

Quarter Two Report 2021

April 1, 2021 – June 30, 2021



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



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I. INTRODUCTION

This report describes the activities conducted in the second quarter of 2021 under the Candidate Conservation Agreements (CCA/A) for the Texas hornshell mussel (THM) and other covered species. The Center of Excellence (CEHMM) administers a Candidate Conservation Agreement (CCA) for federal land as well as a Candidate Conservation Agreement with Assurances (CCAA) for non-federal lands. The New Mexico State Land Office (SLO) administers the CCAAs for state trust lands. Additional details about the CCA/A are available in the 2018 annual report and the agreements themselves.



Figure 1. The Delaware River near the New Mexico and Texas State Line.

The CCA/As and past reports can be found at the following URLs:

<http://cehmm.org/index.php/documents/tx-hornshell/>

https://www.fws.gov/southwest/es/documents/R2ES/TxHornshell_CCAA_NMCPL_v3_FR2980.pdf

II. ENROLLMENT & FUNDING

CCA/A enrollment data for 2021 is shown in Table 1. The SLO administered 28 Certificate of Inclusion (CIs) and CEHMM administered 42 CIs and 33 CPs. The SLO had 127,373.93 acres of state trust land enrolled in its CCAA and CEHMM had 274,256.41 acres of non-federal land enrolled through its 42 signed CIs and 312,250.60 acres of federal land enrolled through its 33 Certificate of Participation (CPs). Although CCAA enrollment was closed when the THM was listed as endangered, the annual enrolled acreage can change because participants who opted for “all activities enrollment” are required to update their enrolled acreage every year. The same acres can also be enrolled by multiple participants if the acreage is being used by multiple parties for different activities.

Table 1. CCA/A Enrollment.

	No. CIs	No. CPs	CCA Acres Enrolled	CCAA Acres Enrolled
			2021	2021
CEHMM	42	33	312,250.60	274,256.41
SLO	28	N/A	-	127,373.93
TOTAL:	70	33	312,250.60	401,630.34

Fifty Participants are enrolled in more than one of the Candidate Conservation Agreements as they have a combination of land ownership types.

During the second quarter of 2021, the Hornshell Program at CEHMM earned \$61,256.46 in Habitat Conservation Fees paid under the CEHMM CCA and CCAA. Also during the second quarter of 2021, the SLO CCAA earned \$78,139.92 in Participant Habitat Conservation Fees.

III. SECOND QUARTER COMMITTEE MEETINGS & AGENDAS

Executive Committee

The Executive Committees held two joint meetings or conference calls in the second quarter of 2021 to discuss the instream flow program and critical habitat. The Executive Committee members in 2021 are as follows:

CEHMM CCAA: Chuck Hayes, Vicky Ryan, U.S. Fish and Wildlife Service (Service) and Emily Wirth (CEHMM)

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

SLO CCAA: Chuck Hayes, Vicky Ryan, and Lisa Henne (SLO)

The Executive Committee discussed the following items at their meetings:

May 19, 2021

1. Instream Flow Program

June 3, 2021

1. Instream Flow Program
2. Technical Working Group for Instream Flow
3. Critical Habitat Discussion

Implementation Committee

The Implementation Committee members in 2021 included the following:

Service: Sara Yates

BLM: Cassie Brooks

CEHMM: Matthew Ramey

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

NMDGF: Daniel Trujillo (alternate Joanna Hatt)

The Implementation Committee met once during the second quarter of 2021 and discussed the following topics:

May 19, 2021

1. Hornshell CCA/A Program Update
2. Habitat Conservation Program Update
3. Black and Delaware River Current Conditions
4. Review of Funded Projects

IV. MITIGATION OF IMPACTS TO HABITAT

During the second quarter of 2021, CEHMM received a total of 10 notices of New Surface Disturbances (NSD) from industry. CEHMM documented 64.78 acres of NSD through the 10 notices. All of the notices of NSD took place in Management Zone D (Appendix A).

During the second quarter of 2021, the SLO received a total of 6 notices of NSD from industry. The SLO documented 76.34 acres of NSD through the 6 notices. All of the notices of NSD took place in Management Zone D.

Table 2. New Surface Disturbances in the Second Quarter of 2021.

	Well Pads	ROWs	Other Infrastructure	Total
CEHMM				
Notifications of New Surface Disturbances	3 (30.0%)	6 (60.0%)	1 (10.0%)	10
Acres Disturbed	30.79 (47.5%)	33.00 (50.9%)	0.99 (1.5%)	64.78
SLO				
Notifications of New Surface Disturbances	4 (66.7%)	2 (33.3%)	0 (0.0%)	6
Acres Disturbed	50.48 (66.1%)	25.86 (33.9%)	0 (0.0%)	76.34
COMBINED				
Notifications of New Surface Disturbances	7 (43.8%)	8 (50.0%)	1 (6.3%)	16
Acres Disturbed	81.27 (57.6%)	58.86 (41.7%)	0.99 (0.7%)	141.12

V. 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 second quarter of 2021, 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. To date in 2021, CEHMM has spent 7 days performing compliance monitoring.

