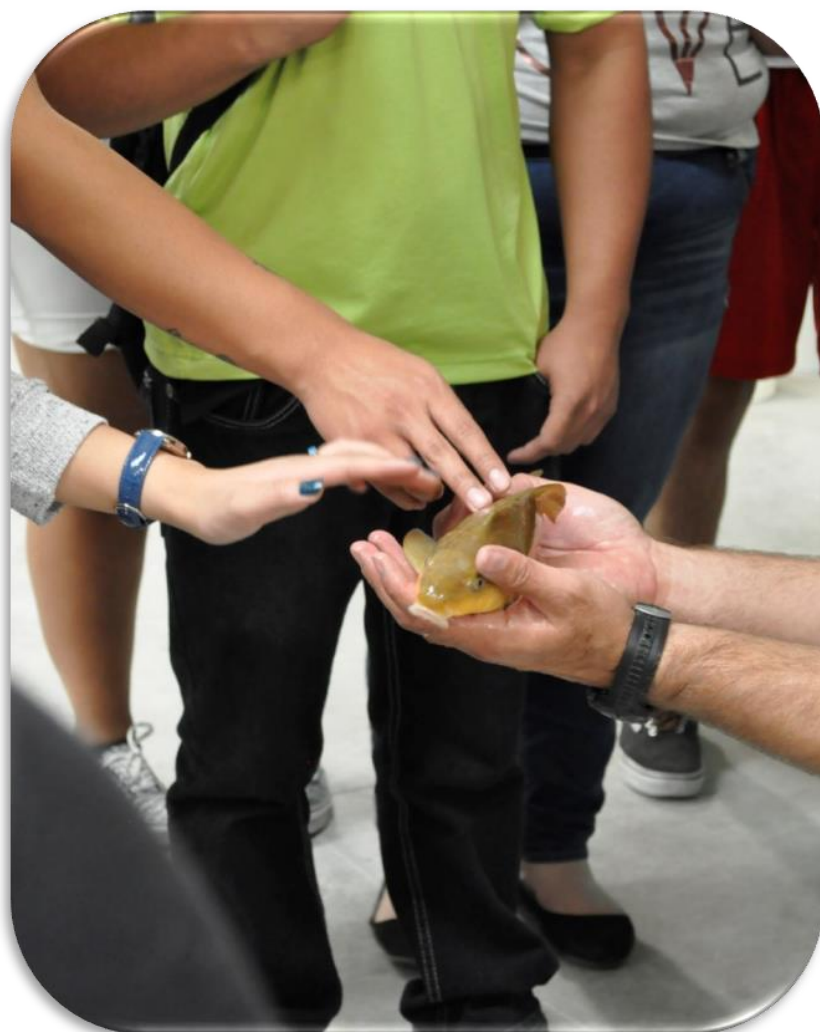




Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Fiscal Year 2014 Outreach Activities



July 2015

Lower Colorado River Multi-Species Conservation Program Steering Committee Members

Federal Participant Group

Bureau of Reclamation
U.S. Fish and Wildlife Service
National Park Service
Bureau of Land Management
Bureau of Indian Affairs
Western Area Power Administration

Arizona Participant Group

Arizona Department of Water Resources
Arizona Electric Power Cooperative, Inc.
Arizona Game and Fish Department
Arizona Power Authority
Central Arizona Water Conservation District
Cibola Valley Irrigation and Drainage District
City of Bullhead City
City of Lake Havasu City
City of Mesa
City of Somerton
City of Yuma
Electrical District No. 3, Pinal County, Arizona
Golden Shores Water Conservation District
Mohave County Water Authority
Mohave Valley Irrigation and Drainage District
Mohave Water Conservation District
North Gila Valley Irrigation and Drainage District
Town of Fredonia
Town of Thatcher
Town of Wickenburg
Salt River Project Agricultural Improvement and Power District
Unit "B" Irrigation and Drainage District
Wellton-Mohawk Irrigation and Drainage District
Yuma County Water Users' Association
Yuma Irrigation District
Yuma Mesa Irrigation and Drainage District

Other Interested Parties Participant Group

QuadState Local Governments Authority
Desert Wildlife Unlimited

California Participant Group

California Department of Fish and Wildlife
City of Needles
Coachella Valley Water District
Colorado River Board of California
Bard Water District
Imperial Irrigation District
Los Angeles Department of Water and Power
Palo Verde Irrigation District
San Diego County Water Authority
Southern California Edison Company
Southern California Public Power Authority
The Metropolitan Water District of Southern California

