

I. RIVER AREA INVENTORY FORM

Wild Rivers Study

San Juan River  
(Four-Corners to Confluence with Lake Powell)

Mid-Continent Regional Study Team

U. S. Department of the Interior - Bureau of Outdoor Recreation  
Bureau of Sport Fisheries and Wildlife  
National Park Service  
U. S. Department of Agriculture - Forest Service

August 1963

I. RIVER AREA INVENTORY FORM

A. General information

1. Name of river

San Juan

2. Location of study unit

Four-Corners Monument to confluence with Lake Powell

3. State

Utah

4. County

San Juan

5. Major drainage basin (see appendix A)

(9) Colorado River

6. Population within 50 miles 10,000; 150 miles 175,000; 250 miles 575,000

7. Weather characteristics by seasons and inclusive dates when study unit is best suited for public use and normal weather conditions during that period

Generally, the climate of the northern Navajo Indian Reservation favors reservoir recreation. The colder months of November through March will discourage all except the hardier sportsmen. Temperatures above 100 degrees are common during the summer in this region, but the thunderstorms of July and August give temporary relief from the heat. The winds, especially in the spring, will be hazardous on the open reservoir and uncomfortable when the temperature is low.

Mexican Hat, Utah  
Average for 8-Year Record

<u>Temperature</u>				<u>Precipitation</u>				
Jan.	Apr.	July	Oct.	Annual	Jan.	Apr.	July	Oct.
32.8	53.1	81.9	59.3	2.53	.33	.04	.12	T

Bluff, Utah  
Average 31-Year Record

<u>Temperature</u>				<u>Precipitation</u>				
Jan.	Apr.	July	Oct.	Annual	Jan.	Apr.	July	Oct.
29.4	55.5	80.1	56.6	7.49	.60	.53	.67	.80

Source: Section 0: 2, 3, 11 and 12

B. Description and characteristics of river (by study unit):

1. Number of miles in study unit

125 miles

2. Width characteristics

150 to 400 feet widths; average widths 200 feet

Source: Section 0: 6 and 13

3. Depth characteristics

Extremely variable throughout the study area; considerable portions, especially in upper area, with shallow mud flats and sand bars. Canyon areas may have relatively deep water with potholes up to 20 feet deep. During periods of runoff entire study area suitable for boating. River determined navigable and capable of supporting motor boat use and rafting (as such falls under jurisdiction of U. S. Coast Guard).

Source: Section 0: 7, 8 and 9

4. Flow characteristics

Area drains 23,000 square miles. River is subject to rapid and extreme fluctuations. Low monthly flows in December, January, and February (around 300 cfs), whereas, maximum is in spring with April through June receiving most (around 5,000 cfs).

Flow data from Bluff, Utah

All-time maximum	70,000 cfs	(September 1927)
All-time minimum	110 cfs	(December 1956)
All-time average	2,782 cfs	(46 years)

Regulation of the river will be largely influenced by the operation of the Navajo Dam in New Mexico and Colorado.

Source: Section 0: 14

5. Course characteristics and stability

Very deeply entrenched in narrow, wildly meandering canyons. Recurved meanders produce the famous Goosenecks of the San Juan. The course is stable.

6. Bed material

Boulders, gravel and, in quiet waters, tremendous accumulations of sediments.

7. Water quality (kind, degree and source of pollution)

No known pollution other than the enormous natural load of silt which the river carries. However, oil field pollution is a potential threat.

8. Type of fishery (warm or cold water) and dominant species of fish (commercial and sport)

Warm. Probably catfish only, for sports purposes.

C. Description and characteristics of setting (by study unit):

1. Nature of topography

An extremely rugged land of canyons and bare rock wildly shaped by wind and water. The river has become deeply entrenched into a vast stratified sandstone plateau of an intermediate level. Many miles of meandering river are crowded into this plateau. These convolutions form the world-famous Goosenecks of the San Juan.

Source: Section 0: 4

2. Ecological type (deciduous, coniferous, prairie, desert, shrub, or other) and brief description

Vegetation extremely limited to desert types with some coniferous scrubby growth of pinon and juniper.

Extremely limited cottonwoods and willows occur in spring areas along the lower canyon areas.

Source: Section 0: 4, 7, 8, and 9

### 3. Important species of wildlife and status

Mule deer - uncommon  
Lizards and snakes - common

Wildlife not particularly significant. A complete silence along river is dominating.

