Gila River Basin Native Fishes Conservation Program
Policy Committee Meeting

Thursday, May 1, 2025
12:00 PM – 2:00 PM (AZT)
Virtual

DRAFT Meeting Notes

Meeting Attendees: Dominic Graziani, Kent Mosher, Betsy Hedden (USBR), Scott Richardson (USFWS), Yvette Paroz (USFS), Heidi Blasius (BLM), Kirk Patten (NMDGF), Brian Hickerson, Julie Carter (AGFD)

Meeting Objectives:

- Review work completed by the Program in the last year.
- Finalize recommendations for FY2026 Work Plan.
- Provide relevant updates on projects, contracts, and species recovery.

Welcome - *Dominic Graziani, Bureau of Reclamation*

- USBR is operating under continued uncertainty due to changes in the federal government. Despite these challenges, this program remains a priority. USBR appreciates everyone taking the time to participate today.

Introductions and Agenda Review - *Kent Mosher, Bureau of Reclamation*

Program Update - *Reclamation and USFWS*

- USFWS has lost ~40% of its staff overall.
    - Two Assistant Project Leaders retired. Heather Whitlaw's workload has increased, and she was unable to attend.
    - Ian Murry (GRBNFCP lead) resigned due to position uncertainty.
    - Jill Morrow remains the lead for loach minnow and spikedace.
    - Scott Richardson is now leading topminnow and pupfish efforts.
    - Brittany Snow (razorback sucker lead) has departed.
    - Steven Ingram remains the Colorado pikeminnow lead; Jeff Servos continues to lead gartersnake efforts.
    - USFWS projects are increasingly focused on Executive Orders and Secretarial Orders, but support for this program is expected to continue.
- AGFD has no recent staff changes.
- NMDGF has no committee changes; Joanna Hatt is now the Gila River Basin Supervisor.
- USFS reported that Janie Agyagos and Albert Sillas have retired. No fish biologists remain on any forest in Arizona. Eileen remains active in the Gila.
- BLM has no o recent staff changes.
- USBR has no staff changes within the GRBNFCP however there are ongoing changes within the agency.
    - USBR funding and acquisition processes remain in flux due to administrative and staffing changes.

    - A continuing resolution has extended funding through September with an assumed budget similar to FY2024, but funds have not yet been loaded—tentative load date is May 15.
    - USBR has lost Grant and Contract Specialists associated with these agreements, potentially causing delays.
    - Efforts continue to award funds by the end of the fiscal year.
    - The Assistant Secretary for Water and Science has placed a temporary hold on all financial agreements (FAs) in the seven Colorado River Basin states; further details are unavailable at this time. This could cause funding gaps.
    - All USBR agreements now require DOGE (Department of Government Efficiency) review, which may cause further delays. Justifications are being framed around water-transfers and related objectives.
    - A new internal agreement process, GINV, is being implemented. All existing agreements will need to be deobligated and reobligated under this process.
    - For questions about specific contracts, contact Betsy Hedden or Kent Mosher.
- Program Status Update (Year in Review – 2024)
    - See presentation.
- CAP Consultation Update
    - The new Biological Opinion (BO) is delayed due to staffing changes.
    - The BO is approximately 80% complete. Remaining steps: internal USFWS review, USBR review, finalization by USFWS.
    - Target completion: early summer.

FY2026 Work Plan - *Kent Mosher, Bureau of Reclamation*

- Review of Project Proposals (Kent)
    - See workplan.
- Technical Committee Clarifications (if needed, All)
    - Kirk Patten (NMDGF), Brian Hickerson (AGFD), Heidi Blasius (BLM Safford FO), and Kent Mosher (BLM Tucson FO) summarized proposed work from their respective agencies.
    - Kirk Patten inquired about funding availability for federal partners.
        - Yvette Paroz (USFS) confirmed USFS will be able to utilize funds.
        - NMFWCO previously confirmed they can still access funding as needed, despite earlier concerns.
- Policy Committee Recommendation
    - USBR, Dominic Graziani, recommends approval
    - NMDGF, Kirk Patton, recommends approval
    - AZGFD, Julie Carter, recommends approval
    - USFWS, Scott Richardson, recommends approval

Updates - *All*

- Species Status Updates (Scott)
    - Spikedace and loach minnow biological reports are in progress.
    - Gila topminnow SSA delayed due to staffing changes; efforts resumed last week.
    - Desert pupfish five-year review is underway.
    - Narrow-headed gartersnake SSA expected to be completed this fiscal year.
    - Northern Mexican gartersnake SSA will begin once narrow-headed SSA is complete.
- Fish Barriers (Kent)
    - See presentation
- Fish Monitoring (Betsy)

    - See Presentation
- Information and Education (Betsy)
    - See presentation
- Other Agency Updates (all)
    - NMDGF:
        - Major legislative reform passed and partially signed by the governor.
        - The department will become the Department of Wildlife with an expanded mission to include nongame species and species of conservation concern.
        - Position qualifications and office locations may change.
        - A license fee increase will generate new revenue.
        - The Land of Enchantment Legacy Fund passed, providing endowment-based funding. Approximately $3.5 million disbursement is expected July 1.
        - A three-year ROW appropriation will also support operations.
        - Four new permanent positions are being added, including one for Gila Basin field support.
        - Glenwood State Fish Hatchery is undergoing renovations; the hatchery is now dedicated to Gila trout. A new infiltrator system is generating more water than expected and may support future production of GRBNFCP species.
- USBR to AGFD: Asked for a point of contact for Fish and Wildlife Coordination Act.
    - Julie Carter offered to receive inquiries and route them appropriately.
    - AGFD confirmed email is acceptable; physical mail is not required.
- Annual Reporting/Technical Committee Meeting Date
    - Annual reporting: Tuesday December 9th, 2025
    - Technical meeting: Wednesday, December 10th, 2025.
        - Coordination will be needed for a spikedace/loach minnow implementation meeting following the technical meeting.

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GILA RIVER BASIN NATIVE FISHES CONSERVATION PROGRAM

Year in Review (2024)

5 Year Strategic Plan (2023 – 2027): Scientific Foundation

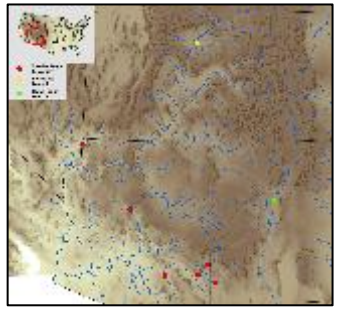
Scientific Foundation		
No	**Goal**	**Objective**
1	Investigate novel methods to control nonnative aquatic biota.	a) Seek at least one opportunity to partner or fund new control methods or improvements upon existing methods.
2	Update and assemble existing knowledge of life history needs and ecology of Gila River basin native aquatic biota.	a) As opportunities arise, initiate ecological/life history studies of native biota where such understanding can assist with conservation goals of the Program.
3	Improve propagation techniques for spikedace and loach minnow.	a) At a minimum, identify and implement at least one research project aimed at improving propagation.
4	Complete genetic management plans for priority species.	a) Develop genetic management plans for spikedace, loach minnow, and Gila topminnow.
5	Investigate new stocking strategies to improve survival of repatriated fish.	a) At a minimum, document existing stocking strategies, identify locations with poor survival, and identify likely causes of poor survival.

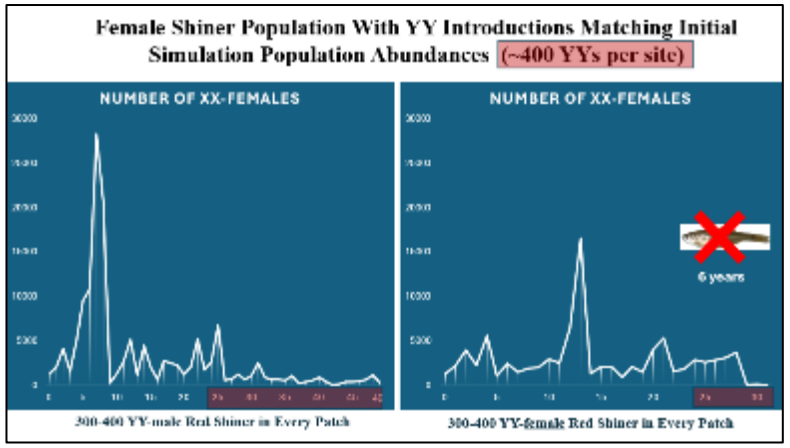
Goal #1:
Investigate novel methods to control nonnative aquatic biota.

