

# Staff Report

for the Engineering Committee Meeting of June 9, 2020

**TO:** Engineering Committee  
**FROM:** Doug Roderick, P.E., Engineering Manager  
**DATE:** June 2, 2020  
**SUBJECT:** Project Status Report

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***ENGINEERING***

**RECOMMENDATION:**

Review the Engineering Department Project Status Report 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 Department.

**BUDGETARY IMPACT:**

No budget impact

DR

Attachment:

- Engineering 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>02 - PIPELINE REPLACEMENT (\$1,500,000) 10151-52907</b>							
02	ADRIAN SCHNEIDER	2019	Long Ravine Campground (DIV 2)	2270	Replacement of existing 50-year old system with approximately 7460 LF of 1 1/2", 3" and 4" pipe. Also replacing failing concrete storage tank and filter system.	Construction	Filter System and new pressure pump installed. Remaining plumbing to hook up internal piping planned for completion at the end of May. Final treatment /pump testing the first week in June, 2020. Full operation expected by second week in June, 2020.
03	DOUGLAS RODERICK	2020	Lidster Avenue & Country Club Terrace (DIV 5)	2071	Replacement of deteriorated water mains and services in this area. 4,545 LF of 8" pipe.	Construction	Construction is underway. Work being performed by Maintenance.
04	TONIA TABUCCHI HERRERA	2020	Christian Life Way at Highway 49 (DIV 5)	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	Design 10%. Survey is complete.
<b>03 - PRV REPLACEMENT (\$160,000) 10151-52908</b>							
01	TONIA TABUCCHI HERRERA	2019	Cedar Ridge PRV Replacement (DIV 2)	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	2019	East Ridge PRV Replacement (DIV 1)	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.
03	DOUGLAS HOBBS	2020	Berggren Lane PRV Replacement (DIV 1)	2370	Replace PRV with 8" pipe connecting Red Dog Rd. with Jasper Agate Court	Design	Design at 50%. In process of obtaining easements.
<b>05 - RAW WATER SYSTEM IMPROV (\$2,100,000) 10151-52910</b>							
01	DOUGLAS RODERICK	2019	Doty North Canal (PC) (DIV 4)	1031	Doty North canal which will encase approximately 450 feet of canal and replace siphon #1.	Design	Board approved MND/MMRP at May 13th meeting. Application to CDFW has been submitted. Will be finalizing up design and temporary easements. Construction still scheduled for fall of this year.
02	DOUGLAS HOBBS	2020	Santini Siphon 1 (DIV 4)	1098	Replacement of undersized Siphon with 1500 LF of 18" pipe.	Design	Evaluation for easement acquisition. Design 50%.
03	DOUGLAS RODERICK	2020	South Yuba Canal Repair & Upgrades Ph 1 (DIV 1)	2419	Repair/Replace segments of So. Yuba Canal	Planning	Maint. logs, notes and pictures given to GHD. Site visits still to be determined due to COVID-19.
<b>06 - BACKBONE EXTENSION (\$1,700,000) 10151-52911</b>							
01	TONIA TABUCCHI HERRERA	2020	E. George to LWW Pipeline Project-Phase I (DIV 5)	2255	Phase I will replace two existing PRVs and install approximately 8653 of 18" pipeline. Replacement PRVs will be above ground and will require ROW. Construction of the pipeline is within County ROW.	Design	Offer package to property owner for Twin Cities Church. Board authorized bidding of Phase 1 of project on May 27, 2020.
<b>07 - NON-PROGRAMMATIC (5,850,000) 10151-52915</b>							
01	DOUGLAS RODERICK	2021	Combie I Replacement	6746	Combie Phase 1 Pipeline Bypass, 8900 LF of 96" pipe	Construction	Bypass pipe being cut into 600 ft lengths and being moved downstream. Anchors for fall bypass pipe being drilled. Work on the road crossings under way.
02	DOUGLAS RODERICK	2021	Centennial Water Supply Project	7013	Centennial Water Supply Project	Planning	Quarterly update to be presented at the June 9th Engineering Committee. Due to COVID-19, no consulting work or AB52 consultation has taken place since the last update.
03	DOUGLAS HOBBS	2020	Alta Sierra Tank Replacement (DIV 2)	6971	Replace existing Alta Sierra Hypalon-covered reservoir with 3MG storage tank	Design	Design underway. Construction to begin October 2020.
04	ADRIAN SCHNEIDER	2020	North Auburn Treatment Plant (DIV 3)	2376	Upgrade of high lift pumps at North Auburn Water Treatment Plant	Planning	Proposals for designing of generator and motor control items received May 29. Recommended consultant to be approved by the Board in June. Design/RFQ expected by September 2020. Second RFQ to be sent out to contractors for purchase and installation of generator and motor control items. Generator install expected winter of 2020/2021.