Source: Section 0: 7, 8 and 9

### D. River access

#### 1. Types and locations of public access (spot on map)

Paved State Routes 47 and 262 provide access at Bluff and Mexican Hat. There is virtually no other access other than extremely rugged jeep trails used in mining exploration.

Float trips from Bluff to Mexican Hat to Lake Powell exist and the study area is accessible by boat from Lake Powell.

Source: Section 0: 4, 7, 8 and 9

#### 2. Factors limiting public access (physical, legal)

This includes some of the most rugged, inaccessible country in America with high rock formations and a multitude of deep canyons.

No legal limitations are known other than unenforced rules of the Navajo Indian Reservation.

### E. Special scientific, educational and esthetic values

#### 1. Geologic

Famous Goosenecks of San Juan are outstanding and world renowned. General area affords excellent opportunity to study the forces of geology in action.

Source: Section 0: 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12

#### 2. Biotic

A warm, sediment-laden stream with catfish and limited other fishlife adapted to this environment. A desert ecology with also limited warm-blooded life exists along the shores. Reptile fauna of lizards and snakes is the most significant part of the animal life.

### 3. Historic

Except for the Dominguez-Escalante expedition in 1776, the Armijo Caravan from Santa Fe to Los Angeles in 1829, and possibly an occasional wandering trapper, prospector or pioneer, the northern portion of the Navajo Indian Reservation was bypassed by the white man. The Spanish conquistadors and missionaries did not penetrate this far north and the western expansion of the United States passed either to the north or south.

Source: Section 0: 2

### 4. Archeologic

Extensive archeologic sites are involved in the canyons including standing prehistoric structures, probably of Fremont and developmental Pueblo cultures. Possibly Utes, Southern Paiutes and Navajos occupied the sites subsequently. Also, large and extensive rock carvings and drawings.

Source: Section 0: 3, 7, 8 and 9

### 5. Other

None

F. Present quality of recreation and environmental factors limiting quality:

<u>Kinds</u>	<u>Quality</u>				<u>Environmental Limiting factors</u>
	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	
Boating:					
Motor		x			Low water
Non-motor		x			Lack of Water Lack of variety in stream character
Fishing			x to	x	Mud and silt; limited access. Catfish only; hot climate
Hunting:					
Big game				x	Limited habitat and access
Small game			x		Chukars only
Water fowl			x		Access
Camping				x	Lack of suitable sites
Swimming				x	Too much silt
Hiking				x	Too hot climate, rugged lands; no trails
Sightseeing:					
From rim	x				Rugged terrain limits access
From river			x to	x	Monotonous scenery
Nature study				x	Lack of variety
Other					
Geology study		x			Limited variety

G. Classification of study unit (according to six ORRRC classes)

Class IV  
Class V  
Class VI ( in limited locations)

H. Status of economic development

1. Characterize the economy of the general river area

Major segment of the economy tied to mineral production and prospecting for minerals. Oil, gas, uranium, phosphates, and other minerals exist in sufficient quantities to entice continued exploration. Tourism provides a relatively minor segment of the general economy. Also limited livestock production.

Recreational use centers around the tiny towns of Mexican Hat and Bluff.

Source: Section 0: 2, 3, 4, 6, 7, and 8

2. Is the economy growing, declining, stagnant? What economic activities are there that are growing, declining?

Mexican Hat and Bluff have a growing economy primarily based on tourism. However, a significant industry associated with mineral production at Mexican Hat is a stimulus to the over-all economy.

Source: Section 0: 7, 8 and 9

3. Describe the transportation routes to and through the general river area (rail, air, boat, auto) and facilities (such as landing strips, etc.)

No rail or scheduled air transportation available within 100 miles of the study area. State Route 47 (N and S) provides the only true access as it crosses the river at Mexican Hat, Utah, and touches the river at Bluff, Utah.

I. Describe present developments and give the status of plans for water resource developments in the general area by Federal agencies and others that would drastically and permanently affect the study unit

None existent or being actively studied. However, the Chinle site (Bluff, Utah); the Goosenecks site; the Slickhorn site; the Great Bend site, or alternates described in House Document 419 will be considered in the near future under Comprehensive River Basin Studies of the Bureau of Reclamation.

