Outline

• Water Supply
• Folsom Reservoir
• Water Rights and Assets
• Water Use
• Challenges
• Opportunities
• 2023 Outlook
• State and City Actions
• City Messaging and Outreach
City of Folsom Water Supply

- Water Supply must be reliable and sustainable
- Why?
  - Public Health and Safety
  - Meet water use demands of current and future City customers
  - Economic development
  - Environmental enhancement
  - Recreational opportunities
Folsom Reservoir
Folsom Dam and Reservoir

• Multi-purpose reservoir
  • Operated by the Bureau of Reclamation
  • Part of the Central Valley Project

• Requirements for water releases
  • Flood control
  • Environmental flows for Lower American River
  • Delta water quality
  • Other water users
Folsom Reservoir Operations

330, ≈ 90,000 AF, emergency operations required
Folsom Water Treatment Plant
Folsom Water Rights and Contracts

- 22,000 AF: Pre-1914 (1851) Appropriative Water Rights
- 5,000 AF: Central Valley Project Repayment Contract (M&I Shortage Policy)
- 7,000 AF: Central Valley Project Repayment Contract (M&I Shortage Policy)
Each of the following is included in the contracts:

- Place of use
- Point of diversion
- Quantity of water
- Rate of delivery of water
- Shortage provisions, if any
- Payment terms, if any
Pre-1914 Water Rights

- Dates back to 1851 – Natomas Water and Mining Company
- 1951 – Contract between Natomas Water Company (NWC) and United States for 32,000 AF
- 1964 – Southern California Water Company (So-Cal) purchases 32,000 AF from NWC
- 1967 – Folsom purchases 22,000 AF of So-Cal water
- 1994 – So-Cal reallocates 5,000 AF to Folsom
- Total Pre-1914 = 27,000 AF
Central Valley Project Water

- Section 206 of Public Law 101-514 authorized contract between SCWA and United States Dept. of Interior
- Repayment Contract between Folsom and Bureau of Reclamation for 7,000 AF
- Subject to Reclamation Municipal & Industrial Shortage Policy (up to 75% reduction in certain year types)
- Junior to water rights that existed prior to the development of the Central Valley Project
Folsom’s Water Use Trends

City of Folsom Water Rights and Contract Deliveries

- Aerojet Raw
- Folsom WTP
- Population Served

Water Supply (acre-feet):

- 2004: 2,298.2
- 2005: 2,308.2
- 2006: 2,318.3
- 2007: 2,328.3
- 2008: 2,338.3
- 2009: 2,348.3
- 2010: 2,358.3
- 2011: 2,368.3
- 2012: 2,378.3
- 2013: 2,388.3
- 2014: 2,398.3
- 2015: 2,408.3
- 2016: 2,418.3
- 2017: 2,428.3
- 2018: 2,438.3
- 2019: 2,448.3
- 2020: 2,458.3
- 2021: 2,468.3
- 2022: 2,478.3
- 2023: 2,488.3

Population Served:

- 2004: 21,687
- 2005: 21,707
- 2006: 21,727
- 2007: 21,747
- 2008: 21,767
- 2009: 21,787
- 2010: 21,807
- 2011: 21,827
- 2012: 21,847
- 2013: 21,867
- 2014: 21,887
- 2015: 21,907
- 2016: 21,927
- 2017: 21,947
- 2018: 21,967
- 2019: 21,987
- 2020: 22,007
- 2021: 22,027
- 2022: 22,047
- 2023: 22,067

Population Served:

- 2004: 1,345
- 2005: 1,345
- 2006: 1,345
- 2007: 1,345
- 2008: 1,345
- 2009: 1,345
- 2010: 1,345
- 2011: 1,345
- 2012: 1,345
- 2013: 1,345
- 2014: 1,345
- 2015: 1,345
- 2016: 1,345
- 2017: 1,345
- 2018: 1,345
- 2019: 1,345
- 2020: 1,345
- 2021: 1,345
- 2022: 1,345
- 2023: 1,345
Monthly Water Use
### Supplies and Demands

