

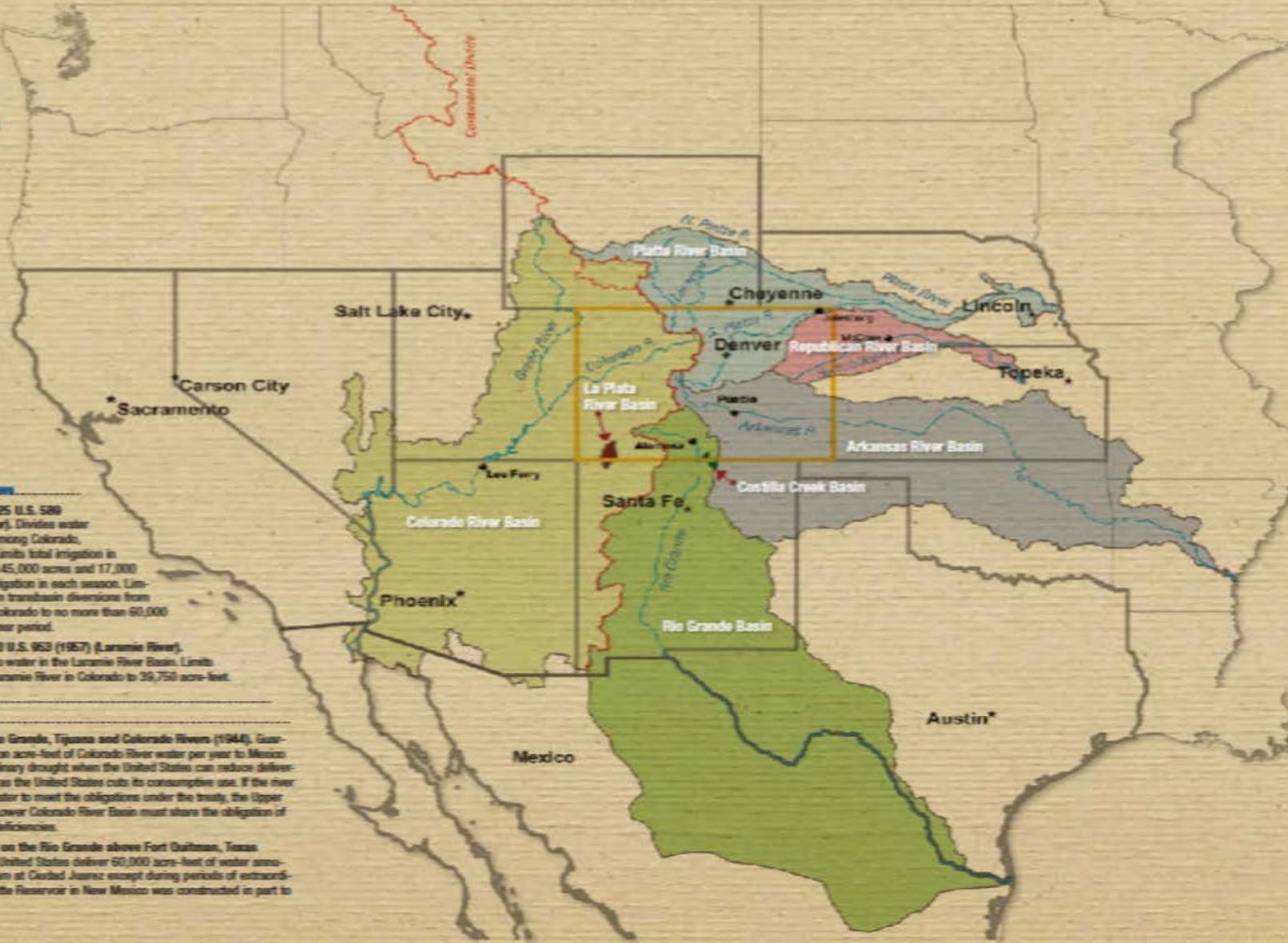
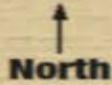
# *The Magic Touch of Water:*

## *A History of the Greeley Water and Sewer Department*

Gregory J. Hobbs and  
Michael Welsh  
Poudre River Forum  
Greeley, Colorado  
February 2, 2018



# Compacts at a glance...



### U.S. Supreme Court Cases

**Nebraska v. Wyoming, 325 U.S. 589 (1945) (North Platte River).** Divides water in the North Platte River among Colorado, Nebraska and Wyoming. Limits total irrigation in Jackson County, Colo. to 145,000 acres and 17,000 acre-feet of storage for irrigation in each season. Limits total water exports from transbasin diversions from the North Platte River in Colorado to no more than 60,000 acre-feet during any 10-year period.

**Wyoming v. Colorado, 353 U.S. 963 (1957) (Laramie River).** Establishes states' rights to water in the Laramie River Basin. Limits total diversions from the Laramie River in Colorado to 29,750 acre-feet.

### International Treaties

**Mexican Treaty on the Rio Grande, Tijuana and Colorado Rivers (1944).** Guarantees delivery of 1.5 million acre-feet of Colorado River water per year to Mexico except in times of extraordinary drought when the United States can reduce deliveries in the same proportion as the United States cuts its consumptive use. If the river does not have adequate water to meet the obligations under the treaty, the Upper Colorado River Basin and Lower Colorado River Basin must share the obligation of reducing use to make up deficiencies.

**Convention with Mexico on the Rio Grande above Fort Quitman, Texas (1906).** Requires that the United States deliver 60,000 acre-feet of water annually at the International Dam at Ciudad Juarez except during periods of extraordinary drought. Elephant Butte Reservoir in New Mexico was constructed in part to meet this obligation.

