

Water Issues in Butte County

Part 1



League of Women Voters of Butte County



Key Questions

- 1. Where does YOUR water come from?*
- 2. How is it distributed?*
- 3. Why does it matter?*

Let's take a quick poll!

Key Terms

- Cubic foot - cf
- Acre foot - af
- Consumption unit - cons unit
- Cubic feet per second - cfs
- Surface water rights
 - Riparian rights
 - Appropriative rights
 - Water Commission Act of 1913
- Groundwater
- Types of districts - water, irrigation, municipal, special

cubic foot - 7.48 gallons of water



consumption unit - one CCF (centum cubic feet)
 or "cons unit" = 748 gallons (100 cubic feet)

Cal Water services detail
 from 11/28/19 - 12/31/19

1" service w/line sprinklers	\$14.36
5.80 CCF at \$1.7435 per CCF	\$9.72
WSMAM charges or credits	\$1.28
CPUC Fee	\$0.29
Other Charges & Credits	-\$0.87
Local Tax (7%)	\$1.19
Public Purpose Programs	\$0.44
Charges, Fees and Taxes Total	\$25.41

Conservation target*

Usage	5 CCF	Target	6 CCF
	3,740 Gallons		4,488 Gallons

Year target	Under target	Most months target
0 CCF	1 CCF	8 CCF
0 Gallons	748 Gallons	4,488 Gallons

* The voluntary conservation target in your district is 20% compared to 2013. Exceeding this target does not impact your water bill, as drought surcharges were eliminated in 2018.



Additional services detail

Santer Check 11/28/19 - 12/31/19	
City sewer fee	\$22.98
Other Services Total	\$22.98

