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Managing Water in the West

Program Implementation

Lower Colorado River Multi-Species Conservation Program



U.S. Department of the Interior
Bureau of Reclamation



Program Area



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LCR MSCP Goals & Objectives

- A comprehensive 50-year species conservation and habitat management program that will:
 - ✦ Conserve habitat and work toward recovery of T&E species as well as reduce the likelihood of additional species being listed
 - ✦ Accommodate present water diversions and power production and optimize opportunities for future water and power development
 - ✦ Provide the basis for incidental take authorizations

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Steering Committee Membership

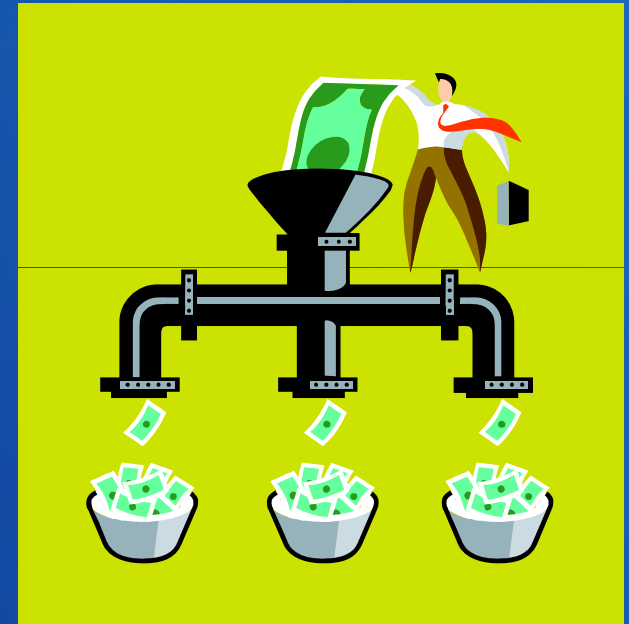
- **Federal Participant Group**
- **Arizona Participant Group (26 Permittees)***
- **California Participant Group (11 Permittees)***
- **Nevada Participant Group (5 Permittees)***
- **Native American Participant Group**
- **Conservation Participant Group**
- **Other Interested Parties Group**

***Participates as a funding agency**

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Cost Sharing

- Total Program Cost
 - \$626 million (2003 dollars)
 - Adjusted Annually for Inflation
- Federal / State Cost Share
 - Split 50/50
- Cost Cap



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Partnerships

- Game and Fish Agencies (Arizona, Nevada, and California)
- Farmers Advisory Board
- Tribes
- National Wildlife Refuges



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LCR MSCP Covered Species

Total of 26 Species

- ◆ **6 Threatened and Endangered Species**
 - ◆ 2 birds, 1 reptile, 3 fish

- ◆ **20 Other Covered Species**
 - ◆ 4 mammals, 10 birds, 2 reptiles, 1 fish, 1 insect, 2 plants

- **5 “Evaluation Species”**
 - 3 mammals, 2 reptiles

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Key Program Elements

- **Creation and restoration of native riparian, marsh, and aquatic habitats**
- **Native fish populations augmentation**
- **Measures to maintain and enhance existing habitats**
- **Species-specific conservation measures**
- **Avoidance & minimization measures**
- **Long-term monitoring & research**
- **Adaptive management principles**

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Habitat Restoration

Total of 8,142 acres

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

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Riparian Restoration



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Marsh Restoration



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Backwater Restoration



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Native Fish Augmentation



Razorback sucker



660,000 fish over 50 years



Bonytail



620,000 fish over 50 years



Humpback chub



\$10,000/year to GCDAMP for 50 years



Flannelmouth sucker



\$80,000 over 5 years + 85 acres of backwaters

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Existing Habitat Maintenance

\$25,000,000 Fund

-  Established within the first years of the program

-  Funds actions to avoid impacts to existing habitats within the planning area

-  Available to Land Managers with consent of Reclamation, USFWS, and State participants

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Conservation Measures

- Maintenance of existing habitat
- Creation and long-term management of habitat specific to each species
- Avoidance & minimization of impacts on Covered Species and their habitats resulting from program implementation
- Population enhancement measures
- Monitoring & research to assess and improve program effectiveness through Adaptive Management

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Adaptive Management Elements

- Measure effectiveness of Conservation Measures
- As need arises, propose revised or alternative Conservation Measures
- Address changed or unforeseen circumstances
- Provide consistency with relevant existing and future USFWS Recovery Plans

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Conservation Projects

- **First two LCR MSCP Conservation Areas**
 -  Cibola Valley Conservation Area
 -  Palo Verde Ecological Reserve
- **Backwaters Restoration**
 -  Hart Mine Marsh
 -  Walker Lake
 -  Draper Lake
 -  Butler Lake
 -  Imperial NWR Demonstration Ponds

Monitoring & Research Elements

- **System Monitoring**
- **Species Monitoring & Research**
- **Post-development Monitoring**
- **Database Management**
- **Adaptive Management**

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System Monitoring

- 🐦 Point counts (e.g., GBBO Nevada Bird Count),
- 🐦 MAPS,
- 🐦 Marsh birds - Inter-agency multi-species
- 🐦 Southwestern willow flycatcher and yellow-billed cuckoo presence/absence surveys and habitat monitoring
- 🐦 Small Mammal distribution
- 🐦 Bat presence/absence and distribution
- 🐦 Covered fish species monitoring






Species Monitoring & Research

- ✿ Covered species life history studies
 - ✿ Southwestern willow flycatcher and yellow-billed cuckoo intensive studies
 - ✿ Small mammal genetics and habitat studies
 - ✿ Brown-headed cowbird and starling control
 - ✿ Bat roost and forage site identification
 - ✿ Insect population studies

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Post-development Monitoring

Evaluation of created and restored habitat

-  **Vegetation survival and growth**
-  **Avian use of restored sites**
-  **Small mammal colonization**
-  **Bat foraging use**
-  **Other Covered Species use**

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