuahuan Desert scrub environment. During medium and high precipitation events, these areas will often become flooded and inundated a few times during an average year. This plant community can range from grasses to shrubs to medium sized trees that require higher water levels than those in the surrounding communities. Common species may include Gooding's willow, plains cottonwood, coyote willow (*Salix exigua*), seepwillows (*Baccharis emoryi* and *B. salicifolia*), salt cedar (*Tamarix ramosissima*), common spikerush (*Eleocharis palustris*), vine mesquite (*Panicum obtusum*), bushy bluestem (*Andropogon glomeratus*), tobosa grass (*Pleuraphis mutica*), alkali muhly (*Muhlenbergia asperifolia*) and smooth horsetail (*Equisetum laevigatum*).

The Chihuahuan Desert scrub is an arid region that occurs on undulating plains scattered with washes that will fill with water following infrequent rains. In this area, these washes drain down through the riparian areas to the Black, Delaware, and Pecos Rivers. This plant community is associated with well-drained soils and consists primarily of shrublands and grasslands with little overstory tree layer. The dominant plant species are creosote bush (*Larrea tridentata*) and honey mesquite (*Prosopis glandulosa*). Common species include alkali sacaton (*Sporobolus airoides*), black grama (*Bouteloua eripoda*), hairy grama (*Bouteloua*), bush muhly (*Muhlenbergia porteri*), soapweed yucca (*Yucca glauca*), snakeweed (*Gutierrezia sarothrae*), tarbush (*Flourensia cenuosa*), cholla (*Opuntia imbricata*), Three-awn (*Aristida* spp.) and mesa dropseed (*Sporobolus flexuosus*).

Agricultural fields within the covered area are typically planted in corn, milo, alfalfa, or cotton. USDA Farm Service Agency Conservation Reserve Program (CRP) fields are made up of lands previously seeded with either native or non-native grasses to control erosion and often appear monotypic.

4.3 Wildlife

A wide variety of wildlife species utilize the riparian corridors around the Black and Delaware Rivers in southeastern New Mexico and West Texas. During migration season, the Black River in particular is known for hosting large populations of migrating birds, including waterfowl, shorebirds, and songbirds.

Reptiles and amphibians that may be found within the covered area include species such as the Rio Grande leopard frog (*Rana berlandieri*), ornate box turtle (*Terrapene ornate*), Texas horned lizard (*Phrynosoma cornutum*), greater earless lizard (*Cophosaurus texanus*), southwestern fence lizard (*Sceloporus cowlesi*), coachwhip (*Masticophis flagellum*), and western diamondback rattlesnake (*Crotalus atrox*). Common bird species include the Northern harrier (*Circus cyaneus*), Swainsons hawk (*Buteo swainsonii*), golden eagle (*Aquila chrysaetos*), mourning dove (*Zenaida macroura*), loggerhead shrike (*Lanius ludovicianus*), cactus wren (*Campylorhynchus brunneicapillus*), and curve-billed thrasher (*Toxostoma curvirostre*). Mammals include the striped skunk (*Mephitis mephitis*), kangaroo rat (*Dipodomys* spp.), mountain lion (*Puma concolor*), badger (*Taxidea taxus*), desert pocket mouse (*Perognathus penicillatus*), thirteen-lined ground squirrel (*Spermophilus tridecemlineatus*), and porcupine (*Erethizon dorsatum*).

Hunting is a popular recreational activity within the covered area. Game species of interest include mule deer (*Odocoileus hemionus*), javelina (*Dicotyles tajacu*), scaled quail (*Callipepla squamata*), bobwhite quail (*Colinus virginianus*), desert cottontail (*Sylvilagus audubonii*), and black-tailed jackrabbit (*Lepus californicus*). Fishing is another popular recreational activity on the Black River. The most commonly caught species include largemouth bass, bluegill, channel catfish and winter rainbow trout (NMDGF 2016).

4.4 Listed, Proposed, and Candidate Species

Federally endangered species that may occur in the covered area include the interior least tern (*Sterna antillarum*), northern aplomado falcon (*Falco femoralis septentrionalis*), southwestern willow flycatcher (*Empidonas traillii extimus*), and Pecos gambusia (*Gambusia nobilis*). Federally threatened species that may occur in the covered area include the Mexican spotted owl (*Strix occidentalis lucida*), piping plover (*Charadrius melodus*), Pecos bluntnose shiner (*Notropis simus pecosensis*), and gypsum wild-buckwheat (*Erigonum gypsophilum*). Although

yellow-billed cuckoos (*Coccyzus americanus*) occur in the covered area, the cuckoos that occur in the covered area are not considered part of the western Distinct Population Segment of the yellow-billed cuckoo, which is listed as threatened in Western New Mexico. Candidate species that are known to occur within the covered area are the TXHS, and Wright's marsh thistle (*Cirsium wrightii*). However, due to differences in habitat requirements between most of these listed species and the covered species for these conservation agreements (CCA and CCAAs), the southwestern willow flycatcher, yellow-billed cuckoo, Pecos gambusia, Wright's marsh thistle, and gypsum wild buckwheat are the only species that occur along the Delaware and Black Rivers.

4.5 Land Use and Ownership

Lands within the two counties covered under the CCA and CCAAs can be divided into three general surface ownership categories: federal, state, and private. Specifically, the BLM has surface ownership of approximately 220 thousand acres (38%), the state of New Mexico has approximately 80 thousand acres (14%), and private landowners 280 thousand acres (48%). The National Park Service has less than 1% of the lands within the covered area.