Mechanical Control Investigation Using YY Fish (Red Shiner) IN PROGRESS

Work Completed in 2024:

- Further refined population modeling and simulations.
- Additional feminization experiments.
- Genetic sample collection for sex-ID marker concordance.
- Red Shiner added to estradiol INAD.





Chad Teal
(Principal Investigator)

Phil Saporito
(Masters Student)

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Goal #2:
Update and assemble existing knowledge of life history needs.

Habitat Suitability and Predictive Analytics for Informing the Translocation of Gila Chub in the San Francisco River, NM

COMPLETED

HABITAT SUITABILITY AND PREDICTIVE ANALYTICS FOR INFORMING THE TRANSLOCATION OF AN ENDANGERED DESERT FISH, GILA CHUB
(*GILA INTERMEDIA*)

BY

Kelsie Rane Field, BS

A thesis submitted to the Graduate School

in partial fulfillment of the requirements

for the degree

Master of Science

Major: Fish, Wildlife and Conservation Ecology
Concentration: Fisheries

NEW MEXICO STATE UNIVERSITY

LAS CRUCES, NEW MEXICO

April 2023

Site Name	Average Gila Chub Abundance (Standard Error, Range)
Bonita Creek, Arizona	82.3 (34.2, 33 – 178)
Hot Springs, New Mexico↓*	29.0 (3.5, 14.2 – 37.7)
NMDGF Permanent, New Mexico↓*	26.4 (1.6, 24.8 – 29.7)
The Box, New Mexico (with outlier)↓*	18.6 (7.0, 9.9 – 53.5)
Dix Creek, Arizona↓	15.1 (12.1, 0 – 87)
The Box, New Mexico (without outlier)↓*	11.6 (0.8, 9.9 – 14.0)
Harden Ciénega Creek, Arizona↓	8.4 (3.9, 0 – 27)
Mule Creek, New Mexico↓	1.3 (0.5, 0 – 4)
Eagle Creek, Arizona	0.1 (0.1, 0 – 1)

↓ indicates sites in the San Francisco River drainage
* indicates translocation sites

Colleen Caldwell
(Principal Investigator)

Kelsie Field
(Masters Student)

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Goal #3:
Improve propagation techniques for spikedace and loach minnow.

Aquatic Research and Conservation Center (ARCC)
Loach Minnow Nest Spacing Study

IN PROGRESS

Work Completed in 2024:

- Continue to investigate effects of three nest spacings (25.4, 38.0, and 50.8 cm) on larval fish production.

Species	Lineage	Raceways	Brood end	Larvae
Spikedace	Aravaipa	A6, B3	98	684
Spikedace	Gila River	A4	108	662
Spikedace	Gila Forks	A2, B5	41	949
Loach Minnow	Aravaipa	B6	49	207
Loach Minnow	Blue River	A1, A3, A5, A7	111	310
Loach Minnow	Gila Forks	B4	91	584
Loach Minnow	San Francisco	B1, B2	44	422

Joshua Walters

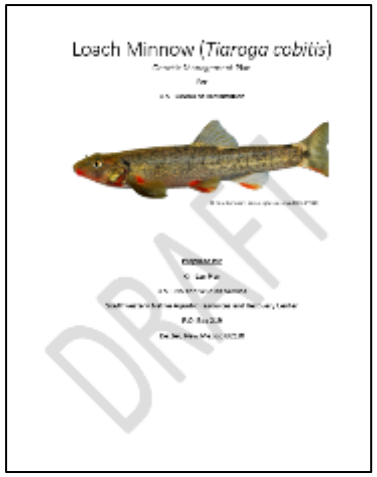
Hudman Evans

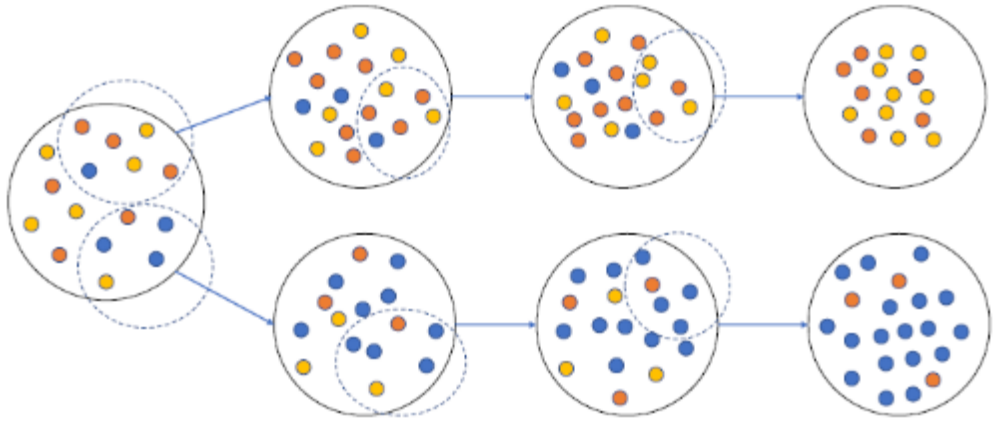
Goal #4:
Develop genetic management plans for priority species.

Gila Topminnow Genetic Management Plan COMPLETED
Loach Minnow and Spikedace Genetic Management Plan IN PROGRESS

Work Completed in 2024:

- Gila Topminnow
  - Genetic Management Plan finalized in 2023.
  - Additional genetic research being conducted on Mexico populations (Texas A&M).
- Loach Minnow and Spikedace
  - Initial drafts for both species provided to Reclamation and USFWS for review.
  - Genetic Management Plans to be finalized in 2025





Wade Wilson
(Principal Investigator)

Emily Ostrow
(Spikedace GMP)

Kin-Lan Han
(Loach Minnow GMP)

Goal #5:
Investigate new stocking strategies to improve survival of repatriated fish.

Razorback Sucker Post-Stocking Survival Study in the Lower Verde River and Horseshoe Reservoir

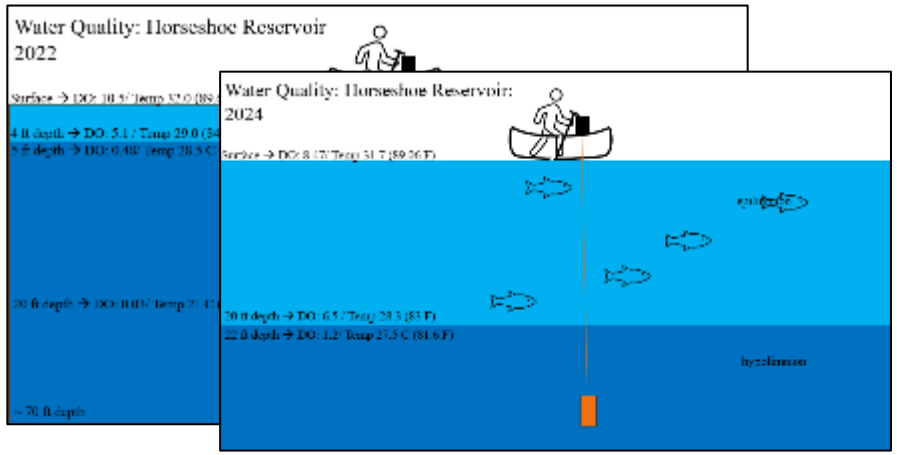
IN PROGRESS

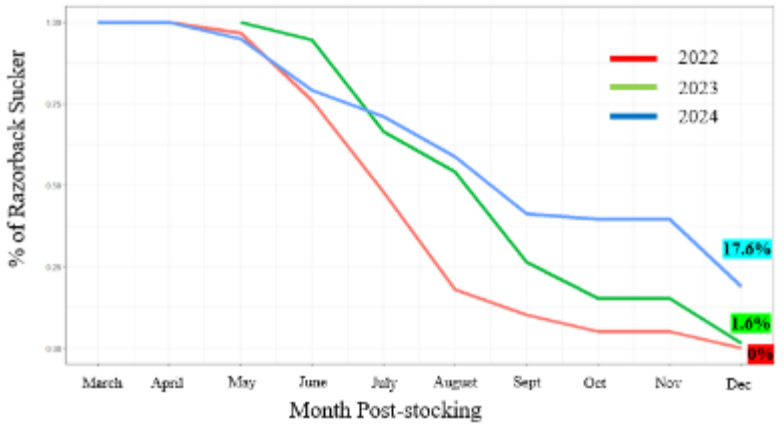
Work Completed in 2024:

- Final year of razorback sucker stocking and monitoring.

Preliminary Results:

- ~2,500 razorback sucker/year (~7,500 total); two stocking locations (river + reservoir)
- Low survival between June – October
- No sig. diff. between 2022 and 2023 survival; 2024 sig. higher: $P = 0.034$
- Survival and mortality rates related to water quality and predation.





