

# THE CONFESSION

NOVEMBER 1, 1977, 7:00 PM



*Like the sword in the stone, here is a prop in a rock.*

# The Confluence

... wants to be the quarterly journal of Colorado Plateau River Guides, Inc. (CPRG), which is a member of a 501 ( c ) ( 3 ) non-profit organization called Canyon Country Volunteers. CPRG is dedicated to:

- Protecting the rivers of the Colorado Plateau
- Setting the highest standards for the river profession
- Providing the best possible river experience
- Celebrating the unique spirit of the river community

**Guide Membership** is open to anyone who works or has worked the river industry of the Colorado Plateau  
**General Membership** is open to those who love the rivers of the Colorado Plateau

### Membership Dues

\$20 per year  
\$100 for 6 years  
\$195 for life  
\$295 Benefactor

General Meetings and Board Meetings will be announced

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### Colorado Plateau River Guides

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Needed: articles, oral histories, poetry, stories, and opinions. This journal is composed using Microsoft Publisher. If you use a word processor, we can translate most programs. Otherwise, please send your text typed. Please include useful photos, charts, diagrams and artwork. The really is no deadline, but the beginning of each quarter works best.

**Managing editor:** John Weisheit  
(jweisheit@hotmail.com)

**Editor of this issue:** Michele Hill and  
Nancy Allemand  
ISSN #1078-425X

**Disclaimer:** Opinions belong to the author and are not a representation of this organization. Free speech.

Cover photo by Mike Hill.

25 or 30 hp lower unit, exposed in Cataract Canyon at 9000 cfs.  
Is it yours? Through agitation it has become part of the rock.

**CLASS V+**           A quarterly Journal for Extreme Rafters and River Guides

**CLASS V+** is a rafting publication and network dedicated to:

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# River Education Seminar

**“Boats and Boaters”**  
 Evening of May 5<sup>th</sup> and all day May 6<sup>th</sup>  
 Green River, Utah

Brought to you by Canyonlands Natural History Association, Bureau of Land Management, National Park Service, Utah Guides and Outfitters, Colorado Plateau River Guides, and numerous Local Sponsors.

**FRIDAY** May 5, 7:00 PM: Keynote address:  
Development of Commercial River Running by Al Holland,  
 in the John Wesley Powell Museum.  
 Followed by a social and discussion at Ray’s Tavern in town.

**SATURDAY** May 6, 7:00 AM at Swasey’s beach

|                             |                  |
|-----------------------------|------------------|
| Registration:               | 7:00-7:30        |
| Introductions and activity: | 7:30-8:00        |
| Stations:                   | 8:05-9:20        |
|                             | 9:25-10:40       |
|                             | 10:45-12:00 noon |

*The*  
**AM**

*Stations will include:*

- Animal Ecology of the River Corridor
  - Mentor activity I.D. and hands on activities
- Early Inhabitants of Eastern Utah
  - Mentor activity Discussion and ideas
- Riparian Botany; a Balance of Weeds
  - Mentor activity I.D. and hands on activity

|                      |             |
|----------------------|-------------|
| Lunch:               | 12:00-12:30 |
| Travel to JWP Museum | 12:30-1:00  |
| Activity at Museum   | 1:00-1:30   |
| Stations:            | 1:35-2:40   |
|                      | 2:45-3:50   |
|                      | 3:55-5:00   |

*The*  
**PM**

*Stations will include:*

- Geomorphology and Repeat Photos
  - Slideshow
- Old Boats and Boaters
  - Boat demonstration and Discussion
- Leave No Trace
  - Discussion and hands on

|                                      |           |
|--------------------------------------|-----------|
| How to discuss controversial topics  | 5:05-5:35 |
| Dinner and Discussion by Bill Hedden | 5:45-7:00 |
| Evaluations                          | 7:00-7:30 |
| Movie by Charlie Eggert              | 7:35-Open |

This event includes Saturday lunch and dinner  
 Also included in the cost is a t-shirt commemorating the event  
 The cost is \$25.00

Professionals at this point, who have confirmed are:

- |             |                 |
|-------------|-----------------|
| Rich Valdez | Kara Dohrenwend |
| Bob Webb    | Roy Webb        |
| Brad Dimock | Al Holland      |

**D**  
**A**  
**Y**  
**2**





# One Hundred Years of Moab History

via *The Times Independent*  
By Sadie Warner

Permission to reprint from *The Times Independent*

Nancy Allemand was the typist for *The Confluence*.

## 1900

- Grand County Board of Commissioners met to discuss the prevention of infectious diseases such as small pox which were raging throughout the state of Utah. Health Districts and regulations were defined, and a quarantine was placed on parties coming from communities infected with the illness.
- Grand County Sheriff Jesse Tyler was murdered by cattle rustlers in the Bookcliffs area in June.
- Miners discovered gold veins in the La Sal Mountains south of Moab.

## 1901

- In an effort to close the gap between southern Utah's rural communities and the center of commerce—Salt Lake City—hours of volunteer work were completed on the road from Moab to Thompson, and hopes were flying high that one of the railroads would build a branch down this way.
- The citizens of Moab succumbed to oil fever as strikes were reported throughout the area and in Green River.

## 1902

- Diphtheria took its toll on the youth of Moab. Scores of graves in the Grand

Valley Cemetery are testament to the epidemic.

- *The Undine*, a river steamer, overturned in the Colorado River at Big Bend. Passengers and crew made it safely ashore.
- It was announced that a mail route between Richardson and Moab was to be established, opening lines of communication and commerce.

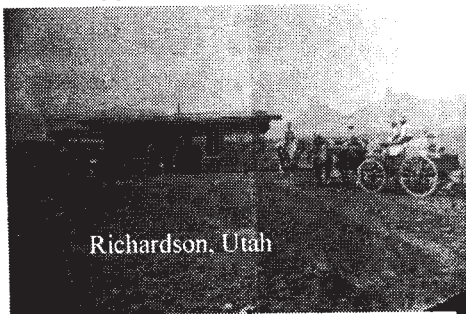


Photo from Mitch Williams Collection

- The La Sal Mining and Milling Company built the area's first smelter. The site was large enough to handle ore mined in La Sal, Lisbon Valley, and other surrounding mines.
- A road was built from Moab to the heart of the miner's camps at Gold Basin.



Early Hwy 128. Salt Wash across the Grand (Colorado) River. Photo from The Mitch Williams Collection.

## 1903

- Moab was incorporated. The town would, from that day on, be under the control of the city council. The first ordinances passed were to

create a town seal, to fix bonds of the officers of the town of Moab and define those offices and duties, and to regulate business licensing.

- La Sal Mountain Telephone and Electric Company was launched in Moab to build and operate power lines.
- Ground was broken for a new courthouse on Center Street.
- Uranium and barium were discovered in the La Sal Mountains.

## 1906

- Waterworks came to Moab. Pipes were laid and plumbing was enjoyed by those who could afford it.
- The Moab Grower's Association was founded.
- A year's subscription to the Moab newspaper—at the time called the *Grand Valley Times*—was \$2.

## 1907

- San Juan County boomed. Mines popped up and farms grew in an era of prosperity.
- Downtown Moab caught fire and was ablaze, but miraculously, damage was minimal.

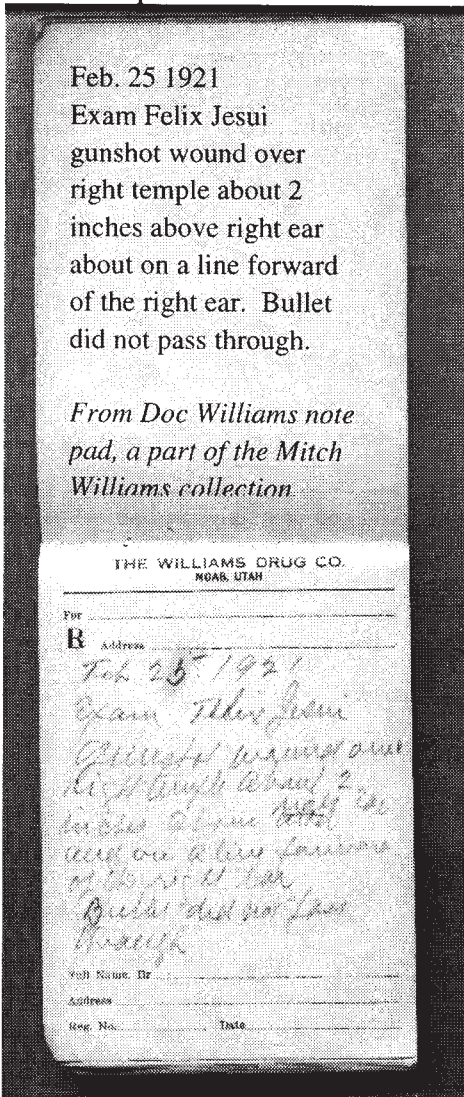
## 1908

- Telephone lines were completed, opening up a whole new world of communication to Moabites.
- A case of scarlet fever was reported and spread. It was later reduced to an epidemic of German measles.
- President Theodore Roosevelt established Natural Bridges National Monument near Bluff, Utah.
- Fire hydrants made their presence known along the streets of Moab.

- At a city council meeting it was decided that alcohol and saloons “are unnecessary evils.” The price of a liquor license skyrocketed to \$2000.

**1910**

- A range war broke out in the desert between cattlemen and sheep farmers. Violence ensued as both sides reverted to more primitive methods to settle disputes.



*Range wars lasted into the 1920s.*

- In order to irrigate 20,000 acres of farmland, it was decided to build a reservoir on Rattle Snake Flat, south

of Moab. Ken’s Lake now sits in that general area.

- Typhoid fever worked its way through the state and made an appearance in Monticello.
- Mexican Hat became a village and Monticello incorporated into a town.

**1911**

- A Moab transportation company was started to shorten the distance between the town and the railroad. Vehicles arrived that could carry up to 12 passengers and looked like stagecoaches, sans horses.



*Studebaker Wagons on 100 North Street Note poles servicing Doc Williams home at 40 West. Doc and two daughters standing. Business venture of Doc’s. Photo from the Mitch Williams Collection.*

**1912**

- The bridge across the Colorado River at Moab was completed. A weeklong celebration was held in its honor.
- Convicts built a road between La Sal and Monticello.
- A canning company, in cooperation with the Moab Fruit Grower’s Association, was built.
- A request for a bridge at Dewey was granted by the state of Utah.

- The newly constructed bridge at Moab began to show its imperfections.
- A disastrous fire enflamed Green River, causing over \$50,000 damage.
- It was decided that a public library would be built.
- A moving picture machine found a home in Moab.

**1913**

- Utah and Colorado joined forces to complete the Midland Trail, a highway from Indianapolis to the Pacific Coast.
- The Dewey Ferry sank to the bottom of the Colorado River.

**1914**

- The voters of Grand County approved a tax levy to build a suspension bridge at Dewy.
- The war between the Great Nations of Europe affects Moab: France cancels its order of ore.

**1915**

- The Grand County Public Library project was started with a book drive. The courtroom was converted into a public reading room.
- Moab was officially electrified when the Hammond’s brought in electric lights.
- Renegade Piutes in Bluff cause an uprising. U.S. Army Chief of Staff, General Scott, captured the leaders and sent the rest of the band to the reservation.
- A steel bridge was built across Court House Wash.
- San Juan County established its own newspaper, *The San Juan Record*.



## 1916

- A road from Moab to Paradox was built and designated a state highway.
- The citizens of Dewey, Castleton, Cisco and Richardson hosted a three-day celebration in honor of the completion of the bridge at Dewey. It was hailed as the second largest suspension bridge west of the Mississippi River.
- The Big Indian Copper Company began construction of the first mill in the area.
- Central School boasted its largest enrollment to date: 240 students in grades K-12.
- The Moab post office progressed from Fourth Class to Third Class due to the large volume of mail being handled.
- An ice plant was built.

## 1917

- In April, President Woodrow Wilson led America into the Great War in Europe. He also introduced the Draft in order to raise a large army in a hurry. Young men all over the country enlisted, or were drafted into service, including many from southeastern Utah. Throughout the year notices appeared in the pages of *The Times* of patriotic farm boys leaving for Europe, and of course there were those few who never made it home.
- Moab found itself completely entrenched in the war effort. Liberty Bond Campaigns were so successful that every man, woman and child in the

valley owned one. Membership in the Moab chapter of the Red Cross was outstanding, movie fans shelled out a 3 cent war tax at the Ides Theater and citizens slimmed down on Wilson's war diet. Moabites were so patriotic that a pre-enlistment training camp was organized in town.

- Moabites began to invest in automobiles.
- The Moab Valley was a filthy place to live, according to the state sanitary inspector. "The unhealthful conditions of town is a crime and a disgrace," the inspector said.
- State convicts arrived in Moab to work on the road to Thompson.
- The United States government purchased large quantities of uranium, using radium content of the ore to manufacture munitions and supplies.

