

Reference

January 1, 2007

Human and Natural History Archive

ADVERTISING

- [1963 - Georgie White River Trip Schedule and Info](#)

ARCHES NATIONAL PARK

- [Arches National Park: Photographic History of Moab Wash Culvert.](#)

ARCHEOLOGY

- [1953 -La Sal Mountains Archaeology Survey.](#) Hunt.
- [Numic Culture Chronology](#)
- [1979 - Uintah Ouray Ute Lands.](#) O'Neil.
- [Ute Nation Chronology](#)
- [Dolores River Project](#)
- [Grand Canyon Project](#)
- [1955 - A Reappraisal of the Fremont Culture \(Book Cliffs\).](#) Wormington.
- [1979 - History of Uintah Ouray Ute Lands.](#) O'Neil.
- [Cultural Resource Summary East Central Utah Moab District.](#) 1980. Pierson.

BIOLOGY

- [Southwestern Trees](#) by Elbert Little. 1950.

BOATS

- [Manual for Operation and Maintenance of 10-Person Manually Inflated Landing Boats](#)

BOOK CLIFFS

- [1955 - A Reappraisal of the Fremont Culture \(Book Cliffs\).](#) (Photos) Wormington.
- [2013 - Hannah Marie Wormington: Woman, Myth, Legend.](#) Nash.

BOATING: UPPER COLORADO RIVER

- [Boating History of UpperColorado, Green & San Juan.](#) Crampton, 1975.
- [Boating History of the Upper Colorado River.](#) Crampton. 1975
- [Colorado Riverbed Case](#)
- [Upper basin river navigation.](#) 1975. Crampton.

CANYONLANDS

- [Canyonlands Chronology](#)
- [Canyonlands District](#). 1964. Crampton.
- [Canyonlands National Park: Jet Boat Survey](#). 1999.
- [Cattle Grazing in Canyonlands](#). 1972. NPS.
- [History & Historical Sites of Cataract & Narrow Canyons](#). Crampton, 1964.
- [History & Historical Sites of Southeast Utah & Northern Arizona](#). Crampton, 1964.
- [Hoskaninni Papers: Mining in Glen Canyon](#). Crampton. 1961.
- [No. 42](#): Anthropological Papers, University of Utah Department of Anthropology, "Outline History of the Glen Canyon Region 1776 - 1922", September 1959
- [No. 46](#): Historical sites in Glen Canyon: Mouth of San Juan River to Lee's Ferry, June 1960

COLORADO PLATEAU

- [Cenozoic Geology of the Colorado Plateau](#). Charles Hunt. 1956. (excellent paper)
- 1996 - Special series in *The Times-Independent*: [110-Day River Trip to Celebrate the Statehood Centennial of Utah](#).

COLORADO RIVER

- [1930 - Historical and Physical Facts in Connection With the Colorado River and Lower Basin Development](#).

DESERT MAGAZINE

- Desert Magazine: [list of articles](#) & [the articles](#) as one large pdf file
- [Dead Horse State Park](#)

DESOLATION

- [Desolation River Log](#). Powell Society.
- [Desolation River Use](#). BLM.

ESCALANTE/GRAND STAIRCASE

- [Escalante National Monument History](#)

GAMES

- [Rules of horse shoes](#). Stinking Desert Gazette.
- [Rules of croquet](#). Stinking Desert Gazette.

GLEN CANYON DAM

- [Glen Canyon Dam Adaptive Management Program](#)
- [Glen Canyon Dam Legal History](#)

GRAND CANYON

- [Colorado River Tides: A New Look at River Flow Through the Grand Canyon](#). Phil Gormley, 2022. eMail:P@HairyBoatman.com
- [Grand Canyon Boatman's Almanac](#) (sunrise/sunset)
- [Grand Canyon Camps on Colorado River](#)
- [Grand Canyon Colorado River Research Program](#)
- [Grand Canyon Historians Symposium](#). 2005.
- [1946 - Harry Aleson and Georgie White Expedition](#). News clips from Boulder City News.

GREEN RIVER MUSEUM: RIVER RUNNERS HALL OF FAME

- [Don Harris](#)
- [Remembering Glen Canyon & Ken Sleight](#). Martha Ham.

EXPLORERS AND EXPEDITIONS

- [Harold Leich. Rapids and Riffles](#). Solo Colorado River expedition of 1933.
- [James Best Expedition of 1891](#). Sorgenfrei.
- Kent Frost: [Interview](#).
- [Powell Survey of the 1870s](#)
- [Rocky Mountain Expedition of 1839](#). Wislizenus.

LAKE POWELL

- [Lake Powell Research Project Bulletins](#)

INTERPRETATION

- [Manual of Interpretation for Canyonlands Region](#). Tag-A-Long Expeditions.
- [History Helper](#). Holiday River Expeditions.

MOAB

- Moab Museum: [Oral history program](#)
- [The Moab Story](#). 1965. Otho Murphy.
- [Shafer Oil Well History](#). H. Prommel. 1927

MENU & TRIP PLANNING

- [Click here](#) to download a typical menu and shopping plan for your river trip. Can be used as follows: 1) a 7-day/10-person summertime river trip; 2) a 14-day/5-person winter river trip; 3) divide the amounts by two, for a 7-day 5-person river trip; 4) you can substitute meat for tofu, veggie burgers, tempeh and etc.
- [Easy Menu for 7 days 10 people](#)
- [Menu for 23 days 8 people](#)
- [Menu for 14 days 16 people](#)
- [Menu for 4 days 5 people](#)
- [Boat rigging list](#)

- [Personal packing list](#)
- [Manual for Kayadyn Expedition Water Filter](#)
- [Katadyn Model 2050 Manual](#)
- [Propane tank capacity](#)
- [Outboard motor fuel capacity experiment](#)

RAINBOW BRIDGE NATIONAL MONUMENT

- [Rainbow Bridge National Monument](#)

RIVER RUNNER HALL OF FAME

- [Ken Sleight](#). BQR, 2019.

SAN JUAN RIVER

- San Juan County: [Blue Mountain Shadows Magazine](#)
- [San Juan River Human & Natural History](#). CPRG seminar handout.
- [San Juan River 1921 Dam Survey: Journal of Hugh Miser](#)
- [Southeast Utah & No Arizona](#). 1964. Crampton.

SEWING MACHINES (Industrial)

- [Juki - Instructions LU 562 & 563](#)
- [Singer - Instructions Class 111 \(152, 153, 154, & 155\)](#)
- [Singer - Parts List Class 111 \(153\)](#)

US GEOLOGIC SURVEY

- [Eugene C. LaRue](#) by Walter Langbein. 1975
- [2003 - Changing River: Time, Culture, and the Transformation of Landscape in Grand Canyon](#). Fairley.

UTAH HISTORICAL SOCIETY

- [History of Beaver County](#). Bradley.
- [History of Box Elder County](#). Huchel.
- [History of Cache County](#). Peterson.
- [History of Carbon County](#). Watt.
- [hHistory of Dushesne County](#). Barton.
- [History of Emery County](#). Geary.
- [History of Garfield County](#). Newell & Talbot.
- [History of Grand County](#). Firmage.
- [History of Juab County](#). Wilson.
- [hHistory of Kane County](#). Bradley.
- [History of Millard County](#). Lyman & Newell.
- [History of Morgan County](#). Smith.
- [History of Piute County](#). Newell.
- [History of Rich County](#). Parson.

- [History of Salt Lake County](#). Sillitoe.
- [History of Sanpete County](#). Antrei & Roberts.
- [History of Sevier County](#). Bishop.
- [History of Summit County](#). Hampshire, Bradley & Roberts.
- [History of Toole County](#). Blanthorn.
- [History of Utah County](#). Holzapfel.
- [History of Wasatch County](#). Embry.
- [History of Wayne County](#). Murphy.
- [History of Weber County](#). Roberts & Sadler.

UTAH STATE

- [Utah State History](#)
- Utah State History: [Home page](#)
- Utah History To Go: [Home page](#)

WESTWATER

- [Interview of Owen Malin](#)
- [2004 - Westwater Lost and Found](#). Milligan
- [2017 - Those Darn Woman Shoes in Westwater's Cave](#). Milligan.
- [2017 - The Outlaw Brothers](#). Milligan.
- [2017 - Dentist's Sabatical on the Grand River in 1897](#). Milligan.

THE RIVER BED CASE: The River Bed Case (USA v Utah). The case is an exceptional oral history of the Colorado River running community in Utah.

- [Click here](#) to read an article about the Colorado Riverbed Case.
 - [The Decree and Utah State Objections](#)
 - [Riverbed Case Brief USA 1929](#)
 - [Riverbed Case Brief USA 1930](#)
 - [Riverbed Case Brief Utah 1929](#)
 - [Narrative Volume One with table of contents](#): Testimony of the river community
 - [Narrative Volume Two with Table of Contents](#): Testimony of the river community.
-

CPRG History

May 2, 2020

ADMINISTRATIVE ARCHIVE

- [CPRG Bylaws](#)
- [Minutes](#)

RESOLUTIONS

- 1996 - CPRG supports the draining of Lake Powell and the decommissioning of Glen Canyon Dam.
 - [2001 - Adaptive Management Program](#)
 - [Letter asking Grand Canyon River Guides to decommission Glen Canyon Dam](#)
From David Brower, Martin Litton and Ken Sleight.
-

THE CONFLUENCE: Journal of Colorado Plateau River Guides

[ALL ISSUES COMBINED \(searchable\)](#) (Very Large File)

[Confluence #33 - Spring 2022: The Journal of Colorado Plateau River Guides](#)

- Bego's Corner
- Conserve and Protect
- The Case for Rubber Rafts
- David Yeamans and Greasy Pliers
- PSA: Leaving Traces in Park Waters

[Confluence #32 - Fall 2021: The Journal of Colorado Plateau River Guides](#)

- CPRG Oral History: Mike Ferguson
- Returning Rapids Project
- Conserve and Protect
- The Case for Rubber Rafts
- David Yeamans and Greasy Pliers
- PSA: Leaving Traces in Park Waters

[#31 - Spring 2021: The Journal of Colorado Plateau River Guides](#)

- A Cataract Canyon Take-Out
- UGO Letter to GCNRA
- Citizen Science Project: Woody Riparian Plant Seeds
- Response from Tom Martin

Confluence #30 - Fall 2020: The Journal of Colorado Plateau River Guides

- CPRG Oral History: Herm Hoops
- The Endless River
- Book Review: From Powell To Power by Tom Martin

Confluence #29 - Spring 2020: The Journal of Colorado Plateau River Guides

- Black George Simmons
- Public Lands and Tourism in Rural Utah
- The Claw
- Science Moab: Really Big Water; conversation with Dr. Victor Baker

Confluence #28 (12.1), Winter 2005 [1.3 mb PDF File]

- [Hank Stewart and Sand Wash](#) by James Aton.
- [Boatmen stories of Arthur Wheeler](#) by James Knipmeyer.
- [John and Parley Galloway](#) by John Weisheit.
- [Glen Canyon Diary: 1955](#) by Gus Scott.
- [Sportyaks: Moab to Hite in 1964](#) by John Weisheit.
- [News, Views, Poetry and Announcements](#) by CPRG members.

