



**Quarterly Report: Q1 2022**  
**Candidate Conservation Agreements:**  
**Texas Hornshell (*Popenaias popeii*)**



CEHMM & The New Mexico State  
Land Office



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**Contents**

Introduction..... 4

Enrollment & Funding ..... 5

Mitigation of Impacts of Habitat..... 6

Habitat Monitoring..... 7

Grants ..... 10

Project Updates ..... 11

First Quarter Committee Meetings ..... 13

Outreach ..... 14

Compliance Monitoring ..... 14

Signature ..... 16

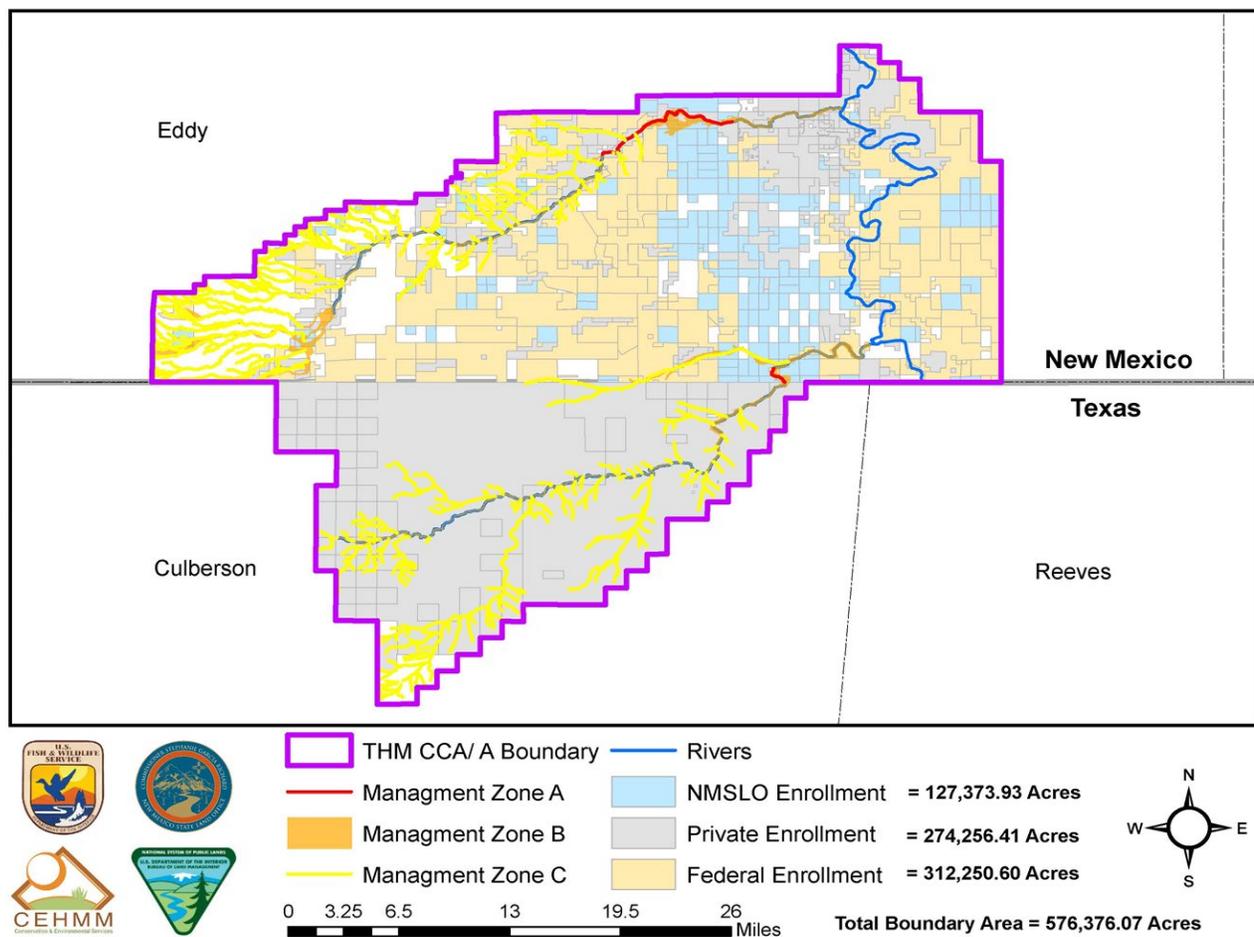
Appendix A - Habitat Conservation Fees for the Calendar Year 2022 ..... 17

Appendix B - USGS Discharge Gauges in the CCA/A Boundary ..... 21

## Introduction

This report describes the activities conducted in the first quarter of 2022 under the three sister Candidate Conservation Agreements for the Texas hornshell mussel (THM) (*Popenaias popeii*) and other covered species. The Center of Excellence (CEHMM) administers a Candidate Conservation Agreement (CCA) for federal land and a Candidate Conservation Agreement with Assurances (CCA) for non-federal and non-state (i.e., private) lands. The New Mexico State Land Office (SLO) administers a CCA for state trust lands. The three conservation agreements are referred to collectively herein as the “CCA/As.” To the extent practicable, CEHMM and the SLO jointly implement the CCA/As through a common governance structure. Figure 1 shows the CCA/A boundary, CCA/A management zones, and land ownership. Additional details about the CCA/As are available in the 2018 annual report and in the agreements themselves, which can be accessed at:

- <http://cehmm.org/thmreports>
- [https://www.fws.gov/southwest/es/documents/R2ES/TxHornshell\\_CCAA\\_NMCPL\\_v3\\_FR2980.pdf](https://www.fws.gov/southwest/es/documents/R2ES/TxHornshell_CCAA_NMCPL_v3_FR2980.pdf)



**Figure 1.** CCA/A Boundary, CCA/A Management Zones, and Land Ownership.

## Enrollment & Funding

CEHMM and the SLO have issued a combined total of 103 Certificates of Inclusion (CIs) in the CCAAs for non-federal land or Certificates of Participation (CPs) for the CCA for federal land. Fifty Participants are enrolled in multiple Candidate Conservation Agreements.

