The San Miguel River

Journeying 80 miles from the alpine headwaters above Telluride to the Dolores River Confluence below Uravan

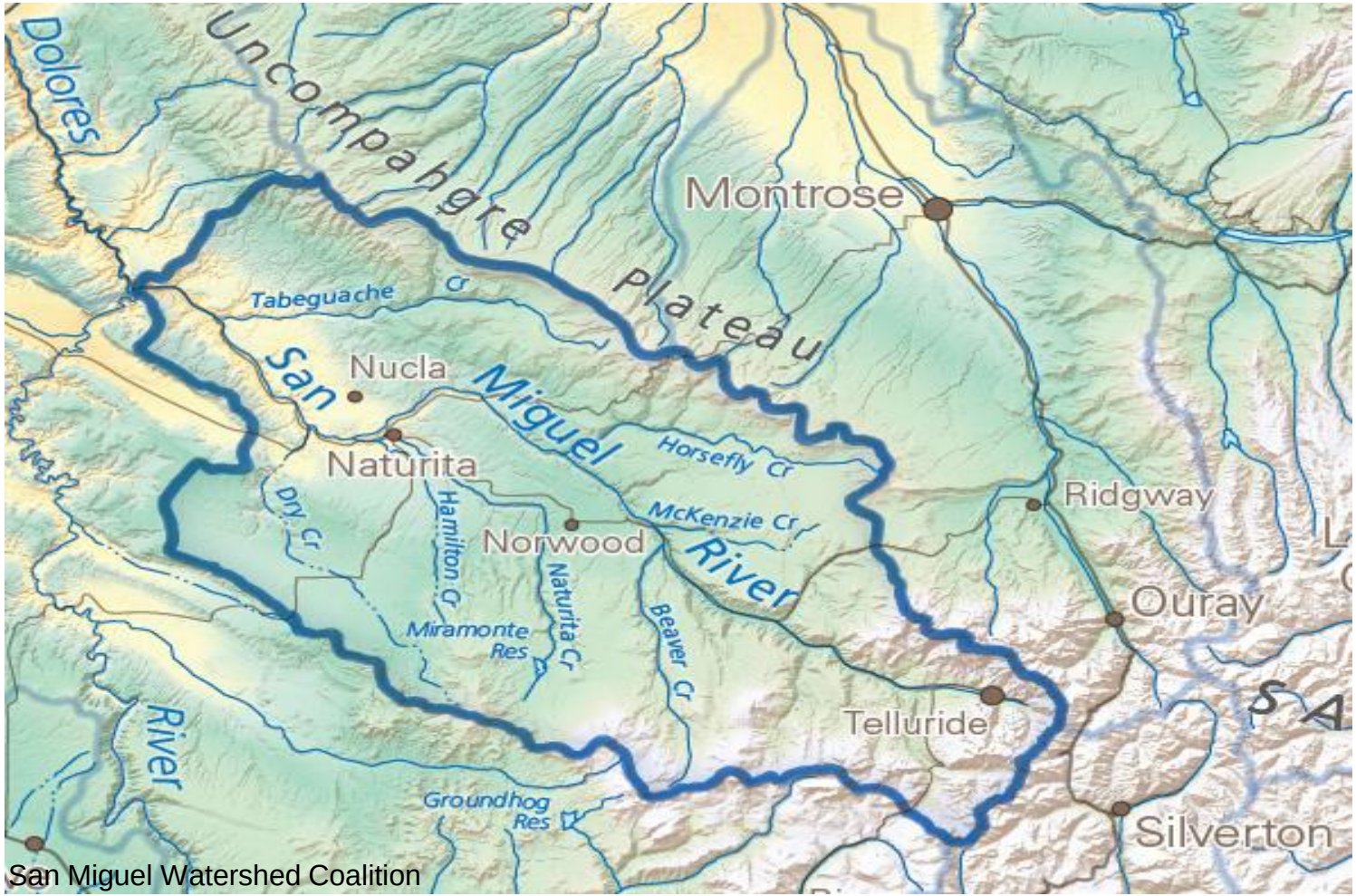
Mark Ragsdale

Lead Water Commissioner

Division 4 - District 60 & 61 San Miguel River

Sandy Ragsdale, Water Commissioner, District 60 - Upper San Miguel River
Heather Harris, Water Commissioner, District 61 - Paradox Creek

- Division 4 includes the Gunnison River basin, **San Miguel River** basin, lower reaches of the Dolores River basin, and the Little Dolores River basin.
- Commissioners administer water rights for water users, consult on water court cases, measure water flow, inspect dams to determine safe water storage levels, and maintain gaging stations and water records within the San Miguel River basin.



