



Staff Report

TO: Board of Directors

FROM: Doug Roderick, PE, Director of Engineering
Keane Sommers, PE, Director of Power Systems
Steve Prosser, Director of Maintenance
Chip Close, Director of Operations

DATE: August 23, 2023

SUBJECT: 2023 Capital Improvement Program Mid-Year Project Status Update

ENGINEERING

RECOMMENDATION:

Receive an update on the status of the projects included in the 2023 Capital Improvement Program for Engineering, Hydroelectric, Maintenance, and Operations Departments.

ATTACHMENTS: 2023 CIP Mid-Year Project Status Update Presentation

2023

CAPITAL IMPROVEMENT PROGRAM
MID-YEAR PROJECT STATUS UPDATE

August 23, 2023



NID



2023 CIP UPDATE

- 2023 Approved Capital Projects
 - Project Budget Summary Year to Date
 - Status of Projects Included in the 2023 CIP Budget
 - Engineering
 - Hydroelectric
 - Maintenance
 - Operations

2023 CAPITAL IMPROVEMENT BUDGET - ALL FUNDS

Fund	Department	2023 Budget*	2023 CIP Expenses
15	Engineering	\$ 9,446,971	\$ 1,987,807
55	Hydroelectric	\$ 8,840,000	\$ 837,621
50	Hydroelectric	\$ 365,000	\$ 335,394
15	Maintenance	\$ 850,332	\$ 215,891
15	Operations	\$ 574,650	\$ 50,597
Totals		\$ 20,076,953	\$ 3,427,310



Engineering Department 2023 Capital Improvement Projects

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - ENGINEERING

Project No.	Project	2023 Budget	2023 Expenditures	Priority Score
6971	Alta Sierra Tank Site	\$ 489,110	\$ 616	n/a
2322	David Way Pump Station	\$ 100,000	\$ 90,938	71
7032	Hemphill Diversion Fish Passage*	\$ 715,000	\$ 639,668	65
2504	Ramp Repair Administration Bldg.	\$ 437,647	\$ 224,043	58
2624	Squirrel Creek Siphon	\$ 399,213	\$ 392,646	55
2645	Combie Ophir Siphons II & III	\$ 170,000	\$ 12,753	71
2647	Ramp Repairs Operations*	\$ 43,853	\$ -	67
2434	Table Meadow III DFWLE*	\$ 825,000	\$ 470,071	61
2409	Maranatha Place DFWLE	\$ 820,000	\$ 72,972	61
2643	Ali Lane DFWLE	\$ 350,000	\$ 20,262	61
2650	Harris Rd DFWLE	\$ 1,165,765	\$ 30,199	61
2376	North Auburn WTP	\$ 1,701,383	\$ 6,783	60
8262	Lincoln Canal Upgrades	\$ 300,000	\$ -	57
2602	DS Canal Shotgun Culverts	\$ 230,000	\$ -	57
2336	Tarr Diversion*	\$ 80,000	\$ -	57
2646	Tarr Canal at Old Auburn*	\$ 180,000	\$ -	57
2182	North Day Road	\$ 870,000	\$ 5,692	55
2550	Sugarloaf Reservoir	\$ 120,000	\$ 20,717	50
6958	Newtown Reservoir	\$ 450,000	\$ 448	40
Totals		\$ 9,446,971	\$ 1,987,807	

*Budget Amendment Pending

Purpose: The reservoir was originally used for raw water storage before being reconstructed into a treated water facility utilizing Hypalon lining and cover. The Hypalon liner was vulnerable to damage from the sun and vandalism, and over time required repair and patching, requiring isolation from the system to repair.

Solution: The Alta Sierra Reservoir was replaced with a 3-million-gallon concrete tank.

Current Project Status: The tank has been filled and is in service. Final punch-list items in process.

Budget: The 2023 budget for this Project is \$489,110. 2023 year-to-date expenses are \$615.



David Way Pump Station

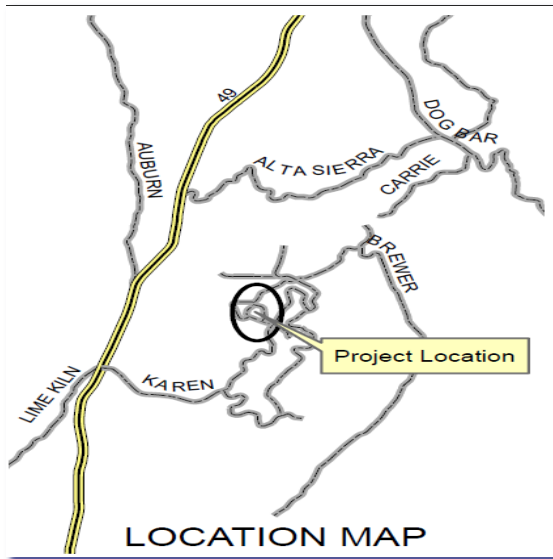
Project No. 2322

Purpose: The David Way Pump Station, built in 1969, is badly deteriorated, has exceeded its life expectancy, lacks fire flow capabilities and a back-up pump.

Solution: The Project includes installation of a new pre-manufactured pump station with separate pumps for domestic demand and fire flow, with two pumps to provide redundancy to the domestic demands.

Current Project Status: The Pump Station and generator were delivered to the site and connected to the existing foundation and piping in March 2023. PG&E relocated electrical lines and switched power over. Project is complete.

Budget: The 2023 budget for this Project is \$100,000. 2023 year-to-date expenses are \$90,938.



Hemphill Diversion Fish Passage Project

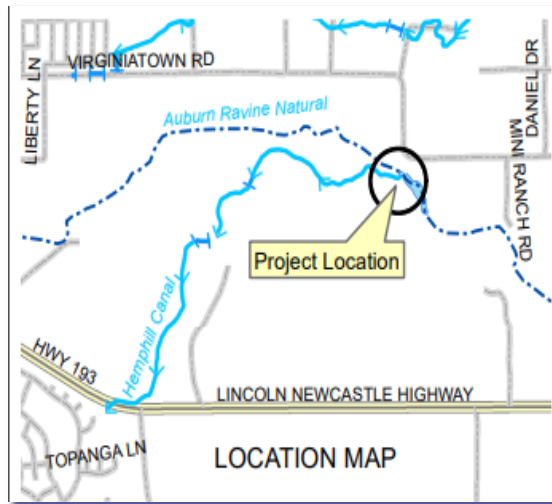
Project No. 7032

Purpose: The Hemphill Diversion Structure was an impediment to the passage of migrating fish that spawn in Auburn Ravine. The impediment needed to be eliminated while maintaining water deliveries to customers served by the Hemphill Canal.

Solution: The Project includes removal of the diversion structure, site stabilization, and construction of a nature-like, roughen rock ramp in-stream fish passage, installation of a fish screen, and improvements to a portion of the Hemphill Canal. The EIR was adopted, and the project approved by the Board on July 28, 2021.

Current Status: Hemphill Fish Passage construction is complete. The cone screen and control gate were in commission before irrigation season started and are currently in service. The fish passage had some rock movement around the sheet pile structure and will be further fortified with a greater quantity of larger rocks this fall.

Budget: The 2023 budget for this Project is \$715,000. Pending approval of a \$15,000 mid-year budget amendment. 2023 year-to-date expenses are \$639,669. The Project was awarded a Wildlife Conservation Board, Prop. 68, cost sharing grant (40 WCB/60 NID).



Ramp Repair – Administration

Project No. 2504

Purpose: The existing ramp to the Administration offices is failing and requires extensive reconstruction.

Solution: The Project will replace the existing ramp and railings to meet current ADA design standards.

Current Project Status: New ramp has been constructed. Painting is nearing completion. Stairs to lower entrance and sidewalk have been reconstructed. New ADA parking has been designated and striped.

Budget: The 2023 Budget for this Project is \$437,647. 2023 year-to-date expenses are \$224,043

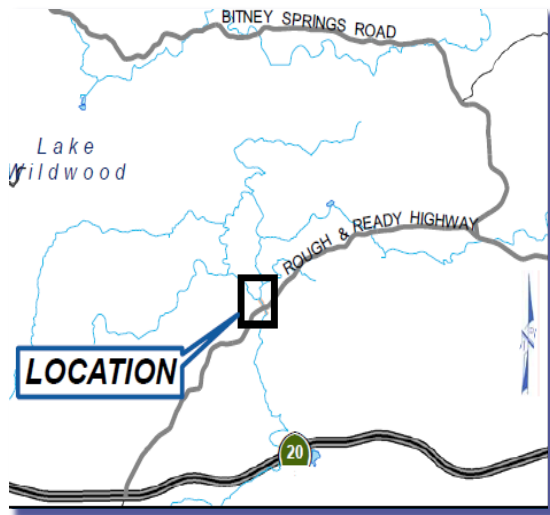


Purpose: Leaks discovered in winter 2021-2022 that included running water down hillside embankment on south side of Rough & Ready Highway and extremely deteriorated exposed pipe across squirrel creek that was also found leaking.

Solution: Replacement of failing portion of 24" diameter steel pipe (total length ~740 feet long), assessment of existing support structures (pipe support over squirrel creek) and inlet/outlet structures, and assessment of potential additional easement needs. Replacement of aerial pipe section over squirrel creek. The buried portion of pipe will require sleeving of new pipe within the old pipe, or total replacement of buried pipe.

Current Project Status: Construction is complete.

Budget: The 2023 budget for this Project is \$399,213. 2023 year-to-date expenses are \$392,645.



Before



After

Combie Ophir II & III Siphon Replacements

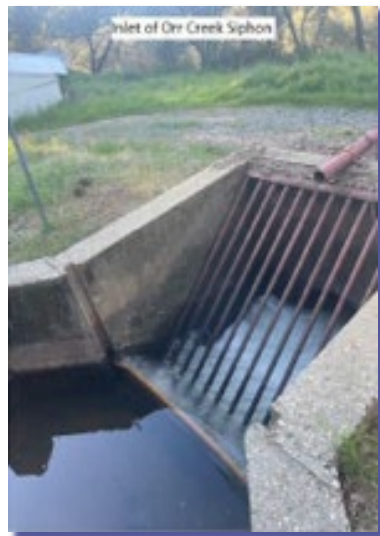
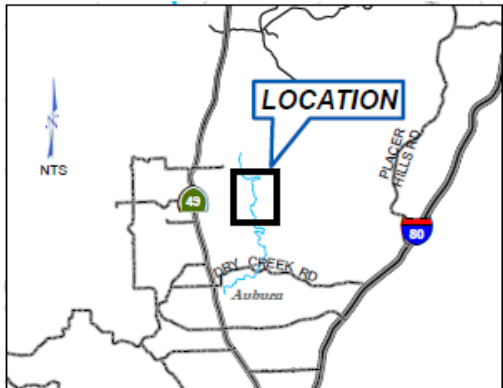
Project No. 2645

Purpose: The Orr Creek, Dry Creek and Rock Creek siphons on the Combie Ophir II & III raw water delivery system are approximately 75 years old and in need of an upgrade.

Solution: The project consists of the replacement/rehabilitation of the three siphons. The siphons are proposed to be upgraded by installing new culverts adjacent to the existing ones for Dry Creek and Orr Creek siphons. The Rock Creek Siphon may be replaced by a new pipeline within the road, subject to review of an alternatives analysis.

Current Project Status: Project description is being created for the Initial Study/Mitigated Negative Declaration. An Alternatives Analysis for the Rock Creek siphon is underway.

Budget: The 2023 budget for this Project is \$170,000. 2023 year-to-date expenses are \$12,752.



Ramp Repair – Operations

Project No. 2647

Purpose: The existing ramp to the Operations offices and stairs to Customer Service lobby are failing and require extensive reconstruction.

Solution: The Project will replace the existing ramp and walkway, and stairs to meet current ADA design standards.