VI. LANDSCAPE MONITORING

Black River Monitoring

CEHMM utilized four U.S. Geological Survey (USGS) discharge gages in the Black River and Blue Springs to monitor the daily average flow of the Black River (Figure 2). Monitoring the flow of the river is vital. The THMs require perennially wetted habitat and flowing water, as emersion (stranding) can cause death and dehydration. The CCA/A has set a minimum flow goal for the Black River at 9.3 cubic feet per second (cfs). CEHMM staff have alarms set on the flow gages, so when the river drops below 5.0 cfs, they are notified and can monitor the river more closely. The monthly average discharge fell below the 9.3 cfs threshold every month of the second quarter in 2021. There were several days during the second quarter that the USGS Black River Above Malaga gage (Gage# 08405500) read daily average flows of zero flow (Figure 3). Participants in the CCA/A who withdraw water from or near the Black River were notified each month so that they could implement any pumping curtailment conservation measures contained in their CI/CP.

Delaware River Monitoring

In 2019, the Delaware River stopped flowing for 138 days and again for 240 days in 2020. This lack of flow prompted CEHMM to start monitoring the flows of the Delaware River on a weekly basis. The river experienced a flood event of over 5,000 cfs in late May and over 20,000 cfs in June of 2021. CEHMM will continue to monitor the status of the Delaware River by utilizing the USGS gage (USGS 08408500) and a physical staff gage within the river (Figure 4).

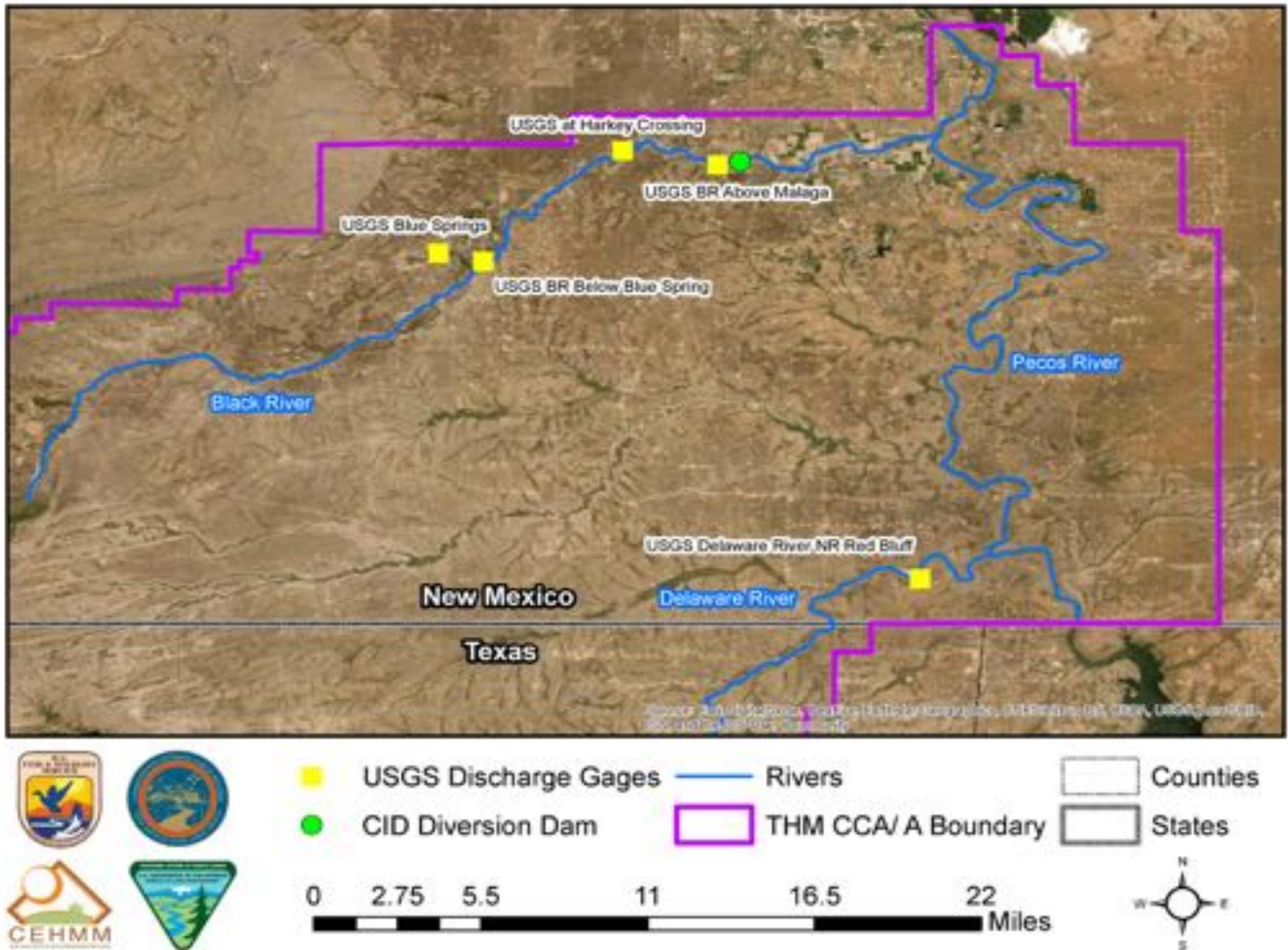


Figure 2. Map of USGS Stream Gage Locations Used by the CCA/A Program.



