

## Capay Diversion Dam Modernizing for Sustained Irrigation Demand



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**Capay Dam on Cache Creek  
in Yolo County, California**

• Sacramento

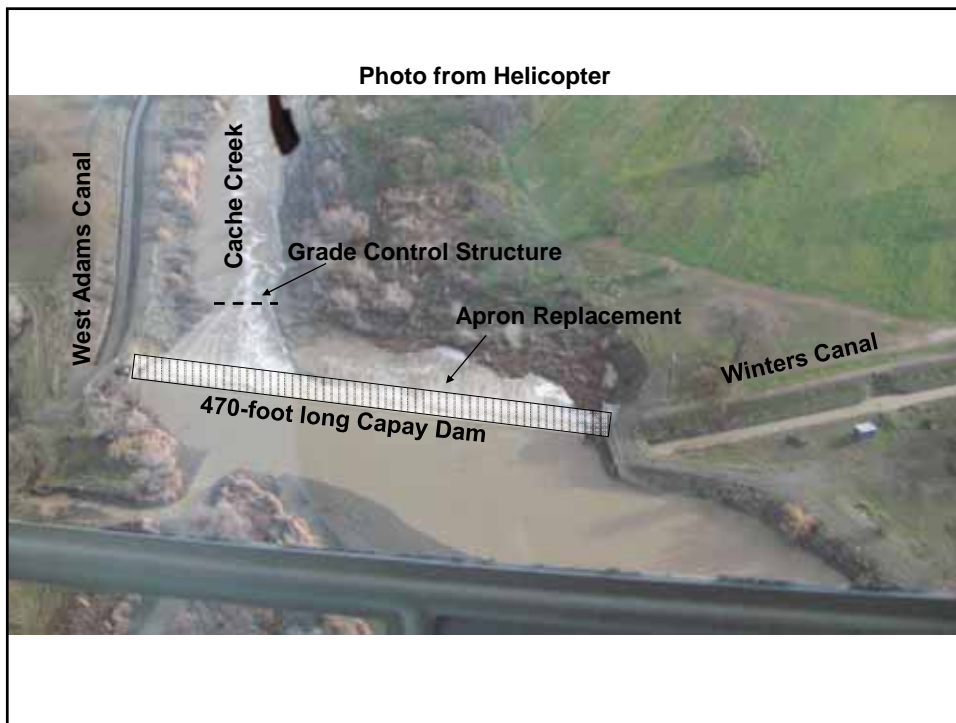
• San Francisco

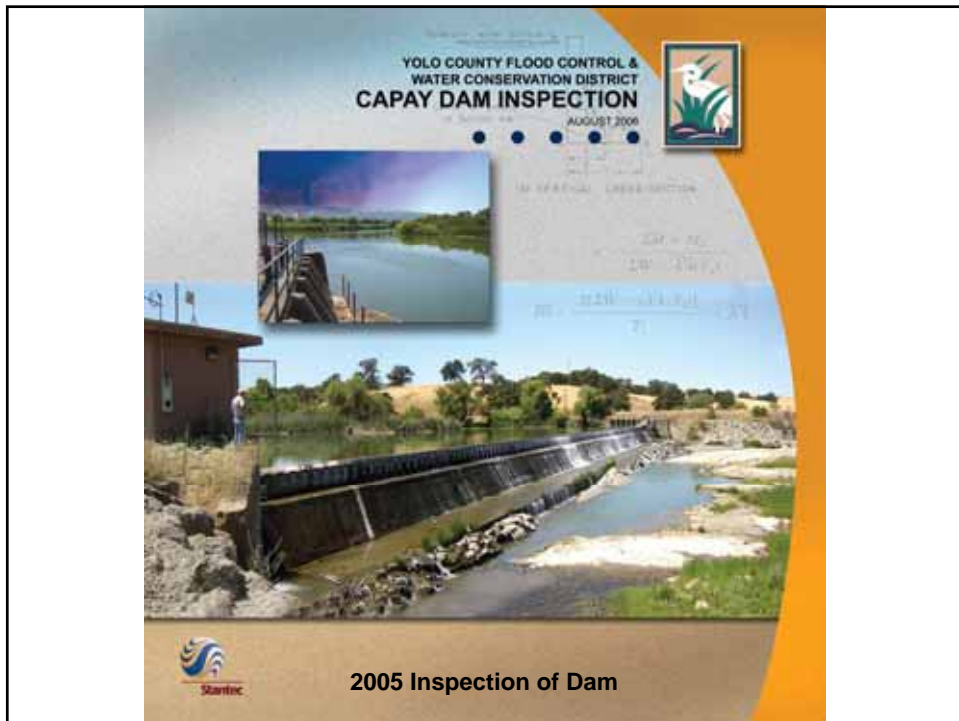
• Los Angeles

• San Diego

**Yolo County Flood Control & Water Conservation District**

- Two upstream water supply reservoirs.
- District releases 250,000 acre-feet of water when full irrigation supply is available.
- All Irrigation water is diverted from Cache Creek at Capay Dam.
- Water is delivered to 60,000 acres.