San Miguel Watershed Coalition

The Headwaters (Upper SMR)

- Lewis & Blue Lakes located in the San Juan Mountains above Telluride
- Flowing into Bridal Veil Creek to Bridal Veil Falls
- Bridal Veil Creek merging with Ingram Creek to become the San Miguel River

Headwater Development & Usage

- Gold mining - 1861
- Agriculture (haymaking/sheep industry) - 1870’s
- Ames Power Plant - 1891
- Bridal Veil Power Plant - 1907
- Idarado Mine - 1934
- Municipal & Domestic Use -1963
- Ski Resort (snowmaking) -1972
- Recreation on the San Miguel River (rafting, fishing, camping, placer mining)

LEWIS LAKE

Photo Credit: Sandy Ragsdale

- Lewis Lake - Elevation 12,700
- Built in early 1900’s
- 350 AF
- Stored/delivered water for Lewis Mill
- Highest headgate in continental United States

Photo Credit: Sandy Ragsdale

Lewis Mill

- 5-Story Mill
- State of the Art Facility
- Still Houses Original Milling Equipment
- 12 tons of Ore Concentrate Each Day
- In Production for Only 3 Years

Photo Credit: Sandy Ragsdale

Inside Lewis Mill

Photo Credit: Sandy Ragsdale

Photo Credit: Sandy Ragsdale

Blue Lake


Photo Credit: HikingWalking.com

- Over 9,000 AF
- Decreed uses:
  - Municipal
  - Commercial
  - Industrial
  - Domestic
  - Power
  - Augmentation
  - Wildlife
- Major supplier of water to Town of Telluride

Bridal Veil Falls and the Bridal Veil Power Plant (The power plant, the second oldest AC generation facility in the country, was built in 1907 to supply the Smuggler’s Union Mine)

Inside the Bridal Veil Powerhouse

Photo Credit: Sandy Ragsdale

Photo Credit: Sandy Ragsdale

Photo Credit:Sandy Ragsdale

Photo Credit:Sandy Ragsdale

Pandora Water Treatment Facility and Town of Telluride

- Telluride founded in 1878
- Pandora relieves Mill Creek and Cornet Creek water treatment plants
- Treats water piped from Bridal Veil Creek
- Designed to handle 1 million cubic gallons of water a day doubling town's water supply
- Hydropower - capable of creating 400 kilowatts - several hundred households
- New facility in October 2014

Photo Credit:Colorado Encyclopedia

Idarado Mine/ Pandora Mill

- 1870's
- Produced gold, zinc, silver and lead
- Operated until 1978
- Major water rights holder

TSG/Mountain Village

- Ski area founded in 1970. $12.50 a day, including sack lunch.
- Mountain Village founded in 1987
- Telluride Golf Resort opens 18 hole course in 1992
- Holder of many senior water rights for snowmaking and grass watering

South Fork/Howard's Fork

- **Trout Lake** - *Trout Lake* is a natural *lake* but was later dammed for the purpose of creating additional reserves for the Ames Power Plant near Ophir, CO
- **Ames Power Plant** -The *Ames Hydroelectric* Generating Plant, constructed in 1890 near *Ophir*, Colorado, was the world's first commercial system to produce and transmit alternating current electricity for industrial use and one of the first AC hydroelectric plants ever constructed.