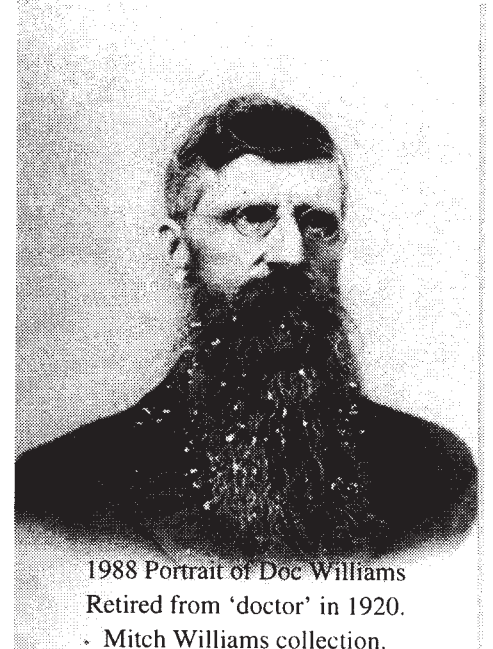
## 1918

- A children's welfare service was started in the valley.
- The war stamp campaign was launched.
- A new building was raised downtown to house the First National Bank and *The Grand Valley Times* office.
- A case of influenza closed Grand County schools and quickly spread throughout the county: 250 new cases developed in one week. A strict quarantine didn't stop the virus from claiming five lives.
- Soldiers began to return to their homes in southern

Utah after Germany surrendered.

## 1920

- After a large oil strike in 1919, the oil world focused its sights on Grand County.
- Prohibition was in full swing as local law enforcement busted booze joints in Green River and Thompson.



1988 Portrait of Doc Williams  
Retired from 'doctor' in 1920.

• Mitch Williams collection.

## 1921

- The river flowing past Moab had a name change. Until February 1921 it was known as the Grand River, ever after it was known as the Colorado River.
- The Moab Chamber of Commerce was founded.

## 1922

- The filthy condition of Moab prompted its citizens to inaugurate an annual clean-up day.
- In October, the very first Grand County Fair was a huge success.

## 1923

- Piutes declared war on the white people in Blanding. Violence was kept to a

minimum and the rebels were captured by the sheriff's posse.

- Moab's First National Bank was robbed. Bandits blew the vault and stole over \$7,000 from the safe. The bank's bookkeeper was bound and left inside the wrecked vault.
- The citizens of Moab and Green River join forces to raise funds for the improvement of roads in southeastern Utah.

1924

- In the heart of winter, the Moab Electric Plant went dead, leaving residents without power for a week.
- The windows sections of what is now Arches National Park was designated a national monument.
- An oil well in Crescent Junction was declared Utah's largest single oil producer.

1925

- Competition reached new heights of intensity in the Moab oil fields after a strike at the Big Six Oil Dome proved far richer than ever imagined. An oily geyser gushed for weeks on end as crews tried to control the flow.

1929

- Arches National Monument ballooned by order of President Hoover.
- The Moab Chamber of Commerce was re-established.
- Inmates at the Grand County Jail, arrested for burglary, shot and killed a sheriff's deputy in the doorway of said jail. After

a brief asylum from their cells, the outlaws were caught by the sheriff, escaped again and were caught again.

1930

- The Moab Lion's Club was formed.

1931

- The Great Depression descended on Moab along with the rest of the country. Unemployment was a major theme in the pages of *The Times-Independent* as job notices were sporadically published, hiring groups of men at a time to maintain county roads.

1933

- The Taxpayer's Protective League was formed by the citizens of Green River in order to combat taxation without representation in Emery County. A petition was signed and submitted to the Utah State Legislature requesting that Green River town become a part of Grand County.
- President Franklin Delano Roosevelt's New Deal was implemented in Moab when vast improvements were planned in the La Sal Mountains' forests. F.D.R. promised the community \$18,000 a month for a period of five months while work camps were set into operation, and groups of local men were employed in reforestation efforts.
- Money was secured from the federal government for the construction of a new school building and massive improvements in

the water and sewer systems.

1934

- A fire claimed the Thompson Garage and Hotel, causing \$25,000 damage

1935

- Dedication ceremonies were held for what is now "the old middle school." The county library, which had been located in the courthouse, found a new home in the recently vacated school building.
- Grazing districts were appropriated throughout southeastern Utah for sheep and cattlemen.

1936

- The first automobile was driven through Arches National Monument, proving that a passable road could be built, for very little cost to the taxpayers.

1937

- Construction was completed on Moab's first public swimming pool, and the new courthouse was dedicated on Center Street.
- One of Moab's most notable landmarks, the Utah Hotel, burned to the ground.

1938

- *The Times* began to print news of Adolph Hitler's invasion into neighboring European countries.

1940

- As the war heated up in Europe, the government called for young American men to register for selective service-just in case.

1941

- Grand citizens were notified to register for ration cards.

- The U.S. Defense Department ensured that roads would be built and maintained to strategic mineral mines in Grand County.
- A Scrap Rally was held in Moab to collect scrap metal for the manufacturing of munitions.
- The largest deposit of magnesium/potassium chloride in North America was discovered five miles down river from the Colorado River bridge at Moab.
- A Japanese-American relocation camp was opened at Dalton Wells, 14 miles west of Moab on the road to Thompson.
- The Potash Company of America bought land and began drilling at Crescent Junction.

#### 1943

- The most disastrous fire in Moab history destroyed the Moab Co-op, a department store and food market, causing \$50,000 damage. The resilient business moved to a temporary location until repairs could be made.

#### 1944

- Moab residents host a clothing drive to aid civilians in Russia.

#### 1945

- The country mourns the loss of a president. F.D.R. was the only living president that Moab residents threw a birthday ball for every year.
- Many residents were surprised to learn that some elements of the Atomic Bomb that had ended the

war with Japan so abruptly, were mined in Grand County.

#### 1946

- Commencement ceremonies were held for the largest class in history to graduate from Grand County High: 32 students.
- *The Times Independent* published its 50<sup>th</sup> anniversary issue on May 30th.
- The Green River bridge collapsed and all traffic on U.S. Highway 50 was brought to a halt. Three weeks later, a temporary structure was opened for cars and light trucks.

#### 1948

- Plans were announced by the Atomic Energy Commission to run the vanadium mill in Monticello. The AEC also assured local mining companies that large purchases of uranium ores were to be made.
- The Moab Women's Club celebrated its 50<sup>th</sup> anniversary.

#### 1949

- First National Bank and *The Times* celebrated growth as the newspaper office moved into a new building and the bank expanded and was remodeled.
- It was announced that a uranium mill would be opened to handle products from southeastern Utah and western Colorado.
- The Moab to Monument Valley Film Commission opened for business with *Wagonmaster*, directed by John Ford.

#### 1950

- Census figures revealed the population of Moab to be 1,272.

#### 1951

- An oil well at Cane Creek spouted 1,500 barrels per day. It was the biggest news for weeks in southern Utah.

#### 1952

- Throughout the year local mining and drilling companies squabbled with the Atomic Energy Commission over uranium prices.

#### 1953

- It was a busy time in Moab for the film industry. Three pictures were shot here, and Moabites enjoyed every minute of it: seeing the stars, hosting the production companies and even doing a little bit of acting themselves-as extras and stand-ins.
- A strike by the La Sal Mining Co. was hailed as the richest uranium deposit to the date.

#### 1954

- The Uranium Boom was in full swing, which directly led to a building boom in Moab. New houses and commercial buildings grew up almost overnight in order to accommodate families and businesses moving into the valley.

#### 1955

- The "ultra modern" Apache Motel opened on 400 East.
- Drought and a heat wave worried the citizens of Moab.
- Construction began on the U.S.'s "most modern"



uranium mill: the Uranium Reduction Co. at Moab.

- New circuits were installed for faster long-distance calling service.
- “Moab is going big time next Monday and it will cost John Q. Public from one it five cents to park the family jalopy on Main or Center Streets to do a little shopping.” That was *The Times*’ way of breaking the news about the installation of parking meters.
- The school year opened with a new building: Helen M. Knight Elementary was named in honor of the beloved Grand County educator and administrator.
- Moab celebrated its 75<sup>th</sup> birthday.
- A new bridge over the Colorado River was built. It is still in use today.

#### 1956

- Moab audiences were delighted by a visit from *The Grand Ole Opry*.
- Twenty-three-year-old Sam Taylor returned from two years of service in the Army to become editor and manager of *The Times-Independent*.
- Tragically, a gas explosion at the Lariat Café in Monticello killed 15 diners during the seven o’clock dinner rush. It was the worst tragedy in the history of southeastern Utah.

#### 1957

- Operations moved to a brand new hospital named in honor of Dr. I.W. Allen.
- Adrien Foote (Taylor), matriarch of *The Times*, graduated from Grand County High.

- Dedication ceremonies 1961 were held for the Uranium Reduction Co. mill. With 220 employees, it was the largest single employer in Moab.

- The San Juan County village of Bluff was wired with electricity.
- KURA broadcast for the first time over Moab airwaves; television wasn’t far behind.
- Miller’s Shopping Center was born when Miller’s Supermarket opened with expanded hardware and sporting goods departments.

#### 1958

- The desert once again branded the people of Moab with drought and searing temperatures.
- After years of discussion and controversy, a paved entry road into Arches National Monument was completed.
- Two inmates in the Utah State Penitentiary were caught by Salt Lake City police counterfeiting Grand County checks and forging the treasurer’s signature.
- Nine holes were ready for play at the Moab Golf Course.

#### 1959

- Dead Horse Point was declared a state park.

#### 1960

- Arches National Monument’s visitor center was built.
- Moab Lanes opened for business with 12 deluxe bowling lanes and a playroom “so mom could bowl too.”

- Construction was begun on the Potash plant down river and was finished in 1963.

#### 1962

- Grand opening ceremonies were held for the rest of the businesses in Miller’s Shopping Center on south Main Street.
- Grand County High students moved into a new building: what is now the middle school.

#### 1963

- Missile testing was begun in Green River.
- The Chamber of Commerce selected “Heart of Canyonlands” as Moab’s official slogan.
- City Market opened its doors for business on Main Street. Remember fresh doughnuts?
- Uranium Reduction Co. sold out to Atlas Corporation.
- Moab mourned the loss of another beloved president: John Fitzgerald Kennedy.

#### 1964

- Canyonlands National Park was established by President Lyndon Johnson.

#### 1965

- Massive renovations were initiated on “old Star Hall.”

#### 1967

- The first annual Jeep Safari was hosted in Moab by the Chamber of Commerce. The event drew 150 jeeps and 500 participants.
- The town’s most spectacular and well-attended fire in history occurred when the Grand County Library succumbed to flames.

- The worst flood in 20 years turned Moab streets into riverbeds and damaged countless homes and businesses.
- Ten permits were issued for the first elk hunt in the La Sal Mountains.



*Tag-A-Long was operating raft trips in the 1960s. Photo of Mitch backing a trailer in the Green River and from the Mitch Williams Collection.*

## 1968

- Four heavily loaded railroad cars derailed and overturned on their way to the D&RG mainline from Potash.
- German troops were firing test missiles near Green River.
- Dedication ceremonies were held for the Dead Horse Point State Park visitor's center; Utah Governor Calvin Rampton presided.
- An unusual storm poured over an inch of rain down on the Moab Valley in an hour and plummeted hailstones that were an inch in diameter, causing untold thousands of dollars in damages to homes throughout the area.
- A new Grand County Library opened to the public.
- The Jaycees planted a permanent live Christmas

tree on the grounds of the county courthouse.

- It was announced that Rio Algom Mines of Canada would begin developments on claims in Grand County.
- An open house was held at the newly remodeled Star Hall, the new gymnasium and other facilities at the junior high.
- A brand new business opened up in Moab: the first car wash.
- The new, modern post office opened on 100 North.
- On Christmas Day, a disastrous fire caused an estimated \$1 million damage.

## 1969

- In his last 90 minutes in office, President Lyndon B. Johnson signed a proclamation doubling the size of Arches National Monument and substantially increasing the size of Capitol Reef National Monument.
- The first foreign exchange student in Moab arrived from Argentina.
- The Slickrock Bike Trail was officially opened to the public.
- Grand County Library hosted its first children's summer reading program and story hour.

## 1970

- The Transient Room Tax premiered in Moab.
- A new medical center was opened downtown by Dr. J.P. Munsey.
- Dead Horse Point State Park was wired with electricity.