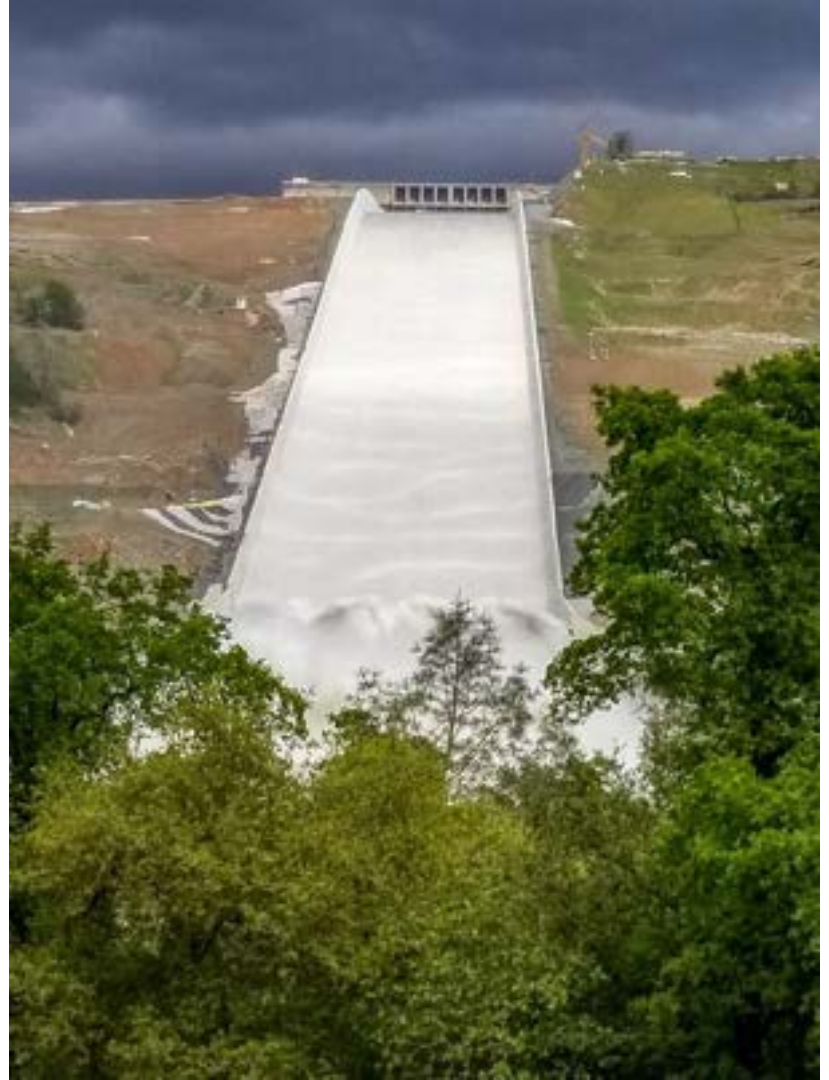
acre foot - 325,851 gallons of water



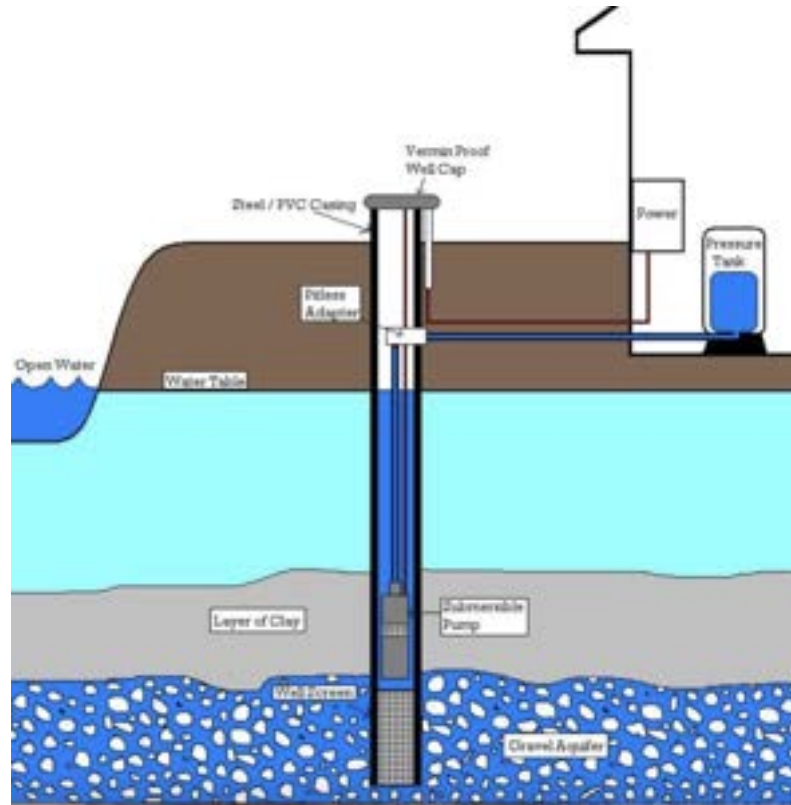
**cubic feet per second
(cfs) -**

amount of water moved
per second past a single
point

A release of 1200 cubic feet per second from Oroville Dam would equal over 32 million gallons per hour.



Groundwater - water stored in aquifers and accessed via wells



Surface water - water available from river, stream, creek, lake or reservoir



Surface water rights -

Permitted use of surface water from a defined watershed or creek or river and the ability to use and store that water for reasonable and beneficial use.

Two Types of Rights

Riparian

Appropriative



Paradise Lake
(Water is drawn by Paradise
Irrigation District.)

Riparian Rights - property along waterways

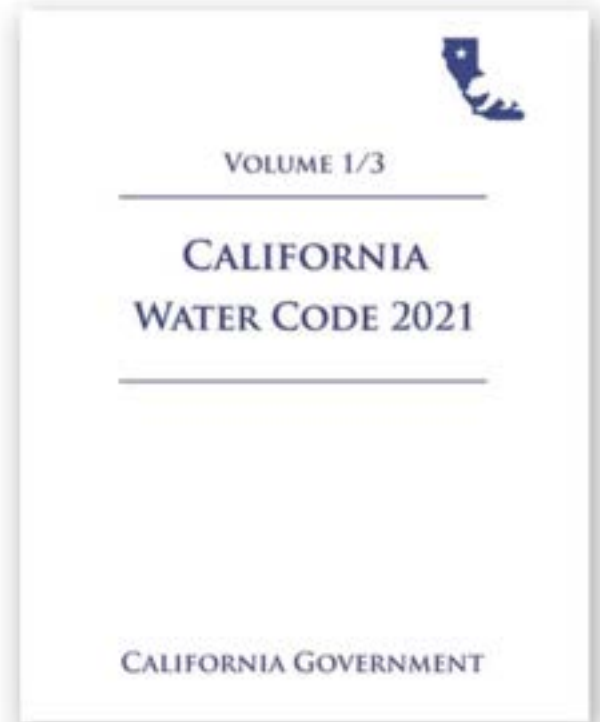
Appropriative Rights - property not along a waterway nor immediately adjacent



**Water
Commission
Act of 1913**

Water district
Irrigation district
Municipal district
Special district

All agencies that deliver surface & groundwater to end users whether it be drinking water or irrigation water.



**These agencies
operate under the
CA Water Code.**

Key Question #1:

Where does your water come from?