Source: Section 0: 5 and 12

J. What impact (detrimental or beneficial) will the following uses (present or planned) have on the qualities of the study unit:

1. Agriculture

None

2. Forestry

None

3. Mining

Oil developments upstream and in the general area pose a potential threat to the river and the pollution thereof. Also, uranium and phosphate mining has potential.

4. Transportation

Nothing significant

5. Industry

Please refer to Item J. 3 - Mining

6. Recreation

The north shore of lower portions included in Glen Canyon National Recreation area. A State park is proposed for a small section below Mexican Hat. Both actions would tend to increase visitation to the study area enormously.

7. Residential - Community

No effect

8. Other

None

K. Condition of headwater lands and trends in management

Not applicable as they are far removed from the study area. However, general condition of lands in vicinity of study area are naturally highly erosive.

- L. Land ownership (general pattern of Federal, State and private ownerships) (show on map)

Largely Federal - proposed administered by National Park Service on the northern shores and the Bureau of Indian Affairs to the south, with extensive areas under jurisdiction of Bureau of Land Management lands. Limited private lands on the northeast.

- M. Actions that have been taken or are planned to protect the natural qualities of the river and its environment (such as special State legislation, zoning, easements, etc.)

River from Bluff downstream is navigable and under jurisdiction of U. S. Coast Guard.

Please refer to Item J. 6

- N. Other

None

- O. Sources of reference and information (maps, reports, agencies, persons, etc.)

1. Memorandum from Southwest Regional Director, USNPS, to Utah State Director, BLM.
2. "The Navajo Reservation Shoreline, A Preliminary Plan for Recreation Use and Development-Glen Canyon Reservoir, Arizona and Utah," National Park Service, 1958.
3. "Navajo Dam", Bureau of Reclamation Report, Farmington, New Mexico - No date.
4. Aerial reconnaissance and ground observation of study team.
5. Conference with Bureau of Reclamation, etc., in Salt Lake City, Utah.
6. Army Map Service Map.
7. Conference with the BSF&W, Albuquerque, New Mexico, 8-15.
8. Conference with the BSF&W, Salt Lake City, Utah, 8-27.
9. Conference with the BLM, Salt Lake City, 8-26, 27.
10. Conference with the Utah Game & Fish, Salt Lake City, Utah, 8-27

11. Proposed Canyon Lands Brochure, National Park Service.
  12. "Survey of the Recreation Resources of Colorado River Basin", National Park Service, 1946.
  13. Geological Survey Maps.
  14. Geological Ground Water Report, Utah.
- P. Photographs (color and black and white) (Label and spot on map)
- Appended.
- Q. Method of study
- Aerial flight, ground survey and conferences with Federal personnel in Salt Lake City.
- R. Period of study
- July 15, August 25, 26, and 27, 1963.

SAN JUAN RIVER

II. CRITERIA

Based on the information and impressions gained during the study, evaluate the river area against the following five criteria. To qualify for further consideration for status in a national system of wild rivers, a river area should meet all of these criteria:

1. The river is still relatively undeveloped, unpolluted, and free-flowing and the scene as viewed from the river is pleasing whether primitive or rural-pastoral, or these conditions must be capable of restoration as far as practicable and within foreseeable legislative, financial and technical capabilities.

Yes X  
No \_\_\_\_\_  
Explain

Borderline to all of the above. Too unstable because of filling and changing of course due to extremely heavy silt load. The Navajo Dam is above the study area and the Glen Canyon Reservoir is below the study area, and these have an affect on the free-flowing aspects of this river. While the scene from the canyon rim is very good from certain vantage points, the scene from the river itself is poor.

2. The river area possesses recreation, scientific, historic, or esthetic values of outstanding quality.

Yes X  
No \_\_\_\_\_  
Explain

Goosenecks area only, and this is of a scientific (geological) interest. Archeological values are existent, but these are generally on the tributaries and side-canyons rather than the main stream. Esthetic values from the river not outstanding; however, the river does form an integral portion of the over-all scenery when viewed from vantage points. Rafting has extremely high values (especially on the lower portion).

3. The river area is large enough to sustain existing public recreation use or accumulate more without resulting in appreciable reduction of the quality of the experience or damage to the resource (rule of thumb: 50 miles long and 50 feet wide).

Yes X  
No \_\_\_\_\_  
Explain

Over-all existing use light; however, for that portion of the river used for float trips (through the Goosenecks from Mexican Hat, New Mexico), it is relatively heavy. In the future, access to the upper portion of Lake Powell might be through this limited segment of the study area. There is a good potential for extremely heavy boating use in this regard.

