

**Glen Canyon Dam Adaptive Management Work Group**  
**Agenda Item Information**  
**April 29-30, 2009**

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Agenda Item

Public Outreach Ad Hoc Group

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Action Requested

√ The following motion is requested, and is provided as a courtesy to AMWG members. However, no motion is presumed to be made unless and until an AMWG member makes the motion in accordance with the AMWG Operating Procedures.

**POAHG, in collaboration with GCMRC, is charged with producing “status updates” for the benefit of the lay public and resource managers summarizing the current understanding and findings related to AMP activities.**

Background of Action Requested

- **The proposed “status updates” will be used to fulfill POAHG’s role to provide background and current information regarding the AMP.**
- **These updates will provide annual snap shot summaries of resource trends and science results for the benefit of the public and resource managers. Information will be obtained by interviewing GCMRC staff and utilizing existing GCRMC reports.**
- **Purpose and Intent of the “status updates” is to inform the public and resource managers of the current status and knowledge of resources and dam operations and advances in adaptive management.**

**Proposed “Status Updates” Format:**

- 1. What are the questions that need answering?**
- 2. How was the research/monitoring conducted?**
- 3. What was learned/research outcomes?**
- 4. How would/will this information affect decision making or management options**

(Note: The above motion addresses the proposed status update reports only, and not the budget. The budget figures noted below are for information only; they will be considered under the FY09/10 Budget agenda item.)

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Presenters

Jeff Humphrey, U.S. Fish and Wildlife Service (POAHG representative for Sam Spiller)  
Michael Yeatts, Hopi Tribe (AMWG Alternate for the Hopi Tribe)  
Doug Hendrix, Bureau of Reclamation (POAHG representative for Reclamation)

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Previous Action Taken

- √ By AMWG:  
At the August 2007 AMWG meeting, the following motion(s) were passed:
  - √ MOTION: **The Adaptive Management Work Group recommends that the Secretary of the Interior approve both the continued deployment and maintenance of the Phase I public outreach campaign products (web site, displays, fact sheets) and the Phase II public outreach campaign, detailed below, that includes development of additional outreach materials, media support, public education, and events development or participation.**
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**Public Outreach Ad Hoc Group 3-year Informational Product Workplan  
Phase II Communications Efforts**

Following is the Phase II public outreach campaign plan for use by the AMWG and Public Outreach AHG to increase understanding of and support for the various research and management activities occurring along the Colorado River. The intent of this plan is to leverage both existing and newly developed informational campaign items and initiatives to familiarize the general public with the goals and workings of the Adaptive Management Program (AMP).

The goal of the outreach campaign is to provide the general public and core target audiences with factual, up-to-date information about the AMP – why it was created, what it entails, and what is was organized to accomplish.

The following plan builds on the Phase I products and identifies new products, initiatives or events the communications team is will pursue, if approved by AMWG, over the next three fiscal years (FY 09, 10 & 11).

**Phase II Campaign Focus**

Product	Date Planning / Work	Responsible Party	Estimated Cost 2009/2010/2011
<b>Portable Display – New Design &amp; Display (Retractable Banner style)</b>	2009/2010	- BOR (Production) - POAHG Committee (content & approval)	\$2500/\$2500
<b>AMP Info Campaign – Trade Show</b> Colorado River Water Users Association	- Dec 2009/10/11	- BOR	\$1,000/1000/1000
- Additional tradeshows TBD	- TBD	- BOR/POAHG	\$2500/2500/2500

