

# Staff Report

for the Engineering Committee Meeting of February 16, 2021

**TO:** Engineering Committee

**FROM:** Doug Roderick, P.E., Interim Engineering Manager  
Keane Sommers, P.E., Hydro-Electric Manager

**DATE:** February 9, 2021

**SUBJECT:** **Project Status Reports**

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***ENGINEERING***

**RECOMMENDATION:**

Review the Engineering Department and Hydro-Electric Department Project Status Reports with the Committee.

**BACKGROUND:**

This item is to provide information to the Committee members regarding the progress, current status and next action to be taken on the projects in process in the Engineering and Hydro-Electric Departments.

**BUDGETARY IMPACT:**

No budget impact

DR

Attachment:

- Engineering Department Project Status Report
- Hydro-Electric Department Project Status Report

## Engineering Department Project Status

<u>Prty</u>	<u>Proj Mgr</u>		<u>Facility Name</u>	<u>WO#</u>	<u>Description</u>	<u>Status</u>	<u>Comments</u>	
<b>01 - EXTENDED CEQA [\$30,000] 10151- 52913</b>								
01	DOUGLAS RODERICK	(DIV 2)	2021	Banner Cascade Canal	6593-02	Banner Cascade Pipeline: Monitoring Canopy Cover and Tree Health Assessment	Post-Construction	Requested proposal from Stantec for the Year-8 (2021) monitoring for the Lower Cascade Canal and Upper Grass Valley Canal Canopy Cover Study and Pond Study.
<b>02 - PIPELINE REPLACEMENT (\$2,050,000) 10151-52907</b>								
01	DOUGLAS RODERICK	(DIV 5)	2020	Lidster Avenue & Country Club Terrace	2071	Replacement of deteriorated water mains and services in this area. 4,545 LF of 8" pipe.	Construction	Final mainline tie-in and existing services to new line completed. Final paving to be done after service tie-ins are done, depending on weather.
02	TONIA TABUCCHI HERRERA	(DIV 5)	2020	Rough & Ready Round-a-bout waterline improvements	2497	Nevada county proposed to realign Rough and Ready Hwy, Ridge Road and Adams Ave. NID affected facilities included treated water line along Rough and Ready HWY and Adams Ave; and Rough and Ready Canal crossing/near Ridge Road. (Div. 5)	Planning	The County is agreeable to relocating the culvert crossing for the RR canal. Details of ROW management and District participation in discussion internally. The County does not feel the treated waterline is impacted by their project and will not relocate it as a result.
03	TONIA TABUCCHI HERRERA	(DIV 5)	2021	Christian Life Way at Highway 49	6962	Replace approximately 1500 LF of pipeline with 8" pipeline. Existing pipeline is undersized; has reached its useful life, is difficult to access, existing ROW is inadequate, requires new route for accessibility	Design	Investigating an alternative route to improve maintenance access, and potential to add additional service connections.
04	TONIA TABUCCHI HERRERA	(DIV 4)	2021	Meadow Brook Pipeline Relocation	2324	Service lines are located in backyards and trees have broken the mainline several times. Project includes relocation of service lines and abandonment of 4" main.	Planning	Reviewing impacted services to determine area to be surveyed.