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<b>08 - COMMUNITY INVESTMENT (\$800,000) 10151-52912</b>							
01	ADRIAN SCHNEIDER	2019	Iron Horse DFWLE (DIV 3)	1019	Construction of 7,206 LF of 8" pipeline along Armstrong Rd., Iron Horse Drive & Brewer Road.	Construction	Final chip sealing expected June 2-3, 2020.
02	ADRIAN SCHNEIDER	2020	Table Meadow Ph 2 DFWLE (DIV 3)	2180	Assist, Design and Construction of 5,770 LF of 8" pipeline for existing neighborhoods approved by Engineering Committee.	Design	Contractor sending submittals for review. Mobilization on site scheduled for mid-June. Pipeline installation to begin by July, 2020.
<b>10-1 - HYDRO NON-PROGRAMMATIC (\$250,000) 50112-52915</b>							
01	KEANE SOMMERS	2019	New Hydro Office Property Development	2084	New Hydro Office Property Development	Design	Award contract to WLC on December 11, 2019. A preliminary update has been received and is in review. Will soon begin solar site study and carbon forest study.
02	KEANE SOMMERS	2020	HYDRO HQ	2405	New Hydro Office Property Development	Design	
<b>10-2 - HYDRO POWERHOUSE IMPROV (\$1,585,000) 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.	Design	Hydro will be seeking a study with an alternatives analysis for possible options to complete the repair of the access road/berm.
02	NATHAN DROIVOLD	2020	Chicago Park Powerhouse Governor Replacement	2402	Replace governor, install instrumentation that will enable operators to monitor flow, temperature, and pressure of vital powerhouse components.	Planning	Hydro received and reviewed a 90% Cooling Water Upgrade Design with its consultant Mead & Hunt on May 4, 2020. Hydro will review the design and order materials in 2020, and will complete installation during the 2021 annual outage for CPPH.
03	NATHAN DROIVOLD	2019	Combie Reservoir	6943	Combie South Access Road. Develop approx. 3,000 ft. from south abutment.	Planning	WHO Committee directed Hydro to pursue constructing a new access road using the second alternative route identified by Nevada City Engineering on May 20, 2020. Hydro will send a Project Definition Memo to Engineering in June to request a design for the new access road.
04	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	Change order approved; contractor plans to come to site for redesign of system June 22, 2020. Installation of mechanical and plumbing anticipated by fall of 2020.
05	THEODORE BLANK	2019	Combie South Electrical Upgrades	2168	Combie South Electrical Upgrades	Design	Hydro purchased the new 12kV transformer, which is expected for delivery in late 2020. Electrical drawing consolidation and updates for the CSPH with Mesa are nearing completion.
06	THEODORE BLANK	2019	CSPH - Replace Switchgear/ISO Meter	2210	CSPH - Replace Switchgear/ISO Meter	Construction	Hydro is working on quote for CAISO meter and will need to purchase. Hydro to start defining project scope for switchgear replacement in a Project Definition Memo.
07	PHILIP NEDVED	2019	Bowman Governor	2234	Replace and integrate with BoP PLC.	Design	Contract with d'Heurle Systems executed January 22, 2020. Construction will start June 1, 2020 during the annual outage at BPH.
08	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 requested a letter proposal to define the project scope from GHD, expected by end of May. Afterwards, Hydro will prepare a Project Definition Memo to send to Engineering.
09	DARYL NOEL	2020	Deer Creek Powerhouse	2290	Deer Creek Powerhouse Upgrades - Cost of upgrades necessary to sell power upon close of sale	Hold	Hydro operations has purchased equipment. Project is on hold pending installation of control panel in DCPH, fiber optic cable between DCPH and E George Treatment Plant, gaging stations on conveyance from E George to DCPH, and an ANIRA box at E George. These installations are necessary for DCPH to be operated remotely by NCPA. Hydro is working on quote the installation of a fiber optic cable between DCPH and E George.
10	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.	Planning	Hydro will contact the vacuum breaker manufacturer Hitachi to hear a presentation and learn more about vacuum breakers and their performance history in June. Hydro will need to order the breaker with relay protection to align with the scope for the RPH Relay Protection Upgrades (FATR 2394), so that project is on hold until the breaker is ordered.
11	NATHAN DROIVOLD	2020	Bowman Intertie	2354	Replace the existing Bowman Inter-tie SF6 breaker with a more environmentally friendly vacuum circuit breaker	Hold	Hydro may replace the existing OCB with a vacuum breaker at the same time as the OCB replacement at RPH (FATR 2351). This project is on hold and will be revisited following Hydro's meeting with the breaker manufacturer for the RPH OCB replacement.
12	THEODORE BLANK	2020	Scotts Flat Powerhouse	2306	Install all components necessary for a new CAISO approved electrical meter for Scotts Flat Powerhouse	Planning	Hydro is working on quote for backup meter and will need to purchase. Hydro had purchased a new CAISO meter for SFPH, however, it was used to replace the CAISO meter at CNPH when it failed.

