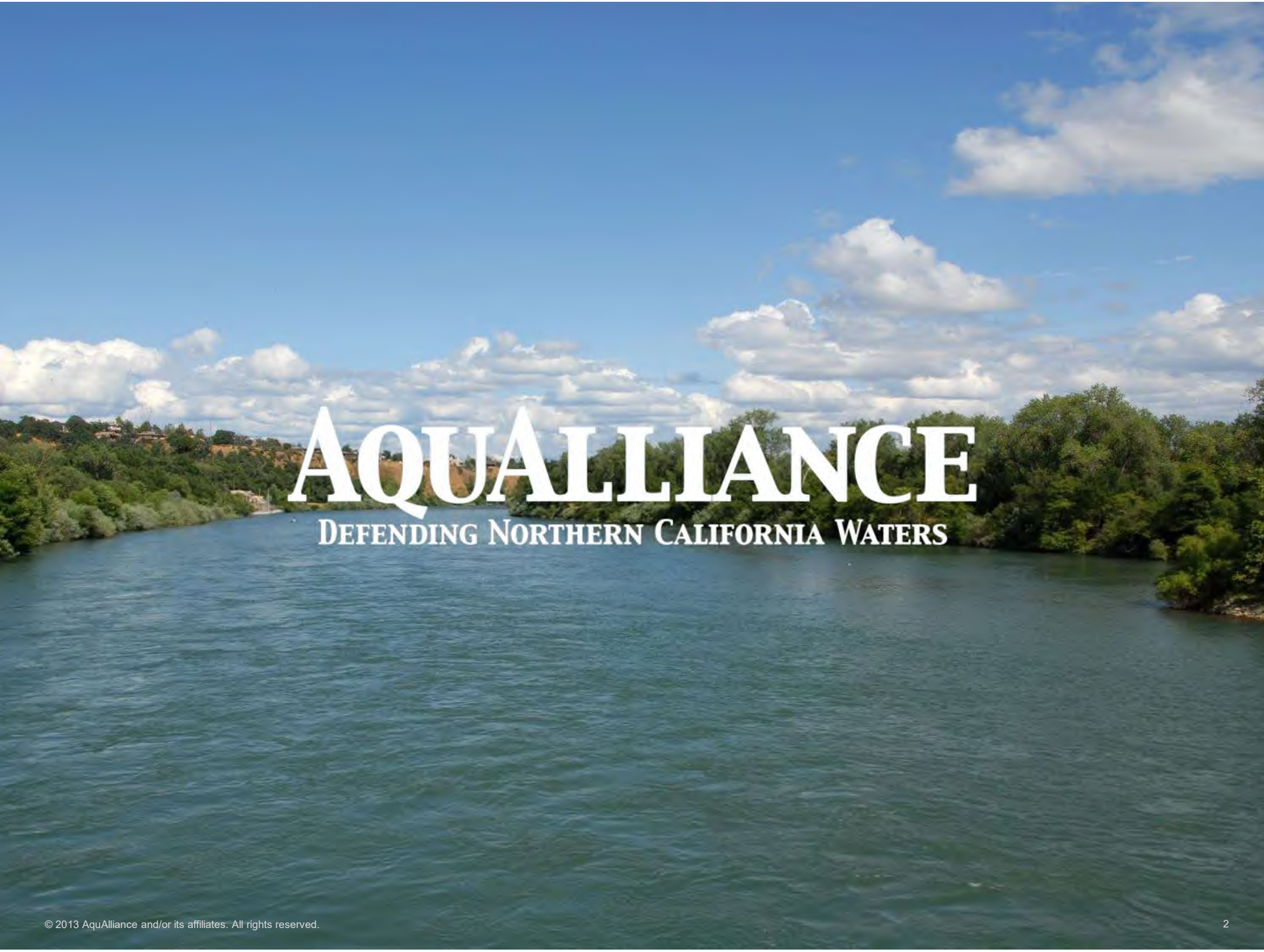