Local Scour at Toe of Apron & Streambed Degradation of Cache Creek



Sediment Deposition above Dam



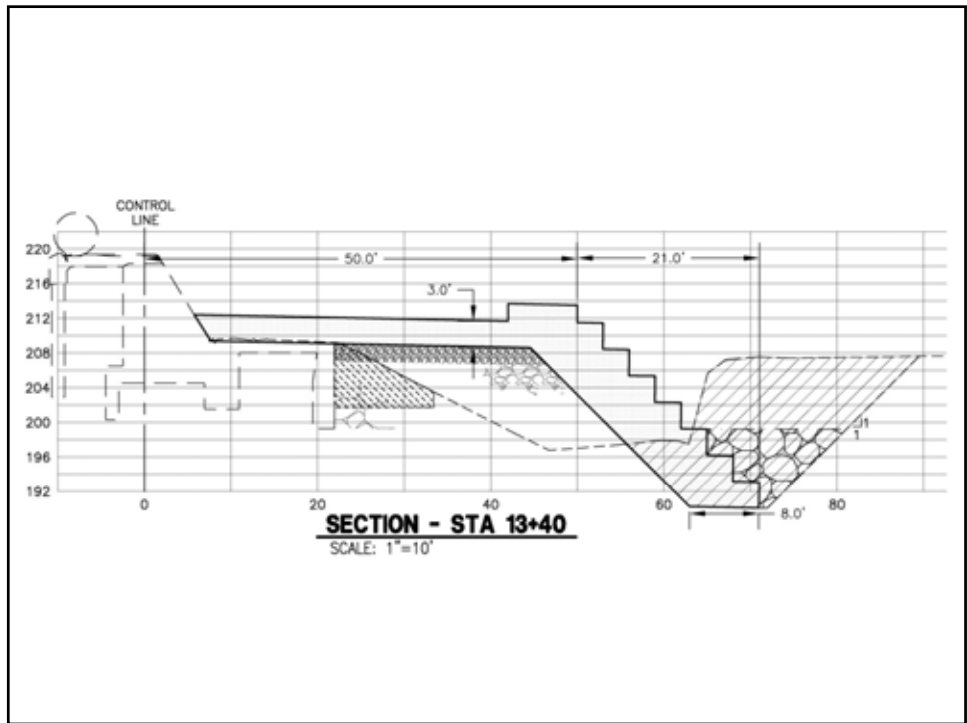
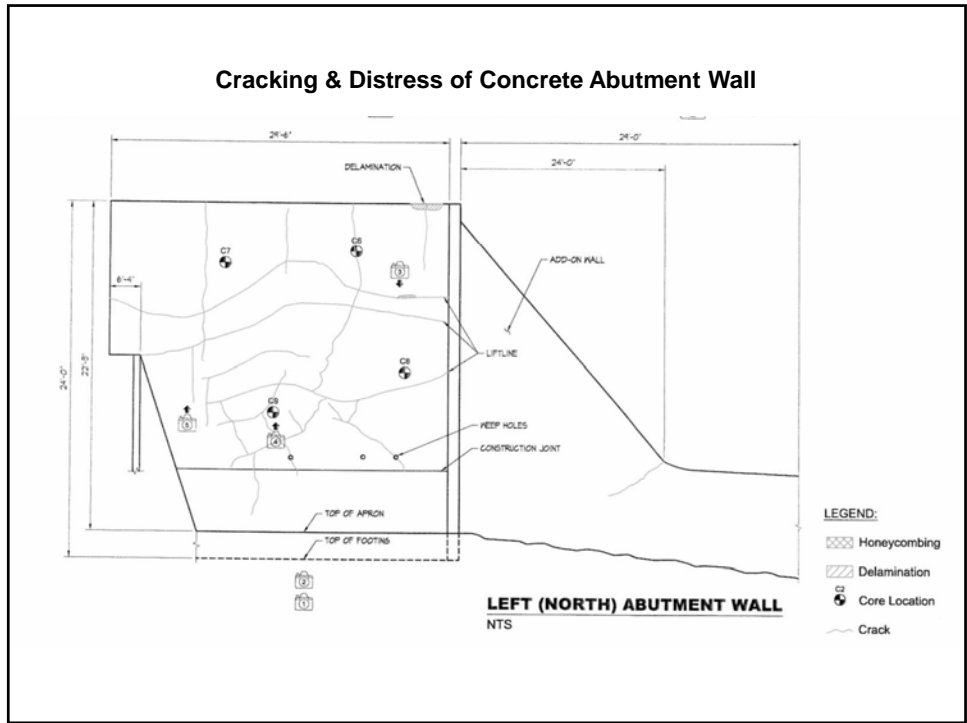


Placing Drill Rig on Apron in 2005



Non-Destructive Testing of Concrete in 2005





## Conclusions

### **Conditions at Dams Change Over Time:**

- Sand & gravel mining in the floodplain
- Urbanization and increased risk
- Encroachment into the floodplain from farming
- Bridge & highway encroachment
- Riparian vegetation (growth or removal)

## Conclusions

### **Cumulative Impacts from Rivers can Jeopardize Structures Such as Dams**

- Streambed degradation
- Sedimentation or local scour
- Concrete erosion & deterioration

## Conclusions

### **Old Structures are Vulnerable**

- Old design standards may be inadequate
- Old construction practices may lead to latent defects
- Structures deteriorate over time exacerbating design deficiencies and construction defects

## Conclusions

**Periodic Inspections are  
Necessary for Dams & Levees.**

**Modern Testing Methods are Cost Effective in  
Assessing Structural Integrity of Dams.**