



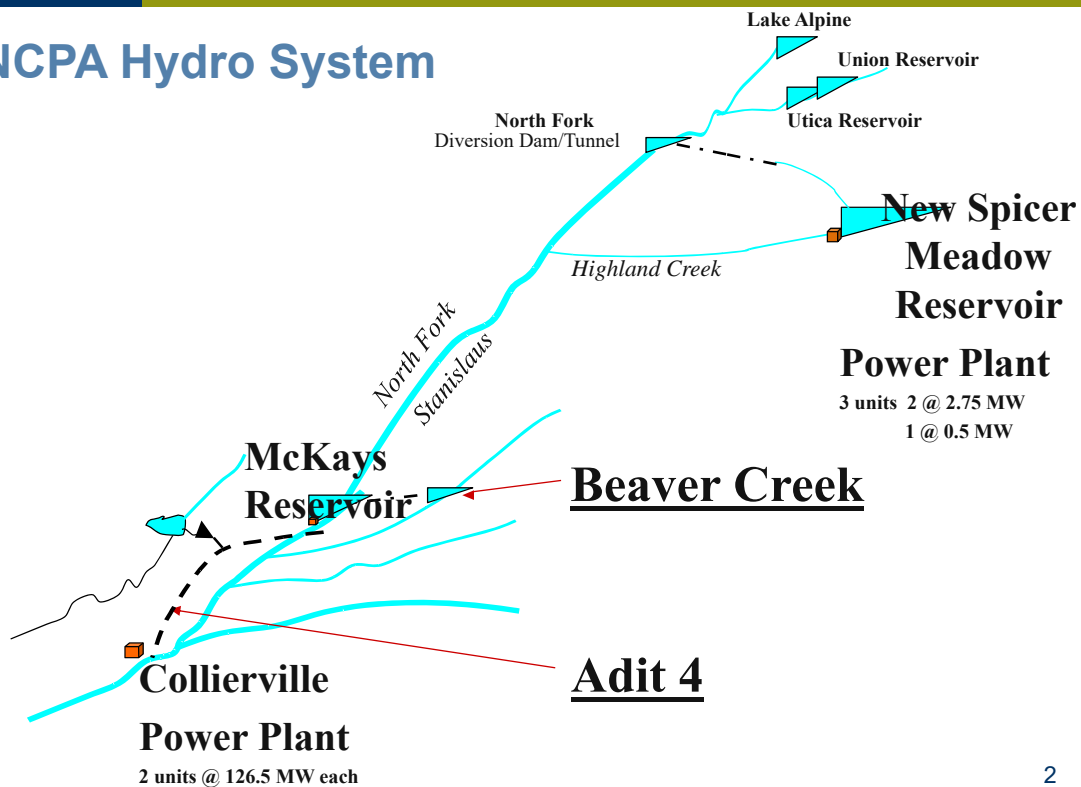
# Project Update for Beaver Creek Diversion Dredging and Adit 4 Spoils Facility Repair North Fork Stanislaus River Hydroelectric Project



Facilities Committee  
December 6, 2017



## NCPA Hydro System



## Beaver Creek



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## Flood Damage and Recovery Summary

- January-February floods filled the Beaver Creek Facility with 11,400 cubic yards of sediment and debris
- Prevented hydropower and consumptive water diversions to McKays
- Emergency permitting and construction
- Restored and fully operational on November 17<sup>th</sup>
- 15,400 cubic yards removed
- Total costs \$2.26M
- Insurance and FEMA reimbursement levels pending

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## Beaver Creek Intake Structure and Reservoir



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## New Operator Stand and Deck Repairs



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## Adit 4 Spoils Facility Repair



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## Damage and Recovery Summary

- Spoils facility failed December 2015
- Conventional permitting and construction
- Project 90% complete
  - Channel repairs and augmentation ongoing through end of year
  - Access road repairs in spring
  - Completion spring 2018