Confluence #27 (10.1), Fall 2003 [2.1mb PDF File]

- [News, events and Opinion](#)
- [Inscriptions: Howland & Wheeler; Dinosaur NM](#) by James Knipmeyer; Herm Hoops
- [Coal Creek Dam Site](#) by Roy Webb.
- [Sediment Happens](#) by John Weisheit.
- [Persistent Drought](#) by John Weisheit.
- [SOCOTWA](#) by Roy Webb
- [Glen Canyon Dam Failure](#) by John Weisheit
- [Southwest Rock Art](#) by Steve Anderson.

Confluence #26 (9.2), Fall 2002 [1.3mb PDF File]

- [Early Trip Down Green/Colorado? James Knipmeyer.](#)
- [Harry T. Yokey by John Weisheit](#)
- [Charles Spencer by Bob Sorgenfrei](#)
- [Labyrinth Canyon Management by Dawson et al](#)
- [Otis Marston and Sportyaks in the Grand by John Weisheit](#)
- [News, Views, Opinion, Announcements and Poetry by CPRG members](#)

Confluence #25 (9.1), Spring 2002 [2.0mb PDF File]

- [Changing Rapids of Cataract](#). Robert Webb, Jayne Belnap & John Weisheit.
- [AJ Tadge](#). James Knipmeyer.
- [James Best Expedition of 1891](#). John Weisheit.
- [Bert Loper Riverbed Testimony](#). John Weisheit.
- [News, Views, Poetry, Humor & Board Comments](#)

Confluence #24 (8.2), Summer 2001 [3 mb PDF File]

- [Black George Simmons Science Trips](#). Dave Focardi.
- [James W. Black](#). James Knipmeyer
- [Interpretive Trip Reports: Boatmen Can See in the Dark; Poetry and more...](#)

Confluence #23 (8.3) Fall 2001 [7mb PDF File]

- [Anasazi Cannibalism](#). Sarah Clinger.
- [Changing Rapids at Hell to Pay Rapid](#). Robert Webb.
- [GJ-Moab River Runners](#). Herm Hoops.
- [More about Bert Loper from testimony](#). John Weisheit.
- [News, Views and Poetry](#).

Confluence #22 (8.1), Spring 2001 [3.6mb PDF File]

- [News, Views & Announce](#)
- [David Brower by John Weisheit](#)
- [Beginners Luck by Daniel Anderson](#)
- [Dave Rust: Glen Canyon 1923 by Frederick Swanson](#)
- [Echo Park Controvers by Herm Hoops](#)
- [Kolb & Loper: Westwater 1916. GJ Sentinel.](#)
- [Richard Jones by Annie Tueller-Payne](#)
- [Spanish Stairs by Silliman in 1952](#)
- [Weeds by Kara Dohrenwend](#)
- [Wright Inscriptions by James Knipmeyer](#)

Confluence #21 (7.2), Fall 2000 [3.6mb PDF File]

- River Education
- Letters
- Neverland
- Diary: Grove K. Gilbert
- F. G. Faatz
- Westwater Canyon Geology
- And more...

[Confluence #20 \(7.1\), Spring 2000](#) [3.6mb PDF File]

- [100-years of Moab Happenings.](#)
- [Fruita Refinery](#)
- [General Information](#)
- [Geology: How The Southwest Began](#)
- [Gunnison River](#)
- [Insects & Endangered Fish](#)
- [Know Your Federal Agencies & Policies](#)
- [Opposition to Glen Canyon Dam](#)
- [Park Service Zodiac](#)
- [Pilling Figurines](#)
- [Westwater Canyon Mining](#)

[Confluence #19 \(6.3\), Winter 1999](#) [3.6mb PDF File]

- [General Announcements](#)
- [1872 Diary of Grove Karl Gilbert.](#) George Simmons (Black George)
- [Friend Grant Faatz Inscription.](#) James Knipmeyer.
- [Neverland.](#) Earl Perry.
- [Westwater Canyon Geology.](#) Will Bussard.

[Confluence #18 \(6.2\), Fall 1999](#) [4.4mb PDF File]

- Hunta Virus
- Peregrine Falcon
- Kent Frost
- Rock Shelters
- Name Changes
- Lost Inscription?
- River Bed Case: The Decree
- Weeds
- San Juan Diary: 1952
- Britt Ready and the Cadillacs
- San Waves
- Poetry and more...

[Confluence #17 \(6.1\), Spring 1999](#) [4.2mb PDF File]

- Rethinking Western Water
- 1998 Desert Waters Rendezvous
- Life on the Rocks
- Clarence King
- Westwater Canyon
- A. G. Turner
- Frenchy
- And more...

[Confluence #16 \(5.3\), Fall 1998](#) [3.9mb PDF File]

- River Guide Poll
- River Guide Interpretation
- River Guide Information
- River Guide Interviews
- River Guide Feedback
- White Bison Mural
- Uranium
- And more...

[Confluence #15 \(5.2\), Summer 1998](#) [3.2mb PDF File]

- Charles Butler Hunt
- Recipe for Dilemma
- Rubber Rafting Redux
- Hetch Hetchy and Glen Canyon
- Why I Left Outfitting
- Confluence Inscription
- David Dexter Rust
- Buzz Holmstrom
- Problematic Dams
- Crossword Puzzle
- The Prez Sezs and more...

[Confluence #14 \(5.1\), Spring 1998](#) [3.9mb PDF File]

- Where Am I?
- Law of the River
- Who's Who? (Agencies)
- Stress
- Managing Conflict
- Information Plus (A book report)
- Upper Animas River
- Animas La Plate Project
- Educational Psychology
- Personal Watercraft
- Les Jones
- U.S. Board of Geographical Names
- Anazazi Symposium
- Restore Hiking to your Repertoire
- Calling and Conjuring Creativity
- Poetry and more...

[Confluence #13, \(4.3\), Winter 1997](#) [3.8mb PDF File]

- Mule Ear Diatreme
- Steamer "Major Powell"
- William Hiram Edwards
- Westwater Canyon
- Guide Training
- International Boating
- Wicked Winds
- Never ask a geologist...
- Crossword Puzzle
- Poetry and more...

[Confluence #12 \(4.2\) Summer 1997](#) [4.7mb PDF File]

- Bob Degles
- Harry McDonald
- Spillway Enhancement
- High Water 1997
- History of Rubber Boats
- Charles Ray Sherrill
- Crossword Puzzle
- And other things...

[Confluence #11 \(4.1\), Spring 1997](#) [4.9mb PDF File]

- George Flavell
- Nathaniel Galloway
- William Richmond
- Harry Aleson & Georgie
- Humback Chubs
- Defending Constitutional Rights
- River Register Inscriptions
- Canyonlands RMP
- Crossword Puzzle
- And other things...

[Confluence #10 \(3.3\), Summer 1996](#) [4.4mb PDF File]

- [Bert Loper](#). John Weisheit.
- [Charles Silver Russell](#). John Weisheit.
- [Samuel Adams](#). Michele Reaume and John Weisheit
- [Abbey's Boots](#). Douglas Carithers
- [Animas La Plata Project](#). Michael Black.
- [Glen Canyon Dam is Broken](#). John Weisheit.
- [Drug Testing](#). Steve T-Berry Young.
- [Confessions of a Jet Boat Driver](#). Dirk Vaughan.
- [News, Views & Announcements](#).

[Confluence #09 \(3.2\), Spring 1996](#) [3.7mb PDF File]

- Jet Skis
- CNP River Management
- John Sumner
- Grove K. Gilbert
- Jewel of the Colorado
- Westwater Canyon
- US Reclamation Service in 1914
- People Use in the River Canyons
- And other things...

[Confluence #08 \(3.1\), Winter 1996](#) [4.7mb PDF File]

- Frank Dodge continued
- Piedra River
- Icebergs in Cataract
- Atlas Tailings
- Affordable Housing
- Mr. Fix It
- Cataract Canyon Flow Regime
- Microplate
- Dolores River
- Paradox Basin
- Big Bottom Pictographs
- High Water Redux
- Endangered Fish
- And other things...

[Confluence #07 \(2.3\). Summer 1995](#) [2.9mb PDF File]

- Action Alerts: Wilderness, ALP and Uranium Waste
- Overflights
- Droughts
- Stories and Poetry
- USGS Stateline Gauge
- The Cutler Group
- Climate
- And other things...

[Confluence #06 \(2.2\). Spring 1995](#) [2.5mb PDF File]

- Avoiding Conflicts
- Frank Dodge Saga
- CNP Backcountry Management Plan
- Injuries
- Papua New Guinea
- The River Mild
- Climate
- Eon, Era, Period, Epoch
- And other things...

[Confluence #05 \(2.1\). Winter 1995](#) [2.5mb PDF File]

- I Can Fix That!
- Where the Hell Am I?
- A Fish Out of Water
- Fitz-Bew
- R.I.P. Denis Julien
- Whiskers
- Quartzite Falls
- Atlas DEIS
- Southern Utah Wilderness Alliance
- And other things...

[Confluence #05 \(2.1\), Winter 1995](#) [2.5mb PDF File]

- [I Can Fix That!](#)
- [Where the Hell Am I?](#)
- [A Fish Out of Water](#)
- [Fitz-Bew](#)
- [R.I.P. Denis Julien](#)
- [Whiskers](#)
- [Quartzite Falls](#)
- [Atlas DEIS](#)
- [Southern Utah Wilderness Alliance](#)
- [And other things...](#)

[Confluence #04 \(1.4\), Fall 1994](#) [2.7mb PDF File]

- [Announcements and Opinion](#)
- [Animas River by Michael Black](#)
- [Captain H. T. Yokey by John Weisheit](#)
- [Resource Management Plan San Juan River by Tom Rice](#)
- [Tamarisk by David Williams](#)
- [Uncompahgre Plateau and Unaweep Canyon by John Weisheit](#)
- [Recycling by Susette DeCoster](#)
- [Books & Poetry](#)

[Confluence #03 \(1.3\), Summer 1994](#) [3.1mb PDF File]

- [Announcements and Opinion](#)
- [Georgie by Richard Westwood](#)
- [Laccoliths of the Colorado Plateau by John Weisheit](#)
- [CPRG Bylaws](#)

[Confluence #02 \(1.2\), Spring 1994](#) [3mb PDF File]

- [Steve Arrowsmith by Tim Thomas](#)
- [Announce and Opinions](#)
- [Clay Hills Boat Ramp by Bill Bishop](#)
- [Animas-La Plata Project by Tamara Wiggans](#)
- [Best Expedition of 1891 by John Weisheit](#)
- [Lost Inscriptions Found by James Knipmeyer](#)
- [Biological Soil Crusts by Jayne Belnap](#)
- [Recovery Implementation Project by Tamara Wiggans](#)
- [Southern Utah Wilderness Alliance by Scott Groene](#)
- [Dolores River by Bill Dvorak](#)
- [Endangered Fish of the Colorado River by Connie Young](#)

Confluence #01 (1.1), Winter 1994 [2.8mb PDF File]

- [Don Hatch by Roy Webb](#)
 - [First CPRG meeting by Dimock, Thomas and Weisheit](#)
 - [Canyonlands Colorado River Management Plan by Jim Braggs](#)
 - [Commercial Outfitting Regulations by Tony White](#)
 - [Navajo Origins by Red Wolfe](#)
 - [Frank Wright by Tom Rice](#)
 - [Canyonlands Natural History Association by Sharon Brussell](#)
 - [San Juan River Waterfall by Gene Stevenson](#)
 - [Endangered Fish by Tamara Wiggans](#)
 - [Cataract Canyon Survey of 1921 by John Weisheit](#)
 - [Canyonlands Field Institute by Rebecca Martin](#)
 - [Current Events](#)
-

CPRG History

November 2, 2018

The History of Inflatable Boats. A Project by Herm Hoops.

