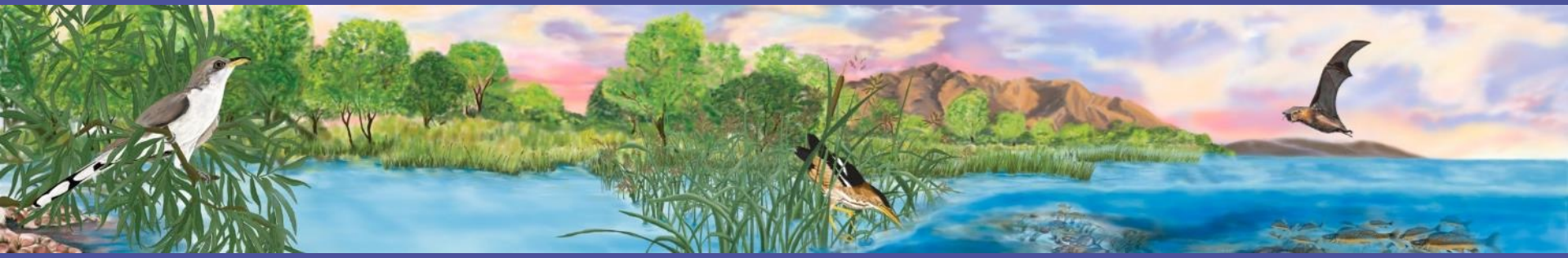
Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

INTRODUCTION TO THE LCR MSCP



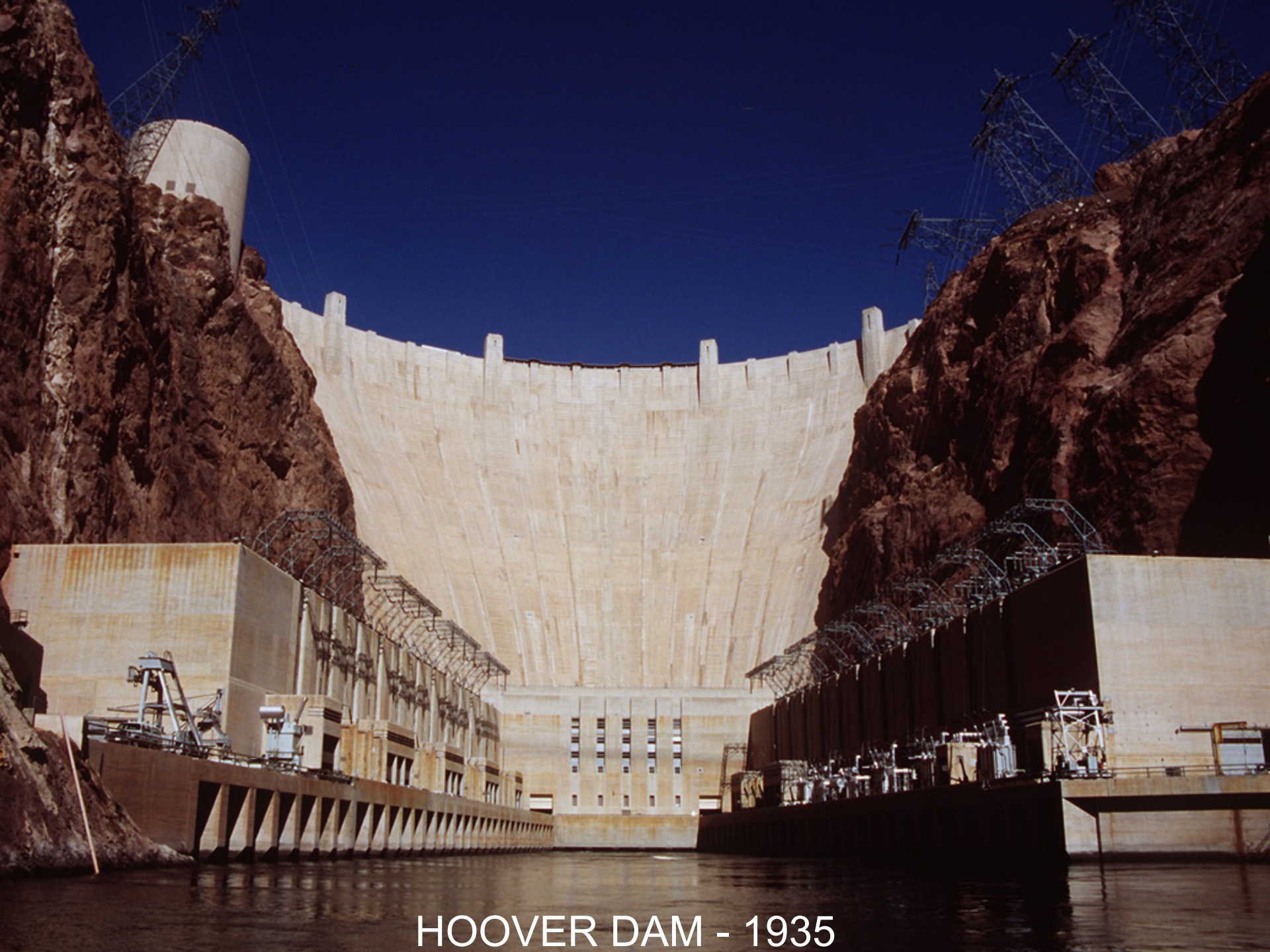
Carolyn Ronning, Wildlife Group Manager
Bureau of Reclamation
Boulder City, Nevada