Nevada Participant Group

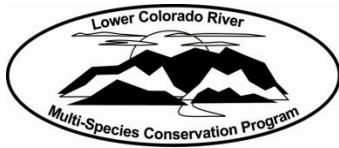
Colorado River Commission of Nevada
Nevada Department of Wildlife
Southern Nevada Water Authority
Colorado River Commission Power Users
Basic Water Company

Native American Participant Group

Hualapai Tribe
Colorado River Indian Tribes
Chemehuevi Indian Tribe

Conservation Participant Group

Ducks Unlimited
Lower Colorado River RC&D Area, Inc.
The Nature Conservancy



Lower Colorado River Multi-Species Conservation Program

Fiscal Year 2014 Outreach Activities

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Lower Colorado River
Multi-Species Conservation Program
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada
<http://www.lcrmscp.gov>

July 2015

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ACRONYMS AND ABBREVIATIONS

| | |
|-------------|---|
| CRAB | Colorado River Aquatic Biologists |
| LCR MSCP | Lower Colorado River Multi Species Conservation Program |
| NDOW | Nevada Department of Wildlife |
| Reclamation | Bureau of Reclamation |
| WEF | Water Education Foundation |
| W.E.T. | Water Education for Teachers |

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INTRODUCTION

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a multi-Federal and non-Federal partnership program that seeks to balance the use of Colorado River water resources with the conservation of native species and their habitats in compliance with the Endangered Species Act. This comprehensive program impacts many different groups, including the partner agencies and organizations represented on the LCR MSCP Steering Committee, the scientific community, local communities, Native American Tribes, farmers, recreationists, and the general public. A public outreach strategy was developed to communicate and inform audiences on LCR MSCP implementation. As part of these efforts, the LCR MSCP reports annual outreach accomplishments.

Highlights of our outreach program during fiscal year 2014 included our continued participation in the fourth year of the Las Vegas Science Expo, participation in water education teacher workshops (Project W.E.T. [Water Education for Teachers]), our first use of “webinar” technology to visit with Bioscience High School (Phoenix, Arizona), and participation in the first year of celebrating International Migratory Bird Day at Clark County Wetlands Park.

TOURS AND GROUP PRESENTATIONS

The LCR MSCP conducts research, monitoring, fish stocking, habitat creation, and management projects over 400 miles of the lower Colorado River from Lake Mead to the U.S.-Mexico border. This requires the LCR MSCP to engage partners who are spread out geographically throughout Arizona, California, and Nevada. One of the most effective ways to create an understanding of the work taking place at LCR MSCP conservation areas, as well as the program area at large, is through occasional tours of the projects. Tours and special group presentations provided during the year are discussed below.

Water Education Foundation

Date: February 27, 2014

Location: Palo Verde Ecological Reserve

The Water Education Foundation (WEF) is a non-profit organization that produces tours, events, and publications to provide an education about water issues in California and the West. The WEF hosts an annual 3-day tour of the lower Colorado River from the Yuma Desalting Plant (Yuma, Arizona) to Hoover Dam (Boulder City, Nevada). At tour stops, a variety of topics are addressed, such as water storage, water delivery, border issues, tribal water rights, drought management, and endangered species. The LCR MSCP typically hosts one or more stops on this tour at LCR MSCP conservation areas to discuss endangered species conservation efforts.

This year, a stop on the WEF tour was hosted at the Palo Verde Ecological Reserve for approximately 40 participants. More information about the lower Colorado River tours can be found on the WEF's Web site at: <http://www.watereducation.org/tour/lower-colorado-river-tour-2014>.

Red Rocks Audubon Society

Date: November 15, 2014

Location: Clark County Wetlands Park, Las Vegas, Nevada

The Red Rock Audubon Society is a chapter of the National Audubon Society dedicated to conservation of birds and other wildlife in southern Nevada. Their meetings and activities are open to the general public and incorporate a mixture of educational workshops, guest speakers, and conservation-based volunteer service.

The Bureau of Reclamation (Reclamation) provided an overview of the LCR MSCP at the Audubon's Western Rivers Action Network workshop titled, "Our Rivers/Our Lifeblood – We're in this Together," which drew approximately 30 attendees.

