

2018 Annual Report



Candidate Conservation Agreements:
Texas Hornshell Mussel (*Popenaias popeii*)



CEHMM

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State of New Mexico

Commissioner of Public Lands

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I. EXECUTIVE SUMMARY

To date, a total of 635,279.24 acres have been enrolled within the Texas Hornshell Mussel (THM) boundary (Appendix A) between either the New Mexico State Land Office (NMSLO) or the Center of Excellence (CEHMM). There are 104 CCA or CCAA agreements that contribute to the enrolled lands. Forty-nine Participants are enrolled in one or more of the conservation agreements.

A total of \$885,956.48 was contributed by the Participants in the CCA/As, and \$162,307.50 was spent for the program's implementation and staffing needs during 2018. CEHMM and NMSLO anticipate using approximately \$270,000 of the funds for research to determine minimum flow requirements and for habitat projects during 2019.

All of the funding contributed during the year came exclusively from industry Enrollment Fees and Habitat Conservation Fees. The Habitat Conservation Fees came from the 101 new surface disturbances reported to CEHMM and the 26 new surface disturbances reported to NMSLO. There were a total of 1,014.86 new acres disturbed from the 127 combined notices.

As the program is in its beginning stages no projects were funded during 2018. While there were no projects to monitor, CEHMM did monitor the flows of the Black River. CEHMM also aided New Mexico Department of Game and Fish (NMDGF), Miami University of Ohio (MU), and Eastern New Mexico University (ENMU) in species monitoring surveys.

During the 2018 calendar year, the THM Implementation Committee met twice discussing topics such as potential proposed projects, project prioritization, and creating of the Technical Working Group and Stakeholder Committee.

The Technical Working Group met once during 2018 for the main purpose of discussing a proposed minimum flow of the Black River. No other THM committees met during the year. Both the Executive Committee and the Stakeholder Committee are scheduled for their first meeting in early 2019.

II. INTRODUCTION

This report describes the activities conducted in 2018 under the Candidate Conservation Agreements for THM and other covered species administered by CEHMM and NMSLO.

III. COVERED SPECIES

Texas Hornshell Mussel

The THM (*Popenaias popeii*) (Figure 1) is a bivalve mollusk that is native to the Pecos River and Rio Grande drainages in New Mexico, Texas, and Mexico. The shell is elongate and subtrapezoidal – meaning four distinct sides with two sides that are parallel with the length greater than the width. The external color varies from dark brown to olive green. Internal soft anatomy consists of a large visceral mass, two pairs of gills used for respiration and glochidial incubation, incurrent and excurrent siphons for water exchange, and a muscular foot for movement.



Figure 1: Texas Hornshell (*Popenaias popeii*)

In 1989, the U.S. Fish and Wildlife Service (FWS) was petitioned to list the THM as “endangered” under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531, et seq.) (“Act”). In 2001, the FWS ruled that listing of the THM was warranted, but precluded, because of other higher priority species. In 2016, the THM was proposed for listing as an endangered species. On March 12th 2018, the FWS listed the THM as endangered under the Act.

Historically, the species occurred throughout much of the Pecos and Rio Grande drainages (Carman 2007, Howells 2001). The species was once found from North Spring River, Roswell, Chaves County, New Mexico south in the Pecos, Black, and Delaware rivers to the confluence of the Rio Grande and Pecos rivers and further to the Gulf of Mexico.

Currently the species is known from four widely separated locations. The first location is in the Black River where the species is confined to a 14 km (8.7 mi) stretch from Black River Village downstream to the Carlsbad Irrigation District (CID) Dam in Eddy County, New Mexico (Carman 2007). This represents less than 12 percent of its historic range in New Mexico (Lang 2001). The second locality is from the Lower Rio Grande in Texas, approximately from the confluence of the Pecos River and Rio Grande possibly down to Brownsville, Cameron County (Lang 2001). Howells (2001) also reported a few shells upriver from the confluence of the Pecos and Rio Grande and downstream from the eastern boundary of Big Bend National Park. THM is also extant in the Devil’s River in Texas, upstream from Amistad Reservoir (Inoue et al. 2015).

The Black River population occupies undercut riverbanks, crevices, ledges, and travertine shelves, and can be found under large boulders. Preferred substrate includes small-grained materials such as clay, silt, or sand that provides areas for the mussels to anchor. They will expose only the posterior portion of the shell in areas with a soft substrate of sand or mud, allowing the animal to siphon, with the rest of their body being covered with substrate. In rocky sites, it will be found in cracks and crevices where fine sediment deposits.

Other Covered Species

In addition to the THM, the Candidate Conservation Agreements also cover the following species: Rio Grande River Cooter, Gray Redhorse, Blue Sucker, and Pecos Springsnail (“Covered Species”).

Rio Grande River Cooter

The Rio Grande River Cooter (*Pseudemys gorzugi*), also known as the Western River Cooter in New Mexico, is a large turtle with yellow-green stripes on the head and neck, and red, yellow, and black markings on the legs. Females average 195.3 mm and males average 152.3 mm in carapace length (Degenhardt et al. 2005). This species is rather sedentary, with maximum movements of only 300 meters (Degenhardt et al. 2005). The Rio Grande River Cooter occurs in large, deep pools of rivers, and is found in the Black, Delaware, and Pecos rivers in New Mexico and Texas (Degenhardt et al. 2005).



Figure 2. Rio Grande River Cooter (*Pseudemys gorzugi*)

The Rio Grande River Cooter (Figure 2) is currently listed as “threatened” by the NMDGF, and the Center of Biological Diversity petitioned the FWS in 2012 to consider this species for protection under the ESA (NMDGF 2014). It is also a Bureau of Land Management (BLM) sensitive species as listed in BLM Manual 6840 (BLM 2008). Threats to the species include recreation (such as hunting and fishing), predation, wildfires, and runoff pollution (NMDGF 2014).



Figure 3. Gray Redhorse (*Moxostoma congestum*)

Gray Redhorse

The Gray Redhorse (*Moxostoma congestum*) (Figure 3) is a host fish for Texas Hornshell glochidia (Levine et al. 2012). Historically, the Gray Redhorse ranged from central and west Texas and northwestern Mexico to the Pecos River and Rio Grande in southern New Mexico and Texas (NMDGF 2014). In New Mexico, the Gray Redhorse historically occupied the Rio Grande downstream of Socorro and the Pecos and Black

ivers from Roswell south to the Texas border (NMDGF 2014).

Due to Golden Algae (*Pyrrnesium parvum*) blooms, in New Mexico, the Gray Redhorse currently only exists in the lower Black River from Blue Springs to the Pecos River confluence (NMDGF 2014). In conjunction with the BLM, the Gray Redhorse has been reintroduced into the Delaware River by NMDGF. NMDGF and BLM field surveys conducted in 2016 on the Delaware River revealed initial successful reproduction by the species (BLM 2013; Tim Frey BLM pers. com.). Further augmentation of the Gray Redhorse may continue when deemed essential to the species persistence. The Gray Redhorse was listed as “threatened” by the NMDGF in 1976 and then as “endangered” in 2008. It is also a BLM sensitive species as listed in BLM Manual 6840 (BLM 2008). 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 of the Gray Redhorse (Bean et al. 2009; Hoagstrom 2001).

Blue Sucker

The Blue Sucker (*Cycleptus elongatus*) is a host fish for Texas Hornshell glochidia (Levine et al. 2012). Historically, the Blue Sucker occupied the Pecos River north of Carlsbad downstream to the New Mexico/Texas border and the lower Black River (NMDGF 2014). The Blue Sucker has declined throughout much of its native range. It has further declined since 2002 in the Pecos River, in part due to the effects from Golden Algae blooms, from Brantley Reservoir downstream (NMDGF 2014).

It is likely extirpated from the Pecos River and the status of the population in the Black River is unknown (NMDGF 2014). The Blue Sucker (Figure 4) was listed as “endangered” by the NMDGF in 1976 (NMDGF 2014). It is also a BLM sensitive species as listed in BLM Manual 6840 (BLM 2008). Threats to the species include range fragmentation by dams, water contamination, Golden Algae blooms, and water quality changes in the Black River drainage (NMDGF 2014).



Figure 4. Blue Sucker (*Cycleptus elongates*)

Pecos Springsnail

Springsnails are tiny mollusks with conical shaped shells that range in color from gray to light brown. The Pecos Springsnail (*Pyrgulopsis pecosensis*) (Figure 5), which has been listed as a state “threatened” species by the NMDGF since 1983, historically occupied only Blue Springs and Castle Springs associated with the Black River in Eddy County, New Mexico. The species has since been extirpated from Castle Springs (NMDGF 2014).

Threats to the Pecos Springsnail include water diversion, drought, underground pumping of water, pollution from oil and gas exploration and production, and poor range management (NMDGF 1996).



Figure 5. Pecos Springsnail (*Pyrgulopsis pecosensis*)

IV. CANDIDATE CONSERVATION AGREEMENTS

Candidate Conservation Agreements are voluntary conservation agreements that facilitate a long-term landscape-based approach to eliminate or reduce threats to species that are on the federal threatened or endangered species candidate list. Candidate conservation agreements provide landowners or participants assurances or a high degree of certainty that in exchange for engaging in voluntary conservation, their lawful activities can continue without additional land or water use restrictions that might otherwise apply should the species be listed under the Act.

The primary purpose of the Candidate Conservation Agreements is to:

- Guide and provide funding for Conservation Actions (e.g., revegetation with native species along rivers, land or water acquisition, etc.) or scientific research for the Covered Species in order to improve the status of these species within New Mexico and Texas;
- Develop, coordinate, and implement Conservation Measures to reduce or eliminate potential threats to the Covered Species in New Mexico and Texas;
- Maintain viable populations of the Covered Species in Occupied Habitat;
- Support ongoing efforts to re-establish populations of the Covered Species in currently unoccupied but historic, suitable habitats (i.e., Delaware River);
- Serve as a landscape-scale programmatic documents for Conservation Measures implemented by CEHMM and Participants;
- Encourage development and protection of suitable habitat for Covered Species by giving Participants incentives to implement specific Conservation Measures; and,
- Allow industrial and agricultural development to continue while protecting and improving habitat conditions for the Covered Species.

CEHMM administers a Candidate Conservation Agreement (CCA) for federal land as well as a Candidate Conservation Agreement with Assurances (CCAA) for non-federal lands. NMSLO also administers a CCAA agreement for lands enrolled on New Mexico state trust land. Certificates of Participation (CPs) are signed agreements used by CEHMM to facilitate voluntary cooperation of stakeholders that hold federal leases, permits, or other authorizations. Likewise, Certificates of Inclusion (CIs) are signed agreements used by both NMSLO and CEHMM to facilitate voluntary cooperation of stakeholders that hold state leases, permits, or other authorizations. All three of the agreements are referred to collectively in this report as “CCA/As.” As described below, CEHMM and NMSLO administer their agreements in a coordinated manner through a Memorandum of Agreement (MOA) for day-to-day administration of the agreements, as well as sharing a common governance structure.