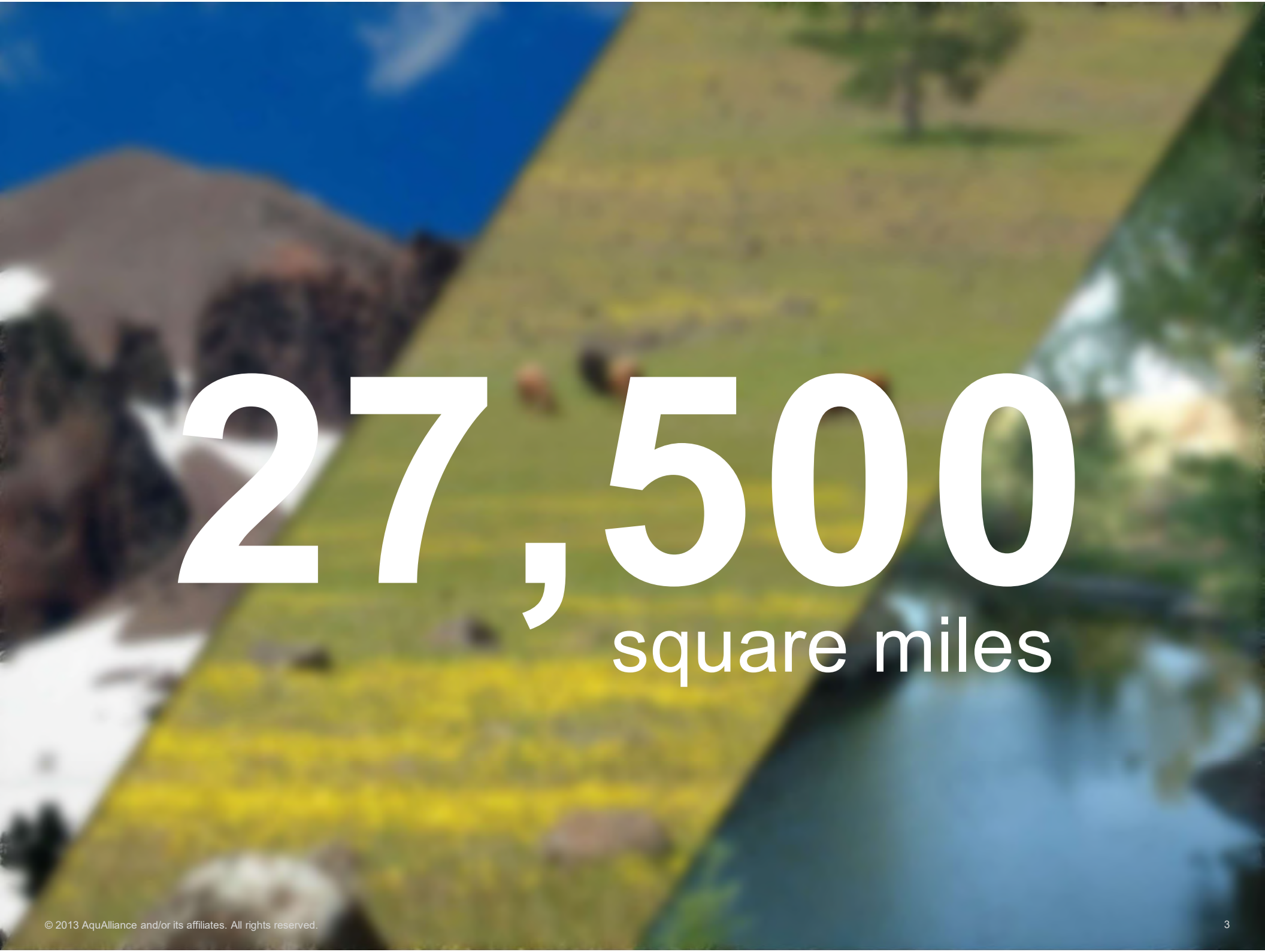
LWV Presentation