Current Project Status: Project scope has been completed. Pending consulting agreement for design services.

Budget: The 2023 budget for this Project is \$43,853. Pending approval of a \$30,000 mid-year budget amendment. There are no 2023 year-to-date expenses.

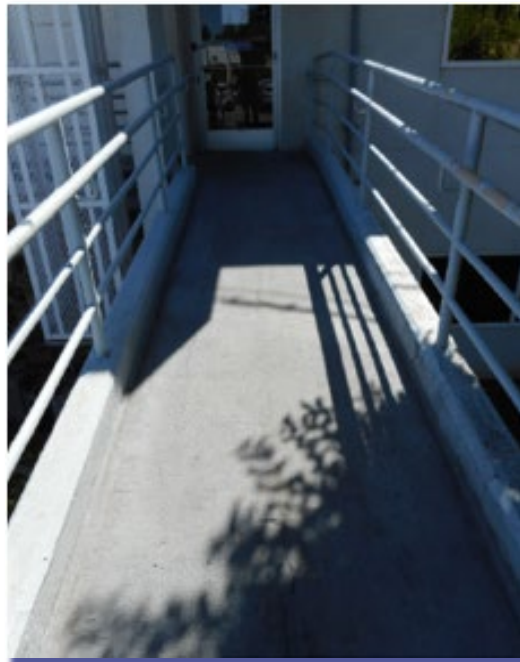


Table Meadow DFWLE

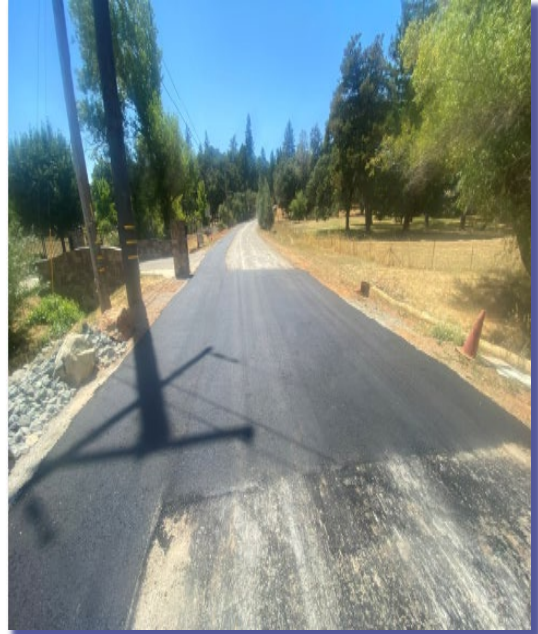
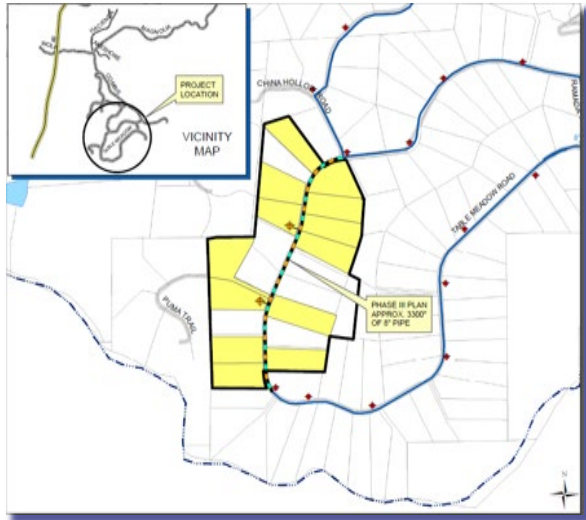
Project No. 2434

Purpose: To assist with the expansion of residential water service to new customers seeking the extension of treated waterlines into their community. 13 property owners are participating.

Solution: Design and construct approximately 3,300 feet of 8-inch treated waterline and two fire hydrants to serve 21 parcels on Table Meadow Road. The project includes pavement restoration.

Current Project Status: Construction nearing completion. Mainline has been tested and is in service. Final asphaltting completed. Some parts are needed to complete service connections.

Budget: The 2023 budget for this Project is \$825,000. Pending approval of a \$25,000 mid-year budget amendment.. 2023 year-to-date expenses are \$470,071.



Maranatha Place DFWLE

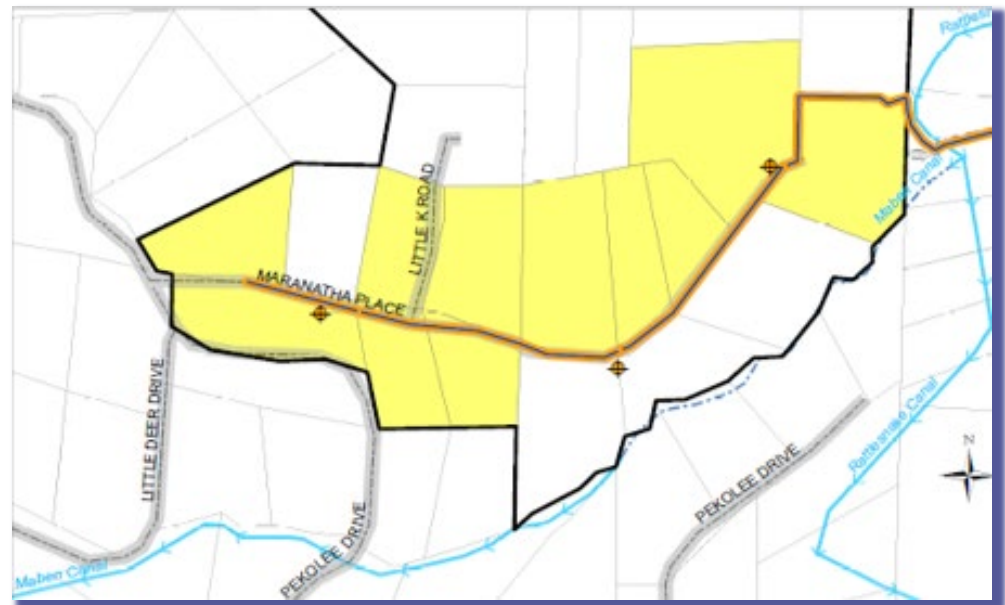
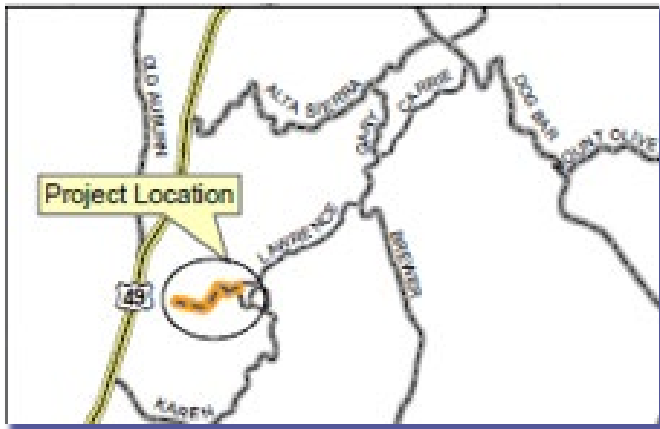
Project No. 2409

Purpose: To assist with the expansion of residential water service to new customers seeking the extension of treated waterlines into their community. 12 property owners are participating

Solution: Design and construct 3,170 feet of 8-inch treated waterline and 3 fire hydrants to serve 21 parcels on Maranatha Place. The project includes pavement restoration.

Current Project Status: Easement agreements have been executed by property owners. Bids were received on August 15, 2023. Bids came in higher than anticipated. Staff to review plan/specs to look for some potential cost savings and rebid in November 2023. Work would occur first quarter 2024.

Budget: The 2023 budget for this Project is \$820,000. 2023 year-to-date expenses are \$72,972. Need to include project budget in 2024.

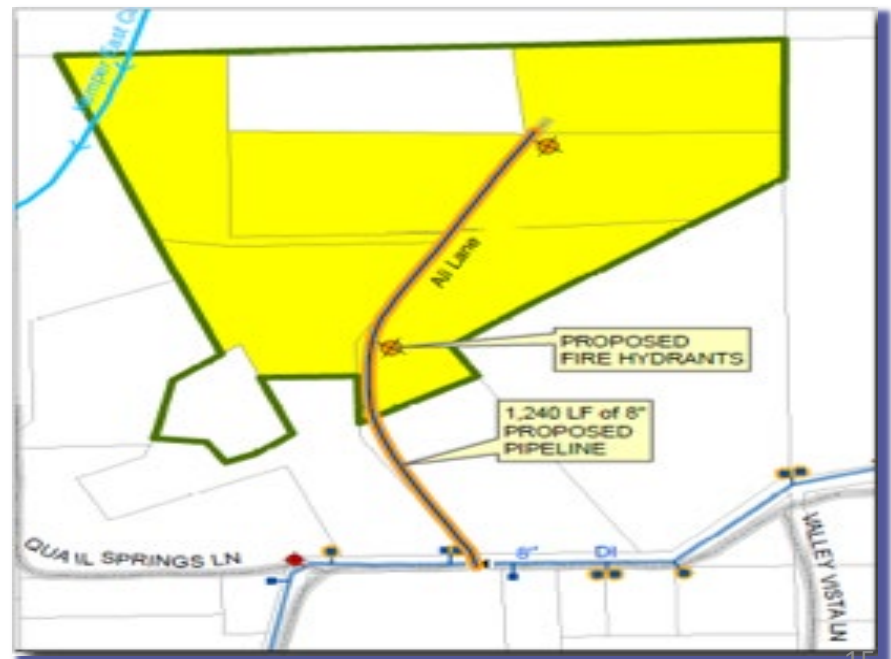
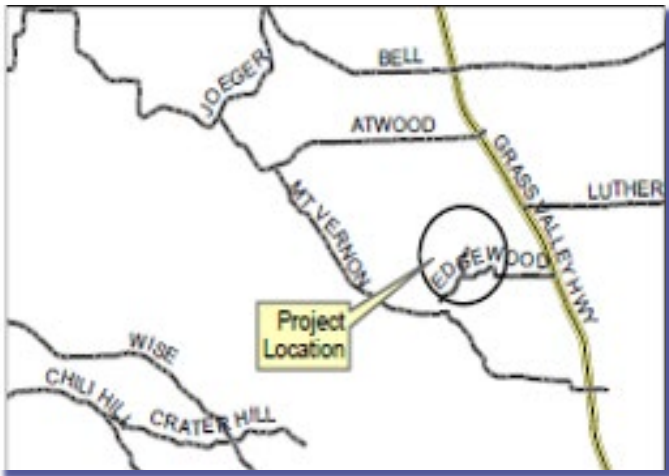


Purpose: To assist with the expansion of residential water service to new customers seeking the extension of treated waterlines into their community. Five property owners are participating in the project.

Solution: Design and construct 1,240 feet of 8-inch treated waterline and 2 fire hydrants to serve 8 parcels on Ali Lane in Auburn. The project includes pavement restoration.

Current Project Status: Bids were received on August 3, 2023. Bids came in higher than anticipated. Staff to review plan/specs to look for some potential cost savings and rebid in November 2023. Work would occur first quarter 2024.

Budget: The 2023 budget for this Project is \$350,000. 2023 year-to-date expenses are \$20,262. Need to include project budget in 2024.