PART ONE - Introduction

The text of these histories and some photos and other information are available from Mr. Hoops for free. You may make a few copies of these documents for in-house or personal use. Otherwise they are protected under the rules of copyright and written permission is required to edit, modify or use the information for profit or publication. For publication please credit University of Utah; J. Willard Library; Utah River Running Archives; Herm Hoops Collection.

- [Herm Hoops - A Brief Biography](#)
- [Herm Hoops - An Oral History](#). Robert Tubbs; 2020.
- [VIDEO: Herm Hoops, a short documentaty](#). Rig to Flip.
- [The Story Behind the Story](#). Hoops.
- [News clip](#): Calhoun Chronicle.
- [The History of Rubber Boats and How They Saved Rivers](#)
- [Amos Burg and "Charlie:" The first whitewater inflatable boat on the Colorado River in 1938](#)
- [Pontoon Down the River & More Photos](#)
- [Cut Down Pontoon and Self-Bailing Boats: Glade Ross & Miss Piggy](#)
- [A Brief History of River Maps & Guides on the Colorado River](#)
- [A Brief History of the Powell Society](#)
-

PART TWO - Inflatable Boat Fabric, Valves, Pumps, and Repairs

- [Photos: Inflatable Boat Fabric, Pumps & Repair Kits](#). Hoops
- [Vulcanizing Uncured Rubber Process & Autoclaves](#)
- [Valves for Inflatables](#)
- [Military Motor Mounts](#)
- [Boat Hull Identification Numbers](#)

PART THREE - Inflatable Boats for Military and Reconnaissance Applications

- [1800s - Various Inflatable Boat Applications](#). Hoops.
- [1842 - Fremont Expedition](#). Hart.
- [WW2 - German Inflatables](#)
- [WW2 & Korea Inflatables](#)
- [WW2 Military Pontoon](#)
- [WW2 - Bridge Pontoon Across the River](#) (tested on the Colorado River)
- [Vietnam - Rafts in Vietnam](#) & [Vietnam Inflatables](#)

PART FOUR - The Dream Builders

- [The Dream Builders: Rubber Fabricators, BF Goodrich, Rubber Crafters & Demaree Inflatable Boats & Photo Collection](#). Hoops.
- [Leyland Inflatables](#)
- [Zodiac and Avon Inflatables](#)
- [Rogue Inflatables](#)
- [Udisco Inflatables](#)
- [Sea Eagle](#)
- [Metzeler](#)
- [Campways and Riken](#)
- [Callegari](#)
- [Achilles](#)
- [Maravia](#)
- [Domar and Canyon](#)
- [Northwest River Supplies](#)
- [Zebec](#)
- [Hyside](#)
- [Colorado Headwaters](#)
- [Wing Inflatables](#)
- [Aire](#)
- [Rocky Mountain Rafts](#). Hoops & Hugo.
- [Odyssey & Eclipse](#)
- [Star](#)
- [Stream Tech](#)
- [Jack's Plastic Welding](#)

PART FIVE - The Swanson Boat Oar Comapny

- [Swanson Boat Oar Company](#). Hoops.
- [2007 - Swanson Boat Oar Company](#)
- [Wood Oars Production](#)

PART SIX - Brief Biographies of the Boatwrights

- [Glade Ross](#). Hoops, 2017.
- [Ron Smith and River Canoes](#) & [Addendum](#). Hoops & Smith, 2014.
- [Kenny Ross](#)
- [Kenny Ross & Wild Rivers Expeditions](#)
- [ARTA, Terry Collier & Niagra Gorge](#) & [\(Sawczyk Vs. US Coast Guard\)](#). Hoops and Collier.
- [Chris Burrow and Leyland](#)
- [Dan Baxter and Campways](#)
- [Hoge Family and Sea Eagle](#)

- [Bill Parks and NRS.](#)
- [Richard DeChant and Hyside](#)
- [Vladimir Kovalik and Wilderness World](#)

PART SEVEN - History of the River (Ghost) Towns in Utah

- [Cisco](#) (Cisco Disco). Hoops.
 - [Dewey](#)
 - [Woodside](#)
-

CPRG History

October 2, 2018

The River Adventures of Black George Simmons

George Simmons is a professional geologist and worked for the US Geological Survey beginning in the 1950s. He was also a founding member of the Powell Society and created a river guide of the Colorado River in Grand Canyon. George was an enthusiastic instructor on many interpretive river trips for the community of professional river guides that work in the Upper Basin of the Colorado River.

[NPS web site about Black George Simmons](#)

DOLORES RIVER

RUNNING El Rio de Nuestra Señora de Dolores in May 1956

by Black George Simmons

12 March, 2007

[Introduction to the Dolores River](#)

[May 5, 1956 with Bob Gant](#) (Dove Creek pump house to Dissapointment Creek)

[May 13, 1956 with Bob Gant & Bill Rodgers](#) (Bradfield Bridge to Dove Creek pump house)

[May 20, 1956 with Clyde Duran & Bob Gant](#) (Gypsum Valley Bridge to Bedrock)

[Entire manuscript without figures](#)

Figures

[Figure 1](#) - Dolores River and its canyon. View upstream from the rim above the Mucho Grande Mine (Sec. 1, T. 42 N., R. 18 W.), Slick Rock District, Colorado. 26 May, 1973.

[Figure 2](#) - Canyon of the Dolores River below the Dove Creek pumping station. December, 1954.

[Figure 3](#) - U. S. Geological Survey Slick Rock Camp, a trailer camp for the families of government employees exploring for uranium. November 1954. The camp was located along Colorado Highway 80, now paved and designated Colorado 141, 3 miles from the Dolores River toward Egnar (that's Range spelled backwards).

[Figure 4](#) - Slick Rock (town) circa 1956. Located at Dolores River Mile 48.5, one mile downstream from Colorado State Highway Bridge. River flows from left to right across view.

[Figure 5](#) - Bob Gant with The Waters of Lodore and Nicholas Needlefoot at Big Canyon Rapid the ingress point by the Dove Creek Pumping Station Mile 19.0, river left (river right and river left are determined from the point of view of an observer looking downstream).

[Figure 6](#) -The Glade Graben, Dolores River Mile 22.0. The faults bounding the down-dropped block occur in the two gullies, and the offset is most apparent in the Wingate Sandstone which forms the lowest and thickest cliff.

[Figure 7](#) - Bob Gant rowing "Nicholas Needlefoot" a few miles downstream from the Dove Creek pumping station. Mine access road near river, upper right.

[Figure 8](#) - "Lost Hat" Rapid. Location undetermined, possibly Little Snag Rapid of DeVries and Maurer (1993, Mile 26.4). A capricious wind whisked my hat aloft before dunking it in the chocolate of the river, a toast to the River Gods.

[Figure 9](#) - Bob Gant in Nicholas Needlefoot in lower part of "Lost Hat" Rapid.

[Figure 10](#) - We broke an oar in "Lost Hat" Rapid. Bob Gant whittled a long stick which he jammed into the two severed parts, making a firm repair.

[Figure 11](#) - Bob Gant surveys Snaggletooth Rapid, Mile 27.5. About two miles downstream from Snaggletooth Rapid the Dolores River makes an abrupt change in course, doubling back on itself in a two-mile hairpin turn (Miles 29.2 - 31.2) called the Horseshoe Bend. A saddle in the bend isolates a hill to the northeast which rises 300 feet above the saddle and 500 feet above the river. We dubbed this promontory the "Dolores Pyramid."

[Figure 12](#) - Horseshoe Bend and the "Dolores Pyramid." The Dolores River in flood stage, 26 May 1973; the river on the left side of the view flows toward the camera, and on the right-away and down stream. View from a mine road in the S1/2, NW1/4, Sec. 6, T. 42 N., R. 17 W. We stopped for a "break" at Mile 31.2 (Fig. 13), river left opposite the south end of Joe Davis Hill knowing that after a little more than a mile we would encounter practically continuous rapids for several miles until we rounded the west end of Joe Davis Hill.

[Figure 13](#) - Bob Gant with Nicholas Needlefoot and The Waters of Lodore at Mile 31.2.

[Figure 14](#) - George Simmons (L) and Bill Rodgers (R) in Nicholas Needlefoot at the Bradfield Bridge (Mile ON), the head of the Ponderosa Gorge. Present day launching is at the Bradfield Recreation Site, 0.6 miles downstream on river left.

[Figure 15](#) - Slab House Ruin near Bradfield Bridge. Trees are growing in the ancient rooms. A few slabs are still standing, and the area is littered with pottery shards.

[Figure 16](#) - Bill Rogers (L) and Bob Gant (R) with Nicholas Needlefoot. Note barbed wire fence crossing the Dolores River at upper right.

[Figure 17](#) - Canyoneers at lunch stop in the Ponderosa Gorge. (left to right: Bill Rogers, George Simmons, Bob Gant)

[Figure 18](#) - A pine tree lies completely across the DOlores River in Ponderosa Canyon. Bill Rogers rows Nicholas Needlefoot to the portage point by the tree's roots.

[Figure 19](#) - Bob Gant (L) and Bill Rogers (R) portage Nicholas Needlefoot around Ponderosa.

CATARACT CANYON

1956 Cataract Canyon River Trip via Green River

Hardscrabble Bottom (Labyrinth Canyon) to White Canyon (Glen Canyon)

In February of 1956, George Simmons begins correspondence with the then-active river community to inquire about possible assistance to complete a mapping project in Cataract Canyon. The lead for this project is Richard Lewis of the US Geological Survey from Denver, Colorado. Simmons, also an USGS employee, is on field assignment to investigate uranium deposits in the Canyonlands region of the Colorado Plateau; at the time he is stationed at Slickrock, Colorado, which is next to the Dolores River and in the heart of the Uruan Mineral Belt.

Black George (his nickname at the time was Sim) sends his inquiries to both commercial and private river runners. For example, he writes to Californians such as Pat Reilly, Georgie White and Otis Marston; Utahns such as Harry Aleson, Bus Hatch, Don Harris and A. K. Reynolds; and Moulty Fulmer from Muncie, Indiana, who built his own whitewater dory and introduced the craft to the Grand Canyon in 1955.

Lewis decides it would be less expensive to let the USGS employees do the trip themselves using their own equipment, and with Simmons serving as the lead boatman. By this time Simmons had completed many river trips, including a previous run through Cataract Canyon in 1952, Lodore Canyon in 1954, and Grand Canyon in 1955.