Land use within the covered area includes energy development activities, recreational use, livestock grazing, and agricultural activities. Energy development activities include the drilling of oil and gas wells, the development of infrastructure (i.e. roads, powerlines, and pipelines) associated with oil and gas wells, withdrawal and selling of ground and surface water for drilling of oil and gas wells, and activities associated with oil and gas production. For the purposes of the conservation agreement, energy development relates to activities occurring on State, Federal, or private lands. Within the covered area, Federal mineral leases currently cover 103 thousand acres on 149 parcels and State mineral leases currently cover 82 thousand acres on 274 parcels. Recreational use within the covered area includes OHV use, hunting, fishing, hiking, watchable wildlife, and camping. Livestock grazing occurs on a majority of the covered area with 43 Federal allotments comprising approximately 345 thousand acres. Management of these allotments is based on similar resource characteristics, management needs, and both resource and economic potential for improvement. Agricultural fields within the covered area are typically planted in corn, milo, alfalfa, or cotton.

In New Mexico, landowners have historically been using ground and surface water for agriculture. With the 1907 Water Code, landowners were given right to continue to use ground and surface water for the land they owned based on the history of water use in the area. These rights can voluntarily be bought, sold, and leased as property separate from land purchases. Owning water rights allows owners to utilize a pre-determined amount of water per year from either ground water or surface water (NMWRRI 2002). Water rights in the covered area in New Mexico are regulated by the New Mexico Office of the State Engineer and the Interstate Stream Commission and fall under the Lower Pecos River Water Master District and the Carlsbad Sub-

District. The NM State Engineer has instituted the Active Water Resource Management program within the Lower Pecos River Basin to match the total water use in the basin with the total available supply.

In Texas, groundwater is governed by the rule of capture, which grants landowners the right to capture water beneath their property and may be used or sold as private property. Water conservation districts have been authorized and created in Texas, but the covered area is not in a groundwater conservation district, and thus is not subject to any additional rules for conservation or protection of groundwater. Surface water, however, belongs to the state of Texas and can only be used by a landowner with the state's permission. Since 1967, ownership and transfers of surface water rights, allowed in certain cases through the Water Rights Adjudication Act, are governed by Texas Commission of Environmental Quality (Kaiser 1987).

4.6 Water Resources

The surface and ground water within the area is affected by precipitation, geology, topography, water runoff, and erosion. Factors currently affecting water levels and water quality include livestock grazing, irrigation for agriculture, and withdrawal of water for oil and gas development.

Although according to the Delaware River NR Red Bluff USGS gage data, the Delaware River has an average discharge of around 3.4 cubic feet per second (cfs) and the Black River above Malaga has an average discharge of around 11 cfs, the water in both of these rivers can change drastically during periods of high precipitation or drought (Figures 2 and 3). After periods of high precipitation and high flow, water quality is expected to be lower due to increased runoff. In September of 2014, both rivers experienced extreme flooding when the discharge reached over 3000 cfs at the Black River above Malaga USGS gage and over 23000 cfs at the Delaware River NR RedBluff USGS gage (USGS 2016).

The Black River and Delaware River both have fairly low salinity at 0.9 parts per thousand (ppt) in the Black River and 1.8 ppt in the Delaware River (Carman 2007). The lower Pecos River however experiences higher salinity around 6.0-7.0 ppt due to brine intrusions near to where the Black River flows into the Pecos near Malaga, NM.

The Black River and the Delaware River both flow into the Pecos River. The Pecos River provides water for beneficial use in both New Mexico and Texas. In 1948 the states of Texas and New Mexico entered into the Pecos River Compact that requires the state of New Mexico to deliver a portion of the Pecos River's water to the state of Texas. To ensure protection of New Mexico water-right owners and compliance with the Pecos River Compact, State and Federal stakeholders in New Mexico entered into the 2003 Pecos Settlement Agreement to implement

water-management strategies. The New Mexico Interstate Stream Commission monitors water levels in the Pecos River to ensure that the state of Texas is getting the water allowed to them.