USGS 08405500 BLACK RIVER ABOVE MALAGA, NM

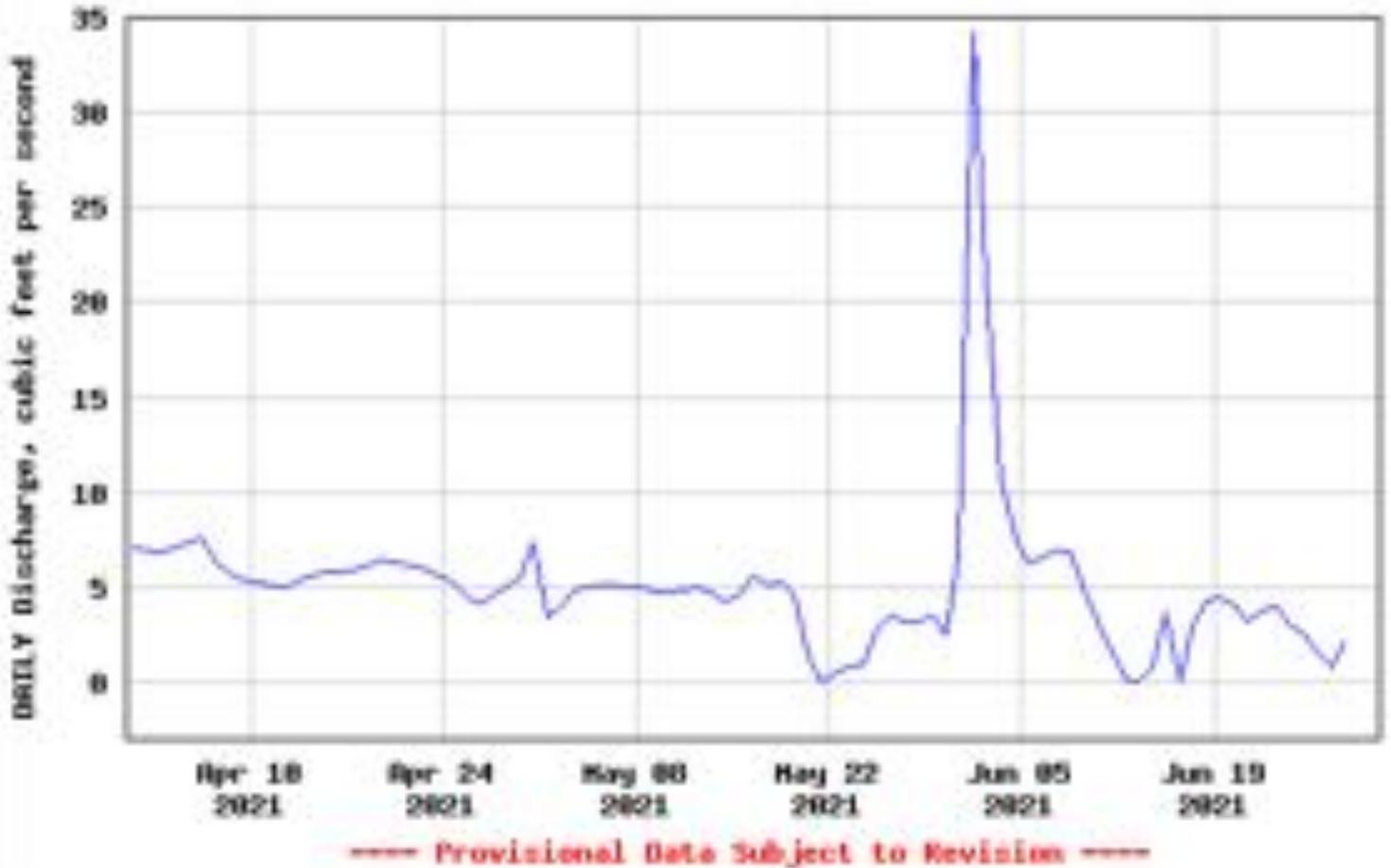


Figure 3. Daily Average Discharge of the USGS Black River Above Malaga Gage (08405500) for the Second Quarter of 2021.