4. The quality, size, and uniqueness of the river and its setting is of sufficient importance to attract use from beyond the boundaries of the locality and state and would appear to outweigh other uses of the river.

Yes \_\_\_\_\_  
No   X    
Explain \_\_\_\_\_

The fact that the lower 70 miles of the San Juan River (not included in the study area) will be inundated as a portion of Lake Powell, which combined with only a small area of any outstanding value (Goosenecks) and present upstream impoundment by the Navajo Reservoir does not justify wild river status for this river. However, the river from Mexican Hat, New Mexico, downstream, should be entirely included in the Glen Canyon National Recreation area due to the potential access route via boat to the San Juan Arm of Lake Powell.

5. Plans for other uses of the river or its setting that would permanently and drastically impair the natural conditions have not progressed to the point that construction has commenced.

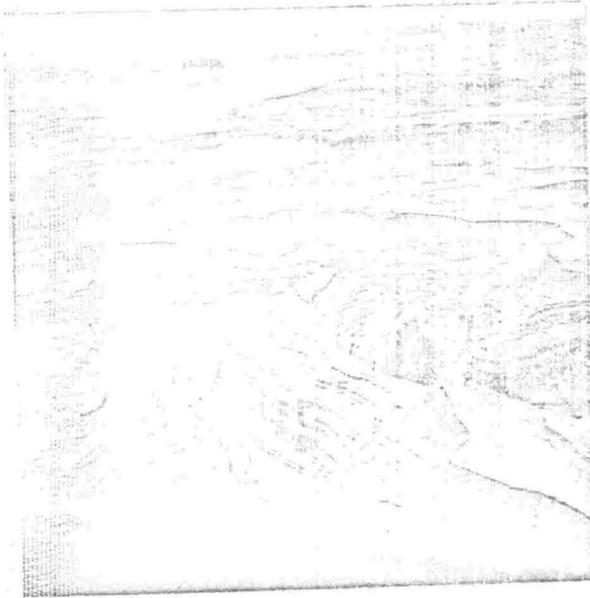
Yes   X    
No \_\_\_\_\_  
Explain \_\_\_\_\_

There is little threat to this large, unstable, sparsely vegetated river. Wildlife populations are sparse. Recreational use, thus far, offers no threat. However, plans for future impoundments probably will continue to crop up.

SAN JUAN RIVER

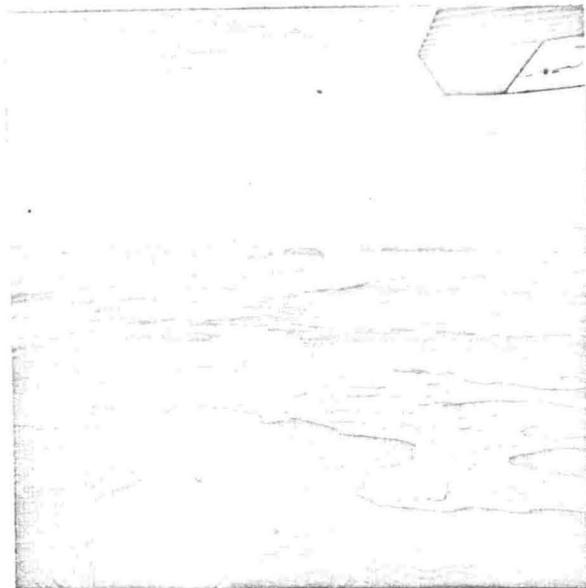
III. FINDINGS

THE RIVER DOES NOT QUALIFY



1.

Goosenecks of the San Juan River with  
Monument Valley on the horizon.



2.

August, 1963

*No report  
Available*

SAN JUAN RIVER, UTAH AND NEW MEXICO

Failed criteria, Reg. 3 (Denver)

Location - Four corners to confluence with Lake Powell

Length of study area - 125 miles

Quality of recreation - Excellent sightseeing from rim. Good motor and nonmotor boating, and geological interests.

Land ownership - Largely Federal. Some within Glen Canyon National Recreation Area and Navajo Indian reservation with extensive areas of public domain. Limited private lands to the northeast.

Summary of findings - Fails to meet criteria of quality, size and uniqueness. Lower 70 miles will be inundated by Lake Powell and will be included in national recreation area. Goosenecks area has geological interests and scenic values. Rafting important. Upstream impoundment by Navajo Reservoir will control water flow.