Figure 2

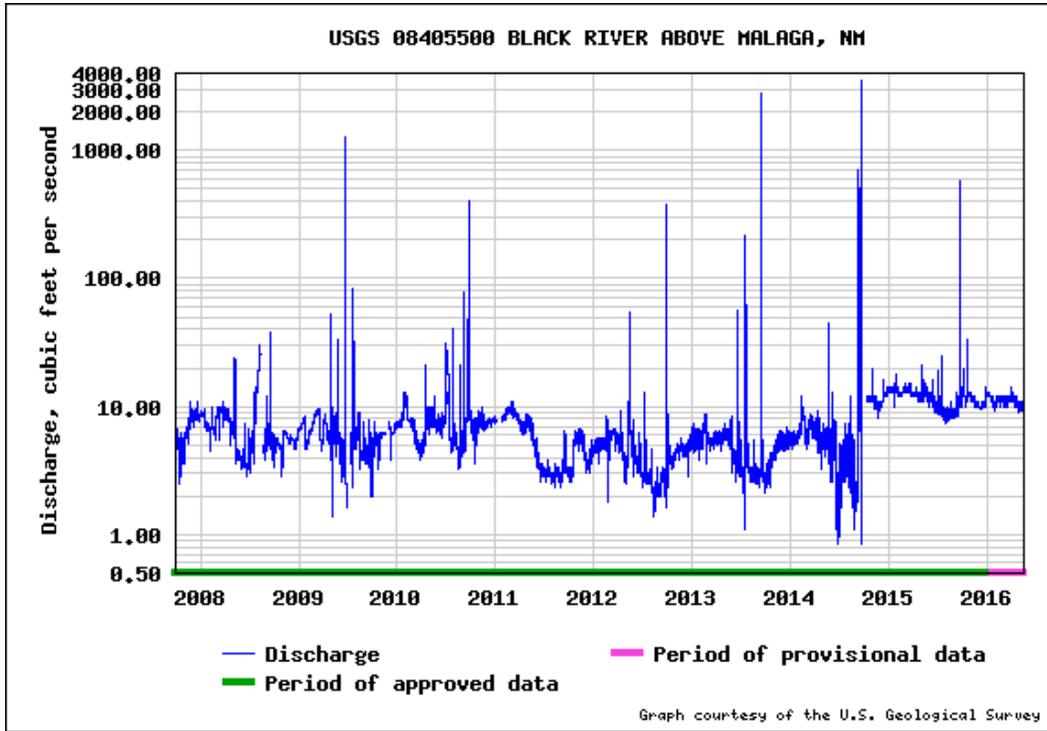
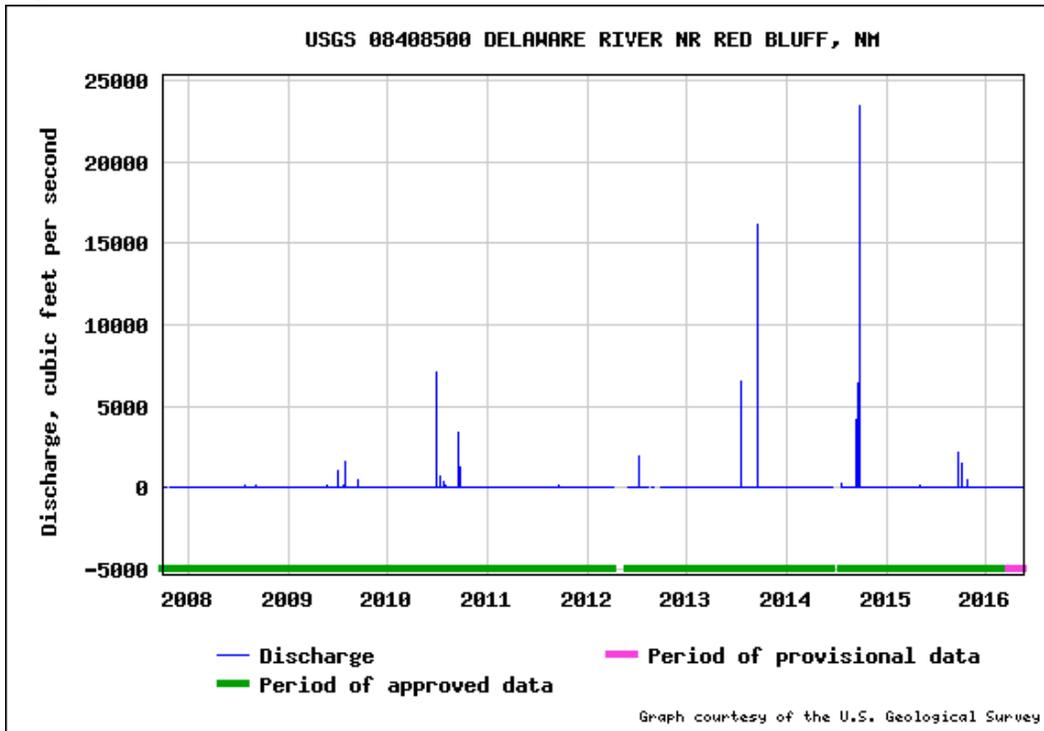


Figure 3



5.0 ENVIRONMENTAL CONSEQUENCES

In this section, the beneficial and adverse effects of implementing the No Action and Action Alternatives (Alternatives B, C, D, and E) are described. A summary of the potential impacts from these alternatives to the major resource areas chosen for analysis is included in Table 1 below.

Table 1. Summary of Impacts to Resources

<i>Resources</i>	<i>No Action Alternative</i>	<i>Alternative B</i>	<i>Alternative C</i>	<i>Alternative D</i>	<i>Alternative E</i>
Soils	Impacts to soils would continue at current levels. Impacts would be moderate adverse and long-term .	Conservation measures would be implemented that would minimize impacts to soils. Impacts would be major beneficial and long-term .	Similar to Alternative B. However, only Federal lands or activities with Federal minerals would be impacted. Impacts would be moderate beneficial and long-term .	Similar to Alternative B. However, only private or State lands would be impacted. Impacts would be major beneficial and long-term .	Similar to Alternative B. Impacts would be major beneficial and long-term .