BUREAU OF RECLAMATION

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

COLORADO RIVER NEAR BLYTHE, CALIFORNIA



HOOVER DAM - 1935

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- 1967 – The Yuma clapper rail (bird) and humpback chub (fish) were listed as endangered.
- 1980 – The bonytail (fish) was listed as endangered.
- 1990 – The desert tortoise (reptile) was listed as threatened.
- 1991 – The razorback sucker (fish) was listed as endangered.
- 1994 – Areas of the lower Colorado River were designated as critical habitat for the bonytail and razorback sucker (fish).
- 1995 – The southwestern willow flycatcher (bird) was listed as endangered.
- 2004 – Areas of the lower Colorado River were proposed as critical habitat for the southwestern willow flycatcher (bird).

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PURPOSE

Multi-stakeholder Federal and non-Federal partnership responding to the need to balance the use of lower Colorado River water resources and the conservation of native species and their habitats in compliance with the Endangered Species Act.

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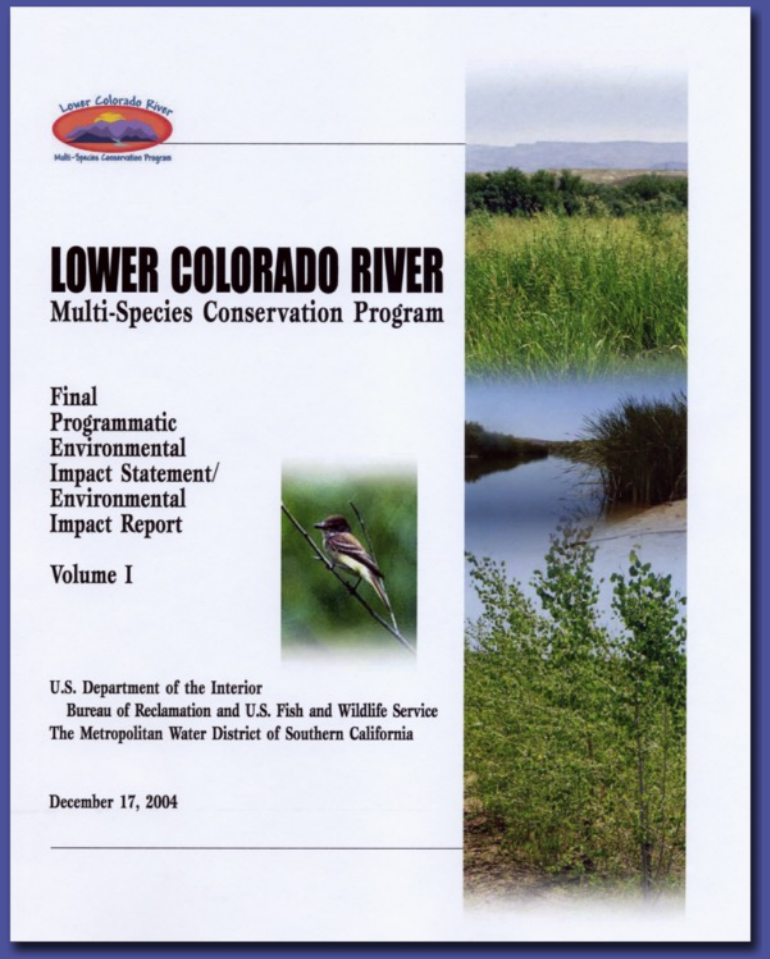
50-Years of ESA and CESA Compliance

- Section 7 and Section 10 HCP
- HCP
- Cost Shared

Covered Actions

- Delivery and Diversion of 9 MAF
- Generation of Power
- Maintenance Activities
- Movement of up to 1.574 MAF within the system and associated reductions of flow



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STEERING COMMITTEE MEMBERSHIP (56 MEMBERS)

- Federal Participant Group
- Arizona Participant Group (26 Permittees)*
- California Participant Group (11 Permittees)*
- Nevada Participant Group (5 Permittees)*
- Native American Participant Group
- Conservation Participant Group
- Other Interested Parties Group