Eastern Butte County Watershed



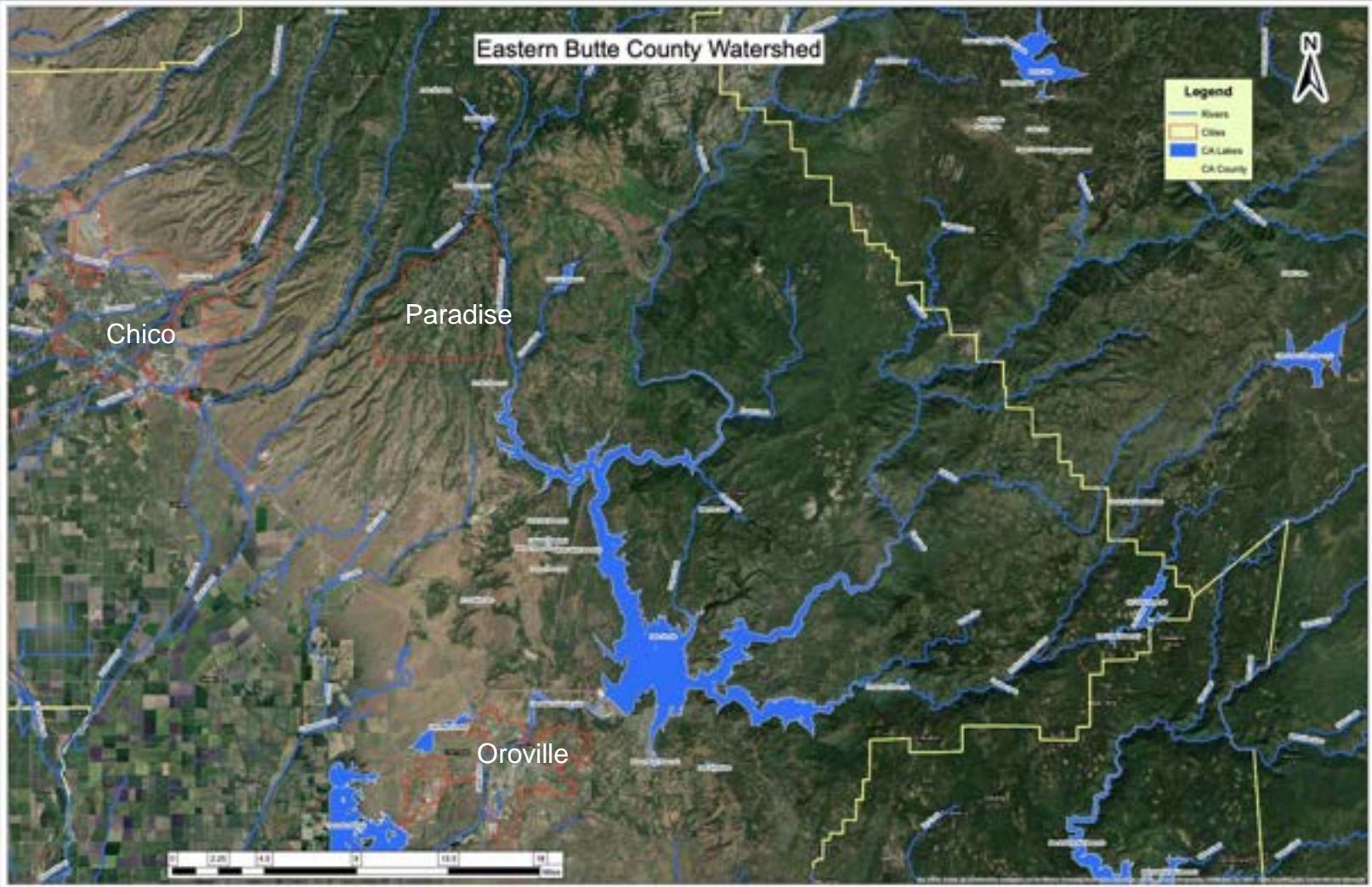
Legend

- Rivers
- Cities
- CA Lakes
- CA County

Chico

Paradise

Oroville



Butte County

To Redding



Butte College

Parade Rd

To Sacramento

Rural Well House



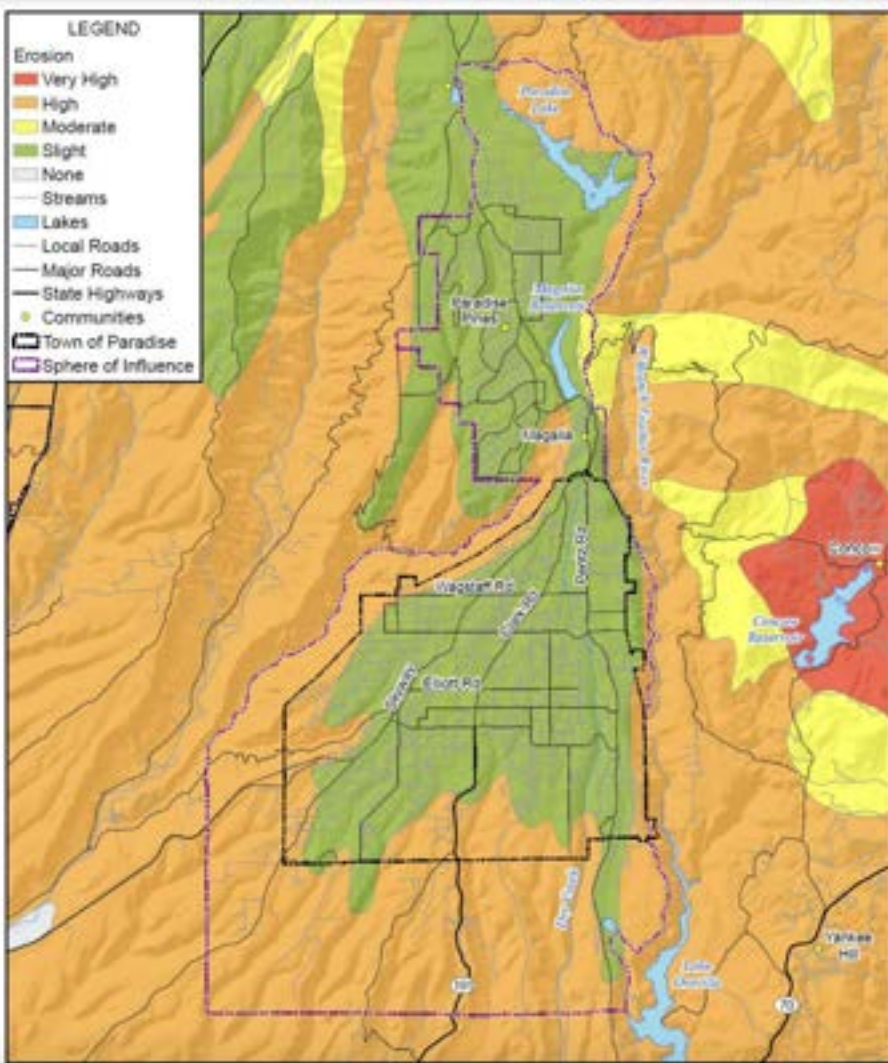
Key Question #2:

Who has control of the water? How is it distributed?

