

Staff Report

TO: Board of Directors

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

DATE: September 13, 2023

SUBJECT: 2024 Capital Improvement Program Workshop

ALL DEPARTMENTS

RECOMMENDATION:

Hold a workshop to review the proposed projects recommended for the 2024 Capital Improvement Program (CIP) budget.

BACKGROUND:

The Engineering, Hydroelectric, Maintenance, and Operations Departments have selected the projects recommended for the 2024 CIP Budget according to the priority scoring system that ranks each project with points based on specific criteria.

BUDGETARY IMPACT: \$18,720,100 is the proposed total for all Departments as follows:

Fund 15 – Engineering	\$6,878,000
Fund 55 – Hydroelectric	\$8,500,000
Fund 55 – Hydroelectric O & M	\$ 265,000
Fund 70 – Information Technology	\$ 350,000
Fund 15 – Maintenance	\$1,032,100
Fund 15 – Operations	\$ 192,000
Fund 70 – Watershed	\$1,503,000

Attachments: (1)

- 2023 CIP Workshop Presentation



NID

**2024 Capital
Improvement
Program
Workshop
September 13, 2023**

2024 CAPITAL IMPROVEMENT BUDGET - ALL FUNDS

Fund	Department	2024 Budget
15	Engineering	\$ 6,878,000
55	Hydroelectric	\$ 8,500,000
55	Hydroelectric O & M	\$ 265,000
70	IT	\$ 350,000
15	Maintenance	\$ 1,032,100
15	Operations	\$ 192,000
70	Watershed	\$ 1,503,000
Total 2024 CIP Budget		\$ 18,720,100

2024 Capital Improvement Projects Engineering – Fund 15

2024 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - ENGINEERING

Project No.	Project	2024 Budget
2568	Lake Wildwood Treatment Plant	\$ 300,000
8099-4	Maben Canal IV	\$ 550,000
TBD	Rough & Ready Reservoir Pipe	\$ 100,000
2336	Tarr Diversion at Wolf Creek	\$ 150,000
2646	Tarr Canal at Old Auburn	\$ 1,350,000
2645	Combie Ophir Siphons II & III	\$ 900,000
2366	Cedar Ridge PRV	\$ 154,000
TBD	Hughes Road Pipeline Replacement	\$ 424,000
TBD	Charging Stations GV Headquarters	\$ 900,000
TBD	ADA Transition Plan	\$ 150,000
2647	Ramp Repairs Operations	\$ 700,000
2376	North Auburn Water Treatment Plant	\$ 1,200,000
Total 2024 CIP Budget Engineering		\$ 6,878,000

Lake Wildwood Treatment Plant Upgrades

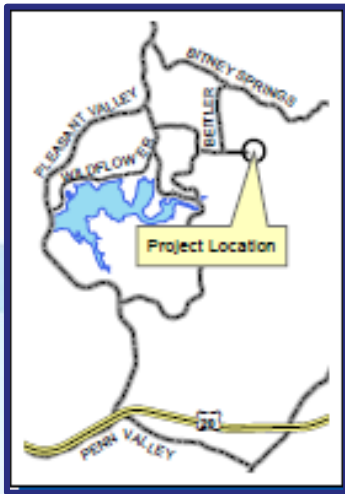
Project No. 2568

Purpose: The Lake Wildwood Treatment Plant has exceeded its useful life and requires substantial upgrades

Solution: Upgrades to the treatment plant include replacing clear wells, the pumps, drying beds, sediment ponds, intake structure, and electrical upgrades.

Priority Score: 57 Basis for Priority: The project will result in lower operating costs, provides a regional benefit to the community, and reduces the threat/impact to health and safety.

Budget: The 2024 budget of \$300,000 is for planning and design of the project. This project is anticipated to be completed in 2026 with estimated total costs of \$8,321,000.



Maben Canal Phase IV

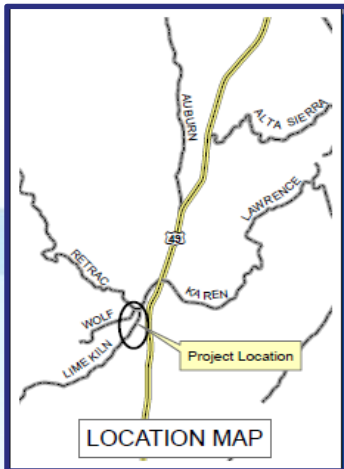
Project No. 8099-4

Purpose: Various berm repairs due to undersized siphon downstream of prior phases. Flow restrictions, over-toppings, and routine leaks. Current Moratorium. Provides year-round in-home use for many customers. This is the fourth and final phase of the Maben Canal project.

Solution: Rehabilitate and enlarge the Maben Canal, placing approximately 662 feet of 18" pipe within the existing canal alignment, and replacing an existing 12" pipe/siphon with a new 24" pipe; 480 feet long. A water flow measuring device will be installed at the end of the new pipe installation as part of the project.

Priority Score: 53 **Basis for Priority:** Lower capital costs, reduced operating and maintenance costs, increased revenue potential, reduces threat or impact to health and safety.

Budget: The 2024 budget for this project is \$550,000 for construction.



Rough & Ready Reservoir Pipe

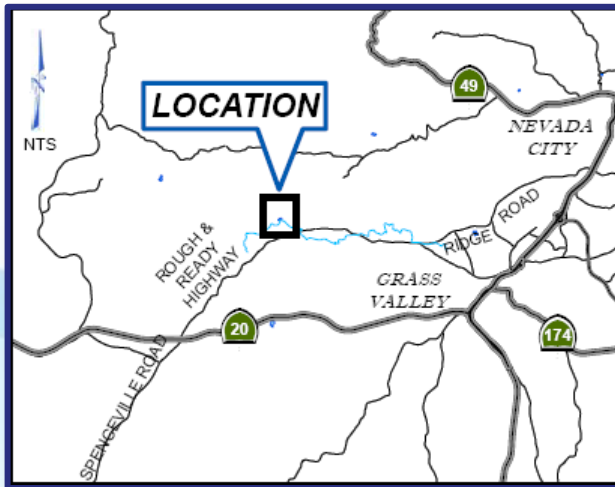
Project No. TBD

Purpose: The outlet pipe feeding the lower Rough and Ready canal from the Rough and Ready Reservoir is badly deteriorated and in need of replacement.

Solution: Replace the outlet pipe and structure that feeds the lower portion of the canal system, as well as the replacing the catwalks and control valve.

Priority Score: 56 **Basis for Priority:** This project will lower operating costs and will provide regional benefit to the community, and deferral of the project could cause a disruption to service.

Budget: The 2024 budget of \$100,000 is for construction of the project.



Tarr Diversion

Project No. 2336

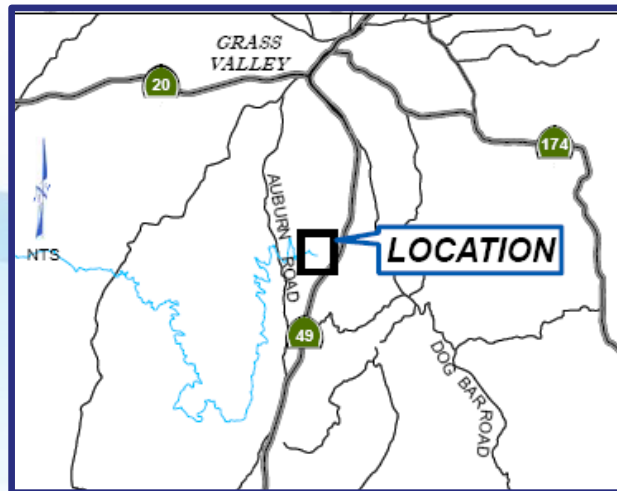
Purpose: The Diversion structure on Wolf Creek that feeds the Tarr canal is badly deteriorated and needs major repairs or replacement. Water is leaking through the existing diversion and walls. The sluice gate appears to be inoperable and buried.