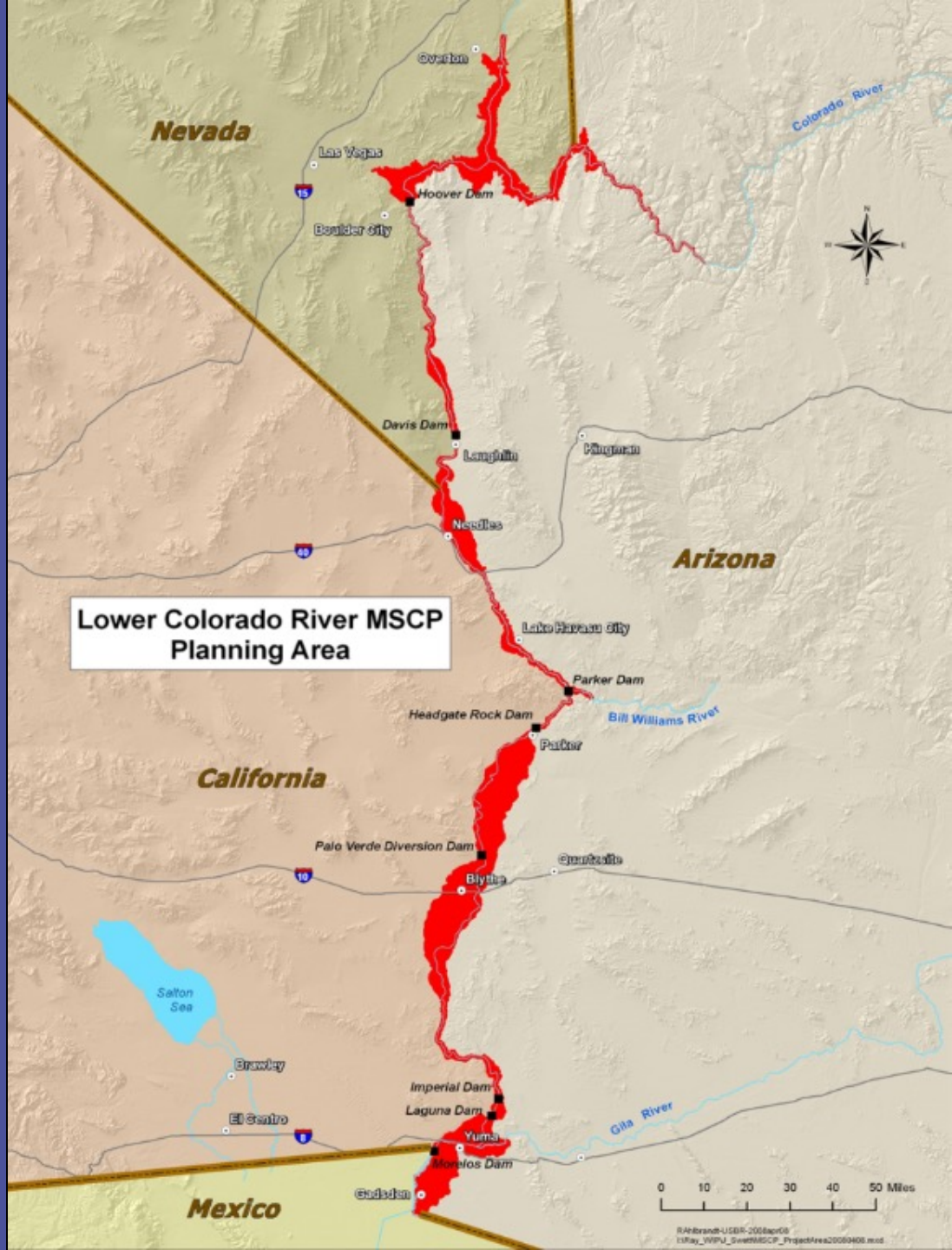
» * *Participates as a funding agency*

LOWER COLORADO RIVER MSCP PLANNING AREA

Extends over 400 miles from Lake Mead to the southernmost border with Mexico.

Includes:

- Lake Mead
- Lake Mohave
- Lake Havasu
- The historic 100-year floodplain
- Full pool elevations of the mainstem reservoirs



Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Program Implementation

- Authorized under P.L.111-11
- Program Documents (HCP, FMA, IA, By-Laws, BO, ROD, EIS)
- Consensus based decision making process
- Dispute Process

Steering Committee Responsibilities

- Provide input on LCR MSCP implementation
  - *Annual Work Plan, Budget, and Report*
  - *Approve Land & Water Acquisition*
- Provide the non-federal cost share (Permittees only)

Reclamation Responsibilities

- Provide the Federal cost share
- Appoint a Program Manager
  - Responsible for implementation of the LCR MSCP