Chico

January 10, 2026





#1 PROBLEM

OVER-ALLOCATED WATER SUPPLY

Paper Water

The average unimpaired runoff of the Sacramento River basin is 21.6 MAF, but the consumptive use claims approved by the state are an extraordinary 120.6 MAF – 5.6 times more claims than there is available water.

California Water Impact Network, AquAlliance, and California Sportfishing Protection Alliance 2012. *Testimony on Water Availability Analysis for Trinity, Sacramento, and San Joaquin River Basins Tributary to the Bay-Delta Estuary*.

UNREALISTIC EXPECTATIONS

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ENDLESS DEMAND

#2 PROBLEM
Aquifer Privatization

Aquifer Privatization

"A recent California Supreme Court decision in *City of Los Angeles* v. *City of San Fernando* will facilitate operation of the ground water basins in conjunction with surface water supplies. In that case the Court held that an agency importing water into a basin has a right to recapture the imported water that percolates into the ground water and can prevent such water from being taken by overlying landowners or appropriators. The Court also held that water rights held by public agencies and public utilities cannot be lost through prescription."

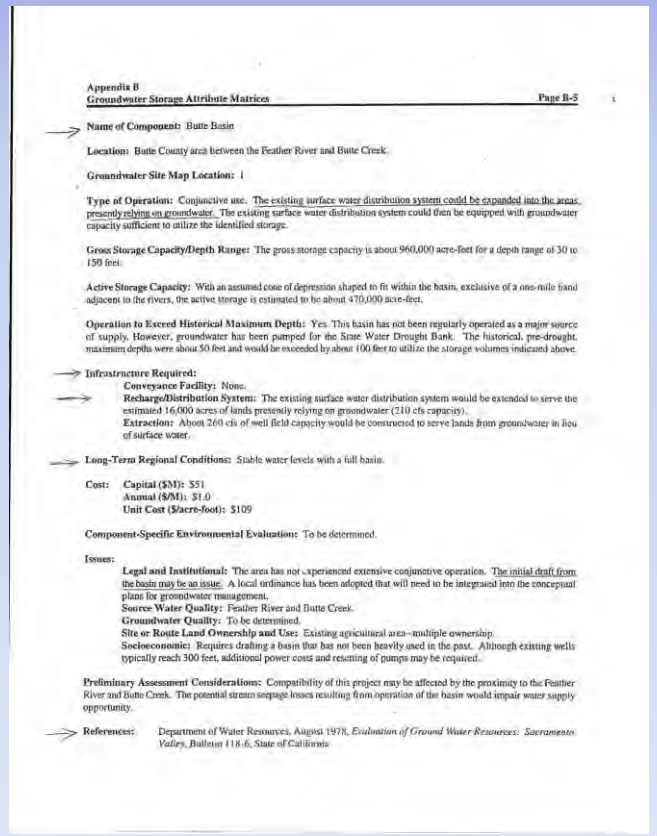
p. 3. DWR Bulletin 118, 1975.

"Recharging the water into an aquifer changes the location or storage of diverted surface water, but it does not change the ownership. For this reason, recharged water remains the possession of the diverter/recharger and the diverter/recharger may exercise full control over that water. Could a project be available for out-of-basin export? Potentially. Depending upon the project scope, it could intend to export recharge water out-of-basin."

2020. A memo regarding *Legal Implications of Potential Projects and Management Actions*, by Vina GSP attorney Valerie Kincaid and Paul Gosselin, Vina GSA Administrator.

***Type of Operation**: Conjunctive use. The existing surface water distribution system could be expanded into the areas presently relying on groundwater. The existing surface water distribution system could then be equipped with groundwater capacity sufficient to utilize the identified storage.*

***Gross Storage Capacity/Depth Range**: the gross storage capacity is about 960,000 acre-feet for a depth range of 30 to 150 feet.*



Appendix B
Groundwater Storage Attribute Matrices Page B-5

Name of Component: Butte Basin

Location: Butte County area between the Feather River and Butte Creek.