CCA/A Participant and parcel acreage enrollment data for 2022 are shown in Table 1. The SLO administers 28 CIs and CEHMM administers 42 CIs and 33 CPs. The SLO has 127,373.93 acres of state trust land enrolled in its CCAA in 2022. CEHMM has 274,256.41 acres of non-federal, non-state land enrolled in its CCAA and 312,250.60 acres of federal land enrolled in its CCA. Fifty Participants are enrolled in multiple Candidate Conservation Agreements because they have a combination of land ownership types. The total amount of land enrolled in the CCA/As in 2022 is 401,630.34 acres. Annual acreage can vary since the Participants who opted for “All Activities Enrollment” are able to add or remove enrolled acreage based on their current areas of activity. The same acres can also be enrolled more than once by different Participants who are using the land for different activities; the totals therefore reflect multiple enrollments of the same parcels.

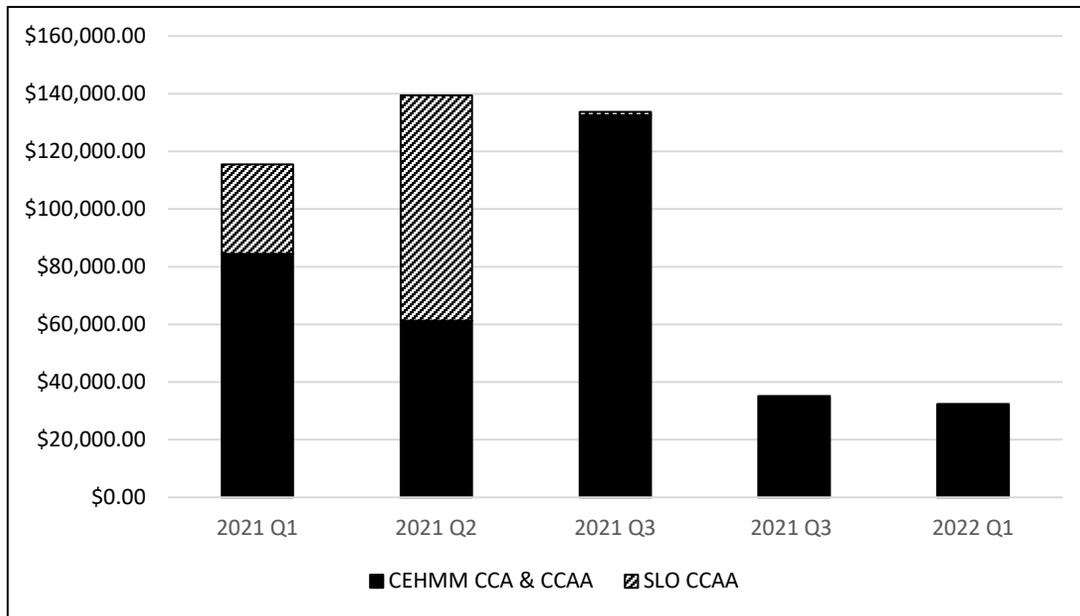
**Table 1.** CCA/A Enrollment in 2022.

	No. CIs	No. CPs	Acres Enrolled in CCA	Acres Enrolled in CCAA
<b>CEHMM</b>	42	33	312,250.60	274,256.41
<b>SLO</b>	28	N/A	N/A	127,373.93
<b>TOTAL:</b>	<b>70</b>	<b>33</b>	<b>312,250.60</b>	<b>401,630.34</b>

During the first quarter of 2022, the Hornshell Program at CEHMM earned \$31,299.33 in Habitat Conservation Fees paid under the CEHMM CCA and CCAA. Also during the first quarter of 2022, the SLO CCAA earned \$0.00 in Participant Habitat Conservation Fees. These details are shown in Table 2 and Figure 2.

**Table 2.** 2022 Quarterly Program Funding Breakdown.

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Year To Date
<b>CEHMM</b>	\$31,299.33	\$ -	\$ -	\$ -	\$31,299.33
<b>SLO</b>	\$0.00	\$ -	\$ -	\$ -	\$0.00
<b>TOTAL:</b>	<b>\$31,299.33</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$31,299.33</b>



**Figure 2.** Quarterly Habitat Conservation Fees Received by the Conservation Programs from 2021 to 2022.

### **Habitat Conservation Fees**

The CCA/As contain a provision that CEHMM will annually adjust all Habitat Conservation Fees for inflation or deflation. This adjustment is based on the percent increase or decrease in the most recent year’s Consumer Price Index (CPI) published by the US Department of Labor, Bureau of Labor Statistics. When adjusting Habitat Conservation Fees, CEHMM refers to the annual inflation of CPI for All Urban consumers, U.S. City Average, all items less food and energy, not seasonally adjusted. Adjustments of the CPI shall occur on the January release date of the CPI for all items less food and energy. The all items less food and energy index rose 5.5 percent in 2021. Details on how the adjustment is calculated can be found in Appendix E of the Texas hornshell CCA/As. Appendix A of this quarterly report shows the updated fees based on the January 2022 release of the CPI. These fees are the same for the THM CCA/A and SLO CCAA.