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.

Priority Score: 56 **Basis for Priority:** This project will lower operating costs and will provide regional benefit to the community, and deferral of the project could cause a disruption to service.

Budget: The 2024 budget of \$150,000 is for CEQA and permitting. The construction of this project is anticipated for 2025 with estimated total costs of \$1,730,000. The 2023 budget was \$80,000.

Project Status: Consulting Agreement approved on August 23, 2023, for Surveying services for both Tarr Canal and Tarr Diversion Projects.



Tarr Canal Rehabilitation

Project No. 2646

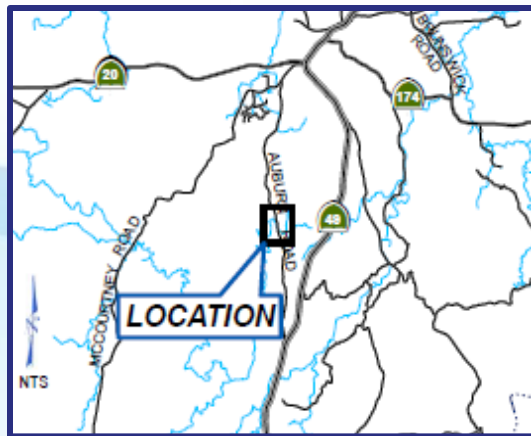
Purpose: There are numerous leaks on the shotcrete section of the canal near Old Auburn Road.

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.

Priority Score: 57 **Basis for Priority:** This project will lower operating costs and will provide regional benefit to the community; deferral of the project could cause a disruption to service and poses a threat to health and safety.

Budget: The 2024 budget of \$1,350,000 for this project is for CEQA, permitting, Right-of-Way acquisitions, and construction. Construction is anticipated to be completed in 2026, with estimated total costs of \$4,150,000. The 2023 budget for this project was \$180,000.

Project Status: Consulting Agreement approved on August 23, 2023, for Surveying services for both Tarr Canal and Tarr Diversion Projects.



Combie Ophir Siphons 2 & 3

Project No. 2645

Purpose: Orr Creek, Dry Creek, and Rock Creek Siphons are steel pipes constructed in the 1940s. The siphons are deteriorated, undersized, and have reached the end of their useful life.

Solution: Design and construct 853 feet of pipeline to replace the Orr Creek siphon, 3,292 feet of pipeline to replace the Dry Creek siphon, and 1,392 feet of pipeline to replace the Rock Creek siphon. All siphons require crossing various creeks, Hwy 49, and on hospital property requiring extensive permitting and CEQA.

Priority Score: 68 **Basis for Priority:** Combie-Ophir is critical infrastructure for delivering raw water. The project will have a regional benefit, potential for increased revenues, and will improve level of service.

Budget: The 2024 budget of \$900,000 is for design, permitting, Right-of-Way acquisitions, and construction related to the Orr Creek phase. The project will be completed in phases with construction anticipated to begin in 2024 through 2026, with estimated total costs of \$6,936,000. This project was included in the 2023 budget for \$170,000.

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



Cedar Ridge Pressure Reducing Valve Station

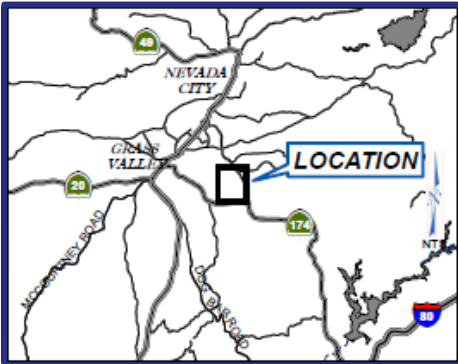
Project No. 2366

Purpose: Replaced an aged, underground Pressure Reducing Valve station (PRV).

Solution: Construct a replacement above ground PRV station within the existing Right of Way (ROW). Additional ROW is needed within the existing ROW to go from easement to fee.

Priority Score: 50 **Basis for Priority:** Reduces threat or impact to health and safety, lower annual operating and maintenance costs, improves level of service.

Budget: The 2024 budget for this project is \$154,000 for construction and ROW acquisitions.



Hughes Road Pipeline Replacement

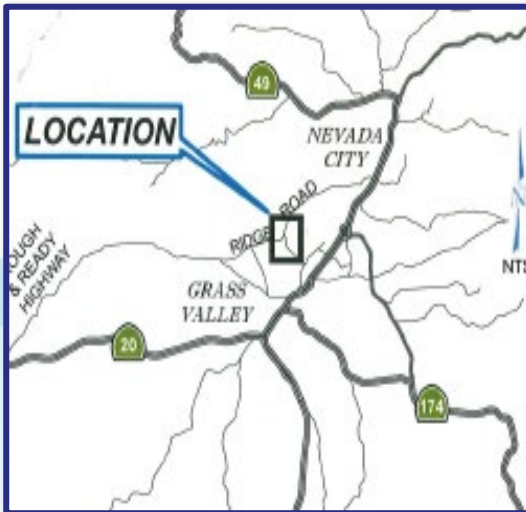
Project No. TBD

Purpose: Original 20" steel pipe has leaked, primarily as it crosses under the Lower Grass Valley Canal. It is a primary transmission main and will be replaced with a new pipe, approximately 1,120 feet. The 520-foot section at the end of Litton Drive will be connected with a 10" pipe in order to provide redundancy and connectivity.

Solution: The project will replace the original aged, leaking pipe enabling the District to provide better operational service for treated water customers.

Priority Score: 53 **Basis for Priority:** This project will lower operating costs and will provide regional benefit to the community, and deferral of the project could cause a disruption to service.

Budget: The 2024 budget for this project is \$424,000 for construction



Charging Stations at Grass Valley Headquarters Project No. TBD

Purpose: The purpose of the project is to meet regulatory compliance.

Solution: Installation of new PG&E service meters and transformers, and installation of two electric vehicle charging stations.

Priority Score: 46 **Basis for Priority:** Meet regulatory requirements.

Budget: The 2024 budget for this project is \$900,000 for construction. The project is anticipated to be completed in 2026, with estimated total costs of \$1,950,000.



Purpose: Improve the safety of District-owned facilities.

Solution: Review the District offices and buildings to ensure compliance with the Americans with Disabilities Act (ADA) and develop a plan to make improvements, as necessary.

Priority Score: 57 **Basis for Priority:** Meet regulatory requirements, and for the health and safety of employees and the public at District facilities.

Budget: The 2024 budget of \$150,000 is for the design, permitting, and construction of the project. The project is anticipated to be completed in phases through 2028 with estimated total costs of \$550,000.



Grass Valley Admin Ramp Repair Operations

Project No. 2647

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

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

Priority Score: 62 **Basis for Priority:** The Project reduces the threat to health and safety for the staff who utilize the ramp to access the main building, and customers entering the main lobby. Deferral of the project could cause a disruption to service.

Budget: The 2024 budget of \$700,000 is for construction of the project. This project was included in the 2023 budget for \$43,853.

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



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.

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).

Priority Score: 57 **Basis for Priority:** The project will result in lower operating costs, provides a regional benefit to the community, and reduces the threat/impact to health and safety.

Budget: The 2024 budget of \$1,200,000 is for construction of the project. This project was included in the 2022 and 2023 budgets. Total expenses anticipated through 2023 are \$1,003,855.