Trout Lake

Photo Credit: Telluride.Net

Trout Lake

- Nearly 5,000 AF
- Major augmentation storage facility for out-of-priority uses when a call is placed on the San Miguel River
- Uses include power, irrigation, industry, fishery, domestic, and augmentation
- Recreation

Lake Hope

Photo Credit: Sandy Ragsdale

- Above Trout Lake at 11,000 feet
- Just over 2300 AF
- Originally built in 1891
- Used to supplement the flow of water to the Ames-Ilium Hydroelectric Project
- Wooden/rock dam

Photo Credit: Sandy Ragsdale

Photo Credit: Sandy Ragsdale


Photo Credit: Sandy Ragsdale

The Importance of Dam Safety!!

or

Safety is dam important!!

Ames Power Plant

The Ames Hydroelectric Generating Plant

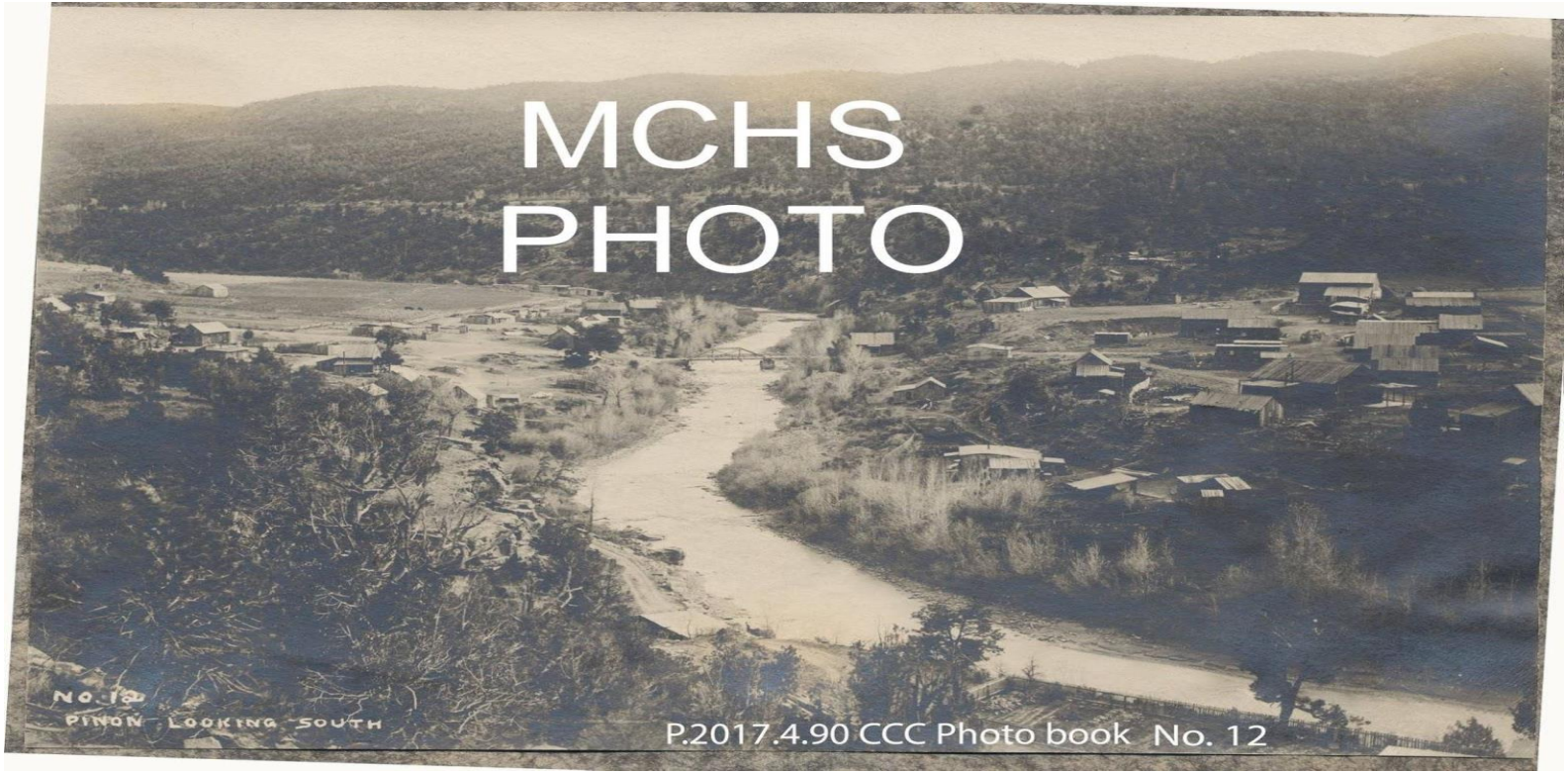
- Constructed in 1890
- World's first commercial system to produce and transmit alternating current (AC) electricity for industrial use
- One of the first AC hydroelectric plants ever constructed
- Built by Westinghouse Electric around two large alternators
    - One was set up in the valley as a generator and driven by water which is piped down from Trout Lake
    - Connected by a 2.6 mile transmission line to the second alternator used as a motor up at the Gold King Mine
- Still in operation today