### Interstate Compacts

**South Platte River Compact (1923).** Divides the waters of the South Platte River between Colorado and Nebraska, giving Colorado the right to fully use the water between Oct. 15 and April 1. During the irrigation season, Colorado will deliver 120 cubic feet per second to Nebraska at Julesburg. If the flow is less than 120 cubic feet per second, Colorado must curtail junior diversions. The State Engineers are authorized to administer the compact.

**Republican River Compact (1942).** Divides the waters of the Republican River Basin among Colorado, Kansas and Nebraska. Colorado is granted 54,100 acre-feet of water each year. The compact allocates 190,300 acre-feet of water each year to Kansas and 234,500 acre-feet of water each year to Nebraska. If the water supply of any source varies, the allocations also change. A commission oversees compliance.

**Arkansas River Compact (1948).** Divides the waters of the river between Colorado and Kansas primarily based on 1948 conditions. An interstate agency administers provisions of the compact and oversees operations of John Martin Reservoir. Principles adopted in 1980 provide for storage accounts in John Martin Reservoir for water users in both states.

**Costilla Creek Compact (1944, revised 1963).** Establishes uses, allocations and administration of the waters of Costilla Creek in Colorado and New Mexico. A commission oversees compliance. Later amendments specify rights to water in specific facilities.

**Rio Grande Compact (1938).** Details obligations of Colorado and New Mexico to deliver water for downstream users, including Mexico and Texas; sets forth system of debits and credits and rules to account for fluctuations in stream flow. A commission is established to administer terms.

**Colorado River Compact (1922).** Apportion 7.5 million acre-feet of consumptive use per year to the Upper Basin and the same amount to the Lower Basin. The Upper states may not cease the flow of the Colorado River at Lee Ferry, Ariz., to be depleted below an aggregate of 75 million acre-feet for any period of 10 consecutive years. The State Engineers, Bureau of Reclamation and U.S. Geological Survey administer the compact.

**Upper Colorado River Compact (1948).** Apportions a percentage of available river water to each Upper Basin state as follows: Arizona, 50,000 acre-feet each year; Colorado, 51.75%; Utah, 23%; Wyoming, 14%; and New Mexico, 11.25%. The Upper Colorado River Commission oversees compliance.

**La Plata River Compact (1922).** Grants Colorado and New Mexico unrestricted use of the river between Dec. 1 and Feb. 15. At other times, each state can use the flow of the river at the state line if the flow is in excess of 100 cubic feet per second. If the flow is less, Colorado must ensure delivery of flow equal to one-half the flow of the river at Hesperus, Colo.

**Animas-La Plata Project Compact (1968).** Unusual because it addresses a water project rather than dividing river waters, the compact gives New Mexico and Colorado equal priority in rights to store and divert project water. The ambitious project has been repeatedly scaled back. The one remaining reservoir started filling in 2009.



**MAP**  
 OF  
**UPPER CALIFORNIA**  
 BY THE  
**U.S. EXPL.**  
 AND  
**GENL. AUSTIN**  
 1848.

*It is supposed that these streams are either lost in the Great Plains or run Northward to the North Pacific Ocean. The latter is the more probable, as the latter is the more probable, as the latter is the more probable.*

*This Plate is a wide of land, with a few detached Mountains, some of which rise in the region of perpetual Snow, where mountains are not uncommon. These few small streams that are seen in the West & few Indians are scattered over the plain, the most remarkable object in creation.*

*This Country is extremely Rocky and rough, the Rivers running through Great Rocks.*