Scott Bonar
(Principal Investigator)

Chris Jenney
(PhD Candidate)

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5 Year Strategic Plan (2023 – 2027): Preventing Extinction and Managing Towards Recovery

Preventing Extinction and Managing Toward Recovery		
No	**Goal**	**Objective**
1	Maintain the Aquatic Research and Conservation Center (ARCC) and explore alternative locations for establishment of hatchery stocks of upper Gila and San Francisco River lineages of spikedace and loach minnow.	a) Use genetic management plans for development of brood stock management plan.
		b) Augment hatchery populations as outlined in broodstock management plans.
		c) Ensure the Aquatic Research and Conservation Center (ARCC) has the staff support and supplies necessary to maintain propagation of spikedace and loach minnow at a level needed to meet stocking demands provided wild fish are available.
		d) Determine start up and O&M costs for New Mexico hatchery stocks of spikedace and loach minnow.
2	Protect native fish populations from nonnative fish invasions.	a) Complete the scoping, environmental compliance, and design of two additional fish barriers, and initiate their construction.
3	Remove nonnative aquatic species threats.	a) Eradicate or suppress nonnative aquatic species from a minimum of five surface waters to secure existing native fish populations and/or prepare for repatriations of native fishes, which can also increase prey availability and improve habitat conditions for narrow-headed and/or northern Mexican gartersnakes.
4	Replicate populations and their associated native fish community into protected streams and other surface waters.	a) Replicate Gila topminnow stocks into a minimum of 5 surface waters.
		b) Replicate each of the other priority fishes into a minimum of one surface water.
		c) In addition to objectives a and b, replicate native fishes (i.e., priority or non-priority fishes) into a minimum of 5 surface waters to improve prey base for narrow-headed and/or northern Mexican gartersnakes.
5	Protect, maintain, and restore degraded aquatic habitats to use for native fish.	a) Restore habitats in a minimum of one location with existing populations or in a location planned for repatriations.
		b) Acquire or work with other programs to acquire easements, land, or water rights to protect key surface water.
6	Inform and educate the public about the conservation status and values of native fishes and the problems nonnative fishes create for them.	a) Implement a minimum of one I&E opportunity per year.
		b) Update Program website at least twice per calendar year.
7	Monitor to quantitatively measure and evaluate project success in improving the status of target species and their habitats.	a) Implement and report on Long-Term Monitoring Plan for Native Fish Populations in the Gila River Basin.
		b) Develop/identify monitoring standards as necessary to adequately evaluate fish barrier function, success and failure of nonnative fish species eradications/suppression, and success and failure of repatriations of native fish species.
		c) Incorporate eDNA monitoring techniques and/or other emerging technologies into monitoring practices.
8	Maintain accurate Program tracking records.	a) Continue to develop annual workplans and reports to track program accomplishments.

Goal #1:
Maintain ARCC and explore alternative locations for establishment of hatchery stocks of upper Gila and San Francisco River lineages of spikedace/loach minnow.

IN PROGRESS

Work Completed in 2024:

- ARCC Propagation
  - All spikedace and loach minnow lineages successfully spawned.
  - Eagle Creek roundtail chub lost due to disease outbreak.
- ARCC Broodstock Augmentations
  - 45 loach minnow and 51 spikedace (Aravaipa Creek)
- ARCC Stockings
  - None in 2024.
- Virtual Call and On-site Visit with ABQ BioPark in Jan 2025.

Species	Lineage	Raceways	Brood end	Larvae
Spikedace	Aravaipa	A6, B3	98	684
Spikedace	Gila River	A4	108	662
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Goal #2:
Protect native fish populations from nonnative fish invasions.

IN PROGRESS

Proposed/Investigating:

- Eagle Creek
- Verde River (2 barriers)
- San Francisco River (Pleasanton Diversion)

Constructed:

- Aravaipa Creek
  - 2024 O&M – graffiti removal
- Blue River
  - 2024 O&M – steel plate armoring
- Bonita Creek
- Cottonwood Spring
- Fossil Creek
- Hot Springs Canyon
- Spring Creek (Oak)
- West Fork Black River

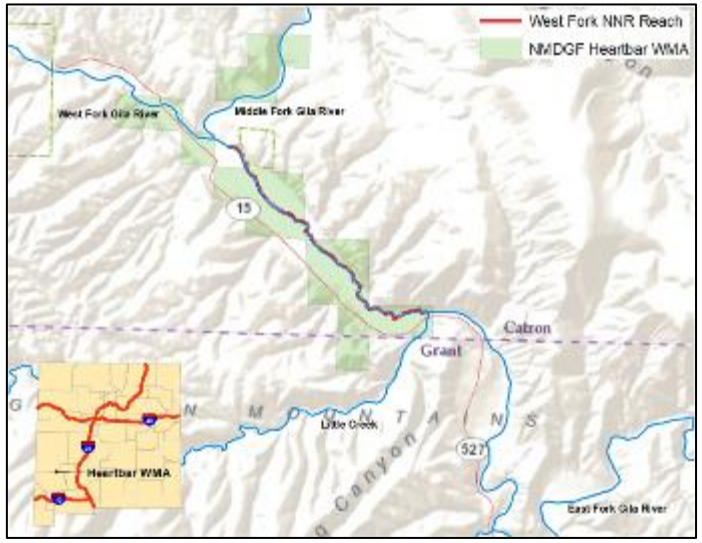
Goal #3:
Remove nonnative aquatic species threats.

IN PROGRESS

Work Completed in 2024:

- Arizona:
  - Harden Cienega
  - Redfield Canyon
  - Ash Canyon/George Wise Spring
  - Fresno Canyon
  - Aravaipa Creek
  - Bonita Creek
  - Upper Verde River (investigations)

- New Mexico:
  - West Fork Gila River



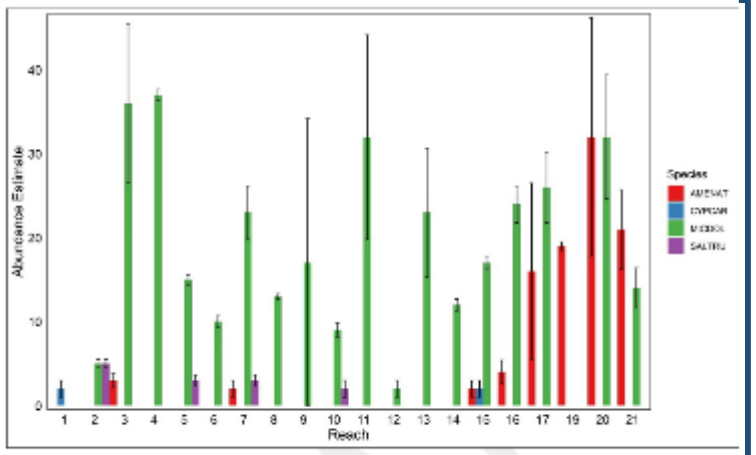


Figure 3. Estimated abundance and standard errors from two-pass depletion models of nonnative fishes captured across all reaches sampled during nonnative removal sampling in the West Fork Gila River in 2024.

Goal #4:
Replicate populations and their associated native fish community into protected streams and other surface waters.

IN PROGRESS

Work Completed in 2024:

- Translocations:
  - Sharp Spring (Gila topminnow)
  - Hidden Water Spring (Gila topminnow)
  - East Fork Sabino Canyon (Gila chub)

- Post-translocation Monitoring
  - Maternity Wildlife Pond (Gila topminnow)
  - Unnamed Drainage #68b (Gila topminnow)
  - Aravaipa Creek (Gila topminnow)
  - Telegraph Canyon/Arnett Creek (Gila topminnow)
  - Sharp Spring (Gila topminnow)
  - Harden Cienega Creek (Gila topminnow)
  - Burro Cienega (Gila topminnow)
  - Spring Creek (spikedace)
  - Blue River (spikedace, roundtail chub)
  - Rarick Canyon (Gila chub)
  - Sabino Canyon – upper (Gila chub)
  - Bear Creek (loach minnow)

Goal #5:
Protect, maintain, and restore degraded aquatic habitats to use for native fish.

IN PROGRESS

Work Completed in 2024:

- The Nature Conservancy and Reclamation had ad-hoc calls to discuss southern AZ property acquisition, Cottonwood Spring fish barrier, environmental site assessment, and access easement for O&M.

- BLM, Audubon, and Reclamation discussed alternative solutions to O'Donnell Creek dam erosion issues.

- Reclamation engaged in water right adjudication proceedings for Cook's Lake property. Site has potential for wetland restoration and native fish recovery.

- Site visit to Lower San Pedro River Preserve in Jan 2025 to discuss pond restoration.