### **Mitigation of Impacts of Habitat**

During the first quarter, CEHMM received a total of 17 notices of new surface disturbances from industry, with 46.27 acres of new surface disturbances documented. All of these disturbances took place in Management Zone D. The SLO did not receive any notices of new surface disturbances during the first quarter of 2022. CEHMM worked with the Participants to ensure all of the proper conservation measures were followed including Reasonable and Prudent Practices for Stabilization (RAPPS) and Spill Prevention Control and Countermeasure (SPCC). These practices included waterbars, silt fences, culverts, erosion blankets, waddles, and reseeded. These details are shown in Table 3 below.

**Table 3. New Surface Disturbances in the First Quarter of 2022.**

	Well Pads	ROWs	Other Infrastructure	Total
<b>CEHMM</b>				
Notifications of New Surface Disturbances	6 (35.29%)	6 (35.29%)	5 (29.41%)	17
Acres Disturbed	30.05 (64.94%)	5.17 (11.17%)	11.05 (23.88%)	46.27
<b>SLO</b>				
Notifications of New Surface Disturbances	0 (0%)	0 (0%)	0 (0%)	0
Acres Disturbed	0 (0%)	0 (0%)	0 (0%)	0
<b>COMBINED</b>				
Notifications of New Surface Disturbances	6 (35.29%)	6 (35.29%)	5 (29.41%)	17
Acres Disturbed	30.05 (64.94%)	5.17 (11.17%)	11.05 (23.88%)	46.27

## Habitat Monitoring

### Black River Discharge Monitoring

The CCA/A set a temporary minimum flow goal of 9.3 cubic feet per second (cfs) at the Malaga gage on the Black River. This is pending the development of a revised flow requirement for the hornshell by August 2022. Since the CCA/A took effect in 2017, CEHMM has monitored the daily average flow at existing United States Geological Survey (USGS) flow gages in the Black River at Malaga (USGS 08405500<sup>1</sup>) and Blue Springs (USGS 08405450<sup>2</sup>) (Appendix B). CEHMM staff set alarms on the flow gages; when river flows are below 9.3 cfs, they are notified and can monitor the river more closely. Participants in the CCA/A who withdraw water from or near the Black River are also notified so they can implement any pumping curtailment conservation measures contained in their CIs/CPs.

CEHMM's river flow monitoring has also been vital for alerting program staff when additional measures, such as salvage efforts, might be necessary to prevent THM mortality due to low flows. Hornshell require perennially wetted habitat and flowing water, emersion (stranding) can cause death and dehydration (Coker 1919). Observational data suggest that hornshell beds may

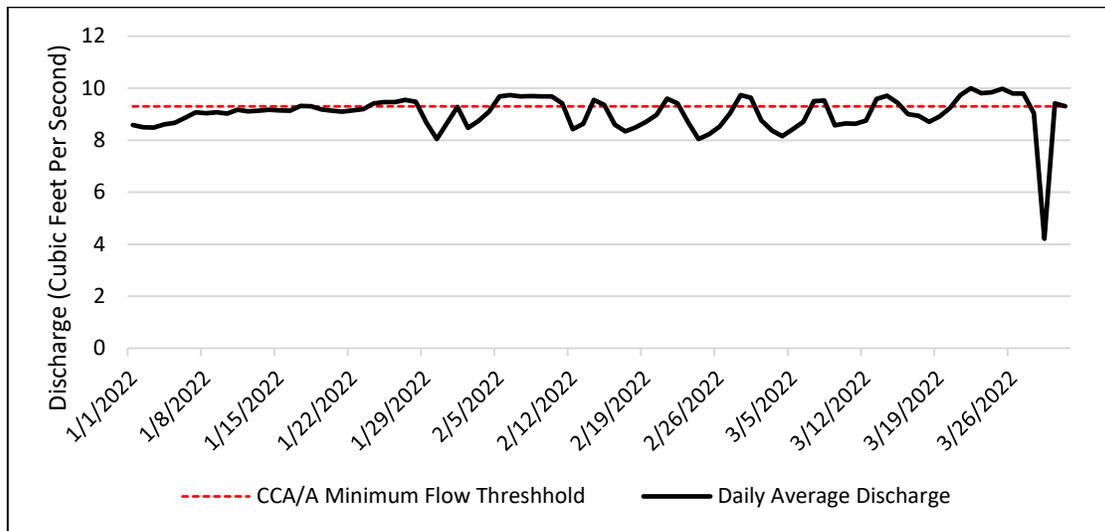
<sup>1</sup> [https://waterdata.usgs.gov/nm/nwis/uv?site\\_no=08405500](https://waterdata.usgs.gov/nm/nwis/uv?site_no=08405500)

<sup>2</sup> [https://waterdata.usgs.gov/nm/nwis/uv/?site\\_no=08405450](https://waterdata.usgs.gov/nm/nwis/uv/?site_no=08405450)

be exposed when flows drop below ~3.0 cfs, so if flows are decreasing and nearing 3.0 cfs, CEHMM notifies the U.S. Fish and Wildlife Service (Service) and the New Mexico Department of Game and Fish (NMDGF) so they can take appropriate measures to protect the species.