Vegetation	Impacts to vegetation would continue to be managed through existing regulatory mechanisms. Impacts would be moderate adverse and long-term.	Conservation measures within the covered area would address and reduce fragmentation, restore native habitat, and promote habitats of covered species. Impacts would be major beneficial and long-term.	Similar to Alternative B. However, only Federal lands or lands with Federal minerals would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. However, only private or State lands would be impacted. Impacts would be major beneficial and long-term.	Similar to Alternative B. Impacts would be major beneficial and long term.
Wildlife	Impacts to wildlife would continue at current levels and would result from habitat fragmentation. Impacts would be moderate adverse and long-term.	All wildlife species would benefit from additional conservation measures within the covered area. Impacts would be major beneficial and long-term.	Similar to Alternative B. However, only Federal lands or lands with Federal minerals would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. However, only private or State lands would be impacted. Impacts would be major beneficial and long-term.	Similar to Alternative B. Impacts would be major beneficial and long term.
Listed, Proposed, or Candidate Species	Management and protection of federally listed, proposed, and candidate species would continue to be guided by existing State and Federal regulations, laws, and policies. Impacts would be moderate adverse and long-term.	Candidate species would benefit directly from the conservation measures implemented on lands enrolled under the conservation agreements. Impacts would be major beneficial and long-term.	Similar to Alternative B. However, only Federal lands or lands with Federal minerals would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. However, only private or State lands would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. Impacts would be major beneficial and long term.
Land Use and Ownership	There would continue to be little incentive for private landowners and Federal lessees, operators, and permittees to engage in the voluntary conservation of candidate species. Impacts would be moderate adverse and long-term.	This alternative would result in an opportunity for the Service and BLM to manage land use impacts to listed or candidate species on a landscape level. Water rights owners would have the opportunity to sell water rights for conservation benefit. Impacts would be major beneficial and long-term.	Participating cooperators would be able to continue their activities under the conditions of the CP. Additional land use restrictions would likely not be required if any of the covered species are listed under the ESA. Impacts would be moderate beneficial and long-term.	Participating cooperators would be able to continue their activities under the conditions of the CI. Assurances would be given that additional restrictions would likely not be required if any of the covered species are listed under the ESA. Impacts would be moderate beneficial and long-term.	This alternative would result in an opportunity for the Service, BLM, and state lands to manage land use impacts to listed or candidate species on a landscape level. Impacts would be major beneficial and long-term.
Water Resources	Impacts to water resources from water withdrawal, oil and gas development, construction, and agriculture would continue at current levels. Impacts would be moderate adverse	Conservation measures would be implemented that would minimize drop of water levels and degradation of water quality due to man-made activities. Impacts would be major beneficial and	Similar to Alternative B. However, only Federal lands or lands with Federal minerals would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. However, only private or State lands would be impacted. Impacts would be moderate beneficial and long-term.	Similar to Alternative B. Impacts would be major beneficial and long term.

and long-term.

long-term.

5.1 Soils

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible** - Soils would not be affected or effects would be below or at the lower levels of detection. Any effects to soil resources would be slight and no long-term effects would occur.
 - **Minor** - The effects to soil resources would be detectable. Effects to soil erosion potential or productivity would be small, as would be the area affected. If mitigation were needed to offset adverse effects, it would be relatively simple to implement and would likely be successful.
 - **Moderate** - The effects on soil erosion potential or productivity would be readily apparent and likely long-term. The resulting change to soil character would cover a relatively wide area. Mitigation measures would probably be necessary to offset adverse effects and would likely be successful.
 - **Major** - The effect on soil productivity would be readily apparent, long-term, and substantially change the character of the soils at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area). Mitigation measures to offset adverse effects would be needed, extensive, and their success could not be guaranteed.
- **Duration:**
- **Short-Term** - Lasting only during the proposed action or no longer than the first growing season thereafter.
 - **Long-Term** - A permanent impact.

5.1.1 Alternative A – No Action

Under the No Action Alternative, soils management and protection would continue to be guided by existing regulatory mechanisms. The BLM would continue to emphasize habitat restoration, erosion control and prevention or avoidance of further degradation of soil resources on lands they manage. It is anticipated that impacts to soils from energy development activities, recreational use, livestock grazing, and agricultural activities within the covered area would continue at current levels. Soil erosion into the river would continue to occur at the same rate. These impacts would continue to be managed on a case-by-case basis. Impacts to soils under this alternative would be **moderate adverse** and **long-term**.

5.1.2 Alternative B – Development of a CCA and CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled under the conservation agreements (CCA and CCAA) that would minimize impacts from land-use activities to soils. There would be an opportunity to manage and protect soil resources from a landscape perspective within the covered area. CEHMM would develop CPs/CIs with input from the Service on the CCA and CCAA and BLM on the CCA that would include conservation measures such as directing surface disturbing activities to those areas containing more stable soils. Participants would also be required to protect or conserve soils through restoration, rehabilitation, erosion control, or any other means above and beyond that which is required under current regulations. The measures outlined in a CP/CI would result in fewer impacts to soils, improvements to soil conditions and funding for soil restoration by removing invasive species and restoring native plant communities, implementing erosion control, minimizing the number of well pads and associated development within oil and gas leases, avoiding development and construction in higher erosion zones A and B, managing livestock grazing to reduce impacts, or following Spill Prevention, Control, and Countermeasure (SPCC) requirements. CEHMM, BLM, and the Service would work with participants to create Plans of Development (POD) that minimize disturbance in sensitive zones while continuing to provide sufficient access and use of the land. Impacts to soils under this alternative would be **major beneficial** and **long-term**.

5.1.3 Alternative C – Development of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to soils. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from energy development activities, recreational use, water withdrawal, livestock grazing, and agricultural activities conducted on Federal lands (38% of the covered area) or private or state lands with Federal minerals. Impacts to soils under this alternative would be **moderate beneficial** and **long-term**.

5.1.4 Alternative D – Development of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to soils. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from energy development activities,

recreational use, water drilling and withdrawal, livestock grazing, and agricultural activities conducted on private or State lands where no Federal minerals occur (62% of the covered area). Impacts to soils under this alternative would be **major beneficial** and **long-term**.

5.1.5 Alternative E – Development of a CCA, private lands CCAA, and a NM state lands CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA and CCAAs that would minimize impacts from land-use activities to soils. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. Impacts to soils under this alternative would be **major beneficial** and **long-term**.

5.2 Vegetation

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible** – Direct or indirect impacts would have perceptible but small changes in the size, integrity, or continuity of vegetation within the covered area.
 - **Minor** – Disturbance or protection, restoration, or rehabilitation of vegetation would be measurable or perceptible but limited in size. The overall viability of plant communities would not be affected and would recover.
 - **Moderate** – Disturbance or protection, restoration, or rehabilitation of vegetation over a relatively wide area would occur. Impacts would cause a change in plant communities (e.g. abundance, distribution, quantity, or quality), but the impacts would remain localized.
 - **Major** – Disturbance or protection, restoration, or rehabilitation of vegetation at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area). Any disturbance to federally listed plant species would be considered major adverse effects.
- **Duration:**
- **Short-term** – The physical impact from the proposed actions would require less than one growing season for the full recovery of plant communities. Beneficial effects would be observed for one growing season.
 - **Long-term** – The physical impact from the proposed actions would require more than one growing season for the full recovery of plant communities. Beneficial effects would be observed for more than one growing season.