- [1956 - Cataract Canyon Diary](#)
- [Diary as featured at the website of Canyonlands National Park](#)

Chronology of the river trip planning

- [Letters of inquiry combined](#)
- February 6, 1956 - [Simmons to Otis "Dock" Marston](#)
- February 11, 1956 - [Bus Hatch to Richard Lewis](#)
- February 14, 1956 - [Harry Aleson to Lewis](#)
- February 15, 1956 - [Lewis to Simmons](#)
- February 19, 1956 - [P. T. Reilly to Simmons](#)
- March 5, 1956 - [Don Harris to Simmons](#)
- March 20, 1956 - [A. K. Reynolds to Simmons](#)

May - Simmons partakes in a Dolores River trip

- June 27, 1956 - [Simmons to Marston](#)
- July 4 1956 - [Marston to Simmons](#)
- **July 21, 1956 - Catatract Canyon trip begins at Hardscrabble Bottom [Diary](#)**
- September 25, 1956 - [Simmons to Marston](#)
- October 26, 1956 - [Marston to Simmons](#)
- December10, 1956 - [Marston to Simmons](#)
- December 11, 1956 - [Moulty Fulmer to Simmons](#)
- April 15, 1957 - [Simmons to Marston](#)
- May 30, 1957 - [Marston to Simmons](#)

Photos of 1956 trip (unless as indicated)

- [USGS crew at trip's end](#)
- [Boats](#)
- [Rapid No. 5](#)
- [Rapid No. 10](#)
- [Big Drop 3 \(1952 trip\)](#) - Dave Arnold lashes boats together after we monstered (loaded with water, but did not flip) at Big Drop III.
- [Big Drop 3](#)
- [Clearwater Canyon](#)
- [Bowdie Canyon](#)
- [Dark Canyon Rapid](#)
- [Mille Crag Bend \(1952 trip\)](#)
- [Springs](#)
- [Approaching Hite \(1952 trip\)](#)
- [All photos combined & the captions](#)

Other Cataract Information

- [1997 - Black George's Cataract Canyon Incident Report](#)

GRAND CANYON

[1969 - River Runner's Guide to Marble and Grand Canyons with Emphasis on Geologic Features](#). George Simmons and Dave Gaskill.

Grand Canyon Photos

- [1955, July 6](#) - Sim (Black George) with his and Parky Brook's catch of catfish at Lee's Ferry while awaiting the shipment of a boat from Harry Aleson. 06 July 1955.
- [1955, July 12](#) - Mile 29.5, river left. Four members of the Western Speological Institute Expedition shade at a lunch stop during another 120+ day. Left to right Dave Gaskill, Art Lange, Parky Brooks, and Raymond de Saussure.
- [1955, July 12](#) - Skeleton in front of cave at Mile 31.5, river right, Western Speoleogical Institute Expedition. I have seen pictures from earlier trips in which the skull was present.
- [1955, July 13](#) - Camp at Vasey's Paradise, Mile32, river right, 07:00. Western Speological Institute Expedition.
- [1955, July 13](#) - Twig Figurines removed by WSI from the upper level of Stanton's Cave, Mile 31.5, river right.
- [1955, July 14](#) - Bert Loper's boat at Mile 41, river right.
- [1955, July 14](#) - Bob Swift (President of the Rock Climbing Section of the Sierra Club, hired to assist WSI speoleologists gain access to caves) silhouetted against wall of Marble Canyon.

- [1955, July 15](#) - George Simmons and Parky Brooks hauled Simmons' boat, Nicholas Needlefoot (King of the Cats) up the Little Colorado River for pictures. Sim (Black George) in Needlefoot.
- [1970, November 19](#) - Canyon of the Little Colorado River from the upper part of the Hopi Canyon Salt Trail.
- [1955, July 18](#) - Sim (Black George) swamped in a hole at the bottom of Unkar Rapid. Mile 72 3/4, river right (Photograph by Bob Swift).
- [1970 - The Udall Factor](#)
- [1967, October 09](#) - Powell Society at Separation Rapid. . (Left to right): Hank Toll (Dr. Henry W., Jr.), President; Dr. David L. Claassen; Dr. George I. Ogura, Vice President; Knobby Newmann.
- [1967, October 09](#) - Powell Society at Separation Rapid. (Left to right): Sim (Black George Simmons) Trustee; Dr. David L. Claassen; Dr. George I. Ogura, Vice President; Knobby Newmann.
- [1972, May 11](#) - Mooney Falls. Havasu Canyon.

1871 - Colorado River from Camp Mohave to Diamond Creek
Photos by Timothy O'Sullivan of the George M. Wheeler Expedition
Grove K. Gilbert is Chief Geologist

[Diary of Grove Karl Gilbert transcribed by Black George Simmons](#)

[Notebook of Grove K. Gilbert from 1871 Colorado River Expedition](#). Transcribed by George Simmons, USGS.

- [No. 1 - Camp Mojave](#)
- [No. 5 - Black Canyon](#)
- [No. 6 - Black Canyon](#)
- [No. 8 - Black Canyon](#)
- [No. 9 - Grand Canyon Rocket Peak](#)
- [No. 35 - Black Canyon](#)
- [No. 47 - Middle Black Canyon](#)
- [No. 75 - Black Canyon](#)
- [No. 76 - Black Canyon](#)
- [No. 79 - Black Canyon](#)
- [No. 81 - Mirror Bar Black Canyon](#)
- [No. 82 - Mirror Bar](#)
- [No. 83 - Mirror Bar](#)
- [No. 85 - Uppermost Black Canyon](#)
- [No. 86 - Table Mountain](#)
- [No. 87 - Fortification Rock](#)
- [No. 90 - Iceberg Canyon](#)
- [No. 91 - Grand Canyon Wall](#)
- [No. 93 - Grand Canyon Diamond Creek Above Mouth](#)

- [No. 99 - Cathedral Mesa](#)
- [No. 113 - Painted Lake](#)
- [No. ?? - GrandCanyon Diamond Creek Mouth](#)

COLORADO RIVER TRIBUTARY PHOTOGRAPHS

From the George Simmons Collection

- [1951, September 3](#) - Yampa River. Gudy Gaskill (left) rowing; Helen Hartel (right) in bow. A treacherous rapid was formed here by a flashflood down Warm Springs Creek on the night of 10 October 1956.
- [1952, May 28](#) - Green River. Sim (Black George) ready to embark from 1st camp in upper part of Red Canyon.
- [1952, May 28](#) - Green River. Ashley Falls which is now about 370 feet below the surface of Flaming Gorge Reservoir.
- [1953, June 19](#) - San Juan River. The landing at the mouth of Grand Gulch, Mile 71, river right.

FIELD MAPS of BLACK GEORGE SIMMONS

Prints of the topographic maps produced by the 1921 USGS dam surveys

Colorado River

- [Sheet A - Lee's Ferry](#)
- [Sheet B - Wahweap Canyon](#)
- [Sheet D - Kane Creek](#)
- [Sheet E - Rock Creek](#)
- [Sheet F - Music Temple](#)
- [Sheet G - Rincon](#)
- [Sheet H - Hansen Creek](#)
- [Sheet I - Smith Fork](#)
- [Sheet J.- Red Canyon](#)
- [Sheet K - White Canyon](#)
- [Sheet L - Dark Canyon to North Wash](#)
- [Sheet M - Confluence to Dark Canyon](#)

Dolores River

- [Sheet 4 - Beaver Canyon](#)
- [Sheet 10 - Confluence](#)

Green River

- [Sheet A - Price River](#)
- [Sheet B - Three Canyon](#)
- [Sheet C - Sand Wash](#)
- [Sheet D - Ouray](#)
- [Sheet E - Dinosaur NM](#)

San Juan River

- [Sheet N - Confluence](#)
- [Sheet O - Paiute Farms](#)

Yampa River

- [Sheet A - Confluence](#)
- [Sheet B - Little Snake River](#)
- [Sheet C - Maybell](#)

Grand Ganyon Plan and Profiles, USGS (not Simmons Collection).

- [Sheet U](#)
- [Sheet T](#)
- [Sheet S](#)
- [Sheet R](#)
- [Sheet Q](#)
- [Sheet P](#)
- [Sheet O](#)
- [Sheet N](#)
- [Sheet M](#)
- [Sheet L](#)
- [Sheet K](#)
- [Sheet J](#)
- [Sheet I](#)
- [Sheet H](#)
- [Sheet G](#)
- [Sheet F](#)
- [Sheet E](#)
- [Sheet D](#)
- [Sheet C](#)
- [Sheet B](#)
- [Sheet A](#)

LIBRARY of BLACK GEORGE SIMMONS (magazine articles)

- [1957 - Georgie White-Clark: River Trip in Canyonlands](#). Desert Magazine.
- [1958 - Flying The Colorado Rlver](#). Arizona Highways.
- [1966 - David Brower: Knight Errant to Nature's Rescue](#). Life Magazine.
- [1966 - Charlie Eggert & Sid Rickets Sumners](#). Event Promotional Materials.
- [1967 - Running Rapids, Vintage 1842 \(Fremont Expedition\)](#). Hart.

J. W. POWELL CENTENNIAL MATERIALS

- [1969 - JWP Centennial: Canyonlands, Part One](#). Denver Post Magazine.
 - [1969 - JWP Centennial: Canyonlands, Part Two](#). Denver Post Magazine.
 - [1969 - JWP Centennial: Adventure on the Colorado River](#). Redbook Magazine.
 - [1969 - JWP Centennial Issue](#). Arizona Highways
 - [1969 - JWP Centennial Issue](#). Reclamation Era.
 - [1969 - JWP Centennial: Art Venue Materials](#).
 - [1969 - JWP Centennial: Letter Head](#). Powell Society.
 - [1969 - JWP Centennial: Havasupai: Misery In Shangrila](#). Denver Post Magazine.
 - [1969 - JWP Centennial: Photo Guidebook To Lake Powell](#). Sun Publishing.
 - [1969 - JWP Centennial: Powell's Quest](#). American Forests.
 - [1969 - JWP Centennial: Roaring Down the Colorado River](#). Chicago Tribune Magazine.
 - [1969 - JWP Centennial: The Wildest Boat Trip in the World](#). Popular Mechanics.
 - [1971 - Rim Rock Hopping: Utah's Bowdie Canyon](#). Wilderness Camping.
 - [1974 - Wooden Boats Plus Colorado Rapids Equals Adventure](#). Smithsonian.
-

CPRG History

September 2, 2018

The Stinking Desert Gazette (and other publications)

From 1986 to 1989 (33 issues), ***The Stinking Desert Gazette*** was prepared and published primarily by the original counterculture community of Moab. These creative writers and cartoonists were also connected, loosely and perhaps even reluctantly, to the outfitting and guiding community of the Canyonlands region. Where are they now? Enjoying what is left of the stinky desert.

[Whimsical Publication Wins Readers](#). Grand Junction Sentinel; November, 1986.