Middle San Miguel River

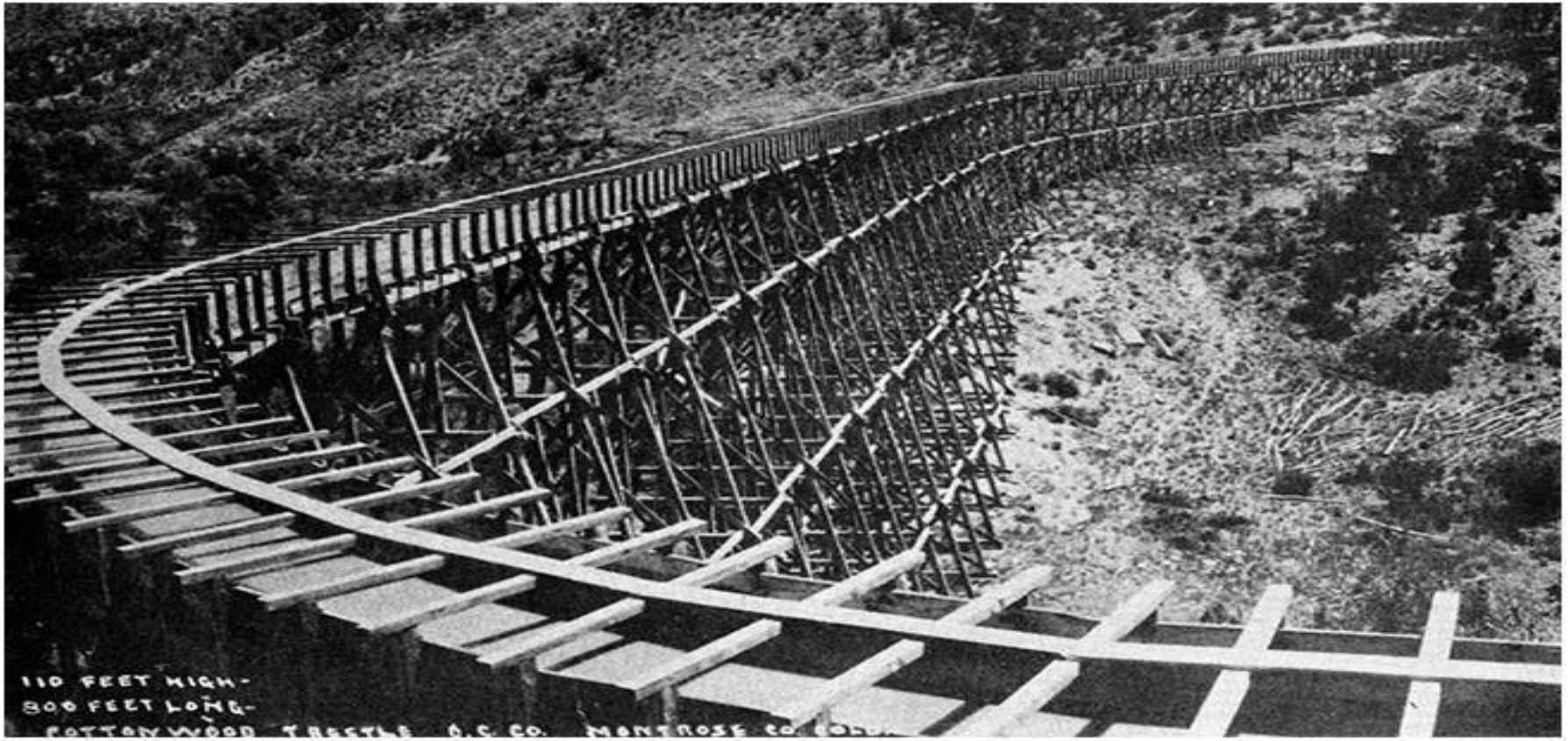
- CC Ditch
- Tri-State Power Plant
- Majority of senior water rights