Public Outreach Ad Hoc Group, continued

<b>Product</b>	<b>Date Planning / Work</b>	<b>Responsible Party</b>	<b>Estimated Cost 2009/2010/2011</b>
<b>Tribal Outreach Materials</b> - Fact sheets - Interpretive Materials	2009/2010/2011	- Mike Yeatts - Hopi	\$1500/1500/1500
<b>Guide Resource Materials</b> - Wallet cards - Ammo can information	2009 / 2010 2009 / 2010	Lynn Hamilton/GCRG	\$1,000/5000/5000 \$1000/1000/1000
<b>Potential Media Events</b> - Media day/translocation efforts (w/ FWS, AZGF, GCMRC) - Archeological excavations	- 2009 / timed w/ releases - TBD	- BOR, FWS, AZGF, GCMRC - BOR/Tribes	- \$5,000/ TBD - TBD
<b>News Media Science Tour</b> - Colorado River raft trip - Tour of Glen Canyon Dam - Tour of hatcheries	2010/2011	- USGS/BOR/POAHG	\$2,500/2500
<b>Media Kit Folders</b>	2010	BOR	\$1,500
<b>Educational Materials</b> - Lesson plan (possible grant op.)	2009/2010	BOR & POAHG	\$1,000/ \$2,000
<b>New Fact Sheet Development</b> - Monitoring of Native Fish - Tribal values - High Flow Test Overview - Fall Steady & Equalization Releases - Suppression of non-native fish	2009/2010/2011	BOR & POAGH	\$5,000/2000/TBD
<b>Annual Web Site Updates &amp; Maintenance</b>	2009/2010	BOR	10,000/10000/10000
<b>Video Footage</b> - Media B-roll packs - Program Overview	2009/2010	AGFD / BOR / FWS	\$5,000/TBD
<b>Administrative Costs</b> - Design, Layout & printing - Materials & Supplies - Meeting attendance	2009/2010/2011	BOR	\$10,000/10,000/10,000
<b>Total Projected Expenses</b>			<b>55,000 - \$60,000/yr</b>

**Timeline**

We anticipate that the design, development, and preparation of the Phase II products and initiatives will occur over the next two fiscal years. Prior to use or distribution of these materials to the general public, the Public Outreach Ad Hoc Group will seek AMWG guidance and approval.

# **AMWG – Public Outreach Ad Hoc Group**

**Budget Progress Report  
TWG Meeting – Phoenix, AZ  
March 16, 2009**



# Completed Products

## Phase I



# Approved Fact Sheets

## ADAPTIVE MANAGEMENT PROGRAM

Using Science to Manage River Resources in Grand Canyon



### Adaptive Management Program Origins

The construction and operation of Glen Canyon Dam fundamentally altered the Colorado River ecosystem. Given the importance of Colorado River water to the states and economies of the Southwest, it is not surprising that there has been and remains considerable controversy over how to share this major river. As we begin the 21st century, challenges ahead are how best to manage this resource for the benefit of agricultural, municipal, industrial, tribal, environmental and recreational interests alike.

The Grand Canyon Protection Act of 1992 directed the Secretary of the Interior to manage Glen Canyon Dam in such a way as to "protect, mitigate adverse impacts to and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established." The act provided direction for the Glen Canyon Dam Environmental Impact Statement, in that all dam operations would need to be analyzed with these goals in mind.

After nearly five years of study, and more than 85 different projects undertaken by more than 15 different agencies - the record decision for the Glen Canyon Dam EIS was signed in 1996. The Decision specified operating parameters for Glen Canyon Dam, and mandated that adaptive management of the resources in Grand Canyon be undertaken. The act explained that a close watch be maintained on the effects of Glen Canyon dam operations and reported that future modifications of those operations and management actions be considered to protect and enhance the Colorado River ecosystem.

As part of this process, Interior Secretary Habbitt created a federal advisory committee composed of the numerous interests who share in the management of the river. These interests is what is called the Adaptive Management Work Group (AMWG). This group recommends dam operations and management actions to the Secretary of the Interior based on a wide variety of public and technical resources.

### Law of the River

The following is a profile of some of the various federal and state laws, compacts, treaties and administrative actions that are generally referred to as the "Law of the River" and control river operations and the rights to the use of the Colorado River.

- **Colorado River Compact of 1922** - Apportioned the Upper and Lower Basins with the right to develop and use 7.5 million acre-foot (maf) of river water annually. The compact reserved water for future upper basin development and allowed planning and development on the lower basin to proceed.
- **Boulder Canyon Project Act of 1928** - This act authorized the construction of Hoover Dam and other irrigation facilities in the Lower Basin. Apportioned the Lower Basin's 7.5 maf among the states of Arizona (2.8 maf), California (1.4 maf) and Nevada (3.3 maf).
- **Mexican Water Treaty of 1944** - Committed 1.5 maf of the river's annual flow to Mexico.