Candidate Conservation Agreement Benefits

The most significant benefit of the CCA/As is that they guide and provide funding for Conservation Actions that preclude or reduce threats to the Covered Species, as well as for research needed to better understand the species’ needs, to improve the status of these species within New Mexico and Texas. Conservation actions are implemented or funded by participants. In comparison to well-intentioned but uncoordinated conservation efforts, the CCA/As, provides a comprehensive and strategic landscape-level approach to address the conservation needs of the Covered Species. A second way in which the CCA/As benefit the Covered Species is through the Participants’ implementation of Conservation Measures. Conservation Measures are avoidance and minimization measures to preclude or reduce threats to the Covered Species that Participants agree to implement through their CI or CP.

The overarching goal of the Conservation Actions and Conservation Measures is to benefit the Covered Species so that a listing is precluded or no longer needed. It is important to note that a listing decision is based upon the removal of threats and stabilization or improvement of the species. The decision to list is a regulatory process and no CCA/A can predetermine the outcome. The actions and successes of the CCA/A will be evaluated in accordance with FWS Policy for Evaluation of Conservation Efforts (68 Fed.Reg. 15100, 2003), which will then be factored into the species status assessments and any listing decisions related to the Covered Species.

FWS has determined that a 10(a)(1)(A) Enhancement of Survival Permit can be issued to persons or entities that enter into a CCA/A with the FWS. Enhancement of Survival Permits are not issued for conservation agreements pertaining to federal land. If one or more of the Covered Species addressed in the CCA/A is later listed under the ESA, the Enhancement of Survival Permit becomes effective and authorizes take of the species that is incidental to otherwise-lawful activities on Enrolled Properties as specified in the CCA/A, provided the activities are performed in accordance with the CCA/As terms. A CCA/A and the associated Permit also encourage non-Federal Participants to implement conservation efforts for species by providing them regulatory assurances that so long as they comply with the terms of the CCA/A and their CI, additional Conservation Measures above and beyond those contained in the agreement will not be required. Furthermore, additional land, water, or resource use limitations will not be imposed upon them should the Covered Species become listed in the future. The CCA/A will provide conservation benefits to all riparian species in the Covered Area through conservation of their riparian habitat, although only the Covered Species will be included in FWS’s Enhancement of Survival Permit. The Enhancement of Survival Permits issued to CEHMM and NMSLO went into effect when FWS listed the THM as endangered.

V. CONSERVATION MEASURES

This section describes the approaches and strategies for conserving the Covered Species and reducing, or eliminating threats thereto. These approaches and strategies are designed to provide conservation benefits to the Covered Species through the application of agreed Conservation Measures. Therefore, the ultimate goal of this CCA/A is to facilitate a long-term approach to protect and manage the Covered Species and their habitat in southeastern New Mexico and western Texas.

For example, Participants can agree to protect and enhance existing populations and habitats, restore degraded habitat, create new habitat, augment existing populations of THM or other Covered Species, restore historic populations, fund research studies, or undertake other activities on their Enrolled Property, which improve the status of the species. The Conservation Measures included in this CCA/As should reduce or eliminate threats to the Covered Species. Baseline Conservation Measures for each stakeholder group are included in this CCA/A and may include Habitat Conservation Fees. Additional Conservation Measures negotiated by each Participant prior to enrollment may be included in the Participant’s individual CI or CP.

Both NMSLO and CEHMM use contributed Habitat Conservation Fees to implement or fund Conservation Actions or scientific research within the Black and Delaware river watersheds or other high priority areas. The goal is to implement the highest priority Conservation Actions needed (regardless of land ownership) to reduce or eliminate threats to the Covered Species as determined by the FWS, with input by CEHMM and NMSLO. As new information or empirical data becomes available, Conservation Measures can be modified or added to future CIs and CPs, and existing agreements with written approval from the Participant, through Adaptive Management.

See Appendix B (CEHMM CCA Conservation Measures), Appendix C (CEHMM CCAA Conservation Measures), and Appendix D (NMSLO CCAA Conservation Measures) for the Conservation Measures that may be applied to Enrolled Properties, broken down by Participant type and CCA/A management zone. Participants will implement these Conservation Measures.

Management Zones

Conservation Measures vary depending on where the activity would take place in relation to habitat for the Covered Species. The greater the potential for an activity to negatively impact habitat for the Covered Species, the more stringent the Conservation Measures. The CCA/As use the following Management Zones:

Zone A: Occupied THM habitat within the Black River and Delaware River.

Zone B: The Black and Delaware rivers (excluding Zone A in each), Blue Springs, and their associated USGS 100-year floodplain.

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

Zone D: The area within the CCAA boundary (Covered Area), not otherwise described in management zones A, B, or C.

VI. FUNDING

CEHMM and NMSLO receive funding through industry’s participation in the CCA/A program. Except as otherwise provided in the CI and CP for certain Participants, each Participant in the CCA/A paid an enrollment fee. Participants enrolled as All Activities were charged a standard enrollment fee of \$30,000, per year for the first three years the Participant is enrolled. Participants enrolled as Parcel-by-Parcel were charged a standard enrollment fee of \$3,000, per year for the first three years the Participant is enrolled. Additionally, if the acreage enrolled by Parcel-by-Parcel Participants exceeds 1,000 acres, Participants will pay an annual \$3 per acre charge for the first three years of their enrollment.

Unless the Participant elects to contribute in-kind services, Participants may be required to pay Habitat Conservation Fees associated with New Surface Disturbances and seismic activities.

VII. COMMITTEES: Roles & Responsibilities

The three separate CCA/A agreements held by CEHMM and NMSLO are distinct but are integrated through a joint governance structure. Additional integration in implementation occurs through a MOA between the NMSLO and CEHMM. Each of the three Candidate Conservation Agreements has a separate Executive Committee that is responsible for decision making and providing guidance for the agreement under its purview.

The three Executive Committees also meet at least once per year to discuss and make decisions about issues that affect all three agreements. All three Candidate Conservation Agreements participate in the same Stakeholder Committee, Implementation Committee, and utilize the same Technical Working Groups.

In addition to the formal governance structure, an informal Coordinating Committee ("CCAACC") was formed in 2018 to provide a forum for NMSLO, CEHMM, and BLM staff to discuss issues of mutual concern that arise during the administration of the Candidate Conservation Agreements. The CCAACC meets quarterly and includes staff that have responsibility for calculating fees, performing site visits, or similar day-to-day activities that need to be implemented consistently across all agreements.

Executive Committee

The makeup and responsibilities of the Executive Committees are as follows:

NMSLO CCAA:

- Commissioner of Public Lands or the Commissioner's Appointed Representative
- One FWS Representative

CEHMM CCAA:

- Two FWS Representatives
- Two CEHMM Representatives

CEHMM CCA:

- Two FWS Representatives
- Two CEHMM Representatives
- Two BLM Representatives

RESPONSIBILITIES:

- Reviewing at least annually the implementation status of the CCA/A (FWS only);
- Meeting at least annually and more often as needed;
- Meeting jointly at least annually to discuss matters of mutual concern;
- Reviewing financial condition of the CCA/A, including fees received, conservation funds expended, and administrative costs paid to CEHMM (FWS only);
- Reviewing and approving funding for projects for Restoration Activities and Conservation Actions;
- Providing a delegate to report at the Stakeholder Committee meetings on actions taken by the Executive Committee;
- Acting on recommendations from the Stakeholder Committee, Implementation Committee, and Technical Working Group;
- Approving Adaptive Management changes recommended by the Stakeholder Committee and the Implementation Committee, but only when consistent with the terms of the CCA/A and any affected CI or CP;

- Initiating the amendment process outlined in the CEHMM CCA/A (Section XVI. Adaptive Management) if amendment of the CCA/A, Permit, or CI and CP is necessary to implement an Adaptive Management change;
- Approving other changes to the CP, CI and CCA/A document.
- Initiating the amendment process outlined in the CEHMM CCA/A (Section XXIII. Modification of the CCA/A and Amendment of the Permit) if amendment of the CCA/A or Permit is necessary to implement such changes;
- Reviewing and resolving appeals of deficiency notices and Conservation Measure Violations;
- Terminating some or all of the Participants CI or CP in accordance with the CEHMM CCA/A, Section XIII.
- Suspension and termination; and,
- Resolving disputes consistent with CEHMM CCA/A Section XXV. Dispute Resolution.

NMSLO, CEHMM, or the FWS can call meetings of the Executive Committee and set agendas for such meetings. The Executive Committees may take actions to further the implementation and administration of their respective agreements subject to any limitations contained within the agreement under their purview and of any affected CI or CP.

Any action by the Executive Committee is valid only when a consensus is reached between the FWS and NMSLO or CEHMM. If a consensus cannot be reached and authority lies with FWS, FWS will have final say.

Nothing in the NMSLO CCAA and CEHMM CCA/A or any CI or CP prohibits the Executive Committee or its members from requesting or receiving direct communications from the Stakeholder Committee, the Implementation Committee, or any Participant.

Stakeholder Committee

The Stakeholder Committee shall be composed of at least nine voting representatives, as follows:

- Three representatives from Oil and Gas;
- Two representatives from Agriculture and Ranching;
- Two representatives from Water Withdrawers;
- One representative from the CID;
- One representative from the Interstate Stream Commissioner;
- One non-voting representative from CEHMM; and,
- One non-voting representative from NMSLO.

Enrolled Participants in the NMSLO CCAA and CEHMM CCA/A shall have the opportunity to participate on the Stakeholder Committee. The Participant or representative may only vote on issues pertinent to the agreement in which they are enrolled. The Stakeholder Committee shall meet at least annually and more often as needed. The Stakeholder Committee shall review issues that impact enrolled Participants, discuss options to make changes, and make recommendations to the Executive Committee.

The Stakeholder Committee shall be composed of at least nine voting individuals, selected from the industry sectors identified in this CCA/A, plus one non-voting representative from CEHMM and one non-voting representative from NMSLO, for a total of 11 members. Enrolled Participants who do not wish to participate on the Stakeholder Committee, or representatives of the Stakeholder Committee who feel their concerns are not being addressed, may at any time meet with a representative from CEHMM or NMSLO, as appropriate. In addition to providing opportunities to participate through the Stakeholder Committee, FWS, BLM, CEHMM, and NMSLO will engage in direct outreach with Participants to address issues and identify potential Conservation Actions.