05	ADRIAN SCHNEIDER	(DIV 2)	2021	North Day Road Pipeline Replacement	2182	Replacement of badly deteriorated A.C. pipeline on North Day Road. Approximately 3,146 feet long.	Design	Design at 90%. Right of Way to review existing or required easement modifications.
06	ADRIAN SCHNEIDER	(DIV 3)	2021	Willaura Acres	2323	Replace deteriorated water mains and services.	Design	Survey work commenced. Letter notifying property owners of project sent January 28, 2021.
07	DOUGLAS HOBBS	(DIV 2)	2021	Osborne Hill Inlet Pipe	6966	Osborne Hill Inlet Pipe 1,720' of 18" pipe	Planning	Reinstating project previously deferred due to funding. 2021 Budgeted Project.
08	TONIA TABUCCHI HERRERA	(DIV 4)	2021	Live Oak Way	2534	Replace old and undersized valves and service lines.	Planning	2021 Budgeted Project.
<b>03 - PRV REPLACEMENT (\$480,000) 10151-52908</b>								
01	TONIA TABUCCHI HERRERA	(DIV 2)	2019	Cedar Ridge PRV Replacement	2366	Existing PRV station is badly deteriorated with valves in a vault. Replacement station will be above ground. Additional ROW is required	Design	Design 90%. Property owner to be contacted regarding existing easement; easement adjustment is required.
02	TONIA TABUCCHI HERRERA	(DIV 1)	2019	East Ridge PRV Replacement	2318	Existing PRV station is badly deteriorated with valves in a vault. Replacement station will be above ground. Additional ROW is required.	Design	Design 10%. Survey is complete. Existing easement information received.
03	DOUGLAS HOBBS	(DIV 1)	2020	Berggren Lane PRV Replacement	2370	Replace PRV with 1300 LF of 8" pipe connecting Red Dog Rd. with Jasper Agate Court	Design	Design at 95%. In process of obtaining easement. Project will be constructed by Maintenance in 2021.
04	DOUGLAS HOBBS	(DIV 2)	2021	Silver Way PRV Replacement	1010	Replace existing PRV station at corner of Silver Way and Hwy 174 with an above ground PRV station upstream on Hwy 174	Design	Design at 10%. Property owner to be contacted regarding adding above ground structure to existing pipe easement.
<b>05 - RAW WATER SYSTEM IMPROV (\$1,250,000) 10151-52910</b>								
01	DOUGLAS RODERICK	(DIV 4)	2019	Doty North Canal (PC)	1031	Doty North canal which will encase approximately 450 feet of canal and replace siphon #1.	Construction	Steel pipe installation is complete. Ductile iron installation is ongoing.
02	DOUGLAS HOBBS	(DIV 4)	2020	Santini Siphon 1	1098	Replacement of undersized Siphon with 1500 LF of 18" pipe.	Design	Design at 95%. Acquiring easements. Project will be completed by Maintenance in 2021.
03	DOUGLAS RODERICK	(DIV 1)	2020	South Yuba Canal Repair & Upgrades Ph 1	2419	Repair/Replace segments of So. Yuba Canal	Planning	Staff received initial condition assessment and report outline for review on February 8, 2021. Anticipate presentation to the Board at the end of May 2021.
04	ADRIAN SCHNEIDER	(DIV 3)	2021	Maben Canal IV	8099-4	Rehabilitate and enlarge canal.	Design	Initiate a design process; create draft construction plans and document specs.
05	DOUGLAS HOBBS	(DIV 4)	2020	Hayt Canal Siphon Replacement	2474	Hayt Canal Siphon #1 and #6, replace aged infrastructure.	Design	Construction of Siphon #1 improvements completed. Flow test completed by Operations. Anticipate moratorium to be removed this season.