## ADAPTIVE MANAGEMENT PROGRAM

Using Science to Manage River Resources in Grand Canyon



### Historical Native Fishes of Glen and Grand Canyons

The native fishes of the Colorado River make up one of the most unique and unusual faunas found anywhere in the world. This assemblage of fish is specifically adapted to the historic environment of the Colorado River, and the species that make up this assemblage are often found nowhere else than the Colorado River Basin.

Even prior to the construction of Glen Canyon Dam, the Colorado River in Grand Canyon was dominated by introduced fish species, mainly warm water types. The construction of Glen Canyon Dam changed the river from a turbid, flood-prone, warmwater river to a perennially cold, clear river. This allowed trout, which were introduced, to flourish and expand their use of the river.

These fundamental changes to the ecosystem in which the native fish evolved is may present numerous challenges to their survival. They encounter a physiological of being a warmwater adapted fish now living in a cold environment. Introduced fishes residing in the Grand Canyon may interact with, compete with, or prey upon these native fishes. Finally, changes in the foodbase have occurred due to the presence of much clearer water than existed prior to construction of Glen Canyon Dam.

### Common Native Fish in Grand Canyon - Conservation Through Adaptive Management

- **Spotted Dace (*Ameletichthys maculata*)** - This small minnow is widely distributed across the western United States. They inhabit tributaries of the Colorado River through Glen and Grand Canyons, and are not uncommon in backwaters in western Grand Canyon.
- **Bluntnose Sucker (*Catostomus commersoni*)** - Bluntnose occurs throughout the upper Colorado River Basin and extend into the Lower Basin through the Little Colorado River Drainage and through Grand Canyon to Lake Mead. They are common in tributaries in Grand Canyon. An adult bluntnose may approach 20 inches in length, and can live up to 30 years.
- **Flannelmouth Sucker (*Catostomus commersoni*)** - Flannelmouth Sucker are widely distributed in the Upper Colorado River Basin, and extend into the Little Colorado River Watershed of Arizona and through Grand Canyon. An adult flannelmouth sucker may approach about 20 inches in length, and like other large suckers of the Colorado River may live up to 30 years.

### Endangered Fishes of Grand Canyon - A Major Focus of Adaptive Management

- **Humbug Chub (*Gila cypha*)** - This endangered fish is only known from the Colorado River System, and is restricted to a few remaining populations. One of those populations resides in the Grand Canyon. It was historically widely distributed in the Upper Colorado River Basin and extended down the main stem of the Colorado River into the Lower Basin to at least near Lake Havasu. In Grand Canyon, most humbug chub are found in the vicinity of the Little Colorado River and its confluence with the Colorado River. This is a warm water species, and its spawning and recruitment appear limited to the more cold waters of the Colorado River in Grand Canyon. Spawning

## ADAPTIVE MANAGEMENT PROGRAM

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### Sand Bars in the Grand Canyon

Below Glen Canyon Dam, the Colorado River winds for nearly 300 miles through gorges of Glen Canyon and Grand Canyon in one of the most pristine environments in the world. Bordering the river are thousands of sand bars that provide habitat for a fascinating variety of plants and animals, including some endangered species. Native plants and animals are actively promoted by the National Park Service, as are rangeland and archaeological resources dependent upon the sand bar habitat. Dam operations and management actions impact the sand bars. The Adaptive Management Work Group develops recommendations to conserve and enhance the sand bars of Grand Canyon.