If participation in the NMSLO CCAA or CEHMM CCA/A expands to include additional categories of enrolled Participants, e.g., inclusion of companies from the solid mineral mining sector, the Stakeholder Committee on its own initiative may increase the size of the Stakeholder Committee (keeping an odd number of voting members at all times) by selecting one or more additional representatives from the four industry sectors identified in this CCA/A.

The Executive Committee shall select the Stakeholder Committee members from nominations received from industry groups in which one or more enrolled Participants are members. Members of the Stakeholder Committee shall serve two-year terms and may be re-nominated. At its first meeting, the Stakeholder Committee shall select a chair and the chair shall serve as a representative for the Stakeholder Committee when the Executive Committee meets. The chair of the Stakeholder Committee cannot be a representative from CEHMM or NMSLO. The CEHMM representative shall assist in meeting scheduling and coordination and preparation of meeting summary notes and recommendations to the Executive Committee, Implementation Committee, or Working Groups.

Any action by the Stakeholder Committee is valid only when a quorum participates, either together or separately and either in person or via phone. For purposes of this CCA/A, a quorum is a simple majority of the representatives with voting authority appointed to a committee (e.g., 5 out of 9 voting representatives is a quorum but 6 out of 13 voting representatives is not a quorum). Approval of actions requires a simple majority of a quorum of the Stakeholder Committee.

Responsibilities of Stakeholder Committee:

- Reviewing and making recommendations to the Executive Committee regarding the annual report;
- Identifying any challenges to implementing the NMSLO CCAA and CEHMM CCA/A and recommending review, study, or action by the Implementation Committee;
- Reviewing the implementation and effectiveness of current Conservation Measures, and recommending review, study, or action by the Implementation Committee;
- Reviewing and making recommendations to the Executive Committee on any proposed changes to Conservation Measures that are contained within the NMSLO/CEHMM CCAA or CI template, or the CCA or CP template, including the fee structure;
- Reviewing and making recommendations to the Executive Committee on Adaptive Management changes;
- Providing an annual report summarizing its activities to the Executive Committee;
- Providing a representative to report at the Implementation Committee meetings on actions taken by the Stakeholder Committee; and,
- Reviewing recommendations from the Implementation Committee and providing input to the Executive Committee and the Implementation Committee.

In addition, the Stakeholder Committee may recommend the establishment of a Technical Working Group(s) to address specific issues brought to its attention.

Implementation Committee

The Implementation Committee shall be composed of scientists from participating state and Federal agencies familiar with the Covered Species. Each of the following entities will provide staff for the Implementation Committee as follows:

- One representative from FWS;
- One representative from BLM;
- One representative from CEHMM; and,
- One representative from NMSLO.

If the NMDGF elects to participate on the Implementation Committee, a representative will be automatically added to the Implementation Committee;

If the Texas Parks and Wildlife Division or the Texas Comptroller of Public Accounts elect to participate on the Implementation Committee, a representative from the participating agency will be automatically added to the Implementation Committee; and, other members of the Technical Working Group, as appropriate.

The Implementation Committee shall meet at least annually and more often as needed. At its first meeting, the Implementation Committee shall select a chair and the chair shall serve as the Committee's representative before the Stakeholder Committee.

The Implementation Committee must act on issues sent to it by the Executive Committee or the Stakeholder Committee and may by its own initiative act on issues it identifies. The Implementation Committee will review or study an issue sent to it by the Executive Committee or Stakeholder Committee, and report back to the referring committee with its findings. Where review and study requires funding, the Implementation Committee shall promptly identify funding needs and provide such information to CEHMM.

Responsibilities of the Implementation Committee include:

- Developing and reviewing proposals for Conservation Actions, including Restoration Activities, prioritizing projects, and seeking approval for funding for said projects;
- Making recommendations to the Executive Committee for revisions to the Annual Report;
- Reviewing and making recommendations to the Executive Committee for any proposed changes to Conservation Measures that are contained within the CCAA or CI template, or the CCA or CP template, based on best available science;
- Reviewing and making recommendations to the Executive Committee for any proposed changes to CI or CP template;
- Reviewing and making recommendations to the Executive Committee for any proposed changes to management zones based on best available science;
- Reviewing and making recommendations to the Executive Committee on Adaptive Management changes based on the best available science;
- Identifying any challenges to implementing the CCAA and CCA, initiating review and study, and developing recommendations for the Executive Committee;
- Reviewing the implementation and effectiveness of current Conservation Measures, initiating review and study, and developing recommendations for the Executive Committee;
- Reporting to and working in collaboration with Stakeholder Committee and Technical Working Groups;
- Reviewing and taking appropriate action on recommendations from the Executive Committee; and,
- Concurrently providing the Stakeholder Committee with all written recommendations to the Executive Committee at the time they are sent to the Executive Committee.

Technical Working Groups

It is anticipated that the Stakeholder Committee and the Implementation Committee will often need to rely on a network of resources when making recommendations for species and habitat enhancement. To provide guidance on technical issues and to help assess conservation priorities and science needs into the future, a network of technical experts will be identified. These representatives can be, but are not limited to, staff from the following agencies, institutions, or organizations:

- USGS;
- New Mexico Office of the State Engineer;
- New Mexico Interstate Stream Commission;
- United States Army Corp. of Engineers;

- Bureau of Reclamation;
- National Park Service;
- NMDGF;
- Texas Parks and Wildlife Department;
- NMSLO;
- Texas Comptroller of Public Accounts;
- New Mexico public or private colleges or universities;
- Texas public or private colleges or universities;
- CID technical staff;
- Scientists, either individually or within an organization, experienced with any of the Covered Species; and,
- Where an issue involves, directly or indirectly, industry sectors enrolled in this CCA/A, technical professionals such as engineers, scientists, and/or consultants familiar with a particular issue.

From time to time, it may be necessary to form an ad-hoc Technical Working Group to develop a solution or set of recommendations for a particular issue. It is the intent of this CCA/A that should a Technical Working Group be formed to review, study, and develop solutions to address a particular issue, the Technical Working Group shall provide a written report on its activities to the Stakeholder Committee and Implementation Committee, and that it shall dissolve shortly after a solution or set of recommendations is developed and communicated. Because it is not possible to conceive of every issue that may be encountered in the implementation of the NMSLO CCAA and CEHMM CCA/A, a representation or voting structure for a Technical Working Group is not defined by the CCA/A.

However, nothing in this CCA/A precludes the Technical Working Group members from establishing a representation or voting structure when a Technical Working Group is formed. It is also the intent of this CCA/A, that Technical Working Groups will work closely with the Implementation Committee, as deemed necessary, to ensure full consideration of the impacts of a particular solution or set of recommendations.

A Technical Working Group will be convened within the first year of implementation to determine a revised minimum flow for the Black River. The Technical Working Group will also evaluate if a minimum flow for the Delaware River is needed. The Technical Working Group addressing revised flow shall make a recommendation to the Executive Committee, Stakeholder Committee, and Implementation Committee within five years of the date of execution of this CCAA and the CCA. Minimum flow is currently defined as 9.3 cubic feet per second (cfs) measured at the USGS Black River above Malaga gage 08405500 located just upstream from the CID dam. Upon Executive Committee approval of the revised minimum flow, it will apply in lieu of 9.3cfs. During this five-year timeframe, the Technical Working Group will also recommend the number and placement of additional gauges along both the Black and Delaware rivers through the governance process. The Technical Working Group will also examine and make recommendations through the governance process for engineering standards for boring under the rivers and make recommendations for developing major spill plans for both rivers. Development of these plans will not obligate Participants beyond Conservation Measures contained within their CI and CP.

Committee Issue Resolution Guidelines

1. The Stakeholder Committee and Implementation Committee shall work collaboratively to resolve any disagreements about the recommendations to be made to the Executive Committee regarding a particular issue or sets of issues.
2. Each Committee shall work proactively to resolve any disagreements promptly so that species conservation or Participant concerns are addressed in a timely manner.
3. In the event the Stakeholder Committee and Implementation Committee reach different decisions with respect to a particular issue or set of issues, one or both may request a meeting with the Executive Committee for purposes of issue resolution ("Issue Resolution Meeting").
4. Prior to the Issue Resolution Meeting, each Committee shall prepare a brief summary of issue, including the most recent record of decision each Committee reached on each issue, and provide it to the Executive Committee at least 24-hours before the Issue Resolution Meeting.

5. The Issue Resolution Meeting shall be promptly convened and may be held in person or via teleconference.
6. The chairs of the Stakeholder Committee and the Implementation Committee shall participate in the Issue Resolution Meeting. The Executive Committee may request additional information from or invite representatives of the Stakeholder Committee, the Implementation Committee, or any relevant Technical Working Group from participating.
7. The decision from the Issue Resolution Meeting is final but may be subject to further review as conditions necessitate.

VIII. 2018 Activities

Enrollment and Funding:

During 2018, NMSLO executed 28 CIs, while CEHMM executed 43 CIs and 33 CPs (Table 1). As seen in Table 1 there are currently 1,326,172.0 acres enrolled through the NMSLO CCAA agreement. CEHMM currently has 322,111.70 acres enrolled through its 43 signed CIs and 176,995.54 acres enrolled through its 33 CPs.

Table 1. Break Down of CCA and CCAA Enrollments

CCA/A Enrollment Numbers					
	Number of CIs	Number of CPs	CCA Acres Enrolled	CCAA Acres Enrolled	Total Acres Enrolled
CEHMM	43	33	176,995.54	322,111.70	499,107.24
NMSLO	28	-	-	136,172.0	136,172.0
TOTAL:	71	33	176,995.54	458,283.0	635,279.24

A total of 49 companies are enrolled in one or more of the Candidate Conservation Agreements.

During 2018, the Hornshell Program at CEHMM received \$753,958.36 in Participant enrollment and Habitat Conservation Fees paid under the CEHMM CCAA and CCA. From the total funds accumulated in 2018, \$161,778.96 was spent for the program's implementation needs. Also during 2018, the NMSLO CCAA received \$131,998.12. From the total funds accumulated in 2018, \$528.54 was used for CEHMM's administrative overhead and providing implementation assistance to NMSLO.

2018 Committee Meetings & Agendas

CCA/A Coordinating Committee (CCAACC):

The CCAACC met twice in 2018 to discuss issues related to joint implementation of the CCA/As. The topics discussed included calculation of fees and coordination of right-of-ways that cross multiple land ownerships.