Engineering Department Project Status

Prty	Proj Mgr		Facility Name	WO#	Description	Status	Comments
<b>05 - RAW WATER SYSTEM IMPROV (\$1,250,000) 10151-52910</b>							
06	TONIA TABUCCHI HERRERA	(DIV 5) 2021	Pet Hill Extension Repairs	2373	Repair and upgrade pipeline and gate for capacity.	Planning	2021 Budgeted Project.
07	TONIA TABUCCHI HERRERA	(DIV 5) 2021	China Drop Pipe Replacement	2329	Replacement of badly deteriorated pipeline to improve water delivery and reliability.	Planning	2021 Budgeted Project.
08	DOUGLAS HOBBS	(DIV 1) 2021	Clipper Creek Techite	2535	Replace 8600' of 24" Techite pipe.	Planning	2021 Budgeted Project.
<b>06 - BACKBONE EXTENSION 10151-52911</b>							
01	TONIA TABUCCHI HERRERA	(DIV 5) 2020	E. George to LWW Pipeline Project-Phase I	2255	Phase 1 Hope Street to approximately 12390 Rough & Ready Highway along R&R HWY parallel construction of 2475 lf of pipeline and 1 PRV replacement. ROW required for replacement above ground PRV. Pipeline construction within County ROW.	Construction	Ridge Road improvements to be constructed by maintenance in 2021.
<b>07 - NON-PROGRAMMATIC [2,200,000] 10151-52915</b>							
01	DOUGLAS RODERICK	(DIV 3) 2021	Combie I Replacement	6746	Combie Phase 1 Pipeline Bypass, 8900 LF of 96" pipe	Construction	Contractor continuing to install 96" RCPP. Siphon inlet structure completed. 48" pipe installed and end-wall built. Backfilling and joint grouting ongoing. Spill structure under construction. On schedule to have water flowing by March 30, 2021.
02	DOUGLAS HOBBS	(DIV 2) 2020	Alta Sierra Tank Replacement	6971	Replace existing Alta Sierra Hypalon-covered reservoir with 3MG storage tank	Construction	Design of tank and associated piping in progress. Easement for 8" Pop- Off valve at golf course in progress. Rock base for foundation is done. Digging for drains and foundation started.
03	TONIA TABUCCHI HERRERA	(DIV 4) 2020	Hemphill Diversion	7032	Hemphill Diversion Project to facilitate Fish Passage.	Design	DEIR project descriptions under further development. Release of DEIR is scheduled for April 1, 2021. Seeking to close consultation with UAIC under AB52.
04	ADRIAN SCHNEIDER	(DIV 3) 2020	North Auburn Treatment Plant	2376	Upgrade of high lift pumps at North Auburn Water Treatment Plant	Design	Waiting for PG&E response to request for adding larger natural gas service from main in street. Design at 90%. Generator install expected in Summer 2021
05	ADRIAN SCHNEIDER	(DIV 1) 2020	Pine Woods Pump Station	2488	Design, purchase and install a permanent stand-by generator at Pine Woods Pump Station	Planning	2020 Draft Study under review.
06	TONIA TABUCCHI HERRERA	2021	SGIP Battery Installation	2520	Battery installation at various District facilities. Part of the California Public Utilities Self-Generation Incentive Program	Planning	Three sites are being pursued that meet the qualifications for backup battery - EGWTP, LRWTP, and Norlene pump station. GSRE working on the applications and interconnection agreement. NID staff providing support.
07	DOUGLAS HOBBS	(DIV 5) 2021	LWW Treatment Plant Expansion	6996	Lake Wildwood Treatment Plant Upgrades - Drying beds, backwash pumps and canal intake screen.	Planning	2021 budgeted project.
08	DOUGLAS HOBBS	(DIV 2) 2021	Loma Rica WTP Clear Well Expansion	2375	Expansion of clearwell to add volume for higher plant flows.	Planning	2021 budgeted project.
09	DOUGLAS HOBBS	(DIV 2) 2021	Loma Rica WTP Modify CT	2378	Modification of Loma Rica Treatment Plant for additional chlorine contact times	Planning	2021 budgeted project.
10	ADRIAN SCHNEIDER	(DIV 3) 2021	David Way Pump Station Rehab	2322	Rehabilitate the existing David Way Pump Station. Facility is badly deteriorated and requires rehab for reliability.	Design	Received pump model information and specs for service and fire flows. Creating design of new pump installation within existing structure.
11	DOUGLAS RODERICK	DIV 2, 3) 2021	Centennial Water Supply Project	7013	Centennial Water Supply Project	Planning	Quarterly update presented at the December 8, 2020 Engineering Committee. Due to COVID-19, no consulting work or AB52 consultation has taken place. The next quarterly update is due in March 2021.
<b>08 - COMMUNITY INVESTMENT 10151-52912</b>							
01	ADRIAN SCHNEIDER	(DIV 2) 2021	Loma Rica Drive - DFWLE	2181	Assist, Design and Construction of a pipeline for existing neighborhoods approved by Engineering Committee January 16, 2018.	Planning	Received 10 responses by January 29, 2021. Will request good faith deposits from those ten property owners by March 8, 2021. If all deposits are received, the project will then go forward with survey and design.
02	ADRIAN SCHNEIDER	(DIV 3) 2023	Maranatha Place DFWLE	2409	Assist, Design and Construction of a pipeline for existing neighborhoods. Approved by Engineering Committee Aug 20, 2019.	Planning	Waiting for available funding to move project forward.