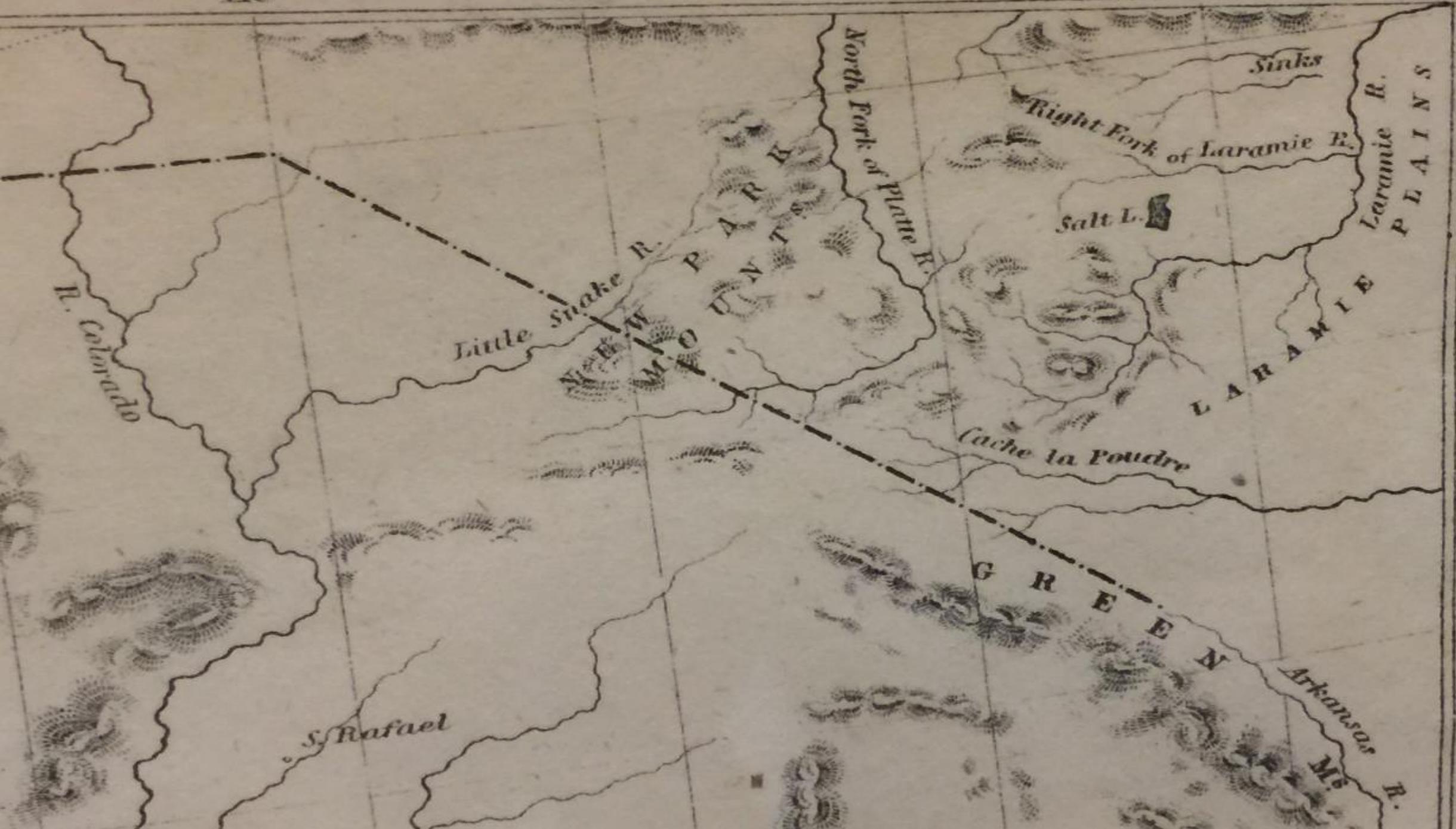
*Southern Boundary*

*INCORPORATED*

*Smith's Track*

*Boundary of Oregon*







The Great Desert is frequented by roving bands of Indians who have no fixed places of residence but roam from place to place in quest of game.

Here the Expedition separated into two detachments on the morning of the 24<sup>th</sup> of July.

Route of Capt. Bells Detachment of the Expedition Eastward.

40  
39  
38  
37  
36

M  
Y  
K  
C  
O  
R

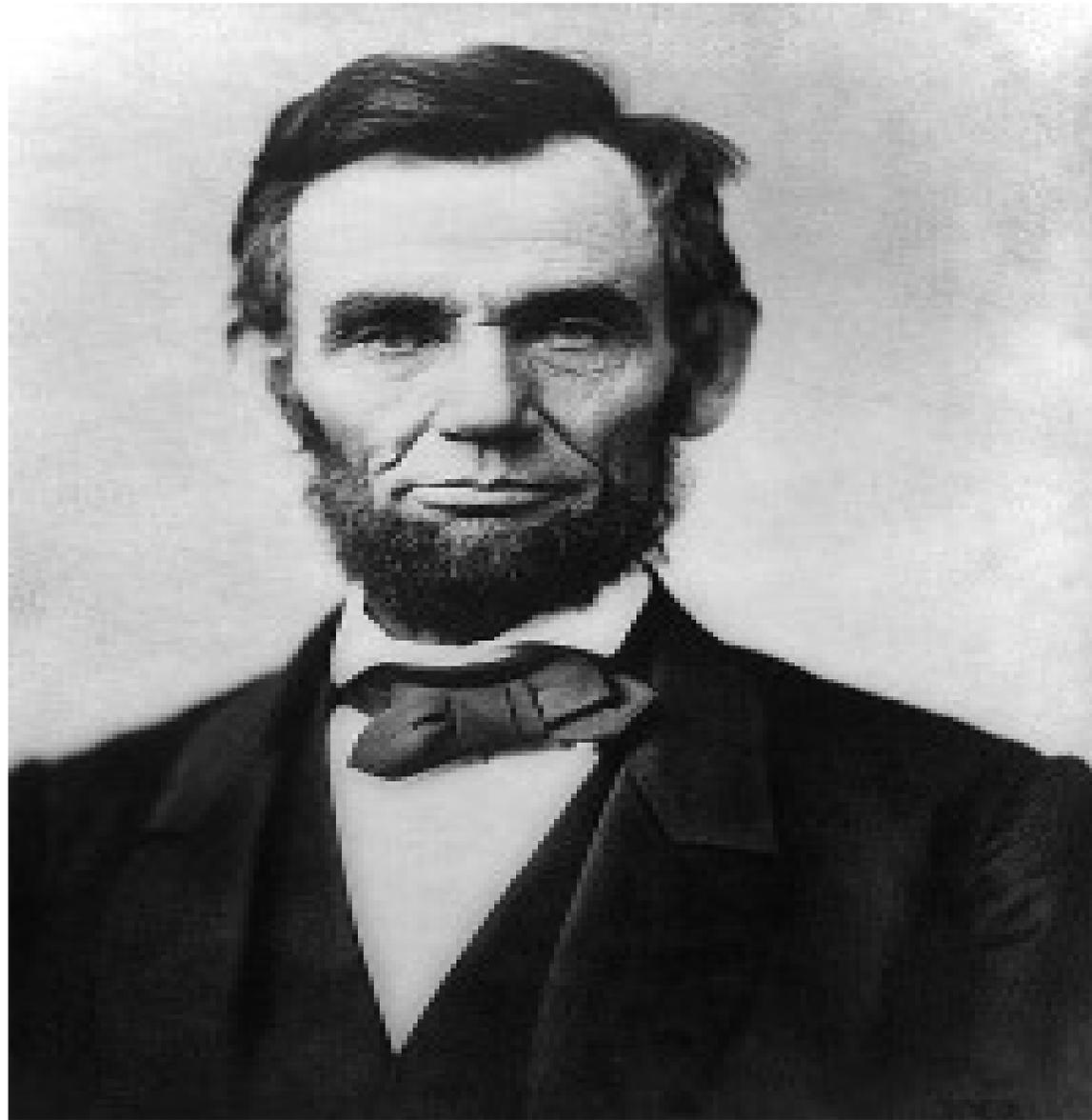
G R E A T

A R K A N S A

D E S E R T

Padouca or South Fork  
Highest Peak  
Potter Cr.  
Bijean Cr.  
Vernilion Cr.  
Ill. Castle Rock  
James' Peak  
Little Springs  
St. Charles Cr.  
Wharf Cr.  
Spanish Peaks  
Tous  
Chamo  
Pecuris  
St. Juan  
Nambe  
SANTA-FE  
Pino  
St. Domingo  
St. Ana  
Rio Grande  
Trap  
Dry Fork  
COUNCIL BLUFFS  
Wood R.  
Pawnee Villa  
PLATTE RIVER  
Republican Fork  
Solomons Fork  
Grand Saline Fork  
Smoky Hill Fork  
De Muns Cr.  
Arkansas River  
Little Arkansas R.  
Negraska or Red Fork  
Strong Sabine  
Saline Cr.  
Nesuketonga or Grand Sabine  
Road to the Osages  
Road to the Pawnees