[Volume 1, Number 1 \(August, 1986\)](#)

- Monopoly Ends
- Live Rock
- Strokes and Pokes
- The Naked Truth
- Backwater

[Volume 1, Number 2 \(September, 1986\)](#)

- Monkey Wrench Gang Busted
- Treehuggers Blamed
- Moab Cooking
- The Stinking Lies Interview

[Volume 1, Number 3 \(October, 1986\)](#)

- Mobabble
- King World
- Derailed

[Volume 1, Number 4 \(November, 1986\)](#)

- Spy War Solution
- Dump Idea Stinks
- The King of the World
- Okay Gas and Groceries

[Volume 1, Number 5 \(December, 1986\)](#)

- Nirvana BLues
- Pack Creek Critique
- Pearl Baker Interview
- Airheads

[Volume 1, Number 6 \(January, 1987\)](#)

- The Absolute Truth
- Moab's Early Mail Service
- Poetry Corner

[Volume 1, Number 7 \(February, 1987\)](#)

- Beautify Cisco
- Whitewater, White Canyons
- Moab Crossword

[Volume 1, Number 8 \(March, 1987\)](#)

- Curt Stewart Leaving
- Indentured Hamster Discovered
- Poopy Problem Solved

[Volume 1, Number 9 \(April, 1987\)](#)

[Volume 1, Number 10 \(May, 1987\)](#)

[Volume 1, Number 11 \(June, 1987\)](#)

[Volume 1, Number 12 \(July, 1987\)](#)

[Volume 2, Number 1 \(August, 1987\)](#)

[Volume 2, Number 2 \(September, 1987\)](#)

[Volume 2, Number 3 \(October, 1987\)](#)

[Volume 2, Number 4 \(November, 1987\)](#)

[Volume 2, Number 5 \(December, 1987\)](#)

[Volume 2, Number 6 \(January, 1988\)](#)

[Volume 2, Number 7 \(February, 1988\)](#)

[Volume 2, Number 8 \(March, 1988\)](#)

[Volume 2, Number 9 \(April, 1988\)](#)

[Volume 2, Number 10 \(May, 1988\)](#)

[Volume 2, Number 11 \(June, 1988\)](#)

[Volume 2, Number 12 \(July, 1988\)](#)

[Volume 3, Number 1 \(August, 1988\)](#)

[Volume 3, Number 2 \(September, 1988\)](#)

[Volume 3, Number 3 \(October, 1988\)](#)

[Volume 3, Number 4 \(November, 1988\)](#)

[Volume 3, Number 5 \(December, 1988\)](#)

[Volume 3, Number 6 \(January, 1989\)](#)

[Volume 3, Number 7 \(February, 1989\)](#)

[Volume 3, Number 8 \(March, 1988\)](#)

[Volume 3, Number 9 \(April, 1988 & last issue\)](#)

Slinking Dessert Glacé

- [Collectors Edition: Volume 1, Number 1, August 1988](#)
-

The Best of Nik Hogan

- [Collector's Edition](#)
-

The Wild Onion

- [Wild Onion 1.1](#)
- [Wild Onion 1.2](#)
-

The Utah Utardian

- [Issue 01](#)
- [Issue 02](#)
- [Issue 03](#)
- [Issue 04](#)
- [Issue 05](#)
- [Issue 06](#)
- [Issue 07](#)
- [Issue 08](#)
- [Issue 09](#)
- [Issue 10](#)
- [Issue 11](#)

The Canyon Country Zephyr

- [Volume 1, Number 1; April, 1989](#)
-

CPRG History

January 1, 2006

Photos of Colorado River Basin

Trimple Survey on the San Juan River in 1921

These photos were used in the development of our journal, [*The Confluence*](#), or from the development of the book, [*Cataract Canyon: A human and environmental history of the rivers in Canyonlands*](#). Most of these photos were acquired through the US Geological Survey photo library at the Federal Center in Denver, Colorado.

GREEN RIVER

City of Green River

- [1875 - Book Cliffs on west side of Green River](#). William Jackson.
- [1889 - Brown and Stanton Expedition](#). Franklin Nims.
- [1921 - USGS dam survey boats above railroad bridge](#). E. C. LaRue.
- [19?? - DRGW steam locomotive near Green River](#). Campbell.

COLORADO RIVER

Professor Valley

- [1905 - Ida Gulch Rapid](#). Cross.

1872 Wheeler Expedition (Mojave to Diamond Creek)

Photographer: Timothy O'Sullivan. Photos courtesy of Black George Simmons.

- [No. 01 Camp Mojave](#)
- [No. 113 Painted Lake](#)
- [No. 5 Black Canyon](#)
- [No. 6 Black Canyon](#)
- [No. 8 Black Canyon](#)
- [No. 35 Black Canyon](#)
- [No. 47 Middle Black Canyon](#)
- [No. 75 Black Canyon](#)
- [No. 76 Black Canyon](#)
- [No. 79 Black Canyon](#)
- [No. 81 Mirror Bar, Black Canyon](#)
- [No. 82 Mirror Bar](#)
- [No. 83 Mirror Bar](#)
- [No. 85 Uppermost Black Canyon](#)
- [No. 86. Table Mountain](#)
- [No. 87 Fortification Rock](#)
- [No. 90 Iceberg Canyon](#)
- [Rocket Peak](#)
- [No. 91 Grand Canyon Wall](#)
- [No. 93 Grand Canyon at Diamond Creek](#)
- [Grand Canyon at Diamond Creek](#)

- [No. 99 - Cathedral Mesa](#)

City of Moab

- [1890 - Businessmen in front of Tet's Saloon](#)
- [1914 - Main and Center Streets, Moab, Utah](#). E. C. LaRue.

Cataract Canyon

- [1911 - Big Drop Two](#). Kolb Brothers.
- [1911 - Big Drop Two](#). Kolb Brothers.
- [1914 - USGS dam site investigation workers](#). E. C. LaRue.
- [1914 - USGS drill big below Confluence of Green and Colorado](#). E. C. LaRue.
- [1921 - USGS survey at dam site near Cove Canyon](#). E. C. LaRue.
- [1921 - USGS survey incident at Dark Canyon Rapid](#). E. C. LaRue.
- [1921 - Dark Canyon inscription panel](#). E. C. LaRue.
- [1921 - USGS survey in Lower Cataract Canyon](#). E. C. LaRue.
- [1921 - USGS survey at Upper Mille Crag Bend](#). E. C. LaRue.

Glen Canyon

- [1914 - Tom Wimmer, Bert Loper and Richardson at upper Glen Canyon](#). E. C. LaRue.
- [1921 - Cataract and San Juan USGS surveys converge](#). E. C. LaRue.
- [1923 - Lee's Ferry, Arizona](#). E. C. LaRue.

Grand Canyon

- [1912 - Kolb Brothers and Bert Lauzon](#). Kolb Brothers.
- [1923 - USGS survey Cave Springs Marble Canyon](#). E. C. LaRue.
- [1923 - Frank Dodge of the Grand Canyon dam survey](#). E. C. LaRue.
- [1923 - Native fish of the Colorado River mainstem](#). E. C. LaRue.
- Eddie McKee: [01](#); [02](#); [03](#); [04](#); [05](#); [06](#); [07](#); [08](#); [09](#); [10](#); [11](#); [12](#); [13](#); [14](#); [15](#); [16](#); [17](#); [18](#);

SAN JUAN RIVER

San Juan Canyon

- [1921 - USGS San Juan expedition](#). H. Miser.
- [1921 - USGS San Juan expedition](#). H. Miser.

ADDITIONAL PHOTOS

- [Grove Karl Gilbert](#)
 - [Grove K. Gilbert](#)
 - [Best Expedition](#)
 - [Eugene Clyde LaRue](#)
 - [Robert Brewster Stanton](#)
-

River News

March 12, 2005

New Rapid in Glen Canyon

Due to the rise of Lake Powell during the snow melt of 2005, this rapid is now under reservoir water. However, it is possible that it will re-emerge and it is also possible that others may develop. Caution is advised when traveling and camping on the the Colorado River where unstable sediment deposits exist between the last rapid in Cataract Canyon and the environs near and below Hite Marina. Advisory: Hiking up Dark Canyon from its confluence with the Colorado River is slick (mud) and there is no alternative route.

- [See the pictures of the new Rapid in Glen Canyon](#) [700k PDF File]
 - [Rapid near Hite rafting take-out](#) [485k PDF File]
 - [Rapid near Hite rafting take-out and left side view of the New Rapid](#) [587k PDF File]
-

CPRG History

February 1, 2001

Canyonlands Chronology

Chronology of Human Experience in the Cataract Canyon Region

An excerpt from [*Cataract Canyon: A Human and Environmental History of the Rivers in Canyonlands*](#) by Robert H. Webb, Jayne Belnap and John S. Weisheit.

- **12250 B.C. to 7800 B.C.** - Various [Paleoindian cultures](#) inhabit the region to unknown extent.
- **7800 B.C. to A.D. 500** - [Desert Archaic](#) culture leaves evidence of occupation.
- **A.D. 500 to A.D. 1300** - [Fremont](#) and [Ancestral Puebloan](#) cultures leave extensive structures, artwork, and agricultural fields in region.
- **A.D. 1300 to present** - Ute, Paiute, [Navajo](#), [Hopi](#) cultures roam through the region.
- **1540** - Spaniards under [Francisco Vazquez de Coronado](#) enter the Colorado Plateau.
- **1680** - The [Pueblo Revolt](#) results in Spaniards leaving their northern frontiers.
- **1692** - The Spaniards regain control of the Pueblos.
- **1765** - Spanish merchant [Juan Maria Antonio Rivera](#) explores west-central Colorado.
- **1775** - Spanish traders [Pedro Mora](#), [Gregorio Sandoval](#) and [Andres Muniz](#) explore west-central Colorado.
- **1776** - Spanish Franciscan priests [Francisco Atanasio Dominguez](#) and [Silvestre Velez de Escalante](#) encircle the Colorado Plateau and discover the Green River.
- **1806** - [Zebulon Pike](#) is arrested by the Spaniards for spying during a U.S. Army expedition into the Rocky Mountain region.
- **1821** - Spanish territories become the possession of an [independent Mexico](#).
- **1824** - [Fur traders](#) enter the Canyonlands region.
- **1828** - Trader [Antoine Robidoux](#) builds a fort near confluence of the Uncompahgre and Gunnison Rivers.
- **1830** - [George Yount](#) and [William Wolfskill](#)'s trapping party cross the Colorado River below the mouth of the [Dolores River](#) and the Green River at the present day town of Green River.
- **1836** - Trapper [Denis Julien](#) explores the rivers of the area that will become Canyonlands National Park.
- **1846** - The [Mexican American War](#) begins.
- **1847** - Members of the Church of Jesus Christ of Latter Day Saints (Mormons) [settle in Utah territory](#) during the Mexican American War.
- **1848** - Mexican American War ends and Utah territory becomes the possession of the United States. [Orville Pratt](#) leads settlers on Old Spanish Trail through Spanish Valley (Moab) and crosses 1,800 feet above the Portal (beginning of Meander Canyon).