5.2.1 Alternative A – No Action

Under the No Action Alternative, vegetation management would continue to be guided through existing regulatory mechanisms. On lands administered by the BLM, the goal of maintaining or improving vegetation with an emphasis on watershed protection and forage for wildlife would continue (BLM 1998, 2013). Brush control methods such as herbicide application and prescribed fire would continue to be implemented on private, State, and Federal lands to improve forage for livestock and wildlife within the covered area. Impacts to vegetation from energy development activities, recreational use, livestock grazing, and agricultural activities would continue at current levels. These impacts would be managed on a case-by-case basis. There would continue to be little incentive for Federal lessees, operators, and permittees or private or State landowners to voluntarily protect and manage the vegetation along the Black and Delaware Rivers for the benefit of the covered species. BLM would continue to perform and promote land management to promote healthy vegetation within the covered area through invasive species treatment and removal, prescribed burns to reduce fuel loads and promote native plant establishment, grazing management to keep livestock out of riparian corridors during the growing season, and planting of native trees along the Black and Delaware Rivers. Impacts to vegetation under this alternative would be **moderate adverse** and **long-term**.

5.2.2 Alternative B – Development of a CCA and CCAA

This Alternative would result in the implementation of conservation measures aimed at removing invasive species, restoring native vegetation, preventing erosion along the streambanks, and keeping minimum streamflow levels. These measures would result in higher water levels due to removal of invasive species which use more water than native species and an increase in the amount and quality of native vegetation in riparian areas within the covered area. In addition, increased native vegetation in riparian areas along the Black and Delaware Rivers could slow the direct loss of suitable habitat for TXHS through erosion in riparian areas on lands enrolled under the conservation agreements or on other lands that would be treated with contributed funds. Impacts to vegetation from energy development activities, recreational use, livestock grazing, and agricultural activities would be managed. Participating cooperators would have an incentive to protect and manage native vegetation and remove invasive vegetation that use more water than native vegetation for the conservation of the covered species. This incentive would be the likelihood that their operational activities, on lands enrolled in a conservation agreement, would not likely be disrupted in the future if any of the covered species were listed under the provisions of the ESA. Vegetation and native habitat restoration efforts within the covered area would

address low water quality and low water quantity issues and promote better more sustainable habitat for the TXHS and other covered species. Impacts to vegetation under this alternative would be **major beneficial** and **long-term**.

5.2.3 Alternative C – Development of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to vegetation. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (38% of the covered area) or lands where Federal minerals occurred. Impacts to vegetation under this alternative would be **moderate beneficial** and **long-term**.

5.2.4 Alternative D – Development of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land use activities to vegetation. Most of the impacts from implementing this Alternative would be the same as those described above from Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or State lands (62% of the covered area). Impacts to vegetation under this alternative would be **major beneficial** and **long term**.

5.2.5 Alternative E – Development of a CCA, private lands CCAA, and NM state lands office CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA and CCAAs that would minimize impacts from land-use activities to vegetation. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. Impacts to vegetation under this alternative would be **major beneficial** and **long-term**.

5.3 Wildlife

Thresholds for Intensity, Duration, and Type of Impact:

- **Negligible** - Wildlife would not be affected or the effects would be at or below the level of detection, would be short-term, and the changes would be so slight that they would not be of any measurable or perceptible consequence to the wildlife species' population.
 - **Minor** - Disturbance or protection, restoration, or rehabilitation of wildlife habitat would be measurable and perceptible but limited in size.
 - **Moderate** - Disturbance or protection, restoration, or rehabilitation of wildlife habitat would occur over a relatively wide area.
 - **Major** - Disturbance or protection, restoration, or rehabilitation of wildlife habitat at a landscape level (i.e. occurring across several different major land resource areas or ecological units within the covered area).
- **Duration:**
- **Short-Term** - Complete disturbance recovery in less than five years. Beneficial impacts would occur for less than five years
 - **Long-Term** - Disturbance recovery requiring more than five years to return to pre-disturbance levels. Beneficial impacts would occur for greater than five years.

5.3.1 Alternative A – No Action

Under the No Action Alternative, wildlife would continue to be impacted at current levels by energy development activities, recreational use, livestock grazing, water withdrawal, and agricultural activities. These impacts would be indirect and primarily result from erosion, lowered water levels, habitat fragmentation and habitat degradation. Additional protection would not be afforded wildlife above and beyond what is currently provided through State and Federal regulations, laws, and policies. BLM would continue to perform and promote land management to promote wildlife populations within the covered area through invasive species treatment and removal, grazing management, native tree plantings to stabilize river banks and diversify wildlife nesting opportunities along the riparian corridor, installation of solar pumps and livestock drinkers, and prescribed burns to promote good habitat with native plant reestablishment. Impacts to wildlife under this alternative would be **moderate adverse** and **long-term**.

5.3.2 Alternative B – Development of a CCA and CCAA

This Alternative would result in the implementation of conservation measures aimed at protecting and managing the covered species. CEHMM, with input from the Service and BLM, would develop CPs/CIs on lands enrolled under the conservation agreements (CCA and CCAA) that would indirectly benefit all wildlife species occupying the rivers and riparian corridors along the Delaware and Black Rivers. These CPs/CIs would include conservation measures such as protecting and enhancing habitat, restoring degraded habitat, creating new habitat, treating undesirable invasive vegetation, and protecting and restoring water levels and clean water. The conservation measures implemented under this alternative would be above and beyond those activities currently being implemented through existing State and Federal regulations, laws, and policies. Therefore, this alternative would result in additional conservation and protection of all wildlife species within the covered area. Impacts to wildlife under this alternative would be **major beneficial** and **long-term**.