The Colorado Co-Operative Company
Est. 1894

- The Town of Nucla, formerly Tabeguache Park, was founded by a socialist organization. They discovered this location which provided everything they desired: mild winters, ample sunlight, virgin soil — **but no water**.
- The Colorado Co-Operative Company was formed in 1894 and they built 17+ miles of ditch (High Line Canal) that flows into Nucla from a headgate on the San Miguel River.
- Ditch completed in 1903. Delivering 3,250 shares (maximum 145cfs) of water from the San Miguel River to the owning shareholders on the park.
- The CC Ditch Company is still in existence today with a governing board of 9 who represent the shareholders interests.
- CC Ditch Company History



The town of Pinon (2nd largest town in Montrose County in the late 1800's) on the banks of the San Miguel River where the cooperative community lived while building the canal to bring water to Tabeguache Park (Nucla). (*Photo courtesy of Montrose County Historical Society)*



Cottonwood Trestle, located on the CC ditch, the highest and longest water trestle of its time. 110 feet high and 800 feet long. (*Photo courtesy of Montrose County Historical Society)*

CC Ditch trestle still in use


Photo Credit: Sandy Ragsdale


Photo Credit: Sandy Ragsdale

Photo Credit: Sandy Ragsdale

Photo Credit: Sandy Ragsdale

Tri-State Power Plant

- A coal fired Power Plant owned and operated by Tri-State Generation
- The world's first power plant to utilize circulating fluidized-bed combustion. Original construction of the power plant was completed in 1959
- Uses up to 5 cfs of water from the San Miguel River to operate

Tri-State Power Plant located on the San Miguel River near Nucla

Lower San Miguel River

- Uravan
- Hanging Flume
- Confluence of the San Miguel & Dolores River

Uravan

- Company town located along the San Miguel River
- Established by U. S. Vanadium Corporation in 1936
- Population of 800 at times
- Uravan was abandoned by the 1980s

Photo Credit: Uravan.com

The Hanging Flume

- Open water chute (known as a flume) 6 ft. wide 4 ft. deep
- Built by The Montrose Placer Mining Company to facilitate gold mining in the 1880's
- Completed flume was 12 miles long and 75 feet above the San Miguel River continuing to the confluence with the Dolores River
- http://hangingflume.org