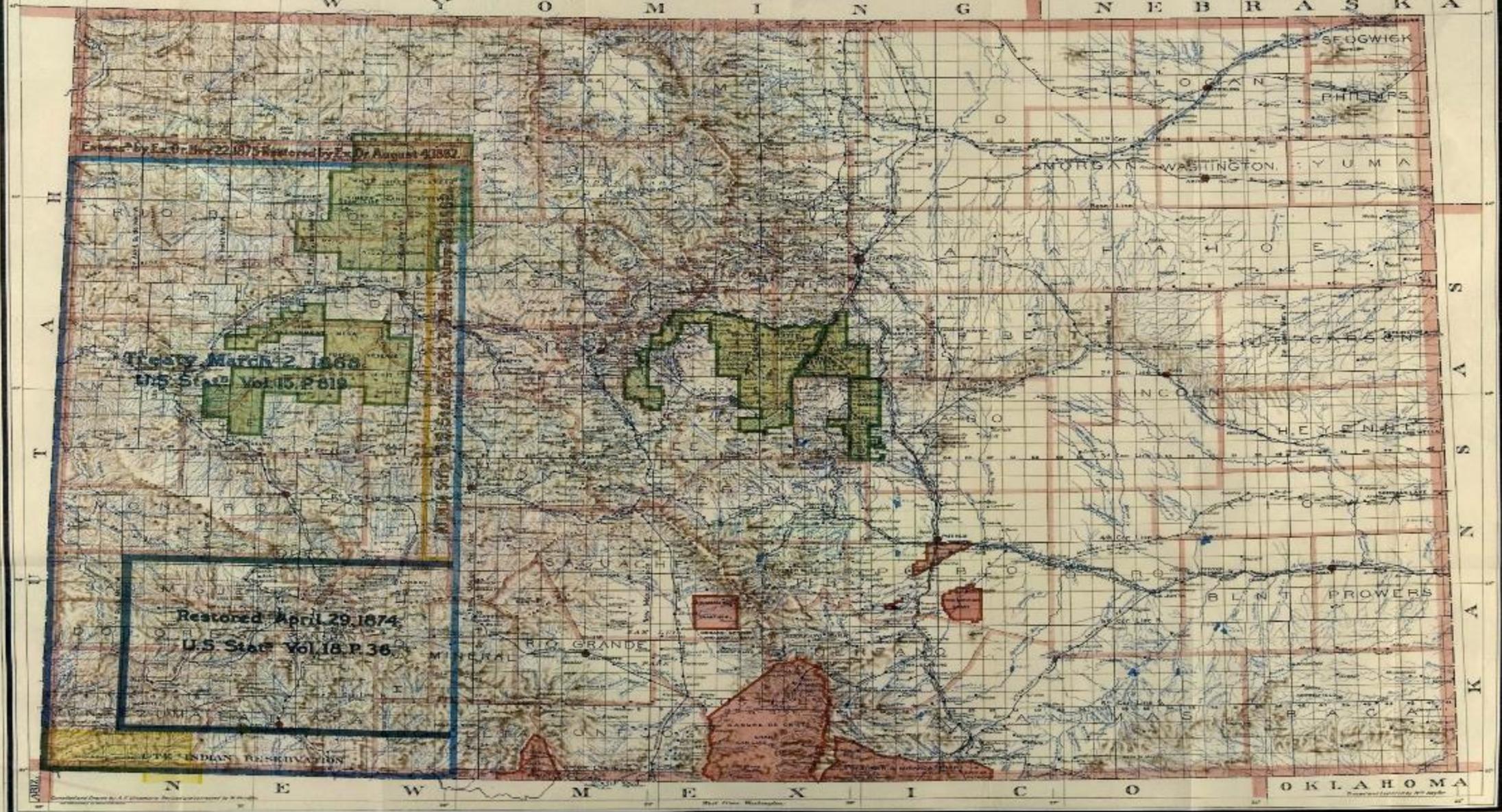
- LEGEND**
- Section 36 outside 1874
  - 1/4 Sec. 36 1874
  - Section 36
  - Section 36

DEPARTMENT OF THE INTERIOR GENERAL LAND OFFICE  
HON. DINGER HEIMANN, COMMISSIONER

# STATE OF COLORADO.

Compiled from the official records of the General Land Office and other sources  
under the direction of  
HARVEY KETCHUM, C. E.,  
Chief of Printing Division, G.L.O.  
1902.

Scale 1 inch = 75 Miles



W Y O M I N G N E B R A S K A  
S E G W I C K  
P H I L I P S  
M O R G A N W A S H I N G T O N Y U M A  
A R K A N S A  
B E T T  
L I N C O L N  
H E Y E N R I C H  
K A N S A S  
B L I N T P R O W E R S  
D O R S E  
M I N E R A L  
R I O G R A N D E  
O N T A R I O  
A R I Z O N A  
O K L A H O M A  
N E W M E X I C O







DELPHUS EMORY CARPENTER



Cultivated Fields in Cash Ranch near Greeley.

