El Dorado Irrigation District

FIVE YEAR

Capital Improvement Plan

2024—2028

Approved October 23, 2023

El Dorado Irrigation District

2024-2028 CAPITAL IMPROVEMENT PLAN

October 23, 2023

	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$2,191,195	$727,671	$999,191	$945,682	$332,292	$5,196,031
Water	$26,871,587	$27,794,723	$32,166,360	$49,361,209	$48,829,612	$185,023,491
Wastewater	$11,050,000	$7,775,000	$11,500,000	$6,525,000	$4,925,000	$41,775,000
Recycled Water	$984,084	$1,563,510	$1,714,340	$1,060,140	$325,000	$5,647,074
Hydroelectric	$7,090,000	$7,055,000	$4,715,000	$24,015,000	$25,140,000	$68,015,000
Recreation	$230,000	$245,000	$50,000	$160,000	$240,000	$925,000
General District	$7,207,401	$2,566,000	$2,092,800	$1,860,000	$1,147,000	$14,873,201
TOTAL	**$55,624,267**	**$47,726,904**	**$53,237,691**	**$83,927,031**	**$80,938,904**	**$321,454,797**

2023-2027 CAPITAL IMPROVEMENT PLAN

Approved November 14, 2022

	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$1,546,195	$427,671	$314,191	$715,682	$557,292	$3,561,030
Water	$16,349,843	$28,270,000	$26,070,214	$12,405,000	$15,195,000	$98,290,057
Wastewater	$16,218,067	$9,855,000	$7,315,214	$6,485,000	$6,350,000	$46,223,281
Recycled Water	$150,000	$300,000	$400,000	$325,000	$325,000	$1,500,000
Hydroelectric	$6,567,656	$9,565,000	$10,550,000	$4,070,000	$7,735,000	$38,487,656
Recreation	$450,000	$150,000	$260,000	$110,000	$275,000	$1,245,000
General District	$7,377,675	$4,714,500	$2,527,000	$2,241,000	$2,130,000	$18,990,175
TOTAL	**$48,659,436**	**$53,282,171**	**$47,436,619**	**$26,351,682**	**$32,567,292**	**$208,297,200**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan

FERC Projects

PROJECT NO.	PROJECT DESCRIPTION	Program	PROJECT Ranking Level 1	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
10007	FERC C51.1 and 51.2 RM Caples Auxiliary Dam and Boat Launch	FERC	1	40,000	40,000	40,000	40,000	40,000	200,000
06019H	FERC: C35 Oyster Creek	FERC	1	15,000	15,000	0	0	0	30,000
06021H	FERC C37.8 Water Temperature	FERC	1	30,000	35,000	35,000	30,000	35,000	165,000
06025H	FERC: C41 Canal Release Pt	FERC	1	10,000	0	0	0	0	10,000
06076H	FERC C38.4b Caples Spillway Channel Stabilization	FERC	1	15,000	15,000	15,000	0	0	45,000
06082H	FERC: C50.1 Silver Lake Campground East Re-Construction	FERC	1	1,230,000	0	0	0	0	1,230,000
06086H	FERC C33 Lake Aloha Trout Removal	FERC	1	20,000	0	0	0	0	20,000
06087H	FERC C37.1 Fish Monitoring	FERC	1	0	0	95,000	70,000	0	165,000
06088H	FERC: C37.2 Macroinvertebrate Monitoring	FERC	1	0	0	75,000	75,000	0	150,000
06089H	FERC: C37.3 Amphibian Monitoring	FERC	1	25,000	0	110,000	0	0	135,000
06090H	FERC: C37.4 Riparian Species Composition	FERC	1	0	0	30,000	0	0	30,000
06091H	FERC: C37.5 Riparian Vegetation Recruitment	FERC	1	0	0	30,000	0	0	30,000
06092H	FERC: C37.7 Geomorphology Evaluation	FERC	1	0	0	80,000	0	0	80,000
06095H	FERC: C54 Visual Resources Management Plan	FERC	1	5,000	0	0	0	0	5,000
06096H	FERC: C55 Heritage Resources	FERC	1	60,000	0	0	0	0	60,000
06097H	FERC: C59 Facility Management Plan	FERC	1	10,000	0	0	0	0	10,000
06098H	FERC: C46 thru C49 Recreation Resource Management	FERC	1	10,000	0	0	0	0	10,000
07003H	FERC: C37.9 Water Quality	FERC	1	100,000	0	0	105,000	0	205,000
07005H	FERC: C51.3 RM Echo Trailhead	FERC	1	8,000	8,000	8,000	8,000	8,000	40,000
07006H	FERC: C51.5 and C51.7 RM USFS Payments	FERC	1	53,195	54,671	56,191	57,682	59,292	281,030
07010H	FERC: C15 Pesticide Use	FERC	1	80,000	80,000	80,000	80,000	80,000	400,000
07011H	FERC: C38 Adaptive Management Program	FERC	1	50,000	50,000	50,000	50,000	50,000	250,000
07030H	FERC: C57 Transportation System Management Plan	FERC	1	400,000	400,000	250,000	400,000	30,000	1,480,000
08025H	FERC C44 Noxious Weed Monitoring	FERC	1	30,000	30,000	45,000	30,000	30,000	165,000
TOTAL				**2,191,195**	**727,671**	**999,191**	**945,682**	**332,292**	**5,196,030**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
16003	Permit 21112 Change in Point of Diversion	WA	2	275,000	200,000	100,000	0	0	575,000
17011	Crestview Pump Station Replacement Project	WA	1	775,000	0	0	0	0	775,000
17035	Green Valley Bridge Relocation	WA	1	0	0	700,000	0	0	700,000
19050	Construction Storage Facility	WA	3	75,000	225,000	0	0	0	300,000
20030	Drop Off Road Waterline Extension	WA	1	1,100,000	0	0	0	0	1,100,000
21015	Swansboro Pump Station Replacement Project	WA	2	0	50,000	0	0	0	50,000
21040	Water Facility Generators - FEMA Grant	WA	1	500,000	0	0	0	0	500,000
21079	Sly Park Intertie Improvements	WA	2	10,500,000	10,400,000	0	0	0	20,900,000
22019	Pleasant Oak Main Pressure Reducing Station #2 Upgrade	WA	2	175,000	250,000	0	0	0	425,000
22038	Reservoir A Filter Valve Replacements	WA	2	1,432,917	0	0	0	0	1,432,917
23001	AMR and Small Meter Replacement	WA	2	360,000	360,000	400,000	400,000	425,000	1,945,000
23002	Serviceline Replacement Program	WA	2	2,750,000	2,750,000	3,000,000	3,000,000	3,450,000	14,950,000
23009	Reservoir 1 Storage Replacement	WA	2	550,000	1,000,000	7,500,000	0	0	9,050,000
23010	Res 1 Water Treatment Plant Generator Replacement	WA	2	525,000	0	0	0	0	525,000
23017	El Dorado Hills WTP Clear Well Pump Replacement	WA	1	153,000	0	0	0	0	153,000
23025	Valve Replacement EDM1 And EDM2	WA	2	50,000	100,000	0	0	0	150,000
24002	Construction Spoils Management	WA	3	420,000	750,000	0	0	0	1,170,000
PLANNED	EDH Water Treatment Plant Phase 1-3 Improvements	WA	2	2,688,000	4,388,000	11,971,000	20,771,000	23,221,000	63,039,000
PLANNED	El Dorado Hills Raw Water Pump Station 4160 Enclosure	WA	2	150,000	0	0	0	0	150,000
PLANNED	Placerville Drive Hangtown Creek Bridge Replacement	WA	1	75,000	975,000	0	0	0	1,050,000
PLANNED	Pleasant Valley Road Bulk Water Station Upgrades	WA	1	0	70,000	125,000	0	0	195,000
PLANNED	Pressure Reducing Station Rehabilitation and Replacement Program	WA	2	50,000	200,000	750,000	350,000	900,000	2,250,000
PLANNED	Pump Station Rehabilitation and Replacement Program	WA	2	75,000	75,000	100,000	1,000,000	600,000	1,850,000
PLANNED	Res 1 Water Treatment Plant Phase 1 Improvements Program	WA	2	537,000	1,237,000	1,312,000	13,560,000	13,560,000	30,206,000
PLANNED	Reservoir A Backwash to Waste Valve Replacement	WA	2	0	195,000	1,925,000	0	0	2,120,000
PLANNED	Ridgeview Pump Station Rehabilitation	WA	2	0	100,000	0	0	0	100,000
PLANNED	SCADA Water Hardware Replacement Program	WA	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Sly Park Outlet Control Facility Improvements	WA	2	0	50,000	100,000	0	0	150,000
PLANNED	Sly Park Spillway Improvements	WA	1	120,000	200,000	0	0	0	320,000
PLANNED	Transmission Slope Stabilization	WA	2	0	75,000	600,000	0	0	675,000
PLANNED	Valve Replacement Program	WA	2	0	100,000	125,000	125,000	150,000	500,000
PLANNED	Water Arc Flash Risk Assessment Program	WA	1	50,000	50,000	50,000	50,000	50,000	250,000
PLANNED	Water Distribution Radio Path Program	WA	3	50,000	50,000	0	0	0	100,000