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

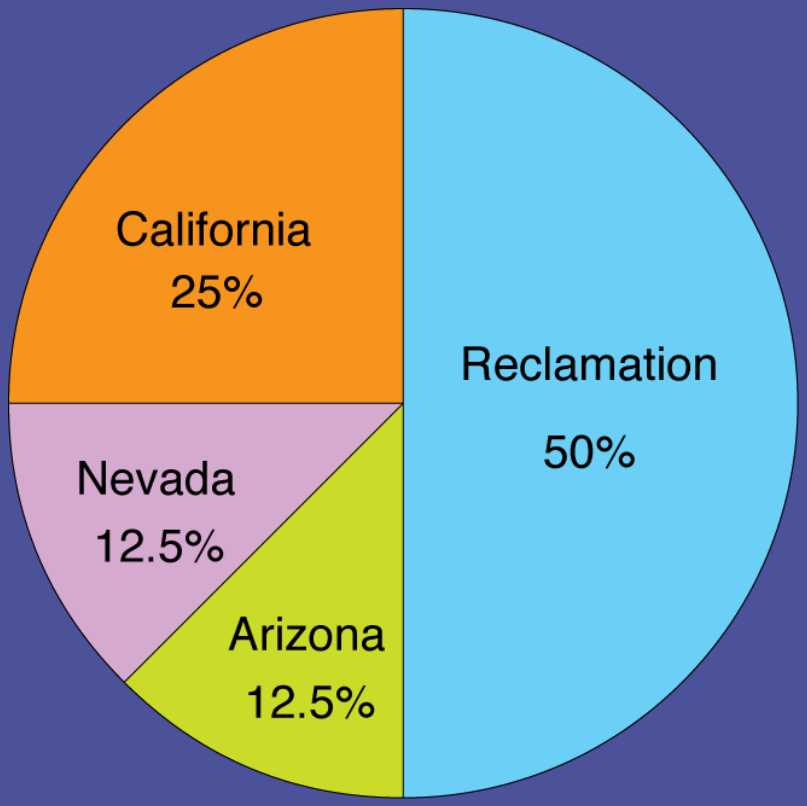
COST SHARING

- Total Program Cost
  $626 million (2003 dollars and adjusted annually for inflation)

- Federal / State Cost Share
  Split 50/50

  2022 = $31,271,830
  2023 = $34,828,626

- Cost cap



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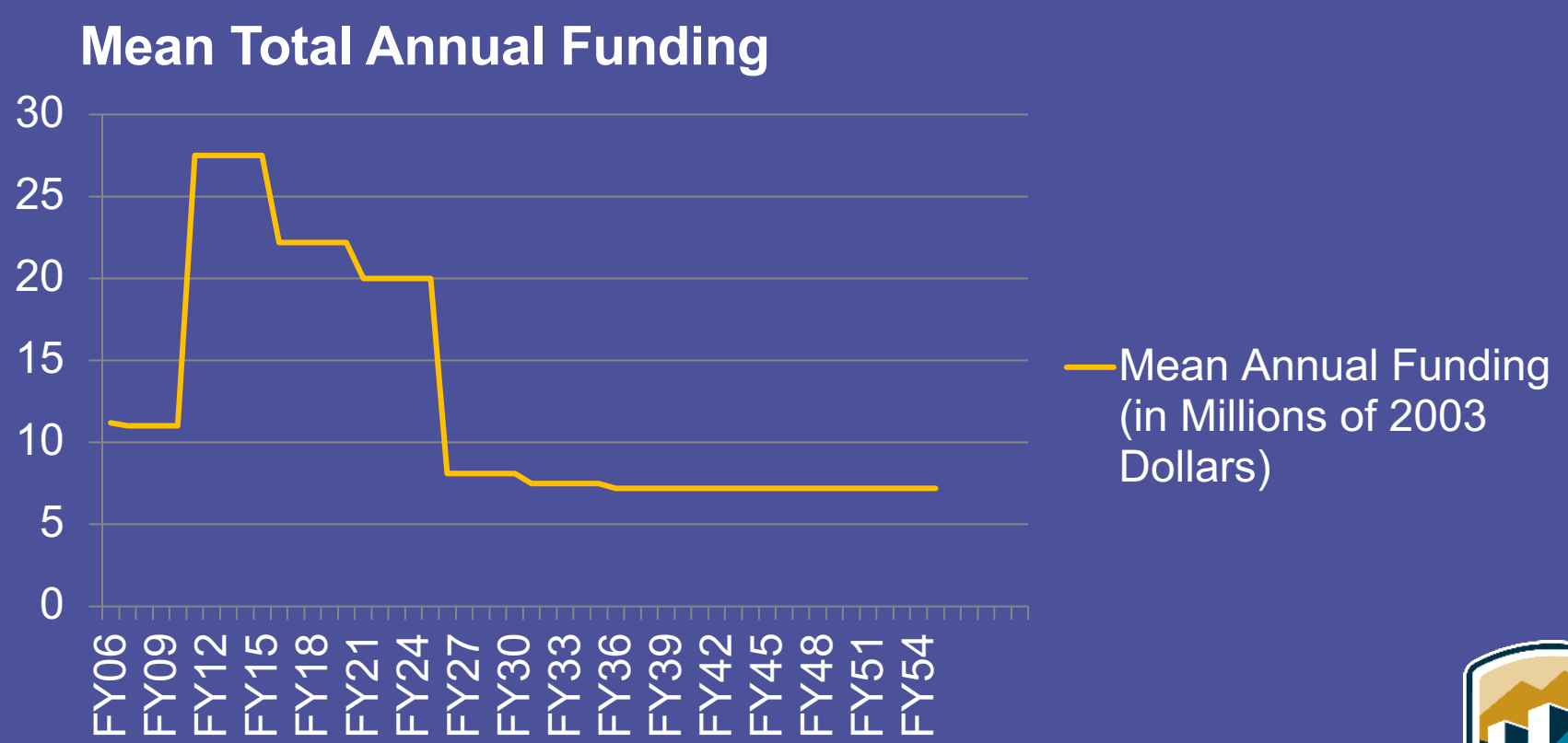
Balancing Resource Use and Conservation