## CALL OF THE WEST.

WHY DO YOU RENT? Why give the best years of your life working for some one else? Own your own farm. You can do it on payments less than the rent you are now paying.

**Be Independent - DO IT NOW.**

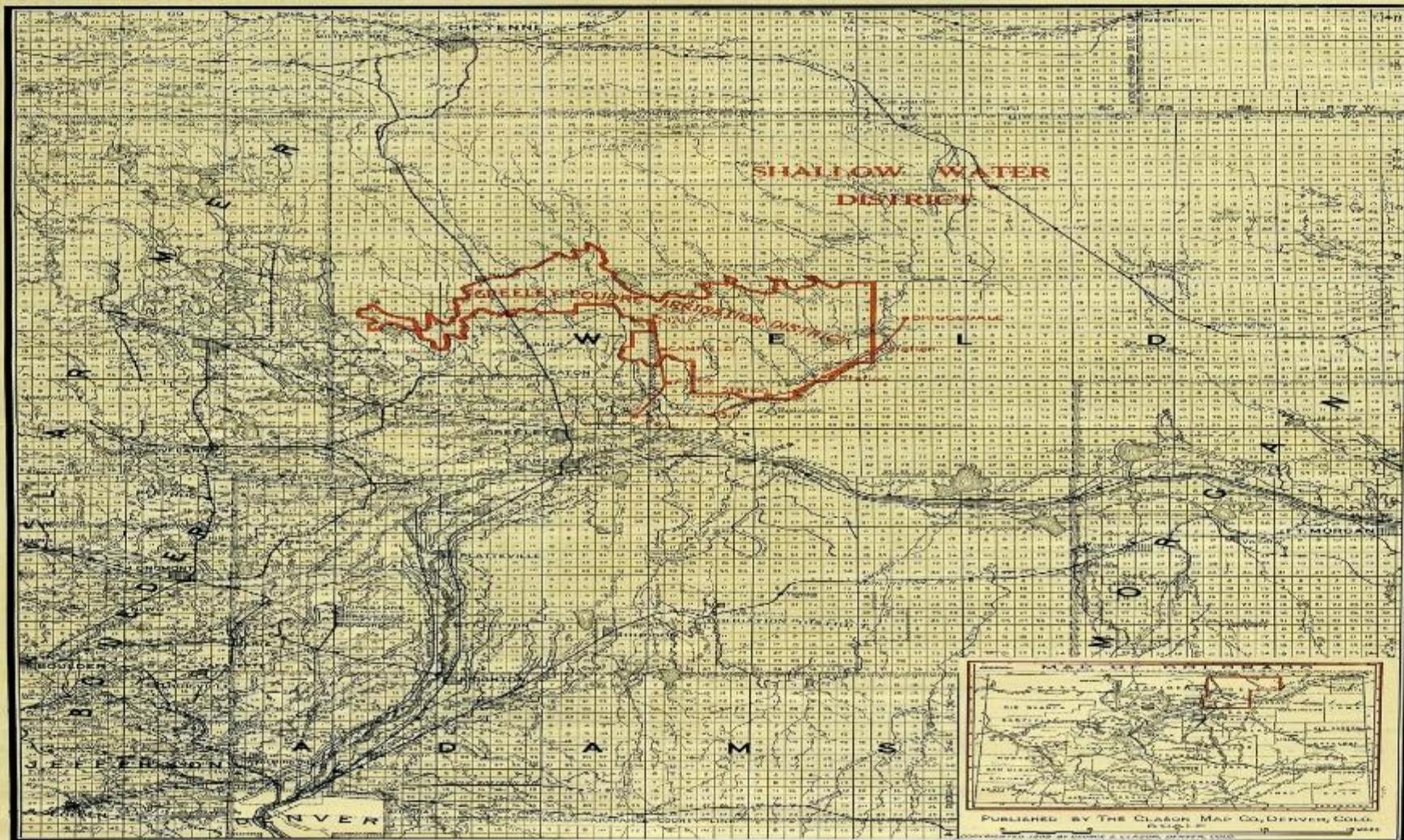


A Herd of Our Lead Sowers from ESTABLISHED FARM.

Clason's Map of the CACHE LA POUDE and SOUTH PLATTE VALLEYS, Colorado.

Sectional map of the best developed and most progressive irrigation county on the American Continent.

Showing the Greeley-Poudre Irrigation District, comprising about 110,000 acres.



PUBLISHED BY THE CLASON MAP CO., DENVER, COLO.  
 1911

Own a subdivided farm in our shallow water district - FERTILE CROW CREEK VALLEY  
 The cheapest and best water right on earth.