Engineering Department Project Status

Prty	Proj Mgr		Facility Name	WO#	Description	Status	Comments	
<b>13-1 - ADMIN CAPITAL 10114-52915</b>								
01	GREG JONES		2021	Scotts Flat Lower Connector Trail	2294	Planning, design, and construction of Scotts Flat Lower Connector Trail	Planning	Bringing update of project/CEQA process to MRM Committee in January, 2021.
<b>17 - SEDIMENT REMOVAL PROJECTS 10151-52914</b>								
01	ADRIAN SCHNEIDER		2020	District-wide Reservoir Study	2500	District-wide reservoir study of the current condition of all District reservoirs, that includes bathymetry to better understand the diminished capacity due to sedimentation. Will assist in determining costs, prioritization, and alternatives.	Planning	The draft of the Reservoir Study is currently being reviewed internally.
02	ADRIAN SCHNEIDER	(DIV 2)	2019	Loma Rica Reservoir	2090	Placement of 5,600 cubic yards of stockpiled sediment at airport property	Post-Construction	Monitoring seed growth to obtain 70% coverage per SWPPP permit requirements. Close grading permit (through contractor submittal of final special inspection reporting).
04	GREG JONES	(DIV 3)	2019	Combie Sediment Removal Project	2135	Removal of sediment at the east side of Combie Reservoir	Post-Construction	Final report completed and submitted to DWR. Report is available on the District's website. Final disposal of material is ongoing.
05	ADRIAN SCHNEIDER	(DIV 2)	2020	Greenhorn Sediment Removal	8515	Removal accumulated sediment from the Greenhorn Creek arm of Rollins Reservoir.	Planning	Pending final Reservoir Sediment Removal Study (cost/benefit analysis) to determine validity of removing sediment from this portion of Rollins Reservoir.
06	ADRIAN SCHNEIDER	(DIV 3)	2020	Orr Creek Reservoir	6963	Cleaning of Orr Creek Reservoir to increase capacity	Planning	Pending final Reservoir Sediment Removal Study (cost/benefit analysis) to determine validity of removing sediment from this reservoir.
07	ADRIAN SCHNEIDER	(DIV 2)	2020	Dutch Flat Afterbay Sediment Removal	2213	Remove accumulated sediment from the afterbay to reduce outlet pipe clogging & operation.	Planning	Pending final Reservoir Sediment Removal Study (cost/benefit analysis) to determine validity of removing sediment from this reservoir.
08	ADRIAN SCHNEIDER	(DIV 2)	2020	Steephollow Sediment Removal	6877	Removal of sediment at Steep Hollow and protection of hydro facilities	Hold	Pending final Reservoir Sediment Removal Study (cost/benefit analysis) to determine validity of removing sediment from this portion of the Rollins Reservoir.
<b>13 - ENGINEERING O&amp;M 10151-NA</b>								
01	DOUGLAS RODERICK		2020	Urban and Agricultural Water Management Plan	1034	Development and approval of Urban and Agricultural Plan as regulatory required.	Planning	Draft document currently being reviewed by staff. Expect public meeting to take place for AWMP on March 3rd or 4th and public hearing for AWMP on March 24, 2021
02	GREG JONES		2020	District Wide Plan for Water	1041	Plan for Water / EIR	Planning	Public meeting held on September 24, 2020. Water Planning Projection Presentation and receipt of Technical Memorandums at November 18, 2020 Board Meeting. Final Technical Memorandums are on the District's Website. Waiting until UWMP/AWMP are completed.