Harris Road DFWLE

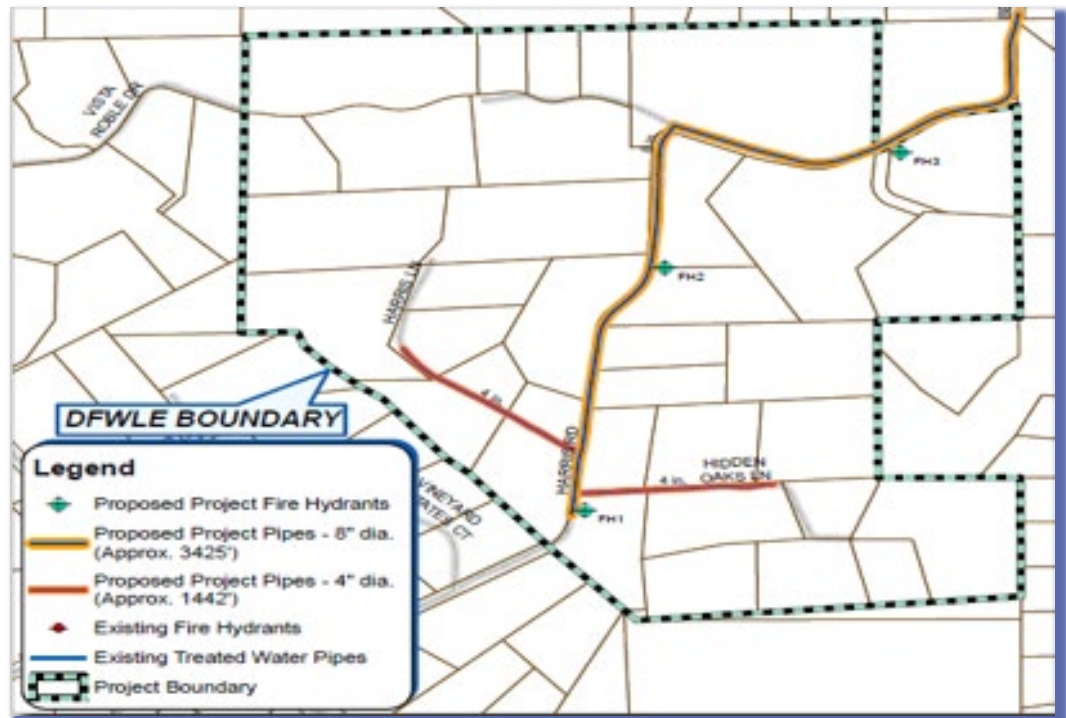
Project No. 2650

Purpose: To assist with the expansion of residential water service to new customers seeking the extension of treated waterlines into their community. 21 property owners are participating in the project.

Solution: Design and construct approximately 3,425 feet of 8-inch treated waterline, 1,442 feet of 4-inch treated waterline, and three fire hydrants to serve 34 parcels on Harris Road and Hidden Oaks Lane. The project includes pavement restoration.

Current Project Status: Design in process. Easement needs are being determined.

Budget: The 2023 budget of \$1,165,765. 2023 year-to-date expenses are \$30,199.



North Auburn Water Treatment Plant

Project No. 2376

Purpose: To rebuild the motor control center (MCC) at the North Auburn Water Treatment Plant for high-lift pumps and convert them to variable frequency drives. The project will result in lower operating costs, provides a regional benefit to the community, and reduces the threat/impact to health and safety.

Solution: Install a motor control center (MCC), electrical panels, and site electrical improvements such as wiring and conduits, along with building modifications to accommodate new variable frequency drives (VFDs).

Current Project Status: Construction contract with C & D Contractors was approved by the Board on July 12, 2023. Construction is expected to begin in November 2023.

Budget: The 2023 budget for this Project is \$1,701,383. 2023 year-to-date expenses are \$6,783. The construction is expected to conclude in 2024. \$880,640 is the anticipated 2023 expense.



Lincoln Canal Upgrades

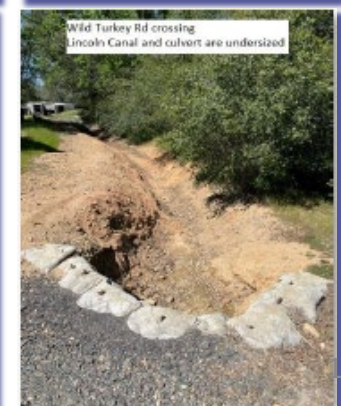
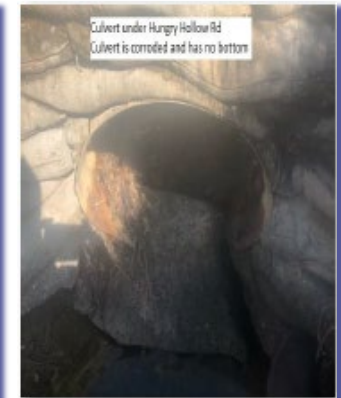
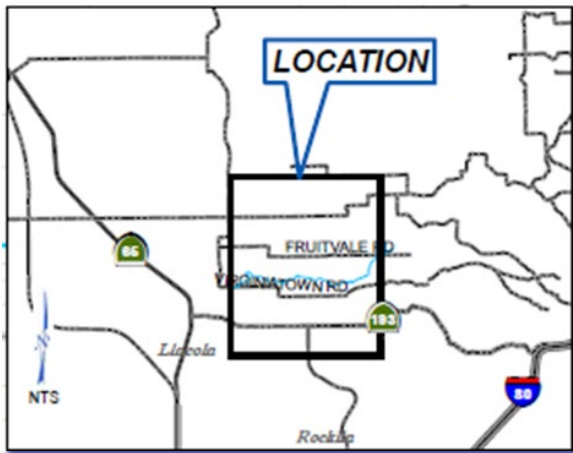
Project No. 2376

Purpose: Sections of the Lincoln Canal at various crossings are deteriorated and undersized for flows. The inlet/Outlet structures of the Fowler siphon have restrictions and need to be improved or replaced.

Solution: Replace crossings at Monument Place, Hungry Hollow Road, Wild Turkey Road, and Segoe Lane Crossings. Review hydraulics at inlet/outlet structures of Fowler siphon and either make improvements or replace the hydraulics.

Current Status: Design in process. Construction expected fall of 2023.

Budget: The 2023 budget for this Project is \$300,000. There are no 2023 year-to-date expenses.



DS Canal Shotgun Culverts

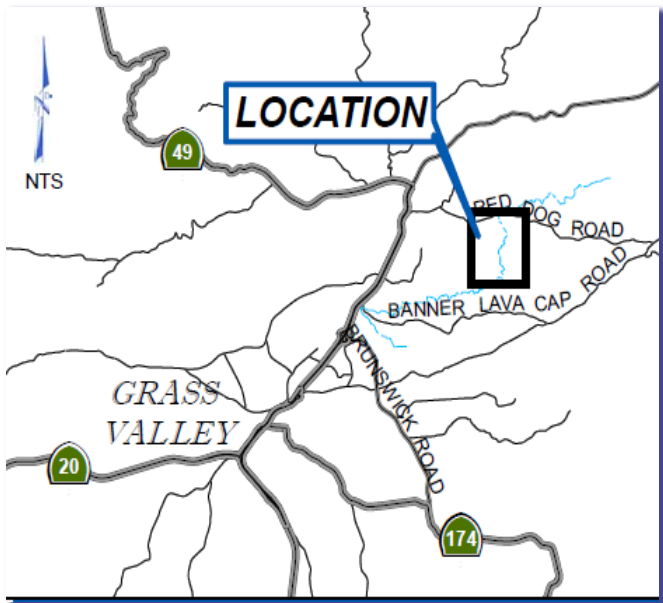
Project No. 2602

Purpose: The DS Canal Shotgun Culverts are deteriorated and in need of replacement. When the South Yuba Canal goes down during the water season, meeting demand for high flows during summertime raw water sales and treatment plant flows becomes an issue.

Solution: The Project will replace the existing shotgun culverts at Banner Mountain Trail with a single concrete box culvert or arch pipe.

Current Project Status: Design is under review internally. Quotes have been received from box culvert suppliers. Construction to occur in fall of 2023.

Budget: The 2023 budget for this Project is \$80,000. There are no 2023 year-to-date expenses.



Tarr Diversion at Wolf Creek

Project No. 2336

Purpose: The Diversion structure on Wolf Creek that feeds the Tarr canal is badly deteriorated and needs major repairs or replacement. Water is leaking through the existing diversion and walls. The sluice gate appears to be inoperable and buried.

Solution: Replace the diversion structure in Wolf Creek with a new concrete structure. Due to the location, extensive CEQA and permits will be necessary. Construction of the facility will be difficult.

Current Project Status: A Request for Proposals was received August 3, 2023, for surveying services for both the Tarr Diversion Project and the Tarr Canal Project. An agreement for surveying services will be presented at the August 23, 2023, Board of Directors meeting for approval.

Budget: The 2023 budget for this Project is \$80,000. A mid-year amendment to transfer \$100,000 to the Tarr Canal Project No. 2646 is pending. There are no 2023 year-to-date expenses.



Tarr Canal at Old Auburn

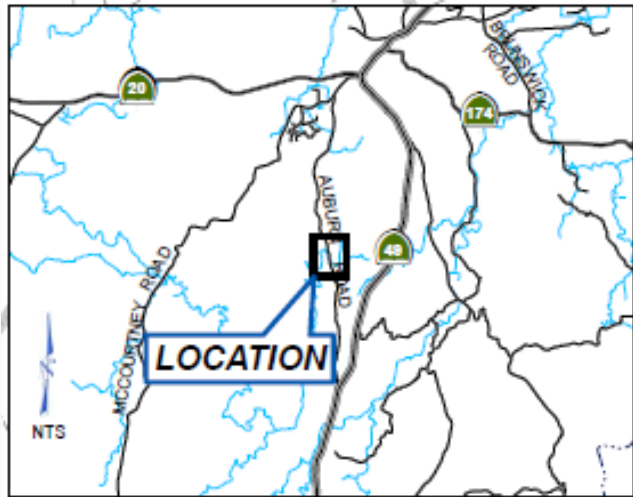
Project No. 2646

Purpose: There are numerous leaks on the shotcrete section of the canal near Old Auburn Road.

Solution: Encase 6,750 feet of the canal with a precast concrete box culvert. Further investigation may reveal additional shotcrete and reshaping portions of the canal.

Current Project Status: A Request for Proposals was received August 3, 2023, for surveying services for both the Tarr Diversion Project and the Tarr Canal Project. An agreement for surveying services will be presented at the August 23, 2023, Board of Directors meeting for approval.

Budget: The 2023 Budget for this Project is \$180,000. A mid-year amendment to transfer \$100,000 from the Tarr Diversion Project No. 2336 is pending. There are no 2023 year-to-date expenses.



North Day Road Pipeline

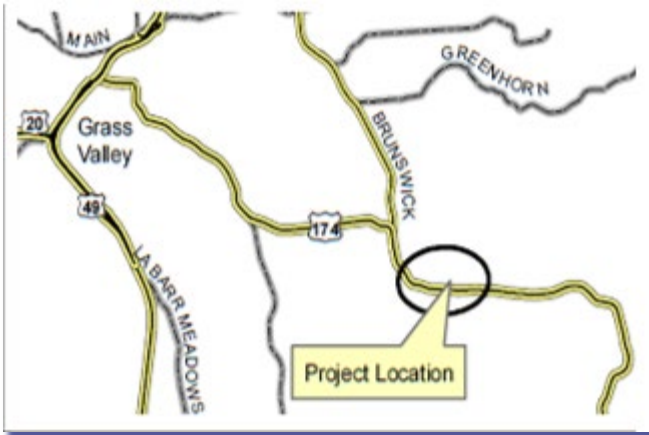
Project No. 2182

Purpose: The North Day Road Pipeline has exceeded its life expectancy and is badly deteriorated. The pipeline currently runs inside of private property lines and against large trees. The mainline has been broken by tree roots, and from property owners working on their property.

Solution: The Project will replace approximately 3,790 LF of A.C. pipeline within existing roadway.

Current Project Status: Easement acquisitions are completed. Caltrans Permit received for Hwy 174 work. Anticipate parts and materials to be delivered to allow construction to begin by October 2023. This project to be constructed by Maintenance.

Budget: The 2023 budget for this Project is \$870,000. 2023 year-to-date expenses are \$5,692.