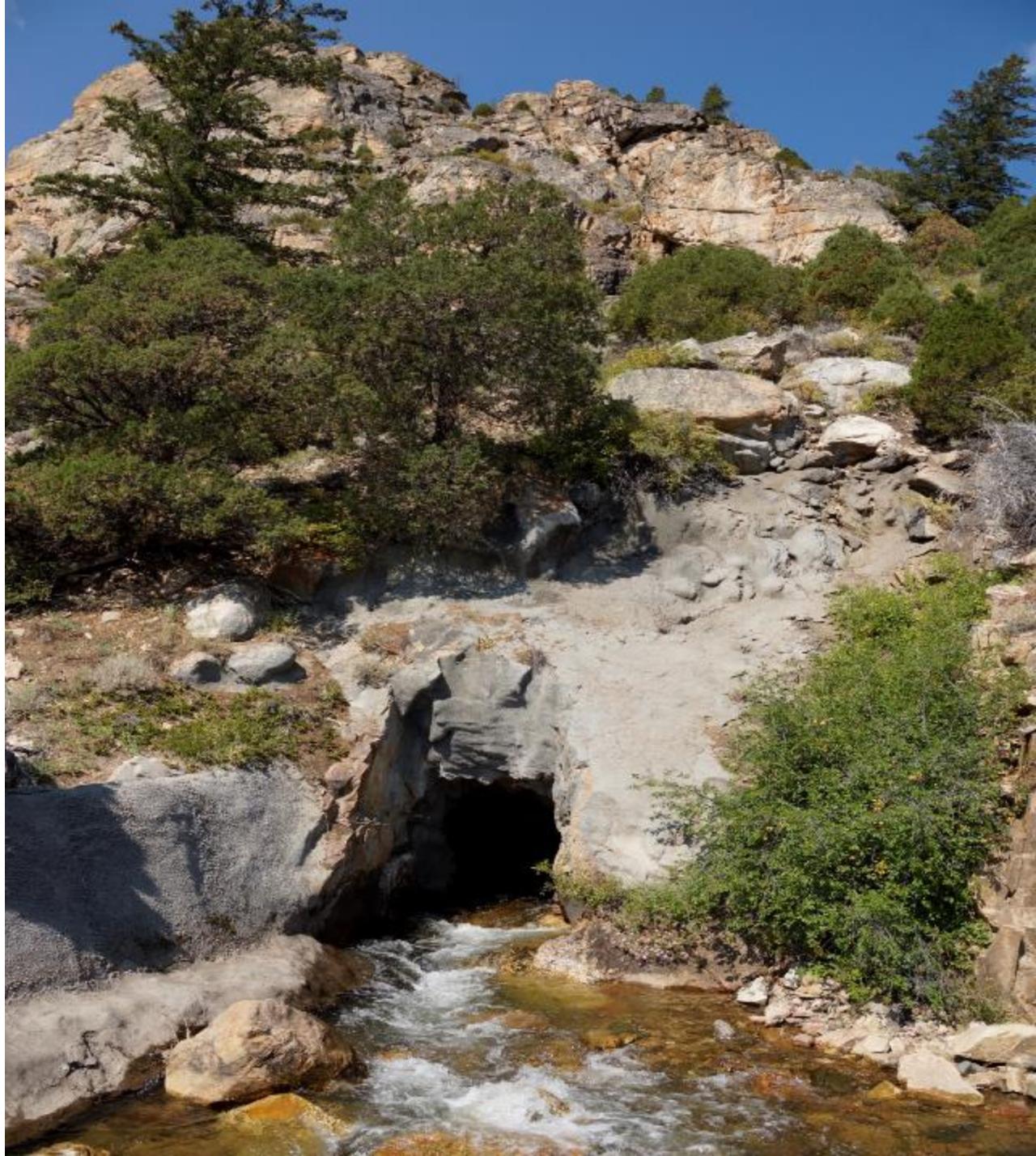
Wheat - Wheat Sown in February, 40 Bushels per Acre, without irrigation.

Compliments of  
**WILSON-PROCTOR REALTY CO.**  
 Grover, Colorado.  
 MAIN OFFICE, IRON BUILDING, DENVER.



Wheat Sown in Feb., with irrigation. Estimated by BUREAU OF AGRICULTURE, DENVER, WILSON-PROCTOR.







# WATER FOR ALL

## THE CACHE LA POUDE RIVER NATIONAL HERITAGE AREA

Welcome to the Cache La Poudre River National Heritage Area, the first and designated river of the Mississippi. Here you can experience a rich and complex array of places and activities that celebrate significant aspects of the American West in a river.

The Cache La Poudre River National Heritage Area includes nearly 45 miles of the "winding" Cache La Poudre starting where the river flows out of the Roosevelt National Forest and extending east past Greeley, almost to the confluence with the South Platte River.

The boundary of the 10-mile Corridor is the 100-year Memphis. The Heritage Area commemorates the significant contribution that the Cache La Poudre River has made to the development of water law in the western United States and the evolution of highly complex water delivery systems. In this seminal environment, these water delivery systems have been essential for survival, economic growth and development.

National Heritage Areas promote a relatively new concept. The concept encourages federal, state, and local government agencies, residents, government agencies, and private property owners — encouraging them to work collaboratively to achieve shared goals. Congress designated the Cache La Poudre River National Heritage Area, "to provide for the preservation of the natural and significant contributions to our national heritage of natural and historical and, wherever, and activities."

**Map of the Cache La Poudre River National Heritage Area**

**Legend:**

- Open Circle: Point of Interest
- Blue Line: River
- Green Line: Corridor
- Red Line: Road
- Blue Square: Water
- Green Square: Forest
- Orange Square: Recreation Area

**Scale:** 0 to 10 Miles

**Key Locations and Landmarks:**

- Quinn Secor Park
- Louis Park Park (Korona Park)
- Redstone
- Windsor Park
- Aspen
- Fort Collins
- South
- East
- Windsor
- Greeley
- Windsor
- Greeley

**Recreational Activities:**

- Fishing
- Hiking
- Wildlife Viewing
- Boating
- Swimming
- Canoeing
- Kayaking
- Mountain Biking
- Winter Sports