Executive Committees:

During 2018, none of the executive committees held a meeting. The first Executive Committee meeting is scheduled for February 7th, 2019. The Executive Committee members are as follows:

CEHMM CCAA: Debra Hill (FWS) and Emily Wirth (CEHMM)

CEHMM CCA: Debra Hill, Emily Wirth, and Ty Allen (BLM)

SLO CCAA: Debra Hill and Commissioner Aubrey Dunn

Due to staffing constrains, the CEHMM CCAA and CCA Executive Committees have only one representative from each entity.

Stakeholder Committee:

The Stakeholder Committee was not formed in 2018. The Executive Committees will select Stakeholder Committee representatives in March, 2019, and the first Stakeholder Committee meeting should take place in April, 2019.

Implementation Committee:

The Implementation Committee members are as following:

FWS: Frank Weaver

BLM: Chelsie Dugan (alternate Cassie Brooks)

CEHMM: Matthew Ramey (alternate Travis Casey)

NMSLO: Will Barnes

NMDGF: Daniel Trujillo (alternate Joanna Hatt)

The first THM Implementation Committee meeting was held November 7th, 2018, and discussed the following topics:

- Selection of a chair to serve as the representative to the Stakeholder Committee;
- Creation of project proposal forms;
- Project prioritization;
- The current status of the Black and Delaware rivers; and,
- The next meeting date.

The Implementation Committee also met December 11th, 2018 and discussed:

- Potential proposed projects to fund;
- Financial feasibility of funding proposed projects;
- How many proposed projects will be accepted each year;
- The priority of project proposals;
- Potential start date for acceptance of project proposals; and,
- The next meeting date.

Technical Working Group:

The first THM Technical Working Group met November 8th, 2018, and discussed the following topics:

- The proposed locations for the new USGS flow gauges on the Black River;
- The minimum proposed flow on the Black River;
- Saltwater Disposal Wells;
- Project prioritization; and,
- The next meeting date.

XI. OUTREACH

In 2018, CEHMM added a THM information section to its website. This section of the website includes past annual reports, the executed CCA and CCAA documents, and SPCC and RAPPs guidelines. In 2019, CEHMM looks to add the following to its website:

- THM boundary map;
- Updates on committee meetings and their agendas;
- Industry spills within the THM boundary; and,
- Update flow reports of the Black River.

X. SPECIES MONITORING

CEHMM staff assisted ENMU with a mark recapture study of the Rio Grande River Cooter along the Black River. The study consisted of capturing the reptiles via hoop nets. The turtles were then checked for a previous marking or pit tags; if they were a new capture they were then marked via a dremel tool and pit tags. Relative condition factors such as weight and length were recorded from all individuals caught. The study provided data on the population of River Cooter in the Black River. ENMU is continuing the ongoing study to better understand the preferred habitat and population dynamics of the Rio Grande River Cooter.

CEHMM staff aided both NMDGF and MU with a mark recapture study of THM. Scuba gear was utilized for searching the river bottom for THM. Once captured, the THM were checked for previous tags. If no previous tag was discovered the THM was issued a tag. Much like the Rio Grande River Cooter study, this study provided data related to the population dynamics of the THM in the Black River.

XI. PROJECTS

During 2018 CEHMM and NMSLO did not accept or fund any projects, as the program was still in its beginning stages and needed to determine project priorities. However, CEHMM will be accepting project proposals from enrollees, universities, government agencies, and others starting in 2019.

The THM program at CEHMM did however review a potential project for 2019. The project is a dye trace investigation of the upper Black River basin. The proposed study will consist of injecting uranine and eosin dye into wells in the upper Black River basin and using charcoal dye receptors downstream of the injection sites to detect the underground flow of the water. The study has the potential to provide hydrologic information about how the Black River and its contributing springs recharge. This data could better inform all of the CCA/A stakeholders regarding the hydrology of the Black River and the potential effects of conservation decisions on the THM. In 2019, the priority projects for funding will be voted on by the Implementation Committee. If the Implementation Committee votes to fund the project, it will move on to a vote by the Executive Committee.

XII. LANDSCAPE MONITORING

CEHMM has utilized USGS flow gauges in the Black River and Blue Springs to monitor the daily average flow of the river (Figure 6 and 7). Monitoring the flow of the river is vital, as THM require perennially wetted habitat and flowing water as emersion (stranding) can cause death and dehydration (Coker 1919). The CCA/A has set a minimum flow goal for the Black River at 9.3 cubic feet per second (cfs). The THM staff at CEHMM have email alarms set on the flow gauges, so that when the river drops below 9.3 cfs, they are notified and can monitor the river more closely. During 2018, the months of April, May, June, July, August, September, and November average cfs of the river was below the CCA/A target goal of 9.3cfs (See Table 2).



Figure 6. Flow gage in Blue Springs

Table 2. The maximum, minimum, and average monthly flows at Blue Springs and the Black River

Location	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Black River Average Flow	10.79	9.99	9.8	8.72	8.59	6.88	6.82	9.1	8.74	15.77	8.83	10.18
Black River Max Flow	11.3	10.9	10.9	9.38	13.5	7.81	8.49	50.3	18.4	245	9.93	11
Black River Min Flow	10.5	8.65	8.37	6.4	7.18	6.23	5.29	5.68	5.88	4.78	7.88	9.41
Blue Springs Average Flow	10.3	9.77	9.76	9.97	10.69	10.41	12.09	11.33	12.03	12.09	11.49	12.66
Blue Springs Max Flow	10.7	10.4	11.2	11.4	11.7	11.4	12.9	19.6	25.1	26.2	11.9	13.4
Blue Springs Min Flow	9.78	9.26	6.51	5.18	9.54	9.18	11.2	10.2	8.36	7.97	11	11.6

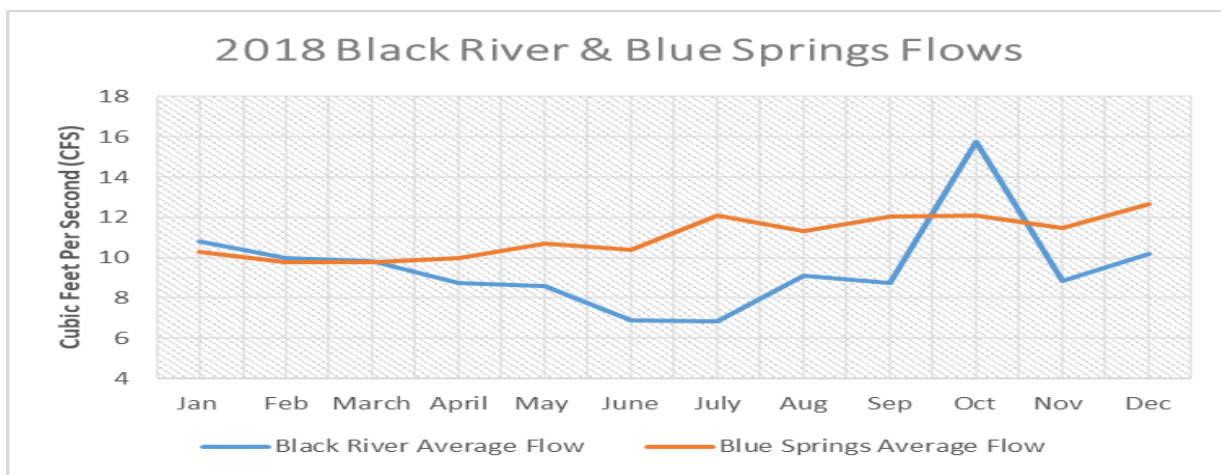


Figure 7. The 2018 monthly average flow of the Black River above Malaga and Blue Springs over time.

XIII. MITIGATION OF IMPACTS TO HABITAT

During 2018, CEHMM received a total of 101 notices of new surface disturbance from industry. Sixty-two of the surface disturbances were to take place on BLM land enrolled through the CCA, while thirty-nine of the notices were to take place on private lands enrolled through the CCAA (Table 3). CEHMM documented 829 acres of new surface disturbance through the 101 notices. A total of 524.28 acres were newly disturbed on BLM lands enrolled in the CCA and 304.31 acres were disturbed on private lands enrolled in the CCAA (Table 3). From the total acres disturbed, new well pads caused 498.41 acres of disturbance, right of ways (ROWs) were the cause of 142.98 acres, and industry infrastructure caused 187.2 acres (Table 3 & Figure 7).

Table 3. CEHMM CCA/A Industry Jobs and Acres Disturbed by Job Type

CEHMM CCA/A Industry Jobs and Acres Disturbed by Job Type			
	Wells	ROW	Infrastructure
Approved Jobs	57	23	21
Disturbed Acres	498.41	142.98	187.2
Total Number of Jobs Approved: 101	Total Number of Acres Disturbed: 828.59		

Table 4. NMSLO CCA/A Industry Jobs and Acres Disturbed by Job Type

NMSLO CCAA Industry Jobs and Acres Disturbed by Job Type			
	Wells	ROW	Infrastructure
Approved Jobs	10	12	4
Disturbed Acres	64.41	116.42	5.44
Total Number of Jobs Approved: 26		Total Number of Acres Disturbed: 186.27	

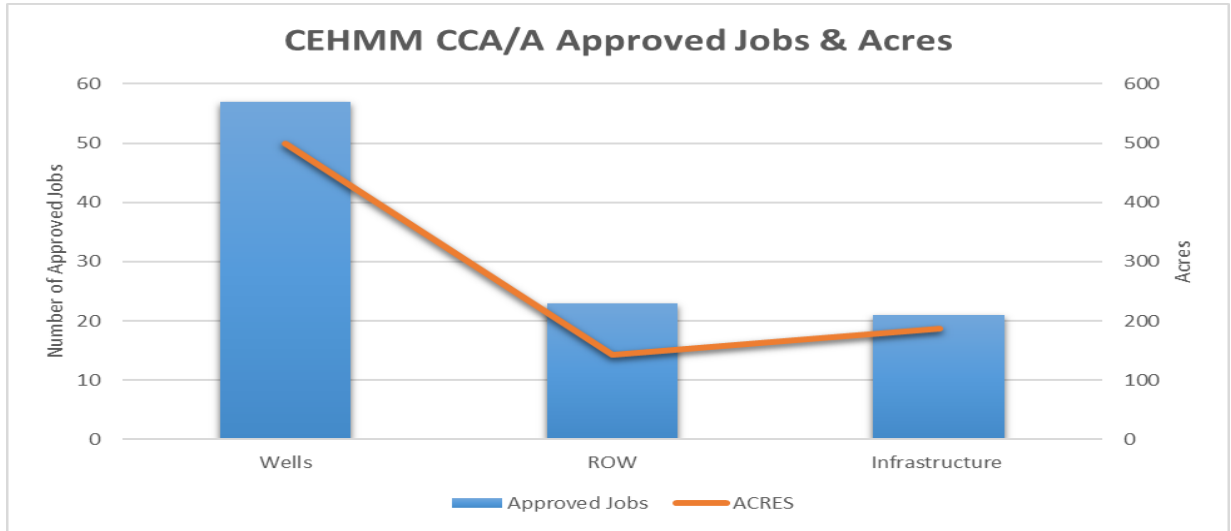


Figure 8. CEHMM Industry Jobs Approved in 2018 with the corresponding Acres Disturbed