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Water Projects

PLANNED	Water Model - Validation and Update	WA	3	50,000	0	50,000	0	50,000	150,000
PLANNED	Water Storage Tank Replacement & Rehabilitation Program	WA	2	2,785,670	2,944,723	1,258,360	6,730,209	2,973,612	16,692,573
PLANNED	Water Treatment Plant Asset Replacement Program	WA	2	500,000	500,000	0	0	0	1,000,000
PLANNED	Water Treatment Plant Flow Meters Upgrade	WA	2	0	0	0	0	100,000	100,000
PLANNED	Waterline Replacement Program	WA	2	0	150,000	2,000,000	3,000,000	3,000,000	8,150,000
PLANNED	Wholesale Meter Replacement	WA	2	0	250,000	0	275,000	0	525,000
PLANNED	Large Meter Replacement	WA	2	0	0	0	0	250,000	250,000
TOTAL				**26,871,587**	**27,794,723**	**32,166,360**	**49,361,209**	**48,829,612**	**185,023,490**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Wastewater Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
15036	Silva Valley - El Dorado Hills Sewer Pipeline	WW	2	0	0	300,000	350,000	350,000	1,000,000
17046	Strolling Hills Pipeline Improvements	WW	2	500,000	3,000,000	3,000,000	0	0	6,500,000
18003	Indian Creek Lift Station Upgrades	WW	2	1,325,000	1,250,000	0	0	0	2,575,000
20040	Deer Park LS SCADA Hardware Replacement	WW	2	65,000	0	0	0	0	65,000
21007	Town Center Force Main Phase 4 Replacement	WW	2	0	0	0	0	100,000	100,000
21026	St. Andrews Lift Station Upgrades	WW	2	100,000	250,000	0	0	0	350,000
21041	Wastewater Facility Generators - FEMA Grant	WW	1	210,000	0	0	0	0	210,000
21081	Motherlode Force Main Replacement Program	WW	1	5,000,000	0	0	0	0	5,000,000
PLANNED	Camino Heights Wastewater Treatment Plant Disposal Improvements	WW	1	0	150,000	200,000	0	0	350,000
PLANNED	Collections Pipeline Replacement and Rehabilitation Program	WW	2	2,500,000	250,000	1,250,000	250,000	1,250,000	5,500,000
PLANNED	Collections SCADA and PLC Upgrade Program	WW	2	400,000	400,000	300,000	0	0	1,100,000
PLANNED	DCWWTP PLC Replacement Program	WW	2	0	150,000	150,000	150,000	0	450,000
PLANNED	DCWWTP Process Control Device Integration	WW	2	75,000	75,000	0	0	0	150,000
PLANNED	EDHWWTP PLC Replacement Project	WW	2	0	300,000	400,000	400,000	0	1,100,000
PLANNED	El Dorado Hills Lift Station Consolidation	WW	2	0	150,000	150,000	0	0	300,000
PLANNED	El Dorado Lift Station Site Improvements	WW	2	0	0	250,000	0	0	250,000
PLANNED	Ponderosa Heights Force Main Replacement	WW	2	0	250,000	750,000	750,000	0	1,750,000
PLANNED	Promontory Village Inflow & Infiltration Study	WW	2	0	0	0	25,000	100,000	125,000
PLANNED	SCADA Wastewater Hardware Replacement Program	WW	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Wastewater Arc Flash Risk Assessment Program	WW	1	50,000	50,000	50,000	50,000	50,000	250,000
PLANNED	Wastewater Asset Replacement Program	WW	2	500,000	500,000	500,000	500,000	500,000	2,500,000
PLANNED	Wastewater Collection System Hydraulic Modeling	WW	3	50,000	50,000	50,000	50,000	50,000	250,000
PLANNED	Wastewater Lift Station Upgrade Program	WW	2	0	175,000	1,625,000	1,475,000	2,250,000	5,525,000
PLANNED	Wastewater Treatment Plant Assessments	WW	2	0	200,000	250,000	250,000	0	700,000
PLANNED	WWTP Solids Handling Replacement	WW	2	0	300,000	2,000,000	2,000,000	0	4,300,000
PLANNED	WWTP Process Improvement Program	WW	2	175,000	175,000	175,000	175,000	175,000	875,000
TOTAL				**11,050,000**	**7,775,000**	**11,500,000**	**6,525,000**	**4,925,000**	**41,775,000**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Recycled Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
PLANNED	Recycled Storage Tank Replacement & Rehabilitation Pr	RW	2	859,084	1,188,510	1,389,340	735,140	0	4,172,074
PLANNED	Recycled Water Asset Program	RW	2	75,000	175,000	75,000	75,000	75,000	475,000
PLANNED	Recycled Water Distribution Program	RW	2	50,000	125,000	250,000	250,000	250,000	925,000
PLANNED	Recycled Water Radio Path Design and Replacement	RW	2	0	75,000	0	0	0	75,000
Total			**TOTAL:**	**984,084**	**1,563,510**	**1,714,340**	**1,060,140**	**325,000**	**5,647,074**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
17028	Flume 48 Replacement	HY	2	50,000	200,000	250,000	200,000	0	700,000
18010	Penstock Improvements	HY	2	200,000	200,000	185,000	80,000	80,000	745,000
19021	Canal RTU Replacement Control Sites	HY	2	150,000	325,000	325,000	325,000	0	1,125,000
19024	Echo Conduit Rehabilitation	HY	2	80,000	0	0	0	0	80,000
19031	Silver Lake Dam Replacement	HY	1	700,000	1,980,000	2,200,000	22,500,000	22,500,000	49,880,000
21003	Diversion Repeater Site	HY	3	175,000	0	0	0	0	175,000
21004	A18 Fiber Communication Improvements	HY	2	300,000	0	0	0	0	300,000
21008	Diversion - Facility Upgrades	HY	1	300,000	0	0	0	0	300,000
21009	Diversion - Fish Ladder Improvements	HY	3	0	50,000	50,000	0	0	100,000
21013	Flumes 45A, 46A, 47A, and 47B Replacement	HY	2	0	0	0	0	2,000,000	2,000,000
21016	Penstock Stabilization	HY	2	80,000	520,000	170,000	0	0	770,000
21028	Powerhouse Automation Replacement	HY	2	75,000	500,000	0	0	0	575,000
22014	Flume 45 Section 3 Replacement	HY	2	500,000	10,000	10,000	10,000	10,000	540,000
22030	Flume 47A Replacement	HY	2	3,200,000	0	0	0	0	3,200,000
23016	Camp 2 Structure	HY	2	0	0	250,000	0	0	250,000
PLANNED	14 Mile Tunnel Improvements	HY	2	200,000	2,000,000	0	0	0	2,200,000
PLANNED	Annual Canal and Flume Improvements Program	HY	2	425,000	300,000	300,000	300,000	300,000	1,625,000
PLANNED	Annual Reservoir and Dam Improvements Program	HY	2	165,000	50,000	50,000	50,000	50,000	365,000
PLANNED	Camp 5 Generator Replacement	HY	2	0	50,000	250,000	0	0	300,000
PLANNED	Ditch SCADA Hardware Replacement	HY	2	0	0	50,000	150,000	0	200,000
PLANNED	Diversion - A11 Flow Control	HY	2	80,000	0	0	0	0	80,000
PLANNED	Flume 4 Replacement	HY	2	0	250,000	250,000	0	0	500,000
PLANNED	Hydro Arc Flash Risk Assessment Program	HY	1	50,000	65,000	50,000	0	50,000	215,000
PLANNED	Hydro Equipment and Facility Replacement Program	HY	2	75,000	75,000	75,000	75,000	75,000	375,000
PLANNED	Hydro Powerhouse Equipment and Facility Replacement	HY	2	75,000	75,000	75,000	75,000	75,000	375,000
PLANNED	Lakes Remote Telemetry Units Replacement	HY	2	50,000	275,000	0	0	0	325,000
PLANNED	Powerhouse Turbine Runner Upgrade	HY	2	50,000	50,000	0	0	0	100,000
PLANNED	Spill 3 Crib Wall Replacement	HY	2	0	0	125,000	200,000	0	325,000