### Glen Canyon Dam's Effect on Sand Bars

- **Glen Canyon Dam collects and retains 84 percent of the river's sediment in its reservoir, Lake Powell.** Glen Canyon Dam regulates the flow of water through Grand Canyon, but does not allow the passage of sediment that once built sand bars and formed an important component of the river ecosystem. The Colorado River was once known for its large annual spring floods of extremely muddy water that were "too thick to drink, too thin to plow." Now, with the settling of the sediment in the reservoir, the dam's turbines release clear water throughout the year, resulting in a sediment-deprived system. Without large annual floods in a sediment-rich river, sand bars are not renewed, and vegetation-overgrowth continues to reduce open sand bar habitat.
- **Water release from the dam fluctuate daily to meet electrical needs.** This fluctuation tends to erode sand bars, which can have an impact on other parts of the river ecosystem.
- **Aggravate and invert natural ecosystems:** Together with organic nutrients in the sand, this habitat is crucial for the growth and survival of the intricate food web found along the river. Many species evolved through perhaps time in this sediment-rich habitat, including the endangered humpback chub, a species still struggling for survival in what remains of its natural habitat. Backwater ponds behind the sand bars are calms, warm water habitats that may prove crucial for the survival of young fish and adulthood.
- **Compromise river viticulture:** With more than 20,000 river viticulture annually and river trips that last from seven to 21 days, river users need numerous and well-distributed sand bars of sufficient size to camp. A rocky, barren shore line or one exhibiting severe vegetation microclimate would make river viticulture difficult, if not impossible, in this unique and greatly sought after region.
- **Archaeological sites:** Many sites are located on the high sand terraces of pre-dam age. Although located above the normal fluctuation level of dam releases, erosion at a number of these sites may be related to the overall decrease in sediment. Appropriate management of the remaining sediment may help preserve these archaeological sites, some of which have been in place for thousands of years.

### Steps Taken to Restore Sand Bars

- **Glen Canyon Dam release fluctuations:** The Adaptive Management Program continues to study various Glen Canyon Dam release fluctuation patterns designed to slow the amount of sand bar erosion and overall transport of sediment out of the Grand Canyon into Lake Mead. This could provide more dry camping area and enhance cultural sites and riparian habitat, while minimizing impacts to power generation.

# List of Fact Sheets

- Adaptive Management Program Origins
- Adaptive Management Program Purpose and Goals
- Who We Are
- Cultural Resources
- Current Status of Resources in the Grand Canyon
- Endangered Species
- Historical Native Fishes of Glen and Grand Canyons
- Hydropower and the Adaptive Management Program
- Colorado River Storage Project
- Lees Ferry Trout Fishery
- Recreational River Rafting
- Sand Bars in the Grand Canyon
- Glen Canyon Dam Temperature Control Device



# Logo & Tagline



*“Using Science to Manage River  
Resources in Grand Canyon”*

# Portable & Stationary Display Panels

## Glen Canyon Dam Adaptive Management Program

### What is Adaptive Management?

Adaptive management is a natural resource management process that focuses on "learning by doing" in achieving the goals of society. Management actions are treated as experiments that may be modified when new information from scientific studies indicates change is needed in resource management policy and practices.

#### Glen Canyon Dam Adaptive Management Program

Concern over the impacts of Glen Canyon Dam operations on the physical environment and ecosystems of the Colorado River resulted in the passage of the Grand Canyon Protection Act of 1992. The act requires the Bureau of Reclamation to:

- Operate the dam in such a way as to protect resources in Grand Canyon National Park and Glen Canyon National Recreation Area.
- Upgrade the dam fully consistent with the Colorado River Compact and continue to provide the benefits for which the dam was authorized as the keywork of the Colorado River Storage Project.

Study Area: Glen Canyon Dam to Paria Ferry

After nearly five years of study undertaken by more than 15 different agencies the Record of Decision for the Glen Canyon Dam Environmental Impact Statement was signed in 1996. The decision specified operating parameters for Glen Canyon Dam and mandated that adaptive management of the resources in Grand Canyon be undertaken.

The Glen Canyon Dam Adaptive Management Program was established in 1997 to provide for long-term scientific research and monitoring of the downstream resources. The information obtained is used as the basis for recommendations for dam operations and other management actions.

**Adjust**

**Design**

**Evaluate**

**Monitor**

**Implement**

**Members**

<b>Armed and State Agencies</b>	<b>Native American Tribes</b>
Arizona Game and Fish Department	Navajo Tribe
Colorado Department of Natural Resources	San Juan Tribe
Colorado Parks and Recreation	Ute Tribe
U.S. Fish and Wildlife Service	Utah Indian Tribal Nations
Western Area Power Administration	Southwest Power Administration
<b>Colorado River Basin States</b>	<b>Environmental Groups</b>
Arizona	Grand Canyon Trust
California	Colorado River Watershed Council
Colorado	Recreational Interests
New Mexico	Recreational Interests
Utah	Recreational Interests
Washington	Recreational Interests
<b>Federal or Power Purchases Contractors</b>	<b>Recreational Interests</b>
Colorado River Energy Recovery Administration (CEREA)	Recreational Interests
Utah Associated Municipal Power Councils (UAMPC)	Recreational Interests

#### Representative Monitoring and Research Study Areas

Since 1997 an immense amount of research studies have been implemented to monitor the program. The information obtained is used as the basis for recommendations for dam operations and other management actions.