## 1971

- W.B. (Skinny) Wynn arrived from Texas to begin operations of his Moab Queen Canyonlands by Nite Show.
- A massive curbs, gutter and street improvement project was completed by the Moab Public Works Department.
- The Atomic Energy Commission and the Environmental Protection Agency joined forces to test areas in western towns for radiation.
- Four Corners Mental Health, a regional center, opened its offices in Moab.
- After being proposed, promised, and put off for years by politicians, President Richard M. Nixon made Arches a national park. He also expanded Canyonlands considerably.
- America's first "Uranium Multi-Millionaire" and former resident, Charles A. Steen announced to the Chamber of Commerce his plans to renovate and open to the public his Moab mansion, *Mi Vida*.
- Tex McClatchey's *Canyon King* sternwheeler was launched on the Colorado River.

## 1972

- Attorney William W. Benge, formerly of Berkeley, Calif., arrived in Moab to open a law practice.
- Cooperation problems between the Moab City Police and the Grand County Sheriff's Department spurred an investigation by the Utah Attorney General's Office.

No arrests were made and the case was quickly closed.

- Technology at *The Times-Independent* really changed. A computer replaced the old Linotype and *The Times* converted to offset printing of the newspaper.
- An open house was held for a new Federal Building in town.
- A special grant enabled the advent of the Sundwall Center, an educational facility for handicapped students.
- The first Santa Claus Christmas parade made the trek down Main Street.

#### 1973

- Snow was big news. Precipitation had been above average and caused a rockslide on the river road and a section of the roller rink to buckle.
- For the first time in history, Grand High's boy's basketball team was the victor in the race for the state's class 2A championship.
- Landscaping and other work was completed at the Old City Park.

#### 1974

- Technological advancements allowed Moab residents to dial direct long distance.
- Equestrian enthusiasts were treated to Moab's first horse races.
- Two Moab men were kidnapped and held at gunpoint until they were left tied in a Price motel room. Their captor, calling himself Mr. Hunter, forced the two men to empty their bank accounts and hand the

money over to him. "Hunter" was later captured in Portland, Ore.; apparently, he was already wanted in Indiana for murder.

#### 1975

- Oil and gas drilling gained momentum.
- The Bureau of Land Management reorganized its districts and stationed a district office here in town.
- A local grape growers association was started.

#### 1976

- Dry desert conditions caused a severe water shortage.
- A new movie theater opened up on Mill Creek Drive across from Power House Lane.

#### 1977

- Pizza Hut, Yellow Front and Checker Auto Parts opened on Main Street.
- The LDS Chapel on 400 North was dedicated.

#### 1978

- The Circuit Court system replaced all city courts throughout Utah.
- Jim Nyland was elected Grand County Sheriff.
- Grand County High School Football Coach Glen Richeson retired after 20 years with the team.

#### 1979

- A chapter of the Parent-Teacher Association was organized in Moab.
- The 50<sup>th</sup> Anniversary of the creation of Arches National Monument was celebrated.

#### 1980

- An outbreak of hepatitis was cause for concern among local officials.

- The "Sagebrush Rebellion" bill was passed by Utah legislators giving control of federal lands within the state over to state officials.
- The Grand Old Ranch House (formerly the Arthur Taylor House) was added to the National Register of Historic Places.
- Castle Valley received nationwide recognition when ABC-TV broadcast a live climb of Castle Rock.
- The world's largest solar voltaic generating system was dedicated during ceremonies at Natural Bridges National Monument.
- After an emergency executive session of the Moab City Council, the entire police force was put on probation due to a lack of effective law enforcement.
- An open house was hosted at the new City Hall offices on Center Street.

#### ***Of Special Note:***

Guides, Moab born locals, Kyler Carpenter and Dusty Simmons have chosen April eighth, two thousand as their wedding day.

#### **AND**

Guides, John and Susette Weisheit set off on 02/02/2000 with two rafts and each other for a thirty day Grand Canyon trip. I hear they are still washing laundry.



# I. Know Your Federal Agencies

**DOI** ~ Department of the Interior, executive department of the United States government that serves as the nation's principal conservation agency. Established by the Congress of the United States in 1849, the department is headed by a secretary appointed by the president with the approval of the Senate. The department's responsibilities include protecting and conserving the country's land, water, minerals, fish, and wildlife; maintaining national parks and recreation areas; and preserving historic places. It also provides for the welfare of Native American reservation communities.

In 1988 the department managed more than 220 million hectares (550 million acres) of federal resource lands; about 340 units of the national park system; 70 fish hatcheries and 442 wildlife refuges; and numerous reclamation dams. The Department of the Interior comprises numerous federal agencies, including the Bureau of Indian Affairs, the United States Fish and Wildlife Service, the National Park Service, and the Geological Survey.

In the United States, extensive reclamation projects began with the enactment in 1902 of the Reclamation Act, which was established to stimulate the economic development of 16 sparsely populated western states. Since then, the Reclamation Service, now called the Bureau of Reclamation, has supervised many federal projects that supply water and power for use in agricultural irrigation, industry, flood control, preservation of fish and wildlife, domestic needs, and recreation.

Reclamation of coastal areas is also possible where offshore or tidal marshlands are covered by shallow water. Many countries have reclaimed land by construction of ditches and drainage of land between dikes and the natural coastline. More recently, many states have enacted legislation requiring mining companies to restore and re-vegetate strip-mined land after a mining operation is abandoned.

Reclamation projects can have harmful effects on the environment. For example, the application of fertilizers and other chemicals on irrigated land increases the salt content of the soil and of the water returning to the source of irrigation, such as a river.

**BIA** ~ Bureau of Indian Affairs, agency of the United States government, generally responsible for administering federal policy for Native Americans and Inuits (Eskimos). One of the oldest federal agencies, the bureau was created in 1824.

Headed by an assistant secretary, the bureau's headquarters is in Washington, D.C., but most of its employees and resources are scattered among offices on Indian reservations. Most of the bureau's employees are Native Americans.

The Bureau of Indian Affairs provides schools on large reservations where public schools are inaccessible. It also sponsors vocational training and employment programs for adults. The bureau offers technical advice and service to tribal governments on administrative procedures, construction, and economic development projects. It maintains a loan fund to assist individual and tribal businesses. The bureau also oversees the preservation and use of land and other natural resources that are held in trust for tribes by the federal government.

**NPS** ~ National Park Service, bureau of the United States Department of the Interior, is responsible for conserving natural scenery, wildlife, and historic sites and objects, and providing for public enjoyment of these areas. The National Park Service was established in 1916 by the Congress of the United States. The areas managed by the service are known collectively as the National Park System. The service is headed by a director, who is appointed by the Secretary of the Interior. The park system is administered through ten regional offices. Each parkland area is directed by a superintendent, who oversees the selection and training of staff, organizes recreational programs, and plans conservation activities.

The National Park Service includes more than 350 areas covering about 324,000 sq km (about 125,000 sq mi). The service administers more than twenty types of areas, which can be grouped into four broad categories: natural, historical, cultural, and recreational. Additions to the park system are generally made by acts of Congress. The president of the United States can also make additions. In 1872 Congress established Yellowstone National Park as a public park. Yellowstone was the world's first national park and set a precedent for the preservation of scenic federal lands.

**BLM** ~ Public Lands, in United States law, term designating largely vacant and unappropriated lands administered by the Bureau of Land Management (BLM) of the United States Department of the Interior. The United States has approximately 110 million hectares (272 million acres) of public land, exclusive of its national parks, national forests, national wildlife refuges, and other land set aside for particular uses. BLM-administered lands are located primarily in the western United States and Alaska.

Three parts to get you started.

## II. Acquisition and Disposal of the Public Domain

Following the American Revolution (1775-1783), certain states ceded their claims to lands west of the Allegheny Mountains to the federal government. The government later acquired additional land through the Louisiana Purchase (1803) and other purchases.

The first significant legislation pertaining to the disposal and use of public land came in 1776, when the Continental Congress offered land grants to induce soldiers to desert from the British army. In the early years of the American republic, many national leaders saw public land as a source of government revenue, and public policy was directed toward the sale of land; however, the policy of selling public land was never highly successful.

Grants of public lands were awarded by the Congress of the United States to encourage the construction of canals, wagon roads, and railroads. Other grants were made to colleges to promote the teaching of agriculture and the mechanical arts (see Land-Grant Colleges). Beginning with the creation of Yellowstone National Park in 1872, many national parks, forests, and wildlife refuges were carved from the public domain.

A general change in the policy of public land disposal came with the passage of the Homestead Act in 1862 (see Homestead Laws). By 1932 more than one million settlers were drawn to public land in search of farms, and by 1962 all agricultural land had passed from public ownership.

## III. Rules for Administering the Public Lands

In 1812 Congress established the General Land Office within the Treasury Department to oversee public-land disposal. This office was transferred to the newly created Department of the Interior in 1849. In 1934 Congress passed the Taylor Grazing Act to provide for the leasing of public land for livestock grazing and established the Grazing Service within the Department of the Interior to administer the act. The Grazing Service was combined with the General Land Office to form the Bureau of Land Management (BLM) in 1946. The BLM is responsible for the balanced management of public lands and resources and their various values to best serve the needs of the American people.

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## INSECTS

### antlions

The presence of an antlion is identified by a funnel shaped hole in the sand. The larvae rest at the tip of the funnel. Any wandering insect that slides into the funnel will activate a hair trigger between the antlion's jaw which will shut with force to impale the wanderer.

### cicadas

Known best by the high-pitched continuous call of the mating male. Nymphs spend life, several years, underground; the tunnels access plant roots. In the year they become adult, there is a hover period subsurface, a soft adult within an exoskeleton. The emergence from the soil is near sunset. The exoskeleton is shed and left behind on whatever the insect climbs upon. The adult wings are flexed to dry to allow the cicada to fly by midnight as it is a delectable treat for predators.



### daddy longlegs

The interesting fact about this arthropod is the slender legs will break off much like a lizard's tail when it is necessary to escape. Daddy longlegs' mouth parts are not fanged like spiders, but like scorpions with chewing mouth parts. The scientific name *Opilio* means shepherd because the legs are likened to the stilts shepherds used to get aloft to count their sheep.

### shrimp

Fairy shrimp and tadpole shrimp feed on microorganisms in the mud. The life cycle is completed in a few weeks about the time the water source dries up. The eggs endure the heat and are perhaps spread from the mud on the feet of birds. Tadpole shrimp resemble trilobites. Fairy shrimp are almost transparent, swim upside down, and the males have a large additional antennae to clasp the female to mate.

### creosote woolly gall

This bright reddish brown intrusion looks like a parasitic plant growth not an accumulation of an insect. A tiny fly deposits an egg in a terminal bud, which hatches a red grub. The plant grows the gall around this feeding grub. By residing in the creosote the grub is protected from disturbance by herbivores because the creosote produces defensive chemicals to divert chomping.



## Utah National Park History

### Synopsis

**ARCHES** - In 1929 an area of 270,000 acres were set aside for a National Monument. By 1971, 73,000 acres, much of the Maze, were added and preserved as park land. Walt Dabney added more acres in 1999.

**CANYONLANDS** - In 1964, 338,000 acres were delineated into three regions: Needles, Island -in-the-Sky and Maze districts. Early Native Americans knew the Maze as "Land of Standing Rocks" or *Toom-pin wu-near' tu-weap*.

**NATURAL BRIDGES National Monument** - 7,800 acres to protect three sandstone bridges in 1908. Sipapu, Kachina and Owachomo span 180 feet to 268 feet at heights of 106 to 220 feet above streambeds.

**La Sal Mountains** - La Sal means salt in Spanish. The Spaniards Dominguez and Escalante named it during their 1776 travels through these lands. Hayden would map the range a hundred years later, labeling the range La Sal, although it had also been referred to as the Elk Mountains. The Miner's Basin attracted hopefuls in the 1800s, enough to set up a general store, saloons, two restaurants, and a livery stable. Aside from this 10,000 people were a few hundred single men in the Bachelor Basin. These several communities were connected by what is now known as the Trans La Sal Trail. Presently, timber, livestock and recreation sweep users onto the land. Taylor Flats was named for *Times Independent* Sam Taylor's family back when they ran cattle up in there. His son Zane rafted commercially for a Moab outfitter before he began to join his father at the press.

**Mt. Peale** - San Juan County's highest peak at 12,721 feet. An account says it is named for its reverberations and peals when the thunderstorms. The Hayden Survey of 1875 led by Henry Gannett and James L. Gardner also had a mineralogist named Albert Peale along. This group of individuals mapped much of this region.

**Mt. Waas** - Grand County's highest peak at 12,331 feet. The Hayden group had a Native American guide for whom Waas and Mt. Tomasaki was named. (Tomasaki is located in the central range of the La Sals). Mount Tukuhnikavats is Paiute for "where the sun sets last". Mount Mellinthin comes from a Moab forest ranger, Rudolph E. Mellinthin who died on August 23, 1918 by the gunshot of a draft deserter he was apprehending.

Scott, David L. and Kay W., National Park Areas Western States, The Globe Pequot Press, Chester Connecticut, 1992.

Van Cott, John W., Utah Place Names, University of Utah Press, SLC, UT, 1991.

Huff, Paula and Wharton, Tom, Hiking Utah's Summits, Falcon Publishing Company, Inc, Helena and Billings Montana, 1997.