Seven Major Suppliers of Water to Residents

- Paradise Irrigation District (PID)
- Del Oro Water Company
- Thermalito Water (and Sewer) District
- South Feather Water and Power Agency
- Cal Water Oroville
- Cal Water Chico & Hamilton
- Cities of Biggs and Gridley

Paradise Irrigation District



Source: Surface water from Little Butte Creek Watershed some of which is stored in the Paradise Lake and the Magalia Reservoir as well as some direct diversion.

Paradise Irrigation District



Infrastructure:

- 170 miles of pipeline (moving treated water)
- One groundwater well (350 acre feet per year)
- Magalia Dam
- Intertie to serve Paradise Pines (community)
- Treatment plant 22.8 MGD, capacity

Rates: Residential \$42.97/mo., includes flat \$20 for water (not currently metered; metering by the end of 2022)

Paradise Irrigation District





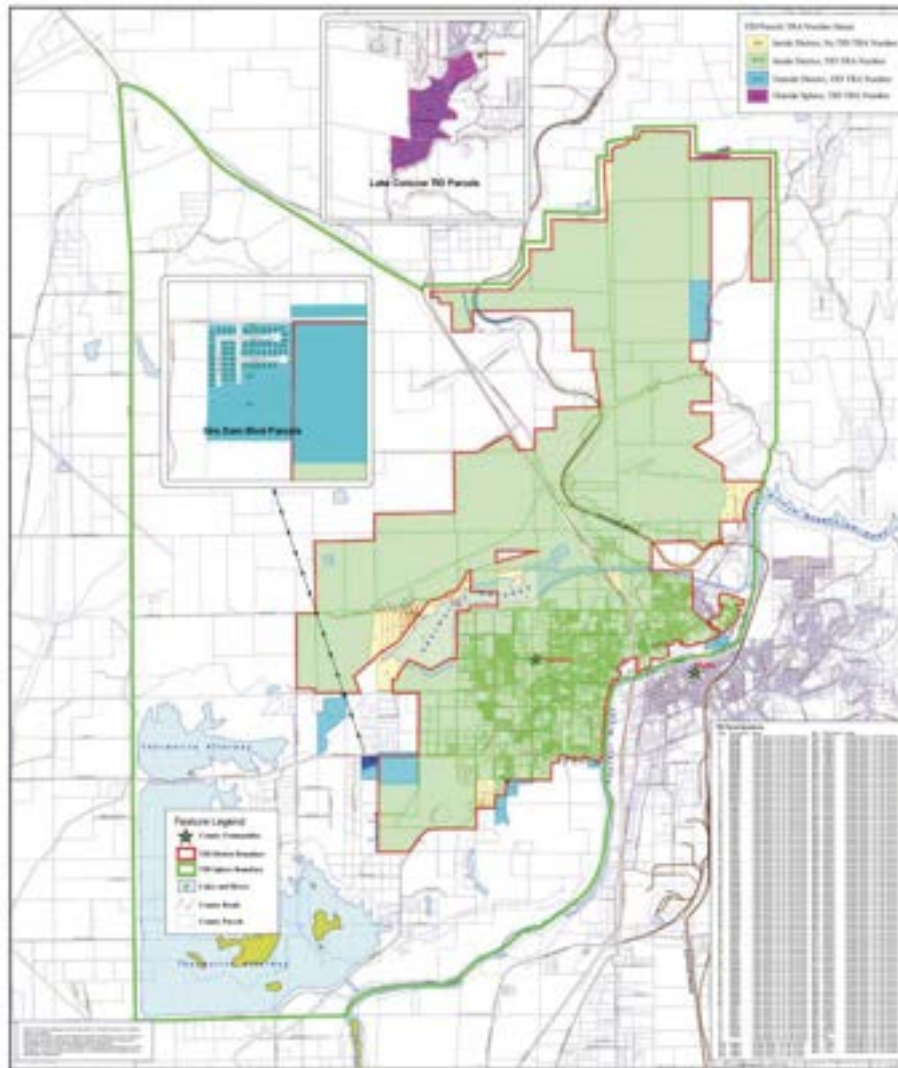
Serves 8000 customers in upper Magalia and Paradise Pines.

Infrastructure:

- Groundwater and treated water purchased from PID in Paradise Pines (lower Magalia)
- Pump groundwater (upper Magalia)

Rates:

- Upper Magalia: \$39.11 Meter \$5.16 per 1,000 gallons
- Paradise Pines: \$34.05 \$3.553 per CCF



Source:
Concow
Reservoir and
groundwater
wells

Thermalito Water District



Infrastructure:

- Wells and reservoir
- Treatment plant

Rates: For residential with 3/4 " meter is \$28.84 (flat or meter fee) plus \$ 0.74 per cubic foot (748 gallons)