The monitoring of fish and riparian habitat has been a top priority. The program has been successful in documenting the impacts of dam operations on the river and riparian habitat. The information obtained is used as the basis for recommendations for dam operations and other management actions.

Real-time monitoring of the river and riparian habitat has been a top priority. The program has been successful in documenting the impacts of dam operations on the river and riparian habitat. The information obtained is used as the basis for recommendations for dam operations and other management actions.

### Using Science to Manage River Resources in the Grand Canyon

#### Sediment

A primary goal of the Adaptive Management Program is the conservation of the Grand Canyon's sand and fine sediment which is an integral part of the natural river process. Sediment is important for riparian habitat, fish habitat, protection of archeological sites and for recreation. Glen Canyon Dam captures the mainstem river sediment supply in Lake Powell. Experimental flood releases from the dam were conducted in 1992 and 2004 to determine if sand would accumulate on beaches and increase the total area and volume of eddy sandbars.

How soon that sand deposited during the 1996 release was not sustained. The 2001 experimental flood releases have shown that some sediments can be reworked if the flows are timed to make use of sediment enriched conditions that follow large tributary floods.

#### Cultural Resources

The Grand Canyon Protection Act specifies cultural resources as a component of the Grand Canyon ecosystem. These resources include:

- Archeological sites include living places, agriculture fields, trails, ceremonial locations, hearthstones and tomahawks. These places are related to the ancestors of Native Americans including the Hanoanoid, Hopi, Navajo, Navajo, Pueblo and the Zuni.
- Historical properties are related to mining, scientific study, and water development, including mines, houses, inscriptions and boats.
- Cultural or societal resources include the plants, animals, water, geography, sounds, smells and space that have value to society.

The main goals of the cultural resources monitoring program are to document site impacts and evaluate the need for site protection measures. One protective measure is the installation of rock and brush check dams to help control erosion at archeological sites.

### Trout Fishery

Lone Ferry, the 10.6-mile stretch of the Colorado River between Glen Canyon Dam and the beginning of Marble Canyon, is a recreational "blue ribbon" trout fishing area. Anglers from around the world come to Lone Ferry to fish for rainbow trout in this large, trout-fishing river. Because of reliable flows of cold water ranging from 40 - 80 degrees, and abundant aquatic food, the river has the capacity to maintain a remarkable trout fishery in the desert. During its history, this productive fishery produced huge rainbow trout ranging from 10 - 20 pounds.

This trout fishery is one of the values associated with the Glen Canyon National Recreation Area, and its maintenance is among the goals of the Adaptive Management Program.

#### Native Fish

The decline of the native fish population is a focus of the Adaptive Management Program's monitoring and research activities. Included are:

- Conducting fish flow experiments to conserve sediment important to native fish habitat.
- Evaluating the proposal to warm dam releases through a sediment withdrawal structure.
- Removing non-native fish that prey upon native fish.
- Monitoring the effects of these actions to identify cause and effect relationships and track native fish population trends.

#### Removal of Non-Native Fish

A four-year long experiment is being conducted to determine if removal of non-native fish, mainly rainbow trout, will result in an increase in survival of native fish. The fish are started with feedstock stock and netted. The netting is then made into a barrier.

#### River Rafting and Recreation

With the completion of Glen Canyon Dam in 1963, regulation of water flows established conditions favorable for river rafting in Grand Canyon. In the 1970s, the surging popularity of river rafting resulted in the need to regulate visitor use in order to protect the river environment and the quality of the river experience. Today, "rafting the river" is a much sought after recreational experience.

The Adaptive Management Program incorporates goals for the needs of river recreation, including conservation of the many popular beaches in the Grand Canyon.