USGS 08408500 DELAWARE RIVER NR RED BLUFF, NM

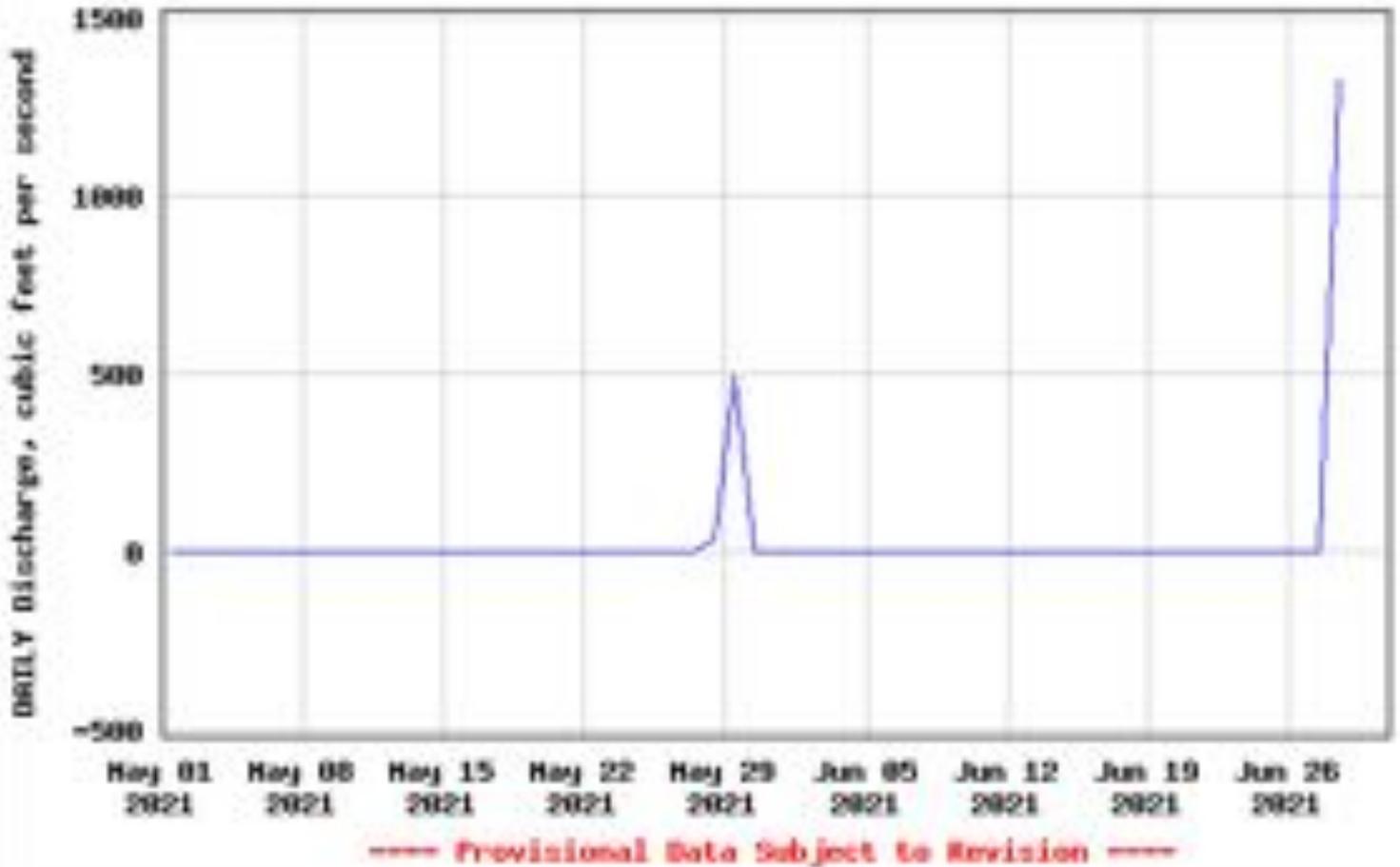


Figure 4. Daily Average Discharge of the USGS Delaware River NR Red Bluff, NM Gage (08408500) from May 1, 2021 to June 30, 2021.