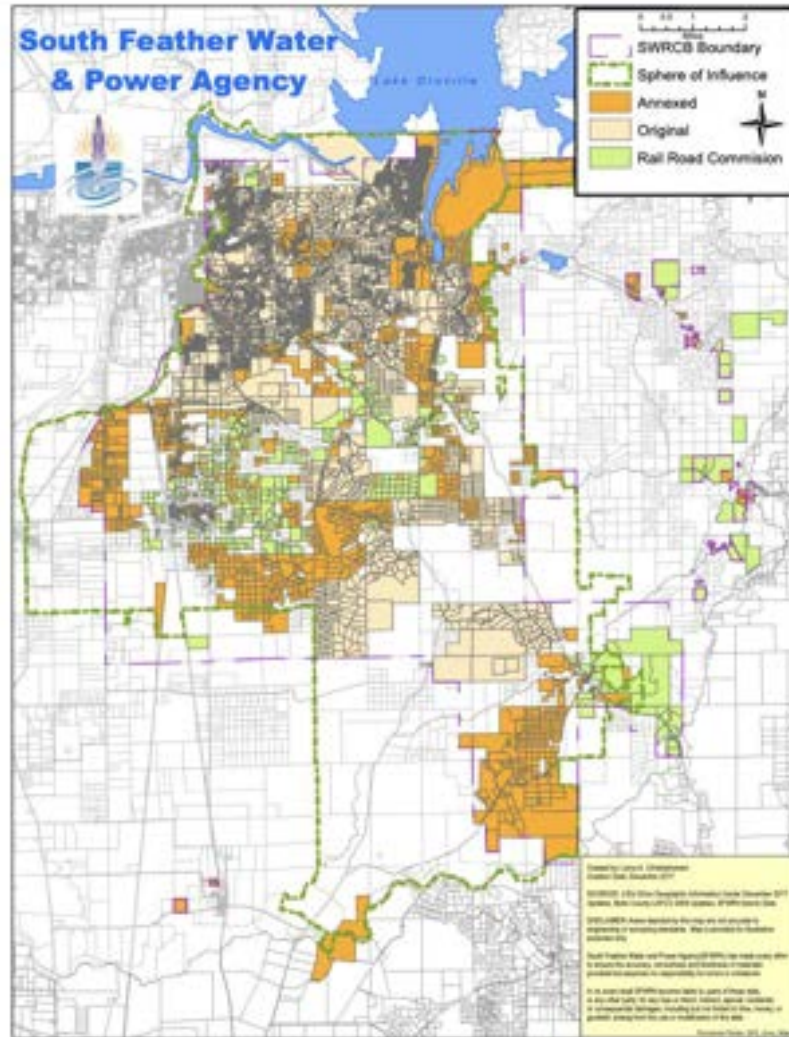
Diversion Dam



Thermalito Power Canal



South Feather Water & Power



Source: All surface water from the south fork of the Feather River

South Feather Water & Power



Infrastructure (in southeast Butte County):

- Little Grass Valley reservoir (also recreational) + other smaller reservoirs
- Five small dams
- Water treatment plant (near Lake Oroville/ Kelly Ridge area)
- 160 miles of open-water canals (untreated water to ag users in SE Butte)

Rates:

- Untreated for ag use - 13 cents per cons unit (748 gallons)
- Treated for residential/commercial use - flat rate \$19 per month + 42 cents per cons unit (metered)



“miner’s inch”



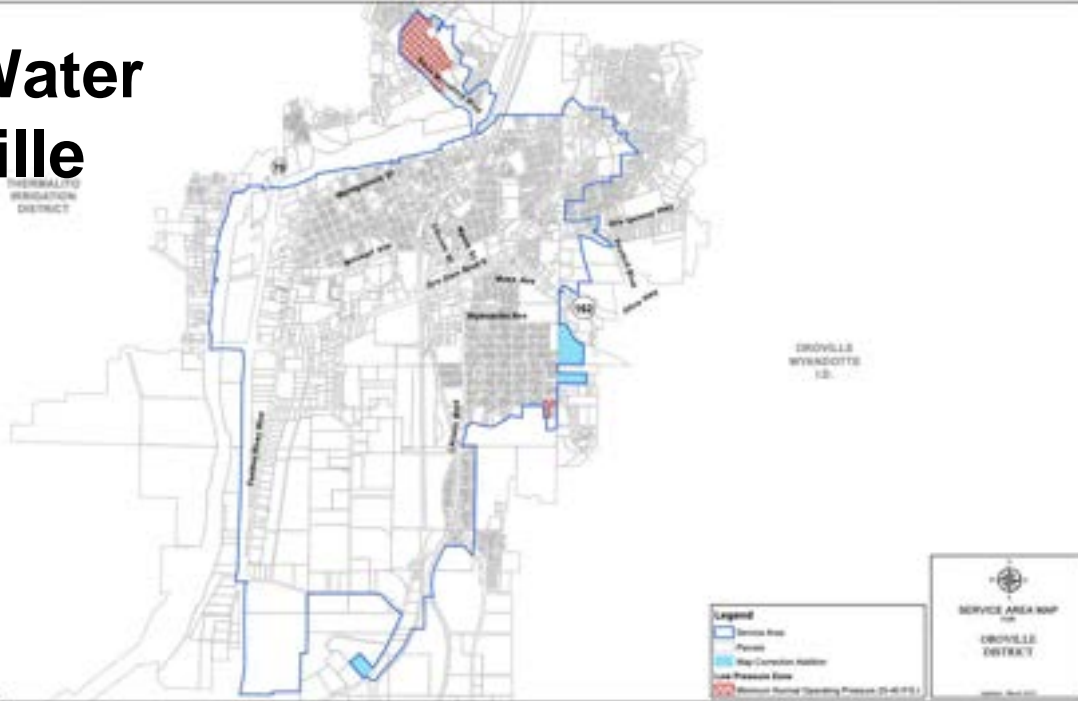


CALIFORNIA WATER SERVICE
1720 North First Street, San Jose, CA 95111
(408) 957-8200

Sheet: Cal P.U.C. Sheet No. _____
Containing: Partial, Cal P.U.C. Sheet No. 2020B

Cal Water Oroville

HERBERT
WYNDGOTT
DISTRICT



Source:

Mostly surface water from the west branch of the Feather River (purchased from PG&E) and local water in four ground wells (only used with high demands).

