

Staff Report

for the Engineering Committee Meeting of June 9, 2020

TO: Engineering Committee
FROM: Doug Roderick, PE, Engineering Manager
DATE: June 2, 2020
SUBJECT: 5-Year Capital Improvement Plan

ENGINEERING

RECOMMENDATION:

Review and discuss the draft 5-Year Capital Improvement Plan (CIP) developed by staff.

BACKGROUND:

The intent of this item is to review and discuss the draft 5-Year CIP with Committee members. The 5-Year CIP includes projects for Engineering, Hydroelectric, Recreation, Maintenance, and Operations. Staff will utilize the 5-Year CIP in the development of the 2021 capital budget.

BUDGETARY IMPACT:

None.

ATTACHMENTS:

- Draft 5-Year Capital Improvement Plan

DR

5-Year CIP (Draft) 6-2-2020

Dept./Account	Reg.Req.	FATR Proj.	Project Name	Budget 2021	Budget 2022	Budget 2023	Budget 2024	Budget 2025
10114 Administration								
52915 Program Budget: Non-Programmatic				\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
	ADA	NPN	Security and ADA upgrades of facilities for public and staff safety	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
10119 Safety								
52915 Program Budget: Non-Programmatic				\$25,000	\$0	\$0	\$0	\$0
		1033	Safety Fall Protection Training Tower & Confined Space Facility	\$25,000				
10151 Engineering								
52907 Program Budget: Treated Water Pipeline Replacement				\$1,750,000	\$2,800,000	\$2,500,000	\$1,200,000	\$1,650,000
		6962	Hwy 49 @ Christian Life Way-Replace 1500 ft. with 8 inch	\$350,000				
		2324	Meadow Brook-Copper relocate (North Auburn) relocate pipeline from back of house(s)	\$400,000				
		2182	North Day Road Pipeline Replacement-Replacement of badly deteriorated pipeline on North Day Road	\$850,000				
		2323	Willaura Acres- (Lime Kiln)-Replacement of deteriorated water mains and services in this area	\$100,000	\$1,400,000			
		6966	Osborne Hill Pipeline		\$100,000	\$500,000		
			Live Oak new main and services (4,600 ft)	\$50,000	\$1,250,000			
			East Bennett Loop (2,600 ft)		\$50,000	\$1,000,000		
		1005	Hughes Rd-Replace and upgrade pipeline					
		6930	Ridge Rd-Sierra College Dr/Hughes Road-1,240 ft. of 16 Inch and 910 Ft. of 20 inch-Replacement and upgrade of waterline			\$950,000		
		2314	Peninsula Campground-Replacement of waterline				\$300,000	
			Glenbrook Basin Pipes (1,500 ft)				\$400,000	
		2387	Jackson Meadows Woodcamp Campground-Replacement of waterline			\$50,000	\$250,000	
			Upper Banner Main Extension (4,400 ft of new pipeline and 7,300 ft of upsized pipeline)				\$250,000	\$1,500,000
		2314	Alta Sierra New Main and Services (4,650 ft)					\$100,000
			Dry Creek at Tractor Supply					\$50,000

52908 Program Budget: Pressure Reducing Valve (PRV) Program				\$380,000	\$250,000	\$250,000	\$250,000	\$250,000
	2371	Dorsey Drive-Replace badly deteriorated PRV	\$130,000					
	2370	Berggren Lane-Replace badly deteriorated PRV	\$250,000					
	2369	Brewer # 1-Replace badly deteriorated PRV			\$125,000			
	2368	Nancy Way-Replace badly deteriorated PRV			\$125,000			
	2316	Echo Ridge-Replace badly deteriorated PRV				\$125,000		
	2317	Slate Creek-Replace badly deteriorated PRV				\$125,000		
	2318	East Ridge-Replace badly deteriorated PRV					\$125,000	
	2320	McPhersons-Replace badly deteriorated PRV					\$125,000	
	2319	Glenwood-Replace badly deteriorated PRV						\$125,000
	2367	Sunset-Replace badly deteriorated PRV						\$125,000