Groundwater Site Map Location: 1

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Active Storage Capacity: With an assumed cone of depression shaped to fit within the basin, exclusive of a one-mile band adjacent to the rivers, the active storage is estimated to be about 470,000 acre-feet.

Operation to Exceed Historical Maximum Depth: Yes. This basin has not been regularly operated as a major source of supply, However, groundwater has been pumped for the State Water Drought Bank. The historical, pre-drought, maximum depths were about 50 feet and would be exceeded by about 100 feet to utilize the storage volumes indicated above.

Infrastructure Required:
Conveyance Facility: None.
Recharge/Distribution System: The existing surface water distribution system would be extended to serve the estimated 16,000 acres of lands presently relying on groundwater (210 cfs capacity).
Extraction: About 260 cfs of well field capacity would be constructed to serve lands from groundwater in lieu of surface water.

Long-Term Regional Conditions: Stable water levels with a full basin.

Cost: **Capital ($M):** $51
Annual ($/M): $1.0
Unit Cost ($/acre-foot): $109

Component-Specific Environmental Evaluation: To be determined.

Issues:
Legal and Institutional: The area has not experienced extensive conjunctive operation. The initial draft from the basin may be an issue. A local ordinance has been adopted that will need to be integrated into the conceptual plans for groundwater management.
Source Water Quality: Feather River and Butte Creek.
Groundwater Quality: To be determined.
Site or Route Land Ownership and Use: Existing agricultural area--multiple ownership.
Socioeconomic: Requires drafting a basin that has not been heavily used in the past. Although existing wells typically reach 300 feet, additional power costs and resetting of pumps may be required.

Preliminary Assessment Considerations: Compatibility of this project may be affected by the proximity to the Feather River and Butte Creek. The potential stream seepage losses resulting from operation of the basin would impair water supply opportunity.

References: Department of Water Resources, August 1978, *Evaluation of Ground Water Resources: Sacramento Valley*, Bulletin 118-6, State of California.

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From a 1997 CalFed document based on DWR's 1978 *Evaluation of Ground Water Resources: Sacramento Valley,* Bulletin 118-6, State of California (emphasis added).

