

**Hydroelectric Department Project Status Report  
as of September 15, 2022**

Priority	Project Manager	Project	Project No.	Description	Status	Comments	CIP
<b>10-1 HYDRO NON-PROGRAMMATIC (\$250,000*) 50112-52915</b>							
01	Keane Sommers	Hydro HQ	2432	New Hydroelectric Office Design/Construction	Hold	The Energy Center program components are under development. The new maintenance facility and storage yard draft predesign by the architect is complete. The three energy/carbon concept studies are complete; forest carbon sequestration, pumped storage, and solar field. A draft Energy Management Strategy Summary has been received and is under review. Once all efforts are completed, findings will be summarized to present options and alternatives for developing the site into various levels of renewable energy generation and carbon zero footprint.	*
<b>10-2 HYDRO POWERHOUSE IMPROVEMENTS (\$1,650,000*) 50112-52920</b>							
01	Nathan Droivold	Deer Creek Powerhouse	TBD	Deer Creek Powerhouse Upgrades: Make upgrades necessary to sell power upon close of sale.	Design	NID will solicit proposals to design a new microwave link from KLOVE tower to the Chicago Park Powerhouse to create a new SCADA data link which is necessary for the operation of Deer Creek Powerhouse.	
02	Nathan Droivold	Rollins Powerhouse	2394	Rollins Powerhouse Relay Protection Upgrade. Replace aging relay protection system to improve protection of the powerhouse relay, transformer, and generator.	Design	NID has reviewed and returned comments on the 60% design package. The next phase of design is expected to be completed this Fall. Construction is scheduled for 2023.	*
03	Nathan Droivold	Chicago Park Powerhouse	2383	Chicago Park Powerhouse Rewind: Replace deteriorated generator windings.	Planning	A contract has been executed to begin Phase I of the Project. A kickoff meeting was held in September and preliminary site visits have been completed. Staff are working with consultants to plan and prepare for inspections/testing during the 2022 annual outage at CPPH.	*
04	Nathan Droivold	Chicago Park Powerhouse	2353	Chicago Park Powerhouse Turbine Overhaul. Replace worn turbine and appurtenances.	Planning	A contract has been executed to begin Phase I of the Project. A kickoff meeting was held in September and preliminary site visits have been completed. Staff are working with consultants to plan and prepare for inspections/testing during the 2022 annual outage at CPPH.	*
05	Nathan Droivold	Chicago Park Powerhouse	2362	Chicago Park Powerhouse Transformer Replacement. Procure and install a new main transformer at the Chicago Park Powerhouse.	Planning	A contract has been executed to begin Phase I of the Project. A kickoff meeting was held in September and preliminary site visits have been completed. Staff are working with consultants to plan and prepare for inspections/testing during the 2022 annual outage at CPPH.	*
06	Tonia Tabucchi Herrera	Chicago Park Powerhouse	2598	Chicago Park Powerhouse RTU Replacement: Replace remote terminal unit (RTU) at Chicago Park Powerhouse to eliminate obsolete equipment and improve the District's SCADA communication network.	Planning	NID is preparing a request a proposals for engineering design and integration support from consultants that will be distributed in the Fall of 2022. Construction is planned for 2023.	*