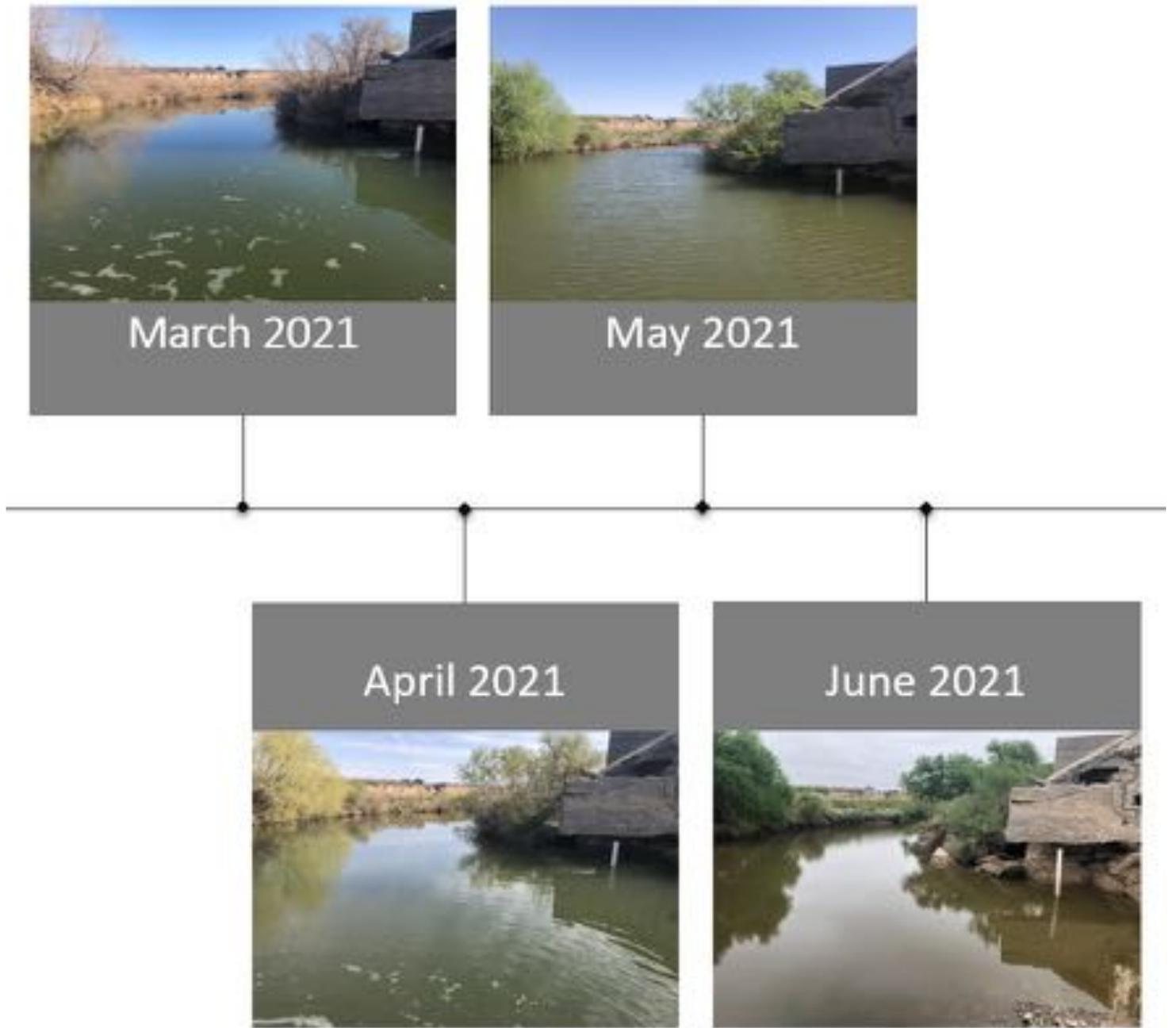


Figure 5. A Photographic Timeline of the Delaware River during the Second Quarter of 2021.

VII. SPECIES MONITORING



Figure 6. CEHMM staff with a flathead catfish that was sampled in the Black River.

During the second quarter of 2021, CEHMM assisted the New Mexico Department of Game and Fish (NMDGF) in their annual fish population survey along the Black River. Fish populations were surveyed using numerous sampling methods, including trammel nets and electroshocking. Fish that were caught were weighed, measured, and released back into the Black River. Potential THM host fish were inspected for glochidia before being released.

CEHMM also assisted Miami University (Ohio) and the NMDGF with Pecos springsnail surveys along the Black River during the second quarter. These surveys primarily consisted of collecting substrate samples and identifying and counting the total number of springsnail within the sample.

VIII. OUTREACH & EDUCATION

During the second quarter of 2021, CEHMM staff attended two freshwater mussel conservation webinars. The Service hosted these webinars and discussed 1) the dependence of freshwater mussels on host fish and 2) the dangers of dams to mussel ecology. CEHMM utilizes the information gathered at these educational talks to make well-versed management decisions regarding the THM.

In April of 2021, CEHMM attended the Southern Wetlands Roundtable hosted by the New Mexico Environment Department (NMED). Scientists and project managers from around the state of New Mexico shared their wetlands research and network with other professionals at the roundtable. CEHMM can utilize ideas from other projects around the state to make more informed management decisions.

On May 1 of 2021, CEHMM staff participated in Riverblitz, an annual river cleanup event in the city of Carlsbad and Eddy County. 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 with litter removed from the Black River.

In June, CEHMM presented to the Permian Basin Petroleum Association's endangered species committee regarding the THM CAAs and the progress of the developing hornshell Habitat Conservation Plan.

IX. SECOND QUARTER 2021 PROJECT UPDATES

CEHMM and the SLO did not fund any new projects during the second quarter of 2021.

Black River Wetland Action Plan- In the fall of 2019, CEHMM submitted a proposal to the New Mexico Environment Department for the Black River Wetland Action Plan (WAP), and the contract was awarded in the spring of 2020. The THM CCA/A provided matching funds in the amount of \$4,669.81. The New Mexico Wetlands Program facilitates the development of comprehensive wetlands restoration and protection in watersheds throughout New Mexico. The WAP will be a planning document designed to address wetlands and riparian resources within the boundaries of the Black River watershed. A WAP describes the current status of wetlands/riparian types, distribution, and conditions within the watershed. It is recognized as a working document representing the best information available at the time. This plan also documents and provides information for improving wetland conditions, identifies sites that can be protected and/or restored, and determines where additional monitoring and inventory are needed.

Q2 Progress: During the second quarter of 2021, the majority of the WAP's resource management, resource analysis section, and executive summary were developed. The resource management section includes subsections such as: wetlands management and prioritization, wetlands impairments and measures to reduce impacts on wetlands, potential projects to protect and restore wetlands, potential funding options, and monitoring component to measure success of implemented projects. The first draft of the WAP was submitted to the NMED on July 1, 2021. In the third quarter the WAP will be finalized and submitted to the NMED.

CEHMM/SLO Instream Flow Program Initiative for the Texas Hornshell Mussel - CEHMM and the SLO partnered on a proposal from CEHMM to the National Fish and Wildlife Foundation (NFWF) for a \$250,000 grant to fund the development of an instream flow program to protect the endangered THM and other at-risk species in the Black and Delaware rivers. The overall objective of the initiative is to provide instream flow for the TMH 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.

Q2 Progress: During the second quarter of 2021, CEHMM and the SLO developed a technical working group made up of local county and state officials. During quarter three CEHMM and the SLO will hold a technical working group meeting to start the Instream Flow Program.

River Flow Regime Requirements Study- This study was approved and funded in October of 2020 for \$168,772. A collaborative team of researchers from Miami, Texas A&M, and Auburn Universities will conduct 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 THM. Relationships between flow, temperature, and dissolved oxygen in the Black River will also be studied. Results will be used to identify flow regimes most likely to induce mortality and/or thermal stress in THM. 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 THM populations in the Black River. This project is currently on hold pending further budget discussions with the universities and approval by the Implementation and Executive Committees due to funding delays with the original funder.