LCR MSCP – Funding and Cost Share



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Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
  - 3 birds, 3 fish, 2 reptiles

Yuma Ridgway's rail
(Yuma clapper rail)

southwestern willow flycatcher

yellow-billed cuckoo

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
  - 3 birds, 3 fish, 2 reptiles

bonytail

humpback chub

razorback sucker

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

COVERED SPECIES

- 8 threatened and endangered species
  - 3 birds, 3 fish, 2 reptiles

desert tortoise

northern Mexican gartersnake

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COVERED SPECIES

- 19 other species
  - 4 mammals, 9 birds, 1 reptile, 1 amphibian, 1 fish, 1 insect, 2 plants

- 5 “evaluation species”*
  - 3 mammals, 2 amphibians

** Evaluation species are those which would qualify as covered species except sufficient information on their biology, habitat use, and occurrence within the project area are not sufficient at the time the HCP was completed*

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

HABITAT CONSERVATION PLAN

GENERAL CONSERVATION MEASURES

- Avoidance and Minimization Measures: 6
- Monitoring and Research Measures: 5
- Conservation Area Management Measures: 2

SPECIES SPECIFIC CONSERVATION MEASURES

- Covered Species: 56
- Evaluation Species: 11

Lower Colorado River Multi-Species Conservation Program

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PROGRAM COMPONENTS

- Conservation Area Development & Management
- Fish Augmentation
- Species Research
- System-wide Monitoring
- Existing Habitat Maintenance

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FISH AUGMENTATION GOALS

- 660,000 razorback suckers
- 620,000 bonytail

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FISH AUGMENTATION ACCOMPLISHMENT THROUGH FY22

SPECIES	LAKE MOHAVE	DAVIS-PARKER	BELOW PARKER	TOTAL	AUGMENTATION TOTAL
RAZORBACK SUCKER	150,323*	117,353	141,759	409,435	259,112
BONYTAIL	2,730	64,107	59,134	125,971	125,971
TOTAL	153,053*	181,460	200,893	535,406	385,083

*Lake Mohave razorbacks don't count towards augmentation goals – separate conservation measure