5.3.3 Alternative C – Development of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to wildlife. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (38% of the covered area) or where Federal minerals occurred. Impacts to wildlife under this alternative would be **moderate beneficial** and **long-term**.

5.3.4 Alternative D – Development of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to wildlife. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or State lands (62% of the covered area). Impacts to wildlife under this alternative would be **major beneficial** and **long-term**.

5.3.5 Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA and CCAAs that would minimize impacts from land-use activities to wildlife. Most of the

impacts from implementing this Alternative would be the same as those described above for Alternative B. Impacts to wildlife under this alternative would be **major beneficial** and **long-term**.

5.4 Listed, Proposed, and Candidate Species

Thresholds for Intensity, Duration, and Type of Impact:

- **Negligible:** When a proposed action would have no measurable effects to a listed, proposed or candidate species.
 - **Minor:** Effects on listed, proposed, or candidate species are expected to be discountable or insignificant.
 - **Moderate:** When an effect to a listed, proposed, or candidate species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable or insignificant.
 - **Major:** When proposed activities could jeopardize the continued existence of a listed, proposed, or candidate species or adversely modify critical habitat. A major impact would also occur if the beneficial effects of the proposed action would likely reduce the need for the species to be listed in its current category (i.e. de-list or down-list).
- **Duration:**
- **Short-Term** - Impacts from the proposed action would occur for less than 5 years.
 - **Long-Term** - Impacts from the proposed action would occur for greater than 5 years.

5.4.1 Alternative A – No Action

The No Action Alternative would result in continued management and protection of federally listed, proposed, and candidate species within the covered area through existing State and Federal regulations, laws, and policies. These existing regulations, laws, and policies may not be sufficient to prevent the listing of candidate species under the ESA without the voluntary cooperation of additional stakeholders. Effects to candidate species would continue to be analyzed on a case-by-case basis with limited opportunity to manage their conservation from a landscape level. BLM would continue to perform and promote land management to promote wildlife populations within the covered area through invasive species treatment and removal, grazing management, native tree plantings to stabilize river banks and diversify wildlife nesting opportunities, installation of solar pumps and livestock drinkers, and prescribed burns to promote native plant reestablishment. Federally listed, proposed, and candidate species would not benefit

from additional conservation measures implemented under a conservation agreement (CCA and CCAA). Any future proposed activities that may affect a listed or proposed species within the covered area would undergo Section 7 consultations on Federal lands or lands with Federal minerals and Section 10 consultations on private and state lands under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate adverse** and **long-term**.

5.4.2 Alternative B – Development of a CCA and CCAA

Under this Alternative, endangered, threatened, and candidate species within Zones A-C would benefit directly from the conservation measures implemented on lands enrolled under the CCA and CCAA. The endangered species southwestern willow flycatcher and Pecos gambusia, threatened species yellow-billed cuckoo and gypsum wild-buckwheat, and ESA candidate species Wright’s marsh thistle would benefit from less disturbance in riparian areas along the Black and Delaware Rivers, higher quality and quantity of water, removal of invasive vegetation, and installation of native vegetation. The remaining endangered, threatened, and candidate species outside Zones A-C may be similar to those under the No Action Alternative. Participating cooperators would collaborate with the Service, BLM, and CEHMM to develop measures to minimize negative impacts from their energy development activities, recreational use, water withdrawal, livestock grazing, or agricultural activities. The TXHS and the other covered species would benefit from less disturbance in occupied or suitable habitats, better water quality due to less development and erosion upstream from occupied and suitable habitats, more dependable water levels, restoration and enhancement of otherwise unsuitable habitat, and more research into their life history and needs. Participating cooperators would have an incentive to contribute to the protection and management of the covered species. This incentive would be the likelihood that their operational activities, on lands enrolled under the conservation agreements, would not be disrupted in the future if any of the covered species were listed under the provisions of the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **major beneficial** and **long-term**.

5.4.3 Alternative C – Development of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to listed, proposed, and candidate species. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (38% of the covered area) or where Federal minerals

occurred. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

5.4.4 Alternative D – Development of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to listed, proposed, and candidate species. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or State lands (62% of the covered area). Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

5.4.5 Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA and CCAAs that would minimize impacts from land-use activities to listed, proposed, and candidate species. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. Impacts to listed, proposed, and candidate species under this alternative would be **major beneficial** and **long-term**.

5.5 Land Use and Ownership

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible** – Land owners or users would not likely be aware of the effects associated with the proposed action.
- **Minor** - Land owners or users would likely be aware of the effects associated with the proposed action; however the effects would be slight and likely short term.
- **Moderate** - Land owners or users would be aware of the effects associated with the proposed action. Effects would be readily apparent. Land owners or users may be subjected to use restrictions or delays in obtaining permits or leases. Beneficial

moderate effects would occur when there are no use restrictions or delays and the impact is short-term.

- **Major** - Land owners or users would be highly aware of the effects of the proposed action and would likely be subjected to significant use restrictions or delays in obtaining permits or leases. Beneficial major effects would occur when there are no use restrictions or delays and the impact is long-term.

- **Duration:**

- **Short-Term** - Impacts from the proposed action would occur for less than one year.
 - **Long-Term** - Impacts from the proposed action would occur for greater than one year.