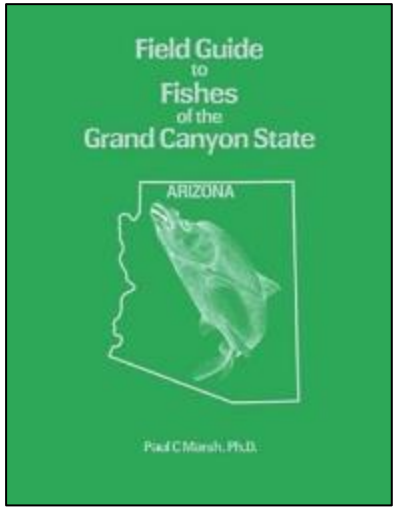
Objective
a) Restore habitats in a minimum of one location with existing populations or in a location planned for repatriations.
b) Acquire or work with other programs to acquire easements, land, or water rights to protect key surface water.

Goal #6:
Inform and educate the public about the conservation status and values of native fishes and the problems nonnative fishes create for them.

IN PROGRESS

Work Completed in 2024:

- Field Guide to Fishes of the Grand Canyon State
  - Released April 15, 2024
- Gila River Basin Native Fish Conservation Film Project
  - Ongoing filming/photography in 2024.
  - Set up new agreement with USFWS to add funds to this work.
  - Discussed expanding to include informational videos for youth whitewater science trips in Verde River.
- Updated GRBNFCP Website



Paul Marsh
(Marsh & Associates)

Jeremy Monroe
(Freshwaters Illustrated)

FRESHWATERS ILLUSTRATED

Marsh Education

FOREST SERVICE U.S. DEPARTMENT OF AGRICULTURE

Goal #7:
Monitor to quantitatively measure and evaluate project success in improving the status of target species and their habitats.

IN PROGRESS

Work Completed in 2024:

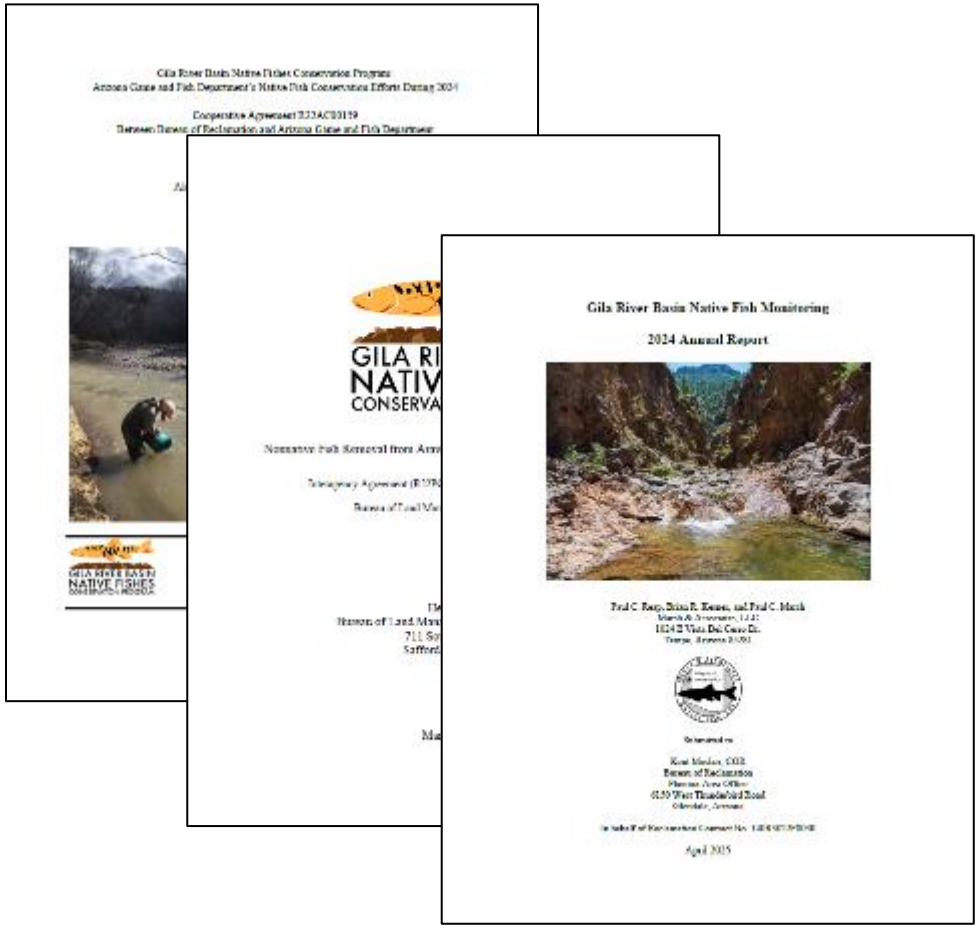
- Continued long-term monitoring of native fish in the Gila River basin (Marsh & Associates).

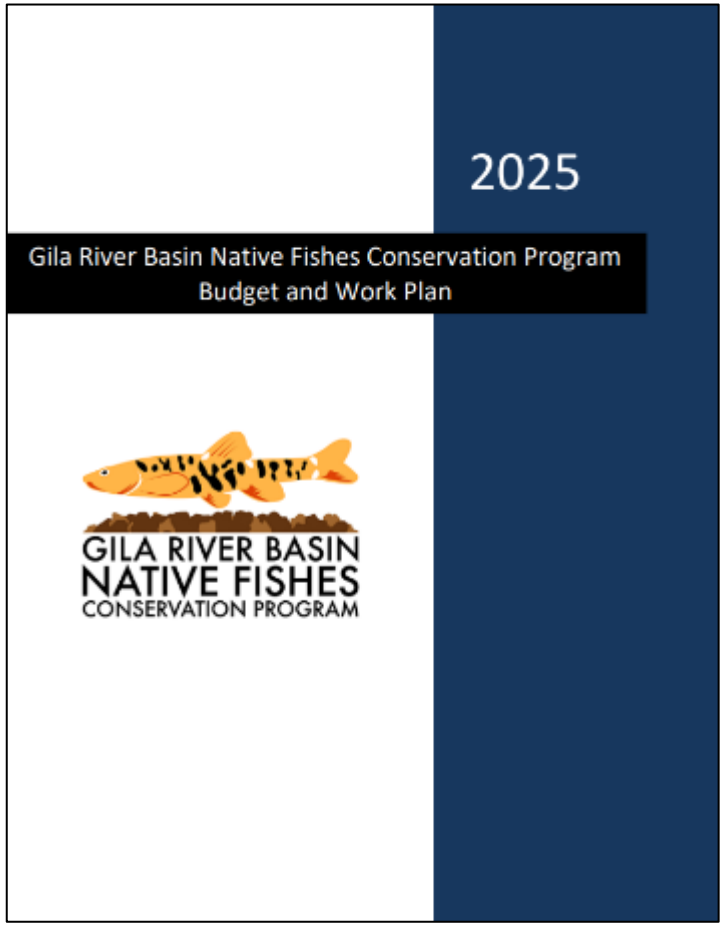
- Initiated study with Kansas State University to assess trends of CAP and Primary Connected Waters dataset (1995 – 2025).

- Continued to support and utilize eDNA sampling.
  - Continued to investigate turbidity effects on eDNA detection (Verde River, USGS)
  - Finalized report for eDNA metabarcoding of fish in the CAP during water releases from Lake Pleasant.
  - Developed new proposal for eDNA metabarcoding in CAP, SRP, Verde River, and Salt Rivers for proposed SRP-CAP Interconnect Facility.
  - Species prioritization for Gila River basin HT-qPCR Biochip

Goal #8:
Maintain accurate Program tracking records.