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
STUDY 2023	2024 Canal Assessment	HY	2	50,000	0	0	0	0	50,000
STUDY 2024	2024 Siphon Assessment	HY	2	60,000	0	0	0	0	60,000
STUDY 2025	2025 Canal Release Points Assessment	HY	2	0	80,000	0	0	0	80,000
STUDY 2026	2026 Tunnel Assessment	HY	2	0	0	50,000	0	0	50,000
STUDY 2027	2027 Flume Assessment	HY	2	0	0	0	50,000	0	50,000
Total				**7,090,000**	**7,055,000**	**4,715,000**	**24,015,000**	**25,140,000**	**68,015,000**

El Dorado Irrigation District

2024 - 2028 Capital Improvement Plan
Recreation Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
18023	Acorn Day Use Area	RE	3	5,000	20,000	0	0	0	25,000
PLANNED	Boat Launching Facility Improvements	RE	3	25,000	0	0	0	0	25,000
PLANNED	Recreation Facility Replacement Program	RE	2	175,000	100,000	25,000	100,000	100,000	500,000
PLANNED	Silver Lake West Campground Improvements	RE	3	0	0	0	35,000	140,000	175,000
PLANNED	Sly Park Recreation Area Facility Improvements	RE	3	25,000	125,000	25,000	25,000	0	200,000
TOTAL:				**230,000**	**245,000**	**50,000**	**160,000**	**240,000**	**925,000**

2024-2028 Capital Improvement Plan
General District

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2024 PLANNED	2025 PLANNED	2026 PLANNED	2027 PLANNED	2028 PLANNED	2024-2028 TOTAL
18044	WAN Upgrade	GD	1	15,000	0	0	0	0	15,000
18055	Hansen 7 Software Replacement	GD	1	2,374,000	0	0	0	0	2,374,000
19027	Windows Server 2016 Upgrade	GD	1	35,000	0	0	0	0	35,000
19028	Datacenter SCADA Segmentation	GD	1	33,000	0	0	0	0	33,000
PLANNED	Arc Flash Risk Assessment Program	GD	1	42,000	0	0	0	47,000	89,000
PLANNED	New Security Systems	GD	1	500,000	515,000	371,000	385,000	400,000	2,171,000
22021	Camino Heights SCADA Upgrade	GD	2	100,000	0	0	0	0	100,000
22044	Remote Site Wireless Deployment	GD	2	22,901	0	0	0	0	22,901
PLANNED	Headquarter Facility Improvements	GD	2	200,000	0	0	0	0	200,000
PLANNED	IT Business Systems Replacement	GD	2	75,000	55,000	275,000	50,000	0	455,000
PLANNED	IT Communication Systems Replacement	GD	2	100,000	175,000	50,000	100,000	100,000	525,000
PLANNED	IT End-User Technology Replacement	GD	2	150,000	325,000	100,000	100,000	0	675,000
PLANNED	IT Network Infrastructure Replacement	GD	2	400,000	237,500	100,000	150,000	100,000	987,500
PLANNED	Security Equipment Reliability Program	GD	2	110,000	100,000	0	0	0	210,000
PLANNED	Vehicle Replacement Program	GD	2	3,050,500	945,000	1,000,000	1,000,000	500,000	6,495,500
PLANNED	Windows 2012 Upgrade	GD	2	0	13,500	64,800	0	0	78,300
22022	Network Perimeter Security Upgrades	GD	3	0	0	32,000	0	0	32,000
PLANNED	SCADA Master Plan Implementation	GD	3	0	200,000	100,000	75,000	0	375,000
Total				**7,207,401**	**2,566,000**	**2,092,800**	**1,860,000**	**1,147,000**	**14,873,201**

FERC
Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06019H

Project Name: FERC: C35 Oyster Creek

Project Category: Regulatory Requirements

Priority: 1 **PM:** Baron **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The District completed the installation of stabilization measures in Oyster Creek in 2019. Post-project monitoring and maintenance of stabilization measures is required for 5-years following project construction to evaluate performance of stabilization measures.

Basis for Priority:

EID would not be in compliance with Condition 35 of the El Dorado Relicensing Settlement Agreement, USFS 4(e) Condition 35, and SWRCB Water Quality Certification Condition 6 requirements contained in the FERC License.

Project Financial Summary:			
Funded to Date:	$ 489,950	Expenditures through end of year:	$ 396,525
Spent to Date:	$396,525	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:		Total Project Estimate:	$ 426,525
Project Balance	$ 93,425	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 10,000	$ 10,000				$ 20,000
Maintenance	$ 5,000	$ 5,000				$ 10,000
TOTAL	$ 15,000	$ 15,000	$ -	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06021H

Project Name: FERC C37.8 Water Temperature

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to implement an annual water temperature monitoring program at project reservoirs and stream reaches. The data collected from this monitoring effort will be used to determine if the coldwater beneficial uses are being met in designated project reaches.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Sections 7 and 12 of the Settlement Agreement, USFS 4(e) conditions 37 and 42, and SWRCB Water Quality Certification condition 14.