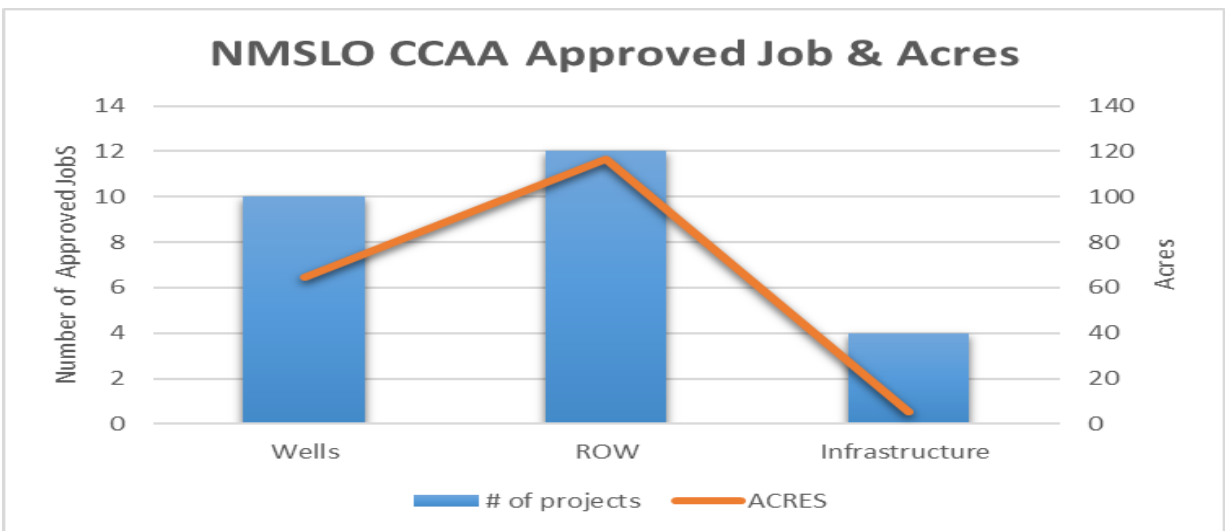


Figure 9. NMSLO Industry Jobs Approved in 2018 with the corresponding Acres Disturbed

During 2018, NMSLO approved a total of 26 jobs from industry. The 26 approved jobs accounted for 186.27 acres of disturbance. From the total acres disturbed, new well pads caused 64.41 acres of disturbance, ROWs were the cause of 116.42 acres, and industry infrastructure caused 5.44 acres (Table 4 & Figure 8). All of the jobs approved by NMSLO took place within the management Zone D.

Of the 101 notices of new surface disturbance in 2018, only two of them took place in management Zone C (see Appendix A), while the other 99 took place in management Zone D. One of the Zone C disturbances was an access road that crossed an ephemeral drainage that could not be rerouted. CEHMM worked with company to ensure that all of the proper Conservation Measures were followed, while the work took place in Zone C. In an attempt to reduce erosion in the ephemeral drainage, two 60 inch culverts were installed under the road, as well as a rock apron on both sides of the road. The second Zone C disturbance was a pipeline ROW that crossed an ephemeral drainage and couldn't be rerouted around the drainage.

CEHMM worked with the company to ensure that erosion control measure in accordance with the Reasonable and Prudent Practices for Stabilization RAPPS took place. CEHMM also ensured that the company complied with the SPCC requirements in accordance with 40 CFR Part 112.

XIV. CONSERVATION MEASURE VIOLATIONS

As the administrators of the CCA/A, CEHMM and NMSLO have responsibility to provide formal notification to Participants if it is discovered that any of the Conservation Measures listed in their CIs and CPs are not being implemented. A Conservation Measure Violation (CMV) is a formal notification to Participants of the failure to implement Conservation Measure(s). It is similar to an Incident of Non-Compliance (INC) that the BLM issues to operators that do not meet the conditions of use on their respective operations. If a CMV is issued, CEHMM and NMSLO will work with Participants to remedy the matter at hand in relation to the specific Conservation Measure that is not being applied. There is no fine or penalty involved with a CMV; however, if three CMVs are issued in a 12-month period, Participants risk termination of their CP and/or CI. Due to diligent planning, consultation with CEHMM and NMSLO, and an understanding of the purpose of the CCA/A, no CMVs were issued in 2018. A blank CMV can be reviewed in Appendix E.

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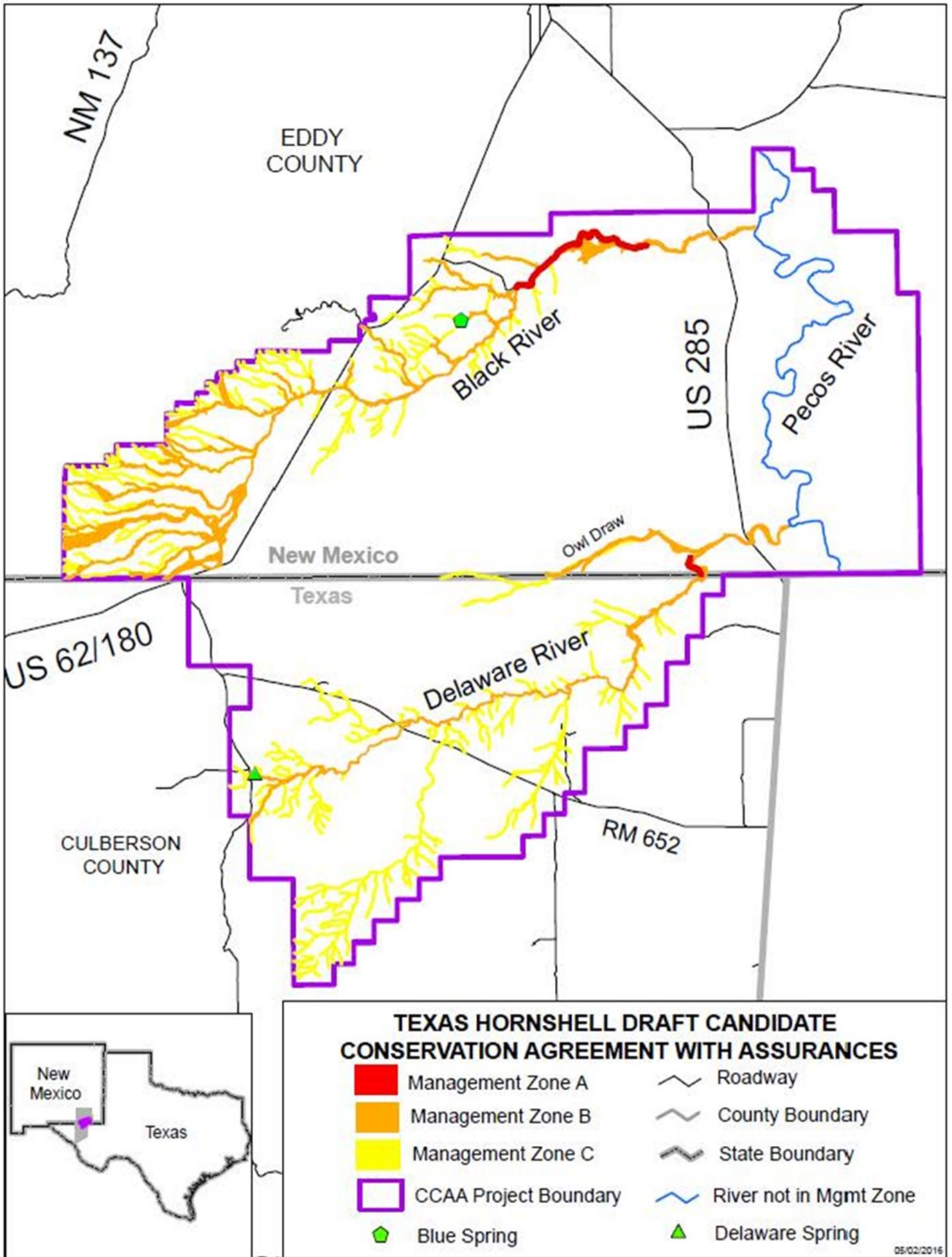
Appendix A
Map of Covered Area
(See map on next page)

Zone A – Occupied Habitat within the Black River and Delaware River.

Zone B – The Black and Delaware rivers (excluding Zone A in each), Blue Springs, and their associated USGS 100-year floodplain.

Zone C – Ephemeral drainages to the Black and Delaware rivers, including Owl Draw.

Zone D – The area within the CCA/A Boundary, not otherwise described in management zones A, B, or C.



Appendix B

CEHMM CCA Conservation Measures from CEHMM CCA Parent Document

Oil and Gas and Associated Infrastructure

Pursuant to Section **XIV. FUNDING AND ENROLLMENT PROCESS** of this CCA and as further set forth in the CP, oil and gas Participants agree to pay Habitat Conservation Fees for CEHMM to provide for:

- The conservation of the Covered Species;
- The conservation, reclamation, and restoration of the habitat suitable or beneficial to the Covered Species; and,
- The implementation and administration of this CCA.

Rather than paying Habitat Conservation Fees, oil and gas Participants may elect to instead contribute in-kind services. For an in-kind service to qualify as performed in lieu of payment of a Habitat Conservation Fee, the Participant must contact CEHMM with the proposed in-kind services, and CEHMM, the FWS, and BLM must approve those actions prior to services being performed.

With the exception of agricultural and livestock species, oil and gas Participants shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition to this and to payment of Habitat Conservation Fees or contribution of in-kind services, oil and gas Participants agree to implement the following Conservation Measures for New Surface Disturbance to avoid and minimize impacts to Covered Species.

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River. A description of currently Occupied Habitat can be found in Appendix A.