IN PROGRESS





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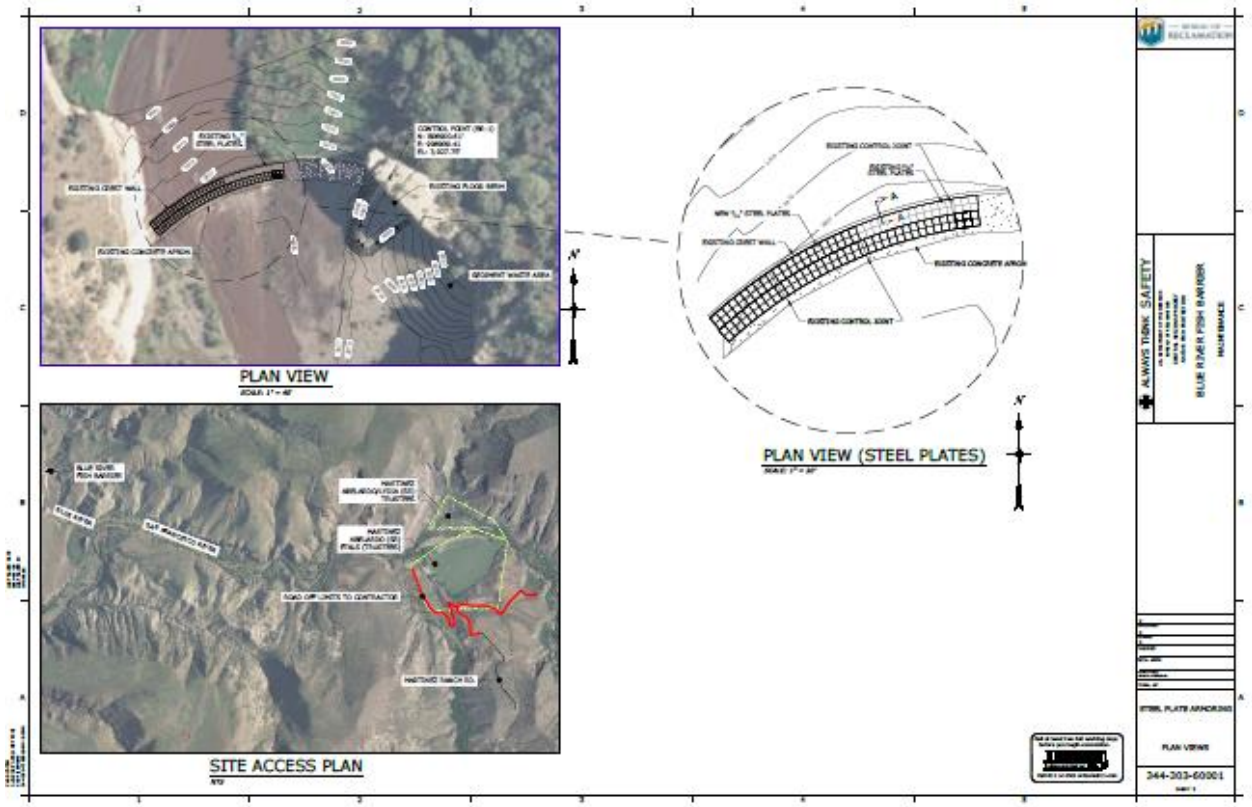
GILA RIVER BASIN
NATIVE FISHES
CONSERVATION PROGRAM

Fish Barriers

Blue River Fish Barrier (O&M)

Operation and Maintenance Activities:

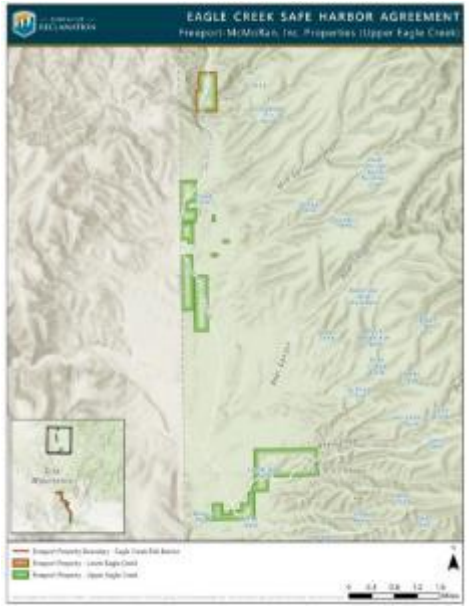
- December 2024 – removed four damaged existing steel plates on apron, installed steel plates on apron, installed steel angle irons/plates on crest wall, and conducted grout repair.

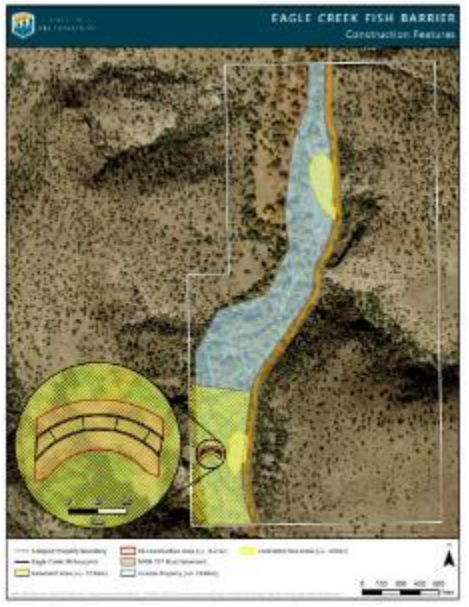


Eagle Creek Fish Barrier (Proposed)

Status:

- Reclamation released a Notice of Public Scoping for the *Draft EA for the Proposed Eagle Creek Conservation Benefit Agreement and Fish Barrier Project* in April 2024.
- The Notice of Availability and Federal Register Notice for the *Draft EA* was released on January 3, 2025, with a 30-day comment period.
- USFWS drafting biological opinion with an estimated completion date of May 2025.
- Pending final environmental compliance and funding, Reclamation anticipates construction would occur Fall/Winter 2026.

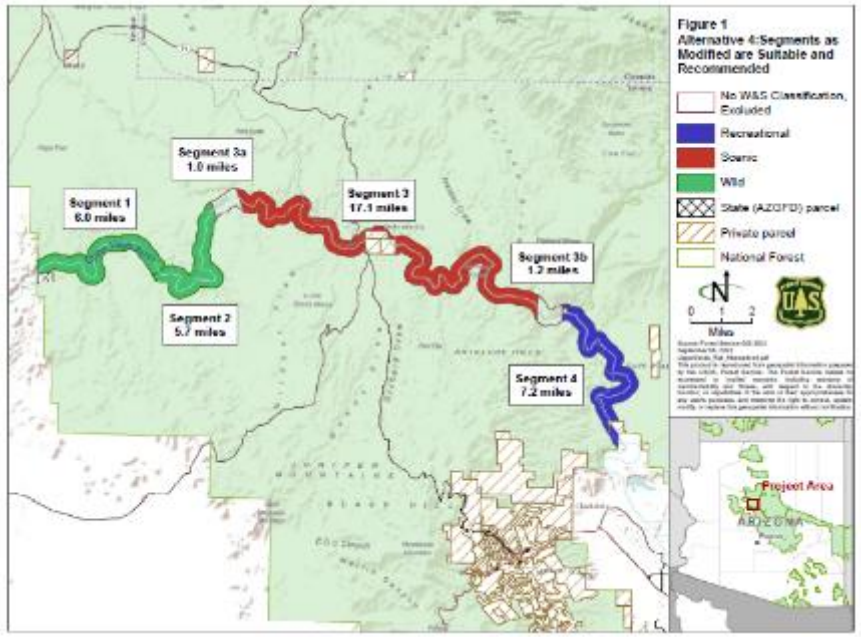


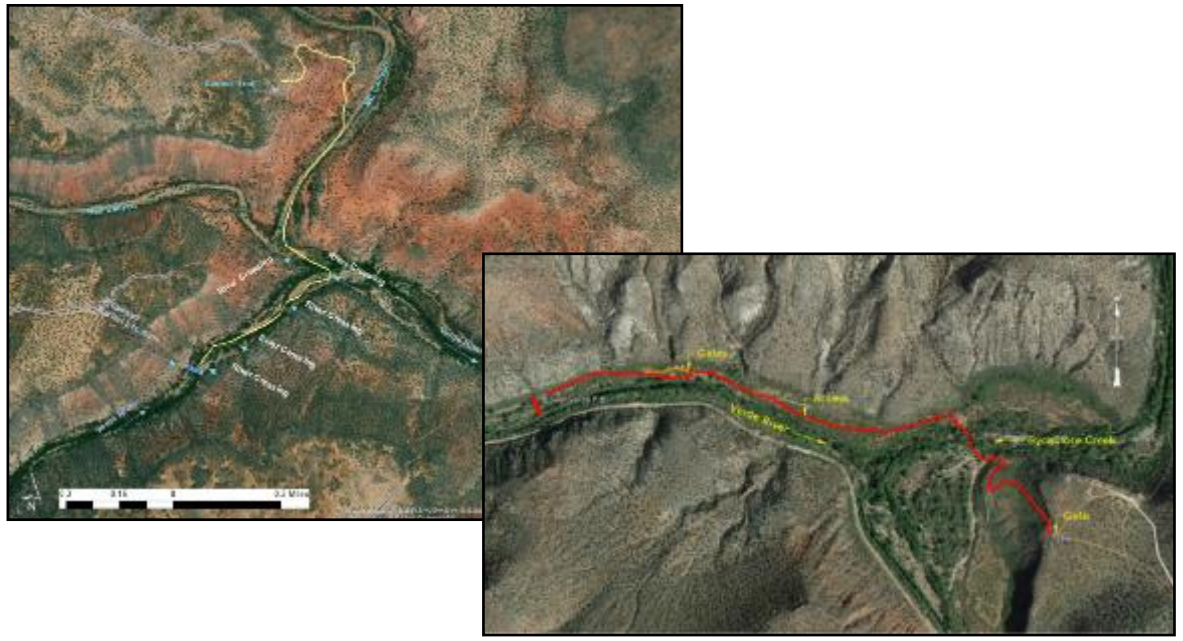


Verde River Fish Barriers (2 barriers; Proposed)

Status:

- Upper Verde River Habitat Analysis (USFS RMRS and NAU) report finalized on April 8, 2024.
- Yellow-billed Cuckoo and Southwestern Willow Flycatcher Surveys conducted at lower and upper barrier site in 2024. Surveys will continue in 2025.
- Held meeting with partners to discus project status in March 2025.
- Reclamation may initiate Value Planning Study in FY2026.