Early in the program’s implementation, the CCA/A program partners agreed the two existing gages did not provide sufficient information about flows within the occupied reach, and they determined that installation of additional gages should be a priority. In 2019, CEHMM, SLO, and the Service committed to share the costs of installing and paying for the ongoing annual maintenance of two new USGS gages in the Black River. The Technical Working Group and USGS collaborated to select the best locations for the new gages and opted to install one new gage at Harkey Crossing (USGS 08405400<sup>3</sup>) and the second gage below Blue Springs (USGS 08405350<sup>4</sup>) (Appendix B). The gage at Harkey Crossing also collects water quality metrics within the occupied reach, including temperature, dissolved oxygen, conductivity, and salinity. The addition of the two new gages allows the CCA/A program to develop a more comprehensive data set to monitor flows and understand how flow varies from upstream to downstream in the river and how water quality varies with stream discharge. The gages also help with calculations of the water volume that would be needed, as well as approximately when it would be needed each year, to reduce threats to the species.

The monthly average discharge for the Black River was 9.03 cfs in January 2022, 9.05 cfs in February, and 9.04 in March. The daily average discharge was below the 9.3 cfs threshold 63.32% of the days in the first quarter. See Figure 3 and Table 4 for first-quarter flow rates.



**Figure 3.** The Daily Average Discharge of the Black River at the USGS Black River Above Malaga Gage During the First Quarter of 2022.

<sup>3</sup> [https://waterdata.usgs.gov/nm/nwis/uv/?site\\_no=08405400](https://waterdata.usgs.gov/nm/nwis/uv/?site_no=08405400)

<sup>4</sup> [https://waterdata.usgs.gov/nm/nwis/uv/?site\\_no=08405350](https://waterdata.usgs.gov/nm/nwis/uv/?site_no=08405350)

**Table 4.** Monthly Average, Minimum Daily Average, and Maximum Stream Flow Calculated by CEHMM using USGS Instantaneous Provisional Stream Gage Readings.

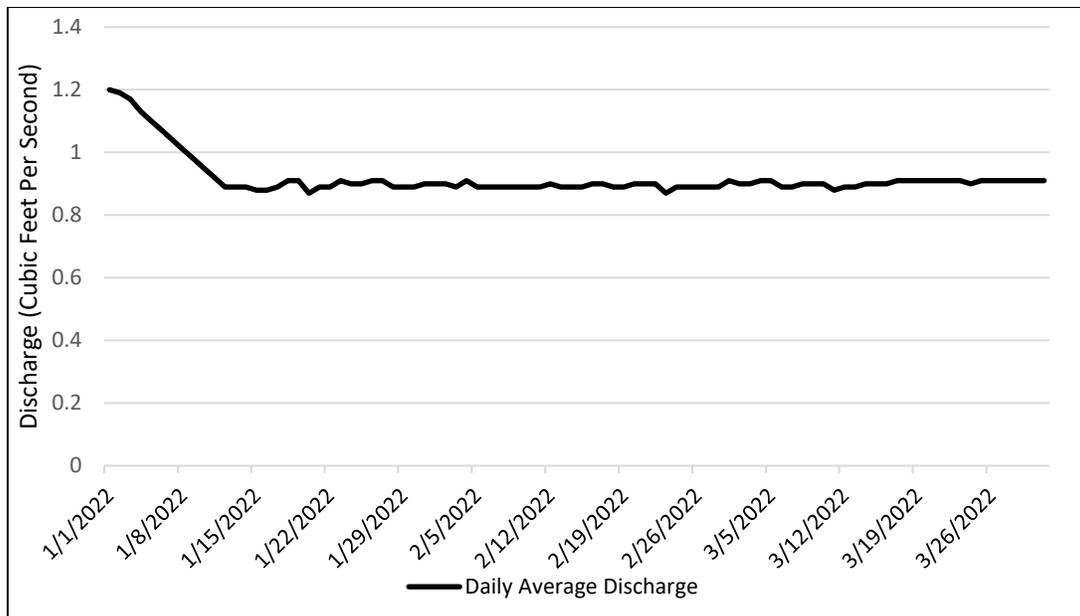
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
<b>Black River (USGS 08405500 BR Above Malaga)</b>												
Average Flow	9.03	9.05	9.04	-	-	-	-	-	-	-	-	-
Minimum Daily Average	<b>8.05</b>	<b>8.05</b>	<b>4.21</b>	-	-	-	-	-	-	-	-	-
Maximum Daily Average	9.55	9.74	10.00	-	-	-	-	-	-	-	-	-
<b>Delaware River (USGS 08408500 DR NR Red Bluff)</b>												
Average Flow	0.96	0.89	0.90	-	-	-	-	-	-	-	-	-
Minimum Daily Average	0.87	0.87	0.88	-	-	-	-	-	-	-	-	-
Maximum Daily Average	1.20	0.91	0.91	-	-	-	-	-	-	-	-	-

**Delaware River Discharge Monitoring**

Due to the lack of flowing water in the Delaware River in recent years, CEHMM physically monitors the river's flows every two weeks (Figure 4). The monthly average discharge for the Delaware River was 0.96 cfs in January 2022, 0.89 cfs in February, and 0.90 in March. See Table 4 and Figure 5 for first-quarter flow rates. The USGS gage on the Delaware River read an average discharge of 0.92 cfs for the first quarter, CEHMM physically observed that the river maintained steady flows through the entire quarter. CEHMM will continue to monitor the status of the Delaware River by utilizing the USGS gage data and physically inspecting the flows of the river.