Sugarloaf Reservoir

Project No. 2550

Purpose: A sinkhole appeared on the top of the south embankment of the reservoir, showed structural weakness, and water was leaking through portions of the dry side of the embankment. Operations has determined that this reservoir should be abandoned, as the cost to repair it would exceed the minor benefit of its continued operation.

Solution: The Project includes installation of a new, permanent bypass and abandonment of the reservoir.

Current Project Status: Maintenance crews have filled in the reservoir. Materials ordered to complete the bypass.

Budget: The 2023 budget for this Project is \$120,000. 2023 year-to-date expenses are \$20,717.

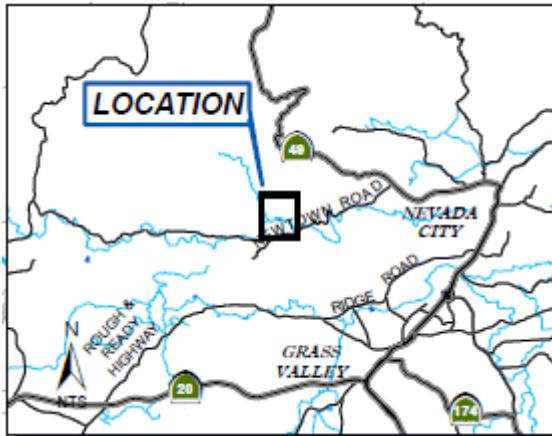


Purpose: The Project includes sediment removal, the installation of a new permanent bypass, and abandonment of the reservoir.

Solution: Remove approximately 5,900 cubic yards of sediment from the reservoir, modify the inlet structure, realign bypass piping, and remove the two existing above-ground control valves and concrete block headwall.

Current Project Status: Extending the 1600 Permit. Preparing easement offer packages, will determine if sediment removal can be done in 2023.

Budget: The 2023 Budget for this Project is \$450,000. 2023 year-to-date expenses are \$448.





Hydroelectric Department 2023 Capital Improvement Projects

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 55 - HYDROELECTRIC

Project #	Project	2023 Budget	2023 Expenditures	Priority Score
2094	Scotts Flat Spillway Repair and Upgrades	\$ 1,500,000	\$ 225,120	84
2655	Chicago Park Powerhouse Refurbishment	\$ 2,500,000	\$ 24,584	82
2658	French Lake Low Level Outlet Gate Refurbishment	\$ 200,000	\$ -	75
2392	Rollins Governor Replacement	\$ 150,000	\$ -	75
2394	Rollins Powerhouse Relay Protection Upgrade	\$ 400,000	\$ 203,636	75
2347	Combie North Powerhouse CAISO Meter	\$ 150,000	\$ -	74
2552	Scotts Flat Powerhouse Fire Detection Upgrade	\$ 30,000	\$ 15,926	73
2553	Combie North Powerhouse Fire Detection Upgrade	\$ 30,000	\$ 5,398	73
2554	Combie South Powerhouse Fire Detection Upgrade	\$ 30,000	\$ 5,768	73
2665	Deer Creek Powerhouse Communications Upgrade	\$ 150,000	\$ -	73
2544	Dutch Flat #2 Powerhouse Cooling Water System Upgrade	\$ 300,000	\$ 104,670	71
2581	Combie North Powerhouse Capacitor Bank Upgrade	\$ 50,000	\$ 25,048	71
2597	Jackson Lake Dam Toe Slope Protection	\$ 100,000	\$ 39,358	71
2483	Dutch Flat #2 Powerhouse Backup Generator	\$ 100,000	\$ 15,987	70
2339	Rucker Creek Spill Gate Replacement	\$ 250,000	\$ -	69
2663	Dutch Flat Afterbay Hydraulic Line Refurbishment	\$ 150,000	\$ -	69
2598	Chicago Park Powerhouse RTU Replacement	\$ 400,000	\$ -	68
2432	New Hydroelectric Office Design	\$ 1,950,000	\$ 75,862	
6943	Combie South Powerhouse Access Road	\$ 250,000	\$ 14,350	64
2576	Fall Creek Diversion Improvements	\$ 150,000	\$ 81,914	62
Totals		\$ 8,840,000	\$ 837,621	26

Scotts Flat Spillway Repair and Upgrades

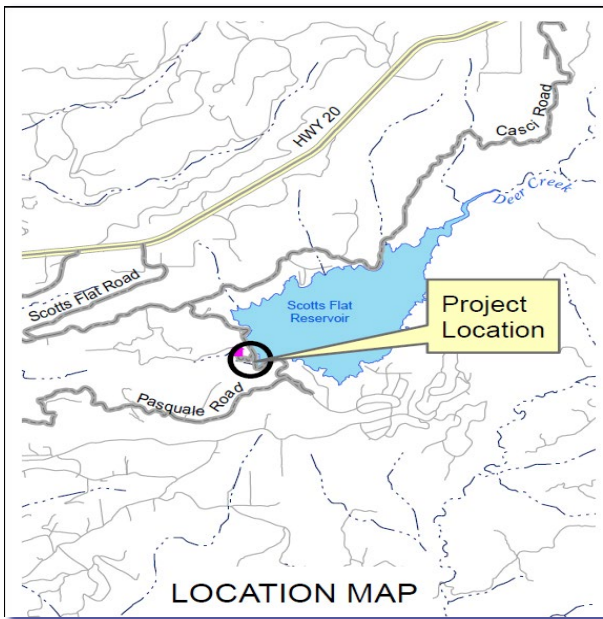
Project No. 2094

Purpose: Upgrade the Scotts Flat Spillway as necessary to safely pass the probable maximum flood as required by DSOD and FERC.

Solution: Requires studies and hydraulic modeling of alternatives; design of modifications of spillway chute, chute walls, and the terminal energy dissipation structure; construction of design.

Current Project Status: Preliminary site work complete. Project design is underway. Contract award for CEQA services is being presented at the August 23, 2023, Board meeting. Construction is planned to start in 2026.

Budget: The 2023 budget for this Project is \$1,500,000. 2023 year-to-date expenses are \$225,120.



Chicago Park Powerhouse Refurbishment

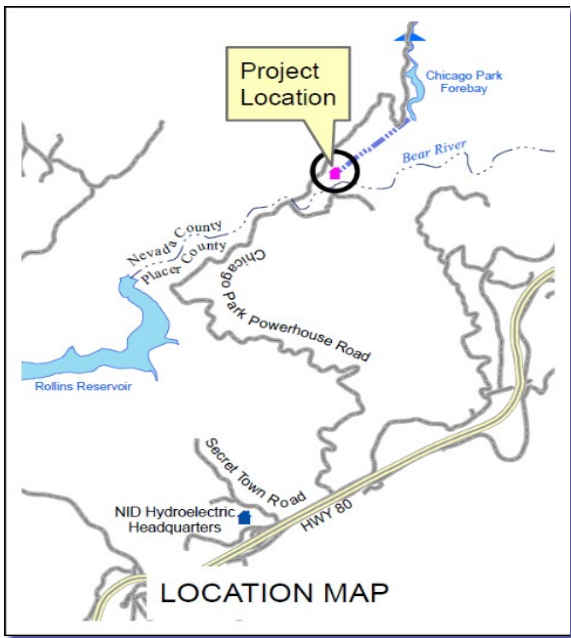
Project No. 2655

Purpose: Improve facility efficiency and performance by replacing or upgrading the turbine and main transformer (original 1960's vintage) and ensure safe plant operation by disassembling, cleaning, and rebuilding the generator at Chicago Park Powerhouse.

Solution: Requires replacing or upgrading existing turbine, main transformer, and their appurtenances. Replace deteriorated generator windings, insulation, poles, and other generator appurtenances. The last rewind was completed in 1991 and test results are showing signs of needing to complete another.

Current Project Status: Condition assessment has been completed. Project planning is underway.

Budget: The 2023 budget for this Project is \$2,500,000. 2023 year-to-date expenses are \$24,584

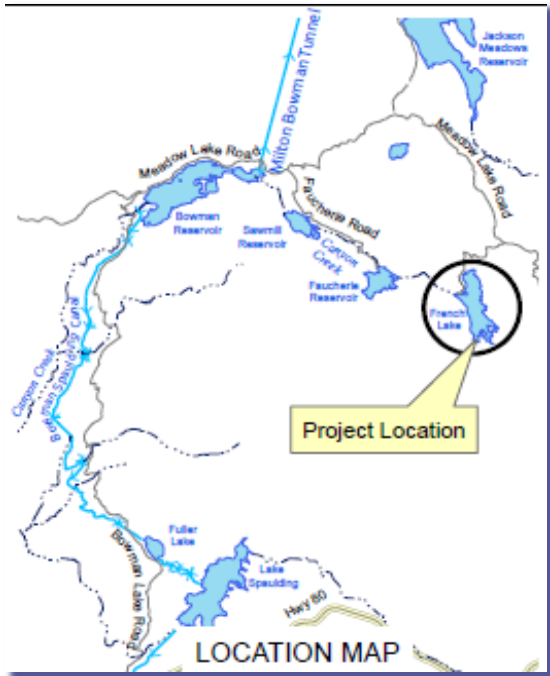


Purpose: Ensure proper and safe operation of the low-level outlet valve for French Lake.

Solution: Repair or replace the hydraulic gate control system pending underwater inspection.

Current Project Status: Inspections are being planned for the fall when the access improves. Project scope will be defined by findings.

Budget: The 2023 budget for this Project is \$200,000. There are no 2023 year-to-date expenses.



Rollins Powerhouse Governor Replacement

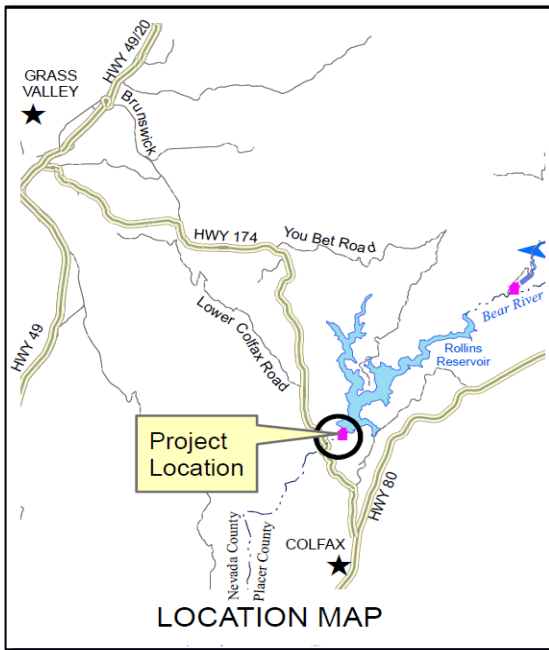
Project No. 2392

Purpose: Improve facility efficiency and performance by replacing or upgrading the existing mechanical governor (original 1980's vintage) at Rollins Powerhouse.

Solution: Replace or upgrade the existing governor and appurtenances.

Current Project Status: Project scope is being developed. A request for proposal will be prepared this fall.

Budget: The 2023 budget for this Project is \$150,000. There are no 2023 year-to-date expenses.



Rollins Powerhouse Relay Protection Upgrade

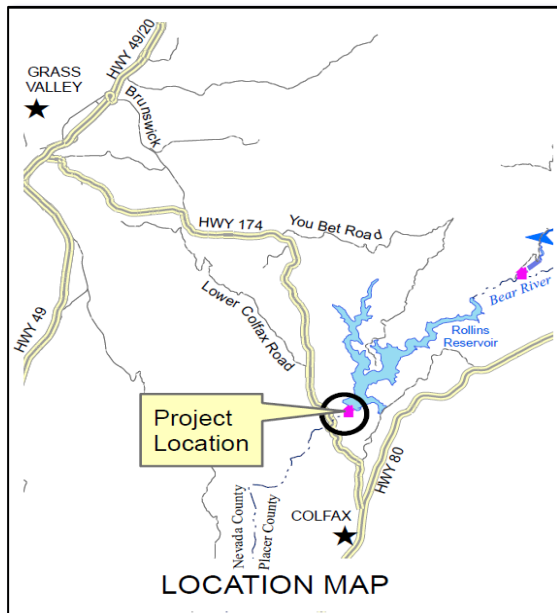
Project No. 2394

Purpose: Provide improved high voltage protection for RPH by upgrading the relay system. This will improve plant efficiency and better protect onsite equipment.