Reader's Digest, Our National Parks, Reader's Digest Association, USA, 1985.

## Riparian Ecology

Richard Valdez taught a zesty five day condensed edition of riparian ecology. I had to secure permission to reprint the suggested reading list from Valdez course after writing 'Elements of Leadership' in Volume 5 Issue 3 about the richness of subjects also to be found in the bibliography. I've determined Valdez is an assured teacher and surmise these readings will be pertinent to those of us perpetuating our study of the Colorado Plateau.

For the first time I heard that the Colorado Squaw fish had a name change in the past year. Native Americans expressed concern about the utilization of "squaw." So listen up when someone mentions the Colorado Pike Minnow. You do know the fish.

The coolest element about this course was relating to Dr. Valdez's illustrations about water levels in the course of the last decade. I don't run into many who have remained around the river that long and have had similar observations about the phenomenon of hundred year floods, dam restitution, relationship of non-native growth and the entrenched meander. The terminology sustained me. I'm in the habit of basic-sizing concepts for laymen, children, foreign speaking entities, and entry level guides that terminology is oft foregone. Let me share with you some of my favorite riparian ecology vocabulary.

Aquatic lives are growing or living in or on the water. Xeric pertains, not only to a terrestrial zone, but, specifically, dry lands. In between these areas is a habitat that is moderately moist, the mesic region, which is often the riparian.

In Grand County, land was purchased to set aside a unique and vital edge of the river, the riparian known as the Matheson Wetlands, managed by The Nature Conservancy. Federal regulation, section 404 of the Clean Water Act, specifies that the Army Corps of Engineers is responsible for issuing permits to discharge dredge or fill material into the United States waters, including wetlands. Allochthonous organic matter enrich wetlands when spring run-off rises over the banks, sweeping up debris upstream and redistributing it. This is an instance of the ecology of a lotic (fluvial/flowing) system. On another perspective, lentic (adfluvial/lake) systems, autochthonous organic matter grows from within, like the growth of algae. Photosynthesis must be able to penetrate the water to spur growth.

Where the river is shallow or thin enough for light to penetrate for photosynthetic production and the nutrients are present, it is possible for a flowing water way to also be autochthonous.

A person can't study riparian ecology without considering geomorphology: how an area is shaped by the surrounding geology. Wetlands are a result of geomorphology and give way to a dense and diverse biomass. The razorback sucker reproduction is affected by changes of the historic reckoning of flows into wetlands. Other species have adapted to the narrow canyons that tumble columnar collapse creating a debris flow. This action feeds particles into the river. The grains bear an incipient motion, sulstating downstream into suspension. The thalweg is the current of velocity and how the energy is



channeled. Where a constriction exists from the peeling of canyon walls into the river, ponding will occur.



## Humpback chub

The thalweg is the flow through the constriction into the expansion zone. Here there is a recurrent channel, it runs between shore and a forming sandbar, accelerating towards the upstream end creating a backwater, nursery to many fish. Scour channels are located at the end of sandbars, that deep edge downstream. Chute channels can be thought of as the highwater route, it is often abandoned. Another nursery area is flooded bottomland.

Neat facts about fish:

The razorback hump is a fusion of three bones; humpback chub has a hump of fat and muscle.

Cutthroat trout are native species to the Colorado River. They have pharyngeal teeth. These teeth pull food into the gut like a hinged claw action, they are also binge feeders. Bonytail has the least known about it and most endangered in North America. In the 1950s - 60s, sportsmen were catching them. Signs of decrease predate the Flaming Gorge Dam, perhaps they were more susceptible to the predication of non-native species and suffer biological extinction. There are so few that they can not find each other. There are now 70 species in the main stem of the Colorado River, 34 of them are predators, when there originally was only one predator, the Colorado Pike Minnow. Life strategies, phonology, of fish are responsible for the unusual adaptations seen in the native species. Some species rely on rheophylic communities, the life that occupies the interstitial voids in a stream system, as in, cobbles. Sand bottoms are ordinarily sterile and life depends on other islands of productivity from the dragging overhanging plants along the shore to alluvial fans blowing in substrate to backwater conditions and flood bottoms.

## Valdez recommends the following reading:

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- Crispin, V., R. House, and D. Roberts. 1993. Changes in instream habitat, large woody debris, and salmon habitat after the restructuring of a coastal Oregon stream. North American Journal of Fisheries Management 13:96-102.
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- Jensen, S. and W.S. Platts. 1987. Processes influencing riparian ecosystems. Pages 228-232 In: Mutz, K.M. and L.C. Lee (tech. coord.) Wetland and riparian ecosystems of the American West. Proceedings of the Eighth Annual Meeting of the Society of Wetland Scientists, May 26-29, 1987, Seattle, WA.
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- Kennett, R. and O. Tory. 1996. Diet of two freshwater turtles, *Chelodina rugosa* and *Elseya dentata* (Testudines: Chelidae) from the wet-dry tropics of northern Australia. Copeia 1996:409-419.
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- Reisner, M. 1986. Cadillac Desert: the American west and its disappearing water. Penguin Books, New York. 582 pp.
- Roper, B.B., J.J. Dose, and J.E. Williams. 1997. Stream restoration: is fisheries biology enough? Fisheries 22:6-11.

# Occupational Exposure to Bloodborne Pathogens

River guides, jeep guides. Climbing, biking, hunting/fishing, scenic flight, cross-country ski and snowmobile guides.

By Michele Hill, Red Cross Instructor

Your medical training reveals the following. Be proactive for our own protection.

The outfitter/company with whom you work is obliged to describe company policy or standards about the types of exposure an employee can anticipate while performing the job. There must be instruction, annually, about procedures to follow in the event of potential or actual exposure of blood or body fluids. The outfitter must supply protective equipment and train employees about the proper use, location, removal, handling, decontamination and disposal of protective equipment and related contaminant/comtaminatable gear. Employers are to provide gloves, gown, eye protection and ventilation devices as appropriate for anticipated circumstances.

Hepatitis B vaccines must be offered to employees by employers at no cost to the employee for the three shot series. Employees may decline the series and sign a waiver that the series was offered at no

charged and you have chosen to refuse the vaccinations. Rule 429-801 states EMS workers get base-line AIDS tests at hire, also at the expense of the employer.

If an exposure plan is not developed in your workplace, assist your employer in strategizing these policies. Write to: Cannon Health Building, 288 N 1460 W, SLC, UT 84116 for a copy of *Occupational Exposure to Bloodborne Pathogens, Final Rule. Federal Register, Department of Labor, OSHA, 29CFR Part 190.1030*. Contact: a Red Cross Instructor to provide *Preventing Disease Transmission* training. Have on hand phone numbers for: Centers for Disease Control (CDC), Atlanta, GA, 30341 - (404)639-3311; Utah Department of Health, Bureau of EMS, Brian Garrett, Infectious Disease Representative - (801)538-6435.

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## Adventure Medical Kits

P.O. Box 43309  
Oakland, CA 94624  
1-800-324-3517

designed the following kit for:

Group Size 1-8 people  
Trip Duration 1-14 Days.

The contents are:

*Comprehensive Guide to  
Wilderness & Travel Medicine*

by Eric A. Weiss, M.D.

CPR Life Mask Face Shield

*Illustrated Guide to Life*

*Threatening Emergencies*

by Eric A. Weiss, M.D.

## INFECTION CONTROL

Nitrile Examination Gloves (4)

Antimicrobial Hand Wipe (2)

Biohazard Waste Bag

## ESSENTIAL EQUIPMENT

SAM Splint

Hyperthermia Thermometer

EMT Shears

Splinter Picker/Tick Removal

Forceps

Duct Tape (5 yds)

## WOUND MANAGEMENT

20 cc. Irrigation Syringe

Providence Iodine Solution USP

10% (1 oz)

Wound Closure Strips (1/4" x 4 -  
10)

Tincture of Benzoin (2)

Double Antibiotic Ointment (3)

Antiseptic Towelettes (6)

## BLISTER MATERIAL

Moleskin 7"x 4"

Spenco 2<sup>nd</sup> Skin (1.5" x 2" -2)

Non-Woven Adhesive Knit

Bandage 7"x 4"

## MEDICATIONS

Extra Strength Tylenol-8

Motrin-8

Diphenhydramine-4

Aloe Vera Gel ¼ oz

## BANDAGE MATERIALS

5x9 Sterile Trauma Pad (2)

4x4 Sterile Dressings (4)

2x2 Sterile Dressings (4)

3x4 Non-adherent Dressing (30)

Stockingnette Bandage

Swift Wrap Elastic Bandage 3"

Tape 1" x 10 yds

Strip & Knuckle Adhesive

Bandages (13)

Cotton Tipped Applicators (4)

## OTHER ESSENTIAL ITEMS

Crushproof Pill Vials (2)

Safety Pins (3)

Accident Report Form and

Pencil

**Wilderness Medical Associates**  
Emergency Training for Outdoor Professionals  
Wilderness First Responder~72 Hours~Course Fact Sheet

**•PREREQUISITE**

Students must be at least 16 years of age to participate in this course (16 and 17 year olds must have proof of parental consent).

**•CERTIFICATIONS AVAILABLE**

All students who successfully complete the WFR course will receive a certification card from Wilderness Medical Associates. Certification remains valid for three years. Within three years, graduates may recertify by way of a two day course.

Wilderness Medical Associates' WFR course meets or exceeds all requirements in the National First Responder curriculum. Requirements for certification vary from state to state, so students who successfully complete our course may be eligible for certification in their home state. Contact your state's Emergency Medical Services Office for information. BLS-CPR certification is also included. There are many different levels of CPR; WFR's must maintain a BLS-CPR certification.

**•CREDENTIALS**

Wilderness Medical Associates' WFR course is widely considered the most complete medical training for outdoor professionals. Our courses are preferred by such organizations as Outward Bound, The National Park Service, The Chesapeake Bay Foundation, many colleges and universities, and the FBI. As Canoe Magazine stated, "Wilderness Medical

Associates has become the de facto standard in wilderness medical training."

**•CLASS FORMAT**

72 hours, over 8 days. Days-off may be added.

Mornings are devoted to lectures and exams.

Afternoons are devoted to practical hands-on sessions and video taped simulations\*.

Evenings are reserved for study and assignments.

\* Expect two or three emergency rescue simulations with made-up victims and stage blood that will be video-taped for enhanced learning.

**•CONTENT**

Topics include patient assessment, body systems, equipment improvisation, trauma, environmental medicine, toxins, backcountry medicine, and wilderness rescue.

**•BRING**

Appropriate clothing for the location and time of year. Remember that, rain or shine, much of our time is spent outside. You will also need a sleeping bag, pens, and a notebook.

**•GRADES**

Grades are based on attendance (100% required), and performance on both written and practical final exams. Not everyone passes this course.

CONTACT INFO: (888) 945-3633; (207) 665-2707; 9-5 ET; 189 Dudley Road, Bryant Pond, ME 04219© Wilderness Medical Associates, 1996

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## WILDERNESS PROFESSIONAL TRAINING

Please note: All courses are significantly discounted for local residents and employees of Moab.

|  |                                  |                     |
|--|----------------------------------|---------------------|
| Wilderness First Responder:<br>80 hrs              | April 8-16, May 1-12, June 19-30 | \$450; locals \$325 |
| Standard Wilderness First Aid:<br>20 hrs           | April 22-23, June 1-2            | \$125; locals \$95  |
| Advanced Wilderness First Aid:<br>40 hrs           | April 3-6, May 23-26             | \$225; locals \$190 |
| Wilderness Medicine Instructor Training:<br>40 hrs | June 7-11                        |                     |

Contact: PO BOX 759 • 76 South Main Street, Suite 16 • Moab, Utah 84532  
Toll free: 877-536-0465 • Local Phone: 435-259-8749 • Fax: 303-285-3480 ext 2981  
Web: [www.wildtrain.com](http://www.wildtrain.com) E-mail: [info@wildtrain.com](mailto:info@wildtrain.com)



## Wilderness Medicine Institute

### •Wilderness First Aid (2 days - 16 hours)

Originally called Backcountry Medicine, SOLO's WFA course was first offered in 1975. Since that time thousands of trip leaders and outdoor enthusiasts have been certified at this level. Many organizations use this course to introduce first aid and long-term patient care to their staff or members. In addition, it is often used for recertification by those with previous WFR certification. Recognized by the American Camping Association, US Coast Guard, and various guides' licensing boards as meeting their first aid requirement. CPR is included in 2-1/2 day courses.

### •Wilderness First Responder (10 days - 80 hours)

Created to provide outdoor leaders, guides, rangers and counselors with the knowledge needed to deal with crises in remote settings, this 80-hour certification course meets all DOT national standards for First Responder with additional protocols for extended care situations. Like all SOLO programs, the emphasis of the WFR is on prevention and decision making.