CONFERENCES AND MEETINGS

Conferences and scientific meetings provide forums to discuss the technical details and issues related to conservation area development, fish and wildlife monitoring, fish augmentation, and species research with program partners, subject matter experts, and other interested parties. These gatherings allow resource managers and scientists to compare best practices and stay informed about important research findings and issues of regional importance. Conferences and meetings that involved substantial program involvement are discussed below.

Colorado River Water Users Association Annual Conference

Date: December 10–12, 2013

Location: Las Vegas, Nevada

The Colorado River Water Users Association *“is a non-profit, non-partisan group, formed to study, formulate, and advise on ways to protect and safeguard the interests of all who use the Colorado River.”* Their annual meeting in Las Vegas draws hundreds of interested parties to discuss issues related to water accounting, ongoing and new issues in water law, municipal reuse and conservation programs, and many other issues related to water use along the Colorado River. The LCR MSCP continues to host an exhibit booth at this conference.

Colorado River Aquatic Biologists Annual Meeting

Dates: January 8–9, 2014

Location: Laughlin, Nevada

Colorado River Aquatic Biologists (CRAB) is an informal group of mainly fisheries biologists, representing Federal, State, tribal, and private entities, working in the Colorado River basin. The group meets each January to share fisheries status updates, research findings, and to discuss topics of current importance pertaining to Colorado River fisheries. Presentations are generally focused on the Colorado River basin from the Mexican border to Lake Powell.

CRAB meetings are considered to be the main local venue for information sharing between fisheries workers involved with both native and sport fishes. LCR MSCP projects are a major part of the native fish component of each annual CRAB meeting. In 2014, 76 individuals attended the CRAB meeting, with a total of 37 presentations made by attendees that included both LCR MSCP and non-LCR MSCP related topics.

A Web page dedicated to CRAB is hosted within the LCR MSCP Web site. Presentations from 2011 to the present are posted as well as details about upcoming meetings. The Web page can be found at: <http://www.lcrmscp.gov/crab/crab.html>.

Colorado River Terrestrial and Riparian Annual Meeting

Date: January 28–30, 2014

Location: Laughlin, Nevada

The Colorado River Terrestrial and Riparian (CRTR) Group helps facilitate communication and information sharing for individuals or groups working on terrestrial, riparian, and marsh habitat issues, including habitat restoration, natural resource monitoring, and research related to the lower Colorado River watershed. Organized under the LCR MSCP, an annual meeting is hosted for any and all groups working on Colorado River issues. In 2014, 99 individuals attended the CRTR meeting, with a total of 30 presentations made by attendees that included both LCR MSCP and non-LCR MSCP related topics.

A Web page dedicated to CRTR meeting information is hosted within the LCR MSCP Web site. Presentations from 2007 to the present are posted as well as details about upcoming meetings. The Web page can be found at: <http://www.lcrmscp.gov/crtr/crtr.html>.

EDUCATIONAL OUTREACH

Educational outreach is an effective way to establish long-term support for program objectives. School groups often request guest speakers or someone to provide field trips. Educational outreach efforts made under the program during the year are discussed below.

Teacher Education Workshops

Partners: National Park Service and Project W.E.T.

Date: June 26–27 and September 20, 2014

Location: Lake Mead (Nevada)

Project W.E.T. is a non-profit organization that works with agencies and educators to package and deliver water education programs intended to raise awareness of water issues. Project W.E.T. offers multi-day continuing education workshops for K–12 teachers and informal educators who focus on water education and related subjects. These workshops introduce teachers to basic hydrology, the water cycle, watersheds, the local (Las Vegas in this case) watershed, and water management, and then place these concepts into the larger context of the Colorado River. Special topics, such as water management, invasive species, conservation, and climate change, are presented by resource agencies and local researchers. The National Park Service – Lake Mead National Recreation Area is now serving as the agency host for this program within southern Nevada.

The LCR MSCP provided informational materials, illustrated species bookmarks, and posters to be distributed to local classrooms by the participants of these events. We also presented program overviews to introduce the program to local educators and to familiarize them with the educational resources contained on the LCR MSCP Web site. We provided funding to support the labor costs for the two facilitators during the workshop. The attendance at each of the two workshops was approximately 25 teachers, for a total of 50 teachers.

Lake Mead Fish Hatchery Tour

Partners: Nevada Department of Wildlife (NDOW), Valley High School (Las Vegas), and National Park Service

Date: May 20, 2014

Location: Lake Mead Fish Hatchery



Figure 1.—Todd Wright of the NDOW demonstrates how water quality is monitored in hatchery raceways.