### Hydropower

The Glen Canyon Dam Adaptive Management Program can affect hydropower production at the dam. The program recognizes that hydropower is an integral component of the region's economy. Colorado River Storage Project (CRSP) power is sold to non-profit entities with five million customers in Arizona, Colorado, New Mexico, Nevada, Utah and Wyoming.

Since 1983, power customers have funded over \$775 million for environmental purposes and the purchase of replacement power for the loss of hydropower associated with environmental flow restrictions.

#### Birds

The Grand Canyon ecosystem provides important habitat for wintering, migrant, and breeding birds. More than 30 species have been recorded breeding along the river in the study area. Repeated research since the 1970s has shown that there are few direct flow-related effects upon the riparian breeding bird community. The primary change has been an increase in vegetation in areas that were once sparse.

#### Species of Concern

The Grand Canyon ecosystem provides important habitat for wintering, migrant, and breeding birds. More than 30 species have been recorded breeding along the river in the study area. Repeated research since the 1970s has shown that there are few direct flow-related effects upon the riparian breeding bird community. The primary change has been an increase in vegetation in areas that were once sparse.

#### River Water Temperature

In 1994 the Fish and Wildlife Service issued a biological opinion recommending the Bureau of Reclamation study the feasibility of modifying the operation of the dam by adding a selective withdrawal structure to control release temperatures. The goal would be to provide the right combination of cold and warm water released from the reservoir to benefit the humpback chub and still protect the trout fishery.

#### Why is the Adaptive Management Program important?

Finding a balance between the operation of Glen Canyon Dam and the requirements of downstream resources will continue to drive the work of the Adaptive Management Program. The many values of Grand Canyon must be protected while maintaining the significant benefits of Glen Canyon Dam to millions of people living in the seven Colorado River Basin states.

Issues we study today will likely take many years to resolve, and new concerns will certainly arise. That's why the Department of the Interior is committed to, and places a high priority on, the long-term adaptive management process to address the complex challenges that exist in Glen and Grand Canyons.

# Public Outreach Website

**GLEN CANYON DAM**  
**ADAPTIVE MANAGEMENT PROGRAM**

Using Science to Manage River Resources in the Grand Canyon

Search  >>

- About AMP
- Key Resources
- Temperature Control
- Photo Gallery
- FAQs
- Contact Us
- Links
- Resource Fact Sheets

The construction and operation of Glen Canyon Dam fundamentally altered the Colorado River ecosystem. Because of the importance of the Colorado River to the Desert Southwest, it is not surprising that there has been, and continues to be, considerable debate over how to share and manage this natural resource.

An important part of that debate is the need to address the impacts to the downstream ecosystem resulting from the ongoing operation of Glen Canyon Dam. To address this challenge, the Glen Canyon Dam Adaptive Management Program (AMP) was established in 1997 to provide for long-term research and monitoring of downstream resources. The scientific information obtained under the Adaptive Management Program is used as the basis for recommendations for dam operations and management actions.

**\* NEW \***

[Colorado River Basin Science and Resource Management Symposium](#)

[2008 High-Flow Experiment](#)

A fundamental component of the AMP is the Adaptive Management Work Group, a Federal Advisory Committee, whose primary purpose is to facilitate the Adaptive Management process and to make recommendations to the Secretary of the Interior on actions to improve resources in Glen and Grand canyons. The group consists of stakeholders representing various interests that work collectively to identify and recommend appropriate management strategies to improve downstream resource conditions.

Through the Adaptive Management approach, scientific experimentation is integrated into resource management actions. Over time, as more is learned about the complexities of the downstream ecosystem, the goal of enhancing and improving downstream resources and dam operations can be realized.

Last updated: September 22, 2008

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Site address: [www.gcdamp.gov](http://www.gcdamp.gov)

# Proposed Products

Phase II

FY 2010 & 2011



# Phase II – Proposed Products

- ✓ **Science Status Updates**
- ✓ **Retractable Banner Display**
- ✓ **Tribal Outreach Materials**
- ✓ **Media Kit Folders**
- ✓ **Video B-roll Kits**
- ✓ **Trade Show Participation**
- ✓ **Guide Resource Materials**
- ✓ **Media Events**
  - Science Day**
  - News Media Tour**
  - Translocation Efforts**
- ✓ **Educational Materials**