5.5.1 Alternative A – No Action

Under the No Action Alternative, there would continue to be little incentive for private landowners and Federal lessees, operators, and permittees to engage in the voluntary, proactive conservation of candidate species. Landowners and Federal lessees, operators, or permittees would continue to be concerned about the potential regulatory implications of having these species on their land. This atmosphere would continue to inhibit cooperation and collaboration regarding the conservation of candidate species. Energy development, recreational use, livestock grazing, water withdrawal, and agricultural activities on lands containing candidate species would have the potential to be delayed or restricted as a result of section 7 consultation requirements or Section 10 permit application requirements should these species eventually become listed under the ESA. If these species become listed, there would be no certainty from an EOS permit associated with a CCAA that additional restrictions would not be assessed on these lands. Impacts to Land Use and Ownership under this alternative would be **moderate adverse** and **long-term**.

5.5.2 Alternative B – Development of a CCA and CCAA

Under this Alternative, the development of a CCA or CCAA would give landowners and Federal lessees, operators, and permittees (participating cooperators) an opportunity to receive a high degree of certainty under the CCA and assurances under the CCAA that more stringent restrictions or additional conservation measures would not be required of them in the event any of the covered species become listed under the ESA. By enrolling in one of the conservation agreements, energy development, recreational use, water withdrawal, livestock grazing, and agricultural activities would likely continue under the conditions of the CP/CI without the additional requirements of a new section 7 consultation or a section 10 permit application. This

would keep them from being delayed while the new consultation is being completed (i.e. up to 145 days) or the Section 10 permit is being completed (i.e., >1+ year). In addition, participating cooperators would gain public relations benefits from their contributions towards candidate species conservation and water right owners would have an additional voluntary opportunity to sell or lease unwanted water rights to CEHMM to benefit conservation of candidate species. This alternative would provide an opportunity for the Service and BLM to manage land use impacts to listed or candidate species on a landscape level. Impacts to Land Use and Ownership under this alternative would be **major beneficial** and **long-term**.

5.5.3 Alternative C – Development of a CCA

Under this Alternative, participating cooperators would be able to continue their activities under the conditions of the CP with the understanding that additional restrictions would likely not be required of them in the future if any of the covered species are listed under the ESA. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, without the development of a CCAA private and State landowners would not have an opportunity to implement conservation measures on their lands in return for assurances that more stringent restrictions or additional conservation measures would not be required of them in the event that any of the covered species become listed under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

5.5.4 Alternative D – Development of a CCAA

Under this Alternative, participating cooperators would be able to continue their activities under the conditions of the CI with assurances that additional restrictions would likely not be required of them in the future if any of the covered species are listed under the ESA. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, without the development of a CCA, Federal lessees, operators, and permittees would not have an opportunity to implement conservation measures in return for the likelihood that more stringent restrictions or additional conservation measures would not be required of them in the event that any of the covered species become listed under the ESA. Impacts to listed, proposed, and candidate species under this alternative would be **moderate beneficial** and **long-term**.

5.5.5 Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA

Under Alternative E, the development of a CCA, private lands CCAA, and NM state lands CCAA would give landowners and Federal and state lessees, operators, and permittees (participating cooperators) an opportunity to receive a high degree of certainty under the CCA and assurances under the CCAA that more stringent restrictions or additional conservation measures would not be required of them in the event any of the covered species become listed under the ESA. By enrolling in one of the conservation agreements, energy development, recreational use, water withdrawal, livestock grazing, and agricultural activities would likely continue under the conditions of the CP/CI without the additional requirements of a new section 7 consultation or a section 10 permit application. This would keep them from being delayed while the new consultation is being completed (i.e. up to 145 days) or the Section 10 permit is being completed (i.e., >1+ year). In addition, participating cooperators would gain public relations benefits from their contributions towards candidate species conservation and water right owners would have an additional voluntary opportunity to sell or lease unwanted water rights to CEHMM to benefit conservation of candidate species. This alternative would provide an opportunity for the Service, NM state lands office, and BLM to manage land use impacts to listed or candidate species on a landscape level. Impacts to Land Use and Ownership under this alternative would be **major beneficial** and **long-term**.

5.6 Water Resources

Thresholds for Intensity, Duration, and Type of Effect:

- **Negligible** – Land owners or users would not likely be aware of the effects associated with the proposed action.
- **Minor** - Land owners or users would likely be aware of the effects associated with the proposed action; however the effects would be slight and likely short term.
- **Moderate** - Land owners or users would be aware of the effects associated with the proposed action. Effects would be readily apparent. Land owners or users may be subjected to use restrictions or delays in obtaining permits or leases. Beneficial moderate effects would occur when there are no use restrictions or delays and the impact is short-term.
- **Major** - Land owners or users would be highly aware of the effects of the proposed action and would likely be subjected to significant use restrictions or delays in obtaining permits or leases. Beneficial major effects would occur when there are no use restrictions or delays and the impact is long-term.

- **Duration:**

- **Short-Term** - Impacts from the proposed action would occur for less than one year.
 - **Long-Term** - Impacts from the proposed action would occur for greater than one year.