Project Status: The design is complete. Construction contract awarded to C & D Contractors, construction to begin in November 2023.



2024 Capital Improvement Projects Hydroelectric – Fund 55

2024 CAPITAL PROJECT BUDGET SUMMARY - FUND 55 - HYDROELECTRIC

Project No.	Project	2024 Budget
N/A	Sno-Cat - 2000 XL	\$ 250,000
2664	Rollins Excitation Transformer Replacement	\$ 50,000
2667	SCADA Software and Hardware Update	\$ 150,000
2665	Deer Creek Powerhouse Communications Upgrade	\$ 150,000
2359	Bowman North Dam Upstream Lining Improvements	\$ 100,000
2660	Dutch Flat #2 Powerhouse Station Batteries Charger	\$ 50,000
2483	Dutch Flat #2 Powerhouse Backup Generator	\$ 100,000
2339	Rucker Creek Spill Gate Replacement	\$ 250,000
2661	Chicago Park Powerhouse Station Batteries Charger	\$ 50,000
2598	Chicago Park Powerhouse RTU Replacement	\$ 200,000
2655	Chicago Park Powerhouse Refurbishment	\$ 2,000,000
2392	Rollins Powerhouse Governor Replacement	\$ 400,000
2394	Rollins Powerhouse Relay Protection Upgrade	\$ 50,000
2094	Scotts Flat Spillway Repair and Upgrades	\$ 1,500,000
2658	French Lake Low Level Outlet Gate Improvments	\$ 200,000
2432	New Hydroelectric Office Design	\$ 3,000,000
Total 2024 CIP Budget Hydroelectric		\$ 8,500,000

SNO-CAT – 2000 XL (XTRA LITE)

Purpose: SnoCats are necessary to make access to remote facilities in extreme winter weather. The District's existing SnoCats are 2003 and 2016 vintage. The 2003 SnoCat will be kept for use on South Yuba Canal if necessary and allowed under CARB regulations.

Solution: Purchase a new SnoCat.

Priority Score: 73 **Basis for Priority:** Staff safety and operational efficiency.

Budget: The 2024 budget of \$250,000 is for the vehicle purchase.

Current Status: Vehicle will be purchased in 2024.



Rollins Excitation Transformer Replacement

Project No. 2664

Purpose: The excitation transformer at Rollins Powerhouse is beyond its useful life per industry standards and has shown signs of deterioration.

Solution: Replacement and maintenance

Priority Score: 66 **Basis for Priority:** Operational efficiency.

Budget: The 2024 budget of \$50,000 is for the equipment purchase of the project. The project is continuing from prior years.

Current Status: Equipment has been specified and will be ordered in 2023. Due to the long lead time, it is not expected to arrive until 2024.



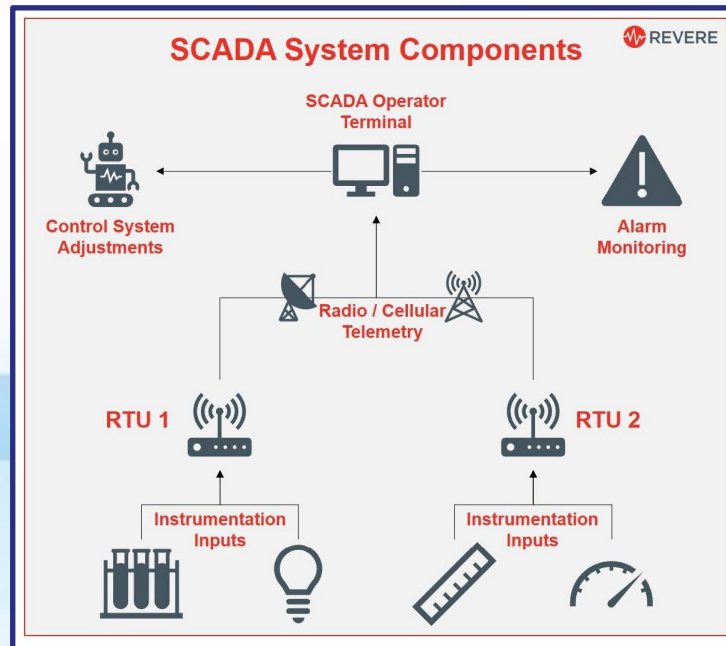
Purpose: To maintain the SCADA network.

Solution: Maintenance and repair. Update hardware and software associated with NID SCADA System.

Priority Score: 70 **Basis for Priority:** Failure to complete the project could result in hardware failures and/or leaving critical infrastructure systems running on unsupported software.

Budget: The 2024 budget of \$150,000 is for the maintenance and repair of the project.

Current Status: This project is continuing from prior years



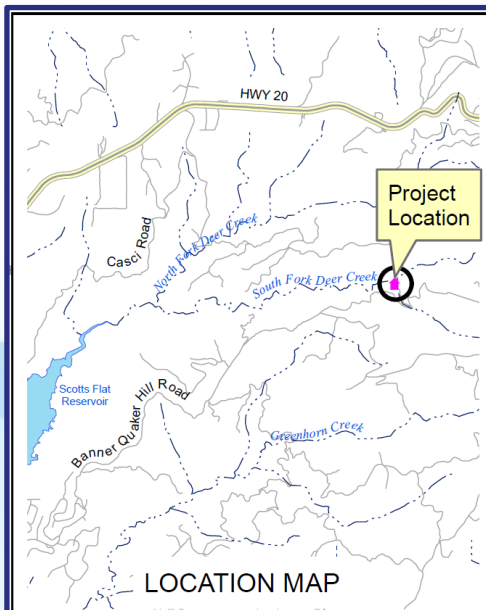
Deer Creek Powerhouse Communication Upgrade Project No. TBD

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

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

Priority Score: 75 **Basis for Priority:** Operational efficiency.

Budget: The 2024 budget for this Project is \$150,000.
This project is continuing from prior years.



Bowman North Dam Upstream Lining Improvements Project No. 2359

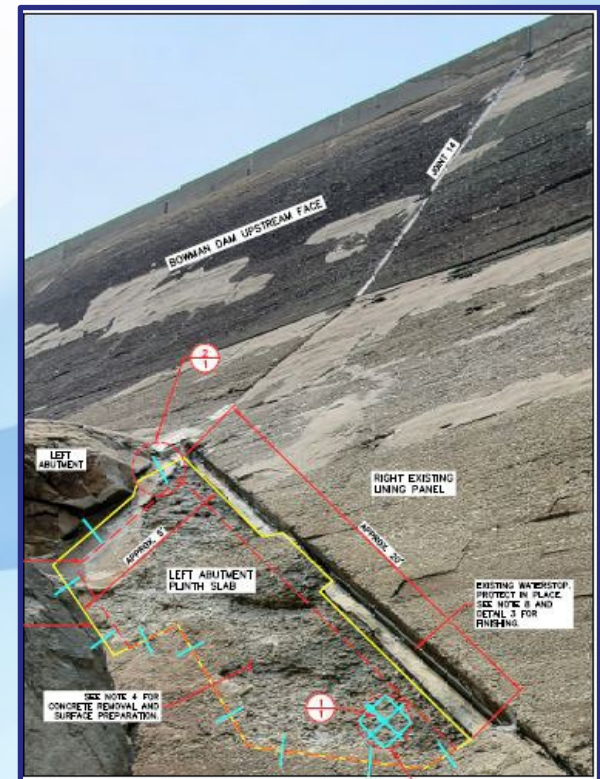
Purpose: Continuing project from 2023. Maintenance and repair. The existing lining has been damaged by extreme freeze/thaw action on the concrete at high elevation and is in need of significant repair to prevent serious damage to critical infrastructure.