- **1853** - [E. F. Beale](#) crosses the Green River near present day Green River, Utah. John W. Gunnison, of the U. S. Army Corps of Topographical Engineers, surveys the 38th parallel for a railroad route and crosses the Green River near where Beale crossed. [John C. Fremont](#)'s railroad reconnaissance crosses the Green River near the mouth of the San Rafael River.
- **1854** - [William Huntington](#) enters Spanish Valley from the south on an expedition for the Mormon Church.
- **1855** - [Elk Mountain Mission](#) temporarily settles in Spanish Valley.
- **1859** - The U. S. Army Corps of Topographical Engineers ([John N. Macomb](#) and [John S. Newberry](#)) searches overland for the Confluence.
- **1862** - The [largest historical flood](#) occurs on Colorado River (400,000 cfs in Arizona).
- **1869** - [John Wesley Powell](#)'s first river expedition travels from Green River, Wyoming, to the mouth of the Virgin River, Nevada.
- **1871** - John Wesley Powell's second river expedition occurs in three phases, from Green River, Wyoming, to mouth of Paria River, two floats of Glen Canyon, final phase from Paria River to Kanab Creek in 1872.
- **1872** - [Almon H. Thompson](#) surveys southern Utah overland for Powell; discovers the Escalante River, the last named river in the continental United States; climbs the Henry Mountains; and floats through Glen Canyon a second time.
- **1874** - Crispin Taylor brings the first significant herd of cattle to Spanish Valley.
- **1875** - [Ferdinand V. Hayden](#) supervises survey of the Uncompaghre Plateau and the La Sal and Abajo Mountains. Powell supervises survey of the Henry Mountains by [Grove Karl Gilbert](#).
- **1877** - [William Granstaff](#) ("Negro Bill") settles in Spanish Valley area.
- **1879** - A U.S. Post Office is established in the town of [Moab](#).
- **1881** - The Moab ferry becomes operational. A Post Office is established in [Grand Junction](#).
- **1882** - The [Ute Tribe](#) is confined to reservations. The [Denver and Rio Grande Railroad](#) enters [Grand Junction](#) from the south. Ferry service is established in Grand Junction. The first [irrigation projects](#) near the Colorado River are established at Grand Junction/Grand Valley. Near Blythe, California, irrigation begins in 1877.
- **1883** - [Cass Hite](#) prospects in upper Glen Canyon. Denver and Rio Grande Railroad is completed through Emery County, Utah.
- **1884** - U.S. Weather Service begins gaging the Colorado River at Fruita, Colorado, and records a record flow of 125,000 cfs on July 4; flow in Cataract Canyon is estimated at 225,000 cfs.
- **1885** - The Roan Toll Road connects Glenwood Springs to Grand junction. Funds are approved to build Grand Junction's first bridge over the Colorado River.
- **1887** - A U.S. Post Office is established at Westwater, Utah.
- **1888** - Elmer Kane and two companions are the first to traverse [Westwater Canyon](#) by boat.
- **1889** - [Frank Kendrick](#) surveys Colorado River from Grand Junction to the Confluence for the [Denver Colorado Canyon Pacific Rail Road](#). [Robert Brewster](#)

[Stanton](#) surveys and [photographs](#) the Colorado River from the Confluence to Hite. Stanton launches his second expedition from Hite to complete his survey through Grand Canyon.

- **1890** - [Emery County](#) is divided and [Grand County](#) is established with [Moab](#) as the county seat. The Denver and Rio Grande Railroad replace narrow gauge rails with standard gauge rails and a new route is built through [Ruby Canyon](#).
- **1891** - The Best Expedition, headed by James Best of the Colorado, [Grand Canyon Mining and Improvement Company](#) ([cached](#)), runs Cataract and destroys a boat in Rapid 15. First oil well in Utah is drilled near Elgin.
- **1892** - George M. Wright and Friend G. Faatz run Cataract Canyon separately and meet up later in Glen Canyon. [Battlement Mesa Forest Reserve](#) near Grand junction is established.
- **1893** - Steamer Major Powell makes the round trip from the San Rafael River to Cataract Canyon at Spanish Bottom.
- **1894** - Nathaniel Galloway makes a solo run of Cataract Canyon.
- **1896** - Utah achieves statehood. George Flavell and Ramon Mont6z and Nathaniel Galloway and William Richmond separately run Cataract Canyon. A ferry is established at Dewey, Utah.
- **1897** - Drs. Babcock and Miller run Westwater Canyon. Galloway again runs Cataract Canyon.
- **1898** - A U.S. Post Office is established at Dewey.
- **1900** - The Kings Toll Road (Highway 128) is completed. An oil shale boom occurs at Parachute Creek, Colorado, leading to increased exploration in the region.
- **1901** - The maiden voyage of the steamship Undine occurs; Frank Surnmeril proposes a resort at Spanish Bottom.
- **1904** - The maiden voyage of the gasolinepowered Wilmont occurs. Nathaniel and Parley Galloway and Louis M. Chaffin and Alonzo G. Turner separately run Cataract Canyon.
- **1905** - The maiden voyage of the gasolinepowered City of Moab occurs.
- **1906** - La Sal Forest Preserve is established near Moab.
- **1907** - Charles Russell, Bert Loper, and Edwin Monett run Cataract Canyon. A.G. Turner runs Cataract Canyon. The maiden voyages of the steamer Black Eagle and the gasoline-powered Paddy Ross occur. Tom Wimmer provides gasoline-powered boat services until 1924 with such boats as the Marguerite.
- **1909** - The Stone expedition runs Cataract Canyon. Henry E. Blake conducts the maiden voyage of the Ida B.
- **1910** - J. H. Hummel runs Cataract Canyon.
- **1911** - Ellsworth and Emery Kolb run Cataract Canyon. Charles Smith runs Cataract Canyon. Colorado National Monument is established near Grand junction.
- **1912** - Moab's first bridge crosses the Colorado River. Charles Smith and Nathaniel Galloway run Cataract Canyon together.
- **1914** - The Tadge/Russell expedition runs Cataract Canyon. The U.S. Reclamation Service drills at the Confluence to test for damsite suitability.

- **1915** - Near Palisade, Colorado, work is completed on a highline diversion dam, the first significant dam upstream of Cataract Canyon.
- **1916** - Ellsworth Kolb and Bert Loper run Westwater Canyon. The Dewey Bridge is completed across the Colorado River.
- **1917** - Second largest twentieth century flood passes through Cataract Canyon (145,000 cfs).
- **1921** - Largest twentieth century flood passes through Cataract Canyon (147,000 cfs). A USGS expedition surveys Cataract Canyon for potential dam sites. The Grand River is renamed the Colorado River.
- **1922** - Colorado River Compact allocates Colorado River water to the seven western states.
- **1924** - John and Parley Galloway run Cataract Canyon.
- **1925** - The Shafer brothers discover oil and gas in Meander Canyon. Moab Garage Company begins a boat transport service that by 1927 would haul 3,500 tons of freight annually.
- **1927** - The Clyde Eddy and Path6Bray expeditions separately run Cataract Canyon.
- **1928** - Boulder Canyon Act authorizes construction of Hoover Dam. Glen and Bessie Hyde run Cataract Canyon, making Bessie the first known woman river runner.
- **1929** - Arches National Monument is established.
- **1933** - The Frazier/Hatch expedition runs Cataract Canyon. Harold Leitch boats and hikes the Colorado River from Grand Lake, Colorado, to Hite.
- **1935** - The Escalante National Monument is proposed along Green and Colorado rivers from Moab to Arizona border.
- **1937** - Haldane "Buzz" Holmstrom makes a solo run of the Green and Colorado rivers.
- **1938** - Amos Burg runs first inflatable boat through Cataract Canyon. Holmstrom becomes first to run every rapid from Green River, Wyoming, to lower Grand Canyon. Norman Nevills runs first commercial river trip in Cataract Canyon. Bernard DeColmont and Antoine DeSeyne are the first to kayak Cataract Canyon. Russell Frazier upruns the Colorado River from Hite to Dark Canyon.
- **1941** - Testing is performed at the Dewey Bridge Dam site.
- **1943** - Bert Loper runs Cataract Canyon.
- **1944** - The United States signs a treaty with Mexico for 1.5 million acrefeet of Colorado River water. Loper again runs Cataract Canyon.
- **1945** - W. Herwig runs scow with freight through Cataract Canyon.
- **1947** - Harry Aleson and Georgie White Clark make first run of Cataract Canyon in WW II surplus neoprene, inflatable rafts. Don Harris and Jack Brennan run Cataract Canyon.
- **1948** - Otis Marston (and others) becomes the first known person to run Dolores River.
- **1949** - John Ford directs "Wagon Master" for Hollywood in Professor Valley. Kenneth Ross runs Cataract Canyon.

- **1952** - Charlie Steen discovers uraninite near Big Indian Valley, starting a mining boom.
- **1953** - Don Harris runs the first power boat through Cataract Canyon.
- **1954** - Leslie Jones canoes Cataract Canyon from Moab to Hite in thirtysix hours.
- **1955** - Ed Hudson runs the first power boat run through Westwater Canyon.
- **1956** - Congress authorizes the Colorado River Storage Act.
- **1957** - Construction of Glen Canyon Dam begins. Georgie White Clark runs thirtythreefoot, G-rig pontoon and Fred Eiseman runs fifteenfoot triple rig through Cataract Canyon in high water. The Canyon Country River Marathon, a boat race, begins.
- **1958** - The Friendship Cruise from Green River, Utah, to Moab begins as an annual Memorial Day weekend event.
- **1959** - Dead Horse Point State Park is established. National Park Service begins to study the concept of Canyonlands National Park.
- **1962** - Dam construction begins on the Gunnison River.
- **1963** - The Denver, Rio Grande and Western Railroad spur road is completed to Potash. Glen Canyon begins storing Colorado River water. The inventory and salvage of Glen Canyon's human history is completed. Flaming Gorge Dam regulates the Green River.
- **1964** - Glen Canyon Dam begins generating electricity. Canyonlands National Park is established.
- **1965** - William Somerville upruns Cataract Canyon in a jet boat.
- **1971** - Arches is converted from a national monument to a national park. More land is added to Canyonlands National Park, including the detached Horseshoe Canyon unit.
- **1980** - The reservoir reaches full pool elevation of 3,700 ft.
- **1981** - The Department of Energy identifies sites immediately east of Needles District as among alternatives for a nuclear waste repository; the plan was dropped in 1986.
- **1982** - Glen Canyon Environmental Studies begins to study the effects of Glen Canyon Dam operations on Grand Canyon.
- **1983** - Flows through Cataract Canyon peak at 104,000 ft³/s, causing brief river closures. The spillway at Glen Canyon Dam fails and the emergency highpool elevation is raised to 3,707.4 ft (normal pool elevation is 3,700 ft). Grazing privileges expire in Canyonlands National Park. The reservoir backs up to the base of Big Drop 3.
- **1984** - Flows through Cataract Canyon peak at 115,300 cfs.
- **1989** - The Secretary of the Interior orders an Environmental Impact Statement on the operations of Glen Canyon Dam and its effects on Grand Canyon (Record of Decision in 1996).
- **1990** - After near extirpation by trappers in the late nineteenth and early twentieth centuries, river otters make their reappearance in the Colorado River above Glen Canyon Dam.