### •Wilderness Emergency Medical Technician

This certification course is designed for outdoor leaders, search and rescue team members, backcountry rangers, rural ambulance attendants, and others who provide emergency care in remote settings. While fulfilling the 1994 DOT EMT requirements for certification, this 160-hour program significantly expands the required topics to address the issues involved in extended care and introduces backcountry rescue techniques. (20 days - 160 hours)

### •Wilderness Emergency Medical Technician Module

This Module, also known as an upgrade, combines wilderness/rural issues with applications of emergency care and rescue and is intended to upgrade EMT's to Wilderness EMT's (WEMT's). The curriculum is based on the NAEMSP Rural Committee's Guidelines and the Wilderness Medical Society's WPHEC curriculum. (5 days - 40 hours)

### •Wilderness First Responder Module (5 days - 40 hours)

### •Wilderness Trauma Life Support (3 days - 24 hours)

### •Advanced Leadership and Emergency Care (25 days - 200 hours)

Outdoor leaders need a balance of wilderness medicine and leadership skills along with prevention, survival and rescue training. Combining the emergency medicine necessary to deal with a medical emergency in the backcountry with the leadership skills that can so often prevent a medical emergency from occurring, ALEC fulfills the DOT FR curriculum as well as the SOLO WFR. The most experiential of our programs, ALEC offers general training in leadership skills like

communicating in a group, community living, decision-making, and problem-solving as well as specific training in backcountry navigation, dangerous environments, weather reading, bivouac, and minimum impact camping.

### •Wilderness First Responder Refresher Training (2 day -16 hours)

This two-day review is designed to recertify Wilderness First Responders and is open to graduates of SOLO, NOLS, WMI, and WMA WFR courses. CPR renewal should be completed before the course but may be available during a course with prior arrangements.

### Additionally, these are available:

- Wilderness EMT Recertification Training (4 days - 32 hours)
- Emergency Medical Technician - Basic (15 days - 120 hours)
- EMT Refresher Training (3 days - 24 hours)
- First Responder Refresher Training (2 days - 16 hours)
- Cardiopulmonary Resuscitation Programs (4 - 8 hours)
- EMT Continuing Medical Education Programs
- Pediatric Trauma (16 hours)
- Trauma Review Course (16 hours)
- Ski Patrol Review Course (16 hours)

### •Advanced Wilderness First Aid (4 days - 32 hours)

As a follow-up to Wilderness First Aid, the AWFA course provides not only more, in-depth information on topics already covered including medical and environmental emergencies but also presents new skills like improvising litters and litter-carrying techniques. More hands-on practice with greater emphasis on leadership is a key element.

Two day formats are taught as "Pt. II" with WFA as prerequisite. Four day formats are Pt. I and Pt. II.

- Up the Creek Without a Jumpkit (4 hours)
- Run for Cover: An Exploration of Bivouac (4 - 8 hours)
- Backcountry Rescue (2 days - 16 hours)
- Travel Medicine for the Adventurer (2 days - 16 hours)
- Wilderness Adventure Travel Advisory (3 days - 24 hours)
- Customized Staff Training

For additional information, call SOLO at (603)447-6711 or send email to: [solo@stonehearth.com](mailto:solo@stonehearth.com)

**WMI of NOLS in Moab, Ut**

**March 11- 19, 2000**

**CPRG Member Discount**

**<http://wmi.nols.edu>**

**WMI does come to moab so keep in touch if this is for you**

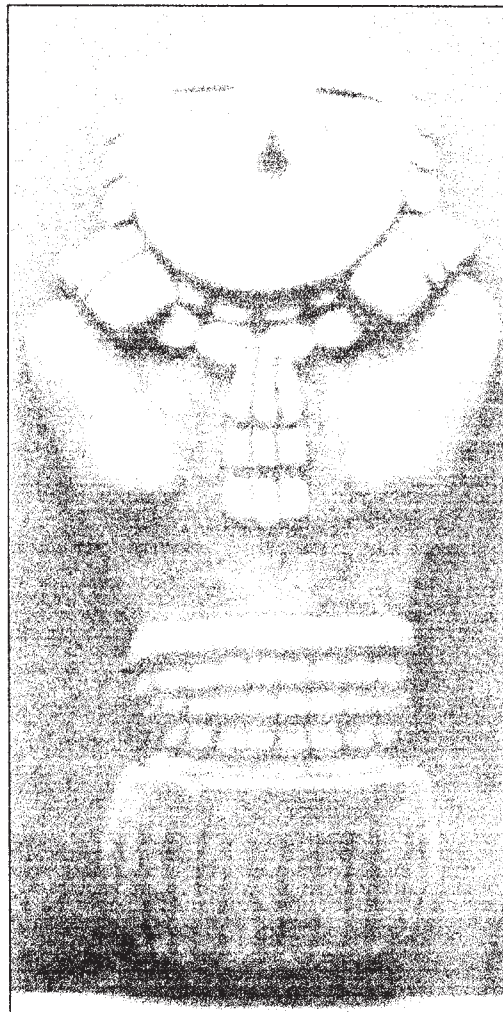
# The Pilling Figurines

These figurines were discovered in March 1950, by Clarence Pilling of Price, Utah in a small side canyon of Range Creek where he owned a ranch at that time. They have since been called in archeological circles, the "Pilling Figurines". The rock overhang where they were found is also known as Pilling's Cave and shelters an irregular area about 100 feet long with a maximum width of 12 feet, and contained, besides the eleven figurines on a natural shelf at the back, a ruined oval room about 10x6 which appears to have had a stone foundation and wooden superstructure, some of the poles of which showed evidence of stone tools. On the cave wall behind the room is a pictograph in white paint 3 ½ inches high of a trapezoid-shape figure. Other artifacts noted were a deeply troughed metate (grinding stone) and a single piece of gray pottery.

All of the figurines are made of unbaked clay and are decorated with applied clay ornaments showing remarkable skill and artistry. The late Noel Morss of the Peabody Museum of Harvard University, who had written, concerning the Pilling Figurines ("Clay Figurines of the American Southwest"), that they were all made by the same person and in pairs. He said, "It is remarkable that such delicate objects should have remained undisturbed and largely undamaged by humans, animals, or the elements, in such a location for the several centuries which have undoubtedly elapsed since their manufacture. "

The figurines, while still soft, were laid on the bottoms of baskets or trays as the imprints can be seen on the back of several of the specimens, and apparently they were intended to be viewed from the front only because the back usually does not contain decorations or ornaments. They range in size from four to six inches, and still show evidence of red, buff and black paint.

Morss further said: "The sexes are clearly distinguished in both anatomy and dress. The females have breasts and wide hips and wear aprons. The men wear breechclouts, except for one, which has a sort of kilt. The women dress their hair in heavy bobs, bound with cord, hanging down over the shoulders... the necklace and belt employ pear shaped



pendants, pierced near the upper end, or disc-shaped objects with a hole for attachment near the edge, rather than in the center. Above and below the eyes, which are formed by transverse slits, are usually present painted stripes."

Morss had numbered and paired the figurines

according to sex, color variation in painting, etc. There is one female (#1) whose mate may have been lost or destroyed. Morss dated the Pilling Figurines as probably having been made in the 11<sup>th</sup> century, which means they are in the neighborhood of 800 or 900 years of age.

The Pilling Figurines are considered in archeological literature to excel, both in beauty and technical construction, any other like find of comparative age in the American Southwest. They have been sought by many outstanding museums of this country, and the College of Eastern Utah Prehistoric Museum of Price, Utah, is indeed grateful to Mr. Clarence Pilling and the BLM for exhibition of the figurines.

Pamphlet from the College of Eastern Utah Prehistoric Museum, Price, Utah.

# Rules and Regulations Regarding Rock, Mineral, and Fossil Collecting in Utah

by Geologic Service Staff Utah Geological Survey, revised April 1996

Utah's rock, mineral and fossil collectors must adhere to rules and regulations established by owners of the lands on which they wish to collect. Prior to collecting, rockhounds should determine ownership of the lands they intend to visit and familiarize themselves with the regulations that apply to collecting on those lands. Site-specific land-ownership maps may be consulted at the recorder's office in the county in which you intend to collect. Utah's lands are managed by the federal government (Bureau of Land Management, U.S. Forest Service, National Park Service, or the Bureau of Indian Affairs), state government (School and Institutional Trust Lands Administration), and private owners (including local governments). Rockhounding permits are required to collect on some government lands, and permission is required to collect on private lands.

## FEDERAL LANDS

About 67 percent of Utah's lands are managed by the federal government. Most of this land is open to collection except for National Parks, National Monuments, Indian Reservation, military reservation, dam sites, wildlife refuges, and wilderness areas.

*Bureau of Land Management (BLM) Lands:* The casual collector may take small amounts of petrified wood, invertebrate and plant fossils, gemstones, and rocks from unrestricted federal lands in Utah without obtaining a special permit if collection is for

personal use, non-commercial purposes. Collection in large quantities or for commercial purposes requires a permit, lease, or license from the BLM.

Collectors of petrified wood on BLM land are subject to slightly different rules. Collecting for personal use has a maximum limit of 25 pounds plus one piece per day but cannot exceed more than 250 pounds per calendar year. Use of explosives and/or power equipment is forbidden. Collectors wishing to resell their petrified wood specimens must apply for a permit.

*National Parks and Native American Lands:* Collecting on these lands is prohibited.

*U.S. Forest Service Lands:* Rock, mineral, and fossil collecting on lands managed by the U.S. Forest Service requires a permit. Although collecting is allowed in most districts and permits are free, collecting rules vary among districts. Seek the rules to avoid penalties.

## STATE LANDS

Most state-owned property is managed by the School and Institutional Trust Lands Administration (Trust Lands) and a Rockhounding Permit is required to collect on these lands. A fee is charged for the annual permit. Rockhounds may collect up to 25 pounds plus one piece per person per day, up to a maximum of 250 pounds per year. Collectors cannot operate in state or local parks.

To remove rock, mineral, or fossil specimens from state lands, commercial collectors must also follow specific regulations, and apply for mineral leases. Materials such as building stone, limestone, gemstones and volcanic materials are commonly collected by amateur collectors with permits but require leases for commercial collectors. Obtain permits from: State Lands @ 355 W. North Temple 3 Triad Center Suite 400, Salt Lake City, UT 84180-1204 (801-538-5508).

## PRIVATE LANDS

To collect you must have permission from the land owner prior to entering the property.

NOTE: Dinosaur and other vertebrate fossils may not be collected in any instance except by permits issued to accredited institutions. For more information, contact Paleontology and Paleoecology program, Utah Geological Survey, 1594 W. North Temple, Salt Lake City, UT 84114-6100.

## SAFETY TIPS

Rockhounding can be a potentially dangerous hobby. To minimize the risk of injury, please remember . . .

- Wear protective clothing (safety glasses, gloves, boots).
- Do not work alone, and let someone else know your schedule.
- Carry a first aid kit.
- Watch for others, and when on slopes, never work directly above or below anyone.
- Do not enter abandoned mines or shafts.



## WESTWATER CANYON ALONG THE COLORADO RIVER PROTECTED FROM GOLD MINING MINING COMPANY PULLS OUT AS PART OF LAWSUIT SETTLEMENT

Date: Tuesday, 23 Mar 1999 11:55:41 EST

**Greg Trainor, Skip Edwards, Roger Flynn; Friends of Westwater, Friends of Westwater Western Mining**

**G**rand Junction, Colorado: March 22, 1999: Pursuant to this week's settlement of a lawsuit brought by the U.S. Department of Justice against a mining company, spectacular Westwater Canyon along the Colorado River will be protected from gold mining. This settlement is a triumph for Friends of Westwater Canyon, a Grand Junction Colorado-based river conservation group, which succeeded in its four year effort to halt on-going gold placer mining activities inside of the Westwater Canyon Wilderness Study Area.

The United States Department of Justice, after filing a lawsuit in federal district court in Salt Lake City against Pene Mining Company of Grand Junction in late 1998, announced that it had settled its claims against Pene Mining for trespass, non-compliance with environmental regulations, and on-going impairment of a wilderness study area. The settlement includes the relinquishment of all placer and lode mining claims within the WSA and the immediate removal of mining equipment, backhoe, and trailers. Reclamation of disturbed lands will become the responsibility of the BLM.

Upon hearing the news from its legal counsel, the Western Mining Action Project of Boulder, Colorado, Friends of Westwater President, Greg Trainor, thanked all of those who contributed their time and

their money to support this effort. Trainor said: "We could not have done this without the support of the Utah Guides and Outfitters, the Southern Utah Wilderness Alliance, Colorado boaters and outfitter organizations, the Mineral Policy Center, and a host of individuals who contributed to save a very special place." Trainor continued: " This is a great victory for a true grassroots organization."

