Water Resource Data in Butte County
Butte County has a long history committed to managing and conserving water resources.

Butte County recognizes that water resource management is built upon policies, programs and science.

The data sources are only part of the story.
An Integrated System

- **Water Transfers** – “Groundwater Conservation Ordinance” (Chapter 33)
  - Permit required for water transfers that include a groundwater component
  - No applications since enactment in 1996

- **Planning and Policies**
  - Drought Preparedness and Mitigation Plan (2005)

- **General Plan 2030**

- **Regional Coordination**
  - Northern Sacramento Valley Integrated Regional Water Management Plan (2014)
Water Resource Data in Butte County

An Integrated System

- Monitoring and Analysis
  - Basin Management Objective (Chapter 33A)

- Scientific assessments
  - Water Budget – *Inventory and Analysis* Report
  - Butte Basin Groundwater Model
  - Recharge Investigations
  - Interbasin Groundwater Flow Project
  - Subsidence Monitoring
Water Resource Data in Butte County

LAND USE AND WATER SOURCES

Figure 4.13. Butte County Irrigation Water Source, 2011 (Source: DWR).
Water Resource Data in Butte County

GROUNDWATER RECHARGE
Groundwater Monitoring

- Track changes over time
- Estimate groundwater flow direction
- Aquifer dynamics
- Understand resource
Water Resource Data in Butte County

Spring Alert Stage Map

- 123 total measured
- 80 alert stages assigned
- 7 No Measurement
- 2 Questionable Measurement
- 13 Alert 1
- 11 Alert 2

Legend

Spring 2017 Alert Stage
- Monitored, No BMO
- Alert not reached
- Alert 1
- Alert 2
- Quest. Meas.
- No Meas.

Highway
Primary Streams
Sub-Inventory Units

0 1 2 4 6 Miles
Water Resource Data in Butte County
Spring: 2004 to 2016
Wells within the 100-450 foot depth interval
Water Resource Data in Butte County
Butte Basin Groundwater Model

- Developed in early 1990s, updated in 2008
- Current update:
  - Inventory and Analysis Report: supply/demand analysis
  - Drought effects on groundwater pumping
  - Develop ‘historical’ model representing land use and water use practices 1970-2015
  - Develop growth and climate change scenarios
Water Resource Data in Butte County

Butte Basin Groundwater Model

- Recharge processes
- Estimating Water supply and demand
  - Growth
  - Land use changes
  - Changing irrigation methods
- Aquifer characteristics and response
Average Annual Inflows and Outflows (thousands of acre-feet)

**Average Annual Inflows**
- Precipitation: 914
- Applied Surface Water: 715
- Groundwater Pumping: 411

**Average Annual Outflows**
- Runoff and Return Flow: 546
- Deep Percolation: 432
- Evaporation: 1,062

**Overall Water Budget**
- Inflows: 2,145
- Outflows: 2,034

**Net Water Inflow**
- 11,000 acre-feet
Thank you