52910 Program Budget: Raw Water Replacement				\$2,450,000	\$1,750,000	\$1,800,000	\$3,500,000	\$500,000
	1098	Santini Siphon 1-Replace 1 & 2-bottleneck & overtopping	\$350,000					
	NPN	South Yuba Repairs - major repairs on facility to improve reliability	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
	8099	Maben Canal (Kyler Canal to Retrac Way)	\$950,000					
	7809	Kyler Canal-Replace and enlarge canal	\$100,000	\$900,000				
		Hayt #1, #5 and #6 (200 ft, 160 ft, 430 ft)	\$400,000					
	2373	Pet Hill Canal Extension Repair - Upgrade pipeline for capacity	\$150,000					
	2329	China Drop Pipe Replacement of aerial pipeline-supports badly deteriorated		\$200,000				
		Clipper Creek Techite (8,600 ft of 24-inch)		\$150,000	\$1,000,000	\$2,000,000		
	2337	Smartsville raw water system-Repair and replacement of badly deteriorated pipelines			\$50,000			
	2372	Markell Spill Replacement-Replace badly deteriorated spillway			\$150,000			
	6967	Newtown Canal Headworks			\$100,000	\$450,000		
	2056	Lester Canal Relocation (Siphon)-Replace and relocate approx. 1400 Ft. of open canal.				\$350,000		
	2391	Fawn Hill Canal Piping - Canal pipe is sliding downhill				\$150,000		
		Camp Far West Drop Pipe				\$50,000		
		Lake Vera						\$800,000
		Doty North						
		Tarr Canal at Old Auburn Rd						
		Smith Moulton Pipeline						
		Sontag Canal berm work						

52911 Program Budget: Backbone Extension				\$3,000,000	\$2,500,000	\$2,200,000	\$1,800,000	\$850,000
		CAPACITY FEES		\$500,000	\$500,000	\$500,000	\$500,000	\$0
		TAX REVENUES		\$2,500,000	\$2,000,000	\$1,700,000	\$1,300,000	\$850,000
	2255	E. George to LWW Pipeline-Extension of waterlines for redundancy and customers		\$3,000,000	\$2,500,000	\$2,200,000	\$1,800,000	\$750,000
	2254	LWW to Smartsville WTP-Extension of waterlines for redundancy and customers						\$100,000

52912 Program Budget: Community Investment				\$500,000	\$1,100,000	\$800,000	\$100,000	\$100,000
	2181	Loma Rica Drive DFWLE-Assist, Design and Construction of a pipeline for existing neighborhoods approved by the Engineering Committee		\$400,000	\$1,000,000			
	2409	Maranatha Place DFWLE-Assist, design and construction of a pipeline for existing neighborhoods approved by the Engineering Committee.				\$700,000		
		Wharf Hydrant Replacement		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000

52913 Program Budget: Extended CEQA				\$30,000	\$0	\$30,000	\$0	\$0
	6593-2	Cascade Canal-Banner Cascade Pipeline-MMRP items from LCCBCP CEQA		\$30,000		\$30,000		

52914 Program Budget: Sediment Removal				\$1,000,000	\$600,000	\$1,000,000	\$1,700,000	\$2,100,000
	6963	Orr Creek Reservoir-Clean and remove sediment to increase capacity		\$250,000				
		Combie- Remove sediment on the eastside of reservoir to increase capacity					\$500,000	\$500,000
	8515	Greenhorn Creek-Rollins Reservoir-remove sediment from Greenhorn Creek to increase capacity		\$750,000	\$500,000	\$500,000	\$500,000	\$500,000
	6877	Steephollow-Remove sediment at Steep Hollow and protection of NID Hydro Facilities					\$500,000	\$500,000
	2213	Dutch Flat Afterbay-Remove sediment to increase capacity			\$100,000	\$500,000		
	2325	Union Reservoir-Remove sediment to increase capacity					\$100,000	\$350,000
	2326	Rex Reservoir-Remove sediment to increase capacity					\$100,000	\$250,000