- **1992** - A long period of drought from 1989-1991 brings the reservoir to its lowest pool elevation (3,611 ft) since the reservoir filled in 1980. Lower Cataract Canyon becomes a river through perched silt banks for thirty miles. Congress passes the Grand Canyon Protection Act.
 - **1993** - Cataract Canyon peaks at 70,600 ft³/s. Colorado Plateau River Guides is established.
 - **1995** - Cataract Canyon peaks at 80,700 ft³/s.
 - **1996** - Glen Canyon Dam releases the first deliberate flood from a dam to improve downstream habitat (45,000 ft³/s) with no effect on Cataract Canyon.
 - **1999** - The pool elevation of the reservoir rises again, drowning out Rapid 27 in Cataract Canyon.
 -
 - **2000** - Drought decreases inflow to the reservoir and its level drops, re-exposing Rapid 27.
 - **2002** - Lowest spring peak for the Colorado River in recorded history peaks at 9,550 ft³/s. Islands of sediment appear on the reservoir below the mouth of the Dirty Devil River and above Hite Marina.
 - **2005** - Lake Powell at lowest level since the 1970s at 3555 feet. The Colorado River flows on top of reservoir sediment as far as White Canyon.
 - **2008** - All Cataract Canyon rapids above Rapid 30 (Gypsum Rapid) are fully restored.
 - **2009** - Removal of Atlas Tailings Pile begins. The toxic material is transferred by rail to disposal site near Crescent Junction exit of Interstate 70.
-

CPRG History

January 10, 2001

Grand Canyon Science

1857 - Grand Canyon is scientifically and topographically examined by an expedition of the US Army of Topographical Engineers under the command of Lt. Joseph Christmas Ives. The expedition traveled by horseback and access the river bottom via Diamond Creek in western (lower) Grand Canyon. The geologist of the expedition is [John Strong Newberry](#), who will later become a charter member of the National Academy of Sciences.

Ives declares the Grand Canyon will forever remain undeveloped and unvisited.

1861- Ives and Newberry transmit to Congress their professional paper called [Report Upon the Colorado River of the West](#). Scenes of the landscape were sketched by the official artist, Heinrich Balduin von Mollhausen ([example](#)), and topographer Frederick W. von Egloffstein ([example](#)).

1869 - John Wesley Powell, a geologist, explores the Colorado River through Grand Canyon on a three month trip in boats that launched in Wyoming at the Green River railroad station. Unlike the first trip, Powell's second trip in 1872 will have a photographer, artist, and topographer.

1872 - The first photographs of the Grand Canyon were exposed by Timothy O'Sullivan ([photo](#)) during an expedition of the US Army Corps of Topographical Engineers under the command of George M. Wheeler. The trip is accomplished by rowing and towing boats upstream from Camp Mojave, Nevada. The party exits the river's lower gorge at Diamond Creek. The geologist of the expedition was Grove Karl Gilbert, who will later leave Wheeler to join Powell's land survey of the Colorado Plateau. Probably for reasons of Wheeler's poor performance at publishing contributions to science.

1875 - John Wesley Powell transmits his report to Congress, called [Exploration of the Colorado River and Its Tributaries](#), and in the following year transmits his professional paper, [The Geology of the Eastern Portion of the Uinta Mountains](#).

1877 - Grove Karl Gilbert transmits his report to Congress. It is called [The Geology of the Henry Mountains](#). The book is probably the most gifted contribution to understanding the geology of the Colorado Plateau.

Reference

January 1, 2001

The Original Escalante National Monument

[Harry Aurand](#), a petroleum geologist, believed that the best resource value for the Canyonlands province of the Colorado Plateau, was its superlative scenery. Looking for oil throughout the landscape, he decided that it was more appropriate to protect the landscape under the auspices of the national park system and planted a seed within the Department of Interior in 1934.

In 1936 [Harold L. Ickes](#), then Secretary of Interior, presented the idea to President Franklin Roosevelt and Utah Governor Harry H. Blood, without success. In fact, he tried several more times without success, even after World War II, when Harry Truman was president.

Click [here](#) to read the preliminary report.

The long correspondence for the creation of this federal reserve land can be read by clicking [here](#).

A chronology for this correspondence, prepared by the National Park Service, can be read by clicking [here](#).

An article from the Utah Historical Quarterly (Spring, 1965), can be read by clicking [here](#).

The national monument would have encompassed 4 million acres and protected the canyons of the San Juan, Green and Colorado rivers in southeastern Utah, including all of gentle beauty of Glen Canyon, which is presently under hundreds of feet of water, as the result of completing Glen Canyon Dam in 1963.

The reason why the monument was never enacted into law, through the [Antiquities Act of 1906](#), was due to the objections of Utah politicians. They thought this landscape was best used for extractive purposes which, through the years, has never proven to have any lasting economic value. This was the argument Harry Aurand was trying to make, even in the tough times of the Great Depression.

Roosevelt did what he could in Canyon Country, by successfully creating [Capitol Reef National Monument](#) in 1937, which became a national park in 1971.

During the administration of President Lyndon Johnson, [Canyonlands National Park](#) was created by an act of Congress in 1964, and in 1996 President William Clinton created [Grand Staircase-Escalante National Monument](#) (1.9 million acres), which is administered by the Bureau of Land Management.

Click [here](#) to read an article from the Salt Lake Tribune (October 6, 1996) about Grand Staircase-Escalante NM.

In 1996 [Harold M. Ickes](#), the son of Secretary Harold L. Ickes, was Clinton's deputy chief-of-staff.

Reference

January 1, 2001

The Lake Powell Research Project

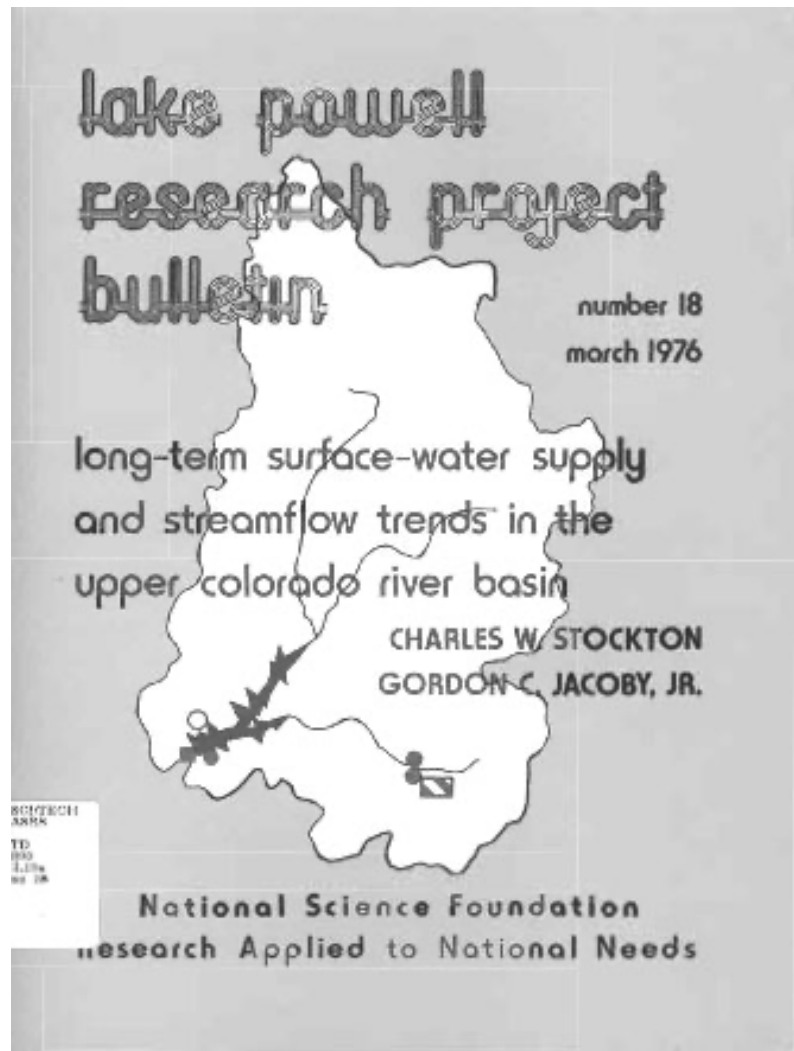
The Lake Powell Research Project (formally known as Collaborative Research on Assessment of Man's Activities in the Lake Powell Region) is a consortium of university groups funded by the Division of Advanced Environmental Research and Technology in RANN (Research Applied to National Needs) in the National Science Foundation.

Researchers in the consortium bring a wide range of expertise in natural and social sciences to bear on the general problem of the effects and ramifications of water resource management in the Lake Powell region. The region currently is experiencing converging demands for water and energy resource

development, preservation of nationally unique scenic features, expansion of recreation facilities, and economic growth and modernization in previously isolated rural areas.

The Project comprises interdisciplinary studies centered on the following topics: (1) level and distribution of income and wealth generated by resources development; (2) institutional framework for environmental assessment and planning; (3) institutional decision-making and resource allocation; (4) implications for federal Indian policies of accelerated economic development of the Navajo Indian Reservation; (5) impact of development on demographic structure; (6) consumptive water use in the Upper Colorado River Basin; (7) prediction of future significant changes in the Lake Powell ecosystem; (8) recreational carrying capacity and utilization of the Glen Canyon National Recreational Area; (9) impact of energy development around Lake Powell; and (10) consequences of variability in the lake level of Lake Powell.

One of the major missions of RAW projects is to communicate research results directly to user groups of the region, which include government agencies, Native American



Tribes, legislative bodies, and interested civic groups. The Lake Powell Research Project Bulletins are intended to make timely research results readily accessible to user groups. The Bulletins supplement technical articles published by Project members in scholarly journals.

THE PROPOSAL

- [1971 - First Progress Report](#). Anderson.
- [1972 - Proposal To NSF](#). Anderson.
- [1973 - Second Progress Report](#). Anderson.
- [1974 - Proposal To NSF](#). Anderson.

PRELIMINARY DOCUMENT

- [1973 - Some Consequences Restricting Maximum Elevation Lake Powell](#). Anderson.

THE BULLETINS

- [No. 0: Bibliography](#)
- [No. 1](#): Mercury in the Lake Powell ecosystem.
- [No. 2](#): Demographic Change Among the Hopi and Navajo Indians.
- [No. 3](#): Air quality in the Lake Powell Region.
- [No. 4](#): Legal-political History of Water Resource Development in the Upper Colorado River Basin. D. Mann. September, 1974.
- [No. 5](#): Geochemistry Lake Powell. Reynolds.
- [No. 7](#): The Impact of Power Developments in the Navajo Nation.
- [No. 8](#): Theoretical Analysis Air Quality. Williams.
- [No. 9](#): Science Information in the Decision to Dam Glen Canyon. P. Perkins. May, 1975.
- [No. 10](#): A Case Analysis of Policy Implementation (NEPA). Cortner.
- [No. 11](#): Macroeconomic Impact Energy Development. Schulze.
- [No. 12](#): Management of Collaborative Science. Anderson.
- [No. 14](#): An Overview of the Effect of Lake Powell on Colorado River Basin Water Supply and Environment. G. Jacoby. November, 1975.
- [No. 16](#): Bacterial Contamination of Lake Powell Waters: An Assessment of the Problem. D. Kidd. December, 1975.
- [No. 18](#): Long-term Surface Water Supply and Streamflow Trends in the Upper Colorado River Basin. Stockton and Jacoby. March, 1976.
- [No. 22](#): The Effects of Power Production and Strip Mining on Local Navajo Populations.
- [No. 24](#): Water Policy and Decision-Making in the Colorado River Basin. 1976.
- [No. 26](#): Air Pollutants Generating Stations. Walther.
- [No. 27](#): Navajo Environmental Protection. Cortner.
- [No. 28](#): Boomtown Impacts of Energy Development. Ives.
- [No. 29](#): Shoreline ecology of Lake Powell. September, 1976.