**Figure 4.** The Flows on the Delaware River on February 28<sup>th</sup>, 2022



**Figure 5.** The Daily Average Discharge of the Delaware River at the USGS Delaware River NR Red Bluff Gage During the First Quarter of 2022.

## Grants

### **CEHMM/SLO Instream Flow Program Initiative for the Texas Hornshell Mussel**

In 2020, CEHMM and the SLO partnered on a proposal from CEHMM to NFWF for a grant to fund the development of an instream flow program to protect the endangered Texas hornshell mussel and other at-risk species in the Black and Delaware rivers. The NFWF awarded the grant in 2021. This funding requires an in-kind matching contribution from the CCA/A program, the Executive Committee set aside \$250,000.00 for the matching contribution. Some or all of the match can be provided through in-kind contributions from the SLO and CEHMM, but the set-aside amount ensures the matching fund requirement is met. The overall objective of the initiative is to provide instream flow for the THM in the Black and Delaware rivers through the purchase or lease of water rights, or through alternative mechanisms such as forbearance agreements or strategies that make water available for instream flow during otherwise dry periods or when high flows are needed for life history requirements. The first expected outcome of the grant would be the execution of one or more short-term (3-5 year) agreements that, at a minimum, will provide sufficient flow in the Black River to prevent the existing THM population from being extirpated by lack of water while long-term solutions to instream flow are developed. The second expected outcome of the project will be the development of a framework for a long-term plan and budget for maintaining stream flows in the Black and Delaware rivers, including multiple options such as outright purchase of water rights, long-term forbearance agreements, or other mechanisms to reduce diversion from the rivers.

**Q1 Progress:** During the first quarter of 2022, AMP Insights worked with CEHMM to build the Instream Flow Technical Working Group and held the kick-off meeting for the Instream Flow Project. The meeting consisted of introductions, a project overview, the

presentation of water transaction and instream flow background information, a discussion of data gaps and needs for the Black River, and general discussions regarding the overall project.

### **Rio Grande Cooter Research on Delaware River**

CEHMM, the Service, the NMDGF, and Eastern New Mexico University (ENMU) partnered on a proposal to survey for Rio Grande Cooter (*Pseudemys gorzugi*) in at least three unique localities on the Delaware River, with a high intensity trap effort that is comparable to the recent surveys on the Black River. The research proposed here leverages a productive collaborative team who will be examining the river to understand the current occurrence and population composition at one of the least surveyed sites of its assumed distribution. The product of the proposed work will provide much needed information on species distribution and habitat preferences, which are an essential part of implementing sound management practices for species protection.

### **Sensor Array Study**

CEHMM proposed a project to establish a sensor array within the occupied reach of the Black River in southeastern New Mexico. The water quality data loggers will allow CEHMM to monitor and better understand the water quality conditions endured by the endangered THM. Through the establishment of the proposed sensor arrays, we will be able to further monitor and gain data to determine if, when, and for what period of time the THM are enduring intolerable environmental conditions. The results of this data collection are expected to provide key insights to environmental gradients among microhabitats, especially as we prepare for further climate-driven variation.

Both the Rio Grande Cooter Research and Sensor Array Study proposals have been submitted to NFWF, although neither has been funded as of yet. A NFWF funding decision was expected in March of 2022 but is still pending. These funding opportunities will require a matching contribution from the CCA/As if approved by NFWF. No CCA/A funds have been spent on these projects at this time. Both project proposals have been recommended by the Implementation Committee and approved by the Executive Committee should the proposals be approved by NFWF.

### **Project Updates**

#### **River Flow Regime Requirements Study**

This study was approved and funded in October of 2020 for \$358,005.00. This project is ongoing and currently in year three out of four. The expected completion date of the project is August 2023. A collaborative team of researchers from Miami, Texas A&M, and Auburn Universities are conducting a series of laboratory experiments and field monitoring studies to examine lethal and sublethal effects of thermal and hypoxia stress on various life history stages of the Texas hornshell. Relationships between flow, temperature, and dissolved oxygen in the Black River are also being studied. Results will be used to identify flow regimes most likely to induce mortality and/or thermal stress in the Texas hornshell. Combined with historical datasets, results will be used by both CEHMM and the Service. CEHMM will determine whether frequency of stressful

periods has been increasing over time, and the Service will make specific flow recommendations for Texas hornshell populations in the Black River.

**Q1 Progress:** During the first quarter, Auburn University completed the scope for growth research on the THM. Scope for growth research measures the metabolic energy that the mussel requires for basic maintenance, filtration, and feeding. Miami University analyzed water quality data from DO loggers located in the Black River. Texas A&M analyzed water data from Miami University research to determine how often there are temperature exceedances in the Black River.

### **Environmental DNA (eDNA) Assay Development for Texas hornshell and Host Fishes**

Originally approved and funded on August 12, 2020 for \$22,480, this eDNA research project began in January 2022 and is expected to be completed by January 2023. eDNA refers to DNA that can be extracted from environmental samples, such as water. The goal of this project is to develop an eDNA assay for the Texas hornshell (*Popenaias popeii*), gray redbreast (*Moxostoma congestum*), and blue sucker (*Cycleptus elongatus*). This project will provide an additional tool for determining the presence, absence, and distribution of the target species. Using eDNA techniques to evaluate distribution of these Covered Species will be more efficient than traditional survey methods.