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<b>10-2 - HYDRO POWERHOUSE IMPROV (\$1,585,000) 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.	Planning	Hydro is defining the project scope and preparing the Project Definition Memo. Hydro will define the project scope and request bids to complete the design in 2020. The design will be completed in 2021, and installation will be during the 2021 annual outage at RPH.
14	NATHAN DROIVOLD	2020	Rollins Powerhouse Relay Protection Upgrade	2394	Replace aging relay protection system to improve protection of the powerhouse relay, transformer, and generator.	Hold	Hydro is defining the project scope and preparing the Project Definition Memo. Scope will be dependent on the RPH OCB replacement (FATR 2351) as the breaker manufacturer will need to provide relay protection inside of the breaker. Project on hold until breaker is ordered.
<b>10-3 - HYDRO DAM &amp; WATER IMPROV (\$1,595,000) 50112-52921</b>							
01	DAR CHEN	2020	Scotts Flat Spillway Repair	2094	Scotts Flat Spillway Repair & Upgrades	Planning	The Spill Crest Stability Analyses Report is being reviewed by DSOD. To reconfigure the geometry of the lower plunge pool to resist forces from the PMF flow, a plan for a physical hydraulic model has been prepared and will be submitted to DSOD and FERC for review and approval. Additional funding will be required to construct this model, and will need NID Board approval.
02	DAR CHEN	2019	Combie Abutment Scour	201402	Dam stabilization, abutments protection against scouring, and water supply upgrade	Planning	Photogrammetric survey of the dam and the grounds has been completed. Detailed geologic mapping to locate sound bedrocks has been completed. Bedrock scour potential is being evaluated by a specialty consultant. Then alternatives development will follow.
03	DAR CHEN	2020	Jackson Lake Spillway	2361	Improve spillway training walls on the Jackson Lake Dam	Design	Design is nearly completed. Dam Safety will submit the design package to DSOD and FERC in early June for review and approval. Hydro will lead the construction with input from a rubble/masonry wall contractor, planned from August to October 2020.
04	DAR 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 French Dam Upgrades design is nearly completed, and will be submitted to FERC for review and approval. The construction is planned from August to October 2021.
<b>10-4 - HYDRO LOWER DIV(\$450,000) 50112-52922</b>							
01	MIN CHEN	2020	Chicago Park Canal Liner Replacement	TBD	Repair segments of the Chicago Park Canal where existing shotcrete liner needs replacement.	Planning	Hydro is defining the project scope and preparing the Project Definition Memo.
<b>10-5 - HYDRO UPPER DIV (\$200,000) 50112-52923</b>							
01	DARYL NOEL	2020	Rucker Creek Spillgate	2339	Replace existing radial gate at Rucker Creek Diversion with an overshot gate to improve personnel safety and operational performance.	Planning	
02	NATHAN DROIVOLD	2020	Bowman-Spaulding Canal	2340	Re-establish driving access to the upstream portal of the Clear Creek Tunnel, design and install a bar screen to prevent debris from plugging the tunnel, and perform a canal condition assessment to identify and prioritize repairs or replacements	Planning	
<b>10-6 - HYRDO SCADA/COMMS (\$265,000) 50112-52924</b>							
01	THOMAS KLUGE	2020	Dutch Flat Forebay/Dutch Flat #2 Powerhouse	2355	Install fiber optic communication between Dutch Flat Powerhouse and Dutch Flat Forebay	Construction	Hydro has received quotes for the installation from IDF. Contracts were fully executed on May 14, 2020, and the installation will be completed before the 2020 annual outage for DF2PH in September.
02	THOMAS KLUGE	2020	Chicago Park Flume	2389	Install fiber optic communication between Chicago Park HVP and Chicago Park intake	Planning	Hydro working on soliciting a study to determine the project scope and costs to install either a fiber optic cable or microwave/radio system.
03	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 working on soliciting a study to determine the project scope and costs to install either a fiber optic cable or microwave/radio system.
<b>13 - ENGINEERING O&amp;M 10151-NA</b>							
01	GREG JONES	2020	District Wide	1041	Raw Water Master Plan / EIR	Planning	Draft Demand and Supply Technical memos being completed.