Q2 Progress: During the second quarter of 2021, CEHMM, Texas A&M University and the NMDGF conducted three field visits to the Black River to collect gravid females for the minimum flow study research.

Black River Erosion Control Project - This erosion control project was approved and funded in August 2020 for \$5,291.00 to restore five acres of habitat along the Black River. Ten to fifteen erosion control structures will be 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 will be cut to a width of 36 inches and bent into an L with the bottom 18 inches being buried. Natural woody substrate will be lined on the bottom of the fence to create a porous dam.

Q2 Progress: During the second quarter of 2021, CEHMM staff installed 20 erosion control structures in an ephemeral drainage along the Black River. Each structure had rock and natural debris installed on the uphill side to aid in sediment collection.

Flume Draw Erosion Control Project - This erosion control project was approved and funded in August 2020 for \$2,912.18 to restore three acres of habitat along the Black River. Ten erosion control structures will be 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 will be cut to a width of 36 inches and bent into an L with the bottom 18 inches being buried. Natural woody substrate will be lined on



Photo Credit: Charles Randklev TAMU

Figure 8. Texas A&M graduate students working to identify environmental thresholds of Texas hornshell glochidia.



Figure 9. One of twenty erosion control structures installed along headcuts of the Black River.

the bottom of the fence to create a porous dam.

Q2 Progress: During the second quarter of 2021, CEHMM staff worked with the BLM to obtain NEPA and archeological clearance for the project. Results for the BLM's approval are still pending. However, pending approval from the BLM, the project is expected to be completed in the third quarter of 2021.

X. FUTURE PROJECTS

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, 2021
- Q2: April 1, 2021
- Q3: July 1, 2021
- Q4: October 1, 2021

Proposal forms are available for download:

<https://www.cehmm.org/index.php/info/news/51-texas-hornshell-cca-a-project-proposals-now-being-accepted>

XI. HABITAT CONSERVATION PLAN

Due to the THM federal listing in 2018, the CCAAs are closed to new Participant enrollment. To provide stakeholders with another option to participate in a conservation agreement, CEHMM, the Service, the SLO, and the NMDGF have been working together since 2019 to develop a Habitat Conservation Plan (HCP) for the THM and other CCA/A covered species. An HCP is similar to the CCA/A since it is a mechanism for Participants to engage in its Covered Activities, while promoting conservation of the THM and other Covered Species. The HCP was submitted to the stakeholders for comment during the second quarter of 2021.

The HCP will be very similar to the CCA/A in many ways. Like the CCA/A, participation in the HCP will be voluntary. The HCP will cover the same species as the CCA/A. Both the CCA/A and HCP will have the same boundary area. Also, enrollment into the HCP will be very similar to that of the CCA/A, in that each Participant will enroll through a CI unique to their enrollment. However, one important topic to note is that federal lands cannot be enrolled into the HCP.

XII. TEXAS HORNSHELL PROPOSED CRITICAL HABITAT DESIGNATION

The Service has published proposed critical habitat (Appendix B) for the Texas hornshell in the Federal Register. <https://www.federalregister.gov/documents/2021/06/10/2021-11966/endangered-and-threatened-wildlife-and-plants-designating-texas-hornshell-critical-habitat>.

The Service is proposing to designate 463.6 river miles of critical habitat, encompassing the Black and Delaware rivers in both Eddy County, New Mexico and Culberson County, Texas. Although, they are considering excluding the Black and Delaware rivers due to the existing Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA), of which you are enrolled. This proposed rule is currently open for comment, and all comments must be received by August 9, 2021. We highly encourage all stakeholders to read through the proposal and submit comments in support of an exclusion due to the ongoing conservation through the CCA/CCAAs. Comments should include the following:

- (1) Describe measures to conserve the physical and biological features of the species' habitat;
- (2) Explain the effectiveness of such measures;
- (3) Demonstrate long-term implementation of the measures; and
- (4) Describe any monitoring or adaptive management to ensure conservation measures remain effective.