Lower Colorado River Multi-Species Conservation Program

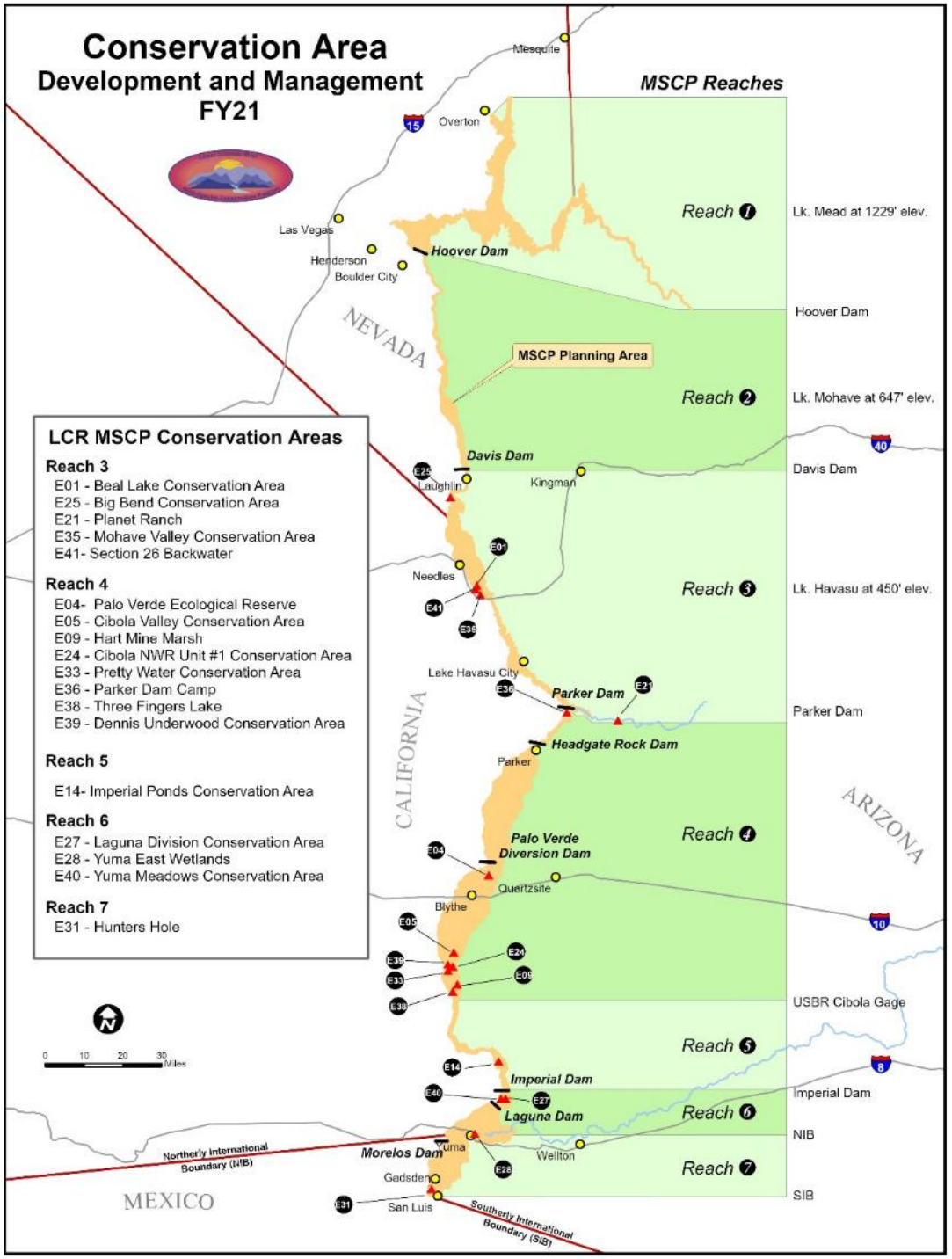
Balancing Resource Use and Conservation

CONSERVATION AREA DEVELOPMENT AND MANAGEMENT GOALS

- Cottonwood-willow 5,940 acres
- Mesquite 1,320 acres
- Marsh 512 acres
- Backwaters 360 acres

Conservation Areas

- 18 conservation areas
  - 9.5 in AZ
  - 7.5 in CA
  - 1 in NV
- Over 6,500 acres of habitat has been created



Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

LAND COVER TYPE BY STATE THROUGH FY21

STATE	COTTONWOOD-WILLOW	HONEY MESQUITE	MARSH	BACKWATERS	TOTAL
ARIZONA	3,026	937	362	80	4,405
CALIFORNIA	1,248	1,109	0	63	2,420
NEVADA	0	0	0	15	15
TOTAL	4,274	2,046	362	158	6,840