San Francisco River (Pleasanton Diversion; Investigating)

Status:

- Engineers plan to model to determine potential upstream affects of raising the height of the diversion.
- No major tasks anticipated in 2025 due limited staff and funds. Focus is on Eagle Creek and Verde River fish barriers.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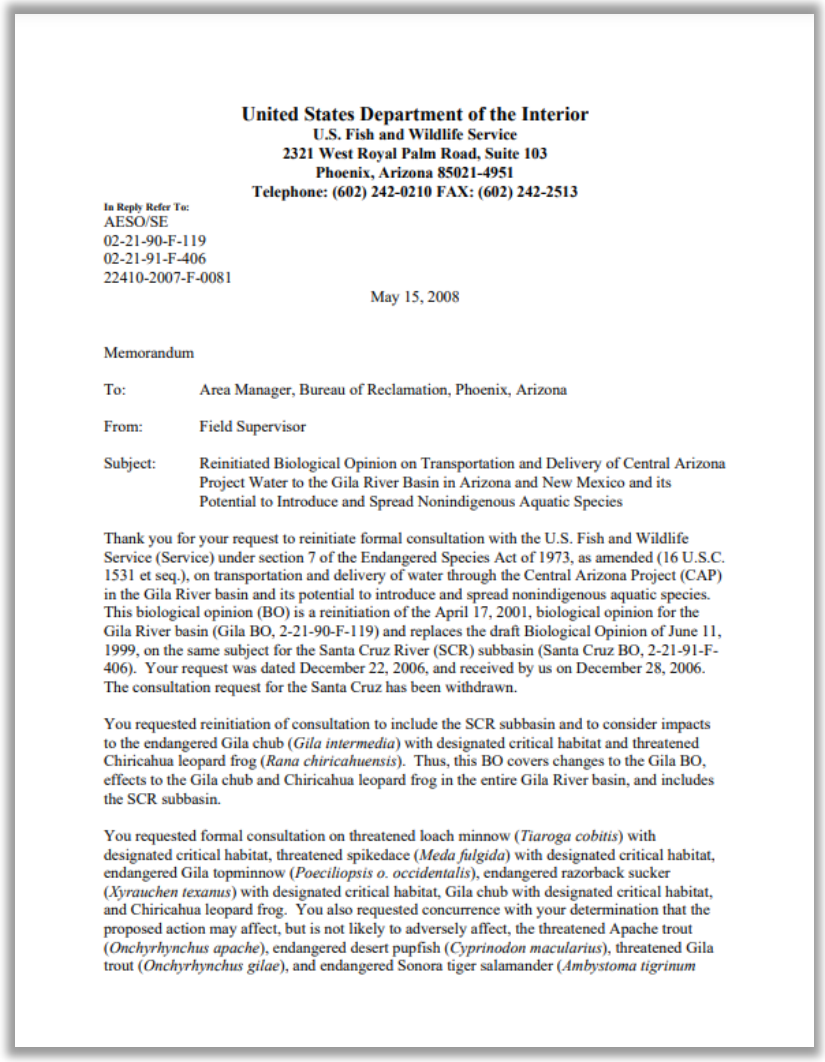
GRBNFCP
Long-term Monitoring
GILA RIVER BASIN
NATIVE FISHES
CONSERVATION PROGRAM

GRBNFCP Monitoring Program



United States Department of the Interior
U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 FAX: (602) 242-2513

In Reply Refer To:
AESO/SE
02-21-90-F-119
02-21-91-F-406
22410-2007-F-0081

May 15, 2008

Memorandum

To: Area Manager, Bureau of Reclamation, Phoenix, Arizona

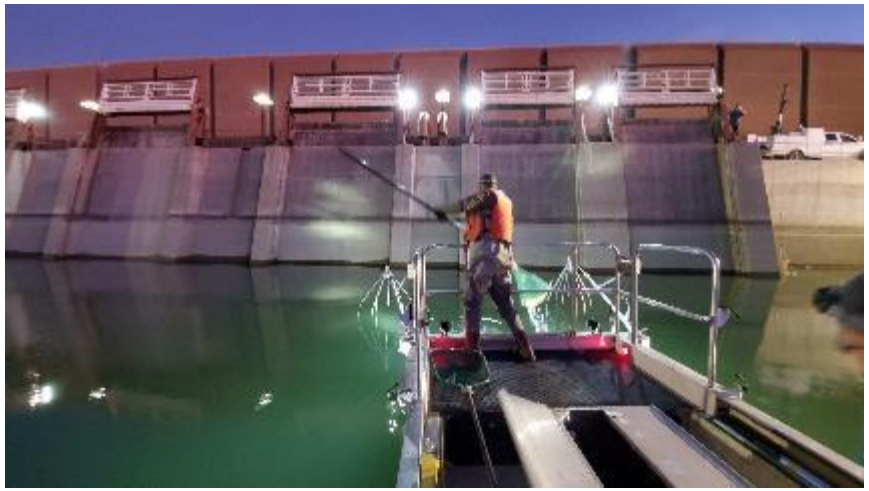
From: Field Supervisor

Subject: Reinitiated Biological Opinion on Transportation and Delivery of Central Arizona Project Water to the Gila River Basin in Arizona and New Mexico and its Potential to Introduce and Spread Nonindigenous Aquatic Species

Thank you for your request to reinitiate formal consultation with the U.S. Fish and Wildlife Service (Service) under section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), on transportation and delivery of water through the Central Arizona Project (CAP) in the Gila River basin and its potential to introduce and spread nonindigenous aquatic species. This biological opinion (BO) is a reinitiation of the April 17, 2001, biological opinion for the Gila River basin (Gila BO, 2-21-90-F-119) and replaces the draft Biological Opinion of June 11, 1999, on the same subject for the Santa Cruz River (SCR) subbasin (Santa Cruz BO, 2-21-91-F-406). Your request was dated December 22, 2006, and received by us on December 28, 2006. The consultation request for the Santa Cruz has been withdrawn.

You requested reinitiation of consultation to include the SCR subbasin and to consider impacts to the endangered Gila chub (*Gila intermedia*) with designated critical habitat and threatened Chiricahua leopard frog (*Rana chiricahuensis*). Thus, this BO covers changes to the Gila BO, effects to the Gila chub and Chiricahua leopard frog in the entire Gila River basin, and includes the SCR subbasin.

You requested formal consultation on threatened loach minnow (*Tiaroga cobitis*) with designated critical habitat, threatened spikedace (*Meda fulgida*) with designated critical habitat, endangered Gila topminnow (*Poeciliopsis o. occidentalis*), endangered razorback sucker (*Xyrauchen texanus*) with designated critical habitat, Gila chub with designated critical habitat, and Chiricahua leopard frog. You also requested concurrence with your determination that the proposed action may affect, but is not likely to adversely affect, the threatened Apache trout (*Onchyrhynchus apache*), endangered desert pupfish (*Cyprinodon macularius*), threatened Gila trout (*Onchyrhynchus gilae*), and endangered Sonora tiger salamander (*Ambystoma tigrinum*