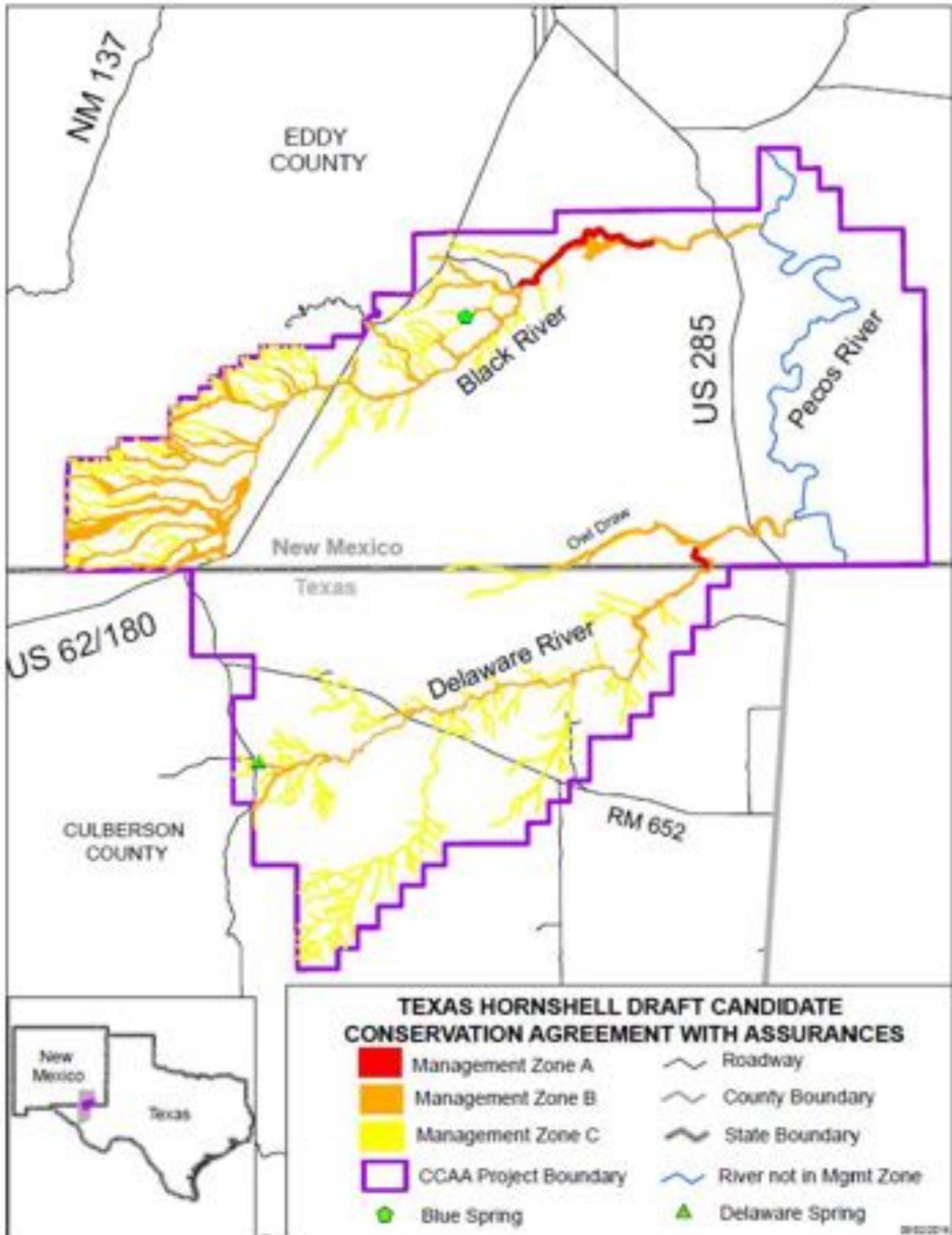
SIGNATURE

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

Signed: Emily K. Wirth
Emily K. Wirth
Executive Director

Date: 7/9/2021

APPENDIX A. TEXAS HORNSHELL CCA/A MANAGEMENT ZONES



APPENDIX B. USFWS WHAT IS CRITICAL HABITAT



U.S. Fish & Wildlife Service

Critical Habitat

What is it?

When the Fish and Wildlife Service proposes a species for listing under the Endangered Species Act, we are required to consider whether there are geographic areas that contain essential features on areas that are essential to conserve the species. If so, we may propose designating these areas as critical habitat.

Here are answers to some of the most frequently asked questions about critical habitat.

What is critical habitat?

Critical habitat is the specific areas within the geographic area, occupied by the species at the time it was listed, that contain the physical or biological features that are essential to the conservation of endangered and threatened species and that may need special management or protection. Critical habitat may also include areas that were not occupied by the species at the time of listing but are essential to its conservation.

An area may be excluded from critical habitat designation based on economic impact, the impact on national security, or any other relevant impact, if we determine that the benefits of excluding it outweigh the benefits of including it, unless failure to designate the area as critical habitat may lead to extinction of the species.

Critical habitat designations affect only Federal agency actions or federally funded or permitted activities. Critical habitat designations do not affect activities by private landowners if there is no Federal " nexus"—that is, no Federal funding or authorization. Federal agencies are required to avoid "destruction" or "adverse modification" of designated critical habitat. The ESA requires the designation of "critical habitat" for listed species when "prudent and determinable."

What provisions of the Endangered Species Act relate to critical habitat?

To protect endangered and threatened species, the ESA makes unlawful

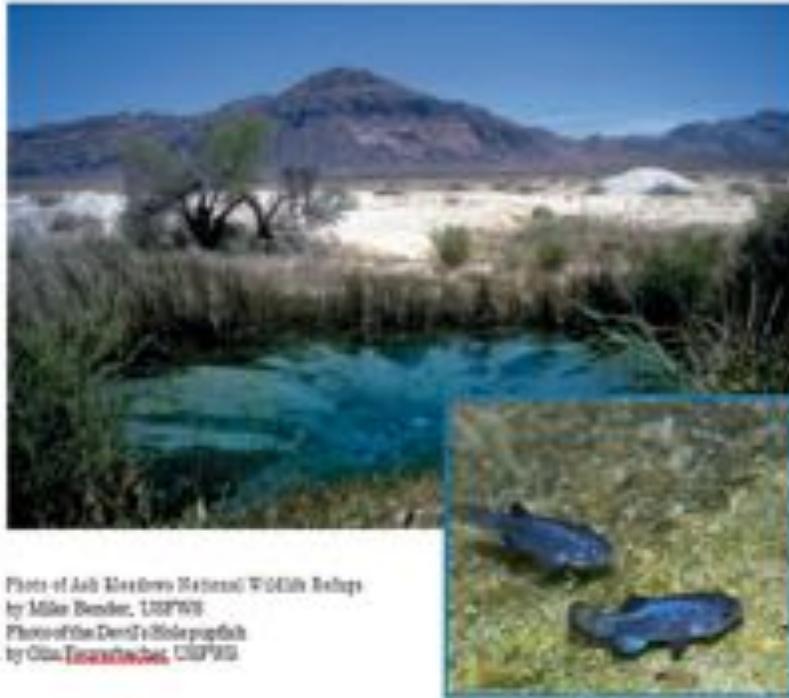


Photo of Ash Meadows National Wildlife Refuge by Mike Bender, USFWS
Photo of the Devils Hole pupfish by Olin Tovar-Rubio, USFWS