The settlement also closed a long standing dispute over the legality of the mining claims held by Pene Mining. In 1998 the Department of Interior issued a separate complaint against Pene Mining declaring the mining claims invalid. Friends of Westwater and the Southern Utah Wilderness Alliance were parties to that case. This case, pending before an Administrative Law Judge in Salt Lake City, was filed after a lengthy mineral validity exam concluded there was no economic mineralization at Westwater. Earlier the Interior Department had withdrawn the Westwater WSA from mineral entry for 50 years. The relinquishment of the claims will moot the claims dispute since there are no more mining claims in the area that has been withdrawn from new claims.

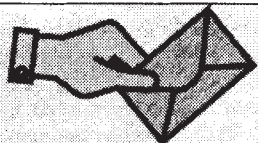
The battle regarding Westwater Canyon is not over. Westwater Canyon WSA, part of the Citizens Proposal for Wilderness in Utah and an area

recommended by the BLM for wilderness, needs to be officially protected. Until that happens, the Friends of Westwater will be working to help the Utah Wilderness Coalition and the Southern Utah Wilderness Alliance to achieve its goals in Utah.

Trainor concluded: "FOW is not against mining, per se. It is against mining when conducted in the wrong places, in the wrong way, and without adequate oversight. The fact that mined land reclamation and environmental repair remains for the public to complete at Westwater is one of the problems with the Mining Law of 1872 and the administration of our public lands."

"It was a shame that the federal government was forced to spend resources and money in their multi-year effort to remove uneconomic and illegal mining," noted Roger Flynn, attorney with the Western Mining Action Project in Boulder, Colorado, which represents Friends of Westwater. "However, the BLM should be applauded for recognizing that some places such as Westwater Canyon are more precious than gold. Unfortunately, the 1872 Mining Law which allowed the filing of the mining claims in the first place is still on the books and continues to hold other special places around the West hostage."

WORLD  
OF  
ADVENTURE



# LETTERS TO THE EDITORS

Moab

## Thanks to the people of Moab

Dear Editor,

On Thursday, October 7, 1999, you ran a news article about an unidentified, 29 year old man who drowned in a rafting accident in Westwater Canyon's "Room of Doom." That man was my son Max Christopher Turner. The other people in the raft were myself, Max's 19 year old brother Doug, a friend of mine and Max's roommate. Needless to say the horror of that heinous afternoon will be with us forever.

While not an expert group of rafters, we were fairly experienced. We had run Westwater Canyon together for the last three years and we have done several other river trips including "Gates of Ladore" and the main portion of the Salmon River in Idaho. We are also a safe group. We had all of the required safety equipment with us on the raft and we were not behaving recklessly. What happened to my son was a terrible "freak" accident. The moment our raft flipped there was nothing anyone present could do to save his life. Max was a large, strong man and due to this he held on longer than anyone thought possible. In the end, hypothermia set in and, being exhausted to his limit, he no longer was able to continue his valiant struggle to live. After nearly an hour he finally let go bravely and I believe peacefully.

Max was a wonderful and accomplished human being. He graduated from the University of Utah and had a Master's Degree from Arizona State University. He was employed as an environmental engineer. At the time of his death he was working on the environmental impact study for the development of the east side of the Jordanelle Dam in Heber, Utah. He was also doing a noise study for a wilderness area in northern Idaho. Max was an avid skier, volleyball player, back packer and participant in the Moab Half Marathon. He just thoroughly enjoyed all time spent on outdoor activities. He was extremely loving and always conscious of spending time with his family and friends. Max was also a big brother, to a twelve year old boy, with the Big Brothers/Big Sister Organization. He was always the one organizing gatherings so he could spend time with the people he cared about.

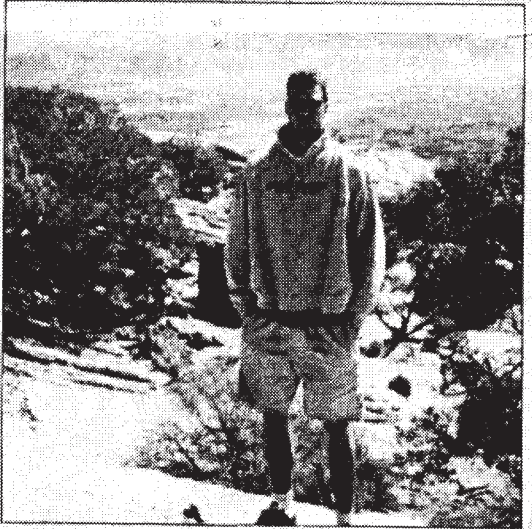
Max's body was not found until November 6, 1999. During the time when he could not be located our family nearly collapsed from grief. One of the steadfast, helping factors that got us through this nightmare was the town and citizens of Moab. You should be proud of the way your community comes together when people are in need. I would like to extend special thanks to the following: Bowen's Motel for putting us up on a moment's notice for many nights without charge.

Ted Cooley at the Mondo coffee shop for having free sandwiches ready early every morning we went out to the river to wait for the searchers. Eddie McStiff's for free dinner. Unfortunately I cannot remember the name of the photo shop that, free of charge, carefully dried out our film, developed and made enlargements of pictures taken of Max two hours before he died. Those pictures are the most precious possessions I have. I must also thank Sheriff Nyland for his kindness in handling the search and his respectful, fragile treatment of our family. Frank from the search and rescue did everything possible to retrieve Max's body and organized an expert search. Steve Swanke, Marc Yeston, Alyssa VanSchmus, Mike Hill and Chad, rangers from Canyonlands National Park Service, have my lifelong gratitude for their tenderness, respect for my family and their many repeated trips up the river to look for my beautiful son. Last, but not least, I would like to extend my heartfelt gratitude to the kayakers who risked their own lives to save Max, and who stayed with his little brother and myself throughout the cold night, on the river, until we were rescued the next morning.

Painful memories may make it impossible for me to return to Westwater Canyon or Moab, at least in the near future. But, I will always have fond thoughts for the little town that was there for Max's family and friends during their time of need. You will not be forgotten. I cannot thank you enough.

Sincerely,

—Danielle Benson  
Bountiful, Utah



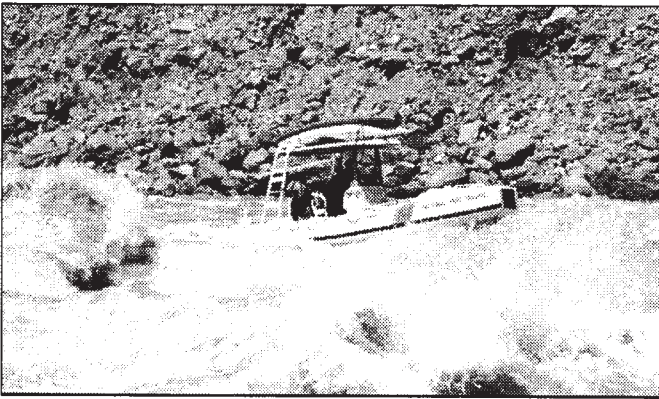
Max Turner, shown here on the day of the Moab Half Marathon in March of this year.



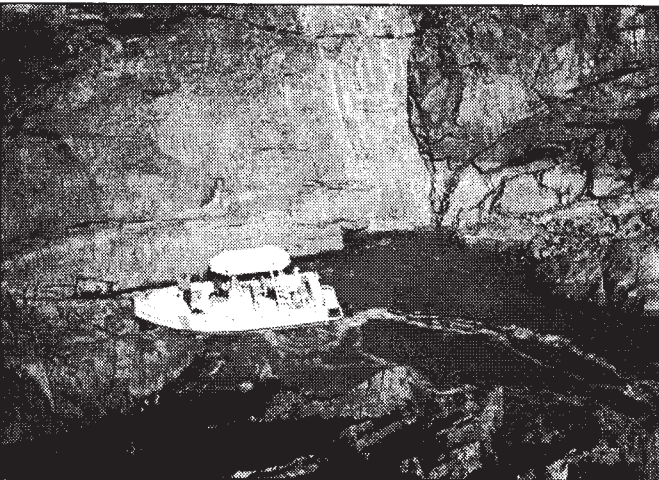
# Park Service Replaces Zodiac with a Custom Whitewater Rescue Jet Boat



Park Service operates a jet boat named in honor of Kent Frost.



On 6/17/99 The USNPS Frost upruns the Big Drops. Seen here at Big Drop 2. Operated by Mike Hill.



The Frost in the Room of Doom of Westwater Canyon. Joining Grand County Search and Rescue efforts to locate Max Turner.

This acquisition serves to replace the 19 ft. Zodiac "inflatable" motorboat that has been the trademark of the River District of Canyonlands National Park. The USNPS Frost is a 24 ft Rigid Hull Inflatable Boat (rhIB). It is constructed of aluminum with a rigid foam collar. The Frost's propulsion is a Hamilton 291Jet that is powered by a Mercury Marine 502 V-8.

The boat's transom is hinged to provide decks that lower at the rear to easily retrieve a person in a rescue operation, or to instantly bail the boat in a rough, whitewater environment. The gunnels were designed lower than normal to also facilitate retrieving swimmers over the side. Another feature of the Frost is the windshield, top and rear arch all remove in one piece to lighten the boat a couple of hundred pounds and give the boat a more stable profile in floodwater Cataract Canyon. With the top on the boat it is able to carry a payload safely and with remarkable stability. The boat's design has a solid foam collar covered with neoprene fabric that was fabricated by Demaree Inflatable Boats. This serves as a fender and added buoyancy.

This craft was created as a whitewater rescue/work boat. Technologies were combined from ocean-going rescue boats (rhIB), and whitewater boats to create this unique hybrid adapted for use in the rivers of our region, primarily the Green and Colorado Rivers and Lake Powell, providing service in extremes of a shallow river to the floodwaters of Cataract Canyon.

The boat is outfitted with a full EMT kit, two backboards, technical rope rescue equipment, reach poles, throw floats, and drinking water. To keep the boat functioning through minor mechanical difficulties, tools, spare parts and fluids are on board, and if that fails there is a small outboard motor that can be mounted on the stern, so the boat can "self rescue" to shore.

In the spirit of multi-agency cooperation, the NPS with the FROST assisted Grand County Search and Rescue in Westwater Canyon. The Frost, operated by Ranger Steve Swanke was able to rescue 9 boaters and four kayaks from just below Skull Rapid in one trip.

MetalCraft Marine of Kingston, Ontario Canada, fabricated the boat. This is one of the many custom boats they have manufactured for the NPS. Ranger Mike Hill of Canyonlands National Park conceived the overall design concept. He, working with the NPS Regional Equipment Specialist and the team at Metal-Craft Marine (naval architect, designers, operators, and fabricators) came up with this unique craft.



## **Fifty Years of Opposition to Glen Canyon Dam**

By Mathew Barrett Gross

In November of 1996, when David Brower convinced the Sierra Club's Board of Directors to endorse the draining of Powell Reservoir, an idea that had previously been held by a relatively select group of river runners, environmentalists, and Edward Abbey fans was hoisted on the American public. That same year had seen the founding of the Glen Canyon Institute, and, less than a year later, hearings were held in the U.S. House of Representatives on the merits of the Sierra Club's proposal. To those unfamiliar with the controversy that surrounds Glen Canyon Dam, the proposal may well have seemed to come from nowhere. In fact, however, the Sierra Club's proposal, the founding of Glen Canyon Institute, and the recent formation of the Glen Canyon Action Network are but chapters in a longer story of opposition to the inundation of Glen Canyon.

Although Glen Canyon was first suggested as a dam site in 1919 by E.C. LaRue, Chief Hydrologist of the U.S. Geological Survey, it wasn't until the introduction of the Colorado River Storage Project (CRSP) legislation in 1949 that the likelihood of a dam in Glen Canyon became serious enough to warrant organized opposition. In 1954, a group of environmentalists in Utah, led by Ken Sleight, formed the Friends of Glen Canyon, whose objective was to revive a near-forgotten 1938 proposal for a 4.5 million acre national monument that would encompass Glen Canyon and much of the Escalante region.

Friends of Glen Canyon failed, obviously, to reach their objective, and their failure was as much a result of loose organization as it was a result of being drowned out by the famed battle for Echo Park. When first introduced in Congress, the Colorado River Storage Project legislation contained provisions to build a dam at Echo Park, in Dinosaur National Monument (as well as at Glen Canyon, Flaming Gorge, and Bridge Canyon). It was the proposal to build a dam inside a unit of the National Park System, however, that sparked a national debate. For six years, the Sierra Club, the Wilderness Society, and a coalition of nearly seventy environmental groups from around the nation worked to defeat the Echo Park proposal, and they eventually won. The success of the battle to save Echo Park was galvanizing-- historians mark the Echo Park debate as the birth of the modern environmental movement in the United States.