Hydro-Electric Department Project Status

<u>Prty</u>	<u>Proj Mgr</u>		<u>Facility Name</u>	<u>WO#</u>	<u>Description</u>	<u>Status</u>	<u>Comments</u>
<b>10-1 - HYDRO NON-PROGRAMMATIC (\$250,000) 50112-52915</b>							
01	KEANE SOMMERS	2020	Hydro Field Office	2432	Design and construction of the new Hydroelectric Field Office	Design	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. Development of an overall site program carbon and energy management strategy and marketing and partner options is underway. 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 IMPROV (\$1,925,000) 50112-52920</b>							
01	NATHAN DROIVOLD	2020	Dutch Flat #2 Powerhouse Balance of Plant.	2348	Install an expandable balance of plant to monitor critical plant systems such as excess vibration of the turbine and generator, temperature, and flow.	Closeout	The new balance of plant PLC was installed during September/October outage period. Testing of the new vibration monitoring system was completed before returning the unit to service. Testing for the new automatic forebay level controls is complete. Hydro has received final submittals for the project. New system alarms are being added to SCADA, and PLC programming of PH islanding conditions is being revised after review of recent test results. Future testing will be scheduled in Q1 2021.
02	NATHAN DROIVOLD	2020	Deer Creek Powerhouse	2290	Deer Creek Powerhouse Upgrades - Cost of upgrades necessary to sell power upon close of sale	Design	Hydro is finalizing plans for a new gaging station on the South Yuba Canal that will measure flow supplying Deer Creek PH. These plans will be sent to PG&E for approval prior to installation.
03	ADRIAN SCHNEIDER	2019	Chicago Park Fire Suppression System (DIV 2)	2164	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.	Design	Construction of project commenced on January 26, 2020. Expected to be completed by March.
04	NATHAN DROIVOLD	2021	SFPH Fire Detection Upgrades	2552	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.	Planning	Hydro has requested a proposal from a fire protection engineering consultant to design a new fire detection system for the PH. This is expected in February. Design and install are scheduled to be completed by the end of Q2 2021.
05	NATHAN DROIVOLD	2021	CNPH Fire Detection Upgrades	2553	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.	Planning	Hydro has requested a proposal from a fire protection engineering consultant to design a new fire detection system for the PH. This is expected in February. Design and install are scheduled to be completed by the end of Q2 2021.
06	NATHAN DROIVOLD	2021	CSPH Fire Detection Upgrades	2554	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.	Planning	
07	ADRIAN SCHNEIDER	2019	Combie Reservoir	6943	Combie South Access Road. Develop approx. 3,000 ft. from south abutment.	Design	90% Design for new access road is complete. Staff met with the appraiser on Knapp & Arroyo properties on 1/7/2021. ROW is creating an offer package for required easements. Construction is planned for 2021.
08	THEODORE BLANK	2019	Combie South Electrical Upgrades	2168	Combie South Electrical Upgrades	Design	The new 12kV transformer has been delivered to Hydro. Hydro and Engineering are working on the containment pad and foundation design for the new transformer in February. Installation is scheduled for 2021.
09	NATHAN DROIVOLD	2020	Rollins Powerhouse	2351	Replace the existing oil circuit breaker (OCB) at the Rollins Powerhouse with a more environmentally acceptable vacuum circuit breaker.	Design	Hydro has opened a project with PG&E's engineering team and is working with PG&E to provide requested project documentation. Hydro received manufacturer's drawings for the new breaker and has approved the unit for fabrication. Installation is planned for Q3 2021.
10	NATHAN DROIVOLD	2021	Chicago Park Powerhouse Governor Replacement	2402	Replace governor, install instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components.	Design	Final design complete. Hydro has submitted a purchase requisition to procure project materials. Hydro will complete project installation during the 2021 annual outage for Chicago Park Powerhouse.
11	NATHAN DROIVOLD	2021	Chicago Park PH Transformer Replacement	2362	Procure and install a new main transformer at the Chicago Park Powerhouse.	Planning	Hydro has solicited a quote to have an engineering team perform a condition assessment of the existing equipment at the Chicago Park PH to make recommendations for a repair or replacement. The project scope will be developed after reviewing this report in 2021.
12	NATHAN DROIVOLD	2021	Chicago Park PH Turbine Overhaul	2353	Replace worn turbine and appurtenances.	Planning	Hydro has solicited a quote to have an engineering team perform a condition assessment of the existing equipment at the Chicago Park PH to make recommendations for a repair or replacement. The project scope will be developed after reviewing this report in 2021.