Solution: Upgrade protective relay system by removing original (1980's vintage) electro-mechanical relays and installing new programmable, multi-function relays and annunciators.

Current Project Status: Preconstruction of new panels is under way. Project is slated for completion during the 2023 annual planned outage in the fall.

Budget: The 2023 budget for this Project is \$400,000. 2023 year-to-date expenses are \$203,636.



Combie North Powerhouse CAISO Meter

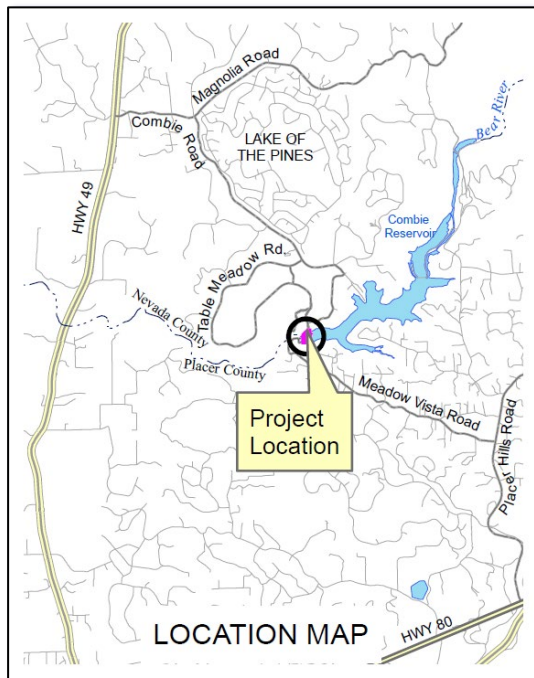
Project No. 2347

Purpose: Provide CAISO certified meter data for Combie North Powerhouse.

Solution: Purchase and install new CAISO meter and appurtenances in the Combie North Powerhouse.

Current Project Status: Project planning is underway.

Budget: The 2023 budget for this Project is \$150,000. There are no 2023 year-to-date expenses.



Scotts Flat Powerhouse Fire Detection Upgrade

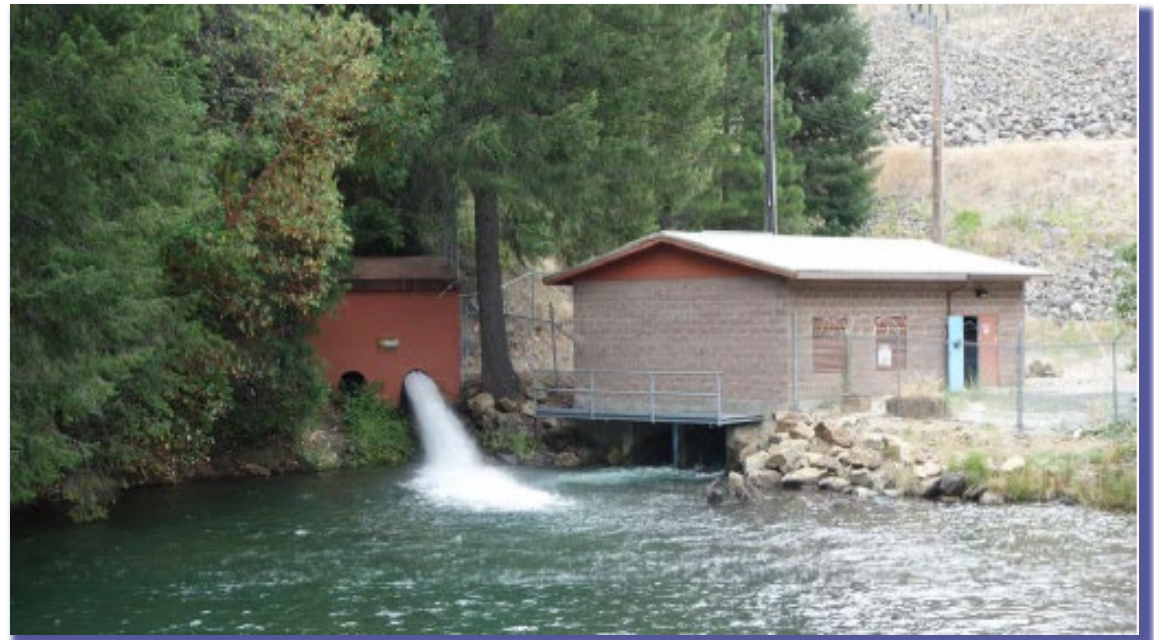
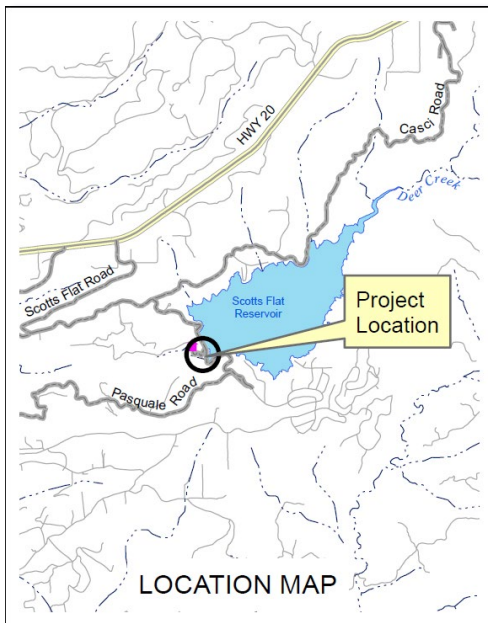
Project No. 2552

Purpose: Provide remote fire detection abilities for Scotts Flat Powerhouse to trigger an emergency response to the normally unmanned facility in case of fire.

Solution: Install new smoke and/or heat detection systems in the Scotts Flat Powerhouse that includes alarming and call out features to notify staff in case of fire while unoccupied.

Current Project Status: Final design has been completed and project percurrent is underway. Construction is planned for 2024.

Budget: The 2023 budget for this Project is \$30,000. The 2023 year-to-date expenses are \$15,926.



Combie North Powerhouse Fire Detection Upgrade

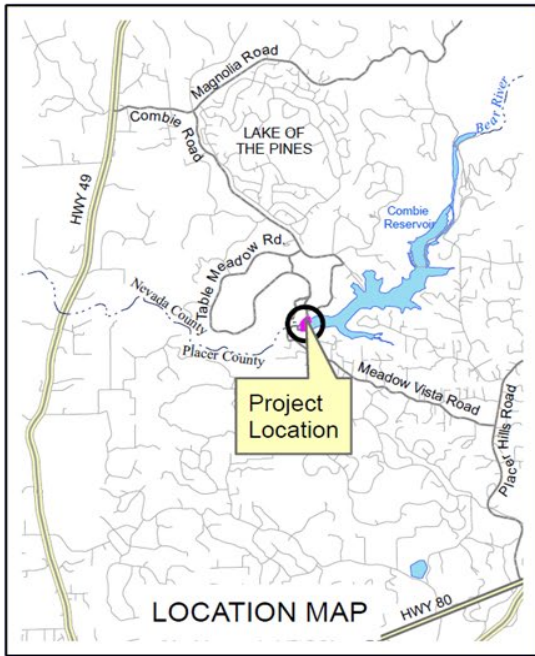
Project No. 2553

Purpose: Provide remote fire detection abilities for Scotts Flat Powerhouse to trigger an emergency response to the normally unmanned facility in case of fire.

Solution: Install new smoke and/or heat detection systems in the Scotts Flat Powerhouse that includes alarming and call out features to notify staff in case of fire while unoccupied.

Current Project Status: Final design has been completed and project percurrent is underway. Construction is planned for 2024.

Budget: The 2023 budget for this Project is \$30,000. 2023 year-to-date expenses are \$5,398



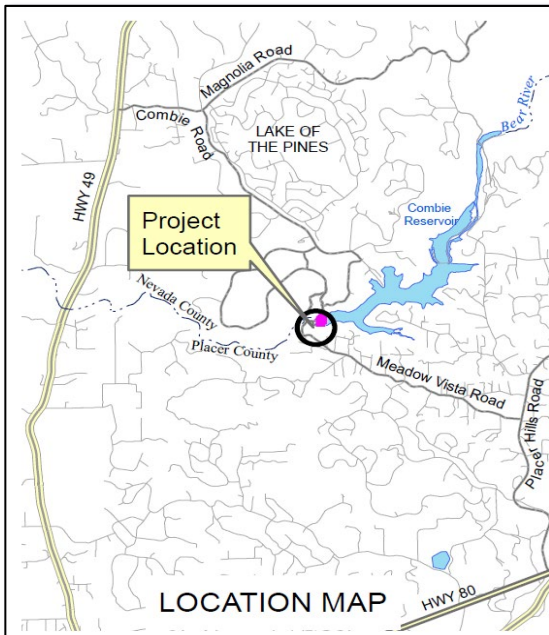
Combie South Powerhouse Fire Detection Upgrade Project No. 2554

Purpose: Provide remote fire detection abilities for Scotts Flat Powerhouse to trigger an emergency response to the normally unmanned facility in case of fire.

Solution: Install new smoke and/or heat detection systems in the Scotts Flat Powerhouse that includes alarming and call out features to notify staff in case of fire while unoccupied.

Current Project Status: Final design has been completed and project procurement is underway. Construction is planned for 2024.

Budget: The 2023 budget for this Project is \$30,000. 2023 year-to-date expenses are \$5,768.

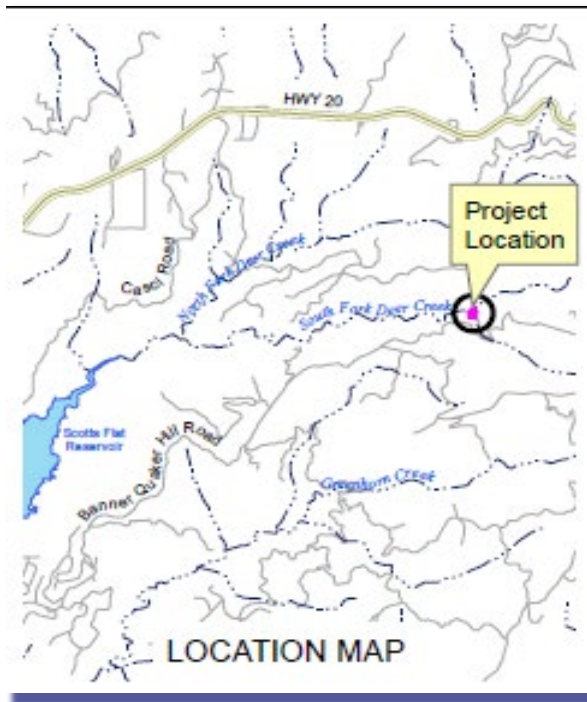


Purpose: Establish a new data link for critical transfer from KLOVE Tower/Deer Creek Powerhouse to Hydro HQ.

Solution: Design and install a new microwave data link from KLOVE Tower/ Deer Creek Powerhouse to Hydro HQ. Includes specifying hardware, design, and installation work.

Current Project Status: The design for the new microwave link has been completed. A bill of materials has been received and project planning is underway.

Budget: The 2023 budget for this Project is \$150,000. There are no 2023 year-to-date expenses.