<table>
<thead>
<tr>
<th>Service Area</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>Build-Out</th>
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<tbody>
<tr>
<td>Ashland&lt;sup&gt;A&lt;/sup&gt;</td>
<td>1,180</td>
<td>1,123</td>
<td>1,128</td>
<td>1,109</td>
<td>1,117</td>
</tr>
<tr>
<td>Folsom</td>
<td>17,005</td>
<td>18,185</td>
<td>20,175</td>
<td>21,486</td>
<td>22,651</td>
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<tr>
<td>Water losses</td>
<td>2,091</td>
<td>2,182</td>
<td>2,421</td>
<td>2,578</td>
<td>2,718</td>
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<tr>
<td>Aerojet/Rocketdyne Raw</td>
<td>144</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
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<tr>
<td>Folsom Rights/Contracts Total&lt;sup&gt;B&lt;/sup&gt;</td>
<td>19,884</td>
<td>20,517</td>
<td>22,746</td>
<td>24,214</td>
<td>25,519</td>
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</tbody>
</table>

A. Water delivered to Ashland is derived from SJWD water rights and contracts.
B. Does not include water from Ashland.
## Folsom Water Use in Context

<table>
<thead>
<tr>
<th>Year</th>
<th>Pre-1914</th>
<th>CVP</th>
<th>Total</th>
<th>% of Water Rights and Contracts</th>
<th>% of Reservoir Capacity</th>
<th>% of Average Annual Outflow&lt;sup&gt;A&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>23,293</td>
<td>1,391</td>
<td>24,684</td>
<td>72.6%</td>
<td>2.54%</td>
<td>0.92%</td>
</tr>
<tr>
<td>2014</td>
<td>18,668</td>
<td>750</td>
<td>19,418</td>
<td>57.1%</td>
<td>1.99%</td>
<td>0.72%</td>
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<tr>
<td>2015</td>
<td>16,456</td>
<td>450</td>
<td>16,906</td>
<td>49.7%</td>
<td>1.73%</td>
<td>0.63%</td>
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<tr>
<td>2016</td>
<td>14,847</td>
<td>3,700</td>
<td>18,547</td>
<td>54.6%</td>
<td>1.90%</td>
<td>0.69%</td>
</tr>
<tr>
<td>2017</td>
<td>15,434</td>
<td>4,000</td>
<td>19,434</td>
<td>57.2%</td>
<td>1.99%</td>
<td>0.72%</td>
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<td>2018</td>
<td>14,215</td>
<td>4,023</td>
<td>18,238</td>
<td>53.6%</td>
<td>1.87%</td>
<td>0.68%</td>
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<tr>
<td>2019</td>
<td>13,687</td>
<td>4,017</td>
<td>17,704</td>
<td>52.1%</td>
<td>1.81%</td>
<td>0.66%</td>
</tr>
<tr>
<td>2020</td>
<td>15,808</td>
<td>2,910</td>
<td>18,718</td>
<td>55.1%</td>
<td>1.92%</td>
<td>0.69%</td>
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<tr>
<td>2021</td>
<td>16,425</td>
<td>1,500</td>
<td>17,925</td>
<td>52.7%</td>
<td>1.83%</td>
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<tr>
<td>2022</td>
<td>16,794</td>
<td>1,000</td>
<td>17,794</td>
<td>52.3%</td>
<td>1.82%</td>
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<tr>
<td>Build-Out</td>
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<td></td>
<td></td>
<td>75.1%</td>
<td>2.61%</td>
<td>0.95%</td>
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</tbody>
</table>

A. Based on 2.7 million acre-feet of annual average outflow from Folsom Reservoir
Challenges

• Groundwater limited for M&I use
• Infrastructure redundancy
• Drought Conditions
• Climate Change
• Regulatory Environment
  • Water Quality Control Plan
  • SWRCB long-term conservation regulations
  • CVP Long-Term Operations
Impacts to Water Supplies

- CVP M&I Shortage
- Delta Water Quality Plan
- Climate Change
- SWRCB Flows
- Dry-Year Conditions
Folsom Dam and Reservoir
Emergency Operations
Opportunities

- Interties with other agencies with access to groundwater
- Regional conjunctive use
  - Sacramento Regional Groundwater Bank
- Aerojet groundwater extraction and treatment (GET)
- Water Supply Delivery Alternative Analysis
- Folsom Water Vision
- Folsom Dam Operations
  - Flows, temperature, and planning minimum
### 2023 Outlook

#### Storages

**Federal End of the Month Storage/Elevation (TAF/Feet)**

<table>
<thead>
<tr>
<th>Facility</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
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<td>Trinity</td>
<td>890</td>
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<td>2274</td>
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<td>2302</td>
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<td>757</td>
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<tr>
<td>Total</td>
<td>8833</td>
<td>9319</td>
<td>9345</td>
<td>8699</td>
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<td>8433</td>
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</table>

