Jeffery B. Smith
Regional HAZMAT Coordinator
DOI-USBR
500 Fir Street
Boulder City NV 89005
Jbsmith1@lc.usbr.gov
Phone (702)293-8060
Fax (702) 2938148
Freshwater Spill Symposium

Lower Colorado River Oil Spill and Response January 2002 lessons learned

With the current drought that has affected the western portion of the United States, the demand for water in the West today is even greater than it was nearly 100 years ago. As it did throughout the 20th Century, the United States Department of the Interior (DOI), Bureau of Reclamation (Reclamation) will continue to work in partnership with the States, Indian tribes, water and power users, local communities and other entities to help meet the West's water and related resource needs for the 21st century.

The Lower Colorado (LC) Region is one of five geographically-defined areas that administer Reclamation programs and projects in the 17 Western states. The LC Region encompasses southern Nevada, California south of the Tehachapi Mountains and east of the Sierra Nevada, most of Arizona, a small corner of southwest Utah, and a small piece of west central New Mexico. The Region was formally established in 1943, some four decades after Reclamation began working in these states.

The Regional Office, from which Reclamation's programs and activities are administered throughout the Region, is located in Boulder City, NV. There also are five Area Offices within the Region, as well as a Native American Affairs Office, which is located in

Phoenix but is administratively part of the Regional Office. The Area Offices are located in Phoenix, AZ.; Yuma, AZ.; Temecula, CA; Boulder City, NV; and at Hoover Dam on the Colorado River. The Area Offices work directly with local entities within specified geographic areas (see map). The Area Offices and the Regional Office work closely together to ensure Reclamation programs and activities throughout the LC Region meet the expectations of our constituents and customers, and are conducted with maximum efficiency, effectiveness and consistency.

Perhaps our most important function in the LC Region is to serve as the lower Colorado River "water master" on behalf of the Secretary of the Interior. In this effort, we work closely with state and local entities, Indian tribes, water and power constituents, environmental groups, other Federal agencies, Mexico and other interested entities. The Colorado River is one of the world's most physically developed and regulated rivers. It must be managed to meet water and power delivery obligations, protect endangered species and their habitat, enhance recreation and provide flood control. In addition, Reclamation must annually measure and account for the water's use, and maintain the river channel and protective levees.

A complex set of laws, interstate compacts, court decisions and decrees, contracts, an international treaty and other administrative and legal documents that have evolved into what is collectively known as the "law of the river" controls our management activities. We work within this "law" to meet our obligations, using its inherent flexibility to seek solutions to today's water management and use challenges.

Water Delivery – Reclamations Lower Colorado Region in a typical year delivers nine million acre-feet (maf) of water to irrigate more than 1.5 million acres in the United States and Mexico, and to help meet the needs of more than 20 million people in Arizona, Nevada and California. In 2000, Reclamation Lower Colorado Region projects delivered about 2.66 maf of Colorado River water to Arizona, 5.3 maf to California, and 330,000 acre-feet to Nevada. An additional 1.7 maf was scheduled for Mexico.

Hydroelectric Power - Hydroelectric powerplants at Hoover, Davis and Parker Dams generate an average of six billion kilowatt hours of electricity a year - the energy equivalent of more than 11.4 million barrels of crude oil, and enough energy to meet the needs of two million people. Reclamation also owns about 25 percent of the output of the Navajo Generating Station, located near Page, AZ; this power is used to pump Colorado River water through the Central Arizona Project to water users in Arizona. Reclamation also constructed the original hydroelectric powerplants at Roosevelt Dam, as well as the powerplants at Headgate Rock Dam and New Waddell Dam. These facilities benefit the Salt River Project, Colorado River Indian Tribes and Central Arizona Project, respectively.

Recreation - There are 15 major recreation areas on Reclamation projects in the LC Region. The largest is the Lake Mead National Recreation Area, America's first national recreation site. More than 12 million people visit these recreation areas each year, and hundreds of thousands more enjoy the recreational opportunities provided by the year

round, managed flow of the lower Colorado River. The recreation areas are managed by other governmental agencies, except for the Hoover Dam visitor center.