NOTE:
This map was not considered for the Public Utilities Commission of the State of California as a final certificate determination or establishment of the authorized area of service or any other public method.

Address Letter No. _____
Sheet No. _____

Sheet
Final Version
The Director of Water

Date Filed _____
Effective _____
Revision No. _____

Cal Water Oroville



Infrastructure:

- 2 storage tanks
- 2 reservoirs
- 6 booster pumps
- Treatment plant

Rates: Residential $\frac{5}{8}$ inch meter flat service charge \$28.49 plus \$2.62 per “cons unit” (increases with quantity)

Cal Water Chico & Hamilton City Systems



Source: Well water supplied to Chico, surrounding areas and Hamilton City



Cal Water **Chico** (Chico & Hamilton City Systems)

Infrastructure:

- **Chico District** has 68 wells, pumps an average of 27 million gallons of ground water a day with 373 miles of pipeline, 8 storage tanks, 9 booster pumps.
- **Hamilton City** has 3 wells, pumps .56 million gallons a day with 7.7 miles of pipeline. An upgrade in March 2021 added 3.15 thousand feet of pipe.

Rates: \$15.34 for $\frac{5}{8}$ " pipe meter service charge + \$1.51 per CCF
(\$1.51 per 748 gallons of water)



Cities of Biggs & Gridley

Source: Ground water from wells



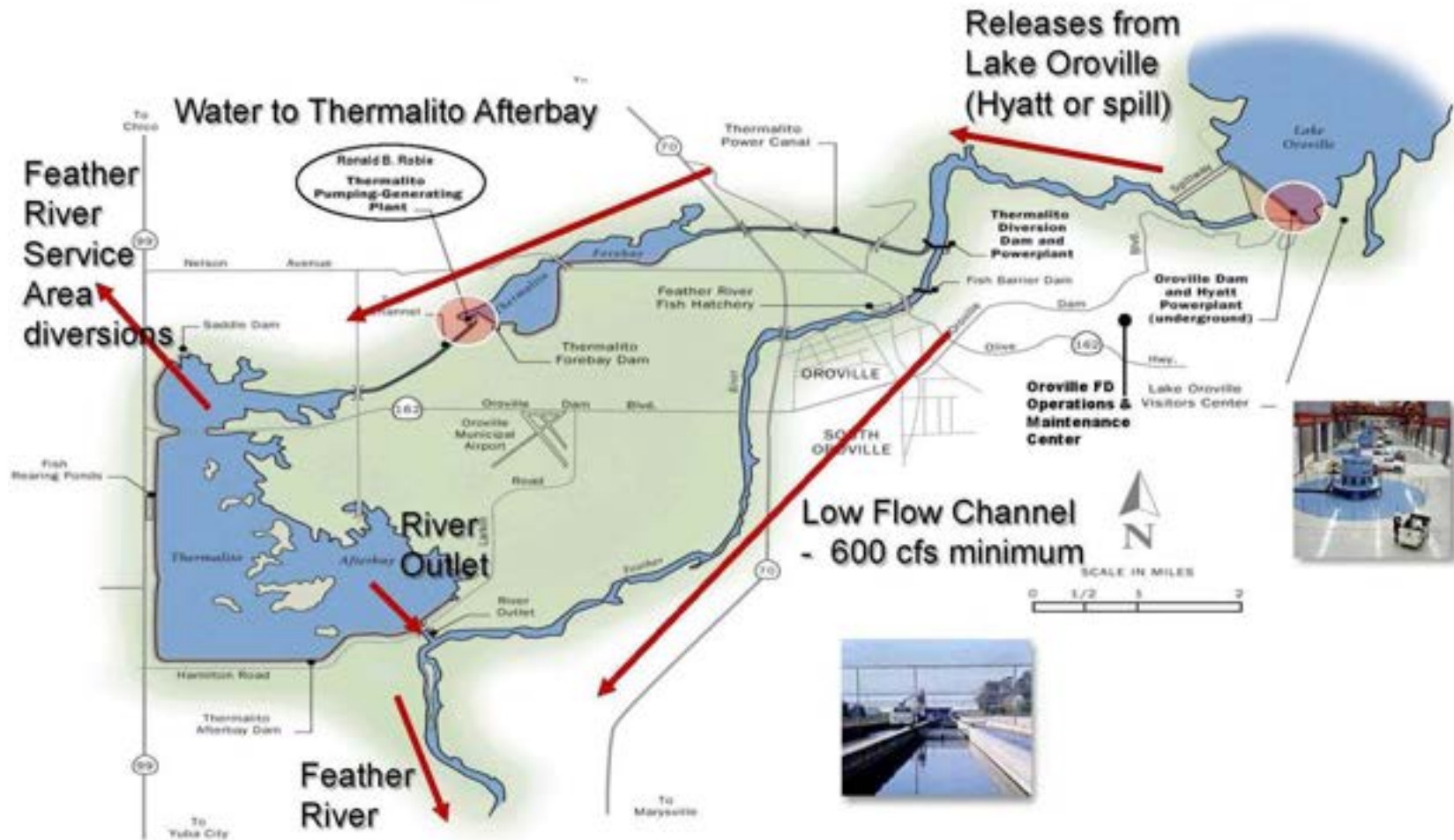
Infrastructure:

- Ground water wells operated by each city's public works dept.
- Water treated with chlorine at each well site
- Cities of Biggs & Gridley lie within the boundaries of Biggs-West Gridley Water District, specifically Butte Water District.