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<b>10-2 HYDRO POWERHOUSE IMPROVEMENTS (\$1,650,000*) 50112-52920</b>							
07	Thomas Kluge	Combie North Powerhouse	2581	Combie North Powerhouse Capacitor Bank Upgrade: Design and replace existing capacitor bank at Combie North Powerhouse to improve the reliability and efficiency of power generation of the facility.	Design	Hydro is working with an engineering consultant to design a new capacitor bank for the Combie North Powerhouse. Once the design is complete, Hydro will order necessary project materials in 2022 and will complete construction in 2023.	*
08	Adrian Schneider	Combie Reservoir/Combie South Powerhouse	6943	Combie South Access Road. Develop approx. 3,000 ft. from south abutment.	Design	Final negotiations were presented to Ms. Arroyo on August 5, 2022. Arroyo to have reviewed by legal representative and respond to offer. Construction planned for 2022.	*
09	Kaylie Hague	Scotts Flat Powerhouse	2552	SFPH Fire Detection Upgrades: Install new smoke detection systems in the Scotts Flat Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	NID's insurance provider has completed their review of the 90% design package and made no comments. NID can now move to completing the 100% design package and will start ordering materials in 2022.	
10	Kaylie Hague	Combie North Powerhouse	2553	CNPH Fire Detection Upgrades: Install new smoke detection systems in the Combie North Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	NID's insurance provider has completed their review of the 90% design package and made no comments. NID can now move to completing the 100% design package and will start ordering materials in 2022.	
11	Kaylie Hague	Combie South Powerhouse	2554	CSPH Fire Detection Upgrades: Install new smoke detection systems in the Combie South Powerhouse that includes alarming and callout features to notify staff in case of fire while unoccupied.	Design	NID's insurance provider has completed their review of the 90% design package and made no comments. NID can now move to completing the 100% design package and will start ordering materials in 2022.	
12	Adrian Schneider	Chicago Park Powerhouse	2164	Chicago Park Powerhouse Fire Suppression System Upgrades. Upgrade of existing CO2 system (piping, alarms, sensors) to protect Generator. Includes installation of new Clean Agent suppression system for control room and the addition of a fire detection system for electrical cable trays.	Post-Construction	The Fire Suppression System was completed in August 2021. A revised Fire Response & Training Plan is being finalized by Hydro. Fire and safety equipment purchases underway by Hydro. System activation to be done September 26-30 by SABAH. The system will be turned on October 1, 2022. Maintenance of the system under contract with SABAH. A Description of System Operation (DOSO) document will be planned for completion prior to end of year.	
13	Nathan Droivold	Chicago Park Powerhouse	2402	Chicago Park Powerhouse Instrumentation Upgrade. Install instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components.	Post-Construction	Construction is now complete and the new cooling water system is in service. Hydro has received project as-builts and commissioning files. Drawings will be verified prior to closeout.	
14	Doug Hobbs	Dutch Flat #2 Powerhouse	2544	Dutch Flat #2 Powerhouse Cooling Water System Upgrade. Install new instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components.	Design	Design is underway. Hydro is reviewing the proposed mechanical and piping system layout. Once a bill of materials is developed, long lead time materials will be purchased. Construction is scheduled for 2023.	*

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<b>10-2 HYDRO POWERHOUSE IMPROVEMENTS (\$1,650,000*) 50112-52920</b>							
15	Tonia Tabucchi Herrera	Dutch Flat #2 Powerhouse	2483	Dutch Flat #2 Powerhouse Backup Generator: All costs associated with the installation of new backup generator at Dutch Flat #2 Powerhouse.	Hold	Design has been completed by consultants. A bill of materials has been developed. Next step is requesting bids for the new switchgear. Project on hold pending the approval of a requested budget ammendment. Engineering will move to procure necessary materials in 2023 or when budget is available. Installation is planned for Fall of 2023 during the annual plant outage.	
16	Nathan Droivold	Rollins Powerhouse	2392	Rollins Governor Replacement. Replace worn governor and appurtenances.	Hold	Hydro to begin project scoping in 2023.	*
17	Nathan Droivold	Bowman Intertie	2354	Bowman Interties SF6 Breaker Replacement. Replace the existing Bowman Inter-tie SF6 breaker with a more environmentally friendly vacuum circuit breaker.	Hold	Hydro will replace the existing SF6 breaker with a vacuum circuit breaker after completion of the oil circuit breaker replacement at Rollins PH (FATR# 2351).	
18	Adrian Schneider	Dutch Flat #2 Powerhouse	2240	Dutch Flat #2 Powerhouse Fire Suppression System Upgrades. Designing, installing and commissioning a new CO2 fire suppression system for the Dutch Flat #2 Powerhouse.	Hold	Project on hold pending the completion of the Chicago Park Powerhouse Fire Suppression System Upgrade Project. Hydro will transfer the project to Engineering.	*
19	Nathan Droivold	Rollins Powerhouse	2379	Rollins Powerhouse Fire Protection System. Provide fire protection system for Rollins Powerhouse (design, installation and commissioning).	Hold	Project on hold pending the completion of the Chicago Park Powerhouse Fire Suppression System Upgrade Project (FATR# 2164).	
20	Nathan Droivold	Deer Creek Powerhouse	2342	Deer Creek Powerhouse Controls and Automation Upgrades. Install programmable logic controller and automate the Deer Creek Powerhouse.	Hold	Project placed on hold.	
21	Nathan Droivold	Deer Creek Powerhouse	2395	Deer Creek Powerhouse Exciter Replacement. Replace exciter and appurtenances.	Hold	Project placed on hold.	
22	Nathan Droivold	Deer Creek Powerhouse	2343	Deer Creek Powerhouse Generator Breaker Replacement. Replace the existing generator breaker with a generator breaker and cabinet to mitigate an arc flash safety hazard at the Deer Creek Powerhouse and improve reliability.	Hold	Project placed on hold.	