Solution: Improve the failing lining on the upstream face of Bowman North Dam.

Priority Score: 72 **Basis for Priority:** Fix and improve the lining on the upstream side of the Bowman North Dam. Repairs are being required by the Division of Safety of Dams (DSOD).

Budget: The 2024 budget of \$100,000 is for the maintenance and repair of the project. The project is continuing from prior years.

Current Status: The 2023 reservoir level is anticipated to be high, so no extensive repair is planned. Hydro plans to purchase a barge/work platform in 2023. A dive inspection is completed. With this data, the top 30 feet of the upstream lining is being mapped and repair areas are identified.



Dutch Flat #2 Powerhouse Station Batteries / Charger

Project No. 2660

Purpose: Station service battery bank and charger are at the end of their useful lives and are no longer PG&E compliant.

Solution: Maintenance and repair. Replace station service battery bank and charger.

Priority Score: 62 **Basis for Priority:** Equipment safety

Budget: The 2024 budget of \$50,000 is for the maintenance and repair of the project.

Current Status: The project is continuing from prior years.



Dutch Flat #2 Powerhouse Backup Generator Upgrade

Project No. 2483

Purpose: Provide an onsite backup power source for the Dutch Flat #2 Powerhouse.

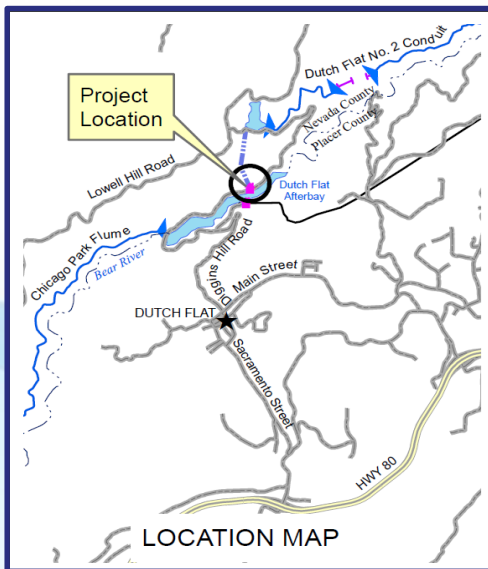
Solution: Design and installation of a new backup generator at Dutch Flat #2 Powerhouse.

Priority Score: 77

Basis for Priority: Critical infrastructure and risk to service disruption.

Budget: The 2024 budget for this Project is \$100,000. The project is continuing from prior years.

Project Status: The project was placed on hold during its design phase pending the approval of a requested budget amendment. Work is planned to resume in 2024.



Rucker Creek Spill Gate Replacement

Project No. 2339

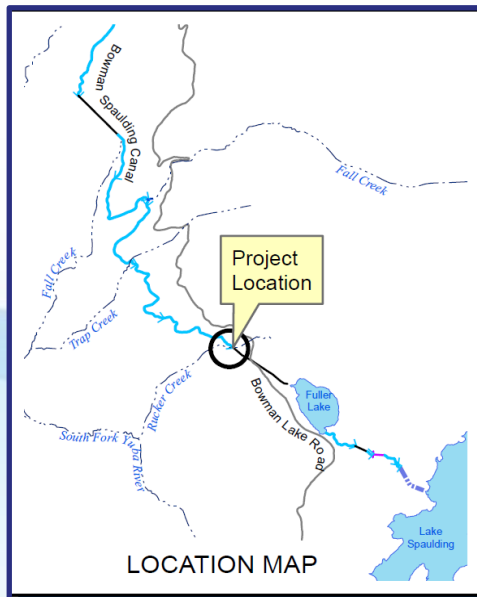
Purpose: Improve canal operational efficiency and reduce safety hazards related to operator callouts during storm events.

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

Priority Score: 88 **Basis for Priority:** Health and safety, and operational efficiency.

Budget: The 2024 budget for this Project is \$250,000. This project was included in the 2023 budget.

Project Status: The project is currently in the design phase.



Chicago Park Powerhouse Station Batteries / Charger

Project No. 2661

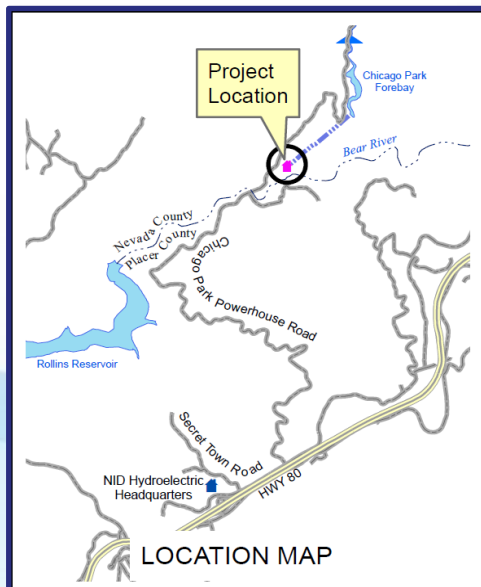
Purpose: Station service battery bank and charger are at the end of their useful lives and are no longer PG&E compliant.

Solution: Maintenance and repair. Replace station service battery bank and charger.

Priority Score: 62 **Basis for Priority:** Equipment safety

Budget: The 2024 budget of \$50,000 is for the maintenance and repair of the project.

Current Status: This project is continuing from prior years



Chicago Park Powerhouse RTU Replacement

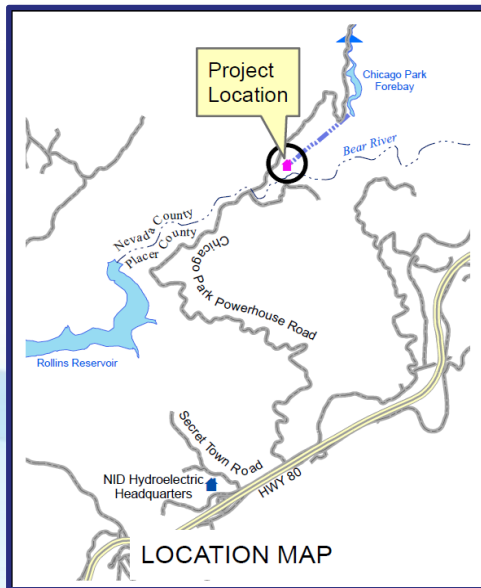
Project No. 2598

Purpose: Replace obsolete hardware for critical SCADA systems.

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

Priority Score: 71 **Basis for Priority:** Operational efficiency, critical powerhouse system, and replacing obsolete equipment.

Budget: The 2024 budget for this Project is \$200,000.



Chicago Park Powerhouse Refurbishment

Project No. TBD

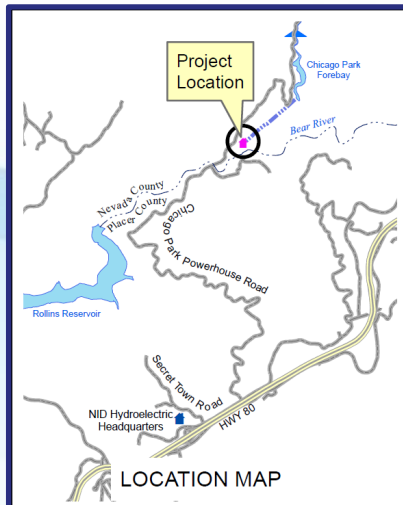
Purpose: Improve facility efficiency and performance by replacing or upgrading the existing turbine and main transformer (original 1960's vintage) and ensure safe plant operation by disassembling, cleaning, and rebuilding the generator at Chicago Park Powerhouse.