## Hydro-Electric Department Project Status

Prty	Proj_Mgr		Facility Name	WO#	Description	Status	Comments
<b>10-2 - HYDRO POWERHOUSE IMPROV (\$1,925,000) 50112-52920</b>							
13	NATHAN DROIVOLD	2020	Rollins Powerhouse Balance of Plant	2393	Install an expandable balance of plant to monitor critical plant systems such as excess vibration of the turbine and generator, temperature, and flow.	Design	Hydro has contracted with an engineering consultant to complete the new balance of plant design. The 30% design is expected in February. The design will be completed in Q2 2021, and installation is scheduled for the 2021 annual outage.
14	NATHAN DROIVOLD	2021	Rollins PH Governor Replacement	2392	Replace worn governor and appurtenances.	Planning	Hydro to begin project scoping in 2021. Installation is scheduled for 2022.
15	NATHAN DROIVOLD	2020	Rollins Powerhouse Relay Protection Upgrade	2394	Replace aging relay protection system to improve protection of the powerhouse relay, transformer, and generator.	Planning	Hydro has contracted with a protection engineering consultant to develop the project scope for a bid package that will be released in Q2 of 2021.
16	NATHAN DROIVOLD	2021	Dutch Flat #2 PH Cooling Water System Upgrades	2544	Install new instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components	Planning	Hydro will solicit proposals to complete the design of a new cooling water system in 2021. Installation is planned for 2022.
17	NATHAN DROIVOLD	2020	Dutch Flat #2 Powerhouse Fire Suppression System	2240	Designing, installing and commissioning a new CO2 fire suppression system for the Dutch Flat #2 Powerhouse.	Planning	Hydro has received a draft basis of design report from its consultant for a new fire suppression system at the Dutch Flat #2 Powerhouse. Hydro has reviewed and provided comments for revisions to the document. A final draft of the basis of design report is expected during Q1 2021.
18	NATHAN DROIVOLD	2020	Bowman Intertie	2354	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).
19	NATHAN DROIVOLD	2021	Rollins PH Fire Protection System	2379	Provide fire protection system for Rollins Powerhouse (design, installation and commissioning).	Planning	Hydro to begin project scoping in 2021. Installation is scheduled for 2022.
20	NATHAN DROIVOLD	2021	Deer Creek PH Controls and Automation	2342	Install programmable logic controller and automate the Deer Creek Powerhouse.	Hold	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
21	NATHAN DROIVOLD	2021	Deer Creek PH Exciter Replacement	2395	Replace exciter & appurtenances.	Hold	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
22	NATHAN DROIVOLD	2021	Deer Creek PH Generator Breaker Replacement	2343	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	Hydro to begin project scoping in 2021 with construction scheduled to start in 2022. Project schedule assumes NID will takeover PG&E facilities in 2021.
<b>10-3 - HYDRO DAM &amp; WATER IMPROV (\$2,660,000) 50112-52921</b>							
01	MIN CHEN	2020	Scotts Flat Spillway Repair	2094	Scotts Flat Spillway Repair & Upgrades	Design	The Board approved the commissioning of a physical hydraulic modeling for Scotts Flat Spillway at the special Board Meeting on 11/18/2020. Model construction is in progress. The results of the modeling is expected by April 2021, and the alternatives report including the preferred solution is expected in June 2021.
02	MIN CHEN	2019	Combie / Van Giessen Dam	20140 2	Dam stabilization, abutments protection against scouring, and water supply upgrade.	Design	The final alternatives report is being reviewed by the District to decide the preferred design alternative. The chosen design will be submitted to DSOD and FERC for review and approval. Then Hydro will transfer the project to Engineering for the next phase of design.
03	MIN CHEN	2020	Gaging Station	2007/ 2360	Replace the damaged sections of the concrete lining on the upstream dam face to minimize leakage, modify the spillway training walls to prevent over topping, and construct a weir on the dam outlet to measure flow.	Design	The design drawings, Construction Quality Control Inspection Program, and Temporary Emergency Action Plan have been submitted to FERC for review and approval. Construction is planned for Q3 2021, and will be managed by Engineering.
<b>10-4 - HYDRO LOWER DIV (\$100,000) 50112-52922</b>							
01	NATHAN DROIVOLD	2020	Chicago Park Forebay Canal Liner Replacement	2511	Repair segments of the Chicago Park Canal where existing shotcrete liner needs replacement.	Planning	Hydro received a report from Engineering reviewing the findings of the September site visit and damage assessment with Hydro. Hydro and Engineering will hold scoping discussions and start the development of a design report with an alternatives analysis in Q1 2021.
02	NATHAN DROIVOLD	2021	Chicago Park Powerhouse Tailrace Repair	2551	Evaluate and address erosion concerns of the tailrace foundation.	Planning	Hydro received a report from Engineering reviewing the findings of the September site visit and damage assessment with Hydro. Hydro will hold scoping discussions and start the development of a design report with an alternatives analysis in Q1 2021.
03	NATHAN DROIVOLD	2021	Dutch Flat Canal Liner Replacement	2545	Repair segments of the Dutch Flat Canal where existing shotcrete liner needs replacement.	Planning	Hydro will solicit a condition assessment of the existing liner system in 2021 in order to plan for future repairs.
<b>10-5 - HYDRO UPPER DIV (\$300,000) 50112-52923</b>							