**Q1 Progress:** In March 2022, the NMDGF conducted a field visit to the Black River to collect water samples from various monitoring locations to aid in the development of eDNA markers. The water samples were then sent to Rocky Mountain Research Station for analysis.

### **Flume Draw Erosion Control Project**

Originally approved and funded on August 12, 2020 for \$2,912.18, this erosion control project started on October 13, 2021 and was completed on February 12, 2022. Sixteen erosion control structures were installed at the head waters of Flume Draw. The structures will reduce sedimentation of the Black River and will promote vegetative growth in a highly eroded ephemeral drainage. V-fence was cut to a height of 36 inches and bent into an L-shape; the bottom 18 inches were buried. Natural woody substrate and rock were lined along the bottom of the fence to create a porous dam.



**Figure 6.** One of the Sixteen Erosion Structure CEHMM Erected in Flume Draw During the First Quarter of 2022.

**Q1 Progress:** During the first quarter of 2022, CEHMM finished this project by installing rock and woody substrate along the bottom of each erosion structure to create a porous dam that aids in the collection of sediment.

### **Project Proposals**

CEHMM and the SLO are now accepting project proposals to fund projects related to research and monitoring, or habitat restoration for the THM and the Other Covered Species. Proposals are ranked and funded on a quarterly basis.

The deadline to submit project proposals for each quarter are as follows:

Q1: January 1, 2022

Q2: April 1, 2022

Q3: July 1, 2022

Q4: October 1, 2022

### **First Quarter Committee Meetings**

#### **Joint Executive Committee**

The Joint Executive Committee did not meet during the first quarter of 2022. The Executive Committee members in 2022 are as follows:

CEHMM CCAA: Chuck Hayes (Service) and Emily Wirth (CEHMM)

CEHMM CCA: Chuck Hayes, Emily Wirth, Ty Allen (BLM)

SLO CCAA: Chuck Hayes, Lisa Henne (SLO)

#### **Implementation Committee**

The Implementation Committee held one meeting in the first quarter of 2022. The Implementation Committee members in 2022 are as follows:

Service: Sarah Yates

BLM: Cassie Brooks

CEHMM: Matt Ramey

SLO: Elaine Heltman (alternates Camilla Romero and Kyle Rose)

NMDGF: Daniel Trujillo

The Implementation Committee met and discussed the following topics:

- Habitat Conservation Plan (HCP)

- Black and Delaware rivers
- Landscape Monitoring
- Project Proposal Review
- Implementation Committee Operating Procedures

The Implementation Committee activities include the following:

1. Provided progress updates on the status of the Habitat Conservation Plan development and design. The HCP was submitted to the Service for review and comment in 2021. The Service provided comments and edits on the document and CEHMM is working to incorporate the revisions into the document.
2. Provided a quarterly update on the flows for both the Black and Delaware rivers. Updates incorporated hydrographs of all USGS gages, flows in relation the 9.3cfs set by the CCA/As, and bi-weekly monitoring photos of monitoring sites on both rivers.
3. Updated the Implementation Committee regarding activities taking place on the landscape such as spills, contaminated areas, fires, and flows to aid in the protection of the THM and other covered species.
4. The Implementation Committee reviewed one project proposal in the first quarter. The project proposal was approved and submitted to the Executive Committee for review and ranking.
5. The Implementation Committee completed a review of the CCA/A operating procedure.

### Outreach

In March, CEHMM staff participated in RiverBlitz, an annual river cleanup event in the city of Carlsbad in Eddy County (Figure 7). CEHMM encouraged enrollees along the Black River to join as well. Within a few hours, CEHMM staff removed hundreds of pounds of litter from the banks of the Black River. CEHMM participates in RiverBlitz twice a year; contact us if you or your organization would like to join us in the Black River cleanup efforts.



**Figure 7.** CEHMM Staff Participating in RiverBlitz.

### Compliance Monitoring

The CCA/As require CEHMM and the SLO to submit an annual compliance verification to the U.S. Fish and Wildlife Service (Service) for each enrolled Participant. CEHMM assists the SLO

with compliance verification through a Memorandum of Agreement for joint implementation of the CCAAs. In the first quarter of 2022, CEHMM's CCA/A compliance monitoring included inspection for failure to submit new surface disturbances and inspection for Spill Prevention, Control, and Countermeasures (SPCC) or Reasonable and Prudent Practices for Stabilization (RAPPS) compliance, if applicable. CEHMM utilized the New Mexico Oil Conservation Division (NMOCD) data, Bureau of Land Management (BLM) right-of-way data, and field surveying to conduct inspections.

**Signature**

If you have any questions, please call Matt Ramey at (575)-885-3700.