52915 Program Budget: Non-Programmatic			\$2,650,000	\$4,100,000	\$4,850,000	\$4,450,000	\$5,000,000
	6746	Combie Phase 1-Replacement-Combie pipeline bypass	\$400,000				
	7032	Hemphill/Fish Diversion - Improve fish passage	\$300,000	\$2,500,000	\$2,000,000		
	6943	Combie South Access Road	\$300,000				
	2376	North Auburn Highlift Pumps - Replace motor control center, VFDs and new generator	\$600,000				
	6996	LWW WTP-Upgrade drying beds, backwash pumps and canal intake screen	\$450,000				
	2375	Clear Well Expansion Loma Rica TP - Add additional clearwell volume for higher plant flows		\$150,000	\$2,000,000		
	2414	Orr Creek Reservoir-CEQA-Repair leaking and badly deteriorated facility	\$100,000	\$800,000			
	2378	Loma Rica WTP Modify CT - Retrofit facility to improve CT		\$150,000			
	2321	LR WTP Pressure Vessel - Replacement of badly deteriorated pressure vessels			\$100,000	\$350,000	\$3,000,000
	7013	Centennial Water Supply Project - Facility for addition future demand and potential drought	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
	2375	Clear Well Expansion Loma Rica - Add additional clearwell volume for higher plant flows			\$150,000	\$2,000,000	
		Upper Banner Storage Tank				\$100,000	\$1,500,000
	2374	E. George Effluent Expansion - Remove constriction in effluent pipeline			\$50,000	\$1,000,000	
	2322	David Way Pump Station PS Rehab.-Aged PS with no redundant pumps			\$50,000	\$500,000	
Total - Engineering Capital			\$11,260,000	\$12,600,000	\$12,930,000	\$12,500,000	\$10,450,000
Water Reserve			\$1,948,155	\$1,004,400	\$1,082,532	\$1,932,908	\$3,982,908
Tax Revenues			\$13,208,155	\$13,604,400	\$14,012,532	\$14,432,908	\$14,432,908

10171 Water			\$150,000	\$65,000	\$65,000	\$200,000	\$200,000
52915 Program Budget: Non-Programmatic			\$25,000	\$15,000	\$15,000	\$200,000	\$200,000
	NPN	WTP Security	\$25,000	\$15,000	\$15,000	\$100,000	\$100,000
	NPN	Miscellaneous Repairs - Major repairs such as structural for ongoing plant operations				\$100,000	\$100,000
52930 Program Bud: Chemical Tanks & Pads			\$50,000	\$50,000	\$50,000	\$0	\$0
	NPN	Chemical Tanks & Pads - Replacement of tanks caused by caustic chemicals	\$50,000	\$50,000	\$50,000		
52931 Program Budget: Clarifiers			\$0	\$0	\$0	\$0	\$0
52932 Program Budget: Lime System Removal			\$75,000	\$0	\$0	\$0	\$0
	NPN	Lime System-Removal of old lime systems from treatment plants	\$75,000	\$0	\$0		
10191 Maintenance							
52915 Program Budget: Non-Programmatic			\$1,000,000	\$0	\$0	\$0	\$0
	NPN	Bear Valley-Steel Building (50' x 100') - New building for operations of the Upper Country system	\$1,000,000				
52916 Program Non-Jurisdictional Major Repairs-Water Diversion, Holding Structures			\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
	2336	Tarr Canal Diversion Repair and Replacement-Clean, repair, and update diversion	\$300,000				
	2335	Tunnel Canal Diversion Repair and Replacement-Clean, repair, and update diversion		\$300,000			
	2334	Camp Far West Diversion Repair and Replacement-Clean, repair, and update diversion			\$300,000		
	2333	China Union Diversion Repair and Replacement-Clean, repair, and update diversion				\$300,000	
	2332	Wiskey Diggins Diversion-Repair and Replacement-Clean, repair, and update diversion					\$300,000
	2331	Auburn Ravine 1-Diversion Repair and Replacement-Clean, repair, and update diversion					
52940 Program Budget: Tank Restoration			\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
	NPN	Storage Tank Recoating	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
52941 Program Budget: Road Restoration			\$150,000	\$160,000	\$160,000	\$160,000	\$160,000
	NPN	Asphalt sealing (WTP & Pump Stations)	\$150,000	\$160,000	\$160,000	\$160,000	\$160,000