Solution: Replace or upgrade the 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.

Priority Score: 90 **Basis for Priority:** Health and safety, operational efficiency, critical powerhouse system.

Budget: The 2024 budget for this Project is \$2,000,000. The project is continuing from prior years.

Project Status: This project is currently in the design phase.



Rollins Powerhouse Governor Replacement

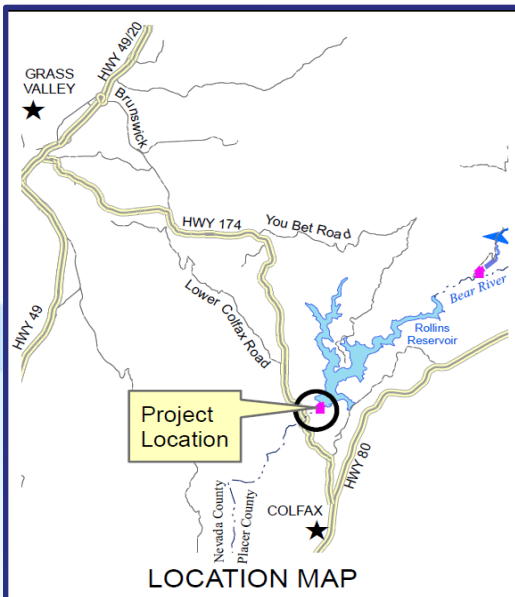
Project No. 2392

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

Solution: Replace or upgrade the existing governor and appurtenances.

Priority Score: 79 **Basis for Priority:** Operational efficiency, and regulatory compliance.

Budget: The 2024 budget for this project is \$400,000. The project is continuing from prior years.



Rollins Powerhouse Relay Upgrade

Project No. 2394

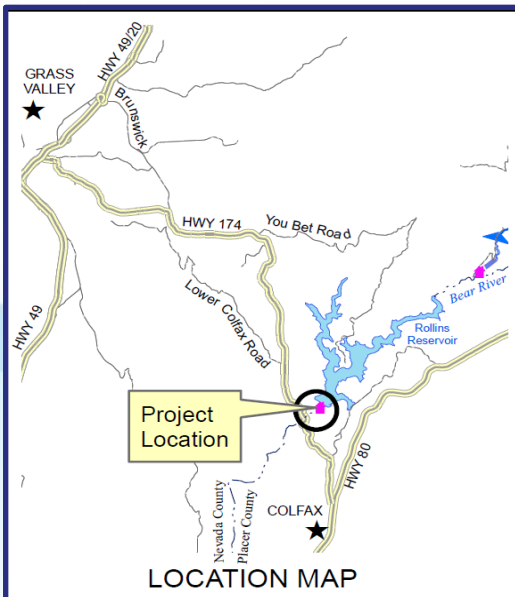
Purpose: Provide improved high voltage protection for RPH by upgrading the relay system. This will improve plant efficiency and better protect onsite equipment.

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

Priority Score: 80 **Basis for Priority:** Equipment protection, and critical powerhouse system.

Budget: The 2024 budget for this Project is \$50,000. This project was included in the 2023 budget.

Project Status: This project is currently in the design phase.



Scotts Flat Spillway Repair and Upgrade

Project No. 2094

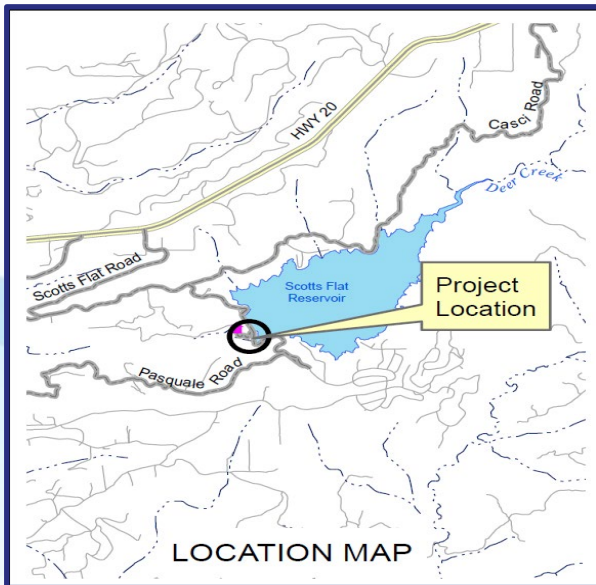
Purpose: Upgrade the Scotts Flat Spillway as necessary to safely pass the probable maximum flood as required by DSOD and FERC.

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.

Priority Score: 91 **Basis for Priority:** Regulator required, public safety, critical infrastructure.

Budget: The 2024 budget for this project is \$1,500,000. The project is continuing from prior years.

Project Status: This project is currently in the design phase. Contract for CEQA/NEPA Services has been executed.



French Lake Dam Low Level Outlet Gate Improvements

Project No. TBD

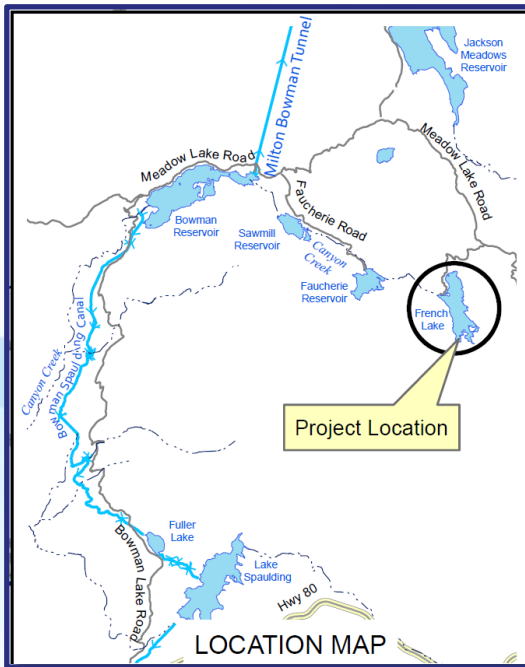
Purpose: Improve facility efficiency and performance by replacing or upgrading the existing mechanical governor (original 1980s vintage) at Rollins Powerhouse.

Solution: Replace or upgrade the existing governor and appurtenances.

Priority Score: 80

Basis for Priority: Operational efficiency, and regulatory compliance.

Budget: The 2024 budget for this Project is \$200,000. The project is continuing from prior years.



New Hydroelectric Field Office Development

Project No. TBD

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

Solution: This work is to make the building inhabitable for the future relocation of the Hydroelectric Department.

Priority Score: 72 **Basis for Priority:** Complete improvements necessary for occupation of the new Hydro Field Office in Colfax.

Budget: The 2024 budget of \$3,000,000 is for environmental studies and construction of the project.

Current Status: This project is continuing from 2023.



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

Project #	Project	2023 Budget
N/A	Maintenance Truck - Replaces H5406 - 3/4 Ton 4x4 w/Service Body	\$ 100,000
N/A	Maintenance Truck - Replaces H5359 - 1/2 Ton 4x4	\$ 55,000
N/A	Operations Truck - Replaces H5435 - 1/2 Ton 4x4	\$ 55,000
N/A	Operations Truck - Replaces H5372 - 1/2 Ton 4x4	\$ 55,000
Total 2024 CIP Budget Hydroelectric O & M		\$ 265,000

Maintenance Truck ½ Ton 4x4 (Replace H5359)

Purpose: H5359 was totaled in a vehicle collision.

Solution: Purchase replacement vehicle. Make and model will be determined after a comprehensive analysis is completed.

Priority Score: 67 **Basis for Priority:** Staff safety and operational efficiency.