Signed: Emily K. Wirth

Emily K. Wirth

Executive Director

Date: 4/13/2022

## Appendix A - Habitat Conservation Fees for the Calendar Year 2022

### CCA/A Appendix E Fee Structure – Revised for Inflation on 2/1/2022

The Participant may be responsible for paying an Enrollment Fee for the first three years this CCA and CP are in effect. If the Participant opts out of the CCA, the Participant is still responsible for these fees. The Participant shall pay the \$30,000.00 Enrollment Fee for enrollment of facilities existing within the Covered Area if enrolling by the All Activities method of enrollment. The Participant may choose to enroll via the Parcel-by-Parcel method. In this case, the Participant shall pay a minimum Enrollment Fee of \$3,000.00 for up to 1,000 acres. For all acreage above 1,000 acres, the Participant shall pay \$3/acre. For either method of enrollment, the Participant shall make the first payment of Enrollment Fees at the time of enrollment. The Participant shall pay the second and third on the first and second anniversaries of the CCA effective date. If the Participant so chooses, the Participant may pay all three Enrollment Fees at the time of enrollment. Enrollment Fees will not be required after the initial three-year period.

The Habitat Conservation Fee for New Surface Disturbance associated with oil and gas development activities will be calculated using the following scales. The scales also apply to third parties doing work for the Participant either on or off the Participant's Enrolled Lands, regardless of who constructs or operates the associated facilities. The Participant may prepay Habitat Conservation Fees at any time at their discretion. The Participant must notify CEHMM prior to conducting any surface disturbing activities associated with this CP on or off the Enrolled Lands either by the Participant or third-party subcontractors. Management zone of the New Surface Disturbance is determined by the location of the activity being developed, not actual habitat found on site.

All Habitat Conservation Fees will be adjusted once yearly by CEHMM to account for inflation or deflation. The term "Base Habitat Conservation Fee" shall refer to the values of the Habitat Conservation Fees set forth in this Exhibit. For purposes of this section, the term "CPI-U" shall refer to the Consumer Price Index for All Urban Consumers, U.S. City Average, all items less food and energy (base 1982-84=100), not seasonally adjusted, as published by the U.S. Department of Labor, Bureau of Labor Statistics. The Maximum Annual Inflation Increase shall be based on the percent increase between the annual average CPI-U for the calendar year that precedes the date of the adjustment ("Current CPI-U") and the annual average CPI-U for calendar year 2016 ("Base CPI-U"). The Maximum Annual Inflation Increase shall be calculated as follows:

$$\text{Maximum Annual Inflation Increase} = \text{Base Habitat Conservation Fee} \times \left( \frac{\text{Current CPI-U} - \text{Base CPI-U}}{\text{Base CPI-U}} \right)$$

Increases, if any, shall occur on the January release date of the CPI-U. The Maximum Annual Inflation Increase will reflect the most recent revision to the annual average Current CPI-U, if any. CEHMM will send Participants a notification, both electronically and by mail, each year at the time the fees are adjusted.

If the annual average CPI-U is unavailable for a calendar year, no increases will be made. If the CPI-U is discontinued entirely or unavailable for a period longer than two calendar years, CEHMM will consult with the Participant to select an appropriate alternative index.

**1) New Well Location Fees<sup>1</sup>**

<b><u>Management Zone</u></b>	<b><u>Conservation Fee</u></b>
Zone A	Not applicable
Zone B	\$22,478.46/location
Zone C	\$11,239.23/location
Zone D	\$2,809.80/location

<sup>1</sup> Includes a single well pad no larger than 3 acres, multi-well pad no larger than 5 acres, and associated access road not to exceed 1 acre. Anything larger will be considered New Surface Development Fees described below. If any portion of the project falls into a higher management zone, the charge incurred will be that of the higher management zone.

**2) New Surface Development Fees**

For other New Surface Disturbances associated with Enrolled Lands, but not directly attributable to a new well pad<sup>2</sup> and associated road, including but not limited to pipelines, frac ponds, electric lines, pits, etc. the Habitat Conservation Fee will be based on the following scale:

<b><u>Management Zone</u></b>	<b><u>Conservation Fee<sup>3</sup></u></b>
Zone A	Not applicable
Zone B	\$8,429.42/acre
Zone C	\$2,809.80/acre
Zone D	\$1,123.92/acre

<sup>2</sup> Co-located wells that require an increase in the size of the existing pad will be assessed by new acres disturbed.

<sup>3</sup> These Conservation Fees are based on the following figures. No additional amounts are owed beyond the amount of the Conservation Fees:

Lease of Water Rights.....	10 acre feet = \$5,000-\$10,000
Purchase of Water Rights.....	1 acre foot = \$5,500-\$10,000
Habitat Restoration (i.e., salt cedar treatment) .....	4 acres = \$10,000
Caliche Removal.....	2-3 acres = \$10,000
Reseeding.....	1 acre = \$1,000

Rebuilding Water Crossings.....Undeterminable at this time

Note: All acreage calculations will be rounded up to the next whole acre, if over 0.5 acres.

New operations on previously disturbed land (e.g., co-located new well on an existing pad or new pipeline in an existing corridor, etc.) will incur no additional Habitat Conservation Fee, unless the area to be redisturbed has been reseeded and/or reclaimed as part of reclamation. Fees will also be assessed for any new acreage disturbed.

CEHMM will calculate area of New Surface Disturbances based on information received and/or on-the-ground observation. Should the Participant disagree with CEHMM’s calculation of the area of New Surface Disturbance, the Participant has the right to challenge the estimate, provide supporting data, and meet with CEHMM and/or the FWS, if necessary. CEHMM and FWS, if participating, will have the responsibility for the final determination of the area of New Surface Disturbance.