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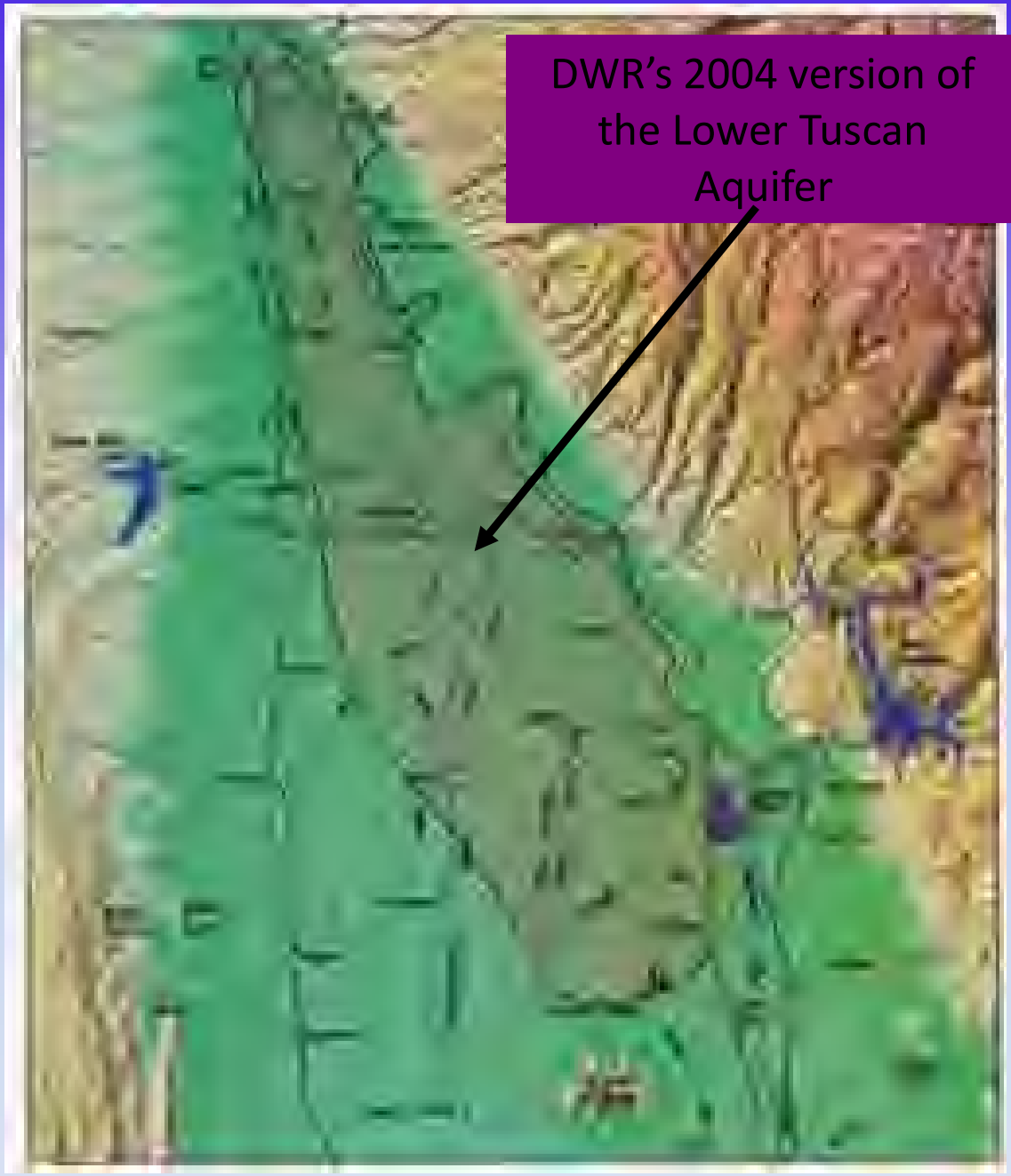


Shaded section represents the approximate area of the Lower Tuscan Aquifer according to DWR in 2004.

There is water underground. But how much? And, more important, who gets to use it?

By Josh Indar

published on 04.08.04, Sac-News & Review

"I mean, let's face it, California is continuing to grow, and nobody seems to want to build any more dams…If you were to look at it purely from a technical point of view, you could say that **the Lower Tuscan is an underground reservoir**. You can put water in it; you can take water out. If you could do that **without hurting anybody**, I wouldn't see anything wrong with it…"