Hydro-Electric Department Project Status

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<b>10-5 - HYDRO UPPER DIV (\$300,000) 50112-52923</b>							
01	DOUGLAS RODERICK	2021	Rucker Creek Spillgate	2339	Replace existing radial gate at Rucker Creek Diversion with an overshot gate to improve personnel safety and operational performance.	Planning	Hydro and Engineering made a site visit to discuss the project scope and proposed approach in December. Engineering will work with Hydro to develop specifications for the new gate and a preliminary construction plan ahead of contacting gate manufacturer's for quotes.
02	PHILIP NEDVED	2021	Fall Creek Flume Upgrades	2404	Bowman-Spaulding Canal Improvements - Make structural enhancements to improve the reliability of the Fall Creek Flume.	Planning	Hydro is reviewing record drawings and reports to develop a flume sheet specification. This will be used to collect quotes from manufacturer's to fabricate the new flume sections. An RFQ will be released in early 2021, with installation planned to start in the summer of 2021.
03	MIN CHEN	2020	Texas Creek Flume Repairs	2525	Repairs along the Bowman-Spaulding Canal below the Texas Creek Diversion.	Design	Work is being planned to repair the exposed weathered foundation bedrock and adjacent ground that has been subject to the erosive impact of the spilling water. The design package is being prepared and is planned to be submitted in February 2021 to FERC for approval. Construction is planned for Q3 2021.
04	NATHAN DROIVOLD	2020	Wilson Creek Diversion Rehab	2546	Repair and modify the Wilson Creek Diversion Dam structure to ensure diverted flows are measurable and accurate.	Design	Hydro has requested Engineering assist to prepare a design for a temporary solution to improve flow measurement and diversion for the 2021-22 winter season. A more permanent solution will be developed for future implementation.
<b>10-6 - HYRDO SCADA/COMMS (\$200,000) 50112-52924</b>							
01	KEANE SOMMERS	2022	Hydro Office Radio Tower	2405	Construct a new hydroelectric field office radio tower to improve communication of critical infrastructure.	Design	Hydro has contracted with a radio tower design firm to complete a feasibility study and preliminary design of the new radio tower to be located at the site of the future Hydro Office. Results of this study are expected in Q2 2021.
02	THOMAS KLUGE	2020	Dutch Flat #2 Powerhouse	2390	Install fiber optic communication between Dutch Flat Forebay and PG&E Drum Afterbay to improve reliability.	Planning	Hydro is moving to install a microwave/radio system (including a new radio tower at Dutch Flat 2 Forebay) for data communications. Further study will be needed in 2021.