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<b>10-3 HYDRO DAM &amp; WATER IMPROVEMENTS (\$1,295,000*) 50112-52921</b>							
01	Dar Chen	Scotts Flat Spillway	2094	Scotts Flat Spillway Repair & Upgrades	Design	The Physical Hydraulic Modeling has been completed and the Draft Alternatives Study, and Draft Geotechnical Basis of Design Reports have been reviewed. These reports address issues of the preferred Alternative 3, replacement of the entire spillway chute with new spillway chute, vertical side walls, and a new flip bucket structure. As the consulting team and scope for design phase proposed by HDR in 2019 has been outdated, the District will negotiate with HDR to reorganize the team, the scope, the approach, and schedules for the next design phase.	*
02	Dar Chen	Sawmill Dam	2596	Sawmill Dam Outlet Pipe Rehabilitation: Investigate and survey the conditions of the outlet pipe for Sawmill Dam. Complete a design to repair, modify, or replace the existing pipe, and then implement the preferred solution.	Planning	A LiDAR scan and an ultrasonic pipe wall thickness sounding inside the outlet pipe at Sawmill Dam has been proposed by SewerVUE from B.C. Canada. Hydroelectric Operations escorted SewerVUE to the site on August 11, 2022, to perform preliminary site reconnaissance for their planning before the inspections. An agreement with SewerVUE has been approved and the inspection has been planned for early October 2022.	*
03	Dar Chen	Scotts Flat Dam	2595	Scotts Flat Dam Wave Erosion Protection: Design and install new erosion protection at/near the crest of the upstream face of Scotts Flat Dam to protect the dam from wave action during a probable maximum flood (PMF) event.	Planning	As DSOD recommends against using concrete K-rails, the District has changed to propose riprap for both dam face protection and the short dike against wave at the upstream edge of the dam crest. AECOM has been asked to evaluate the wave action and adequacy of the riprap. DSOD dam alteration permit application is required for these riprap additions. Hydroelectric plans to defer the construction so that any necessary change in the wave protection scheme due to low PMF freeboard can be made as part of the Scotts Flat Spillway Upgrade construction.	*
04	Dar Chen	Jackson Lake Dam	2597	Jackson Lake Dam Toe Slope Protection: Investigate stability of the downstream toe slopes near the outlet end of Jackson Lake Dam. Complete a design to repair and mitigate the issue, and then implement the preferred solution.	Design	In the September 7, 2022 meeting with the District, the California Water Resources Control Board agreed to the District's proposal on turbidity reduction and sediment disposal with minor comments for construction. Dam Safety will incorporate the comments in the 100% design. Submittals of the application packages for review by the Water Board and FERC have been planned for October 2022. The construction has been planned and scheduled for 2023.	*
05	Dar Chen	Combie/Van Giessen Dam	201402	Combie Dam Stabilization. Improve abutment protection against scouring, and water supply upgrades.	Hold	The final alternatives report has been received and a preferred solution has been selected. Construction is planned for 2025-2026.	