52942 Program Budget: Pipeline Restoration				\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
		NPN	Pipeline Rehabilitation - Epoxy Lining	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
52943 Program Budget: Canal Restoration				\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
		NPN	Shotcrete Lining of Canals	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
		NPN	South Yuba Canal - emergency repairs to the facility					
Total Capital-Operation Revenues, Maintenance and Water Operations				\$2,450,000	\$1,375,000	\$1,375,000	\$1,510,000	\$1,510,000
30250 Recreation								
52915 Program Budget: Non-Programmatic				\$315,000	\$315,000	\$315,000	\$315,000	\$315,000
		2091	Boat Slips/Docks-Purchasing 42 boat slips from EZDocks, for Long Ravine. Recreation staff will construct the new slips and will be removing the old slips.	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
			Sewer System Replacements	\$30,000	\$30,000	\$50,000	\$50,000	\$50,000
		2314	Peninsula (2019)-Repair/replacement of Peninsula Sewer System					
			Roadway Restoration	\$10,000	\$10,000	\$40,000	\$40,000	\$40,000
		2020	Scotts Flat Office & Generator-Replace existing deteriorating office	\$200,000	\$200,000			
		NPN	Roofing Upgrades	\$25,000	\$25,000	\$35,000	\$35,000	\$35,000
		NPN	Campground Host - trailer replacement, Scotts Flat, Long Ravine, Peninsula			\$140,000	\$140,000	\$140,000
Total Capital - Recreation				\$315,000	\$315,000	\$315,000	\$315,000	\$315,000

50112 Hydroelectric								
52915 Program Budget: Non-Programmatic- Total represents non-bonded Projects				\$0	\$250,000	\$2,500,000	\$2,200,000	\$500,000
		2084	New Hydro Office Property Development (Hydro Maintenance Shop/Office)		\$250,000	\$2,500,000	\$2,000,000	\$100,000
		2083	RPH2 Rollins No. 2 Powerhouse-Designing, permitting and construction of Rollins No. 2 Powerhouse below Rollins Dam				\$200,000	\$200,000
		6947	LRPH Loma Rica Hydroelectric-Build new hydroelectric facility on Banner Cascade Pipeline					\$200,000

52920 Program Budget: PH Improvements-Total represents non-bonded Projects				\$2,250,000	\$3,650,000	\$4,450,000	\$3,675,000	\$100,000
		2354	BPH Bowman Intertie Breaker	\$170,000	\$100,000			
		2362	CPPH Transformer Replacement	\$50,000	\$1,500,000	\$750,000		
		2383	CPPH Rewind		\$50,000	\$1,500,000		
		2402	CPPH Governor and Instrumentation Upgrade	\$400,000	\$75,000			
		2352	CPPH Switchgear Upgrade				\$50,000	
		2353	CPPH Turbine Overhaul	\$100,000	\$1,250,000	\$1,250,000		
		2347	CNPH CAISO Meter			\$150,000		
		2168	CSPH Instrument/Control/Protection Upgrades	\$250,000	\$100,000	\$100,000		
		6943	CS Access Road	\$200,000				
		2342	DCPH Controls/Automation		\$50,000	\$400,000		
		2343	DCPH Generator Breaker	\$50,000	\$100,000	\$100,000	\$25,000	
		2395	DCPH Exciter Replacement	\$50,000	\$150,000			
		2387	DCPH Transformer Replacement			\$50,000	\$750,000	\$100,000
		2246	DFPH Fire Suppression System Upgrades	\$30,000				
		2403	DFPH Switch Gear Upgrade			\$50,000	\$500,000	
		2349	DFPH No 2 Turbine Shutoff Valve (TSV)				\$500,000	
		2350	DFPH Main Transformer Replacement			\$50,000	\$1,500,000	
		2351	RPH OCB Replacement	\$200,000	\$75,000			
		2379	RPH Rollins Powerhouse Fire Protection System	\$300,000				
		2392	RPH Governor Replacement	\$50,000	\$200,000			
		2393	RPH Balance of Plant	\$250,000				
		2394	RPH Relay Protection Improvements	\$150,000				
		2406	SFPH Balance of Plant Upgrade			\$50,000	\$250,000	
		2401	SFPH Switchgear and Relay Replacement				\$100,000	