**Local Businesses and Organizations:**

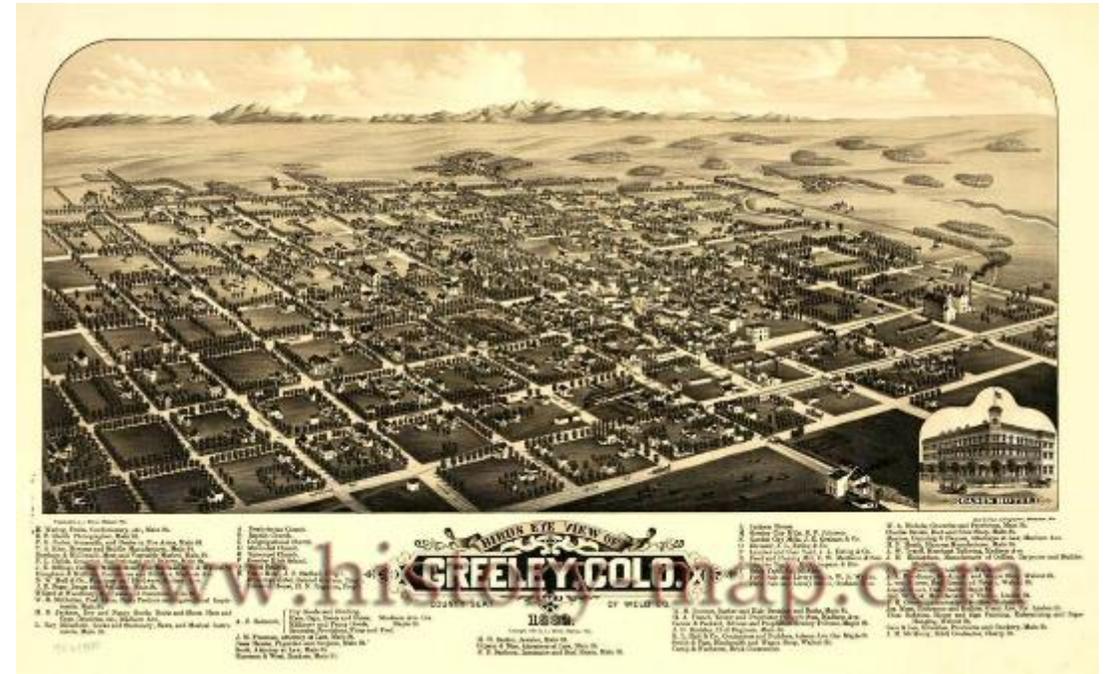
- Cache La Poudre
- Fort Collins
- Windsor
- Greeley

**Additional Information:**

- For more details on recreation, programs, and other opportunities, visit our website at [www.cache-lapoudre.gov](http://www.cache-lapoudre.gov)
- For a complete list of activities, visit our website at [www.cache-lapoudre.gov](http://www.cache-lapoudre.gov)
- For more information on the area, visit our website at [www.cache-lapoudre.gov](http://www.cache-lapoudre.gov)

# *Desert or Garden? The Union Colony Generation (1870-1900)*

- Primary emphasis of colonists was water for irrigation
- **Inclusion of urban water uses** made Union Colony different
- Poudre River water: **abundance, cleanliness, security and taste** (selling points for new settlers then and now)

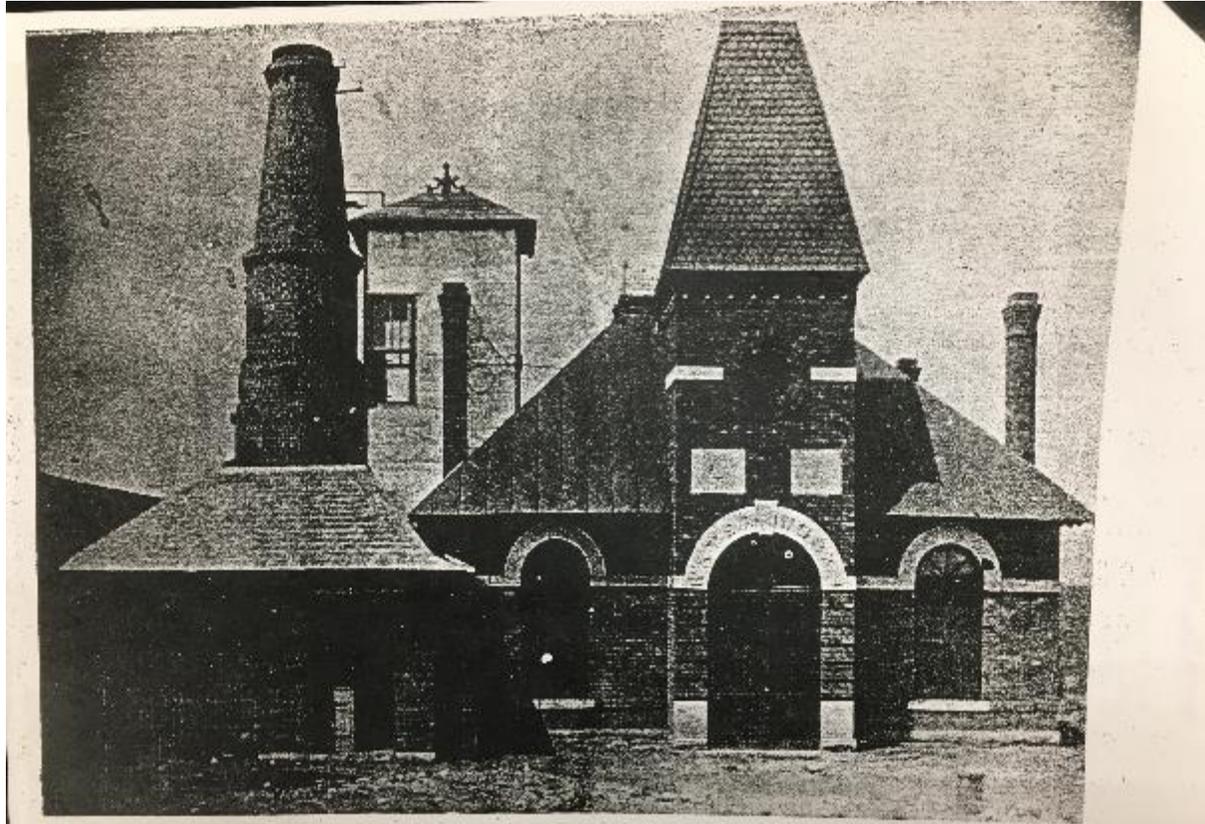


# *Water for the Union Colony (continued)*

- **Number 3 Ditch** devoted **three-eighths of water flow to “lawns and gardens”** of townspeople (water law said “use it or lose it”)
- Household water came originally from wells drilled in the Poudre aquifer



# *Greeley's First Water Works Plant (1888)*



Shown above the old water works in Greeley built around 1888. The plant was located near the C. & S. Tracks south of Island Grove Park and West of 14th Avenue.