Engineering Department Project Status

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<b>13 - ENGINEERING O&amp;M 10151-NA</b>							
02	TONIA TABUCCHI HERRERA	2019	LWW and N. Auburn Water Age Evaluation (DIV 3&5)	2027	Model the water age in the LWW and N. Auburn Treated Water Systems.	Study	Consultants comments are under review.
<b>13-1 - ADMIN CAPITAL 10114-52915</b>							
01	TONIA TABUCCHI HERRERA	2020	Hemphill Diversion (DIV 4)	7032	Hemphill Diversion Maintenance Activities to facilitate Fish Passage. Modification of the downstream area of existing Diversion facility with anticipation to improve fish passage.	Design	Board approved Consulting Contract with ECORP for CEQA services on May 13, 2020. Routing consulting agreement for signatures.
<b>17 - SEDIMENT REMOVAL PROJECTS (\$1,200,000) 10151-52914</b>							
01	GREG JONES	2020	Steephollow Sediment Removal	6877	Removal of sediment at Steep Hollow and protection of hydro facilities	Hold	Need funds to get things moving for Channel / Monitoring. ROW has one easement remaining.
02	ADRIAN SCHNEIDER	2019	Loma Rica Reservoir (DIV 2)	2090	Cleaning of the Loma Rica Reservoir to increase capacity.	Closeout	Removing remaining stockpile. This will complete the sediment program for this location.
03	ADRIAN SCHNEIDER	2020	Greenhorn Sediment Removal (DIV 2)	8515	Removal accumulated sediment from the Greenhorn Creek arm of Rollins Reservoir.	Planning	Conduct sediment tests in August in order to provide information for future contractor for disposal/sales options. Obtaining sediment removal permits. Sediment removal RFQ to be sent out in 2021.
04	ADRIAN SCHNEIDER	2020	Orr Creek Reservoir (DIV 3)	6963	Cleaning of Orr Creek Reservoir to increase capacity	Design	Project direction and planning being reviewed by staff.
05	ADRIAN SCHNEIDER	2019	Newtown Reservoir (DIV 1)	6958	Install permanent bypass pipe & remove accumulated sediment from the reservoir to regain capacity.	Post-Construction	Anticipate removing previous year's stockpile of 700 cubic yards of sediment off site from private property. Potentially removing remaining sediment from reservoir as well. District to use recently installed bypass pipe to divert flows around reservoir to dry out sediment.
06	GREG JONES	2019	Combie Sediment Removal Project	2135	Removal of sediment at the east side of Combie Reservoir	Post-Construction	Sediment removal complete. Final disposal of material ongoing.
07	ADRIAN SCHNEIDER	2020	Dutch Flat Afterbay Sediment Removal (DIV 2)	2213	Remove accumulated sediment from the afterbay to reduce outlet pipe clogging & operation.	Planning	Further development of CEQA document by consultant.
<b>18 - RECREATION (\$315,000) 30250-52915</b>							
01	DOUGLAS RODERICK	2020	Ditch Tender House Scotts Flat	2102	Remodel of Ditch Tender House at Scotts Flat Lake	Construction	Maintenance finishing up final items including ADA ramp.