# Proposed New Fact Sheet Topics

- High Flow Test  
Overview (in process)
- Monitoring of Native Fish
- Tribal Values
- Non-native Fish Suppression
- Fall Steady Flows



# Guide Materials

<p><b>How to Structure Answers:</b></p>	<p><b>Bridging and Deflecting</b></p> <p>Possible Bridges:          "Let's look at it from a broader perspective..."          "There is an equally important concern..."          "Let's not lose sight of the underlying problem..."</p>	<p><b>Communicate With Power Message Developer®</b></p> <p>Fair One Steps:</p> <p>Fair Two Steps:</p> <p>Fair Three Steps:</p>	<p><b>Communicate With Power® 2000</b></p> <p><b>Encountering the Media®</b></p> <p><b>Wallet Card</b></p> <p>By Barry McLoughlin          McLoughlin Multimedia Publishing</p> <p>For information call:          In North America: Call: 1-800-663-3800          Fax: 1-800-403-9277          Outside North America: 613-230-9235          Fax: 613-230-2630          Email: <a href="mailto:communications@mclo.com">communications@mclo.com</a>          Visit our web site: <a href="http://www.mclomedia.com">www.mclomedia.com</a></p> <p>Ottawa, ON, Canada;          Washington, D.C.; Princeton, NJ.</p>
<p><b>Relaxation Exercises</b></p> <p>Breathe slowly &amp; deeply for 5 minutes.</p> <p>Massage your face, neck and hands.</p> <p>Shake your hands loosely.</p> <p>Stomp your feet.</p> <p>Pull in your stomach, lean against a wall; then breathe out through your teeth for 2 minutes.</p> <p>Sip cool water.</p> <p>Psyche yourself up:</p> <p>"I am going to have an interesting dialogue about a fascinating subject."</p>	<p><b>Interview Plan</b></p> <p>Issue:</p> <p>Goal:</p> <p>Theme:</p> <p>Core Message 1:</p> <p>Specific Messages</p> <p>Core Message 2:</p> <p>Specific Messages</p> <p>Core Message 3:</p> <p>Specific Messages</p>	<p><b>Interview Plan cont'd</b></p> <p>Positioning Statement:</p> <p>Quotable Quotes:</p> <p>1.</p> <p>2.</p> <p>Examples, Analogies, Illustrations, Facts:</p> <p>1.</p> <p>2.</p> <p>3.</p>	<p><b>Questions to Ask the Reporter on Initial Contact</b></p> <p>Your name again?</p> <p>Representing what media outlet?</p> <p>What is it about?</p> <p>What particular aspect are you focusing on? or, How are you approaching the story? or, What's biggiering your story?</p> <p>Am you speaking to others?</p> <p>How much do you know about our organization (or the subject)?</p> <p>May I FAX some background information to you? Your FAX number?</p> <p>What is your deadline?</p> <p>May I call you back in an hour? (30 minutes? 10 minutes?)</p> <p>What is your phone number?</p>

## Wallet card

- Profile AMP research activities for handout to Grand Canyon visitors
  - 50,000 wallet cards

