

# Information and Outreach

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- IN tasks/questions (all):
  - Systems administration
    - Systems administration
    - Website development
  - Library
    - Library operations
    - Peer Review
- Project Completion Year
  - Ongoing.

# Systems Administration

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- IN tasks/questions (all):
  - Systems administration
    - Desktop computers and servers
    - Network
    - Internet and intranet connectivity
    - Computer security
    - System backup and recovery
    - Trouble shooting and maintenance
    - Data storage
  - Web services
    - Website development and maintenance
    - Online discussions forums
- Project Completion Year
  - Ongoing.

**Welcome**



The Grand Canyon Monitoring and Research Center (GCMRC), the cornerstone of the Glen Canyon Dam Adaptive Management Program (AMP), was formally established in October of 1996. Located in Flagstaff, Arizona, the GCMRC measures effects of Glen Canyon Dam operations on the resources along the Colorado River from Glen Canyon Dam to Lake Mead. The GCMRC's scientific activities contribute to meeting the statutory requirements placed on the Secretary of the Interior by Congress via the 1992 Grand Canyon Protection Act, the 1995 Glen Canyon Dam Environmental Impact Statement, and the 1996 Record of Decision.

The GCMRC operates within the Adaptive Management Program to define research objectives and develop monitoring programs to meet information needs of the AMP. The Adaptive Management Work Group (AMWG) consists of a diverse group of stakeholders, including: Department of Interior agencies (Bureau of Indian Affairs, Bureau of Reclamation, Fish and Wildlife Service, National Park Service), Western Area Power Administration, Colorado River Basin States, Native American Tribes, Colorado River Energy Distributors Association, recreational users and environmental organizations. Additionally, a set of Independent Review Panels (IRP) provide independent assessments of program proposals and accomplishments to ensure scientific objectivity and credibility.

**Recent Updates**

**11-16-2004**      **Information on Proposed High Flow Releases, Nov 2004:**

[Information on Proposed High Flow Releases, Nov 2004.](#)

Proposed  
GCMRC  
Home Page



# Library

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- IN tasks/questions (all):
  - Library
    - On-line library catalog
    - Monthly update of new reports received
    - Contractor/cooperator assistance
    - Subject and material research
    - Access to reports, maps, aerial photos and images, oblique photos and slides, and videos
  - Peer review
    - Peer review of products that ensure quality science
  - Library scanning project
- Project Completion Year
  - Ongoing.

# The Grand Canyon Monitoring and Research Center Library

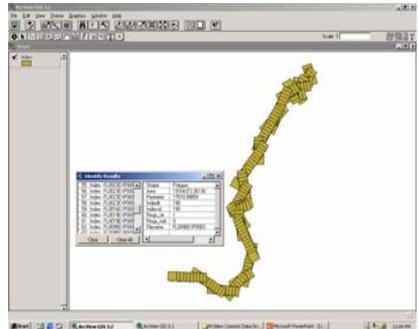


Stephanie Wyse, Librarian

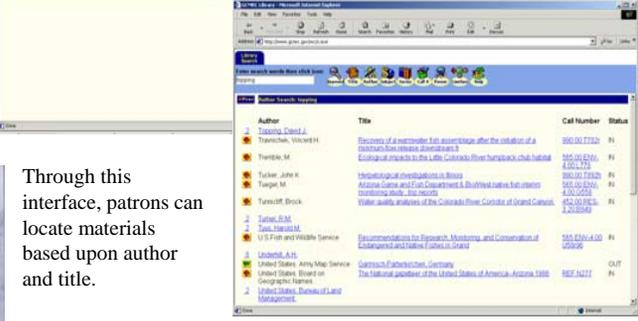
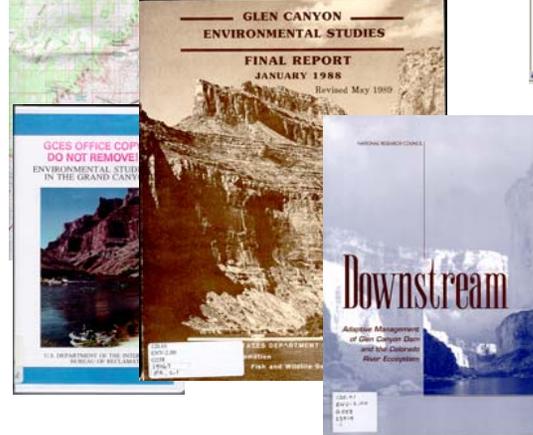
The purpose of the Grand Canyon Monitoring and Research Center's library is to collect, archive and deliver those materials that assist the GCMRC in its efforts to administer long-term monitoring and research. The library provides a centralized repository for hard copy information such as books, reports, maps, photography, and videos as well as an expanding collection of electronic media including CDs and DVDs.