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**10-4 HYDRO LOWER DIVISION WATER IMPROVEMENTS 50112-52922**

01	Doug Hobbs	Chicago Park Forebay/Canal	2511	Chicago Park Forebay/Canal Liner Replacement. Repair segments of the Chicago Park Canal where existing shotcrete liner needs replacement.	Hold	Project placed on hold.	
02	Doug Hobbs	Chicago Park Powerhouse	2551	Chicago Park Powerhouse Tailrace Repair: evaluate and address erosion concerns of the tailrace foundation.	Hold	Project placed on hold.	
03	Doug Hobbs	Dutch Flat Canal	2545	Dutch Flat Canal Liner Replacement. Repair segments of the Dutch Flat Canal where existing shotcrete liner needs replacement.	Hold	Project placed on hold.	

**10-5 HYDRO UPPER DIVISION WATER IMPROVEMENTS (\$950,000\*) 50112-52923**

01	Doug Roderick	Bowman-Spaulding Canal	2339	Rucker Creek Spill Gate Replacement. Replace existing radial gate at Rucker Creek Diversion with an overshot gate to improve personnel safety and operational performance.	Design	Engineering is working with Hydro to develop specifications for the new gate and a preliminary construction plan. Engineering has contacted gate manufacturer's for quotes and estimate of lead times. FERC review of project design will be required prior to construction.	*
02	Phil Nedved	Fall Creek Diversion	2576	Fall Creek Diversion Improvements. Make structural enhancements to improve the reliability of the Fall Creek Diversion Flume.	Planning	Hydro has obtained a quote for necessary project materials for purchase in 2022. This will need to be requoted for current pricing before materials are ordered in the Fall of 2022.	*
03	Doug Hobbs	Bowman-Spaulding Canal	2600	Boxcar Spill Canal Lining Repair: Repair deteriorated shotcrete liner of the Bowman-Spaulding canal.	Hold	Damaged areas were assessed during the annual Bowman-Spaulding Canal outage in 2022 to plan for future repairs.	*
04	Kaylie Hague	Wilson Creek Diversion	2546	Wilson Creek Diversion Rehabilitation. Repair and modify the Wilson Creek Diversion Dam structure to ensure diverted flows are measurable and accurate.	Design	Project is complete and will not appear on future reports.	
05	Adrian Schneider	Bowman-Spaulding Canal	2599	Christmas Tree Spill Gate Replacement: Replace existing radial gate at Christmas Tree Spill with an overshot gate to improve personnel safety and operational performance.	Planning	Engineering will begin the project after completion of the Rucker Creek Spill Gate Replacement Project (FATR# 2339) so that standards can be developed for system consistency.	*

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<b>10-6 HYDRO SCADA/COMMUNICATION UPGRADES (\$350,000*) 50112-52924</b>							
01	Tonia Tabucchi Herrera	Hydro HQ	2405	Hydro Office Radio Tower	Planning	The line of sight study has been reviewed by District staff. The findings of this study were used to update the NID Hydroelectric Department SCADA Wide Area Network Report to plan future communications improvement projects. Hydro and Engineering visited the site and discussed road improvements and tower location. Engineering reviewing road location, survey information and ROW needs.	*
<b>RAW WATER SYSTEM IMPROVEMENTS 10151-52910</b>							
00	Dar Chen	Loma Rica Dam	2529	Loma Rica Dam Repairs	Hold	The seismic retrofit alternatives study has been completed. An internal draft project documentation memo has been sent from the Dam Safety Engineer to the Mangers of Hydroelectric and Water Operations and the future District PM for Design. Project will be placed on hold until its design phase, which is planned to start in 2025.	