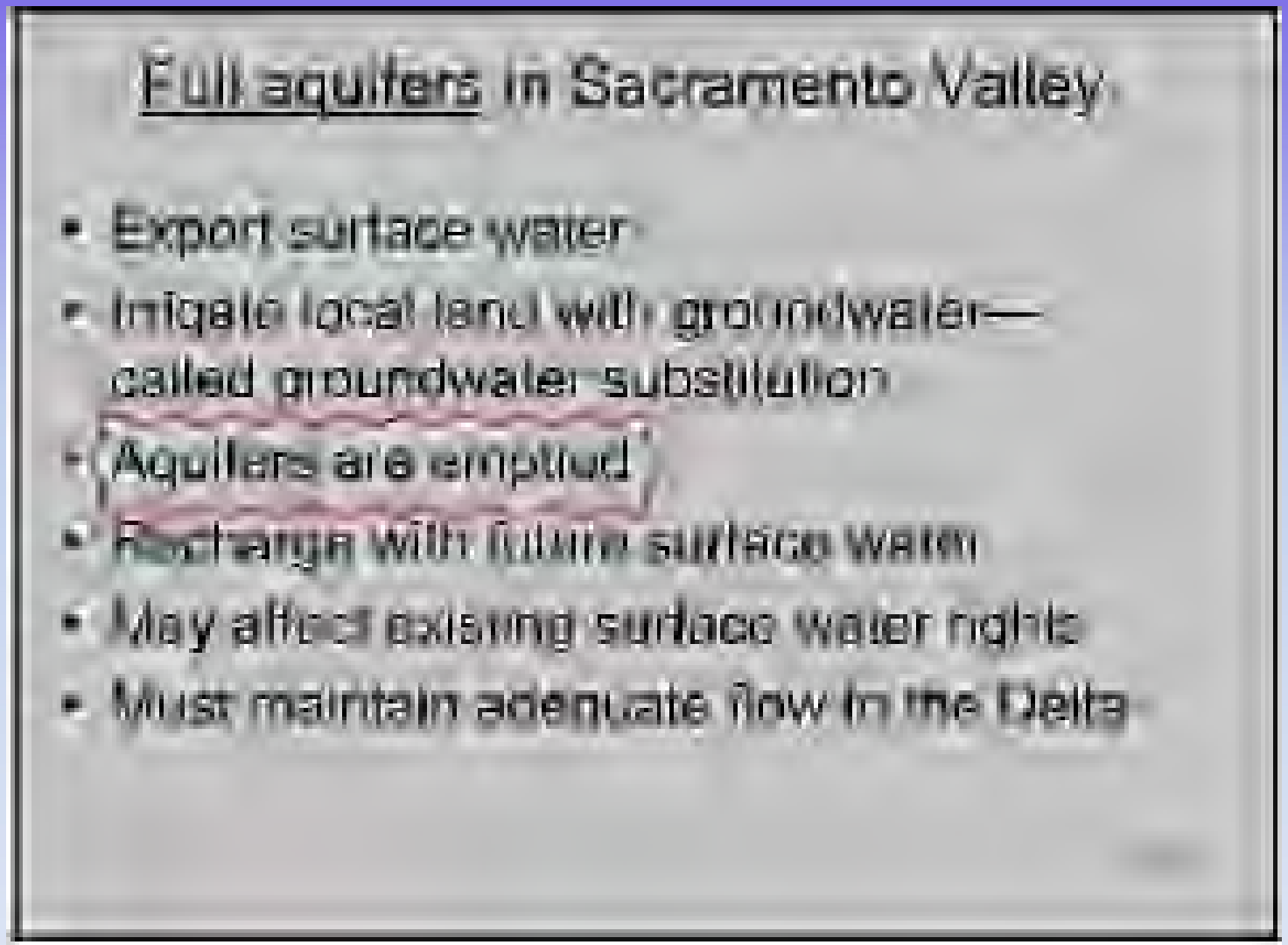
- Toccoy Dudley, former Chief of Groundwater, DWR-Northern District

What Grants Said

"GCID shall define three hypothetical water delivery systems from the State Water Project (Oroville), the Central Valley Project (Shasta) and the Orland Project reservoirs sufficient to provide full and reliable surface water delivery to parties now pumping from the Lower Tuscan Formation. The purpose of this activity is to describe and compare the performance of three alternative ways of furnishing a substitute surface water supply to the current Lower Tuscan Formation groundwater users to eliminate the risks to them of more aggressive pumping from the Formation and to optimize conjunctive management of the Sacramento Valley water resources."

U.S. Bureau of Reclamation , September 2006. Grant Assistance Agreement.

What State Agencies Said



Source: Carl Hauge DWR 2011

"If we want to avoid problems in areas that are reasonably healthy today, it is imperative that we consider the overall value of the hydrologic system, both to man and to nature. Time is of the essence in these cases, since the environmental and surface water rights impacts occur very early in groundwater development, when modest water level declines of only 20 to 40 feet can result in significant depletion of streamflow and even perhaps loss of perennial flow and the impact of surface water rights."

Dan Wendell, The Nature Conservancy, March 2014

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Examples of unsustainable groundwater management strategies:

Local Transfers & Experimental Recharge Plans

1. **1994 Drought Water Bank**
2. **Tuscan Water District**
3. **Groundwater Sustainability Plans**

The Grand Experiment

Ground zero:
California Drought Water Bank
Groundwater Substitution Transfer

DURHAM 1994