52921 Program Budget: Reservoir, Dam and Water-Total represents non-bonded Projects	\$2,740,000	\$1,945,000	\$3,420,000	\$15,700,000	\$15,400,000
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	DSOD & FERC	2094	Scotts Flat Dam Spillway Repair	\$1,000,000.00	\$1,000,000.00	\$2,500,000.00	\$10,000,000.00	\$8,900,000.00
	DSOD & FERC	201402	Combie Dam Stabilization and Scour Protection-Phased Project	\$300,000.00	\$400,000.00	\$550,000.00	\$3,000,000.00	\$2,500,000.00
		2359	Bowman North Dam Face Concrete Lining Improvement		\$150,000.00	\$300,000.00	\$1,800,000.00	
	FERC, DSOD	2400	Bowman South Dam Stability				\$300,000.00	\$4,000,000.00
	FERC	2007	French Dam - New Gauging Station	\$350,000.00	\$50,000.00			
	FERC	2360	French Dam - Freeboard, Upstream Lining, Spillway Training Wall	\$1,000,000.00	\$75,000.00			
		2358	Jackson Meadows Outlet-Butterfly Valve Replacement				\$200,000.00	
	FERC, DSOD- FY 2021	2361	Jackson Lake - Spillway Channel Confinement Deficiency	\$70,000.00	\$100,000.00	\$20,000.00		
		2385	Rollins Dam Penstock Drainage Improvement	\$20,000.00	\$150,000.00			
		2357	Sawmill Upstream Face Improvement		\$20,000.00	\$50,000.00	\$400,000.00	

52922 Program Budget: Lower Division Waterway-Total represents non-bonded Projects	\$450,000	\$450,000	\$0	\$0	\$0
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		2386	CP Flume Intake Drain Improvements	\$50,000	\$450,000			
		2341	DF Canal Liner Replacement	\$400,000				

52923 Program Budget: Upper Division Waterway-Total represents non-bonded Projects	\$600,000	\$450,000	\$100,000	\$500,000	\$500,000
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		2230	BSCNL Bowman-Spaulding Canal Lining Project				\$500,000	\$500,000
		2339	Rucker Spill Gate Replacement	\$150,000				
		2404	Fall Creek Flume Improvements			\$50,000		
		2340	BSCNL Repairs Upstream of Clear Creek Tunnel	\$450,000	\$450,000	\$50,000		

52924 Program Budget: SCADA/Communication Upgrades-Total represents non-bonded Projects				\$200,000	\$350,000	\$185,000	\$0	\$0
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	201502	SCADA Upgrade						
	2405	New Hydro Field Office Radio Tower			\$350,000			
	2355	DFPH -HVPB- DF Forebay Fiber Optic						
	2390	DFFB-PG&E Drum Fiber Optic		\$200,000				
	2389	CPHVP - CP Intake Fiber Optic						
	2346	DCPH Install Microwave from KLOVE Tower (SF) to CPPH				\$185,000		

Total Capital - Hydroelectric				\$6,240,000	\$7,095,000	\$10,655,000	\$22,075,000	\$16,500,000
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TOTAL O&M CAPITAL - Operations and Maintenance				\$2,450,000	\$1,375,000	\$1,375,000	\$1,510,000	\$1,510,000
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TOTAL CAPITAL - Engineering, Hydroelectric and Recreation				\$17,815,000	\$20,010,000	\$23,900,000	\$34,890,000	\$27,265,000
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