Cottonwood-willow Goal: 5,940 acres Created: 4,274 acres

Honey Mesquite Goal: 1,329 acres Created: 2,046 acres

Marsh Goal: 512 acres Created: 362 acres

Backwaters Goal: 360 acres Created: 158 acres

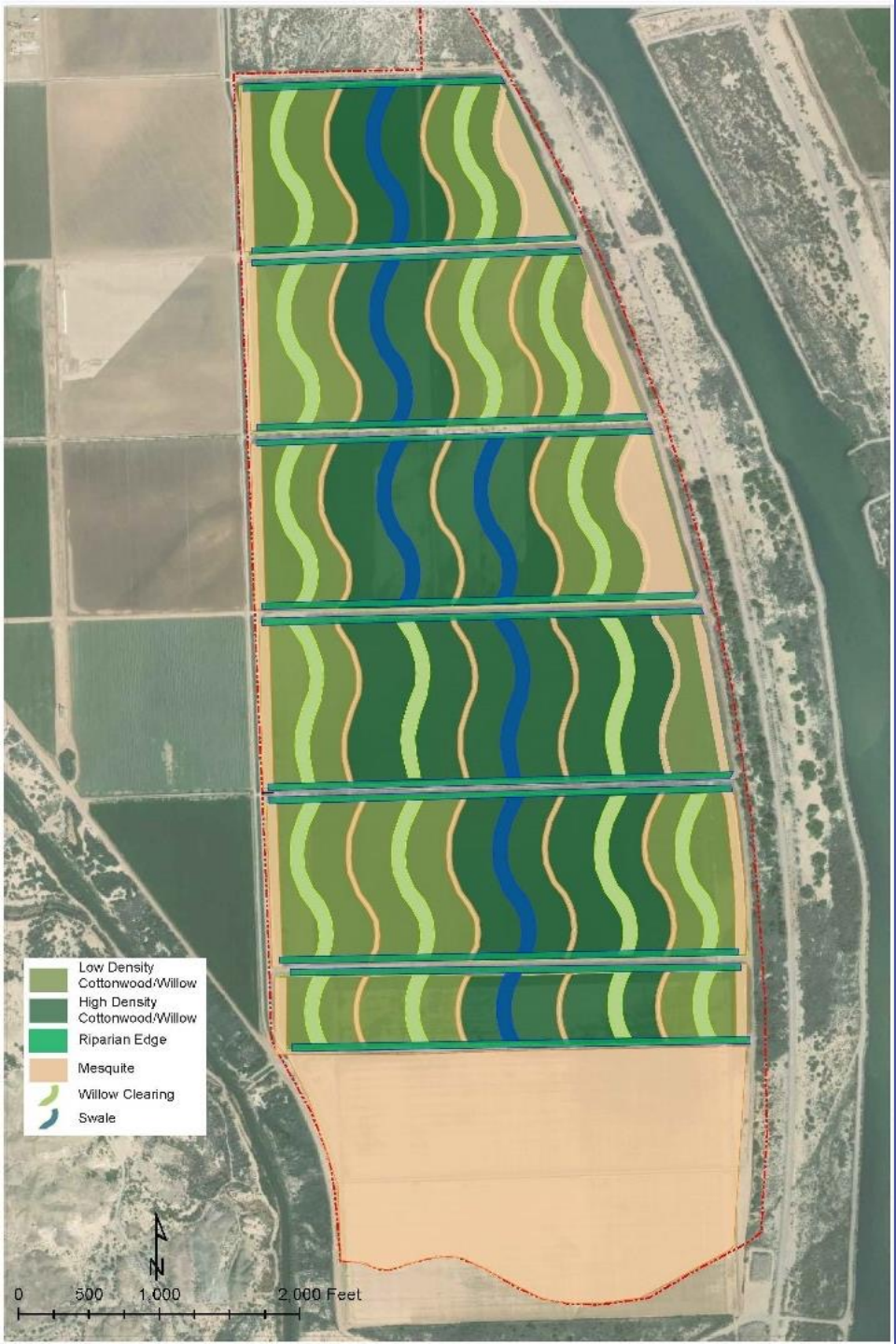
HABITAT CREATION ACCOMPLISHMENTS

- LCR MSCP has established sufficient acres of habitat to complete conservation measures for:
  - western red bat (765 ac)
  - Colorado River cotton rat (125 ac)
  - elf owl (1,784 ac)
  - summer tanager (602 ac)
  - western yellow bat (765 ac)
  - Yuma hispid cotton rat (76 ac)
  - Gila woodpecker (1,702 ac)
  - MacNeill's sootywing (222 ac)