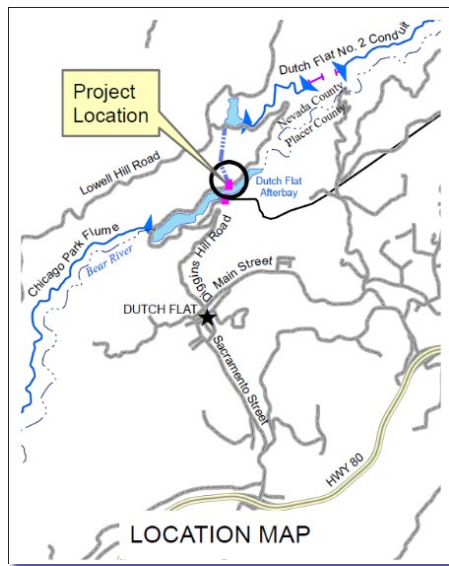
Dutch Flat No. 2 Powerhouse Cooling Water Upgrade Project No. 2544

Purpose: Improve facility efficiency and performance by upgrading the cooling water system at Dutch Flat No. 2 Powerhouse. Being able to collect accurate, real-time cooling water data is necessary to better understand unit function and performance and can help identify preventative maintenance tasks to prevent failures and unit downtime.

Solution: Upgrade with a modern system that can be integrated into the balance of plant programmable logic controller. Scope includes replacing cooling water piping, replacing analog gauges with new HMI screen, adding new flowmeters and pressure transmitters, etc.

Current Project Status: Design is complete. Material procurement is underway. Construction is scheduled to occur during the annual plant outage in the Fall of 2023.

Budget: The 2023 budget for this Project is \$300,000. 2023 year-to-date expenses are \$104,670.



Combie North Capacitor Bank Upgrade

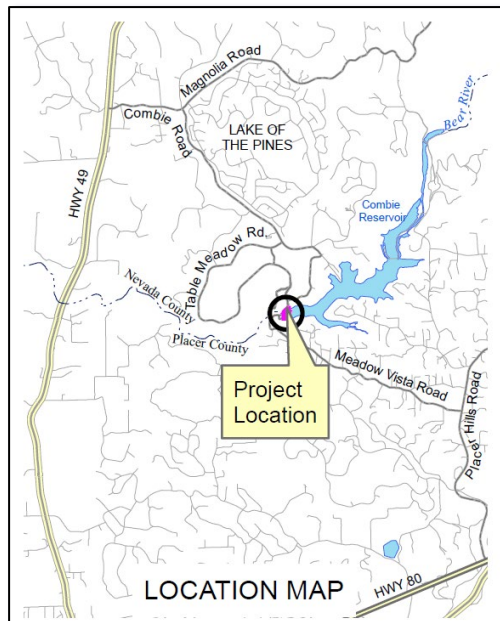
Project No. 2581

Purpose: Replace existing capacitor bank at Combie North Powerhouse to improve the reliability and efficiency of power generation of the facility for variable flow conditions. The existing arrangement limits generation to specific flow condition which, when not met, cause flow to be bypassed.

Solution: Design and support the installation of a new capacitor bank for Combie North Powerhouse.

Current Project Status: Design and procurement have been completed and construction is being planned for 2023

Budget: The 2023 budget for this Project is \$50,000. 2023 year-to-date expenses are \$25,048.



Jackson Lake Dam Toe Slope Protection

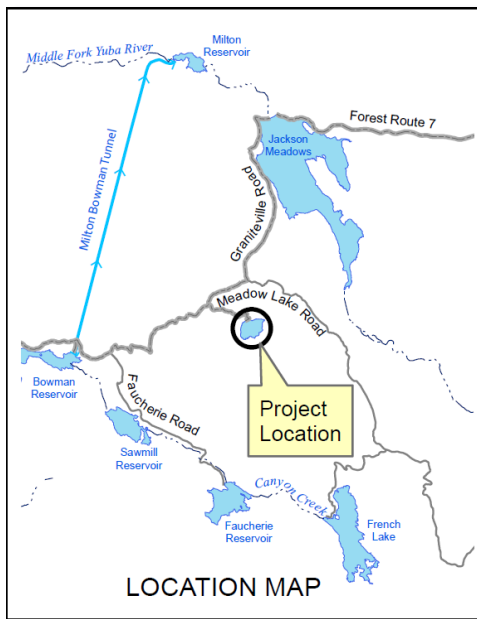
Project No. 2597

Purpose: Stabilize the slopes near the downstream outlet of Jackson Lake Dam.

Solution: Design and construct stabilization measures to ensure the long-term stability of the toe slopes near the downstream outlet end.

Current Project Status: Design and bidding process have been completed. Construction is planned for 2023.

Budget: The 2023 budget for this Project is \$100,000. 2023 year-to-date expenses are \$39,358.



Dutch Flat No. 2 Powerhouse Backup Generator

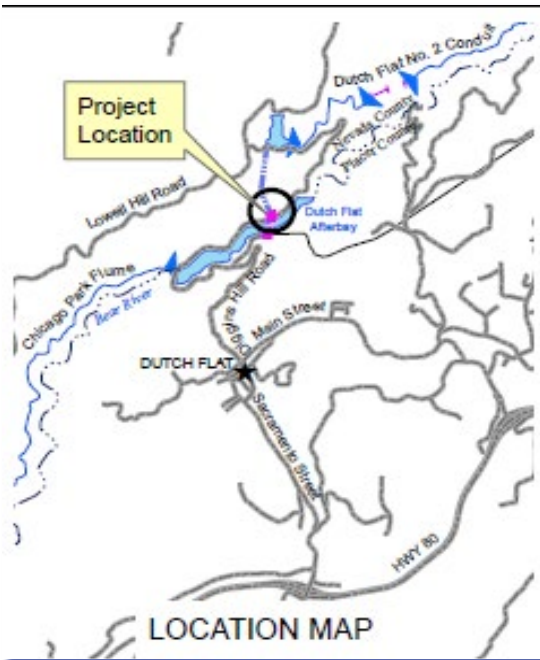
Project No. 2483

Purpose: Provide an onsite Backup power source for the Dutch Flat No. 2 Powerhouse.

Solution: Design and installation of new backup generator at Dutch Flat No. 2 Powerhouse.

Current Project Status: Design is completed. Long lead time item materials have been ordered. Materials are expected to arrive in Spring of 2024 and will be installed during the annual plant outage later in 2024.

Budget: The 2023 budget for this Project is \$100,000. 2023 year-to-date expenses are \$15,987.



Rucker Creek Spillgate Replacement

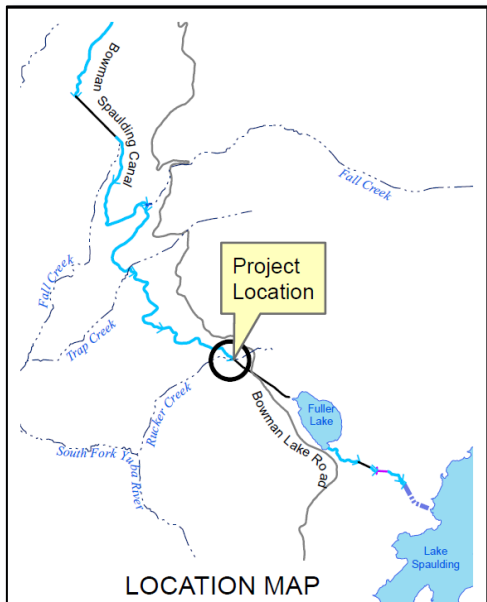
Project No. 2339

Purpose: Improve canal operational efficiency and reduce safety hazards related to operator callouts during storm events.

Solution: Replace existing radial gate at Rucker Creek Diversion with an overshot gate to improve personnel safety and operational performance.

Current Project Status: Final design and specifications have been completed and will be sent to FERC for review and project approval.

Budget: The 2023 budget for this Project is \$250,000. There are no 2023 year-to-date expenses.



Dutch Flat Afterbay Hydraulic Line Refurbishment

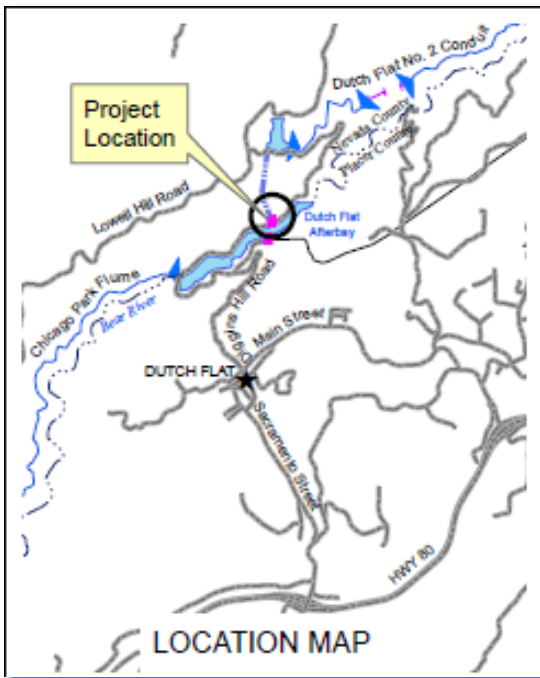
Project No. 2663

Purpose: Ensure proper and safe operation of the low-level outlet valve for the Dutch Flat Afterbay.

Solution: Repair or replace the hydraulic gate control system pending underwater inspection. Add lighting to the outlet tunnel to improve the safety of District staff operating the low-level outlet valve.

Current Project Status: Project bill of materials has been developed and procurement is underway.

Budget: The 2023 budget for this Project is \$150,000



Chicago Park Powerhouse RTU Replacement

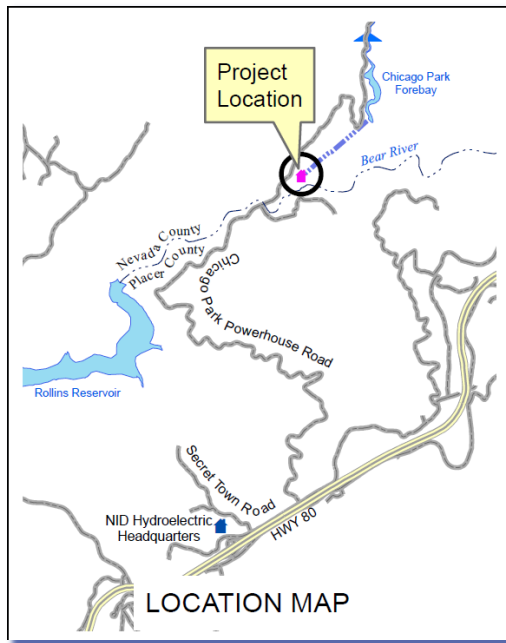
Project No. 2598

Purpose: Replace obsolete hardware for critical SCADA systems.

Solution: Specify, procure, and install new remote terminal unit (RTU) for Chicago Park Powerhouse to provide modern, onsite SCADA alarming.

Current Project Status: Contract is in place to start design in the Summer of 2023. A project kick off meeting has been completed. Construction is planned for 2024.

Budget: The 2023 budget for this Project is \$400,000. There are no 2023 year-to-date expenses.



New Hydroelectric Office Design

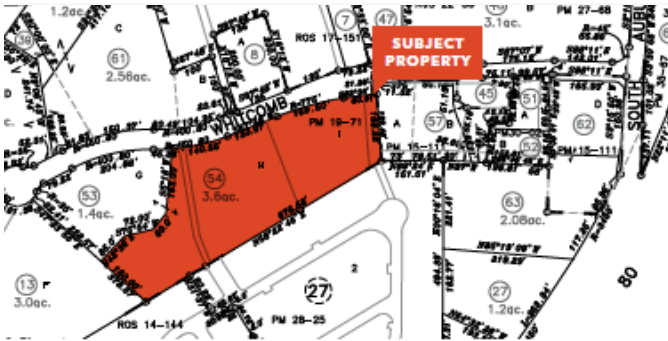
Project No. 2432

Purpose: Complete improvements necessary for occupation of the new Hydro Field Office.