a range of activities involving such species without a permit for purposes consistent with conservation goals of the ESA. These activities include take, import, export, and interstate or foreign commerce. "Take" includes kill, harm, harass, pursue, hunt, capture, or collect or to attempt to engage in any such conduct.

The ESA requires Federal agencies to use their authorities to conserve endangered and threatened species and to consult with the Fish and Wildlife Service about actions that they carry out, fund, or authorize to ensure that they will not destroy or adversely modify critical habitat. The prohibition against destruction and adverse modification of critical habitat protects such areas in the interest of conservation.

How does the Fish and Wildlife Service determine areas to designate as critical habitat?

Biologists consider physical and biological features that the species needs for life processes and successful reproduction. These features include:

- space for individual and population growth and for normal behavior;
- cover or shelter;
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- sites for breeding and rearing offspring, germination, or seed dispersal and

Myths & Realities

Does designating critical habitat mean no further development can occur?

No. A critical habitat designation does not necessarily restrict further development. It is a reminder to Federal agencies of their responsibility to protect the important characteristics of these areas.

Does a critical habitat designation affect all activities that occur within the designated area?

No. Only activities that involve a Federal permit, license, or funding, and are likely to destroy or adversely modify critical habitat will be affected. If this is the case, we will work with the Federal agency and landowners—including private landowners—to amend their project to enable it to proceed without adversely affecting critical habitat. Most Federal projects are likely to go forward, but some may be modified to minimize harm.

■ habitats that are protected from disturbances or are representative of the historical geographical and ecological distributions of the species.

What is the process for designating critical habitat?

The Service may propose to list a species and concurrently propose to designate critical habitat, or it can address a species' critical habitat up to a year after the date of its listing. The Service proposes a critical habitat designation, publishing it in the *Federal Register* and requesting public comments. We may modify a proposal as a result of information provided in public comments. We base our final designation of critical habitat on the best scientific data available, after taking into consideration the probable economic and other impacts of the designation. After reviewing the comments, the Service responds to them and publishes a rule, including final boundaries, in the *Federal Register*.

Are Federal agencies required to consult with the Fish and Wildlife Service outside critical habitat areas?

Yes, even when there is no critical habitat designation, Federal agencies are required to fulfill their conservation responsibilities by consulting with the Service if their actions "may affect" listed species. The requirement helps to ensure that Federal agencies do not contribute to the decline of endangered and threatened species or their potential for recovery.

What is the purpose of designating critical habitat?

Designating areas as critical habitat does not establish a refuge or sanctuary for a species. Critical habitat is a tool to guide Federal agencies in fulfilling their conservation responsibilities by requiring them to consult with the Service if their actions may "destroy or adversely modify" critical habitat for listed species. A critical habitat designation helps to protect areas—occupied and unoccupied—necessary to conserve a species. Critical habitat has value in requiring the Service to gather more detailed information about a species than what is required for listing, thereby increasing knowledge to share with Federal agencies—and, in turn, increasing their effectiveness to conserve a listed species.

Are all the areas within the mapped boundaries considered critical habitat?

No. Our rules typically exclude developed areas such as buildings, roads, airports, parking lots, piers, and similar facilities. Accompanying text describes those areas.

Critical habitat is designed to protect the essential physical and biological features of a landscape and essential areas in the appropriate quantity and spatial arrangement that a species needs to survive and reproduce and ultimately be conserved.

Does the ESA require consideration of economic impacts as part of designating critical habitat?

Yes. The Service is required to consider potential economic impacts, as well as any other benefits or impacts of designating critical habitat—and may exclude an area if the benefits of excluding it outweigh the benefits of including it unless that would result in the extinction of the species.

Do economic considerations affect decisions to list a species as an endangered or threatened species?

No, the Act requires listing decisions to be made solely on the basis of the best available scientific and commercial information.

What is the impact of a critical habitat designation on economic development?

Most activities that require consultation by Federal agencies proceed without modification. In areas where the species is not present, some project modifications that would not have occurred without the critical habitat designation may be required. For example, the U. S. Army Corps of Engineers may schedule a beach renourishment project—that is, adding sand to a beach to stabilize it—before or after the nesting season of sea turtles to avoid harm to the sea turtles, their eggs, or their hatchlings.

Which species have critical habitat designated?

A list of all ESA protected species with designated critical habitat can be viewed online at <https://ecos.fws.gov/ecp/report/table/critical-habitat.html>

U. S. Fish and Wildlife Service
Endangered Species Program
5275 Leesburg Pike
Falls Church, VA 22041
703-358-2171
<http://www.fws.gov/endangered/>

March 2017