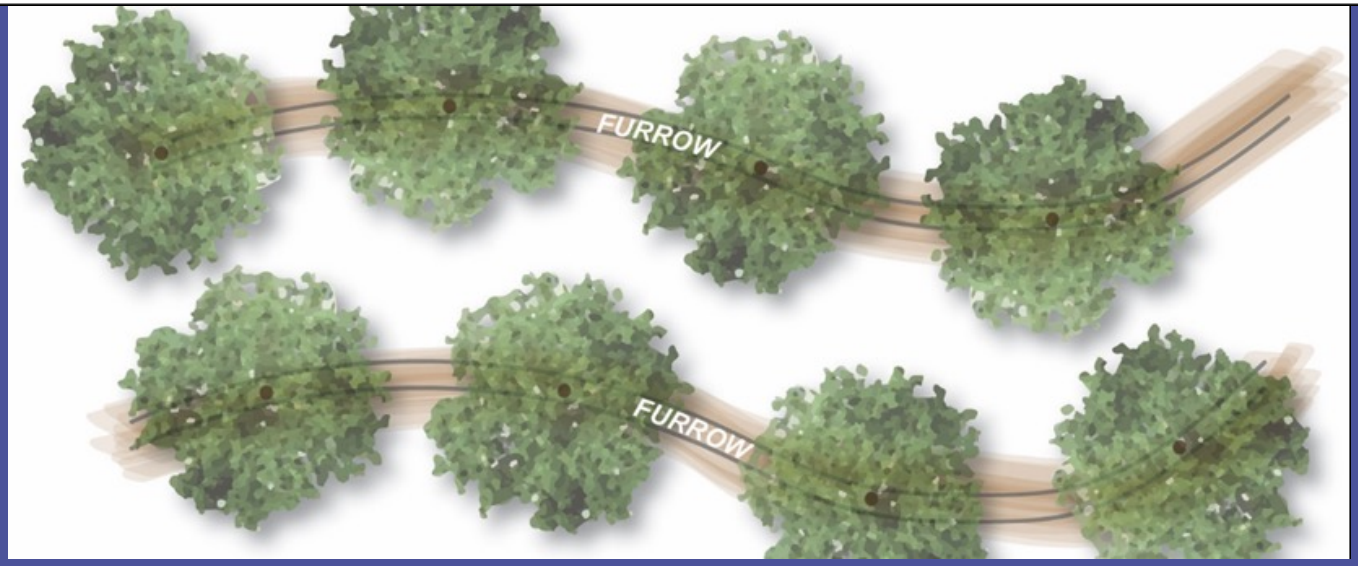
Cibola Valley Conservation Area

Dennis Underwood Conservation Area

- 635 acres
- The habitat creation concept includes establishing approximately 506 acres of cottonwood-willow and 122 acres of honey mesquite land cover types.



1. Mesquite
2. Low density Cottonwood-coyote willow
3. Willow clearing
4. High Density Cottonwood, coyote, Gooding's Willow
5. Swale
6. High Density Cottonwood-Gooding's Willow




CAT
DEERE


Biomark

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

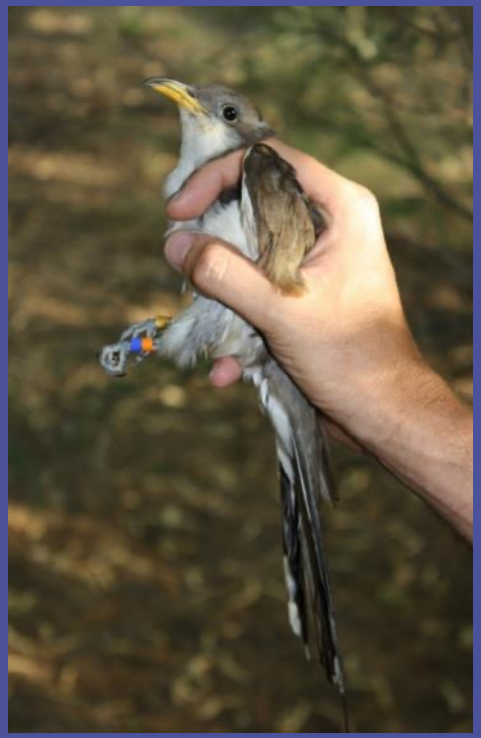
ACCOMPLISHMENTS

- "Build it and they will come" - Most riparian and marsh species are responding to the created habitat
- Conservation Areas have been secured to meet the goals of the program
- Approximately 75% of the required habitat has been created in the first 15 years
- The flexibility in the program documents and the adaptive management approach have allowed us to meet challenges

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

CONSERVATION AREA MONITORING



Conservation Area	Count of LCR MSCP Species Detected At Least Once Between 2005-2019
Beal Lake Conservation Area	20
Big Bend Conservation Area	8
Cibola National Wildlife Refuge Unit #1	12
Cibola Valley Conservation Area	11
Hart Mine Marsh	5
Hunters Hole	8
Imperial Ponds Conservation Area	5
Laguna Division Conservation Area	7
Mohave Valley Conservation Area	2
Palo Verde Ecological Reserve	13
Parker Dam Camp	1
Planet Ranch	12
Pretty Water Conservation Area	1
Yuma East Wetlands	13

Conservation Area	Yuma Ridgway's rail	Yellow-billed cuckoo
Beal Lake Conservation Area	X	X
Big Bend Conservation Area		-
Cibola National Wildlife Refuge Unit #1	-	X
Cibola Valley Conservation Area	-	X
Hart Mine Marsh	X	-
Hunters Hole	-	X
Imperial Ponds Conservation Area	X	-
Laguna Division Conservation Area	X	X
Mohave Valley Conservation Area		-
Palo Verde Ecological Reserve	-	X
Parker Dam Camp	-	
Planet Ranch		X
Pretty Water Conservation Area	-	
Yuma East Wetlands	X	X

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

SPECIES RESEARCH

- Evaluation of immediate post-stocking survival of razorback and bonytail

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

SYSTEM MONITORING

Detections of YBCU on the BWR NWR 2006-2019

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

By 2015:

- 96% the 945 acres of planted at PVER was occupied by YBCU
- Up to 80 YBCU breeding territories (at least 2 birds per territory) were estimated that year.

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

CHALLENGES

- Securing land and water in California to meet CESA requirements
- Developing long-term management guidelines for created habitats
- The “Unknown” (i.e., drought, climate change, invasive species, etc.)

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

WHY DOES THE LCR MSCP WORK?

- The Program has a well-defined purpose, goals, and objectives
- The HCP has attainable conservation measures
- The flexibility in the program documents and the adaptive management approach allowed us to meet challenges
- The Steering Committee has been an active participant throughout implementation and is willing to compromise to move the program forward because a majority have a stake in its success

Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

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