Hanging Flume, 1890

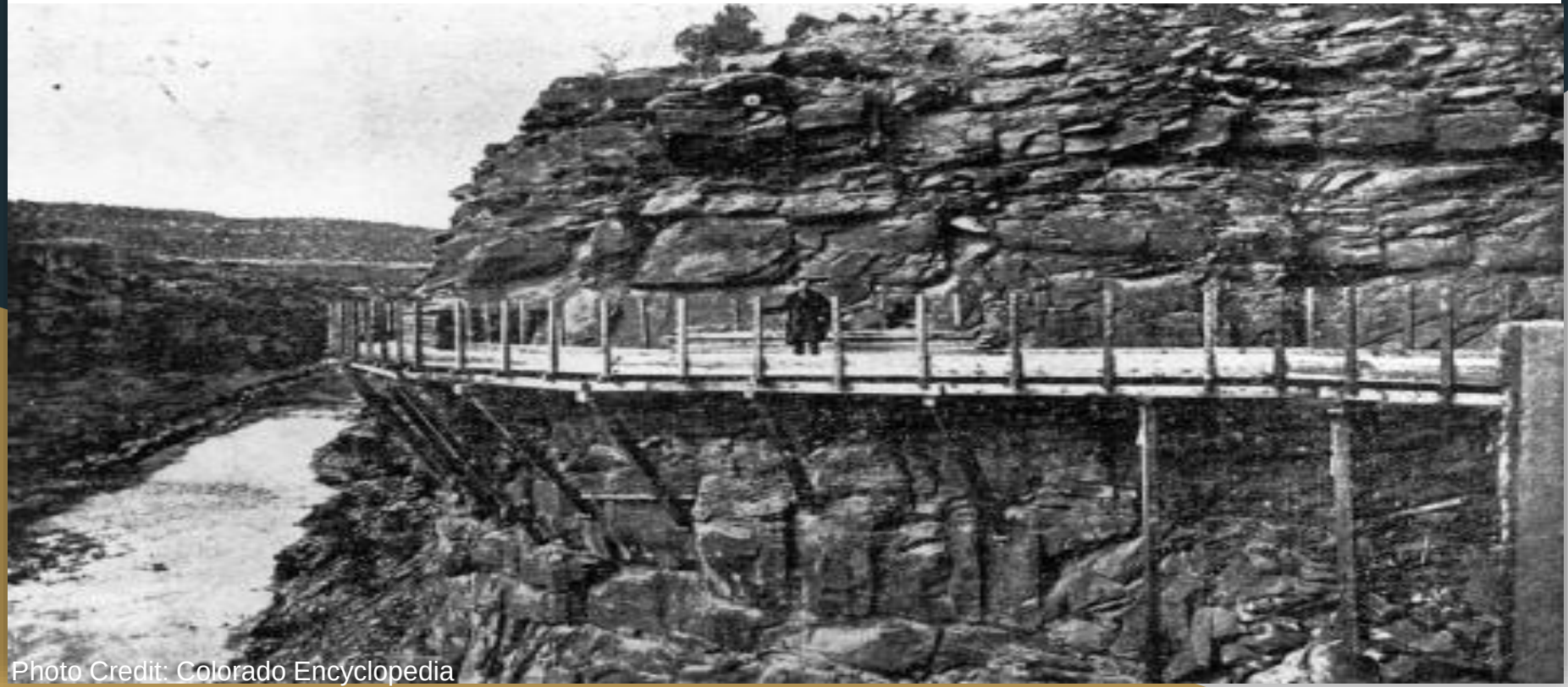


Photo Credit: Colorado Encyclopedia

The Hanging Flume


THEDENVERCHANNEL.COM
"THE LAST OUTPOST"
THE HISTORY OF THE HANGING FLUME
DENVER abc
5:15
79°

The Confluence of the Dolores & the San Miguel River

- The San Miguel River drops 7,000 feet from the San Juan Mountains above Telluride, Colorado to the confluence with the Dolores River 80 miles downstream (near Uravan).
- The San Miguel is more or less free-flowing, but diversion dams dot the river and alter its flow along the way. Such as the CC ditch headgate and Nucla Power Plant.

Photo Credit:Wikimedia Commons

District 61 - Paradox Creek

- One of the few places where out-of-state water comes into Colorado
- Buckeye Reservoir and Canal
  - Completed around 1920
  - 3,000 AF
  - Supplies irrigation water to Paradox Valley east to the Dolores River
- Paradox Creek used to deliver irrigation water

Present Day Administration

- Snowmaking/Golf Course(TSG)
- Town of Telluride
- Tri-State Power Plant
- CC Ditch

San Miguel River Data

San Miguel River near Placerville, CO

Highline Canal(CC ditch) near Pinion

San Miguel River at Brooks Bridge near Nucla, CO

San Miguel River at Uravan, CO

Call on the San Miguel River

1939	124-92 cfs
1929	92-80 cfs
1916	80-40 cfs
1911	40-0 cfs

San Miguel Project

- **San Miguel Water Conservancy District** holds decree from November 1950
- A Participating Project under the **1956 Colorado River Storage Project Act**
- Authorized for construction under the **1968 Colorado River Basin Project Act**
- 72,600 AF conditional with 71,200 AF for refill
- Irrigation
- Last diligence case 17CW3071

Thank You

- Questions

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