

***Adaptive management program of
wildlife and their habitat for the
Lower Colorado River Multi Species
Conservation Program***

Matthew Voisine
Wildlife Team
Resources Management Office
Lower Colorado Region

LCR MSCP Habitat Conservation Plan

- Acreage
- Biological & Conservation Goals
- Covered and Evaluation Species
- Adaptive Management
 - System Monitoring
 - Species Research
 - Restoration Research
 - Post-Development Monitoring
 - Database Management

LCR MSCP acres

Habitat creation

Cottonwood/Willow: 5,940 a

Honey Mesquite: 1,320 a

Marsh: 512 acres

Backwaters: 360 acres

Total: 8,132 acres

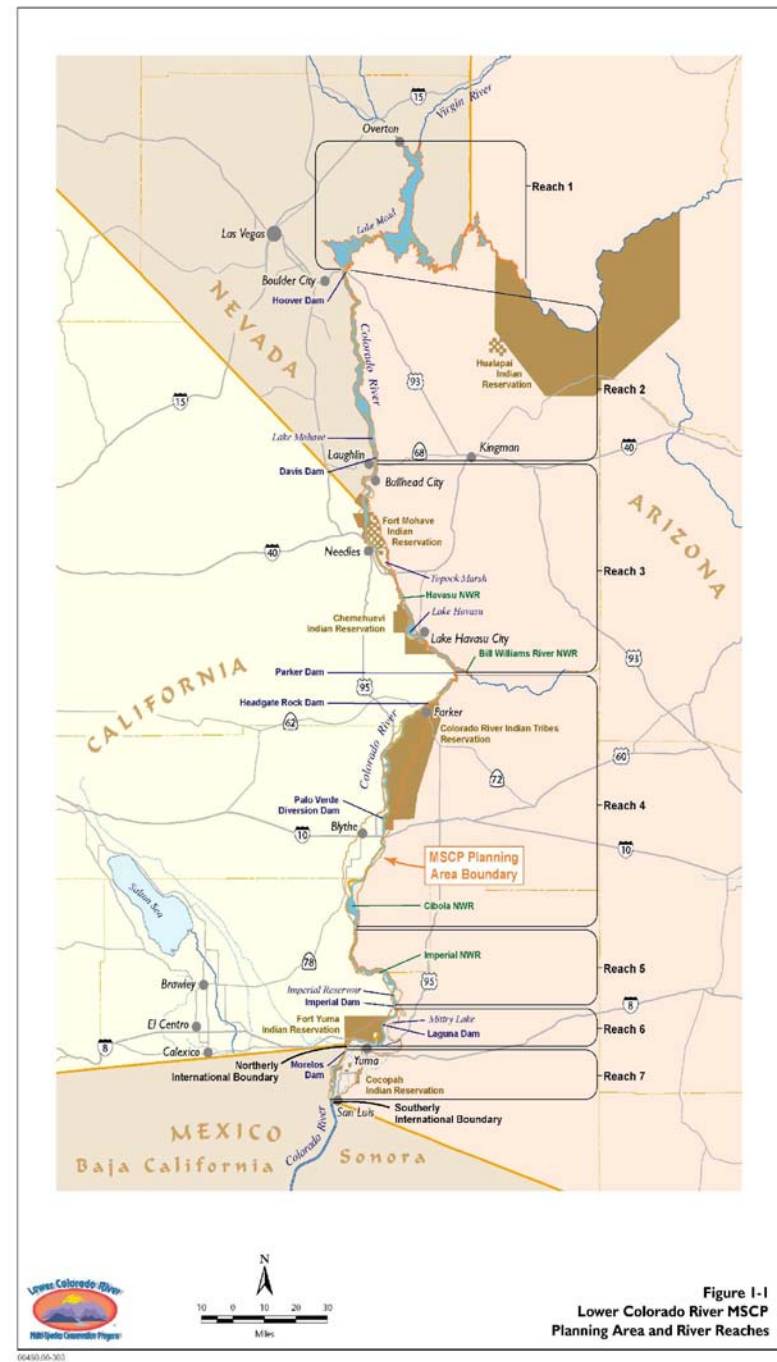


Figure 1-1
Lower Colorado River MSCP
Planning Area and River Reaches

RECLAMATION

LCR MSCP HCP Biological & Conservation Goals

- Biological Goals
 - Create and maintain species habitat
 - Provide monies to support conservation programs
- Conservation goals
 - Avoid, minimize, and fully mitigate adverse effects of covered activities and LCR MSCP implementation on the species
 - Contribute to recovery of listed species
 - Reduce the likelihood of future Federal listing of non-listed species