GILA RIVER BASIN
NATIVE FISHES
CONSERVATION PROGRAM

2024 Native Fish Monitoring Summary

Stream	AGCH	CAIN	GIIN	GIRO	LECY	MEFU	ONAP	PACL	PIPR	POOC	PYOL	RHOS	SATR	TICO	Catch
AD Wash	-	-	-	-	-	-	-	-	-	393	-	-	-	-	393
Bass Canyon	10	97	668	-	-	-	-	15	-	-	-	164	-	-	954
Bear Canyon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Bear Creek	1,725	362	-	-	-	-	-	698	-	-	-	-	-	253	3,038
Buckhorn Spring	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78
Cienega Creek	3,842	-	-	-	-	-	-	-	-	-	-	-	-	-	3,842
Coal Mine Canyon	113	-	-	-	-	-	-	-	-	299	-	-	-	-	412
Cottonwood Spring	-	-	-	-	-	-	-	-	-	200	-	-	-	-	200
Dix Creek	290	20	253	-	-	-	-	355	-	-	-	348	-	-	1,266
Fresno Canyon	213	-	-	-	3	-	-	-	-	466	-	-	-	-	688
Grant Creek	-	1	-	-	-	-	76	5	-	-	-	251	-	-	333
Harden Cienega Creek	14	48	69	-	-	-	-	393	-	-	-	125	-	-	649
Hot Springs Canyon	1,168	17	102	-	-	-	-	137	-	-	-	1,158	-	43	2,625
KP Creek	2	6	-	-	-	-	-	43	-	-	-	197	14	-	262
Lower Blue River	476	573	-	303	-	182	-	2,235	-	-	-	532	-	1	4,302
Lower Turkey Creek	369	181	36	-	-	-	-	621	1	-	1	18	-	-	1,227
Middle Blue River	334	114	-	13	-	12	-	1,265	-	-	-	1,156	-	17	2,911
Monkey Spring	-	-	-	-	-	-	-	-	-	51	-	-	-	-	51
Morgan City Wash	80	-	-	-	77	-	-	-	-	195	-	-	-	-	352
Romero Canyon	-	-	122	-	-	-	-	-	-	-	-	-	-	-	122
Sabino Canyon	-	-	190	-	-	-	-	-	-	-	-	-	-	-	190
Sheehy Spring	-	-	46	-	-	-	-	-	-	-	-	-	-	-	46
Spring Creek	104	-	415	9	-	-	-	-	-	661	-	143	-	-	1,332
Tule Creek	-	-	-	-	-	-	-	-	-	680	-	-	-	-	680
Total	8,740	1,419	1,901	325	80	194	76	5,767	1	2,945	1	4,092	14	314	25,953

- 14 Species
- 98.12% Native species

GILA RIVER BASIN NATIVE FISHES CONSERVATION PROGRAM

2025 Native Fish Monitoring Schedule

Region(s)	Start Date	End Date	Site #1	Site #2	Site #3	Site #4
5	April 7, 2025	April 9, 2025	Cottonwood Spring	Monkey Spring	Coal Mine Canyon	Fresno Canyon
5	April 21, 2025	April 23, 2025	Sheehy Spring	Parker Canyon		
6	April 29, 2025	-	Lime Creek			
5	May 5, 2025	May 8, 2025	Sonoita Creek			
1	May 19, 2025	May 22, 2025	San Francisco (AZ)			
5	August 4, 2025	August 6, 2025	O'Donnell Creek			
5	August 18, 2025	August 20, 2025	Redfield Canyon			
5	September 8, 2025		Cienega Creek			
5	September 15, 2025	September 18, 2025	Hot Springs Canyon	Swamp Springs Canyon		
6	September 29, 2025	October 1, 2025	Spring Creek	Sheepshead Canyon		
1	October 13, 2025	October 16, 2025	Lower Blue River			
NM	October 27, 2025	October 30, 2025	San Francisco (NM)	Tularosa River (NM)		
NM	November 10, 2025	November 13, 2025	Gila River (Upper Box)			

Focal Species Key
Gila Topminnow
Gila Chub
Loach Minnow
Gila Topminnow/Gila Chub
Spikedace/Loach Minnow
Gila Chub, Loach Minnow, Spikedace
Gila Chub/Loach Minnow

GILA RIVER BASIN NATIVE FISHES CONSERVATION PROGRAM

GRBNFCP Nonnative Fish Monitoring

Streams (2025)

Stream	Reach	Fixed Station Name
San Pedro River	US-Mexico boundary to Fairbank	Hereford
		Lewis Springs
		Charleston
	Fairbank to Redington	Hughes Ranch
		Three Links
	Redington to Gila River	Aravaipa Creek
		Dudleyville
		Mouth
Gila River	Coolidge Dam to Porphyry Gulch	Coolidge Dam
		Hook & Line Ranch
	Porphyry Gulch to Winkleman	Dripping Springs
		Christmas
		O'Carroll Canyon
	Winkleman to Mineral Creek	San Pedro River
		Kearny
		Kelvin
	Mineral Creek to Ashurst-Hayden Dam	A-Diamond Ranch
		Cochran
		Box Canyon
Salt River	Stewart Mtn. Dam to Granite Reef Dam	Stewart Montain Dam
		Goldfield Administrative Site
		Granite Reef Dam

Canals (2024/2025)

Canal	Reach	Station Name
CAP Canal	Hayden-Rhodes Aqueduct	Bouse Hills Pumping Plant
		Little Harquahala Pumping Plant
		Hassayampa Pumping Plant
	Fannin-McFarland Aqueduct	Salt-Gila Pumping Plant
	Tucson Aqueduct	Brady Pumping Plant
		Red Rock Pumping Plant
		San Xavier Pumping Plant
Florence-Casa Grande Canal	Ashurst-Hayden Dam to Pima	Above China Wash fish barrier
		Below China Wash fish barrier
	lateral feeder canal	Pima lateral turnout
SRP Arizona (North) Canal	Granite Reef Dam to electrical fish barrier	Above fish barrier (census)
	Electrical fish barrier to Indian Bend Wash	Below fish barrier (opportunistic)
SRP South Canal	Granite Reef Dam to electrical fish barrier	Above fish barrier (census)
	Electrical fish barrier to terminus	Below fish barrier (opportunistic)

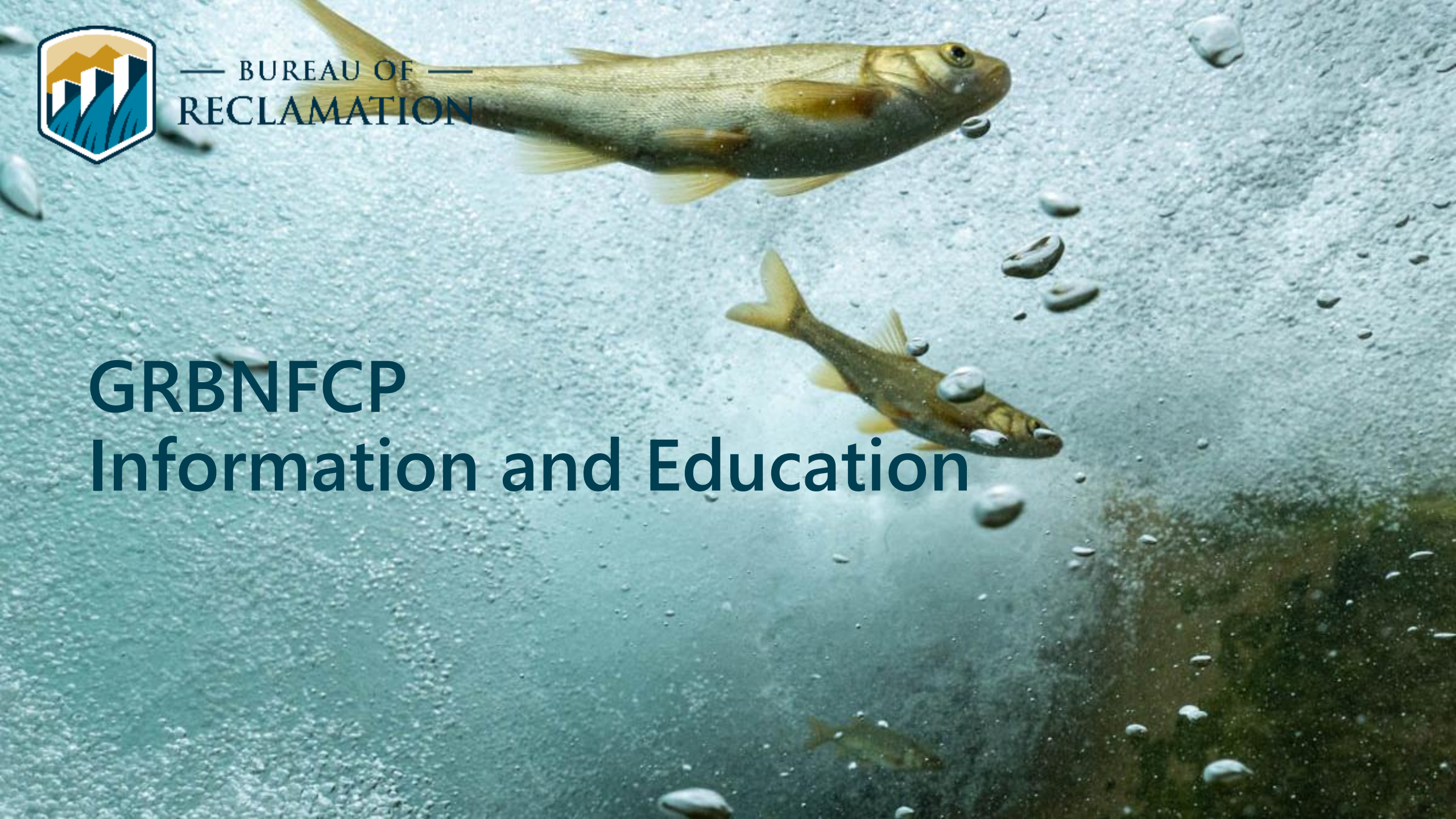
Long-term trends in abundance and distribution of fishes in canals and rivers associated with the Central Arizona Project (CAP)

Keith Gido, Trevor Hefley, Ridge Sliger

Figure 1. Gila River basin and waters associated with the Central Arizona Canal.