Rural canals



Afterbay
Release
Points



Key Questions

- 1. Where does YOUR water come from?*
- 2. How is it distributed?*
- 3. Why does it matter?*

Key Question #3:

Why does it matter?

WATER is the *source of life!*





Sustainable Groundwater Management Act (SGMA)

term. SGMA is comprised from a three-bill legislative package, including AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), and subsequent statewide Regulations. In signing SGMA, then-Governor Jerry Brown emphasized that "groundwater management in California is best accomplished locally."

SGMA requires local agencies to form groundwater sustainability agencies (GSAs) for the high and medium priority basins. GSAs develop and implement groundwater sustainability plans (GSPs) to avoid undesirable results and mitigate overdraft within 20 years.

DWR serves two roles to support local SGMA implementation:

- 1) Regulatory oversight through the evaluation and assessment of GSPs
- 2) Providing ongoing assistance to locals through the development of:
 - Best management practices and guidance
 - Planning assistance
 - Technical assistance
 - Financial assistance

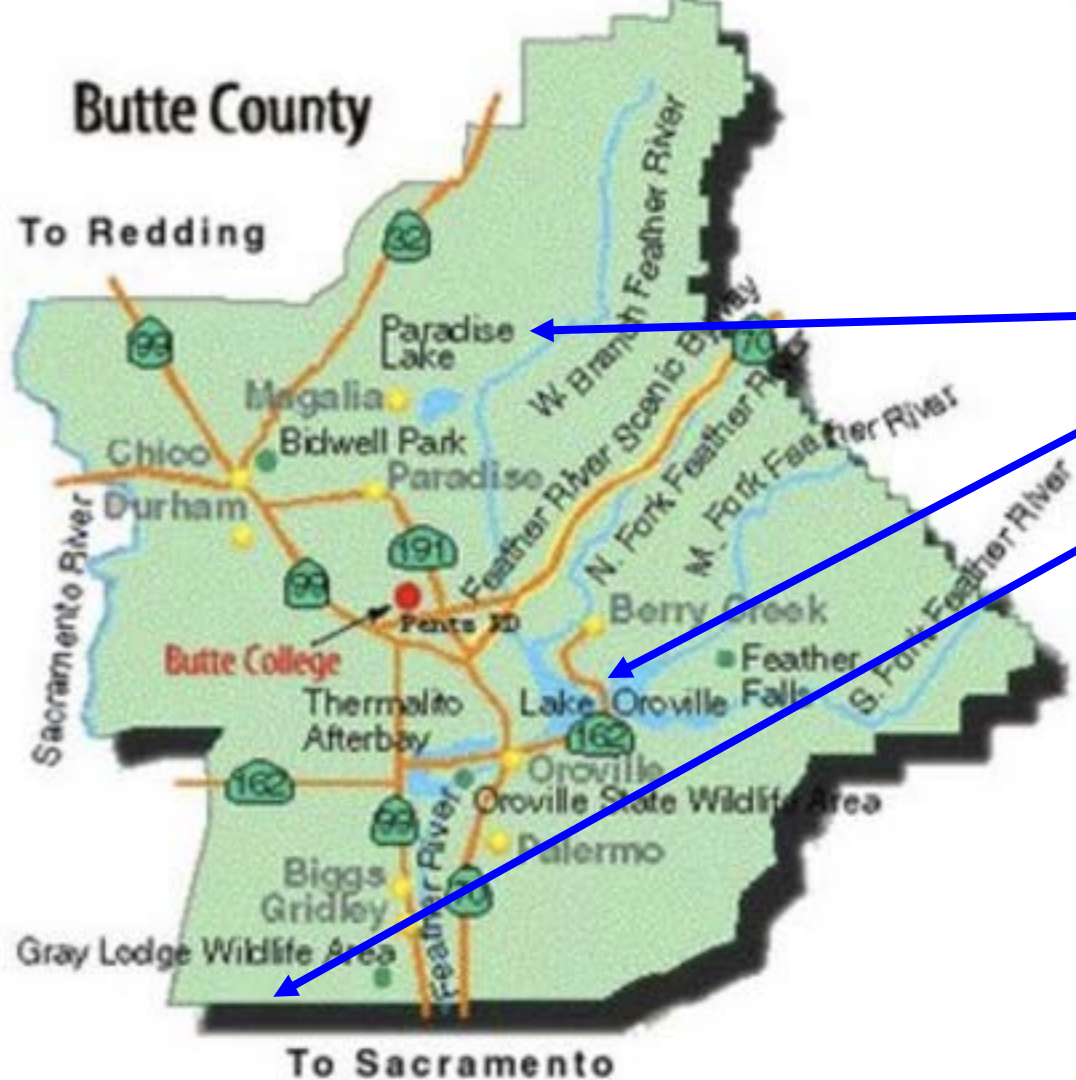
Learn more about SGMA and the importance of groundwater by viewing the video below and the SGMA Groundwater StoryMap.