- **No. 30:** Kaiparowits Handbook: Coal Resources.
- **No. 33:** The impact of energy development on recreation use and value in the Glen Canyon National Recreation Area. November, 1976.
- **No. 34:** The Effect of Lake Powell on Dissolved Silica Cycling in the Colorado River
- **No. 37:** Macroinvertebrates and diatoms on submerged bottom substrates, Lake Powell. Potter. March, 1977.
- **No. 38:** Costs of transporting coal from the Kaiparowits Plateau to Southern California. March 1977.
- **No. 43:** Energy Decision-Making. Cortner.
- **No. 44:** Shoreline Materials Geologicacal Strata. Potter.
- **No. 46:** Modeling Pollutant Concentrations. Williams.
- **No.48:** Evaporation, Bank Storage, and Water Budget at Lake Powell. G. Jacoby. July, 1977.
- **No. 50:** Transportation of Energy. Anderson.
- **No. 52:** The excellent but deteriorating air quality in the Lake Powell Region. September, 1977.
- **No. 53:** Kaiparowits EIS. Ingram.
- **No. 57:** Boomtown Consequences. Little.
- **No. 63:** Analysis of metallic cations in the Lake Powell ecosytems and tributaries. Kidd. June, 1978.
- **No.64:** Sedimentation in Lake Powell. W. Condit et al. June, 1978.

ADDITIONAL REPORTS

- 1969 - Bank Storage. Murdock.
 - 1992 - Lake Powell Water Quality. Tinkler.
-

Reference

January 1, 2001

Grand Canyon Colorado River Research Program

The Colorado River Research Program in Grand Canyon National Park was initiated by the National Park Service in 1974 to secure scientific data to provide a factual basis for the development and the implementation of a plan for appropriate visitor-use of the Colorado River from Lee's Ferry to Grand Wash Cliffs and for the effective management of the natural and cultural resources within the Inner Canyons. The intensified research program consists of a series of interdisciplinary investigations that deal with the resources of the riparian and the aquatic zones and with the visitor-uses including river-running, camping, hiking, and sight-seeing of these resources, as well as the impact of use and upstream development upon canyon resources and visitor enjoyment.

Here are the Technical Reports:

No. 1: [Design and Method of the Sociological Research in the Grand Canyon](#). Bo Shelby and Joyce M. Nielsen. June, 1976.

No. 2: [Motors and Oars in the Grand Canyon](#). Bo Shelby and Joyce M. Nielsen. June, 1976.

No. 3: [Use Levels and Crowding in the Grand Canyon](#). Bo Shelby and Joyce M. Nielsen. June, 1976.

No. 4: [Private and Commercial Trips in the Grand Canyon](#). Bo Shelby and Joyce M. Nielsen. June, 1976.

No. 5: [Survey of Fishes, Mammals and Herpetofauna of the Colorado River in Grand Canyon](#). Royal D. Suttkus, Glenn H. Clemmer, Clyde Jones, and C. Robert Shoop. June, 1976.

No. 6: [A Periphytic Microflora Analysis of the Colorado River and Major Tributaries in Grand Canyon And Vicinity](#). David B. Czamecki, Dean W. Blinn, Terrill Tompkins. June, 1976.

No. 7: [Alterations of Terrace Deposits and Beaches of the Colorado River in Grand Canyon](#). Alan D. Howard and Robert. July, 1976.

No. 8: [Limnologic Studies on the Colorado River from Lees Ferry to Diamond Creek](#). Gerald Cole and Dennis M. Kubly. June, 1976.

No. 9: [User Carrying Capacity for River-Running the Colorado River in the Grand Canyon](#). F. Yates Bordon. November, 1976.

No. 10: [An Ecological Survey of the Riparian Zone of the Colorado River between Lees Ferry and Grand Wash Cliffs](#). Steven W. Carothers and Others. June, 1976.

No. 11: [Human Waste Disposal on Beaches of the Colorado River in Grand Canyon](#). Robert A. Phillips and Cynthia Sortor Lynch. February, 1977.

No. 12: [Survey of Bacteria, Phytoplankton and Trace Chemistry of the Lower Colorado River and Tributaries in the Grand Canyon National Park](#). Milton R. Sommerfeld, Wayne M. Crayton and Nancy L. Crane. July, 1976.

No. 13: [Hydrology and Sedimentology of the Colorado River in Grand Canyon](#). Emmett M. Laursen and Elliot Silverston. December, 1976.

No. 14: [Summer Distribution and Reproductive Status of Fish of the Colorado River in Grand Canyon National Park and Vicinity, 1975](#). C. O. Minckley and Dean W. Blinn. June, 1976.

No. 15: [Aquatic Investigation on the Colorado River from Separation Canyon to the Grand Cliffs, Grand Canyon National Park](#). James E. Deacon and John R. Baker. June, 1976.

No. 16: [An Economic Analysis of the River Running Industry in the Grand Canyon National Park](#). C. R. Michael Parent and F. E. Robeson. December, 1976.

No. 17: [Synthesis and Management Implications of the Colorado River Research Program](#). R. Roy Johnson, September, 1977.

No. 18: [Sound-Level Evaluations of Motor Noise from Pontoon Rafts in the Grand Canyon](#). D. N. Thompson, A. J. Rogers, Jr., F. Y. Borden. 1974.

Reference

January 1, 2010

Canyonlands Watershed Council

[Click here](#) to visit the official web page of the Canyonlands Watershed Council.

ADDITIONAL INFORMATION

[Center for Watershed Protection](#).

[Colorado River documents](#). On The Colorado.

[Earth Explorer](#). Maps, aerial photos, satellite imagery.

[Watershed Management](#). Southwest Hydrology. University of Arizona, Tucson.

[Watershed Planning](#). Environmental Protection Agency.

[National NEMO Network](#)

ENVIRONMENTAL PROTECTION AGENCY (EPA)

[Watershed Mapping](#)

[Handbook for Developing Watershed Plans to Restore and Protect Our Water](#)

Growth and Water Resources Fact Sheet

FUNDRAISING

[EPA](#)

GEOLOGY

Geohydrology

1971 - [Geology and water resources of the Spanish Valley area, Grand and San Juan Counties, Utah](#). US Geological Survey. Sumsion.

1977 - [A digital model of ground-water flow in Spanish Valley, Grand and San Juan Counties, Utah](#). US Geological Survey. Eychaner.

1990 - [Ground-water conditions in the Grand County area, Utah, with emphasis on the Mill Creek-Spanish Valley area](#). US Geological Survey. Blanchard.

1991 - [Geohydrology of Mesozoic rocks in the upper Colorado River basin in Arizona, Colorado, New Mexico, Utah and Wyoming, excluding the San Juan basin](#). US Geological Survey. Freethey et al.

1997 - [Map of recharge areas for the Glen Canyon and valley-fill aquifers, Spanish Valley area, Grand and San Juan Counties, Utah](#). US Geological Survey. Steiger et al.

1999 - [A summary of the ground-water resources and geohydrology of Grand County, Utah](#). Utah Geological Survey. Eisinger et al.

2000 - [Geohydrology and numerical simulation of ground-water flow in the central Virgin River basin of Iron and Washington Counties, Utah](#). (aquifers in Navajo Sandstone). US Geological Survey. Heilweil et al.

2001 - [Reconnaissance study of age and recharge temperature of groundwater near Moab, Utah](#). University of Utah. Kip Solomon.

2007 - [The Hydrogeology of Moab-Spanish Valley, Grand and San Juan Counties, Utah](#).

[with emphasis on maps for water-resource management and land-use planning](#). Utah Geological Survey. Lowe et al. [Plates 1-12](#).

Hydrology

2006 - [The Moab Mill Project](#). A technical report toward reclaiming uranium mill tailings along the Colorado River in Grand County, Utah. Living Rivers.

MOAB'S SOLE-SOURCE AQUIFER PROTECTION PLAN

- [Click here](#) to view Grand County Water Documents
- [Guidelines To Petition: Reclassify Aquifer](#)
- [Petition to Utah Water Quality Board to Reclassify](#)
- [Geologic Data](#)
- [Color Map](#)
- [Legend: Color Map](#)
- 2001 - [Drinking Water Source Protection Plan](#)
- 2001 - [Drinking Water Source Protection Plan](#)
- 2001 - [Skakel Springs Drinking Water Source Protection Plan](#)
- 2002 - [Drinking Water Source Protection Plan](#)
- 2002 - [Federal Register: Glen Canyon Aquifer SSA](#).
- [Map: Locations of Moab aquifers and oil & gas parcels](#)
- [Sole Source Protection Planning](#). DEQ.
- 2018 - [Hydrologic and Hydrogeologic Assessment of the Surface Water and Groundwater Resources Affecting the Moab City Springs and Wells, Moab, Utah: Phase 1: Hydrologic and Environmental System Analysis \(HESA\) and Conceptual Models](#). Kolm & Heijde.

GRAND COUNTY PLANNING

1996 - [Public Facilities Analysis](#)
1996 - [General Plan](#)
2000 - [Grand County Land Use Code](#).
2004 - [General Plan Update](#)

Johnson's Up-On-Top (Cloudrock)

2000 - [Moab Land Company: Cloudrock Preliminary Plan](#)
2001 - [Moab Land Company: Cloudrock Preliminary Plan](#)
2007 - [PUD Summary Amendment](#)
2007 - [Amended Agreement](#)
2007 - [Cloudrock Final Plat Phase 1a](#)
2008 - [A Look at Johnson's Up-On-Top](#). Grand County Citizens for Clean Water.
2008 - [Second and Reinstated Development Agreement](#)
2008 - [Cloudrock development withdrawal letter](#)
[Graphics of Johnson's Up-On-Top](#). Includes satellite imagery of the local topography, overlays of the Cloudrock infrastructure, location of the springs and wells, the direction of groundwater flow, and fractures in the Navajo Sandstone.

GRAND COUNTY WATERSHEDS

Westwater Canyon Watershed

[EPA](#)

[USGS](#)

Lower Dolores River Watershed

[EPA](#)

[USGS](#)

Kane Springs Watershed

[EPA](#)

[USGS](#)

MOAB CITY PLANNING

[Moab City General Plan](#)

Lion's Back Development

[Preliminary Design Guidelines](#)

[Attachments for preliminary design Skakel Springs Drinking Water Source Protection Plan](#)

[Appeal to City of Moab over approval of Lionsback Resort](#)

[Map: Lions Back and Skakel Spring Protection Zone](#)

[Map: City Annexation of Lions Back.](#)

STATE INSTITUTIONAL TRUST LANDS ADMINISTRATION (SITLA)

[2009 - Spanish Valley Block Plan.](#)

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY (DEQ)

[Utah DEQ Watershed Planning Program](#)

[Utah DEQ Watershed Fact Sheets](#)

[Southeast Colorado River Watershed](#)

[Map: Southeast Colorado River Basin](#)

[Bibliography: Southeast Colorado River Basin](#)

[Utah Non-Point Pollution Program, EPA](#)

UTAH STATE UNIVERSITY

[Watershed Resources](#)

[Bear River Watershed Council](#)

WATERSHED PLANNING SAMPLES

[Kentucky](#)

[Purdue University](#)

[Arizona/NEMO](#)

[Ohio Guide to Developing Watershed Plans](#)

[Illinois Watershed Planning](#)

[Oregon Watershed Councils](#)

WATERSHED TOOLS

Center for Watershed Protection

[Conducting a Watershed Protection Audit](#)

[Smart Watershed Benchmarking Tool](#)

[Watershed Vulnerability Analysis](#)