Solution: Complete office/building renovations, make repairs to the roof, install perimeter fencing, upgrade communications, and install a backup generator.

Current Project Status: Project planning is in progress and design will start in the Summer of 2023. Construction is planned for 2024.

Budget: The 2023 budget for this Project is \$1,950,000. 2023 year-to-date expenses are \$75,862.



Combie South Access Road

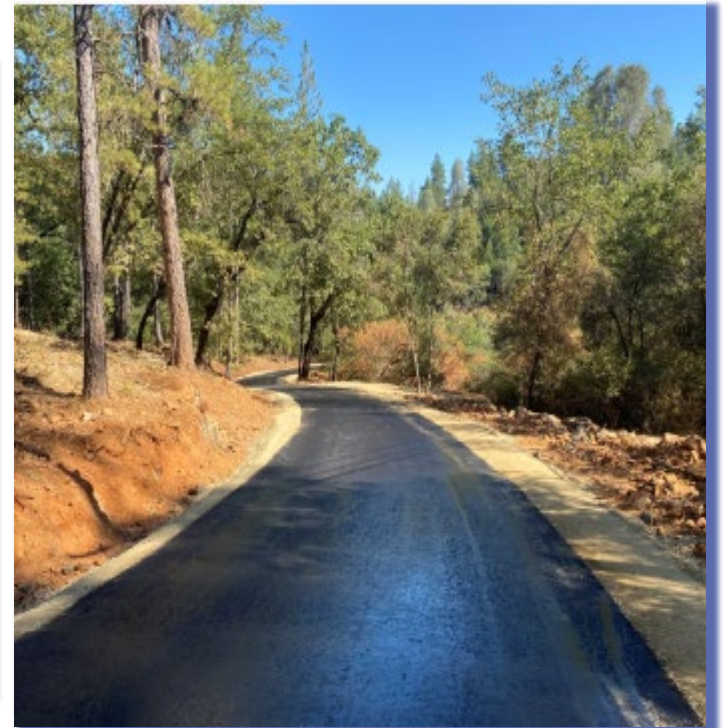
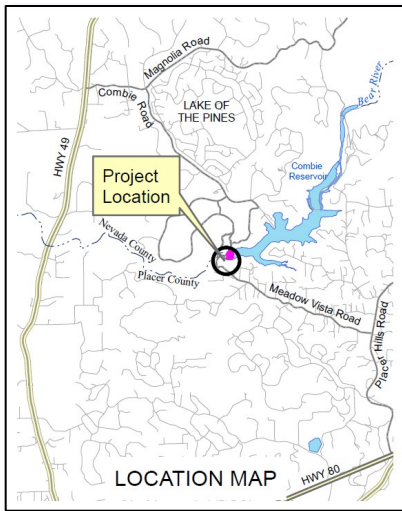
Project No. 6943

Purpose: Provide adequate access to the Combie South Powerhouse from Meadow Vista.

Solution: Plan and design a new access road to the Combie South Powerhouse. Includes identifying necessary land acquisitions, completing survey and design work, and construction. Access road shall meet fire safe standards and will be secured with a new gate.

Current Project Status: Construction is underway and will be completed in the Summer of 2023.

Budget: The 2023 budget for this Project is \$250,000. 2023 year-to-date expenses are \$14,350



Fall Creek Diversion Improvements

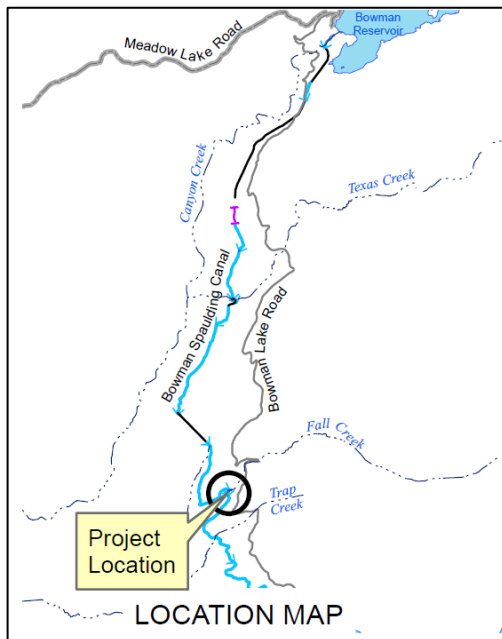
Project No. 2576

Purpose: Make structural enhancements to improve the reliability of the Fall Creek Flume on the Bowman-Spaulling Canal.

Solution: Replace flume sheets and associated hardware.

Current Project Status: Further assessments are underway to determine the condition of the timber structure before construction on the flume can begin.

Budget: The 2023 budget for this Project is \$150,000. 2023 year-to-date expenses are \$81914.



2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 50 - HYDROELECTRIC O&M

Project #	Project	2023 Budget	2023 Expenditures	Priority Score
2359	Bowman North Dam Upstream Lining Repairs	Removed from 2023 Budget		
2662	Dutch Flat Forebay Low-level Outlet Refurbishment	Removed from 2023 Budget		

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 55 - HYDROELECTRIC O&M

Project #	Project	2023 Budget	2023 Expenditures	Priority Score
N/A	Mini Excavator for South Yuba Canal	\$ 125,000	\$ 106,448	60
N/A	Hydro Operations Truck #1	\$ 50,000	\$ 46,315	58
N/A	Hydro Operations Truck #2	\$ 50,000	\$ 46,315	58
N/A	Hydro Operations Truck #3	\$ 50,000	\$ 46,315	58
N/A	Hydro Maintenance Truck	\$ 90,000	\$ 90,000	58
Totals		\$ 365,000	\$ 335,394	

Hydro Maintenance Mini Excavator for South Yuba Canal

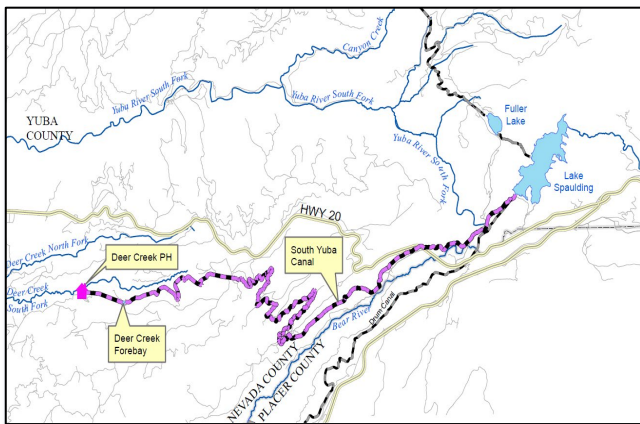
Project No. N/A

Purpose: Allow NID to perform routine and emergency repairs on the South Yuba Canal.

Solution: Purchase a mini excavator (make and model to be determined).

Current Status: Awaiting delivery.

Budget: The 2023 budget for this purchase is \$125,000. 2023 year-to-date expenses are \$106,448.

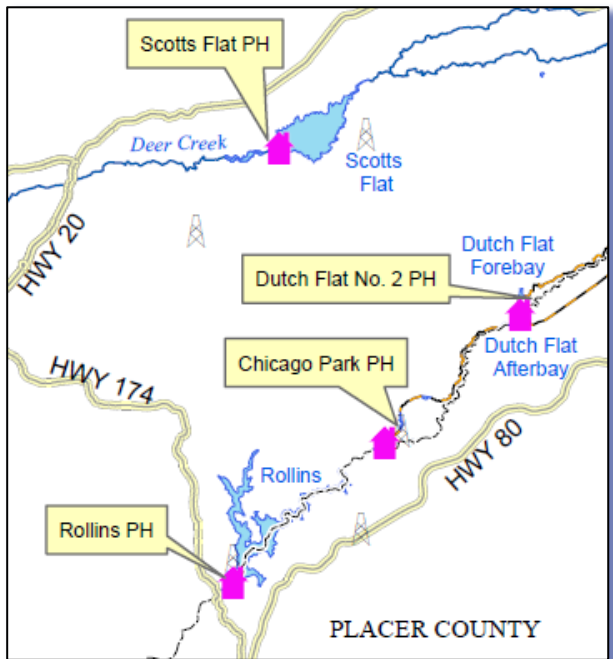


Purpose: Provide a new truck for Hydro Operations.

Solution: Purchase a new Ford F150 work truck to replace current vehicle H5185 (2008 Toyota Tundra with 140,897 miles).

Current Project Status: Delivered.

Budget: The 2023 budget for this purchase is \$50,000. 2023 year-to-date expenses are \$46,315.

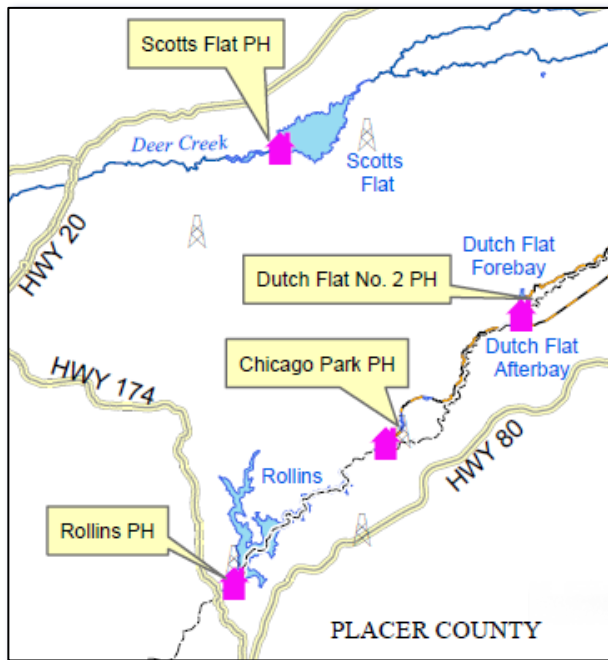


Purpose: Provide a new truck for Hydro Operations.

Solution: Purchase a new Ford F150 work truck to replace current vehicle H5372 (2014 Ford F150 with 143,122 miles).

Current Status: Delivered.

Budget: The 2023 budget for this purchase is \$50,000. 2023 year-to-date expenses are \$46,315.



Hydro Operations Truck No. 3

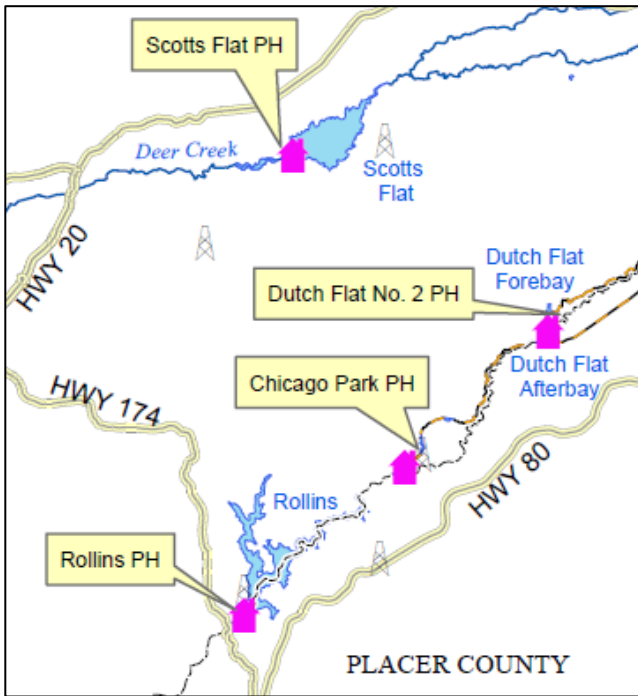
Asset No. H5524

Purpose: Provide a new truck for Hydro Operations.