Project Financial Summary:			
Funded to Date:	$ 411,500	Expenditures through end of year:	$ 389,042
Spent to Date:	$ 366,042	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 23,000	Total Project Estimate:	$ 554,042
Project Balance	$ 22,458	Additional Funding Required	$ 142,542

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$20,000	$25,000	$25,000	$20,000	$25,000	$ 115,000
Reporting	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Staff Time	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
						$ -
TOTAL	$ 30,000	$ 35,000	$ 35,000	$ 30,000	$ 35,000	$ 165,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$7,542
		$0
		$0
Total	100%	$7,542

Funding Comments: Water temperature monitoring conducted in coordination with water quality monitoring every three years.

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06025H

Project Name: FERC: C41 Canal Release Pt

Project Category: Regulatory Requirements

Priority: 1 **PM:** Mutschler **Board Approval:** 10/23/23

Project Description:

Required by the FERC Project No. 184 license Settlement Agreement and USFS 4(e) Condition 41, which states the District must develop and file for FERC approval a canal drainage structure and release point plan. The licensee shall implement the plan upon approval. The plan has been approved and implementation is underway. An update to the plan is needed in 2024 to include upgrades that have been implemented, identify future upgrades, and evaluate the condition of spillway channels. Future design and construction costs will depend on the scope of activities identified in the updated plan.

Basis for Priority:

This project is required by the Project 184 FERC License and is on-going.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 39,271
Spent to Date:	$ 34,271	2024 - 2028 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 49,271
Project Balance	$ 10,729	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 10,000					$ 10,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06076H

Project Name: FERC C38.4b Caples Spillway Channel Stabilization

Project Category: Regulatory Requirements

Priority: 1 **PM:** Venable **Board Approval:** 10/23/23

Project Description:

This Project is a mandatory requirement of the conditions of the FERC license. The District completed the installation of stabilization measures in the spillway channel in 2020. Post-project monitoring and maintenance of stabilization measures is required for 5-years following project construction to evaluate performance of stabilization measures.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 8 of the Settlement Agreement, USFS 4(e) conditions 38.4b, and SWRCB Water Quality Certification condition 5.

Project Financial Summary:			
Funded to Date:	$ 1,196,857	Expenditures through end of year:	$ 1,099,295
Spent to Date:	$ 1,057,295	2024 - 2028 Planned Expenditures:	$ 45,000
Cash flow through end of year:	$ 42,000	Total Project Estimate:	$ 1,144,295
Project Balance	$ 97,562	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 10,000	$ 10,000	$ 10,000			$ 30,000
Maintenance	$ 5,000	$ 5,000	$ 5,000			$ 15,000
TOTAL	$ 15,000	$ 15,000	$ 15,000	$ -	$ -	$ 45,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06082H

Project Name: FERC: C50.1 Silver Lake Campground East Re-Construction

Project Category: Regulatory Requirements

Priority: 1 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

Required by the License Settlement Agreement and the USFS 4(e) Conditions, the District must reconstruct the paved surfaces, toilets, and water system at the 62-unit USFS Silver Lake Campground, including upgrade of this facility to meet the current FS design standards and the USDA Forest Service Region 5 accessibility standards requirements of the Architectural Barriers Act (ABA). Campground improvements were completed in 2020, with the exception of the installation of a water line from the water source to the campground. The Project involves replacing the existing spring-fed water source, which is located over a mile away, with a new groundwater well within the campground. The new well will provide a more reliable source of water to serve both the Silver Lake East and Silver Lake West campgrounds. The Project will include permitting the new well and installing the new well, a small building to house a tank and equipment, and a new water line to serve both Silver Lake East and Silver Lake West campgrounds.

The well is scheduled to be drilled in fall 2023 and the remainder of the project is anticipated to be bid in fall 2023 and constructed summer 2024. The District received an additional one-year time extension from FERC and the new completion date for the installation of the water system is October 18, 2024.

Basis for Priority:

This project is required to comply with the FERC License Condition No. 50.1 and USFS 4(e) Condition requirements. The District completed the campground work in 2020. The District is requested and received a time extension from FERC to complete the Water System Work in 2024.

Project Financial Summary:			
Funded to Date:	$ 3,176,332	**Expenditures through end of year:**	$ 3,052,231
Spent to Date:	$ 2,792,231	**2024 - 2028 Planned Expenditures:**	$ 1,230,000
Cash flow through end of year:	$ 260,000	**Total Project Estimate:**	$ 4,282,231
Project Balance	$ 124,101	**Additional Funding Required**	$ 1,105,899

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction (Water System)	$ 1,230,000					$ 1,230,000
TOTAL	$ 1,230,000	$ -	$ -	$ -	$ -	$ 1,230,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$1,105,899
			$0
Total	**100%**		**$1,105,899**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06086H

Project Name: FERC C33 Lake Aloha Trout Removal

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding only necessary in years when a spill occurs over the auxiliary dams at Lake Aloha. If spill occurs, EID is required to manually remove trout from the pools downstream of the auxiliary dams to help reduce potential impacts to Sierra Nevada yellow-legged frogs by trout predation.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 33, and SWRCB Water Quality Certification condition 4.

Project Financial Summary:			
Funded to Date:	$ 92,000	Expenditures through end of year:	$ 70,662
Spent to Date:	$ 70,662	2024 - 2028 Planned Expenditures:	$ 20,000
Cash flow through end of year:		Total Project Estimate:	$ 90,662
Project Balance	$ 21,338	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$20,000					$ 20,000
						$ -
TOTAL	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06087H

Project Name: FERC C37.1 Fish Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate the status of fish populations in selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 359,200	Expenditures through end of year:	$ 347,890
Spent to Date:	$ 347,890	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 512,890
Project Balance	$ 11,310	Additional Funding Required	$ 153,690

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 80,000	$ 55,000		$ 135,000
Staff time			$ 15,000	$ 15,000		$ 30,000
						$ -
TOTAL	$ -	$ -	$ 95,000	$ 70,000	$ -	$ 165,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments: Monitoring for hardhead required in 2026; monitoring for rainbow trout required in 2026 and 2027

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06088H

Project Name: FERC: C37.2 Macroinvertebrate Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate the status of macroinvertebrates in selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 279,000	Expenditures through end of year:	$ 271,209
Spent to Date:	$ 271,209	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 421,209
Project Balance	$ 7,791	Additional Funding Required	$ 142,209

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 70,000	$ 70,000		$ 140,000
Staff time			$ 5,000	$ 5,000		$ 10,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 75,000	$ 75,000	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06089H

Project Name: FERC: C37.3 Amphibian Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Amphibian surveys are required June through September if at any time flows in the South Fork of the American River (SFAR) are 100 cfs or less and the diversion into the canal causes the flow in the SFAR to change 50 cfs or more in 1 day. The objective of these surveys is to assess the effects of flow fluctuations on foothill yellow-legged frog egg masses and tadpoles. Amphibian surveys for Sierra Nevada yellow-legged frog (SNYLF) and foothill yellow-legged frog (FYLF) are also required every five years at project reservoirs and stream reaches as part of the El Dorado Hydroelectric Project No. 184 Adaptive Management Program. Amphibian surveys are also required in years when a spill occurs over the auxiliary dams at Lake Aloha. If spill occurs, EID is required to survey for SNYLF in the pools downstream of the auxiliary dams.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 403,648	Expenditures through end of year:	$ 379,974
Spent to Date:	$ 379,974	2024 - 2028 Planned Expenditures:	$ 135,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 514,974
Project Balance	$ 23,674	Additional Funding Required	$ 111,326