It should be noted, however, that there was never a "trade" of Echo Park for Glen Canyon. Glen Canyon was always in the CRSP legislation, and the objective of the Sierra Club and its coalition during the CRSP debate was the protection of the integrity of the park system. When the CRSP was passed by a slim Congressional majority on March 1, 1956, the Echo Park dam proposal was gone

from the CRSP; the Sierra Club had also won a proviso in the CRSP for a dam to be built to protect Rainbow Bridge National Monument, which was in danger of being encroached upon by the rising waters behind Glen Canyon Dam. Thus, at least publicly, the Sierra Club never relented on its main objective of protecting the national park system.

Having achieved victory at Echo Park, however, it soon became clear to many that Glen Canyon, though not a part of the park system, was a place of undeniable beauty, worthy of protection in its own right. Among those who came to this realization was David Brower, then-Executive Director of the Sierra Club, who felt a sense of personal responsibility for the Glen's loss.

The 1960's were a time of anguish for those who knew and loved the Glen before the dam, but, by the end of the decade, that anguish had given way to anger. In 1970, Friends of the Earth and Ken Sleight sued the federal government for allowing the waters of the reservoir to enter nearby Rainbow Bridge National Monument, in violation of the CRSP. The District court sided with the environmentalists, but the decision was reversed by the Tenth Circuit Court of Appeals. Sleight and Friends of the Earth appealed to the U.S. Supreme Court, but the court refused to hear the case, and the water rose into Rainbow Bridge National Monument.

1975 saw the publication of Edward Abbey's *The Monkey Wrench Gang*, a novel that (arguably) introduced a new generation of outdoor enthusiasts to what was lost behind the dam. Many observers have pointed to the novel as influential in the formation of the environmental group Earth First!, and thus it is appropriate, given the focus of the novel upon the destruction of Glen Canyon Dam, that Earth First! launched itself into the headlines by unfurling a three-hundred foot plastic "crack" along the front of the dam in 1981.

Like many Earth First! actions, "cracking" the dam was both creative and confrontational. By 1997, however, the movement to drain Powell Reservoir, led by the Glen Canyon Institute, had advanced beyond theatrics and into the realm of hard science. Currently, the Institute is conducting a Citizen's Environmental Analysis, based on NEPA guidelines, to study the effects of draining Powell Reservoir. Concurrently, the newly-formed Glen Canyon Action Network is working to build grassroots support for the restoration of Glen Canyon. Thus the movement to drain Lake Powell is alive and well, and, forty-six years after the formation of Ken Sleight's ragtag group, Glen Canyon still has its share of friends.

# GLEN CANYON ACTION NETWORK

## MEDIA ADVISORY

For Immediate Release Contact: Owen Lammers

February 11, 2000 (435) 259-1063

### **Technical, Economic and Legal Hurdles to Draining Lake Powell not Insurmountable, but Politics Could be, New Analysis Reveals**

The Stanford Environmental Law Journal recently published an 88-page analysis of the Sierra Club's 1996 proposal to restore Glen Canyon on the Colorado River by draining Lake Powell reservoir.

The extensively researched analysis titled, "Undamming Glen Canyon: Lunacy, Rationality, or Prophecy" was written by Scott Miller, an attorney with the Office of the Solicitor General, U.S. Department of the Interior. Mr. Miller examined: existing laws pertaining to the management of the Colorado River; technical and economic issues pertaining to anticipated impacts on water storage and energy supply; and the variety of impacts associated with changes in the recreational uses within Glen Canyon. Some key findings are excerpted below.

**LAW OF THE RIVER:** If we take a close look at the [Sierra Club] proposal, we may find that there is flexibility still hidden in the rigid Law of the River. We may also find crucial benefits to making the Law of the River itself more flexible.

**WATER:** Practically speaking, the effects of draining Lake Powell on water availability are surprisingly minimal, though not altogether absent. Politically speaking, however, effects on water use are the most difficult

problem facing the Sierra Club's proposal.

**POWER:** Although Glen Canyon's raw generating capacity of 1,300 MW is impressive, it is not irreplaceable. ... Furthermore, there is currently significant surplus of power in the Colorado Plateau region, so there would be a significant amount of time to find alternative sources of raw power. By the time additional sources of power are needed the life-span of Glen Canyon Dam's powerplant may be considerably reduced; in a few hundred years, accumulated sediments will completely eliminate power production from Glen Canyon Dam.

**RECREATION:** Perhaps the most fundamental question concerning recreation, however, is how much recreation do we really want on Lake Powell and in the Grand Canyon? ... The two-and-a-half million visitors to Lake Powell leave an extraordinary amount of trash on the beaches and on the lake. Along Lake Powell's 2,000 miles of coastline there are only forty-six restrooms. Fouled by human waste, beaches along the lake are periodically closed. Visitors consume about five million gallons of gas on their Lake Powell vacations each year. ... Perhaps present recreation should be limited in any case. Doing so might also limit any

costs of draining Lake Powell."

**ENVIRONMENT:** In sum, environmental costs and benefits associated with draining Lake Powell are presently unclear. Here, perhaps more than any other issue, our current knowledge is severely insufficient to accurately evaluate the consequences. At the same time, the [Colorado] Plateau's native fishes, the Sea of Cortez's vaquita and totoaba, and the delta itself may not wait for decades of study.

**CONCLUSIONS:** This preliminary analysis of water, power, recreation, and the environment reveals that some of the common assumptions about the importance of Glen Canyon Dam and Lake Powell may not be accurate. Even so, analysis has its limitations. There are values involved that simply cannot be balanced with dollars or any other economic valuations. ... Just look to the Florida Everglades, where the federal and state governments have already spent \$3.5 billion and plan to dedicate nearly \$8 billion more to habitat restoration, or the Columbia River where \$3 billion already has been spent trying [to] save and restore the salmon and steelhead.

"Although preliminary, Miller's analysis represents the best compilation of facts to date

concerning the proposal to drain Lake Powell. The barriers to a restored Glen Canyon are not so much technical or economic, as political. It was politics that inundated Glen Canyon, and it will be a people's movement that will bring about its restoration," said Owen Lammers, Executive Director of the Glen Canyon Action Network, the Colorado River advocacy group based in Moab, Utah.

"This analysis helps to further awaken the public to the potential of reviving the declining

ecosystems in the Grand Canyon," said Lisa Force, of the Tucson-based Center for Biological Diversity, the nation's leading advocate on behalf of endangered species. "The more people who become aware that the Grand Canyon is itself endangered by Glen Canyon Dam, the sooner the dam's decommissioning will become a reality."

Although Mr. Miller is in the employ of the Interior Department, the analysis is his own, and in no way represents

any official government position on the future of Glen Canyon Dam. The Stanford Environmental Law Journal also published a foreword by Dr. Richard Ingebretsen, President of the Glen Canyon Institute, based in Flagstaff, Arizona.

Copies of the analysis are available from GCAN at (435)259-1063, or through the fulfillment office of the Stanford Environmental Law Journal (650)725-0183. To obtain contact information for the author, Scott Miller, contact GCAN.

≈ **Glen Canyon Action Network** ≈ **People for the Integrity of the Colorado River** ≈

P.O. Box 466 ♥ Moab, UT 84532 (21 N. Main St.) ♥ Tel: 435.259.1063 ♥ Fax: 435.259.7612  
email: [info@drainit.org](mailto:info@drainit.org) <<http://www.drainit.org/>>

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### ***Tampa Tribune, January 15, 2000 • Indians get back their land • Associated Press***

The government is returning 84,000 acres to the Northern Ute tribe as part of a deal to clean up millions of tons of uranium waste along the Colorado River.

Energy Secretary Bill Richardson announced the agreement Friday at the tribe's

headquarters in Fort Duchesne.

The deal, which the Energy Department called the largest return of Indian land in the Lower 48 states in a century, is subject to approval by Congress.

The land, which is believed to contain oil rich shale deposits, was

given to the Utes in 1882. On the eve of entering World War I in 1916, the federal government took it back to create a reserve supply of oil for the Navy fleet. The reserve was never tapped.

"The land is not needed for national security anymore," Richardson said. "The

right thing to do is return it. The Utes are the rightful owners."

Under the agreement, the Indians can open the land to oil and gas drilling. They will have to pay a percentage of the royalties to the government.

### ***Tampa Tribune, January 7, 2000 • Desert to become treasure • Associated Press***

More than 1,500 square miles of soaring, red-hued cliffs, desert dotted with squat juniper and pinon trees and plunging, rocky canyons of intermittent streams that feed the Colorado River. That's the proposed Grand Canyon-Parashant national Monument.

President Clinton is poised to give new federal protection to this area and two others in Arizona and California. Arizona officials are trying to block the President's move.

"If Clinton is interested in public opinion that process is

underway. The land in question already belongs to the federal government. A monument designation would prohibit mining and could include other restrictions, such as limits on off-road vehicle use," said assistant to

chief of staff Arizona representative Stump.

"By proclaiming these areas as monuments, Clinton is making sure these national treasures are protected not only now, but most importantly for future generations," said Southwest Forest



Continued from the previous page **Tampa Tribune, January 7, 2000**

Alliance in Flagstaff, AZ. Grand Canyon – expand Pinnacles is being done for political purposes and does not like the dictates from Washington.  
Interior Secretary Parashant, they are Agua National Monument.  
Bruce Babbitt Fria north of Pheonix and Arizona Govenor  
recommended three California Coastal. It wrote to Clinton urging  
possible new monuments was also suggested to him to forego these  
to Clinton. Other than endeavors. She thinks it

### **The Times Independent, March 2, 2000 ~ Southern Utah News**

Kanab—The Kanab City Council is encouraging its citizens to attend a rally in Page, AZ for the preservation of Lake Powell. The City of Page is asking for support form surrounding communities, by a show of attendance, from individuals and groups who desire to maintain the popular recreation area. The city also reported that an estimated 5,000 people in support of draining the lake will also be at the March 14th rally. The mayor of Kanab has designated a coordination effort to support the people of Page and Lake Powell.

### **Gunnison River, Colorado**

Here's a drainage feeding the Colorado River in the vicinity of Grand Junction. The Gunnison begins where the Taylor and East Rivers join, being fed by tributaries out of the Continental Divide, the Sawatch Range, and the Elk and San Juan Mountains. The Gunnison was once channeled by UnawEEP Canyon. While the floor of the Gunnison River remained the same altitude the Uncompahgre Uplift rose two miles causing the river to sweep the strata downstream to the Colorado River and the Colorado in turn to carry that sediment downstream.

The first known visitors were on foot wanting to find a way to install a diversion tunnel in 1901. By 1909 a six mile tunnel carried 300,000 acre feet from the Gunnison to the Uncompahgre Valley. As far as the first river runners go... the first folks used the mechanical advantage of ropes and climbing technology to portage. The blocks of rock choking the Gunnison River were and are enormous portages in Black Canyon. The rate of descent of the river troubles experts today and the difficulty of access makes rescue arduous . . . plus.

Here the geology is changed from the familiar deposits of the Colorado Plateau. The Kayenta Formation is missing atop the Wingate as is the softer Chinle below. Since the erodable Chinle is not present the river could not carry away sediment to widen the entrenchment. And with the absence of the Kayenta the combination of the Entrada on the Wingate creates an even taller cliff than we are accustomed to viewing while floating along. The Black Rock of the Uncompahgre Complex is just underground further fortifying the exasperation of erosional forces in the Gunnison River region.

Upstream are three dams. Crystal Reservoir has flooded Cimmaron to the East Portal of Black Canyon National Monument in 1970. The other two, Morrow Point and Blue Mesa Reservoirs were installed further upstream some years before Crystal. In 1980 the Chevron Corporation donated 300 cfs to the Nature Conservancy. It's a gift that is the first of it's kind in Western Water politics. The Nature Conservancy plans to keep it in the river to help instream flows. That 300 cfs is worth millions of dollars.

The river and community received their name from Lieutenant John Gunnison. He surveyed the area in 1853 to report the feasibility of a railroad across the Rockie Mountains. He stayed clear of the abyssal, 50 mile long gorge, the Black Canyon of the Gunnison. The schist is of the Uncompahgre Complex. The rim is no more than 350' across in this chasm while the river is a mere 40' wide at it's shores. Here the walls lift from 200' to 2000'.

Downstream are calmer waters, lazing past Dominguez and Escalante Canyons, named after 1716 Spanish explorers by the USGS Hayden party in 1875. Irrigation dams and bridges lay across the lower stretch presenting dangerous impediments to the unaware. This stretch is controlled by the Montrose office of the Bureau of Land Management. There is a proposed Dominguez Project to dam and create a hydro-power plant a short way above the community of Whitewater, Colorado. U.S. Fish and Wildlife report Colorado Pike Minnow (previously known as Colorado Squaw Fish) reside in this area.

## **Fruita Refinery**

I hope this information is helpful. This project has developed into a difficult ambition but if successful worth the labor. I maintain volumes of information on soil, vegetation, wildlife, geology, seismicity, aquatic ecology, meteorology and air quality (etc.). If you have additional questions please call. Thanks JJS

The purpose of this letter is to provide a brief overview regarding the history behind the Fruita Refinery and future goals for property usage.