The GCMRC library catalog is accessible through the organization's website: [www.gcmrc.gov](http://www.gcmrc.gov)

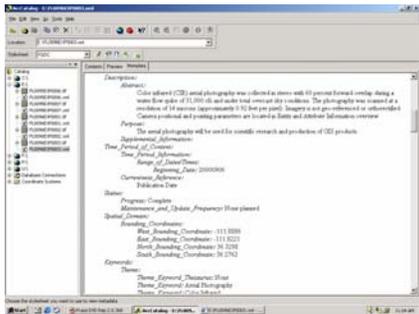


The GCMRC library holds a collection of aerial overflights of the Canyon on CD-Rom and DVD-Rom. Library users can select an image they would like to view on a flightline map...



Through this interface, patrons can locate materials based upon author and title.

...view the metadata for that image...



Library holdings include the following:

- Hard copies and electronic copies of final funded research reports
- Reprints of articles resulting from funded research
- Books and articles resulting from research efforts associated with GCMRC
- Books and articles related to Grand and Glen Canyon
- Books and articles related to natural and controlled riverine environment.
- Photographs and slides (aerial and field documentation).
- CD-ROM and DVD-ROM versions of aerial photograph.
- Videotapes (overflights, programs related to Glen and Grand Canyon)
- Maps (topographic, flightline maps, Arc/Info Coverages, Orthophotos)



In addition to maintaining a hard copy collection of reports, the GCMRC is making new reports available on-line as they are submitted.



...and view the image using ArcView

# The Grand Canyon Monitoring and Research Center Library Scanning Project

The Grand Canyon Monitoring and Research Center (GCMRC) measures the effects of Glen Canyon Dam operations on the resources along the Colorado River from Glen Canyon Dam to Lake Mead. The GCMRC library supports GCMRC scientists and investigators, Adaptive Management Work Group (AMWG) and Technical Work Group (TWG) members, and public interests in the Colorado River ecosystem by providing an infrastructure for organizing, archiving, and disseminating information such as reports, maps, aerial imagery, slides, and videos. The GCMRC is in the process of converting its collection of rare and one-of-a-kind materials to digital format. This project will serve to preserve the original media as well as allow for more effective distribution of data over great distances. Once the hardcopy media is scanned, the digital information will be stored in file formats for distribution via the Internet and can be analyzed using computer software.

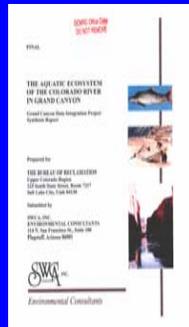
## Aerial Imagery



- Inventory: 17,652 images (photos and film)
- Equipment: Vexcel UltraScan 5000 photogrammetric scanner
- Methods: Photos will be scanned and metadata created
- Formats: tifs (images) and xml (metadata) files
- Archiving: files saved to DVDs – deep archive copy saved offsite
- Media: DVD
- Resolution: 14 microns
- Distribution: Through the GCMRC library and on-line

## Funded Research Reports

- Inventory: 813 gray literature research reports
- Equipment: Canon HP DR-5080C Col 910 Text Scanner
- Methods: Reports disbound and scanned
- Formats: pdf files
- Archiving: Part of GCMRC backup structure
- Media: 8 mm tapes
- Resolution: 300 dots per inch (dpi)
- Distribution: GCMRC on-line catalog (website)



## Videotapes



- Inventory: 198 videos in VHS Format 521 in broadcast format
- Equipment: Sony Umatic VP-9000 videocassette player, Panasonic AG-2400 VC, Pinnacle Pro-One Video Editing/Authoring System, Adobe Premiere Software
- Methods: Videos are played on Sony or Panasonic and then digitized using the Pinnacle system
- Formats: avi, tif and xml
- Archiving: files saved to DVDs – deep archive copy saved offsite
- Media: DVD
- Resolution: 720 X 480 pixels per frame
- Distribution: Through the GCMRC library and on-line

## Slides and Photographs

- Equipment: Nikon Super Coolscan scanner, HP 4C Scanjet scanner
- Inventory: 8000 slides, 700 photographs
- Methods – Slides and photos are scanned and then saved as tifs
- Formats – tif and Windows based metadata programs
- Archiving: files saved to DVDs – deep archive copy saved offsite
- Media: DVD
- Resolution 300 dpi (low resolution) 2700 dpi (high resolution)
- Distribution – GCMRC website



## Maps



- Inventory: 60 flightline maps
- Equipment: Altek Datatab Pro Line Digitizer
- Methods: Maps will be digitized
- Formats: Arc/Info Coverages with xml metadata files
- Archiving: files saved to DVDs – deep archive copy saved offsite
- Media: DVD
- Resolution: N/A
- Distribution – GCMRC website

File formats were selected to ensure that they meet the following criteria:

non-proprietary

industry standard

preserves the integrity of the information contained on hardcopy media