The Habitat Conservation Fee for above-ground power lines will be calculated using the above scale for New Surface Development. The acreage of New Surface Disturbance will be based on information found in the OCD and SLO New Surface Disturbance activities approval document provided by the Participant to CEHMM.

If New Surface Disturbance falls within two or more management zones, the amount of the Habitat Conservation Fee will reflect the amount of the New Surface Disturbance within each management zone.

**3) Fees associated with new seismic data acquisition**

<u>Management Zone</u>	<u>3D Survey Conservation Fee</u>	<u>2D Survey Conservation Fee</u>
Zone A	\$ <u>11.25</u> /acre	\$ <u>224.78</u> /linear mile*
Zone B	\$ <u>8.43</u> /acre	\$ <u>168.59</u> /linear mile*
Zone C	\$ <u>5.62</u> /acre	\$ <u>112.39</u> /linear mile*
Zone D	\$ <u>1.69</u> /acre	\$ <u>28.11</u> /linear mile*

\*or any fraction thereof

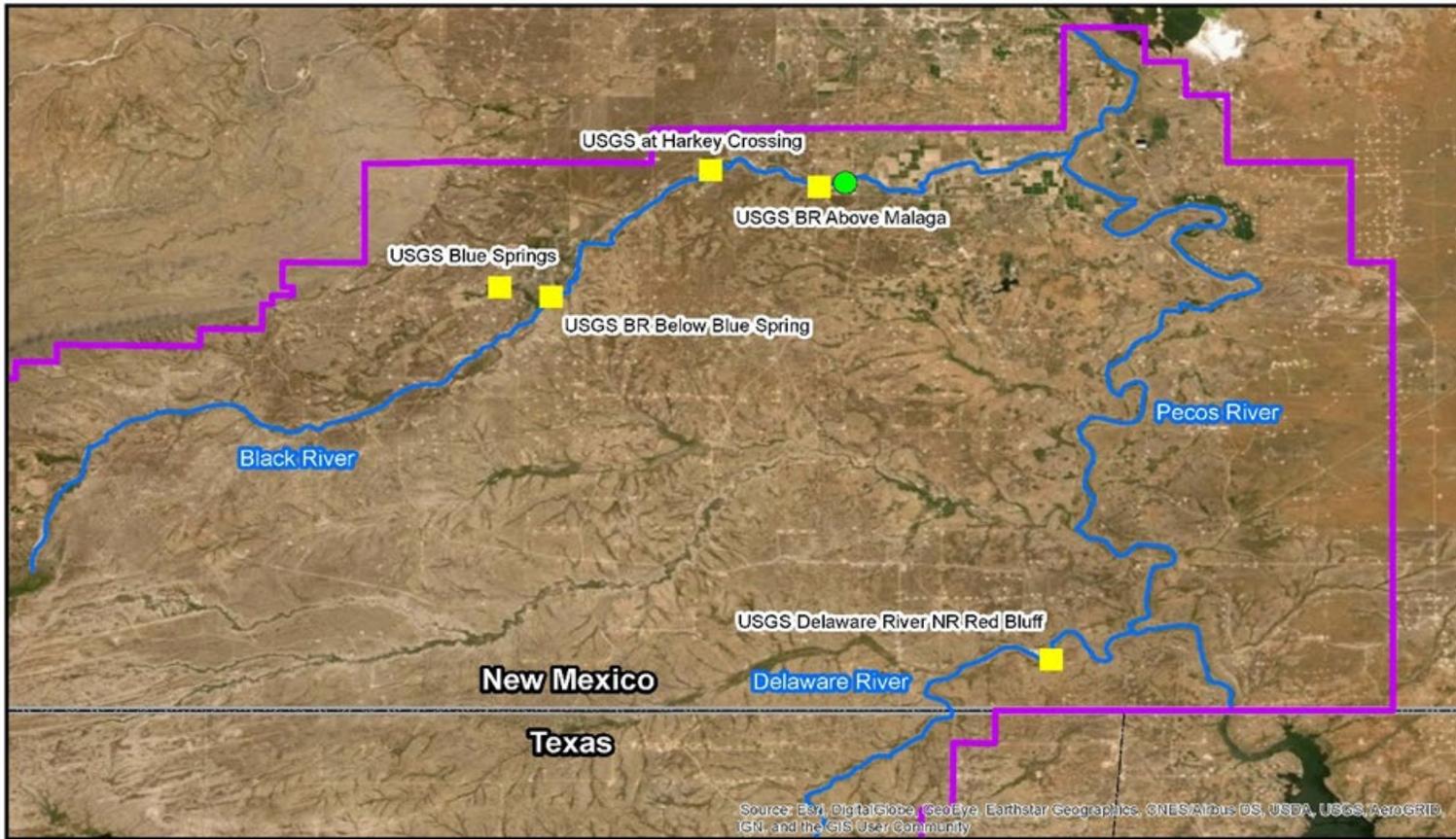
The acquisition of seismic data on enrolled parcels may also disturb the surface of other land not enrolled in this CP. The Habitat Conservation Fee calculated for seismic activity includes disturbances occurring on both enrolled and non-enrolled land.

**Routine production operations**

Routine production operations are not considered New Surface Disturbance and will not create the obligations to pay a Habitat Conservation Fee. Routine production operations are those

which do not require an agency permit or approval, and those operations that require an agency approval but do not disturb the surface.

**Appendix B - USGS Discharge Gauges in the CCA/A Boundary**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