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
FYLF/SNYLF monitoring			$ 100,000			$ 100,000
Staff time			$ 10,000			$ 10,000
SFAR flow fluctuations	$ 10,000					$ 10,000
Lake Aloha monitoring	$ 15,000					$ 15,000
						$ -
TOTAL	$ 25,000	$ -	$ 110,000	$ -	$ -	$ 135,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$1,326
		$0
Total	100%	$1,326

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06090H

Project Name: FERC: C37.4 Riparian Species Composition

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate riparian species composition at selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 60,000	Expenditures through end of year:	$ 56,657
Spent to Date:	$ 56,657	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 86,657
Project Balance	$ 3,343	Additional Funding Required	$ 26,657

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 25,000			$ 25,000
Staff time			$ 5,000			$ 5,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06091H

Project Name: FERC: C37.5 Riparian Vegetation Recruitment

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to evaluate riparian vegetation recruitment at selected stream reaches for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 75,000	Expenditures through end of year:	$ 58,235
Spent to Date:	$ 58,235	2024 - 2028 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 88,235
Project Balance	$ 16,765	Additional Funding Required	$ 13,235

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 25,000			$ 25,000
Staff Time			$ 5,000			$ 5,000
						$ -
						$ -
TOTAL	$ -	$ -	$ 30,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06092H

Project Name: FERC: C37.7 Geomorphology Evaluation

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. The objective of this monitoring effort is to monitor representative stream channel areas for comparison to the ecological resource objectives to help determine if ecological resource objectives are achievable and being met, as specified in the El Dorado Hydroelectric Project No. 184 Adaptive Management Program.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 169,266	Expenditures through end of year:	$ 158,198
Spent to Date:	$ 158,198	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 238,198
Project Balance	$ 11,068	Additional Funding Required	$ 68,932

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring			$ 70,000			$ 70,000
Staff time			$ 10,000			$ 10,000
TOTAL	$ -	$ -	$ 80,000	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06095H

Project Name: FERC: C54 Visual Resources Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

This project is a requirement of the Article 402 of the Federal Energy Regulatory Commission (FERC) License for Project No. 184, Section 24 of the El Dorado Relicensing Settlement Agreement, and United States Forest Service (USFS) 4(e) Condition 54. These conditions require the District to prepare and implement a Visual Resources Management Plan (VRMP). The purpose of the Visual Resources Management Plan (VRMP) is to guide the decision-making process and facilitate the aesthetic/visual enhancement and management of specific Project No. 184 facilities and lands affecting the visual character of the Project No. 184 area. The current VRMP was approved in 2008 and is due to be reviewed and updated. Funding will be for professional services and staff time to update the plan and coordinate review and approval of the updated VRMP with the USFS and FERC.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 54.

Project Financial Summary:			
Funded to Date:	$ 55,381	Expenditures through end of year:	$ -
Spent to Date:	$ 40,381	2024 - 2028 Planned Expenditures:	$ 5,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 5,000
Project Balance	$ 5,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 5,000					$ 5,000
						$ -
TOTAL	$ 5,000	$ -	$ -	$ -	$ -	$ 5,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06096H

Project Name: FERC: C55 Heritage Resources

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to complete and implement the Heritage Properties Management Plan (HPMP). The HPMP provides management protocols and mitigation measures for the ongoing protection of archaeological resources located within the FERC boundary.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) conditions 55 and 56.

Project Financial Summary:			
Funded to Date:	$ 279,580	Expenditures through end of year:	$ 212,841
Spent to Date:	$ 212,841	2024 - 2028 Planned Expenditures:	$ 60,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 272,841
Project Balance	$ 66,739	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 50,000.00					$ 50,000.00
Staff Time	$ 10,000.00					$ 10,000.00
						$ -
						$ -
TOTAL	$ 60,000.00	$ -	$ -	$ -	$ -	$ 60,000.00

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06097H

Project Name: FERC: C59 Facility Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Mutschler **Board Approval:** 10/23/23

Project Description:

Required by the License Settlement Agreement, and the USFS 4(e) Condition 59: Within 1 year of license issuance, the licensee shall file with FERC a Facility Management Plan that is approved by the FS. The licensee shall implement the plan upon approval. Every 5 years, the licensee shall prepare a 5-year plan that will identify the maintenance, reconstruction, and removal needs for Project facilities within the FERC boundary and located on Forest Service property. The plan was approved by the USFS and filed with FERC. The plan is due to be reviewed and updated. Future costs are subject to change based on the scope of the new plan. Items remaining to be evaluated include the following: winch house at the surge chamber and the water tank shed along the penstock.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 59.

Project Financial Summary:			
Funded to Date:	$ 70,000	Expenditures through end of year:	$ 54,197
Spent to Date:	$ 49,197	2024 - 2028 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 64,197
Project Balance	$ 15,803	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 10,000					$ 10,000
						$ -
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06098H

Project Name: FERC: C46 thru C49 Recreation Resource Management

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

Required by the new FERC License, Settlement Agreement, and the USFS 4(e) Conditions. Conditions 46-49: Condition No. 46 – Implementation Plan. A recreation implementation plan shall be developed by the licensee in coordination with the FS within 6 months of license issuance. Condition No. 47 - Recreation Survey. The licensee shall conduct a Recreational Survey and prepare a Report on Recreational Resources that is approved by the FS every 6 years from the date of license issuance. Condition No. 48 – Forest Service Liaison. The FS and the licensee shall each provide an individual for liaison whenever planning or construction of recreation facilities, other major Project improvements, and maintenance activities are taking place within the National Forest. Condition No. 49 - Review of Recreation Developments. The FS and the licensee shall meet at least every 6 years to review all recreation facilities and areas associated with the Project and to agree upon necessary maintenance, rehabilitation, construction, and reconstruction work needed and its timing, as described in Conditions No. 49 and 50. Following the review, the licensee shall develop a 6-year schedule for maintenance, rehabilitation, and reconstruction.

This is a mandatory requirement of the October 18, 2006 FERC Order Issuing New License

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 384,000	Expenditures through end of year:	$ 335,428
Spent to Date:	$ 305,428	2024 - 2028 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 345,428
Project Balance	$ 48,572	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Survey						$ -
Reporting	$ 10,000					$ 10,000
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07003H

Project Name: FERC: C37.9 Water Quality

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is necessary to implement the water quality monitoring program at Project No. 184 reservoirs and stream reaches. The data collected from this monitoring effort will be used to characterize water quality under current project operations and help determine if applicable water quality objectives/criteria are being met and whether designated beneficial uses are protected.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 7 of the Settlement Agreement, USFS 4(e) conditions 37, and SWRCB Water Quality Certification condition 13.