SAN JUAN RIVER



STUDY SECTION



### SIGHT-SEEING GUIDE TO Utah

To help motorists plan enjoyable trips, information about some attractions is furnished here. Facts were up to date on publication, but are subject to change. Admission is free unless otherwise noted. Numbers and index references are for main map below.

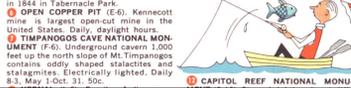
- LOGAN (F-3). Mormon Tabernacle (1866) is outstanding example of early Mormon architecture. Nearby is the impressive castellated Logan Temple. East of the city is scenic Logan Canyon with unique experience. The high salt content of the water permits bathers to float effortlessly.
- SALT LAKE CITY (E-5). Headquarters of the Latter-day Saints (Mormon) Church.

9 1/2 year-round, also Sun. 1-5 April-Nov. Geologic displays at the University of Utah include several dinosaur skeletons and fossil foot prints. Weekdays 8-4. Various types of waterfowl as well as deer, wild sheep and kangaroo may be seen at Tracy Aviary in Liberty Park. Tues.-Sun. 10-6, Feb.-Oct.

DODDEN (F-4). John M. Browning. Museum in the Armory displays original and production models of renowned firearms inventor. Weekdays 9-4. Log cabin built in 1844 in Tabernacle Park.

OPEN COPPER PIT (E-6). Kennecott mine is largest open-cut mine in the United States. Daily, daylight hours.

TIMPANOGOS CAVE NATIONAL MONUMENT (F-6). Underground cavern 1,000 feet up the north slope of Mt. Timpanogos contains oddly shaped stalactites and stalagmites. Electrically lighted. Daily 8-3, May 1-Oct. 31, 50c.



Daily 7-7 summer, 8-5 spring and fall and 8-4-30 winter.

PROVO (F-6). Home of Brigham Young University. Nearby is Utah Lake, noted for water sports and good fishing.

OLD STATE HOUSE (E-8). Territorial legislature met in this sandstone structure in 1855-56 before Salt Lake City was designated the capital. Now a museum of pioneer and Indian relics. Weekdays 9-5, Mar. 15-Nov. 15, 8-8 June-Aug.

DEAD HORSE POINT (K-10). Overlooks in state park offer spectacular views of the Colorado River and the red rock country. Compares with scenery and coloring at the Grand Canyon.

ZION NATIONAL PARK (C-12). See map below. Eight-mile road follows Zion Canyon, with trails to more remote areas. Steep canyon walls of eroded sandstone are vividly colored. Among the rock monoliths is Great White Throne, rising some 2,500 feet. Mountain tunnel on Route 15 penetrates mile of solid rock; three "win-downs" afford views of the region. Visitor Center daily 7-7 in summer. Car fee \$1.

CEDAR BREAKS NATIONAL MONUMENT (D-11). Vast natural amphitheater half a mile deep terraced with limestone in over 50 colors. Along its 10,700-foot high rims alpine flora and fauna flourish. Daily May-Nov.

BRYCE CANYON NAT. PARK (E-11).

NATURAL BRIDGES NATIONAL MONUMENT (K-11). Three huge natural sandstone bridges and the ruins of a cliff dwelling of interest here. Owechemo Bridge may be viewed from the road.

MONUMENT VALLEY (J-12). Pinacles and buttes of red sandstone rise like skyscrapers from the valley floor within the Navajo Indian Reservation.

HOVENKEEP NATIONAL MONUMENT (L-12). Four separate groups of prehistoric cliff dwellings preserved in primitive area reached from Mexican Hat.

Utah offers 14 developed ski areas, with 38 lifts and tows, with a better than four-month average season. Deep powder, rugged mountains and wide open slopes are its skiing trademarks. The winter

### HOW TO READ THIS MAP

## Utah

ISSUED MARCH 1963

**Roads**

- Completed
- Under Construction
- Proposed
- Planned
- Other Highways (Numbered)
- Limited Access Highways
- Connecting Roads
- No Connection Between Roads
- Interstate Route Numbers

TO ROAD: To give maximum clarity in this map a limited network of principal through routes is printed in red. These roads generally carry more through traffic than other main highways shown in dark blue but do not necessarily offer better traveling conditions.

### Salt Lake City