Zone B: Within the Black and Delaware rivers (excluding Zone A in each), and Blue Springs and their associated USGS 100-year Floodplain, the Participant will exercise good faith efforts to avoid Zone B. Where the Participant cannot avoid Zone B, this CCA and its associated CP authorizes New Surface Disturbance subject to the following:

1. The oil and gas Participant shall identify and submit to CEHMM a reason that Zone B cannot be avoided. Reasons may include, but are not limited to:
 - i. The mineral estate cannot otherwise be accessed;
 - ii. The Participant lacks surface or right-of-way access;
 - iii. Contractual or landowner restrictions;
 - iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
 - v. The potential to increase environmental impacts;
 - vi. Safety considerations;
 - vii. The project would become economically infeasible; or,
 - viii. Others, as approved by CEHMM, in conjunction with the FWS and BLM.
2. If Zone B cannot be avoided, the oil and gas Participant shall take the following steps to minimize the potential impacts:
 - i. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
 - ii. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
 - iii. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;

Appendix B

CEHMM CCA Conservation Measures (Continued)

- iv. Educate personnel, agents, and contractors about the requirements of the CP and this CCA and provide direction in accordance with the Conservation Measures. CEHMM will notify the Participant to resolve any issues with their subcontractors;
- v. Provide CEHMM with the permit, lease, grant or other authorization from BLM if applicable; and,
- vi. Provide CEHMM plats or other electronic media describing the New Surface Disturbance and existing surface disturbance utilized for the project.

Zone C: Ephemeral Drainages to the Black and Delaware rivers. The oil and gas Participant will exercise good faith efforts to avoid, if feasible, obstructing or disrupting the natural flow of ephemeral drainages. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential impacts:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
2. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
3. Educate personnel, agents, and contractors about the requirements of the CP and this CCA and provide direction in accordance with the Conservation Measures. CEHMM will notify the Participant to resolve any issues with their subcontractors;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Provide CEHMM with the permit, lease, grant, or other authorization from BLM, if applicable; and,
6. Provide CEHMM plats or other electronic media describing the New Surface Disturbance for the project.

Zone D: CCA Boundary requirements. The oil and gas Participant shall comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112. SPCC plans for Participant's New Surface Disturbance of Enrolled Lands subject to this CP will be available upon request to be used by CEHMM.

1. Provide CEHMM with the permit, lease, grant, or other authorization from BLM, if applicable; and,
2. Provide CEHMM plats or other electronic media describing the New Surface Disturbance for the project.

Notice: The oil and gas Participant will provide notice of New Surface Disturbance and seismic activities as described in Section **XV. DEVELOPMENT PROCEDURES**. The Participant will notify:

1. CEHMM not less than 15 days in advance of New Surface Disturbance and Seismic Activities to determine appropriate Habitat Conservation Fees in accordance with Appendix E. CEHMM will deduct the fees from the Participant's account within 30 days of receiving notification from the Participant on surface disturbing activities. CEHMM would then provide notice, both written and by electronic transmission, to the Participant within 30 days of deducting Habitat Conservation Fees from the Participant's account;
2. CEHMM not less than 3 days prior to commencement of New Surface Disturbance;
3. CEHMM, not less than 3 days in advance, of any changes to prior notice of New Surface Disturbance; and,

Appendix B

CEHMM CCA Conservation Measures (Continued)

4. CEHMM within 72-hours after Emergency Operations that result in New Surface Disturbance. Emergency Operations are those activities unexpectedly and urgently required to prevent or address immediate threats to human health, safety, property, the environment, or national defense or security.

Solid Minerals Mining Industry

Companies engaged in solid minerals mining can participate in this CCA, the associated CCA or both. The covered activities and appropriate Conservation Measures applicable to solid minerals mining will be developed and included in the CP's developed for those participants prior to their enrollment. Solid minerals mining participants shall be subject to all other provisions included in this CCA and the associated CEHMM CCA including, without limitations, the Funding and Enrollment, Participant Non-Compliance, Suspension and Termination, and Monitoring and Reporting. In addition to the Conservation Measures below, Mineral Participants, with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area.

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River.

Zone B: The Mineral Participant shall exercise good faith efforts to avoid a New Surface Disturbance in Zone B. Where the Participant cannot avoid a project in Zone B, this CCA and its associated CP authorizes New Surface Disturbance subject to the following conditions:

1. The Mineral Participant shall identify and submit to CEHMM a reason that Zone B cannot be avoided. CEHMM, in conjunction with the FWS and BLM, must approve the reason and the activity before the project can take place. Reasons may include, but are not limited to:
 - i. The mineral estate cannot otherwise be accessed;
 - ii. The Participant lacks surface or right-of-way access;
 - iii. Contractual or landowner restrictions;
 - iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
 - v. The potential to increase environmental impacts;
 - vi. Safety considerations;
 - vii. The project would become economically infeasible; or,
 - viii. Other reasons approved by CEHMM, in conjunction with the FWS and BLM.
2. If Zone B cannot be avoided, the Mineral Participant shall take the following steps to minimize the potential disturbance:
 - i. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
 - ii. Comply with Spill Prevention, Control and Countermeasures (SPCC) requirements (Appendix G) in accordance with 40 CFR Part 112;
 - iii. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
 - iv. Educate personnel, agents, and contractors about the requirements of the CP and this CCA and provide direction in accordance with the Conservation Measures;

Appendix B

CEHMM CCA Conservation Measures (Continued)

- v. Provide CEHMM with a copy of the permit from New Mexico Mining and Minerals Division (MMD), if applicable;
- vi. Provide CEHMM plats, mine operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
- vii. Provide CEHMM with the mine reclamation plan.

Zone C: The Mineral Participant shall exercise good faith efforts to avoid, if feasible, obstructing or disrupting the natural flow of ephemeral drainages in Zone C. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential disturbance:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
2. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
3. Educate personnel, agents, and contractors about the requirements of the CP and this CCA and provide direction in accordance with the Conservation Measures;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Provide CEHMM with the permit from MMD, if applicable;
6. Provide CEHMM plats, mining operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
7. Provide CEHMM with the mine reclamation plan.

Zone D: Mineral Participants shall comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112 within Zone D. SPCC plans for Participant's New Surface Disturbance of Enrolled Properties subject to this CP will be available upon request to be used by CEHMM.

1. Provide CEHMM with the permit from NMOCD, if applicable;
2. Provide CEHMM plats, mining operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
3. Provide CEHMM with the mine reclamation plan.

Notice: Mineral Participants shall provide notice of New Surface Disturbance and seismic activities as described in Section **XV. DEVELOPMENT PROCEDURES**. Participants will notify CEHMM:

1. Not less than 15 days in advance of New Surface Disturbance and Seismic Activities.
2. Not less than 3 days prior to commencement of New Surface Disturbance;
3. Not less than 3 days in advance, of any changes to prior notice of New Surface Disturbance; and,
4. Within 72-hours after Emergency Operations that result in New Surface Disturbance. Emergency Operations are those activities unexpectedly and urgently required to prevent or address immediate threats to human health, safety, property, the environment, or national defense or security.

Appendix B

CEHMM CCA Conservation Measures (Continued)

Water Withdrawers

Water Withdrawer Participants (Water Withdrawer Participants), with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition, Water Withdrawer Participants agree to implement the following Conservation Measures:

Zone A: Temporarily maintain minimum streamflow and curtail pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to the Black River in Zone A should the flow fall below 9.3 cfs at the USGS gauge location at the CID dam. NMDGF recommends 3 cfs (Arm et al. 2014) absolute minimum flow for the Texas Hornshell, but 9.3 cfs is based on current minimum flow as established by water withdrawers in the area. However, the Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCA and the CEHMM CCA.

Zone B: Within the Black and Delaware rivers (excluding Zone A in each), Blue Springs, and their associated USGS 100-year floodplain:

1. Temporarily maintain minimum stream flows and cease pumping of water if minimum flow is reached. The Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCA; and,

Provide CEHMM with the permit from BLM if applicable.

Zone C: Ephemeral Drainages to the Black and Delaware rivers, including Owl Draw:

1. Temporarily maintain minimum stream flows and cease pumping of water if minimum flow is reached. The Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCA; and,

Provide CEHMM with the permit from BLM if applicable.

Agriculture and Ranching

The Implementation Committee, with input from ranching industry Participants, will develop a grazing plan for areas near designated Life History Sites or Sensitive Habitat Areas, subject to approval by the Executive Committee. The Implementation Committee will also develop a Vegetation Plan to incrementally remove invasive species (Creosotebush, *Larrea tridentate*; Honey Mesquite, *Prosopis glandulosa*; Saltcedar, *Tamarix* spp.; Russian Olive, *Elaeagnus angustifolia*; and Tarbush, *Flourensia cernua*) and replant with native grasses, trees, or shrubs.

The Agriculture and Ranching Participants, with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition to providing CEHMM access to Enrolled Lands for species monitoring and implementation of Conservation Actions, Participants shall implement the following Conservation Measures, as set forth in greater detail in each CP, to minimize adverse effects on Covered Species:

Appendix B

CEHMM CCA Conservation Measures (Continued)

Zone A:

1. Refrain from creating any New Surface Disturbance;
2. Follow the grazing plan as agreed upon in the CP (if applicable);
3. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, cease pumping water from the Black River in Zone A;
4. Avoid utilizing low-water crossings when other routes are available;
5. Implement or allow the implementation of erosion control along the banks of the Black and Delaware rivers (if applicable); and,
6. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone B:

1. Follow the grazing plan as agreed upon in the CP (if applicable);
2. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, the Participants shall limit water pumping in Zone B to the minimum amount necessary for domestic and livestock use, and to prevent crop failure;
3. Avoid utilizing low-water crossings when other routes are available;
4. Implement or allow implementation of erosion control in the 100-year floodplain;
5. Refrain from increases in current agricultural practices that could impact Zone A (e.g., increasing grazing pressure and developing new agricultural fields); and,
6. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone C:

1. Follow the grazing plan as agreed upon in the CP (if applicable);
2. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, the Participants shall limit water pumping in Zone C to the minimum amount necessary for domestic and livestock use, and to prevent crop failure;
3. Avoid utilizing low-water crossings when other routes are available; and,
4. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone D:

1. Follow the grazing plan as agreed upon in the CP (if applicable); and,
2. Implement or allow implementation of the Vegetation Plan (if applicable).

CEHMM CCAA Conservation Measures for CEHMM CCAA Parent Document

Oil and Gas and Associated Infrastructure

Pursuant to Section **XIV. FUNDING AND ENROLLMENT PROCESS** of this CCAA and as further set forth in the CI, oil and gas Participants agree to pay Habitat Conservation Fees for CEHMM to provide for:

- The conservation of the Covered Species;
- The conservation, reclamation, and restoration of the habitat suitable or beneficial to the Covered Species; and,
- The implementation and administration of this CCAA.

Rather than paying Habitat Conservation Fees, oil and gas Participants may elect to instead contribute in-kind services. For an in-kind service to qualify as performed in lieu of payment of a Habitat Conservation Fee, the Participant must contact CEHMM with the proposed in-kind services, and CEHMM, in conjunction with FWS, must approve those actions prior to services being performed.