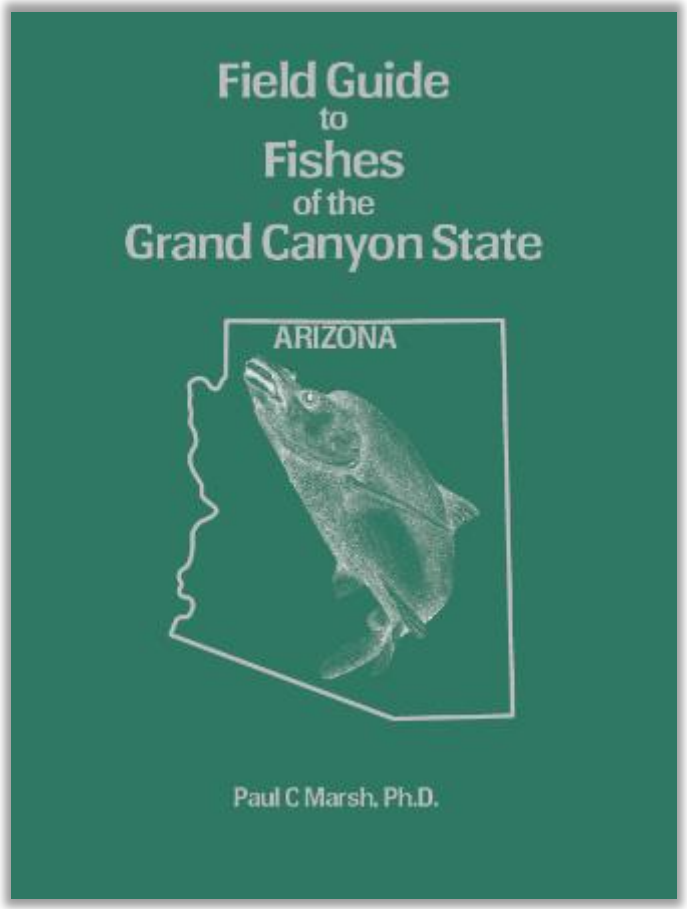
Objectives

1) Establish a baseline for the abundance and distribution of nonnative fishes
2) Test for trends in abundance across the 30-yr dataset at different locations
3) Evaluate the statistical power or uncertainty in species trends based on the current sampling protocols



GRBNFCP
Information and Education

Field Guide to Fishes of The Grand Canyon State



11. Gila chub, *Gila intermedia.* Native

45. Yellow bullhead, *Ameiurus natalis.*
Non-native

GILA RIVER BASIN
NATIVE FISHES
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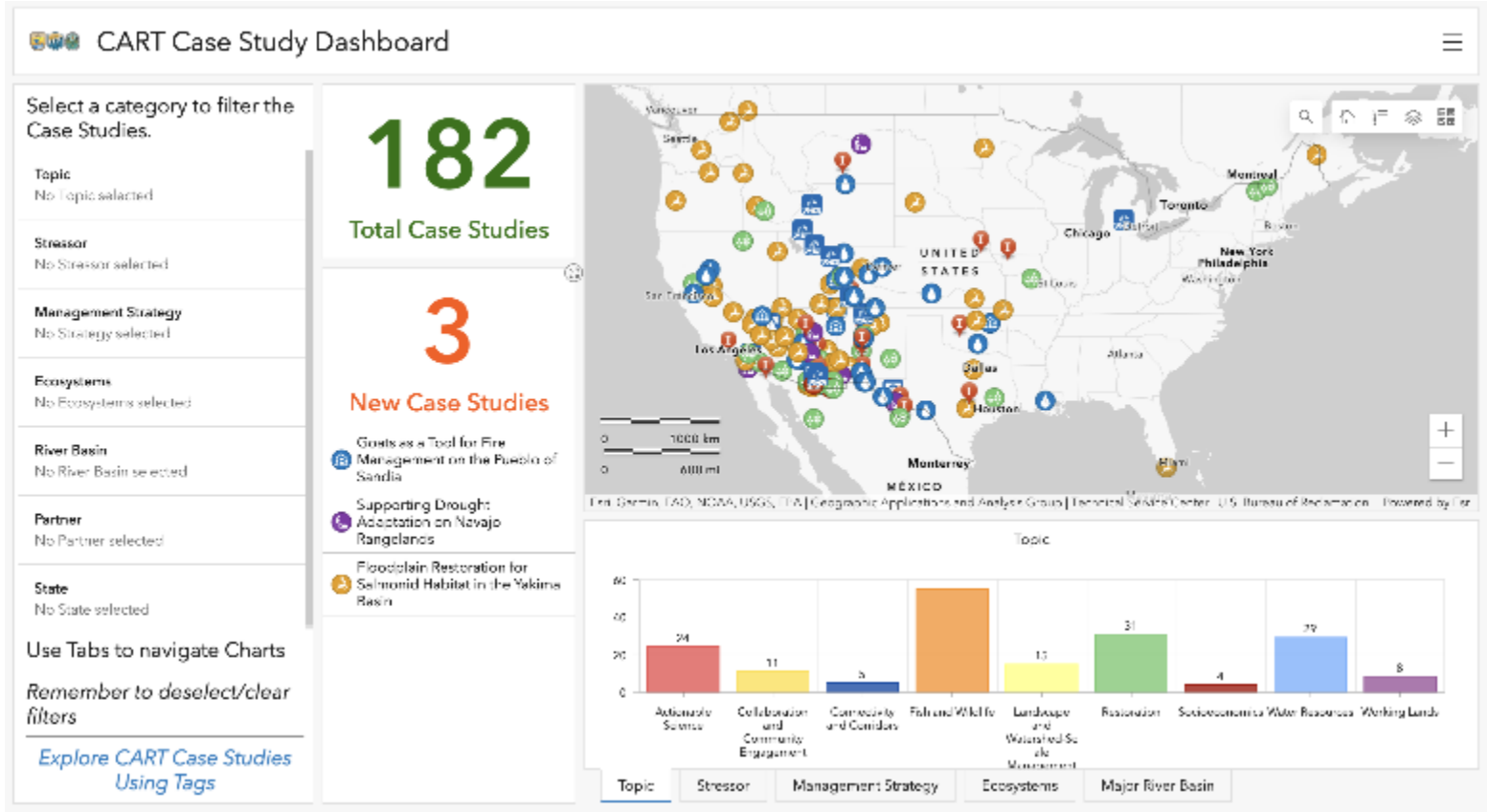
Gila River Basin Film Project (2024)

- Agreement modified in 2024 - Project extended to March 2026
  - 6 – 10 minute short film on the Gila River Basin
  - 1 -2 minute video (social media posts)
  - 48 – 62 images
  - 3 min of B-roll footage

FRESHWATERS ILLUSTRATED

Conservation and Adaptation Resources Toolbox (CART)



CONSERVATION & ADAPTATION RESOURCES TOOLBOX

The Blue River Native Fish Restoration Project

August 9, 2024

Grand Canyon Youth

- Collaboration with Grand Canyon Youth & Freshwaters Illustrated
- Two short videos (pre- & post-trip) to support Verde River field trips
- Focus on watershed science, native species, and stewardship
- Aligned classroom resources (NGSS, activities, geography, vocab)
- Pilot in 2025–26; full rollout in 2026–27
- Free access via K-12 Water Teachers platform for broader reach

FRESHWATERS ILLUSTRATED

GRAND CANYON YOUTH
discover your nature

Elizabeth Hedden

Fish Biologist

EHedden@usbr.gov

BUREAU OF RECLAMATION

GILA RIVER BASIN NATIVE FISHES CONSERVATION PROGRAM