#### State End of the Month Reservoir Storage (TAF/Feet)

<table>
<thead>
<tr>
<th>Facility</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
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<td>Oroville</td>
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<td>807</td>
<td>794</td>
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<td>813</td>
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<td>1007</td>
<td>928</td>
<td>967</td>
<td>1093</td>
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<td>NA</td>
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<td>NA</td>
<td>NA</td>
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<td>NA</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Total San Luis (TAF)</td>
<td>2014</td>
<td>1954</td>
<td>1725</td>
<td>1327</td>
<td>994</td>
<td>981</td>
<td>1092</td>
<td>1273</td>
<td>1340</td>
<td>1548</td>
<td>1775</td>
<td>1944</td>
<td>1505</td>
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<td>479</td>
<td>485</td>
<td>504</td>
<td>523</td>
<td>536</td>
<td>506</td>
<td></td>
</tr>
</tbody>
</table>
State Actions

• **August 2021**
  - Emergency drought regulation
    - Water suppliers shall implement Level 2 actions of their WSCP
    - 2 days per week watering
    - Prohibit non-functional turf irrigation for commercial, industrial and institutional sites

• **April 2023**
  - Rescinded most drought requirements
  - Continued prohibition of non-functional turf watering
  - Streamlined process for groundwater recharge projects
City Actions

• August 2021 – June 2023 Actions
  • Level 2 (Stage 3) Water Conservation
  • 2 days/week watering, odd/even schedule
  • Additional funding for rebate programs

• May/June 2023 Actions
  • Rescinded Level 2 (Stage 3) Water Conservation
  • City Council approved additional rebate funding for FY 2023-24
Messaging and Outreach

- Logo and tagline developed – “Folsom Saves – It’s Our Nature”
- City wide mailer to all customers
- Freeway signs (300,000 + motorists daily)
- Bi-monthly newsletters (30,000 + residents and businesses)
- Weekly articles and tips (e-newsletter)
- Weekly social media posts
- Weekly adds in Folsom telegraph (14,000 readers)
- Utility bill inserts
- Metro Cable channel 14 public service announcements
- Folsom Saves webpage
- Water wise workshops
City Messaging and Outreach

Water savings made simple

Stay Water-Wise, Folsom!

Folsom's Water Conservation Division is committed to helping our residents and businesses use water efficiently through rebates, services, and programs.

RACHIO SMART SPRINKLER CONTROLLER DIRECT PURCHASE PROGRAM
Water customers pay just $75 plus tax and shipping for the latest technology in Irrigation controllers.

FLUME SMART HOME WATER MONITORING DEVICE DIRECT PURCHASE PROGRAM
Water customers pay just $91 plus tax and shipping after a $25 refund from Flume for a homewater monitoring device.

CASH FOR GRASS REBATE
Receive $5 per square foot of turf replaced, up to $1,000, in this turf replacement program.

DROPCOUNT APP
Monitor your water use with Dropcount, a free app for Folsom water customers.

HIGH EFFICIENCY TOILET REBATE
Swap your older, higher volume per flush toilet with a toilet that uses 1.28 gallons per flush to receive 50% of the material cost, up to $175.

IRRIGATION EFFICIENCY UPGRADE REBATE
Replace inefficient sprinkler system equipment. Controllers, spray heads, and drip irrigation receive 50% of the material cost, up to $50.

FREE WATER WISE HOME CALLS
Sign up for your free Water Wise Home Call to receive a free evaluation of indoor and outdoor water use, including an irrigation checkup.

REPORT WATER WASTE
Contact the city at 916-961-4477 or waterconservation@folsom.ca.us.

www.folsom.ca.us/waterconservation

MANAGE YOUR WATER USE THE SMART WAY!

We can do this!
KEEP ON SAVING WATER, FOLSOM.
IT'S IN OUR NATURE. • FOLSOM.CA.US
Questions

Marcus Yasutake
City of Folsom
Environmental and Water Resources Director
916-461-6161
myasutake@folsom.ca.us
Orthophosphate

- Food grade additive used as a corrosion inhibitor in the form of phosphorous
- Forms a coating in copper pipes that does not dissolve in water
- Approved for use in drinking water systems by:
  - Environmental Protection Agency
  - U.S. Food and Drug Administration
- Not classified as environmentally hazardous
Adding Orthophosphate

- Decrease likelihood of copper pitting by adding orthophosphate to the treatment process
- Strive to maintain target pH of 8.5
- Started with small increments of orthophosphate
  - 0.1 parts per million (ppm) in the first week
  - 0.2 ppm the second week
  - 0.3 ppm the third week
- Maintain at 0.3 ppm