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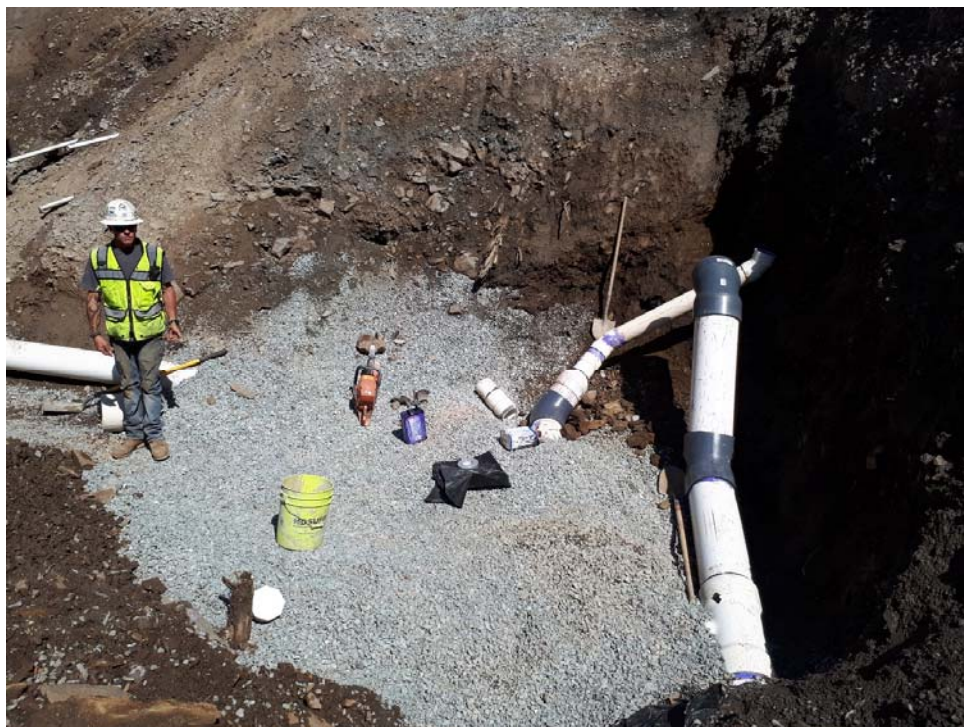


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## Canal Demo



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## Canal Backfilled



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## Horizontal Drain Collector Manifold



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## Existing Canal Demo



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## Upstream Canal Cutoff Wall



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## Beginning of Clark Creek Canal After Cutting



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## Schedule

- Project 90% complete
- Flow tests conducted Friday November 10<sup>th</sup>
  - Water energy dissipation system (baffles) problematic
  - Engineering peer review initiated with GEI 11/10
  - Baffles removed and interim repairs made 11/13 – 12/8
  - Slope repairs, due to test-flow excursions, conducted 11/20 – 12/12
  - Design engineer, GHD, paying for repairs

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## Schedule

- Peer review hydraulic analysis
  - Completed 11/21
  - Confirmed baffles needed to be removed
  - Indicated channel needs augmentation to create additional ~2-3' freeboard.
  - Preliminary design complete and scheduled for construction 12/8 – 12/21
- Second flow tests planned for January
- Access road repairs planned for Spring

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## Financial

- Total authorized construction contract costs \$2.89M
- Anticipated net contract expenditures \$2.6–\$2.8M
  - Estimated \$400,000 in damage/augmentation
  - Channel augmentation costs under discussion
- Insurance reimbursement levels pending
  - McLaren's, engineer, responded to NCPA's August counterproposal in October
  - NCPA provided a detailed written response in October
  - McLaren verbally indicated an interest to close the reimbursement gap and settle
    - Meeting planned in January

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# Murphys to Collierville Microwave Hop

December 6, 2017

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## Murphys - Collierville Microwave







NORTHERN CALIFORNIA POWER AGENCY

## Murphys - Collierville Microwave



NORTHERN CALIFORNIA POWER AGENCY

## Murphys - Collierville Microwave



## Murphys - Collierville Microwave



## Collierville Maintenance Outage



## Collierville Outage

- **McKays Intake Debris Removal**
  - Divers found 6' to 8' of debris against the intake.
  - Removed ~15 yd<sup>3</sup> over three days
- **Collierville Major Work Items**
  - Rebuild last needle jet
  - Spiral case drain valve rebuild (x2)
  - Turbine runner cavitation weld repairs
  - Main transformer oil processing (x2)
  - Isophase bushing oil leak repair
  - Generator end turn partial discharge repairs
  - Generator condition assessment
- **General Maintenance**
  - Generator & bearing coolers / filters / oil / breakers
- **Testing**
  - Overspeed / inundation / bearing failure / jet brake / diesel gen / fire systems