Natural and Cultural Resources - Four national wildlife refuges (Imperial, Cibola, Bill Williams and Havasu) and one national wildlife area were developed on the lower Colorado River to provide fish and wildlife habitat and recreational opportunities. In addition, numerous backwater areas have been created or rehabilitated to provide fish and wildlife habitat. Managing, protecting and enhancing fish and wildlife habitat and natural, cultural and recreational resources to preserve the aesthetic quality and natural environment and promote the safe and healthful use of land and water has long been part of Reclamation's program, in cooperation with other Federal and state natural resource agencies.

Flood Control - Hoover Dam and Parker Dam are the only facilities on the Colorado River with an authorized flood control function, but all the dams on the river help prevent or minimize flooding. (The modification of Roosevelt Dam on the Salt River in Arizona added flood control to that structure's function also.) In 2000, lower Colorado River dams prevented potential flood damages estimated at $1.4 million. Since 1950, the dams have prevented an estimated $1.1 billion in flood damages.

Drought Protection - Since Hoover Dam was completed in 1935, there has not been a water shortage on the lower Colorado River, although there have been several droughts in the geographic area covered by the LC Region.

Our vision in the LC Region is to manage and operate the lower Colorado River system in a manner that respects the rights and obligations established under the existing "Law of the River" while looking for creative ways to meet the changing and contemporary needs of the river basin. To help accomplish this vision, we follow several key objectives: Effectively carry out the Secretary of Interior's role as watermaster of the Lower Colorado River, in consultation with the Colorado River Basin states and other interested parties. Provide technical expertise on the Lower Colorado River operation and maintenance to meet water delivery requirements. Work with the regulatory community and interested parties in developing the Lower Colorado River Response Plan and The Lower Colorado River Multi-Species Conservation Program (MSCP). The MSCP is a coordinated, comprehensive, long-term multi-agency effort to conserve and recover endangered species, and protect and maintain wildlife habitat on the lower Colorado River.

The MSCP's purposes are:

- Protect the Lower Colorado River environment while ensuring the certainty of existing river water and power operations,
- Address the needs of threatened and endangered wildlife under the Endangered Species Act, and
- Prevent the listing of additional species on the lower Colorado River.

The MSCP covers areas up to and including the full-pool elevations of Lakes Mead, Mohave and Havasu and the historical floodplain of the Colorado River from Lake Mead

to the United States-Mexico Southerly International Boundary, a distance of about 400 river miles. Conservation measures currently focus on the area from Hoover Dam to the border, but may include Grand Canyon in the future.

Developed between 1996 and early 2005, the plan for this 50-year effort includes the goal of creating more than 8,100 acres of riparian, marsh and backwater habitat for four listed species and 16 other species native to the lower Colorado River. It also includes measures to protect and enhance an additional two listed and four non-listed species, and plans for stocking more than 1.2 million juvenile razorback suckers and bonytail to augment the existing populations of these fish in the lower Colorado River.

On 5 January 2002 Reclamation Yuma Area Office (YAO) Hazmat Coordinator received a phone call from emergency response personnel that a oil slick 16 miles long was traveling down stream toward Yuma Arizona. Since YAO had trained personnel and equipment to respond to this incident, YAO deployed boom to protect sensitive areas. YAO did not have the capabilities to recover and collect oil. Since YAO did not have the capability to recover and collect oil the YAO Hazmat Coordinator contacted the National Response Center (NRC) to see if he can talk with the EPA Region 9 Federal On Scene Coordinator (FOSC) The lessons learned from the oil spill that occurred in 2002 were an eye opener not only for Reclamation but for EPA, other Federal Agencies, the States of Arizona and California, and municipalities along the Lower Colorado River.

It was realized that:

1) **The Lower Colorado River response plan needed updating**. During the incident it was realized that the EPA Lower Colorado River Response plan was outdated.