With the exception of agricultural and livestock species, oil and gas Participants shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition to this and to payment of Habitat Conservation Fees or contribution of in-kind services, oil and gas Participants agree to implement the following Conservation Measures for New Surface Disturbance to avoid and minimize impacts to Covered Species.

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River. A description of currently Occupied Habitat can be found in Appendix A.

Zone B: Within the Black and Delaware rivers (excluding Zone A in each), and Blue Springs and their associated USGS 100-year Floodplain, the Participant will exercise good faith efforts to avoid Zone B. Where the Participant cannot avoid Zone B, this CCAA and its associated CI authorizes New Surface Disturbance subject to the following:

1. The oil and gas Participant shall identify and submit to CEHMM a reason that Zone B cannot be avoided. Reasons may include, but are not limited to:
 - i. The mineral estate cannot otherwise be accessed;
 - ii. The Participant lacks surface or right-of-way access;
 - iii. Contractual or landowner restrictions;
 - iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
 - v. The potential to increase environmental impacts;
 - vi. Safety considerations;
 - vii. The project would become economically infeasible; or,
 - viii. Others, as approved by CEHMM, in conjunction with the FWS.
2. If Zone B cannot be avoided, the oil and gas Participant shall take the following steps to minimize the potential impacts:
 - i. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
 - ii. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
 - iii. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;

Appendix C

CEHMM CCAA Conservation Measures (Continued)

- iv. Educate personnel, agents, and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures. CEHMM will notify the Participant to resolve any issues with their subcontractors;
- v. Provide CEHMM with the permit from New Mexico Oil Conservation Division (NMOCD), if applicable; and,
- vi. Provide CEHMM plats or other electronic media describing the New Surface Disturbance and exiting surface disturbance utilized for the project.

Zone C: Ephemeral Drainages to the Black and Delaware rivers. The oil and gas Participant will exercise good faith efforts to avoid, if feasible, obstructing or disrupting the natural flow of ephemeral drainages. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential impacts:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
2. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
3. Educate personnel, agents and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures. CEHMM will notify the Participant to resolve any issues with their subcontractors;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Provide CEHMM with the permit from NMOCD, if applicable; and,
6. Provide CEHMM plats or other electronic media describing the New Surface Disturbance for the project.

Zone D: CCAA Boundary requirements. Oil and gas Participants shall comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112. SPCC plans for Participant's New Surface Disturbance of Enrolled Properties subject to this CI will be available upon request to be used by CEHMM.

1. Provide CEHMM with the permit from NMOCD, if applicable; and,
2. Provide CEHMM plats or other electronic media describing the New Surface Disturbance for the project.

Notice: Oil and gas Participants will provide notice of New Surface Disturbance and seismic activities as described in Section **XV. DEVELOPMENT PROCEDURES**. Participants will notify:

1. CEHMM not less than 15 days in advance of New Surface Disturbance and Seismic Activities to determine appropriate Habitat Conservation Fees in accordance with Appendix E. CEHMM will deduct the fees from the Participant's account within 30 days of receiving notification from the Participant on surface disturbing activities. CEHMM would then provide notice, both written and by electronic transmission, to the Participant within 30 days of deducting Habitat Conservation Fees from the Participant's account;
2. CEHMM not less than 3 days prior to commencement of New Surface Disturbance;
3. CEHMM, not less than 3 days in advance, of any changes to prior notice of New Surface Disturbance; and,
4. CEHMM within 72-hours after Emergency Operations that result in New Surface Disturbance. Emergency Operations are those activities unexpectedly and urgently required to prevent or address immediate threats to human health, safety, property, the environment, or national defense or security.

Appendix C

CEHMM CCAA Conservation Measures (Continued)

Solid Minerals Mining Industry

Companies engaged in solid minerals mining can participate in this CCAA, the associated CCA or both. The covered activities and appropriate conservation measures applicable to solid minerals mining will be developed and included in the CI's developed for those participants prior to their enrollment. Solid minerals mining participants shall be subject to all other provisions included in this CCAA and the associated CCA including, without limitations, the Funding and Enrollment, Participant Non-Compliance, Suspension and Termination, and Monitoring and Reporting. In addition to the Conservation Measures below, Mineral Participants, with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area.

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River.

Zone B: The Mineral Participant shall exercise good faith efforts to avoid a New Surface Disturbance in Zone B. Where the Participant cannot avoid a project in Zone B, this CCAA and its associated CI authorizes New Surface Disturbance subject to the following conditions:

1. The Mineral Participant shall identify and submit to CEHMM a reason that Zone B cannot be avoided. CEHMM, in conjunction with the FWS, must approve the reason and the activity before the project can take place. Reasons may include, but are not limited to:
 - i. The mineral estate cannot otherwise be accessed;
 - ii. The Participant lacks surface or right-of-way access;
 - iii. Contractual or landowner restrictions;
 - iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
 - v. The potential to increase environmental impacts;
 - vi. Safety considerations;
 - vii. The project would become economically infeasible; or,
 - viii. Other reasons approved by CEHMM, in conjunction with the FWS.
2. If Zone B cannot be avoided, the Mineral Participant shall take the following steps to minimize the potential disturbance:
 - i. Where feasible, take advantage of existing and available infrastructure and improvements;
 - ii. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
 - iii. Comply with Spill Prevention, Control and Countermeasures (SPCC) requirements (Appendix G) in accordance with 40 CFR Part 112;
 - iv. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
 - v. Educate personnel, agents, and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
 - vi. Provide CEHMM with a copy of the permit from New Mexico Mining and Minerals Division (MMD), if applicable;

Appendix C

CEHMM CCAA Conservation Measures (Continued)

- vii. Provide CEHMM plats, mine operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
- viii. Provide CEHMM with the mine reclamation plan.

Zone C: The Mineral Participant shall exercise good faith efforts to avoid, if feasible, obstructing or disrupting the natural flow of ephemeral drainages in Zone C. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential disturbance:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS) (see Appendix F);
2. Comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112;
3. Educate personnel, agents, and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Provide CEHMM with the permit from MMD, if applicable;
6. Provide CEHMM plats, mining operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
7. Provide CEHMM with the mine reclamation plan.

Zone D: Mineral Participants shall comply with SPCC requirements (Appendix G) in accordance with 40 CFR Part 112 within Zone D. SPCC plans for Participant's New Surface Disturbance of Enrolled Properties subject to this CI will be available upon request to be used by CEHMM.

1. Provide CEHMM with the permit from NMOCD, if applicable;
2. Provide CEHMM plats, mining operation plans, or other electronic media describing the New Surface Disturbance for the project; and,
3. Provide CEHMM with the mine reclamation plan.

Notice: Mineral Participants shall provide notice of New Surface Disturbance and seismic activities as described in Section **XV. DEVELOPMENT PROCEDURES**. Participants will notify CEHMM:

1. Not less than 15 days in advance of New Surface Disturbance and Seismic Activities.
2. Not less than 3 days prior to commencement of New Surface Disturbance;
3. Not less than 3 days in advance, of any changes to prior notice of New Surface Disturbance; and,
4. Within 72-hours after Emergency Operations that result in New Surface Disturbance. Emergency Operations are those activities unexpectedly and urgently required to prevent or address immediate threats to human health, safety, property, the environment, or national defense or security.

CEHMM CCAA Conservation Measures (Continued)

Water Withdrawers

Water Withdrawer Participants (Water Withdrawer Participants), with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition, Water Withdrawer Participants agree to implement the following Conservation Measures:

Zone A: Temporarily maintain minimum streamflow and curtail pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to the Black River in Zone A should the flow fall below 9.3 cfs at the USGS gauge location at the CID dam. NMDGF recommends 3 cfs (Arm et al. 2014) absolute minimum flow for the Texas Hornshell, but 9.3 cfs is based on current minimum flow as established by water withdrawers in the area. However, the Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCAA and the CCA.

Zone B: Within the Black and Delaware rivers (excluding Zone A in each), Blue Springs, and their associated USGS 100-year floodplain:

1. Temporarily maintain minimum stream flows and cease pumping of water if minimum flow is reached. The Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCAA.

Zone C: Ephemeral Drainages to the Black and Delaware rivers, including Owl Draw:

1. Temporarily maintain minimum stream flows and cease pumping of water if minimum flow is reached. The Technical Working Group, following the Governance process (Section **II. GOVERNANCE**), will work with subject matter experts to determine minimum flow within five years of implementation of this CCAA.

Agriculture and Ranching

The Implementation Committee, with input from ranching industry Participants, will develop a grazing plan for areas near designated Life History Sites or Sensitive Habitat Areas, subject to approval by the Executive Committee. The Implementation Committee will also develop a Vegetation Plan to incrementally remove invasive species (Creosotebush, *Larrea tridentate*; Honey Mesquite, *Prosopis glandulosa*; Saltcedar, *Tamarix* spp.; Russian Olive, *Elaeagnus angustifolia*; and Tarbush, *Flourensia cernua*) and replant with native grasses, trees, or shrubs.

The Agriculture and Ranching Participants, with the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area. In addition to providing CEHMM access to private lands for species monitoring and implementation of Conservation Actions, Participants shall implement the following Conservation Measures, as set forth in greater detail in each CI, to minimize adverse effects on Covered Species:

Appendix C

CEHMM CCAA Conservation Measures (Continued)

Zone A:

1. Refrain from creating any New Surface Disturbance;
2. Follow the grazing plan as agreed upon in the CI (if applicable).
3. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, cease pumping water from the Black River in Zone A;
4. Avoid utilizing low-water crossings when other routes are available;
5. Implement or allow the implementation of erosion control along the banks of the Black and Delaware rivers (if applicable); and,
6. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone B:

1. Follow the grazing plan as agreed upon in the CI (if applicable);
2. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, the Participants shall limit water pumping in Zone B to the minimum amount necessary for domestic and livestock use, and to prevent crop failure;
3. Avoid utilizing low-water crossings when other routes are available;
4. Implement or allow implementation of erosion control in the 100-year floodplain;
5. Refrain from increases in current agricultural practices that could impact Zone A (e.g., increasing grazing pressure and developing new agricultural fields); and,
6. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone C:

1. Follow the grazing plan as agreed upon in the CI (if applicable);
2. Immediately upon receiving notice from CEHMM that flow in the Black River has dropped below minimum flow, the Participants shall limit water pumping in Zone C to the minimum amount necessary for domestic and livestock use, and to prevent crop failure;
3. Avoid utilizing low-water crossings when other routes are available; and,
4. Implement or allow implementation of the Vegetation Plan (if applicable).

Zone D:

1. Follow the grazing plan as agreed upon in the CI (if applicable); and,
2. Implement or allow implementation of the Vegetation Plan (if applicable).