Budget: The 2024 budget of \$55,000 is for the vehicle purchase

Current Status: Vehicle will be purchased in 2024.



Maintenance Truck 3/4 Ton 4x4 (Replace H5406)

Purpose: Provide a new truck for Hydro Maintenance.

Solution: Purchase a new ¾-ton (F250) work truck with service body.

Priority Score: 70

Basis for Priority: Operational efficiency.

Budget: The 2024 budget for this purchase is \$100,000.



Operations Truck ½ Ton 4x4 (Replace H5435)

Purpose: H5435, 2016 Chevy Colorado had 112,972 miles.

Solution: Purchase replacement truck. Make and model will be selected after thorough analysis.

Priority Score: 68 **Basis for Priority:** Staff safety and operational efficiency.

Budget: The 2024 budget of \$55,000 is for the vehicle purchase

Current Status: Vehicle will be purchased in 2024.



Operations Truck ½ Ton 4x4 (Replace H5372)

Purpose: H5372, 2014 Ford F150 has 151,778 miles.

Solution: Purchase replacement truck. Make and model will be selected after thorough analysis.

Priority Score: 69 **Basis for Priority:** Staff safety and operational efficiency.

Budget: The 2024 budget of \$55,000 is for the vehicle purchase

Current Status: Vehicle will be purchased in 2024.





2024 Capital Improvement Projects Information Technology (IT) – Fund 70

2024 CAPITAL PROJECT BUDGET SUMMARY - FUND 70 - IT

Project #	Project	2024
TBD	Upgrade Door Security	\$ 350,000
Total 2024 CIP Budget IT		\$ 350,000

Upgrade Door Security

Purpose: To meet security requirements, Nevada Irrigation District installed an access control system for the doors and gates throughout the enterprise in the early 1990's. The current access control system is a Johnson Controls' P2000 security system. Johnson Controls installed the system, but we are not under any maintenance contract to maintain the system at this time.

The access control system consists of media card readers, door controllers, and hardware and software proprietary to Johnson Controls. Throughout the years, Johnson Controls has updated the software and components, but NID and assistance from outside vendors support the door hardware and software. The system has performed very well for NID over the years.

In 2017, Johnson Controls merged with Simplex Grinell. Through this merger, it was decided that the Johnson Controls P2000 security system would be phased out in favor of a new security platform, CCURE 9000. Software and firmware updates have ended and all support for the existing access control system will end in 2024.

Solution: We need to look for an upgrade path to migrate our P2000 platform, or seek for a new access security control system, including hardware. It is imperative that we replace the outdated Johnson Control door security system as soon as possible. The current system poses an unacceptable risk in the event of system failure. Our research indicates that we must replace all proprietary door locking controllers, the application, and the existing media. This course of action is necessary to significantly reduce the risk of system failure, bring us onto a supported system, and enhance our security with advanced security protocols.

Priority Score: 56

Budget: The 2024 budget for this project is \$350,000.



2024 Capital Improvement Projects Maintenance – Fund 15

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - MAINTENANCE

Project No.	Project	2024 Budget
TBD	Roof Replacement – Business Center	\$ 100,000
N/A	Vehicle Lift - Replace and Upgrade Existing	\$ 65,100
N/A	1/2-ton Pickup Truck - Replace Vehicle 10418	\$ 55,000
N/A	Tow- Behind Air Compressors (2) - Replace Existing	\$ 80,000
N/A	1/2-ton Pickup Truck - Replace Vehicle 10514	\$ 55,000
N/A	Tow-Behind Chipper - Replacement and Upgrade of Asset 9995	\$ 85,000
N/A	1/2-ton Pickup Truck - Replace Vehicle 9860	\$ 55,000
N/A	Skip Loader - Replacement for Existing Grader Asset 9138 (Tier 0)	\$ 140,000
N/A	Excavator - Replacement for Asset 8580 (Tier 0)	\$ 275,000
N/A	Forklift - Replacement for Asset 8339 (Tier 0)	\$ 122,000
Total 2024 CIP Budget Maintenance		\$ 1,032,100

Roof Replacement – Business Center

Purpose: Mitigate the leaking roof on the Business Center building.

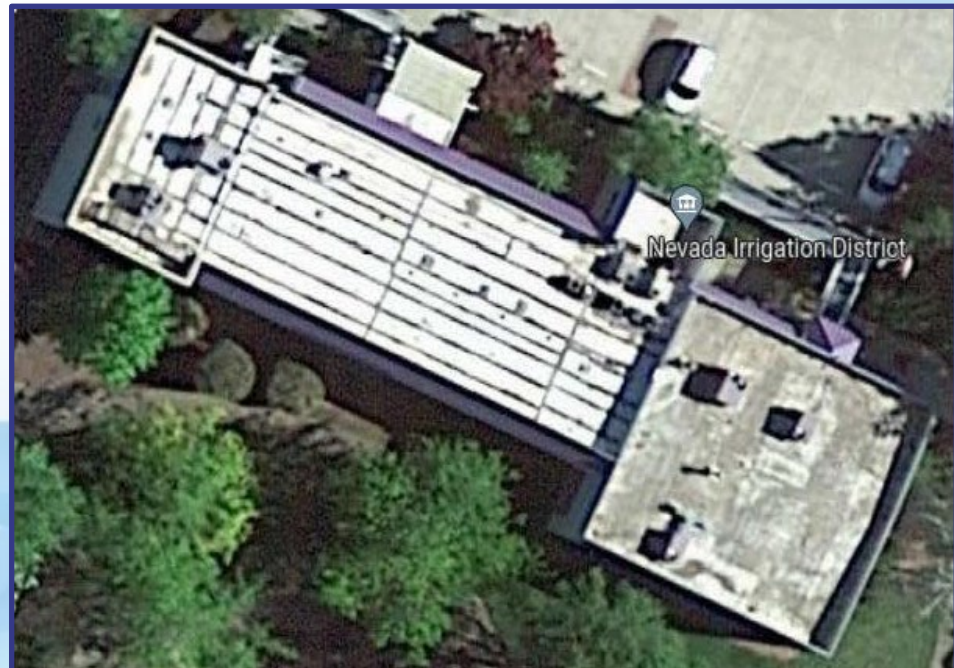
Solution: Replace the roof. A Request for Proposal (RFP) would be solicited from qualified, DIR registered contractors to bid on a new roof design or flat roof replacement.

Priority Score: 61

Basis for Priority: This is a flat roof with a rubber liner. Coatings have been applied to the liner to prolong the roof's life. However, leaks at 4 to 6 different locations reappear every winter and the roof needs to be replaced. This project would include working with the roof-mounted HVAC units.

In addition to serving as the District's headquarters/Business Center, this building directly serves the public. Board meetings open to the public and other water, utility and safety agency meetings are held in this building. Existing customers deliver payments and new customers establish accounts in person at this location.

Budget: The 2024 budget for this project is \$100,000.



Vehicle Lift – Replace And Upgrade Existing

Purpose: Replace an underrated (lbs) vehicle lift for the Mechanic Shop.

Solution: Purchase a new/replacement vehicle lift rated at 20,000 lbs.

Priority Score: 56

Basis for Priority: The Mechanic Shop currently has two vehicle lifts; one rated at 12,000 lbs and one rated at 15,000 lbs. Numerous District vehicles weigh more than 15,000 lbs and cannot be lifted for service/repairs. The ability to lift heavier “medium duty” trucks using a vehicle lift is safer, more ergonomic and more productive than working with jack stands on the shop floor.

The existing unit rated at 12,000 lbs will be used as a trade-in on the new vehicle lift or sold at auction.

Budget: The 2024 budget for this purchase is \$65,100.