The Fruita Refinery is located at 1493 Colorado State Highway 6 & 50 in Fruita, Colorado. The site is in a rural setting approximately 2 miles west of Fruita and 15 miles east of the Utah/Colorado Border. The facility operated in various capacities from 1957 through 1996. As is typical with facilities of this type various compounds were stored, processed, generated, and disposed on site.

Between 1957 and 1973 the refinery processed Gilsonite (an oil-bearing mineral) into liquid products and petroleum coke. In 1973 Sam Gary of Gary Energy purchased the facility and operated the refinery as the Gary Refinery Company. In 1985 the Gary Refinery Company filed for Chapter 11 bankruptcy and the facility was decommissioned. In response to the oil shale boom, the plant was re-opened in 1989 by the Western Slope refining Company and utilized contracts with Unocal to purchase shale-oil derived syncrude from the Unocal Plant in Parachute Creek, Colorado. As international pressures in 1990 made the refining of oil shale uneconomical, the facility was again shut down.

In January 1991, the facility began operations as Landmark Petroleum (Landmark); and subsequently closed in 1996 due to lack of an economical feed source. On July 1, 1996, Fruita Marketing and Management, Inc. entered into an agreement whereby FMM purchased from Landmark all of the Refinery assets and real property. Had this agreement not transpired, it is probable that the site would be largely unusable for decades. The FMM goal is to work together with Mesa County and key environmental agencies so that the site can be returned to a combination of uses, predominantly industrial.

### Environmental Liabilities

As the owner of the real property and fixed assets, FMM has assumed liability for environmental compliance at the site. Consequently, Mesa environmental, Inc. (MEI), was contracted by FMM to establish a schedule of tasks for environmental assessment of the Refinery. Completion of these tasks is a prerequisite to a Landmark Order on Consent developed by MEI and the CDPHE for FMM and will establish the extent of impact as well as determine the criteria for remediation.

To initiate the development of the Order on Consent, MEI developed a Ground-Water Characterization Work Plan of phased assessment tasks and a schedule for these tasks. This work plan specifies the methods, strategies and techniques to be employed to develop an understanding of the nature and extent of impacted ground water at the Refinery and outlines the phased approach designed to achieve this goal.

### Mesa County Delinquent taxes

Landmark Petroleum, Inc. Owned and operated the Refinery from 1990 to 1996. Landmark assets, which are personal property, are subject to delinquent property taxes. The assets had been subject to distraint against the distrainted property.

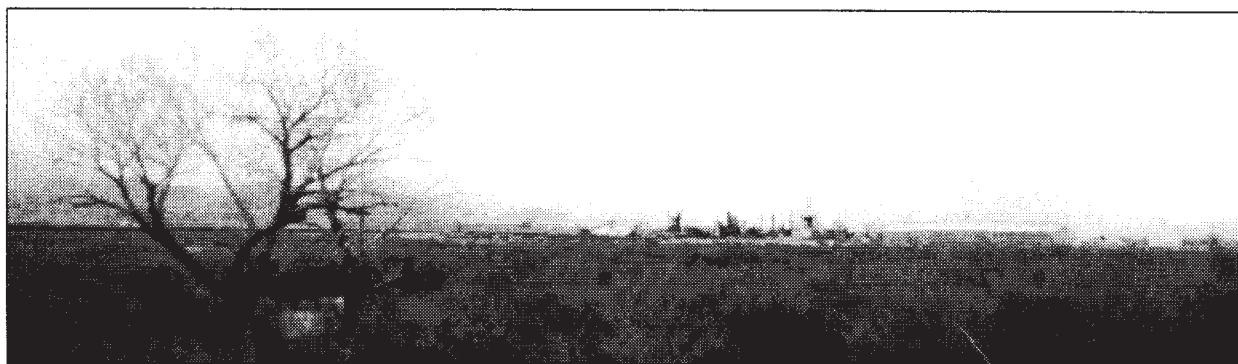
FMM, the Mesa County assessor and the Mesa County Treasurer proposed to enter into an agreement a mechanism for the solution of the above-mentioned property tax assessment. This involved the conveyance of river frontage property (approximately 88 acres) to the Colorado Department of Natural Resources. The goal, to develop a non-industrial opportunity for the proposed Fruita-Kokopelli Greenway Plan. This plan envisions a continuous trail along the Colorado River from Fruita to Loma (boat ramp) for use as hiking, mountain biking and horseback riding trail. The proposed property transfer of the 88 acres would become part of the trail traversing the southern edge of the Refinery property. It is the preferred route of the Bureau of Land Management, National Park Services and U.S. Fish and Wildlife Services. The Greenway Trail would provide a buffer between the Refinery and the Colorado River to the south and would be a positive influence on how the area is perceived.

### Development of the Site

FMM has developed a marketing plan that would encompass marketing and dismantling of the personal assets. Certain portions of the site could be reconfigured to operate as an Industrial Development. All of these uses could result in Fruita, Mesa County and Colorado benefitting from an expansion of industry thus increasing the property tax base and available jobs in the Valley. Although the facility will never be operated as in the past, parts can be used by environmentally sound businesses.

Prior to FMM and MEI's voluntary undertaking of the responsibilities discussed, no solution seemed evident. Neither FMM nor MEI had any previous participation with the Refinery operation, including spills, violations, non-compliance issues or environmental impact at the site. Following the October 1993 closure of the Refinery, FMM has played an active role in coordinating and complying with issues created by prior ownership. Since FMM's involvement with the Refinery, there has been continued cooperation between the involved organizations. Results include the recovery and recycling of 10,000 bbls of crude spilled during refining operations; characterization, consolidation and disposal of waste generated by prior operators; and the excavation of 15,000 yd. of impacted soil which created a hazard to migratory waterfowl. In addition significant advancements have been made in objectives previously discussed in the letter.

I hope this helps you to understand our situation.  
Yours truly  
James J. Stemrich



The Refinery as seen from Highway 70 just east of the Loma exit



# GEOLOGY: HOW THE SOUTHWEST BEGAN

Driving through the Western states of Colorado, Utah and Nevada is like passing through a vast geological museum whose exhibits are the rocks, plateaus, mountains, deserts and canyons dating back more than 300 million years. They are in effect a living museum, since the earth-shaping processes they represent are continuing even today, though so imperceptibly they go unnoticed when measured against the span of a human lifetime.

At almost every bend of the road, you'll see examples of the many processes: the uplifted, faultblock backbone of middle America we call the Rocky Mountains; rocks in places like Utah's Zion and Bryce Canyon National Parks, that were sculpted into a thousand bizarre shapes and sizes by centuries of erosive wind and water; canyons gnawed deep and wide by rivers; peaks thrust skyward by volcanism; valleys carved by the glacier giants of the Ice Age.

Much of the evidence of this earth building is seen in national parks and monuments of the West. If geology interests you, most park visitor centers have

special exhibits and displays on the subject.

You may want to purchase a few basic books and booklets which are also available in the parks. In addition, rangers are well versed on geologic history, and will be happy to answer questions you have. Geology can be complicated, but how it applies in the Rocky Mountain West can be divided into five or six simple "chapters," each spanning millions of years.

More than 300 million years ago, most of the West was covered by a vast, shallow sea, its surface broken only by a few hills and low lying plains. Wind and water gradually wore down some of these peaks, but another group of mountains, known as the Ancestral Rockies began to rise from the same sea in a chain that extended from Wyoming to Texas. About 230 million years ago, the eastern floor of the sea was tilted by gigantic forces within the earth. The climate became tropical in nature, and dinosaurs flourished. Although the soft sandstone and limestone materials that built these earliest Rockies can be found even today, the mountains themselves were almost

completely worn away by erosion by about 160 million years ago.

Then occurred a period that geologists call the Laramide Revolution, lasting about 100 million years. More mountain building occurred as the crust of the earth, weakened and strained by the great weight of the ancient sea began to buckle and fold upward.

The Laramide Revolution ended about 60 million years ago, this entire portion of the continent had risen above water, never to sink again.

Next, volcanoes added their fury to the process which, as by the geysers and hot springs of Yellowstone National Park, continues to a lesser extent even today. Much older clues to volcanism can be seen in rock formations like Devil's Tower in Wyoming, 865 feet high, designated a national monument in 1906-first in the nation.

Finally, there were the glaciers. You'll see their handiwork here, too, in the distinctive canyons, valleys and plateaus sculpted by their tremendously heavy, slowly moving forms during the Ice Ages.

## Notice:

The fall of 1999 hunting season revealed the body of fugitive Pilon. Those remains were discovered by Navajo men hunting on the reservation downstream and in-land of Mexican Hat. A reward of \$150,000 was split between the men.

The following is an outline of the steps you might take while investigating a controversial concern or issue. These are guidelines that can help you and your audience begin to understand the various perspectives and factors involved in an issue. This outline is a summary of a 30 page lesson plan developed as a part of the U.S. Forest Service "Investigating Your Environment" Series. A copy is available free from Susan Thomas, Leavenworth ranger District, 600 Sherbourne, Leavenworth, WA, 98826. 509-548-6977, Ext. 237.

## Guidelines for Investigating an Issue

### Describe the Issue:

- What is happening?
- Where is it happening?
- Why is it happening?
- Who is affected and how?
- What is the impact?
- What are possible alternatives?
- What formal statements are involved?

### Collect and Record Information:

- List factors that might contribute to the issue.
- Describe what you want to know about these factors.
- Describe the kind of data needed.
- Identify information sources for this issue.
- What more do we want to know?
- How will we find out this information?

### Interpret Information Collected:

- Describe what the information tells you about the issue.
- Identify cause-effect relationships, comparisons, and contrasts that can be inferred from the data.
- Identify the parts that can be investigated further.

### Analyze the Impact:

- Identify impacts on other environments, social patterns, economics, politics, etc.

- Identify questions each interest group is concerned about.
- Summarize points of view of the interest groups.
- Identify interest group history.

### Analyzing Factors and Alternatives to Present Conditions:

- Identify factor.
- Identify how it contributes to the issue.
- Develop or describe alternatives.
- Describe how change will affect issue.

### Analyzing Possible Courses of Actions:

- Develop list of possible courses of action.
- Identify advantages and disadvantages of each course of action (impact).

### Develop Action plan that could be used to Implement Recommendation:

- Identify recommended solution.
- Identify action necessary to implement recommendation.
- Identify who could help implement it.
- List steps to implement.
- Establish Criteria to Evaluate Recommendation
- Analyze Information Sources (newspaper, TV, Interview report, etc.)
- Evaluate Overall Process

## Milkweed

*Asclepias speciosa Torr.*

**PLANTS**

The plant name refers to its milky white sap, or latex. It contains a proteolytic enzyme, *asclepain*, which aids the stomach in the digestion of meat. Also, the milk has acrid juices effective in some softening of warts. Its seed pod is covered with short prickles, and contains a large quantity of silky down. Milkweed was once cultivated for the silky down, which was used to stuff beds, pillows, and – during World War II, lifejackets. Underground, there is a white rhizome giving rise to true roots and small or large stands of plants.

## Filaree

*Erodium cicutarium*

from *A Field Folio of Indian and pioneer Medicinal Plants* by Dr. Wes Larsen

Worldwide in distribution, probably introduced into the southwest by the Spanish. The plant is found in open places, moist or dry.

The height of the plant depends on the available moisture. During wet years they reach a height of 2 feet and in the early days of Southern Utah, farmers harvested filaree as hay. It was an important winter and early spring forage for livestock.



Colorado Plateau River Guides

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**Trip Leader Logic** ~ printed originally in *Paddler Magazine*

innuendos

**A puzzle, Give it a try!**

By Kristy McGill

While planning your next trip, you realize that although you have four rafts and 12 people, you might have a difficult time figuring out where everyone will go. You have two oar rafts – a yellow one and an orange one – and you have two paddle rafts – a blue one and a red one. The rafters' names are Adam, Betty, Cody, Diane, Eric, Fiona, George, Heidi, Ivan, Jane, Kurt and Lois. Each raft will have an equal number of men and women. Remember: a person must be qualified to row an oar raft. Use the following clues to help you place each person.

1. Fiona won't ride in the same raft as Betty.
2. Adam and Lois always ride together.
3. Cody wants to ride with Diane.
4. Betty is allergic to yellow, orange and blue.
5. Kurt knows how to guide an oar raft.
6. Ivan wants to captain the red raft.
7. Jane and Betty are best friends and want to ride together.
8. Diane will paddle in the blue raft.
9. Heidi won't go in a paddle raft.
10. Eric wants to paddle with Diane.
11. Lois will row the yellow oar raft.

Answers: The yellow oar raft will be rowed by Lois. Adam will ride along. The orange oar raft will be rowed by Kurt. Heidi will ride shotgun. The blue raft will be paddled by Eric, Diane, Cody and Fiona. The red raft will be paddled by Betty, George, Ivan and Jane.