For Example

A) Emergency point of contacts were not up to dated

B) Resource protection strategies are not identified with in the old plan

C) Equipment and resources location are outdated and or not identified

2) **Communication and planning with local, state and federal agencies needs to be developed.** There has been very little planning with other federal, state and local agencies for spills that occur on the Lower Colorado River. Communication with these agencies only occurs when there is an incident. Also, if there was an updated plan in place then agencies along the Lower Colorado River would know who is in charge of an incident and where the resources are located. Currently Reclamation Regional Hazmat Coordinator is working with EPA Region 9 on updating the EPA Lower Colorado River response and developing an inland area committee for the Lower Colorado River Region.

3) **Who is in charge when there is an incident on the river?** There are many questions of who is in charge of the Incident when an incident occurs on the Lower Colorado River since there are many jurisdictions and resources that could be affected.

4) **Where are the resources located?** During the incident, questions where asked such as who has spill boom and were is it located, oil recovery equipment location, boats, and trained personnel?.

5) **Where is the funding for response?** Many Federal and local agencies do not have funding for spill response. During thise response, EPA provided funding through the Oil Pollution Liability Trust fund administered by the Coast Guard National Pollution Fund

Center.~~.~~ The web site for the trust fund

ishttp://www.uscg.mil/hq/npfc/Response/index.htm

~~Steps to get funding from the Oil Liability Trust Fund are as follows~~:

- ~~Call the National Response Center (NRC) @ (800) 424-8802 to report the spill~~
- ~~Get a Report Number from the NRC~~
- ~~When talking to the NRC request to talk to a Federal On Scene Coordinator (FOSC) from your EPA Region~~
- ~~When talking to the FOSC request for a Federal Pollution Removal Number (FPRN). This is the number that opens up the Oil Liability Trust Fund and allows for spending. (This funding comes from the Coast Guard. The Cost Guard will work with the Responsible Party for cost recovery.)~~
- ~~If the situation warrants EPA will show up on site and/or send out their STARC contractor to monitor cleanup activities~~
- ~~The cost documentation package prepared by the DOI Lead Federal Agency must be sent through DOI Office of Environmental Policy and Compliance (OEPC) for completeness and then sent forward to EPA for approval of cost who then will forward it to the Coast Guard who will then cut a check to the Lead Federal Agency.~~
- ~~If in need of help you may contact Mr. Jeffery B. Smith, Regional Hazmat Coordinator, Bureau of Reclamation Lower Colorado Region, Boulder City NV~~

~~Office: (702) 293-8060 Cell: (702) 378-2400~~

~~Help is also available from DOI-OEPC Oakland Office @ (510) 817-1477~~

6) **Natural Resource Damage Assessment and Restoration**. Natural resource damages assessment (NRDA) is the process by which resource management agencies determine and collect restoration funds when hazardous material spills or hazardous waste sites harm natural resources. The Department of the Interior (Interior) has issued regulations to provide a framework and standards for this process (see 43 CFR part 11). During this incident it was determined by all DOI agencies that Natural Resources were not damaged and that a Natural Resource Damage claim would not be administered against the responsible party. The lessen learned in this response is that Reclamation early response prevented injury to many natural resources.

The Superfund law (CERCLA) authorizes NRDA when there is a release of a hazardous substance. The Clean Water Act (CWA) authorizes NRDA when there is a discharge of a hazardous substance or oil into navigable waters. Certain categories of parties responsible for a release or discharge, known as "responsible parties" or "RPs," are liable for natural resource damages if the release or discharge results in injury to natural resources. Natural resources include land, fish, wildlife, plants, air, and water that the government manages on behalf of the public. Only Federal, State, and Tribal officials who have been designated as natural resource "trustees" may recover natural resource damages. The primary Federal trustees are Interior (including the Fish and Wildlife Service, the National Park Service, and the Bureau of Land Management, Bureau of Reclamation), NOAA, and the Department of Agriculture's Forest Service. State and

Tribal trustees commonly include fish and game, park, and water management authorities.

Trustees must use recovered damages to fund restoration, rehabilitation, replacement, or acquisition of the equivalent of the injured natural resources. These actions often referred to collectively as "restoration," are principally designed to return injured resources to baseline (i.e., the condition that would have existed if the release or discharge had not occurred). Restoration may also compensate for the public's interim loss of injured resources from the onset of injury until baseline is restored. In contrast, response actions, normally conducted by the U.S. Environmental Protection Agency (EPA) or State or Tribal response agencies, focus on controlling exposure to a released substance and removing the substance in order to protect human health and the environment from threats of additional harm. Thus, although response can reduce or even eliminate the need for restoration in some cases, the two types of action are distinct.

