

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

| Priority   | Project Manager        | Project                 | Project No. | Description  | Status   | Comments   | CP |
|--|------------------------|-------------------------|-------------|--|----------|--|----|
| <b>10-1 HYDRO NON-PROGRAMMATIC (\$250,000*)</b>          |                        |                         |             |  |          |  |    |
| 01   | Keane Sommers          | Hydro HQ                | 2432        | New Hydroelectric Office Design/Construction   | Hold     | Project placed on hold pending a further study to determine whether purchasing an existing building is more cost effective than new construction.  | *  |
| <b>10-2 HYDRO POWERHOUSE IMPROVEMENTS (\$1,650,000*)</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 the 90% design package and returned comments. The next phase of design (100%) is expected to be completed before the end of 2022. Once completed the 100% design package and other project data will be submitted to PG&E for project coordination. Construction is scheduled for 2023. | *  |
| 03   | Nathan Droivold        | Chicago Park Powerhouse | 2383        | Chicago Park Powerhouse Rewind: Replace deteriorated generator windings.   | Planning | Staff hosted the consulting team at CPPH during the annual plant outage in September for various inspections. The consulting team is preparing their report of findings and will present this to NID staff later in 2022.  | *  |
| 04   | Nathan Droivold        | Chicago Park Powerhouse | 2353        | Chicago Park Powerhouse Turbine Overhaul. Replace worn turbine and appurtenances.  | Planning | Staff hosted the consulting team at CPPH during the annual plant outage in September for various inspections. The consulting team is preparing their report of findings and will present this to NID staff later in 2022.  | *  |
| 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 | Staff hosted the consulting team at CPPH during the annual plant outage in September for various inspections. The consulting team is preparing their report of findings and will present this to NID staff later in 2022.  | *  |
| 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*)</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 | Quotes for road construction were received from four contractors. The apparent low bidder was Hansen Bros. Enterprises. Contract award will be presented to the NID Board of Directors during the December 14th meeting. Construction is anticipated to start in 2023.   | *  |
| 09   | Kaylie Hague           | Scotts Flat Powerhouse                   | 2552        | SFPH Fire Detection Upgrades:<br>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 | The 100% design package has been accepted and Hydro will move to begin ordering materials needed for construction in 2023.   |    |
| 10   | Kaylie Hague           | Combie North Powerhouse                  | 2553        | CNPH Fire Detection Upgrades:<br>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 | The 100% design package has been accepted and Hydro will move to begin ordering materials needed for construction in 2023.   |    |
| 11   | Kaylie Hague           | Combie South Powerhouse                  | 2554        | CSPH Fire Detection Upgrades:<br>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 | The 100% design package has been accepted and Hydro will move to begin ordering materials needed for construction in 2023.   |    |
| 12   | 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 | Mechanical and piping system layout complete. Long lead mechanical bill of materials complete for purchase in 2022. Contract for electrical and electronic control design in progress. Construction scheduled for 2023.  | *  |
| 13   | 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. |    |
| 14   | Nathan Droivold        | Rollins Powerhouse                       | 2392        | Rollins Governor Replacement. Replace worn governor and appurtenances.   | Hold   | Hydro to begin project scoping in 2023.  | *  |

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| <b>10-2 HYDRO POWERHOUSE IMPROVEMENTS (\$1,650,000*)</b> |                  |                          |             |   |        |  |     |
| 15   | 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).  |     |
| 16   | 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. | *   |
| 17   | 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).                                    |     |
| 18   | 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.  |     |
| 19   | Nathan Droivold  | Deer Creek Powerhouse    | 2395        | Deer Creek Powerhouse Exciter Replacement. Replace exciter and appurtenances.   | Hold   | Project placed on hold.  |     |
| 20   | 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. Once the Alternatives Report is finalized, all of the reports will be prepared to send to FERC and DSOD. As the consulting team and scope for design phase proposed by HDR in 2019 has been outdated, the District is negotiating 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 | Services of a LiDAR scan and an ultrasonic pipe wall thickness sounding inside the outlet pipe at Sawmill Dam have been completed. Awaiting final report.   | *   |
| 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 has incorporated the comments in the 100% design. Submittals of the design and application packages for review by the Water Board and FERC are planned in 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**

|    |            |                            |      |   |      |                         |  |
|----|------------|----------------------------|------|---|------|-------------------------|--|
| 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\*)**

|    |                  |                        |      |  |          |  |   |
|----|------------------|------------------------|------|--|----------|--|---|
| 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 | Material purchase of flume sheets and associated hardware was submitted and approved in October. These items are expected to be delivered later in 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*)</b> |                           |               |             |                          |          |  |     |
| 01  | Tonia Tabucchi<br>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 submitted a survey request to determine property line location and extent of additional survey needs. | *   |
| <b>RAW WATER SYSTEM IMPROVEMENTS</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 Managers 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.   |     |