1/2-Ton Pickup Truck – Replace Existing

Purpose: Maintenance Supervisors need reliable vehicles to respond to water emergencies at all times of the day (regular workday and as emergency call outs at nights and on weekends).

Solution: Purchase a new/replacement 1/2-ton pickup truck for the Maintenance Supervisor over the Construction and Facilities Maintenance Crews.

Priority Score: 59

Basis for Priority: The existing vehicle (Asset 10418) is a 2013 Ford F150 1/2-ton pickup truck with over 121,000 miles. This vehicle will most likely be reassigned as a District pool vehicle, with an existing pool vehicle being sold at auction. The anticipated delivery date of a new truck is mid-year 2024, which will age this vehicle one additional year before it is replaced.

Budget: The 2024 budget for this purchase is \$55,000.



Tow-behind Air Compressors (2) – Replace Existing

Purpose: To be in compliance with CARB/PERP regulations.

Solution: Purchase two new/replacement tow-behind air compressors; one each for the Grass Valley and Placer Maintenance Yards.

Priority Score: 51

Basis for Priority: The existing Tier 3 units (Assets 10031 and 10032) are 2008 Sullair 260-DSL tankless air compressors, with over 1,684 operating hours combined, and must be replaced by January 2025 with units that meet the latest emission standards/technology. These units will be sold at auction.

Budget: The 2024 budget for this purchase is \$80,000 (for both units).



1/2-Ton Pickup Truck – Replace Existing

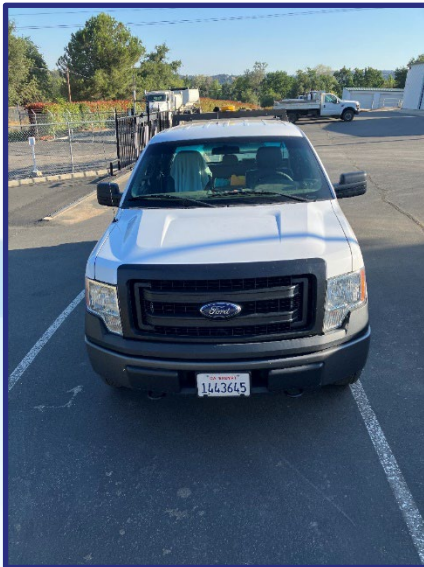
Purpose: Maintenance Supervisors need reliable vehicles to respond to water emergencies at all times of the day (regular workday and as emergency call outs at nights and on weekends).

Solution: Purchase a new/replacement 1/2-ton pickup truck for the Maintenance Supervisor over the Placer Crew.

Priority Score: 54

Basis for Priority: The existing vehicle (Asset 10514) is a 2014 Ford F150 1/2-ton pickup truck with over 145,000 miles. This vehicle will most likely be reassigned as a District pool vehicle, with an existing pool vehicle being sold at auction. The anticipated delivery date of a new truck is mid-year 2024, which will age this vehicle one additional year before it is replaced.

Budget: The 2024 budget for this purchase is \$55,000.



Tow-behind Chipper – Replace And Upgrade Existing

Purpose: Replace an undersized, unreliable chipper.

Solution: Purchase a new/replacement tow-behind chipper for the Placer Crew.

Priority Score: 43

Basis for Priority: The existing chipper (Asset 9995) is a 2008 Bandit 65X brush chipper with over 1,173 operating hours. The unit is undersized for the District's needs (can only handle small wood debris) and is becoming mechanically unreliable. The existing unit will be used as a trade-in on a new chipper or sold at auction.

Budget: The 2024 budget for this purchase is \$85,000.



1/2-Ton Pickup Truck – Replace Existing

Purpose: Maintenance Supervisors need reliable vehicles to respond to water emergencies at all times of the day (regular workday and as emergency call outs at nights and on weekends).

Solution: Purchase a new/replacement 1/2-ton pickup truck for the Maintenance Supervisor over the Canal Maintenance Crew.

Priority Score: 54

Basis for Priority: The existing vehicle (Asset 9860) is a 2007 Dodge 2500 3/4-ton pickup truck with over 90,000 miles. This vehicle will most likely be reassigned as a District pool vehicle, with an existing pool vehicle being sold at auction. The anticipated delivery date of a new truck is mid-year 2024, which will age this vehicle one additional year before it is replaced.

Budget: The 2024 budget for this purchase is \$55,000.



Skip Loader – Replace Existing Grader

Purpose: To be in compliance with CARB regulations.

Solution: Replace an existing grader with a new skip loader for the Canal Maintenance Crew.

Priority Score: 59

Basis for Priority: The existing grader is currently used to help with snow removal and “access road” rehabilitation projects. A skip loader has the same capabilities as a grader, but with far less financial impacts to the District (new skip loader \$140,000 v. new grader \$600,000). The existing unit is a 1996 John Deere 770B wheeled motor grader (Asset 9138) with over 4,502 operating hours. As a Tier 0 unit, it has negative impacts to the District's off-road CARB emission score. The existing grader will be used as a trade-in on the new skip loader or sold at auction.

Budget: The 2024 budget for this purchase is \$140,000.



Excavator – Replace Existing

Purpose: To be in compliance with CARB regulations.

Solution: Purchase a new/replacement excavator for Maintenance’s Raw Water Section that will be utilized by both Grass Valley and Placer Maintenance crews.

Priority Score: 58

Basis for Priority: The existing unit (Asset 8580) is a 1997 John Deere 200LC track excavator with over 7,949 operating hours. As a Tier 0 unit, it has negative impacts to the District's off-road CARB emission score. The existing unit will be used as a trade-in on the new excavator or sold at auction.

Budget: The 2024 budget for this purchase is \$275,000.



Forklift – Replace Existing

Purpose: To be in compliance with CARB regulations.

Solution: Purchase a new/replacement forklift for the Placer Crew.

Priority Score: 56

Basis for Priority: The existing unit (Asset 8339) is a 1999 Eagle Picher forklift with over 2,643 operating hours. As a Tier 0 unit, it has negative impacts to the District's off-road CARB emission score. The forklift is used daily for loading and off-loading trucks. The existing unit will be used as a trade-in on the new unit or sold at auction.

Budget: The 2024 budget for this purchase is \$122,000.



2024 Capital Improvement Projects Operations – Fund 15

2023 CAPITAL PROJECT BUDGET SUMMARY - FUND 15 - OPERATIONS

Project #	Project	2024 Budget
10690	Vehicle Replacement 1/2 Ton Pickup	\$ 48,000
10801	Vehicle Replacement 1/2 Ton Pickup	\$ 48,000
10722	Vehicle Replacement 1/2 Ton Pickup	\$ 48,000
10692	Vehicle Replacement 1/2 Ton Pickup	\$ 48,000
Total 2024 CIP Budget Operations		\$ 192,000

Vehicle 10690 Replacement

Purpose: Vehicle #10690 has been recommended for replacement by the Districts fleet mechanics.

Solution: Truck #10690 is a 2016 Ford F150 4x4 with 131,624 miles. Based upon historic usage, this vehicle is expected to have over 150,000 miles by the end of 2024.

Priority Score: 61

Basis for Priority: this vehicle is of high priority as it is utilized for daily treated water operations and emergency response.

Budget: The 2024 budget includes \$48,000 for replacement of this vehicle.



Vehicle 10801 Replacement

Purpose: Vehicle #10801 is recommended for replacement by the District's fleet mechanics.

Solution: Truck 10801 is a 2017 Ford F150 4x4 with 124,700 miles. Based upon historic usage, this vehicle is expected to have over 150,000 miles by the end of 2024.