Solution: Purchase a new Ford F150 work truck to replace current vehicle H5373 (2014 Ford F150 with 145,596 miles).

Current Status: Delivered.

Budget: The 2023 budget for this purchase is \$50,000. 2023 year-to-date expenses are \$46,315.



Hydro Maintenance Truck

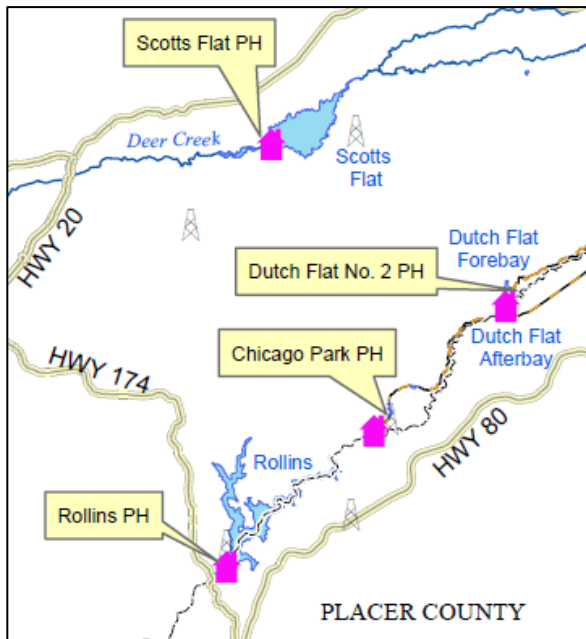
Asset No. H5525

Purpose: Provide a new truck for Hydro Maintenance.

Solution: Purchase a new $\frac{3}{4}$ -ton (F250) work truck.

Current Status: Delivered.

Budget: The 2023 budget for this purchase is \$90,000. 2023 year-to-date expenses are \$88,032.





Maintenance Department 2023 Capital Improvement Projects

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - MAINTENANCE

Project #	Project	2023 Budget	2023 Expenditures	Priority Score
11127	2023 Ford F550 4x4 Dump Truck	\$ 92,666	\$ 92,643	65
11128	2023 Ford F550 4x4 Dump Truck	\$ 92,666	\$ 92,643	65
N/A	Side-by-Side ATV	\$ 35,000	\$ 30,605	64
N/A	Excavator	\$ 170,000	\$ -	62
N/A	Mini-Excavator	\$ 72,000	\$ -	62
N/A	1.5-Ton Flatbed Truck	\$ 88,000	\$ -	58
N/A	5-Yard Dump Truck	\$ 150,000	\$ -	56
N/A	5-Yard Dump Truck	\$ 150,000	\$ -	56
Totals		\$ 850,332	\$ 215,891	

1.5-Ton Dump Truck

Asset No. 11127

Purpose: California Air Resources Board (CARB) compliance is necessary for the District's large vehicles. The current 1-ton dump trucks will become out of compliance. These will be replaced with the 5500 series (1.5-ton) that have better breaking and payload capabilities with the same size chassis.

Solution: Replace asset No. 9913 with a CARB-compliant 1.5-ton dump truck.

Current Status: Received.

Budget: The 2023 budget for this truck is \$92,666. Total 2023 year-to-date expense \$92,643.



1.5-Ton Dump Truck

Asset No. 11128

Purpose: California Air Resources Board (CARB) compliance is necessary for the District's large vehicles. The current 1-ton dump trucks will become out of compliance. These will be replaced with the 5500 series (1.5-ton) that have better breaking and payload capabilities with the same size chassis.

Solution: Replace asset No. 10261 with a CARB-compliant 1.5-ton dump truck.

Current Status: Received.

Budget: The 2023 budget for this truck is \$92,666. Total 2023 year-to-date expense is \$92,643.



ATV/Side-By-Side

Purpose: Replace the aging piece of equipment that is essential to vegetation control operations.

Solution: Replace existing asset 10461 with a new ATV/Side-By-Side.

Current Status: Received. Includes aftermarket retrofits.

Budget: The 2023 budget for the project is \$35,000. Total 2023 year-to-date expense \$30,605.



Excavator

Purpose: Replace aging piece of equipment that is essential to canal maintenance operations.

Solution: Replace existing asset No. 10096 with a new excavator.

Current Status: Order pending. In stock, just needs bucket attachments, per specifications. To be delivered September 30, 2023.

Budget: The 2023 budget for the project is \$170,000.



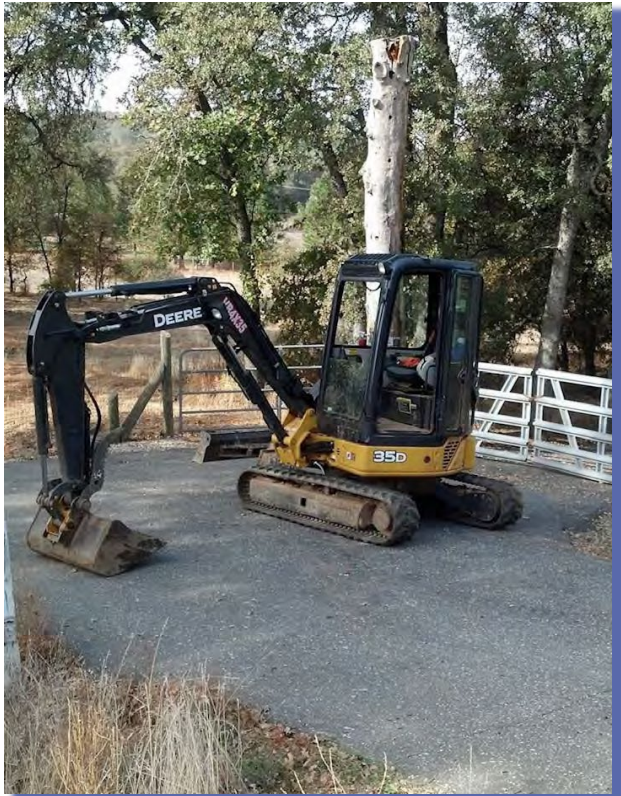
Mini-Excavator

Purpose: Replace aging piece of equipment that is essential to canal maintenance operations.

Solution: Replace existing asset No. 10439 with a new mini-excavator.

Current Status: Being built in August-September 2023. To be delivered by December 31, 2023.

Budget: The 2023 budget for the project is \$72,000.



1.5-Ton Flatbed Truck

Purpose: Replace aging vehicle that is essential to canal maintenance operations.

Solution: Replace existing asset No. 9648 with a new 5500 series 1.5-ton flatbed truck.

Current Status: Being built. To be delivered by December 31, 2023.

Budget: The 2023 budget for the project is \$88,000.



5-Yard Dump Truck

Purpose: CARB mandates to meet updated pollution standards for all on-road diesel equipment. The existing 5-yard dump trucks do not meet the new standards.

Solution: Replace existing vehicle with CARB-compliant models. Board approval was received on June 8, 2202, with a purchase agreement processed to replace asset 10003. PO No. 00056921. Delivery and payment expected 2nd or 3rd quarter FY23.

Current Status: Being built. To be delivered by December 31, 2023.

Budget: The 2023 budget for this asset (roll-over from FY22) is \$150,000.



5-Yard Dump Truck

Purpose: CARB mandates to meet updated pollution standards for all on-road diesel equipment. The existing 5-yard dump trucks do not meet the new standards.

Solution: Replace existing equipment with CARB-compliant models. Board approval was received on June 8, 2202, with a purchase agreement processed to replace asset 10004. PO No. 00056921. Delivery and payment expected 2nd or 3rd quarter FY23.

Current Status: Being built. To be delivered in early 2024.

Budget: The 2023 budget for this asset is \$150,000.





Operations Department 2023 Capital Improvement Projects

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - OPERATIONS

Project #	Project	2023 Budget	2023 Expenditures	Priority Score
2681	E. George PLC Replacement	\$ 140,000	\$ -	74
2671	Loma Rica Chemical Tanks	\$ 149,050	\$ -	66
10694	Vehicle Replacement	\$ 45,000	\$ -	63
10614	Vehicle Replacement	\$ 45,000	\$ -	62
10533	Vehicle Replacement	\$ 45,000	\$ -	61
2672	Automated Head Gates	\$ 100,000		55
11126	Vehicle Replacement	\$ 50,600	\$ 50,597	63
Totals		\$ 574,650	\$ 50,597	

E. George PLC Replacement

Project No. 2681

Purpose: Replacement of the no longer supported Programmable Logic Controller (PLC) at the Elizabeth George Water Treatment Plant. The PLC is the hub of operations of the water treatment plant. Without the manufacturer's support, PLCs may become susceptible to corruption and security breaches. A failure of the PLC would jeopardize operations and potentially the public water supply.

Solution: Replace the three PLC racks with current equipment.

Current Project Status: The PLC update is in contract and awaiting parts to begin the project.

Budget: The 2023 budget for this Project is \$140,000. There are no 2023 year-to-date expenses.



Purpose: The Loma Rica WTP does not have redundant storage for critical water treatment process chemicals. The goal is to have 2 tanks for each chemical to cover supply issues. Critical to ensuring basic chemical supply for treatment when supplier availability is challenged. Has the potential to affect plant production and the public supply of water.

Solution: This project will provide the concrete pad and new double wall tanks to ensure adequate, safe storage.

Current Project Status: Engineering is designing the pad. Tank have been ordered; installation anticipated in fall 2023.

Budget: The 2023 budget for this Project is \$149,050. There are no 2023 year-to-date expenses.



Vehicle 10694 Replacement

Purpose: Vehicle No. 10694 has met its service life expectancy and has been recommended for replacement by the fleet mechanics.

Solution: Truck 10694, a 2015 Ford F150, has 139,563 miles and is projected to be over 172,000 by mid-year 2023. It is recommended that the truck be replaced with another in kind vehicle.

Current Status: Purchase approved by Board. Awaiting delivery.

Budget: The 2023 budget for this Project is \$45,000. There are no 2023 year-to-date expenses



Vehicle 10614 Replacement

Purpose: Vehicle No. 10614 has met its service life expectancy and has been recommended for replacement by the fleet mechanics.

Solution: Truck No.10614, a 2014 Ford F150, has 131,434 miles and is projected to be over 160,000 by mid-year 2023. It is recommended that the truck be replaced with another in-kind vehicle.

Current Status: Purchase approved by Board. Awaiting delivery.

Budget: The 2023 budget for this Project is \$45,000. There are no 2023 year-to-date expenses



Vehicle 10533 Replacement

Purpose: Vehicle No. 10533 has met its service life expectancy and has been recommended for replacement by the fleet mechanics.

Solution: Truck No. 10533, a 2013 Ford F150, has 122,477 miles and is projected to be over 154,000 by mid-year 2023. It is recommended that the truck be replaced with another in-kind vehicle.

Current Status: Purchase approved by Board. Awaiting delivery.

Budget: The 2023 budget for this Project is \$45,000. There are no 2023 year-to-date expenses.



Automated Gaging Head Gates

Project No. 2672

Purpose: NID head gates and gaging stations have met their life expectancy and are in need of replacement.

Solution: This project will begin the replacement of manual head gate control structures with automated gates that will allow for real-time adjustment and measurement. Three stations are projected

Current Status: Project was waiting on a grant that doesn't look like it's going to happen. It will more than likely have to be pushed to next year.

Budget: The 2023 budget for this Project is \$100,000.



Vehicle 10262 Replacement

Asset No. 11126

Purpose: Vehicle No. 10262 has met its service life expectancy and has been recommended for replacement by the fleet mechanics.

Solution: Truck No. 10262, a 2011 Ford F350 4x4, has 118,481 miles. Replace with 2022 Ford F250 4x4.

Current Status: Purchase approved by Board and has been received.

Budget: The 2023 budget for this Project is \$50,600. 2023 year-to-date expenses are \$50,597.