Project Financial Summary:			
Funded to Date:	$ 609,000	Expenditures through end of year:	$ 589,877
Spent to Date:	$ 589,877	2024 - 2028 Planned Expenditures:	$ 205,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 794,877
Project Balance	$ 19,123	Additional Funding Required	$ 185,877

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Monitoring	$ 60,000			$ 65,000		$ 125,000
Lab analysis	$ 25,000			$ 25,000		$ 50,000
Staff time	$ 15,000			$ 15,000		$ 30,000
TOTAL	$ 100,000	$ -	$ -	$ 105,000	$ -	$ 205,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$80,877
		$0
Total	100%	$80,877

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07005H

Project Name: FERC: C51.3 RM Echo Trailhead

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

Required by the FERC License, Settlement Agreement, and the USFS 4(e) Condition 51.3, which requires the District to provide funding for the following activities at Echo Lakes Trailhead:

a. Toilet pumping
b. Trash removal/litter pick-up within the site

Funding under this CIP is required to cover the costs of toilet pumping as well as capitalized labor for operations staff to clean up litter within the site.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 30,000	Expenditures through end of year:	$ 24,593
Spent to Date:	$ 24,593	2024 - 2028 Planned Expenditures:	$ 40,000
Cash flow through end of year:		Total Project Estimate:	$ 64,593
Project Balance	$ 5,407	Additional Funding Required	$ 34,593

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Services	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Staff time	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 15,000
TOTAL	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 8,000	$ 40,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$2,593
		$0
Total	100%	$2,593

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07006H

Project Name: FERC: C51.5 and C51.7 RM USFS Payments

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

Required by the FERC License, Settlement Agreement, and USFS 4(e) Condition 51, which in part, requires the District to provide funding for the following activities:

a. Special Use Administration Funding: The licensee shall annually pay, by October 1, the amount of $4,800 (year 2002 cost basis) to provide for performing monitoring and permit compliance assurance for the campground concessionaire special use permits at Caples Lake Campground and Silver Lake East Campground. The costs shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP).

b. Dispersed Area Patrol Funding on Lands Affected by the Project: The licensee shall annually pay, by October 1, $25,000 (year 2002 cost basis). The cost shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). These funds are to provide for patrol and operation of non-concessionaire developed and dispersed recreation facilities, as well as trails and other locations utilized by visitors to the Project, within and adjacent to the Project boundary. The licensee shall annually provide a boat and operator on Caples Lake and Silver Lake at least twice each season (time to be determined by mutual agreement between the licensee and the FS) to assist the FS in policing the shoreline along Silver Lake and Caples Lake, and to clean up litter.

Funding under this CIP is required to pay the annual fees to the USFS for special use administration and dispersed area patrol on USFS lands affected by the Project, and for capitalized labor to patrol the shoreline and clean up litter at Silver Lake and Caples Lake.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 722,421	Expenditures through end of year:	$ 717,762
Spent to Date:	$ 662,762	2024 - 2028 Planned Expenditures:	$ 281,030
Cash flow through end of year:	$ 55,000	Total Project Estimate:	$ 998,793
Project Balance	$ 4,659	Additional Funding Required	$ 276,372

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Fees	$49,195	$50,671	$52,191	$53,682	$55,292	$261,030
Staff time	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$20,000
TOTAL	$ 53,195	$ 54,671	$ 56,191	$ 57,682	$ 59,292	$281,030

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$48,536
			$0
Total	100%		$48,536

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07010H

Project Name: FERC: C15 Pesticide Use

Project Category: Regulatory Requirements

Priority: 1 **PM:** M. Heape **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is requested to implement the integrated pest management plan (IPMP). The IPMP addresses pesticide use at EID facilities within the jurisdiction of the El Dorado National Forest (ENF) and Lake Tahoe Basin Management Unit (LTBMU).

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license and USFS 4(e) condition 15.

Project Financial Summary:			
Funded to Date:	$ 998,000	Expenditures through end of year:	$ 986,694
Spent to Date:	$ 906,694	2024 - 2028 Planned Expenditures:	$ 400,000
Cash flow through end of year:	$ 80,000	Total Project Estimate:	$ 1,386,694
Project Balance	$ 11,306	Additional Funding Required	$ 388,694

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$ 65,000	$ 65,000	$ 65,000	$ 65,000	$ 65,000	$ 325,000
Equipment / Supplies	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
						$ -
						$ -
TOTAL	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 400,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$68,694
		$0
Total	100%	$68,694

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07011H

Project Name: FERC: C38 Adaptive Management Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is for staff time to implement the adaptive management program (Condition 38) of the FERC license. This program requires coordination with the Ecological Resources Committee (ERC), implementation of the resource monitoring program, and evaluation of monitoring results to determine if resource objectives are achievable and being met.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 14 of the Settlement Agreement, and USFS 4(e) condition 38.

Project Financial Summary:			
Funded to Date:	$ 727,000	Expenditures through end of year:	$ 714,657
Spent to Date:	$ 694,657	2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 964,657
Project Balance	$ 12,343	Additional Funding Required	$ 237,657

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Staff time	$50,000	$50,000	$50,000	$50,000	$50,000	$ 250,000
						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$37,657
		$0
Total	100%	$37,657

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07030H

Project Name: FERC: C57 Transportation System Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Mutschler **Board Approval:** 10/23/23

Project Description:

Condition 57 states within 1 year of license issuance, the licensee shall file with FERC a transportation system management plan that is approved by the FS for roads on or affecting National Forest System lands. The plan was prepared and approved and established the level of licensee responsibility for project-related roads. Also included in this CIP is the Trails Maintenance Plan. The plan is due to be reviewed and updated. Plan updates include consultation with the Forest Service. Future costs are subject to change based on the scope of the new plan.

Projects are for stabilizing the numerous access roads to the Project 184 system. Projects will be to repair and refurbish existing roads that are part of the Transportation System Management Plan that we have with the US Forest Service. Roads to be worked on include:

Powerhouse Road - 3.5 Miles - 2024
Camp 2 Road - 1 Mile, Five Beat Access Roads - 2 Miles - 2025
Camp 1 Road - 2 Miles - 2026
Flume 4-6 Access Road - 3 miles - 2027

Work will include replacing missing rock and treating the road with SoilTech mixture to prevent dust and erosion

Basis for Priority:

Project is required by Project 184 license and is on-going.

Project Financial Summary:			
Funded to Date:	$ 105,000	Expenditures through end of year:	$ 82,934
Spent to Date:	$ 77,934	2024 - 2028 Planned Expenditures:	$ 1,480,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 1,562,934
Project Balance	$ 22,066	Additional Funding Required	$ 1,457,934

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Update Plan	$ 10,000					$ 10,000
Construction	$ 390,000	$ 400,000	$ 250,000	$ 400,000	$ 30,000	$ 1,470,000
TOTAL	$ 400,000	$ 400,000	$ 250,000	$ 400,000	$ 30,000	$ 1,480,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$377,934
		$0
Total	100%	$377,934

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 08025H

Project Name: FERC C44 Noxious Weed Monitoring

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 10/23/23

Project Description:

Mandatory requirement of the FERC license. Funding is requested to implement the noxious weed plan for the prevention and control of noxious weeds at Project No. 184 facilities. The plan requires annual surveys within the Project No. 184 boundary in areas where high priority noxious weeds are known to occur and in areas where ground disturbance occurred during the previous year. The plan also calls for surveys to be conducted every 5 years within the entire Project No. 184 boundary.

Basis for Priority:

If unfunded, EID would be out of compliance with the FERC license, Section 8 of the Settlement Agreement, and USFS 4(e) condition 44.