W. Lloyd Garrison  
of Greeley, Colorado

# *Greeley Water and the Progressive Era (1900-1930)*

- Static population growth (3,000 people by 1900) versus Denver's 135,000 (larger than Los Angeles)
- Aging of the Union Colony generation
- Decision to encourage **food production** within city limits because of access to river, water wells, rail line, etc.
- **Great Western Sugar Company** arrives in 1901; invests \$20 million in harvesting of sugar beets; processing of liquid sugar



# *Greeley Water and the Progressive Era (continued)*

- Need to purchase more water from Poudre River
- **Whedbee Ditch (at right)** above Fort Collins in 1901 (still in use)
- **Idea follows example of New York City:** taking of water from the Catskill Mountains by wooden pipeline to avoid pollutants
- **Result is NYC's boast of "champagne waters"**



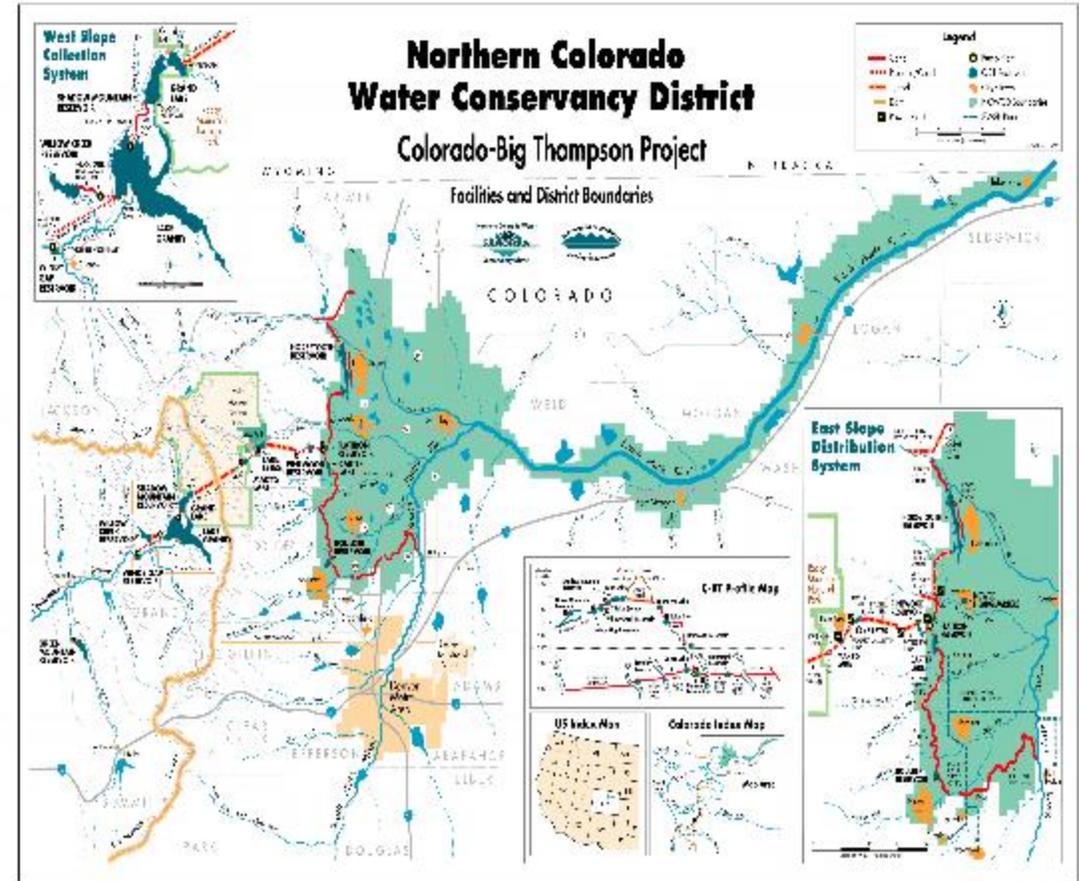
# *Greeley Water Responds to Challenges Local and Global (1930-1960)*

- Next generation faces double burden of **Great Depression** and the **Dust Bowl**
- Efforts to find high-mountain water checked by state of Wyoming in US Supreme Court
- Greeley leadership turns to FDR's New Deal agencies for help (private sector could not help anymore)



# *Greeley Water Responds to Challenges Local and Global (1930-1960)*

- Building of the **Colorado-Big Thompson Project (1937-1954)**: 310,000 acre-feet of water to augment limited supplies
- Farmers were first to use the water; Greeley acquired five percent of the “shares” for urban use (15,000 shares)
- Secure source of water from the Colorado River changes the face of the “Front Range” (**cities now own two-thirds of CBT waters**)



# *Greeley Water and the Environmental Age: 1960-1990*

- Denver and Northern Colorado start shift from agriculture to urban/industrial water uses
- Greeley continues emphasis on food processing within city limits with massive feed lots; **Monfort meat plant** built in 1958; Great Western stays until 1985
- Greeley pursues ambitious water purchases from retired farmers; engages in “**lease-back**” policy to keep farms in production; supports large storage dam above Fort Collins
- Pressure from federal government and environmental groups for cleaner water; “in-stream” benefits in the Poudre; blocking of dams and reservoirs, etc.



gwp100028 fotosearch.com

# *The 21st Century: Urban Growth and Rural Communities*

- Colorado at a Demographic Crossroads: 10 million people by 2050 (5 million in Denver alone)
- Northern Colorado: 2 million people by 2050 (tripling of population); Greeley could have 240,000 people in 30 years (up from 100,000)
- How to provide water for all? **What would the Union Colonists advise?**
- Mixture of conservation and water purchases; density of urban development; new generation's lifestyle that is less water-dependent?