We were contacted by Valley High School (Las Vegas, Nevada) with a request to help them provide a field trip related to fish and wildlife conservation for their high school students. We were able to partner with the NDOW's Lake Mead Fish Hatchery, which hosted the class visit. The National Park Service provided a fee waiver, which allowed the school to travel to the Lake Mead National Recreation Area without being charged the normal fees.

Reclamation provided an overview of Colorado River history, operations, and the LCR MSCP. The NDOW provided an indepth overview and tour of the Lake Mead Fish Hatchery. The tour focused on how the hatchery is involved with raising razorback suckers for the LCR MSCP, how the hatchery systems work, and the unique adaptations of these native fish.

Boy Scouts of America Field Trip

Date: June 13, 2014

Location: Boulder City and Las Vegas Wash

Reclamation conducted a 1-night bat survey outreach event at the Las Vegas Wash (Henderson, Nevada) with local boy scouts from Henderson and Boulder City, Nevada.

This event was scheduled for the first week of summer vacation. The topics discussed during the survey included the role of bats in the ecosystem, bat behavior, habitat requirements, how bat species are identified and measured, mist netting survey methods, and acoustic survey methods (echolocation).



Figure 2.—Biologist, Allen Calvert, observes bat wing conditions as Boy Scout volunteers record data using Global Positioning System units and paper data sheets.

National Job Shadow Day

Partners: East Career and Technical Academy (Las Vegas, Nevada)
and Clark County Wetlands Park

Date: February 6, 2014

Location: Clark County Wetlands Park

As part of National Job Shadow Day, we took six 12th graders from East Career and Technical Academy to Clark County Wetlands Park to learn about wetland habitat restoration and wildlife identification. While the Las Vegas Wash is not an LCR MSCP project, it provides a local example of habitat restoration and wildlife observation techniques.

We led the group on a walking tour around a series of ponds and trails vegetated with native mesquite and cottonwood, stopping at key locations to observe birds, nests, and trees, which had been chewed on by beavers. The students, using binoculars and spotting scopes on tripods to provide an up-close viewing experience, observed great blue herons, northern shovelers, common coots, gulls, and various wading birds. We used bird identification field guides to demonstrate how specific features and body shapes are used to identify birds.

Mirage Educators Appreciation Day

Partners: Mirage Casino, Clark County School District, and numerous other organizations

Date: August 14, 2014

Location: Mirage Casino, Las Vegas, Nevada

This annual event helps provide K–12 teachers with donated school supplies and the opportunity to visit and network with numerous exhibit tables hosted by non-profit groups, agencies, museums, and other organizations with a potential educational value. This event provides an opportunity to distribute informational materials about the LCR MSCP and to make initial contact with teachers who may be interested in having classroom speakers or field trips to learn more about the program.

Classroom Visits

We made several classroom visits during the year within southern Nevada (Clark County). During these visits, we discussed the history of water and power development along the Colorado River and how those changes have impacted native wildlife and fish species. We discussed conservation activities being completed by the LCR MSCP to balance human and ecosystem needs. To broaden our outreach within the program area, we also conducted one webinar with a science-based magnet school in the Phoenix, Arizona, area (Bioscience High School). A summary of our classroom visits is provided below:

| School | Dates | Students contacted | Program type |
|---|-------------------|--------------------|--------------------|
| Bioscience High School (Phoenix, Arizona) | February 20, 2014 | 56 | WebEx presentation |
| James Gibson Elementary School | May 16, 2014 | 40 | Career day |
| Martha P. King Elementary School | May 20, 2014 | 100 | Career day |
| Estimated total students | | 160 | |



Figure 3.—On February 20, 2014, Reclamation hosted a webinar with Bioscience High School that discussed the history and operation of the lower Colorado River and the LCR MSCP.