Appendix C

CEHMM CCAA Conservation Measures (Continued)

Carlsbad Irrigation District

CID owns and operates a diversion dam downstream of the Occupied Habitat in the Black River and manages irrigation canals leading to the diversion dam from the Pecos River and from the diversion dam to deliver water to CID members. In lieu of Enrollment and Habitat Conservation Fees described in this CCAA, CID's commitment will be through monitoring, communication, and cooperation, leading to greater conservation for the Covered Species.

CID agrees to implement the following Conservation Measures:

- Monitor USGS gauges within the Black River weekly;
- Report low water flows to CEHMM;
- Report fishes trapped in CID canals observed during routine inspections to CEHMM;
- With the exception of agricultural and livestock species, shall not release, plant or otherwise establish or introduce exotic or invasive species, including but not limited to saltcedar (*Tamarisk* spp.), giant cane (*Arundo donax*), cheatgrass (*Bromus tectorum*), Lehmann's lovegrass (*Eragrostis lehmanniana*), Zebra Mussels (*Dreissena polymorpha*), Sheepshead minnow (*Cyprinodon variegatus*), feral pigs, or other species that may degrade habitat in the Covered Area;
- Train CID employees on CCAA requirements and reporting any issues to CEHMM during the course of their regular job duties; and
- Assist CEHMM and FWS with getting access to CID lands with 24-48-hour notice for the purposes of monitoring, or a minimum of two weeks notice for Conservation Actions, and/or research.

Appendix D

NMSLO CCAA Conservation Measures from NMSLO CCAA Parent Document

Solid Minerals Mining

Zones A, B, and C: The State Land Office does not issue solid minerals mining leases in Zones A, B, or C.

Zone D:

1. Educate and provide direction to personnel, agents, and contractors about the Conservation Measures agreed to in the CI and this CCAA;
2. Implement erosion control measures as specified in the CI;
3. Avoid obstructing or disrupting the natural flow of ephemeral drainages;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Minimize the surface disturbance where feasible;
6. Provide the Commissioner with the permit from New Mexico Energy and Natural Resources Department, Mining and Minerals Division, if applicable;
7. Provide the Commissioner with a Mine Operation Plan (MOP) and Reclamation Plan for New Surface Disturbances greater than 1 acre. The MOP shall include, but is not limited to:
 - i. Orderly development
 - ii. Locations & methods of topsoil storage
 - iii. Overburden stockpiles
 - iv. Tailings disposal
 - v. Dams or impoundments
 - vi. Slope stabilization methods
 - vii. Runoff diversions
 - viii. Solid and liquid waste disposal
 - ix. Spill reporting & cleanup
 - x. Sediment control
 - xi. Security & access control
 - xii. Blasting
 - xiii. Archaeological clearance
 - xiv. Endangered species clearances
 - xv. Comments on Plan View Map
 - xvi. List of all required federal & state permits
 - xvii. Professional Engineer stamp for mines greater than 10 acres

Appendix D

NMSLO CCAA Conservation Measures (Continued)

Agriculture and Ranching

Zone A:

- 1.Refrain from creating any New Surface Disturbance.
- 2.Follow the grazing plan as agreed upon in the CI (if applicable).
- 3.Curtail or cease pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to Zone A when flows fall below minimum levels, as agreed upon in the CI (if applicable).
- 4.Implement or allow the implementation of erosion control along the banks of the Black and Delaware rivers (if applicable).
- 5.Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone B:

- 1.Follow the grazing plan as agreed upon in the CI (if applicable).
- 2.If flows in the Black or Delaware rivers drop below the minimum levels agreed upon in the CI, limit water pumping in Zone B to the minimum amount necessary for domestic and livestock use, or to prevent crop failure (if applicable).
- 3.Implement or allow implementation of erosion control in the 100-year floodplain.
- 4.Refrain from increases in current agricultural practices that could impact Zone A (e.g., increasing grazing pressure and developing new agricultural fields).
- 5.Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone C:

- 1.Follow the grazing plan as agreed upon in the CI (if applicable).
- 2.If flows in the Black or Delaware rivers drop below the minimum levels agreed upon in the CI, limit water pumping in Zone C to the minimum amount necessary for domestic and livestock use, or to prevent crop failure (if applicable).
- 3.Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Zone D:

- 1.Follow the grazing plan as agreed upon in the CI (if applicable).
- 2.Implement or allow implementation of the vegetation plan as agreed upon in the CI (if applicable).

Pumping Water for Sale, Gift, or Trade

A group of subject matter experts will be convened to study the minimum flows needed to support the Covered Species and reach a determination within five years of implementation of this CCAA. In the interim, a minimum flow of 9.3 cfs at the USGS gauge location at the CID dam will be used for the Black River.

Zones A, B, and C –Curtail or cease pumping of surface water and groundwater that has a demonstrated direct hydrologic connection to Zone A when flows fall below minimum levels, per the specific measures agreed upon in the Participants' CI.

Appendix D

NMSLO CCAA Conservation Measures (Continued)

Oil and Gas and Related Infrastructure

Zone A: No New Surface Disturbance in Occupied Habitat within the Black River and Delaware River.

Zone B: The Participant will exercise good faith efforts to avoid Zone B. Where the Participant cannot avoid Zone B, this CCAA and its associated CI authorizes New Surface Disturbance subject to the following:

1. The oil and gas Participant shall identify and submit to the Commissioner a reason that Zone B cannot be avoided. Reasons may include, but are not limited to:
 - i. The mineral estate cannot otherwise be accessed;
 - ii. The Participant lacks surface or right-of-way access;
 - iii. Contractual or landowner restrictions;
 - iv. The mineral resource cannot be accessed utilizing proven technology reasonably available in the Permian Basin;
 - v. Safety considerations;
 - vi. The project would become economically infeasible; or,
 - vii. Others, as approved by the Commissioner.
2. If the Commissioner concurs that Zone B cannot be avoided, the oil and gas Participant shall take the following steps to minimize the potential impacts:
 - i. Implement erosion control measures in accordance with Reasonable and Prudent Practices for Stabilization (RAPPS);
 - ii. Comply with Spill Prevention, Control, and Countermeasure (SPCC) requirements in accordance with 40 CFR Part 112;
 - iii. Comply with the United States Army Corp of Engineers (USACE) Nationwide 12 General Permit, where applicable;
 - iv. Educate personnel, agents, and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
 - v. Provide the Commissioner a copy of the permit from New Mexico Oil Conservation Division (NMOCD), if applicable; and,
 - vi. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance and existing surface disturbance utilized for the Project.

Appendix D

NMSLO CCAA Conservation Measures (Continued)

Zone C: The oil and gas Participant will exercise good faith efforts to avoid obstructing or disrupting the natural flow of ephemeral drainages. If it is not feasible to avoid these areas, the Participant shall take the following steps to minimize the potential impacts:

1. Implement erosion control measures in accordance with the Reasonable and Prudent Practices for Stabilization (RAPPS);
2. Comply with SPCC requirements in accordance with 40 CFR Part 112;
3. Educate personnel, agents and contractors about the requirements of the CI and this CCAA and provide direction in accordance with the Conservation Measures;
4. Comply with the USACE Nationwide 12 General Permit, where applicable;
5. Utilize technologies (like underground borings for pipelines), where feasible;
6. Provide the Commissioner with a copy of the permit from NMOCD, if applicable; and,
7. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance for the Project.

Zone D:

1. Comply with SPCC requirements in accordance with 40 CFR Part 112;
2. If requested by the Commissioner, provide SPCC plans for Participant's New Surface Disturbance of Enrolled Properties subject to the participant's CI;
3. Provide the Commissioner with a copy of the permit from NMOCD, if applicable; and
4. Provide the Commissioner plats or other electronic media describing the New Surface Disturbance for the Project.

Notification of New Surface Disturbance Requirements for All Zones:

No less than 15 days prior to commencing a New Surface Disturbance or seismic activities, the Participant shall:

1. Consult with the Commissioner to assess the potential impacts to the Covered Species and their habitat. Upon request from the Participant, the Commissioner will make recommendations to reduce potential impacts to the Covered Species and their habitat and to reduce potential fees for New Surface Disturbance activities proposed within the Covered Area.
2. Provide the Commissioner with a description of the proposed New Surface Disturbance that includes:
 - i. Survey plats, GIS shapefiles, Google Earth KML, or other appropriate documentation of proposed surface disturbing activities within the Covered Area;
 - ii. Anticipated timeframe that surface disturbing activities would occur;
 - iii. Notice not less than 15 days in advance of New Surface Disturbance and seismic activities to allow CEHMM to deduct the appropriate Habitat Conservation Fees;

Appendix D

NMSLO CCAA Conservation Measures (Continued)

3. Provide the Commissioner additional notice not less than 3 days prior to commencement of New Surface Disturbance for Initial Project development; and,
4. Provide the Commissioner notice not less than 3 days in advance of any changes to prior notice of New Surface Disturbance.

The Commissioner, in cooperation with the Participant, will complete the following:

1. Review the description of the New Surface Disturbance submittal by Participants to determine if it is complete;
2. Conduct onsite inspections of the projects if necessary;
3. Consult with the Executive Committee as needed on New Surface Disturbance within the Covered Area to determine how Participant's proposed activities could proceed; and,
4. Calculate Habitat Conservation Fees for the proposed New Surface Disturbances.

Appendix E
CEHMM CMV

**Center of Excellence for Hazardous Materials Management (CEHMM)
Notice of Conservation Measure Violation**

<i>Authorized Organization</i> CEHMM	<i>Operator/Landowner</i>	<i>CI/CP Number</i>
<i>Address</i> 505 N. Main Street Carlsbad, NM 88220	<i>Address</i>	
<i>Telephone</i> 575-885-3700	<i>Attention</i>	

Well/Site Name	API Number	Unit/Lot	Section	Township	Range	County	State

The following condition(s) were found by CEHMM on the date and at the site(s) listed above

Date	Time (24-hour clock)	Inspector	Corrective Action to be Completed by	Date Corrected

Description of Conservation Measure Violation with Corrective Action:

When the Written Order is complied with, sign this notice and return to the above address.

Company Representative: _____ Title: _____

Address: _____ Phone: _____

Signature: _____ Date: _____

Company Comments: _____

Warning

The Center of Excellence is providing notice of deficiency to the Participating Operator/Landowner and is giving them the opportunity to cure this deficiency. If the deficiency is not corrected, or due diligence is not being shown to correct the deficiency within sixty (60) days of the receipt of the letter, the parcel(s) involved will be terminated from this CI/CP. If Participating Operator/Landowner has three (3) deficiencies within 365 consecutive days (excluding deficiencies cured as stated above), the entire CI/CP will be terminated.

Signature of CEHMM Authorized Officer _____ Date _____