## Ammo can info

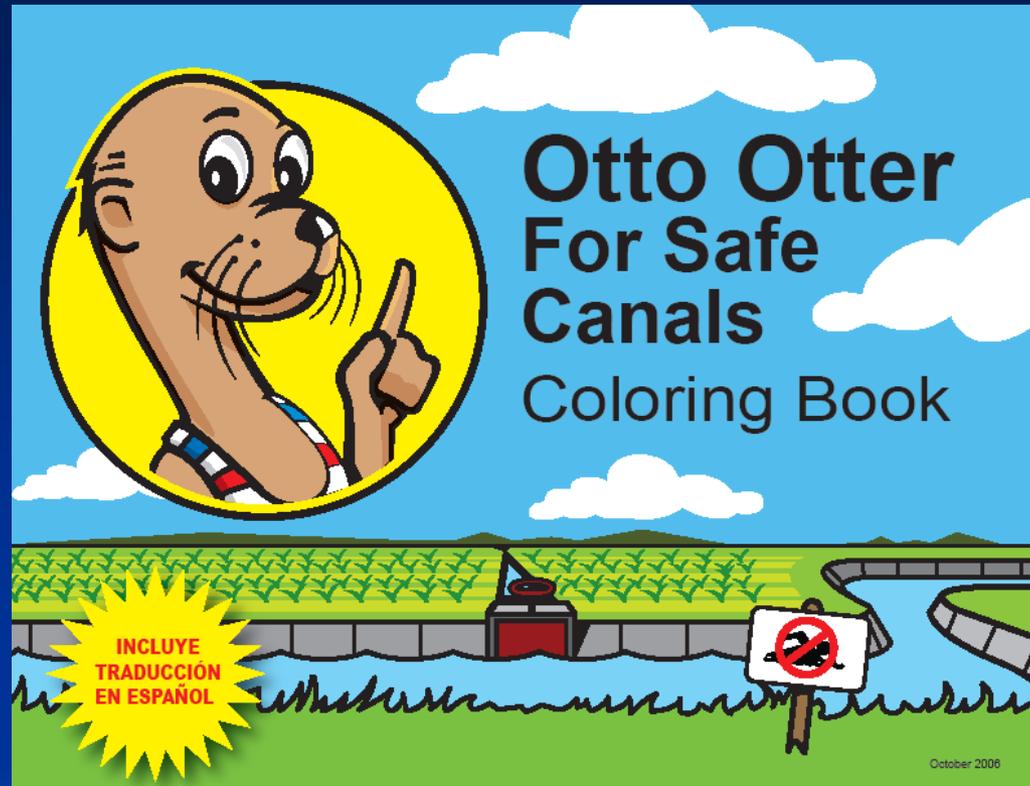
- Laminated fact sheets

# Media Kit Folder



Example: For illustration purposes only

# Educational Materials - Grant



Example: For illustration purposes only

# Media Event – Science Day

Colorado River Basin Science and  
Resource Management Symposium

## Coming Together: Coordination of Science and Restoration Activities for the Colorado River Ecosystem

**November 18-20, 2008**

**Doubletree Resort Hotel**  
5401 N. Scottsdale Road  
Scottsdale, AZ

This symposium will promote the exchange of information on research and management activities related to the restoration/conservation of the Colorado River and its major tributaries from the headwaters to the U.S./Mexico border. This 2-1/2 day symposium will feature plenary sessions as well as concurrent technical sessions, vendors and poster sessions.

### Conference Sponsors:

*U.S. Geological Survey – Southwest Biological  
Science Center*  
*Glen Canyon Dam Adaptive Management  
Program*  
*U.S. Fish and Wildlife Service*  
*Upper Colorado River Endangered Fish  
Recovery Program*  
*Lower Colorado River Multi-Species  
Conservation Program*  
*Bureau of Reclamation*  
*National Park Service*  
*Colorado River Fish and Wildlife Council*  
*Water Education Foundation*



### Program Highlights

Multiple programs to restore and conserve the Colorado River's native species and habitat have evolved independently since 1980 – programs that have had a major impact on water management and conservation efforts. These programs have many common goals and objectives, but there has been no formal opportunity for the exchange of information among these programs. This basin-wide symposium will provide scientists, stakeholders, land and resource managers, and decision-makers the opportunity to learn about these various programs and exchange ideas and data enhancing the effectiveness of these programs – and their success in restoring and conserving the river's ecosystem.

### Plenary and Technical Session Topics Include:

- ▶ Status and trends of aquatic resources, including native and nonnative fishes
- ▶ Climate change and long term drought: how will it affect restoration efforts?
- ▶ Adaptive management and collaborative management decision making
- ▶ Instream flow management and protection (including dam operations and reservoirs)
- ▶ Nonnative fish management and restoration
- ▶ Integrating recreational fisheries with native fish conservation
- ▶ Monitoring program design and effectiveness
- ▶ Native fish propagation, stocking genetic management
- ▶ Sediment conservation and management
- ▶ Societal values and Native American perspectives
- ▶ Riparian habitat monitoring and restoration

More information on this symposium – including a secure, on-line registration form – is available at [www.watereducation.org](http://www.watereducation.org)

# General Program Support Activities



# Special Events & Media Coordination



Media Relations - March 2008 High Flow Test

# Public Meetings Support



Experimental Flows