Priority Score: 61

Basis for Priority: this vehicle is of high priority as it is utilized for daily water distribution operations and emergency response.

Budget: The 2024 budget includes \$48,000 for replacement of this vehicle.



Vehicle 10722 Replacement

Purpose: Vehicle #10722 is recommended for replacement by the District's fleet mechanics.

Solution: Truck #10722 is a 2016 Ford F150 4x4 with 136,947 miles. Based upon historic usage, this vehicle is expected to have over 150,000 miles by the end of 2024.

Priority Score: 61

Basis for Priority: this vehicle is of high priority as it is utilized for daily water distribution operations and emergency response.

Budget: The 2024 budget includes \$48,000 for replacement of this vehicle.



Vehicle 10692 Replacement

Purpose: Vehicle #10692 is recommended for replacement by the District's fleet mechanics.

Solution: Truck 10692 is a 2015 Ford F150 4x4 with 140,154 miles. Based upon historic usage, this vehicle is expected to have over 150,000 miles by mid-year 2024.

Priority Score: 61

Basis for Priority: this vehicle is of high priority as it is utilized for daily water distribution operations and emergency response.

Budget: The 2024 budget includes \$48,000 for replacement of this vehicle.





2024 Capital Improvement Projects Watershed – Fund 70

2024 CAPITAL PROJECT BUDGET SUMMARY - FUND 70 - WATERSHED

Project #	Project	2024
N/A	Selective Logging	\$ 165,000
N/A	Hazard Tree / Fire Fuels Management	\$ 283,500
2651	Bear River Wildfire Recovery Project	\$ 335,000
N/A	Upper Yuba Forest Restoration Project	\$ 500,000
2592	English Meadow Restoration Project	\$ 219,500
Total 2024 CIP Budget Watershed		\$ 1,503,000

Selective Logging

Purpose: For over 100 years, wildfire suppression and reduced forest thinning have inadvertently increased the risk of severe wildfire in California by overcrowding forests. Overcrowded forest communities are susceptible to diseases and pests, like the western pine beetle, which increases tree mortality and subsequently further increases the risk of wildfire. Removing merchant timber from the region decreases forest fuels, increases forest health, and allows for project work to be offset through timber sales.

Solution: Tree density assessments, watershed environmental analysis, felling and hauling timber from the forest.

Priority Score: 61 **Basis for Priority:** To provide water security, increased water supply, and safeguard our source watersheds. Reduces threat to health and safety of the public and District staff and reduces operation and maintenance costs.

Budget: The 2024 budget for this project is \$165,000. Total project costs are estimated to be \$1,032,700 through 2028.



Hazard Trees – Fire Fuels Management

Purpose: Annual hazard Tree, Defensible Space Requests, General Fire Fuels reduction to protect infrastructure and improve forest health.

Solution: Felling of, removing and chipping hazardous trees for watershed health and wildfire mitigation. Mastication and hand crew with chipper reduction of fire fuels to address the risk and provide protection to communities and water infrastructure from catastrophic wildfire.

Priority Score: 70 **Basis for Priority:** To provide water security, increased water supply, and safeguard our source watersheds. Reduces threat to health and safety of the public and District staff and reduces operation and maintenance costs.

Budget: The 2024 budget for this project is \$283,500. The total project costs are estimated to be \$1,803,064 through 2028. This project is continuing from prior years.



Bear River Wildfire Recovery Project

Purpose: The River Fire burned approximately 300 acres of NID property, threatening water quality and ecosystem health. Many dead standing burned trees remain, posing as dangerous fire fuels for potential future fires. In addition, approximately 50 acres of unburned area requires fuel reduction to further prevent wildfires and improve forest health.

Solution: Mastication on 50 flat acres to reduce fuel load. Hand crew and tracked chipper on 100 acres to fall most of the standing dead trees, chipping tops and branches. Erosion control as necessary using straw wattles or bales.

Priority Score: 66 **Basis for Priority:** To provide water security, increased water supply, and safeguard our source watersheds. Reduces threat to health and safety of the public and District staff, has a positive environmental impact, and meets strategic priorities and goals.

Budget: The 2024 budget for this project is \$335,000 for implementation. This project is continuing from prior years. The total costs are estimated to be \$770,000 and completed in 2024. In June 2022 NID was awarded a grant of \$570,000 from the Sierra Nevada Conservancy.



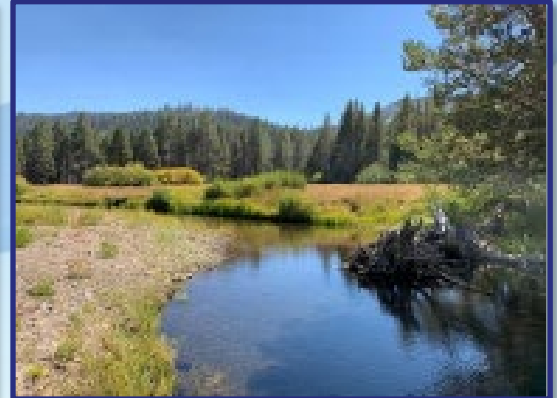
Upper Yuba Forest Restoration Project

Purpose: The purpose of the Upper Yuba Headwaters Forest Restoration Project is to remove understory fire fuels and hazardous trees on 400 total acres owned and managed by Nevada Irrigation District (NID) to reduce the risk of catastrophic wildfire, improve forest ecological health and resilience, protect water supply and quality, and to remove risks to human health and safety in this critical headwaters area.

Solution: This project will utilize mechanical treatment to remove and chip or grind understory vegetation and ladder fuels that are 0-14" DBH to modify the forest stand structure to reduce the potential that a ground fire could rise into tree canopies and become a conflagration. By reducing ladder fuels, accumulated wood debris, forest stand competition for limited resources, and raising the QMD, the forest community will become healthier and more resilient to disturbance and climate change.

Priority Score: 68 **Basis for Priority:** To provide water security, increased water supply, and safeguard our source watersheds. Reduces threat to health and safety of the public and District staff, has a positive environmental impact, and meets strategic priorities and goals.

Budget: The 2024 budget for this project is \$500,000 is for planning, design, and implementation. The total project costs are estimated to be \$1,815,000 through 2027. In June 2023, this project was awarded a grant of \$1.27M grant from the Sierra Nevada Conservancy.



English Meadow Restoration Project

Purpose: Floodplain restoration and forest management on approximately 380 acres of the headwaters of the Middle Yuba River. English Meadow is located approximately 1 mile upstream of one of NID's largest water storage reservoirs, Jackson Meadows Reservoir. In-stream restoration work will be done in concert with a fire fuel reduction project. Both projects aim to improve hydrology and forest health. These outcomes will be achieved by reducing the risk of catastrophic wildfire via treatment of overcrowded timber stands, thinning the forest community, and reconnecting the incised stream channel to the meadow floodplain and underlying aquifer.

Solution: This project will significantly reduce catastrophic fire risk and improve watershed health, increase water supply and safeguard this source watershed of the Middle Yuba River. The project will significantly reduce catastrophic fire risk and promote healthy and functional forest and watershed conditions, improve carbon sequestration, and restore natural flow and bedload transport and deposition regimes. This project is estimated to be complete in the summer / fall of 2024.

Priority Score: 63 **Basis for Priority:** To provide water security, increased water supply and safeguard our source watersheds. Reduces threat to health and safety of the public and District staff, has a positive environmental impact, and meets strategic priorities and goals.

Budget: The 2024 budget for this project is \$219,500 for implementation. This project is continuing from prior years. The total project costs are estimated to be \$1,594,000 and completed in 2024. In October 2021, this project was awarded a grant of \$1.25M from the Wildlife Conservation Board.