The hazardous substance NRDA regulations are optional procedures that trustees may use to conduct their assessments. Trustees generally use the regulations as a framework for settlement negotiations with RPs. However, if trustees and RPs fail to reach settlement and trustees must file suit, Federal and State trustees who comply with the regulations have an advantage, known as a "rebuttable presumption," in litigation. The regulations provide an administrative process that involves preparation of various documents and coordination with interested parties. The regulations also include a range of technical procedures for the actual determination of injuries and damages.

Under the regulations, there are four phases of an NRDA: Preassessment, Assessment Plan, Assessment Implementation, and Post-Assessment. Once trustees discover or are notified of a release or discharge, they may enter the Preassessment phase. Based on certain criteria, trustees perform a Preassessment Screen to determine whether additional assessment work is warranted. They document their determination, and if work is warranted, they proceed to the Assessment Plan phase.

During the Assessment Plan phase, trustees prepare an Assessment Plan describing how they intend to determine injuries and damages. This phase also involves coordination among trustees and between trustees and response agencies, involvement of the RP, and opportunity for public comment on the Assessment Plan.

~~After the Assessment Plan is drafted and made available for public review, trustees enter the Assessment Implementation phase, in which they perform the work described in the Assessment Plan. The regulations contain two general types of assessment procedures for determining injury and damages. "Type A" procedures are standardized procedures for simplified assessments requiring minimal field observation that are available to determine damages for minor spills in certain environments. "Type B" procedures are more detailed procedures for assessments in other cases. The regulations provide criteria for using a type A procedure, type B procedures, or both.~~

~~After determining and quantifying injury, trustees identify a reasonable number of possible restoration alternatives, including natural recovery. Trustees select one of the~~

~~alternatives based on several factors, including technical feasibility, relationship of costs to benefits, and consistency with response. Trustees then document their decisions in a Restoration and Compensation Determination Plan, which is subject to public review and comment. After the public comment period, trustees estimate the cost of implementing the selected restoration alternative. Trustees may also, but are not required to, determine the value of the associated public interim losses using methodologies authorized by the regulations.~~

~~Once the trustees have calculated damages, they enter the Post-Assessment phase. In this phase, the trustees prepare a Report of Assessment detailing the results of the Assessment Implementation phase. The trustees present the Report to the RPs, along with a demand for damages and reasonable assessment costs. Trustees have the authority to settle their damages claims at any time. However, if the RPs do not agree to pay within 60 days of receipt of the demand, then the trustees may file suit.~~

~~Once damages have been awarded or settlement has been reached, trustees officials establish an account for the recovered damages and prepare a post-assessment Restoration Plan. The trustees provide for public comment on the Plan and then implement the Plan using recovered natural resource damages.~~Do to the quick response activities by Reclamation many natural resources were protected before they had a chance to be affected.

7) **Spill Prevention Control and Countermeasures (SPCC) Issues along the Lower Colorado River**. With this incident, EPA took the opportunity to look at SPCC issues along the Colorado River to include portable pumps for irrigation intake, and fueling operations along the river. EPA Region 9 spent several days on the Lower Colorado River looking at facilities to see if they were in compliance with the SPCC regulation. EPA did some on the spot corrections and training during this visit. Some of the findings that were identified during their visit were no secondary containment for portable fuel tanks and unstable location of fuel tanks.

In Conclusion EPA Region 9 and Reclamation know how important the Colorado River is as a resource to the desert southwest. That is why EPA Region 9 and Reclamation wants to work closely in updating the EPA Lower Colorado Response Plan and then implement the Lower Colorado Inland Area Planning Committee to ensure that Federal, State, Tribal and local agencies are working in cooperation in protecting the Lower Colorado River. The Inland Area Planning Committee will ensure that responders know who to contact and were the equipment is located during a response.