▶ Sustainable Groundwater Management Act (SGMA)

- ▶ [Groundwater Sustainability Agencies](#)
- ▶ [Groundwater Sustainability Plans](#)
- ▶ [Alternatives to Groundwater Sustainability Plans](#)
- ▶ [Best Management Practices and Guidance Documents](#)
- ▶ [Adjudicated Areas](#)

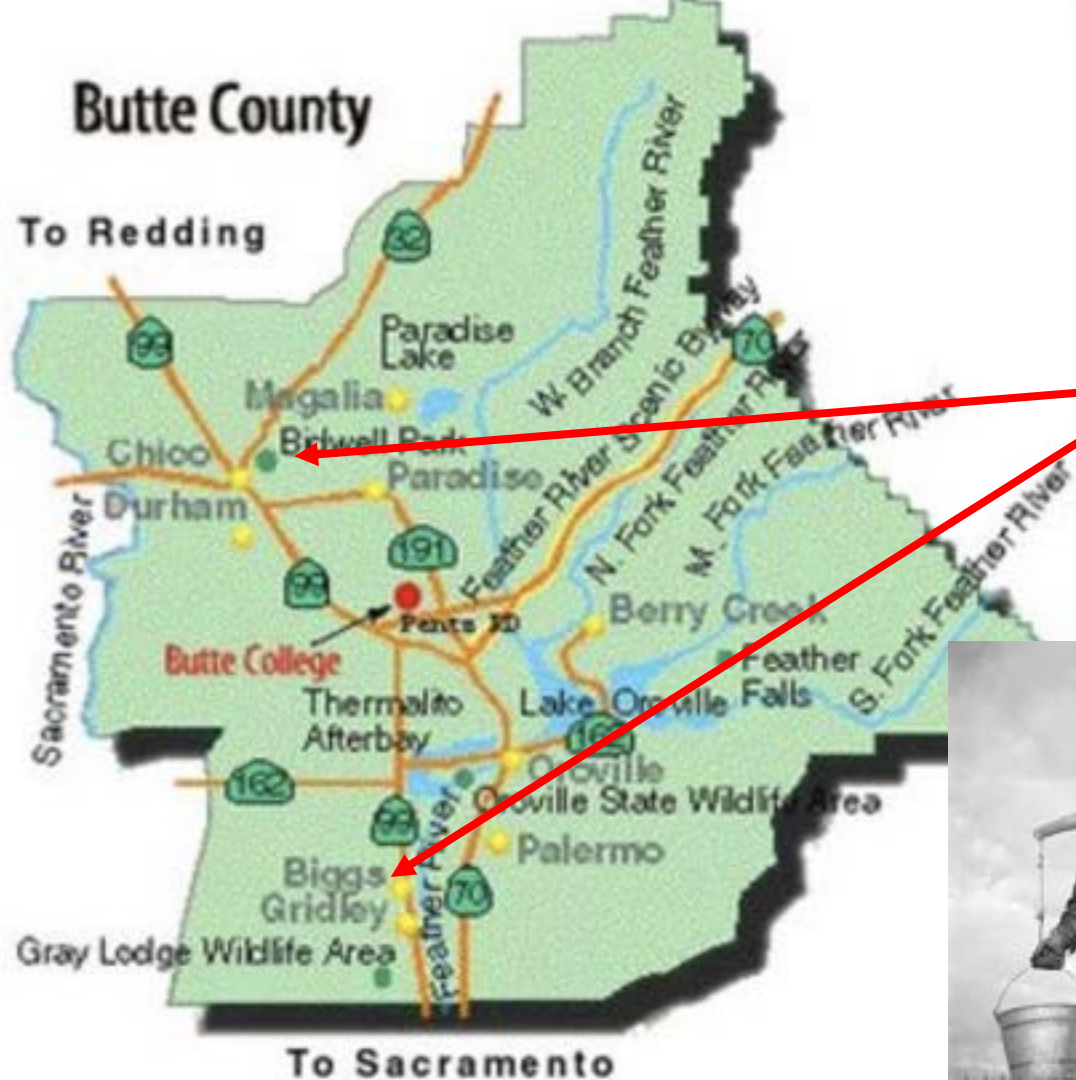
Contact Us

General Inquiries:
sgmps@water.ca.gov



Plenty of surface water to meet needs





Groundwater restrictions may limit population & farm expansion



Part 2 Water Issues in Butte County

Water availability

Costs

Infrastructure Needs

Legal ramifications

Potential liabilities



Resources

League of Women Voters of Butte County <https://my.lwv.org/california/butte-county>

Paradise Irrigation District - www.pidwater.com; (Documents - PID Options Identification Report), p. 17

South Feather Water & Power Agency - www.southfeather.com

Cal Water, Chico - www.calwater.com; select District

Cal Water, Oroville - www.calwater.com; select District

City of Biggs www.biggs-ca.gov/City-Services/Utilities/Water/index.html

City of Gridley - www.gridley.ca.us; Public works Department

Thermalito Water & Sewer District - www.twsd.info

California Department of Water Resources (DWR), www.water.ca.gov, manages State Water Project (Lake Oroville)

Butte County [Water and Resource Conservation > Home \(buttecounty.net\)](http://buttecounty.net)

Questions?



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Part 1

**Thank you
for coming!**

League of Women Voters of Butte County