Project Financial Summary:			
Funded to Date:	$ 347,342	Expenditures through end of year:	$ 331,727
Spent to Date:	$ 324,727	2024 - 2028 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 7,000	Total Project Estimate:	$ 496,727
Project Balance	$ 15,615	Additional Funding Required	$ 149,385

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$ 25,000	$ 25,000	$ 40,000	$ 25,000	$ 25,000	$ 140,000
Reporting	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
						$ -
						$ -
TOTAL	$ 30,000	$ 30,000	$ 45,000	$ 30,000	$ 30,000	$ 165,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$14,385
		$0
Total	100%	$14,385

Funding Comments: Annual

2024	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 10007

Project Name: FERC C51.1 and 51.2 RM Caples Auxiliary Dam and Boat Launch

Project Category: Regulatory Requirements

Priority: 1 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

Required by the FERC License, Settlement Agreement, and the USFS 4(e) Condition 51, which, in part, requires the District to provide funding for the following activities:

1. The licensee shall be responsible for one-half of the following maintenance at the Caples Lake Auxiliary Dam Parking Area: a) routine cleaning, repair, and maintenance of all constructed features, b) toilet pumping, c) trash removal/litter pick up at the site, d) maintenance of the signboards, and e) vegetation management.

2. The licensee shall be responsible for operating and maintaining the boat launching ramp, associated parking lot, and other public facilities constructed at this site for the term of the license. The licensee shall also be responsible for maintenance of signboards. The USFS shall be responsible for maintaining the information on those signboards to USFS standards.

Funding under this CIP is required to pay for services, capitalized labor, and materials necessary for operations and maintenance activities at the Caples Lake Auxiliary Dam parking area and at the Caples Lake Boat Launch.

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	$ 304,000	Expenditures through end of year:	$ 264,472
Spent to Date:	$ 264,472	2024 - 2028 Planned Expenditures:	$ 200,000
Cash flow through end of year:		Total Project Estimate:	$ 464,472
Project Balance	$ 39,528	Additional Funding Required	$ 160,472

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Services	$25,000	$25,000	$25,000	$25,000	$25,000	$ 125,000
Staff time	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 50,000
Materials	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Construction						$ -
TOTAL	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$472
		$0
Total	100%	$472

Funding Comments:

Water Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 16003

Project Name: Permit 21112 Change in Point of Diversion

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leeper **Board Approval:** 10/23/23

Project Description:

The District's existing Water Right Permit 21112 allows for water diversion at Folsom Reservoir for consumptives uses. Long-term water supply planning forecasts indicate that a portion of the Permit 21112 water supply will be necessary to serve areas of the District that are east of El Dorado Hills and at a higher elevation. The District seeks to modify Permit 21112 to add an authorized point of diversion and re-diversion to more effectively and efficiently meet the future water demands. The District seeks to add a point of diversion that allows both direct diversion from the South Fork of the American River, as well as re-diversion of this water to storage in Jenkinson Lake. The additional point of diversion is proposed at the District's existing El Dorado Diversion Dam near Kyburz. In addition, the District's seeks to add Jenkinson Lake as an authorized point of re-diversion and an authorized place of storage for Permit 21112 water. Water diverted at the El Dorado Diversion Dam can be conveyed to Jenkinson Lake via the Hazel Creek Tunnel. To take all or any portion of Permit 21112 water upstream of Folsom Reservoir at a new diversion location, EID must successfully petition the State Water Resources Control Board (SWRCB) for water right permit changes to add points of diversion and rediversion and a new place of storage. This project requires extensive hydrologic modeling to support the petition process and environmental review. The SWRCB Change Petition process encompasses preparation of the Petition (including preliminary engineering, hydrologic, and biological analyses, mapping, legal review, and preliminary meetings with SWRCB staff, California Department of Fish & Wildlife staff, and other stakeholders); California Environmental Quality Act (CEQA) compliance through preparation of an environmental impact report; processing of the Petition and any protests by the SWRCB; and potentially evidentiary hearings before the SWRCB if protests are filed against the Petition and cannot be resolved through stakeholder negotiations. The planned annual expenditures reflect a timeline for CEQA compliance and Petition processing in 2024-2026. The estimated expenditures related to the Petition processing and potential SWRCB hearing proceedings are estimates only, and actual expenditures will be highly dependent on the technical and legal support necessary to advance the Petition. Any post-SWRCB hearing proceedings, including potential administrative appeals and/or litigation would require additional funding.

Basis for Priority:

This project provides measurable progress toward achieving the District's goals, including helping to meet future water demand as identified in long-term water supply planning efforts, reducing the cost of water conveyance and delivery through gravity flow, increasing flexibility and reliability in water delivery systems to benefit the District's entire service area, improving drought resiliency, maintaining compliance with regulatory and legal obligations regarding water operations, and optimizing existing water rights.

Project Financial Summary:			
Funded to Date:	$ 1,534,439	Expenditures through end of year:	$ 1,410,231
Spent to Date:	$ 1,140,231	2024 - 2028 Planned Expenditures:	$ 575,000
Cash flow through end of year:	$270,000	Total Project Estimate:	$ 1,985,231
Project Balance	$ 124,208	Additional Funding Required	$ 450,792

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Modeling	$ 50,000					$ 50,000
CEQA/Environmental	$ 125,000					$ 125,000
Petition Processing	$ 100,000	$ 100,000				$ 200,000
SWRCB Hearing		$ 100,000	$ 100,000			$ 200,000
TOTAL	$ 275,000	$ 200,000	$ 100,000	$ -	$ -	$ 575,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	100%		$150,792
Total	100%		$150,792

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17011

Project Name: Crestview Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. The District has an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment.

The Crestview Pump Station is in need of replacement due to maintenance issues with an existing buried pneumatic tank, which cannot be certified for the operating pressure due to the inability to examine the entire structure. This is a safety issue for the District as we cannot certify the existing tank for service. The existing single pump is also located within a confined space and is a potential maintenance hazard. Without the benefit of a second pump, 25 customers are taken out of water for any regular maintenance. Additionally, the station air compressors have failed due to being underground causing the pipeline to become air locked and causing various leaks on the distribution piping.

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 150,000	Expenditures through end of year:	$ 109,889
Spent to Date:	$ 29,889	2024 - 2028 Planned Expenditures:	$ 775,000
Cash flow through end of year:	$ 80,000	Total Project Estimate:	$ 884,889
Project Balance	$ 40,111	Additional Funding Required	$ 734,889

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor (Project Management & Inspection)	$ 75,000					$ 75,000
Construction	$ 700,000					$ 700,000
TOTAL	$ 775,000	$ -	$ -	$ -	$ -	$ 775,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$734,889
Total	100%	$734,889

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17035

Project Name: Green Valley Bridge Relocation

Project Category: State/County Road Projects

Priority: 1 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

El Dorado County plans to construct two new bridges on Green Valley Road; one at Mound Springs Creek and one at Indian Creek. The District has existing waterlines and two pressure reducing stations (Green Valley PRS #1 and Greenstone PRS #1) on Green Valley Road that will be impacted by the project and require relocation at District cost as they are located in the public right of way. Based on the County's current design, approximately 1,200 feet of 8 and 12-inch waterline will need to be relocated along with both pressure reducing stations. The relocation work needs to be completed in advance of the County's project as the District is in conflict with the new bridge abutments and road realignment. The District has pre-purchased all necessary pressure reducing valves, isolation valves, fittings, for both pressure reducing stations, and is working to complete the relocation design to be bid once the County has completed their right of way acquisition. The County plans to have right of way acquisition complete by the end of 2023. The project has been in the works for several years and dependent on County schedule.

Basis for Priority:

The District has facilities that are in the public right of way that will be impacted by the planned projects. The relocation must be done at the District's cost to make way for the County's project.