5.6.1 Alternative A – No Action

Under the No Action Alternative, water management would continue to be guided through existing regulatory mechanisms. On lands administered by the BLM, the goal of maintaining or improving vegetation with an emphasis on watershed protection and forage for wildlife would continue. Erosion control methods that slow introduction of excess sediment into the rivers would continue to be implemented on private, state, and Federal lands to slow erosion in drainages and riparian areas, along river banks, and along roads within the covered area. Impacts to water quality and water levels from energy development activities, recreational use, water withdrawal, livestock grazing, and agricultural activities would continue at current levels. These impacts would be managed on a case-by-case basis. There would continue to be little incentive for Federal lessees, operators, and permittees or private or state landowners to voluntarily protect and manage the water resources of the Delaware and Black Rivers for the benefit of the covered species. The BLM would continue to manage water quality and quantity on BLM lands by removing thirsty invasive species, planting native species, promoting erosion control and managing grazing to minimize erosion and disturbance of river beds. Water withdrawal and river flow levels would continue to be monitored by the New Mexico Interstate Stream Commission to ensure delivery of water to the Texas state line according to the 1948 Pecos River Contract between Texas and New Mexico. Stakeholders in the 2003 Pecos Settlement Agreement would continue to implement water-management strategies to protect New Mexico's interests in the lower Pecos River. Impacts to water resources under this alternative would be **moderate adverse** and **long-term**.

5.6.2 Alternative B – Development of a CCA and CCAA

This Alternative would result in the implementation of conservation measures aimed at maintaining minimum stream flows, removing invasive species with high water requirements, preventing erosion along the riverbanks, and reducing introduction of pollutants and excess sediment into the rivers. These measures would result in an increase in the water flow and water quality. Impacts to water resources from energy development activities, recreational use, water withdrawal, livestock grazing, and agricultural activities would be managed through a comprehensive, watershed approach. Participating cooperators would have an incentive to protect and manage water resources for the benefit of the covered species. This incentive would be the likelihood that their operational activities, on lands enrolled in a conservation agreement,

would not likely be disrupted in the future if any of the covered species were listed under the provisions of the ESA. Impacts to water resources under this alternative would be **major beneficial** and **long-term**.

5.6.3 Alternative C – Development of a CCA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA that would minimize impacts from land-use activities to water resources. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on Federal lands (38% of the covered area) or where Federal minerals occurred. Impacts to water resources under this alternative would be **moderate beneficial** and **long-term**.

5.6.4 Alternative D – Development of a CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCAA that would minimize impacts from land-use activities to water resources. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. However, the impacts would be restricted to those resulting from activities conducted on private or State lands (62% of the covered area). Impacts to water resources under this alternative would be **moderate beneficial** and **long-term**.

5.6.5 Alternative E – Development of a CCA, private lands CCAA, and NM state lands CCAA

Under this Alternative, conservation measures would be implemented on lands enrolled in the CCA and CCAAs that would minimize impacts from land-use activities to water resources. Most of the impacts from implementing this Alternative would be the same as those described above for Alternative B. Impacts to water resources under this alternative would be **major beneficial** and **long-term**.

6.0 CUMULATIVE EFFECTS

Cumulative impacts include the combined effect of past activities, specific planned projects and other reasonably foreseeable future actions that are reasonably certain to occur within the project area. The Federal action agency (the Service) must determine whether impacts of the proposed action, in this case the development of conservation agreements (CCA and CCAA), when taken together with other actions would result in a significant environmental impact.

Ongoing activities within the project area such as oil and gas development, livestock grazing, recreational use, water withdrawal, and agricultural activities would continue to have adverse impacts on the resources (i.e. soils, vegetation, wildlife, listed, proposed, and candidate species, land use and ownership, and water resources) identified and analyzed in this environmental assessment, with or without the development of a CCA or CCAA. However, the conservation measures proposed in the development of the CCA and CCAA (Preferred Alternative) would have net beneficial impacts to all of the resources, specifically the covered species.

Potential adverse cumulative effects may occur throughout the project area should the CCA and CCAA not be entered into. All actions which may occur in the area, including foreseeable non-Federal actions, may result in cumulative adverse impacts.

Whether or not the CCA or CCAA are implemented, land use practices, such as additional oil and gas production and water withdrawal, will increase overall surface disturbance and decrease water quantity and quality. However, when sited and managed correctly, the additional disturbance from industry could have minimal impacts to the TXHS and the other covered species. Additionally, livestock grazing in the covered area would increase overall surface disturbance. However, when managed correctly and kept from riparian areas, cattle grazing can positively influence habitat and native species restoration. When proper stocking rates, pasture rotation, and well-managed grazing methods are adhered to, vegetation could be managed in a manner advantageous to associated wildlife.

By its very nature, implementation of a CCA and CCAA would reduce overall surface and stream disturbance around the Black and Delaware Rivers due to various land use practices and conservation measures. These cumulative beneficial impacts would serve to minimize or completely eliminate some of the threats to the TXHS, Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and the Pecos Springsnail. If a significant number of the threats are addressed, this has the potential to positively impact the status of the species before listing decisions on these species are made in the future.

7.0 CONCLUSION

As a result of the analyses contained within this environmental assessment, it is anticipated that Alternatives B (Development of a CCA and CCAA) and E (Development of a CCA, private lands CCAA, and NM state lands CCAA) will provide the greatest benefit to the resources within the covered area and the availability for all lands within the covered area to enroll. In the

absence of a NM state lands CCAA (Alternative E), state lands would still be given the opportunity to enroll in the private lands CCAA (Alternative B). Although the impacts to resources from Alternatives C and D would be moderately beneficial, the major beneficial impacts resulting from the activities associated with Alternative B and E would make this the Preferred Alternative. The Preferred Alternatives and their associated activities will not have significant impacts to resources either by themselves or cumulatively with other actions. It has been determined that an Environmental Impact Statement (EIS) will not be required for this project and thus will not be prepared for the implementation of the Preferred Alternative.

8.0 COORDINATION AND PREPARATION

The development of this environmental assessment was a coordinated effort between the Service and the BLM. Public notification of the availability of the Draft Environmental Assessment and Conservation Agreements (CCA and CCAA) will be published in the *Federal Register*. All concerned individuals and agencies will be provided a hard copy upon request for review and comment.

The following individuals assisted in the preparation of this environmental assessment:

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