LCR MSCP Covered & Evaluation Species

- Covered species
 - determined utilizing ESA listed species or protected by CA, AZ, NV laws
 - could become listed under ESA, CA, AZ, NV laws
- Evaluation species
 - could be added to covered list but at this time sufficient data are not available to determine their status in the planning area

LCR MSCP Covered Species

Birds

Southwestern Willow Flycatcher

Yuma Clapper Rail

Yellow-billed Cuckoo

Gilded Flicker

Gila Woodpecker

Western Least Bittern

California Black Rail

Vermilion Flycatcher

Arizona Bell's Vireo

Sonoran Yellow Warbler

Summer Tanager

Elf Owl



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LCR MSCP Covered Species



Reptiles & Amphibians

- Desert Tortoise
- Flat-tailed Horned Lizard
- Relict Leopard Frog
- Lowland Leopard Frog*
- Colorado River Toad*

Bats

- Western Red Bat
- Western Yellow Bat
- California Leaf-nosed Bat*
- Pale Townsend's Big-eared Bat*



* Evaluation Species

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LCR MSCP Covered Species

Small Mammals

Desert Pocket Mouse

Colorado River Cotton Rat

Yuma Hispid Cotton Rat

Butterfly

Macneill's Sootywing Skipper

Plants

Threecorner Milkvetch

Sticky Buckwheat



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LCR MSCP Adaptive Management

- Utilizes USFWS definition which states
 - Method for examining alternative strategies for meeting measurable biological goals and objectives, and then if necessary, adjusting future conservation management actions according to what is learned



LCR MSCP System Monitoring

- Collect data on existing populations and habitats of covered species to determine status, distribution, density, migration, productivity
- Implemented annually with decreasing intensity over time



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LCR MSCP System Monitoring

- Southwestern Willow Flycatcher
 - Continue river-wide presence/absence surveys
- Yellow-billed Cuckoo
 - Continue and increase species research
 - Develop river-wide presence/absence surveys
- Yuma Clapper Rail
 - Change current protocol to include California Black Rail, Western Least Bittern, as well as other marshbirds
- Point Counts
 - Develop river-wide protocol for monitoring other riparian birds

LCR MSCP System Monitoring con't

- Bats
 - Continue and expand river-wide presence/absence surveys
- Vegetation maps
 - continue and update periodically

LCR MSCP Species Research

- Conduct species research and profiles
 - Relict leopard frog
 - Lowland leopard frog
 - Colorado river toad
 - Small mammals
 - Yellow-billed Cuckoo (survey protocol)
 - MacNeill's sootywing skipper
- Southwestern Willow Flycatcher
 - Colorimetry, prey base, habitat requirements
 - effectiveness of Brown-headed Cowbird trapping



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LCR MSCP Restoration Research

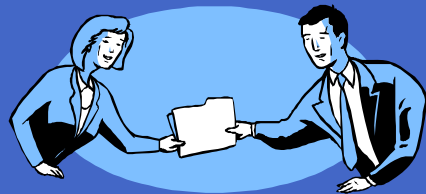
- Site preparation
- Water delivery systems
- Planting techniques

LCR MSCP Post-Development Monitoring

- Evaluation of development of sites as covered species habitat and use of habitat by covered species
- Presence/Absence surveys
 - small mammals, bats, reptiles and amphibians, and skipper
- Avian use of restorations sites
 - Point counts, MAPS, area searches
- Vegetation monitoring
 - initial success, changes over time

Database Management

- Centralized database to categorize and disseminate the research
- Act as a liaison between the wildlife and restoration groups



RECLAMATION

Thank you

Questions
&
Discussion



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