FESTIVALS AND SPECIAL EVENTS

Festivals and special events attract the general public to come participate and learn about a variety of topics, including science and conservation. To be successful, these events often require the participation and support from large numbers of organizations, with one organization taking the lead to produce the event. By participating in large festivals and events, Reclamation is able to gain visibility for the LCR MSCP from a large number of people without having to be the organizer of the event. Some large events, such as the Las Vegas Science Expo, have attracted from several hundred to as many as 10,000+ attendees within a single day. During fiscal year 2014, we participated in the following festivals and special events:

International Migratory Bird Day

Partners: Clark County Parks and Recreation, Bureau of Land Management, Reclamation, NDOW, Southern Nevada Water Authority, U.S. Fish and Wildlife Service, and Red Rock Audubon Society

Date: March 5, 2014

Location: Clark County Wetlands Park

Clark County Wetlands Park partnered with six local agencies to create a community event celebrating “International Migratory Bird Day,” which introduces the public to the world of birds. The theme in 2014 was “Why Birds Matter,” which was modified to “Birds Matter in Las Vegas,” to customize the theme to the local area.

Reclamation participated in the event planning, which included activity stations, such as a bird walk; a live red-tailed hawk with a wildlife rehabilitator; pine cone bird feeder construction; and other bird-related activities. Approximately 200 people participated in the 2014 event.



Figure 4.—Reclamation produced this poster to commemorate the 2014 event.

Earth Day (Party for the Planet)

Partners: Mandalay Bay Casino and the Association of Zoos & Aquariums

Date: April 22, 2014

Location: Mandalay Bay Casino (Shark Reef Aquarium), Las Vegas, Nevada

This annual Earth Day festival is hosted by the Mandalay Bay Casino (Shark Reef Aquarium) in conjunction with the Association of Zoos & Aquariums. The activity brings together numerous southern Nevada-based public lands, resource, and conservation agencies/organizations to interact with the public and discuss issues of environmental importance.

In 2014, we hosted an exhibit table to discuss the role of the LCR MSCP and to discuss how the program is involved with conserving species and their habitats. We spoke to approximately 100 people, primarily from California, southern Nevada, and throughout the United States and abroad. Some of the international visitors were from Canada, Mexico, the Philippines, and China.

Las Vegas Science Expo

Partners: Las Vegas Science Festival

Date: May 3, 2014

Location: Cashman Expo Center, Las Vegas, Nevada

This full-day event attracted 8,000 attendees to Cashman Expo Center (Las Vegas, Nevada) to learn and participate in hands-on science demonstrations, view exhibits and animals, and to learn about local science programs. We have participated in every year of this annual event since it began in 2011. At this event, we distributed illustrated posters, covered species bookmarks, and program information while talking with participants about the program's conservation efforts along the lower Colorado River.

National Public Lands Day

Partners: National Park Service, NDOW, Clark County Parks & Recreation Department, Town of Laughlin, Nevada State Parks, Hitchin' Post Stables, Academy of Building Industries, and Laughlin High School

Date: September 27, 2014

Location: Pyramid Canyon Day Use Area, Laughlin, Nevada

More than 350 people attended the National Public Lands Day event, which included agency tables, learning activities, hikes, and stewardship projects, with the focus on caring for the Nation's shared lands. Reclamation shared details on the programs in Lake Mohave and the Big Bend Conservation Area that help foster the populations of endangered fishes of the Colorado River.

Approximately 200 children participated in a variety of activities ranging from a species identification "scavenger hunt" to a "lawn fishing" contest (with Velcro fish and bait/hooks) to creating "Leave No Trace" bracelets and lanyards. Several enjoyed flying kites on the day use area's grassy field, paddling in the splash pad, and indulging in playground activities, all of which were developed through a partnership among Reclamation, the National Park Service, and Clark County, and supported by funding from the Southern Nevada Public Land Management Act.



Figure 5.—Visitors attending the Public Lands Day event stopped by to learn about native fishes.

VOLUNTEER PARTICIPATION

Reclamation has continued to partner with Arizona State University Colleges at Lake Havasu City since it opened in 2012. The students participate in small mammal trapping, bat monitoring, and native fish monitoring.

Eight Arizona State University students participated in endangered fish conservation efforts during 1 day of this year's "razorback roundup" on Lake Havasu (February 10–14, 2014). The "roundups" are annual lake-wide sampling events that allow biologists to collect information on the abundance of federally endangered razorback suckers relative to the many species of introduced sport fishes that dominate the lake. Participating agencies this year included Reclamation, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the Bureau of Land Management, and the Arizona Game and Fish Department.

On April 1, 2014, five Arizona State University students attended and observed sonic transmitters being surgically implanted into bonytail at the Windsor Beach, Lake Havasu launch ramp. Fish were later released as part of a study to track the movements and behaviors of these critically endangered fish following stocking into the lower Colorado River.