Project Financial Summary:			
Funded to Date:	$ 165,000	Expenditures through end of year:	$ 139,188
Spent to Date:	$ 114,188	2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 839,188
Project Balance	$ 25,812	Additional Funding Required	$ 674,188

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor (Inspection & Project Management)			$ 50,000			$ 50,000
Construction			$ 650,000			$ 650,000
TOTAL	$ -	$ -	$ 700,000	$ -	$ -	$ 700,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19050

Project Name: Construction Storage Facility

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

This project will evaluate a new storage facility in the EID upper yard to house material and equipment for increased security and protection from elements.

Basis for Priority:

Improve efficiency and provide safe and adequate storage.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 45,135
Spent to Date:	$ 25,135	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 345,135
Project Balance	$ 4,865	Additional Funding Required	$ 295,135

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Permitting	$ 75,000	$ 225,000				$ 300,000
Construction						$ -
TOTAL	$ 75,000	$ 225,000	$ -	$ -	$ -	$ 300,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$70,135
Total	100%		$70,135

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 20030

Project Name: Drop Off Road Waterline Extension

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

This project will include the installation of approximately 1,100 linear feet of 8" ductile iron pipe (DIP) to connect existing 8" DIP on Drop Off Road with existing 6" PVC pipe on Dogwood Lane in Pollock Pines. Installation of this new waterline will allow for the abandonment of 1,300 feet of existing substandard steel waterline, a portion of which crosses over the existing Main Ditch just downstream from the Forebay Outlet. This project will also include the installation of one Pressure Reducing Station. This project was combined with the Forebay Road Waterline Replacement Project and approved for construction. The Forebay Road portion of the project will be complete in 2023, and the Drop Off Work will be complete in 2024.

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increases maintenance costs.

Project Financial Summary:			
Funded to Date:	$ 1,408,963	Expenditures through end of year:	$ 127,967
Spent to Date:	$ 57,967	2024 - 2028 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:	$ 70,000	Total Project Estimate:	$ 1,227,967
Project Balance	$ 1,280,997	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction	$ 1,000,000					$ 1,000,000
Construction Inspection	$ 60,000					$ 60,000
Capitalized Labor	$ 40,000					$ 40,000
TOTAL	$ 1,100,000	$ -	$ -	$ -	$ -	$ 1,100,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: The Proejct does not increase capacity so it is funded with water rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21015

Project Name: Swansboro Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mackay **Board Approval:** 10/23/23

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. The District has an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment.

The current Swansboro Pump Station is at the end of its useful life as the pumps are approximately 45 years old and parts are no longer available. Currently pump number 2 is nearing a complete bearing failure and must be replaced. The pneumatic tank for the station has also reached the end of its useful life and has welded patches from previous repairs. This work would include removing the existing tank and install new pumps, above and below ground plumbing upgrade, and upgrade the SCADA panel.

Basis for Priority:

Replacement of assets to improve reliability and avoid interruption to service throughout the District in the event of failures.

Project Financial Summary:			
Funded to Date:	$ 91,000	Expenditures through end of year:	$ 92,164
Spent to Date:	$ 67,164	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 142,164
Project Balance	$ (1,164)	Additional Funding Required	$ 51,164

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 50,000				$ 50,000
Environmental						$ -
Construction						$ -
TOTAL	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$1,164
Total	100%		$1,164

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21040

Project Name: Water Facility Generators - FEMA Grant

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The District applied for and was granted Hazard Mitigation Grant Program (HMGP) funding through the Federal Emergency Management Agency (FEMA) to provide a federal cost share for emergency backup generator installations at fifteen remote District facilities. Included in the application is generators for eight water pump stations. This project will provide local agency funding as required by the HMGP grant.

Basis for Priority:

The project will provide continual power of eight water pump stations during utility power outages. Grant timeline requires project completion by September 2022.

Project Financial Summary:			
Funded to Date:	$ 306,348	Expenditures through end of year:	$ 264,307
Spent to Date:	$ 214,307	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 764,307
Project Balance	$ 42,041	Additional Funding Required	$ 457,959

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction	$ 2,250,000					$ 2,250,000
FEMA Funding	$ (1,750,000)					$ (1,750,000)
TOTAL	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$457,959
		$0
		$0
Total	100%	$457,959

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21079

Project Name: Sly Park Intertie Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The Sly Park Intertie is a key component of supply reliability in times of drought and during emergencies. In service it provides water delivery flexibility between Reservoir A WTP and Reservoir 1 WTP. The Intertie includes approximately 3.5 miles of 22" and 30" steel waterline built under emergency conditions just after the 1976-77 drought. The unlined pipeline has corroded significantly due to lack of cathodic protection and due to the volume of leaks it was taken out of service. The Sly Park Intertie improvements were identified as a supply reliability project in the 2013 Integrated Water Resources Master Plan. Previous engineering reports from the mid 1990's and in 2006 explored the possibility of rehabilitating the pipeline with a non-structural liner. However, a 2020 study found that the wall loss was too significant to be cost effective to install a liner and thus explored a complete removal and replacement. The 2020 study includes analysis of changed operations that could reduce pumping head up to 180 feet by pumping water from Reservoir A to Reservoir 1 during annual Forebay outages with a new pump station placed at the outlet of Reservoir A, rehabilitation options, direct replacement alternatives analysis, and a financial analysis. The ability to move water between Reservoir 1 and Reservoir A will also allow for a long overdue inspection of the 60 year old Camino Conduit between Jenkinson Reservoir and Reservoir A WTP, additionally it will provide time for the rehabilitation of valves within the dam that are in need of service or replacement, and provide a longer window for scheduled Reservoir A WTP maintenance. The estimated pipeline construction project cost at this time is $28 million for an open cut replacement based on the 2020 Draft Evaluation of Rehabilitation Alternatives Technical Memorandum. Cost estimates are based on a 10% design level of confidence and include a 30% construction contingency. Typical contingencies for 10% design level cost estimates range between 30% and 100%. The contingency used for this cost estimate is at the low end of the range and higher actual costs are likely. Staff will continue to pursue any grant funding that may become available.

Basis for Priority:

Replacement of the pipeline and installation of a new pump station will ensuring water supply flexibility/reliability between the two major gravity supply sources that provide two thirds of the District's water supply.

Project Financial Summary:			
Funded to Date:	$ 2,721,464	**Expenditures through end of year:**	$ 1,606,383
Spent to Date:	$ 1,106,383	**2024 - 2028 Planned Expenditures:**	$ 20,900,000
Cash flow through end of year:	$ 500,000	**Total Project Estimate:**	$ 22,506,383
Project Balance	$ 1,115,082	**Additional Funding Required**	$ 19,784,918

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$300,000	$ 300,000				$ 600,000
Environmental	$ 100,000	$ 100,000				$ 200,000
Right of Way	$ 100,000					$ 100,000
Construction	$ 15,000,000	$ 15,000,000				$ 30,000,000
Grant Offset	$ (5,000,000)	$ (5,000,000)				$ (10,000,000)
TOTAL	$ 10,500,000	$ 10,400,000	$ -	$ -	$ -	$ 20,900,000

Estimated Funding Sources	Percentage	2024	Amount
2024 Bond	100%	$	9,384,918
Total	**100%**	**$**	**9,384,918**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 22019

Project Name: Pleasant Oak Main Pressure Reducing Station #2 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The current Pleasant Oak Main Pressure Reducing Station #2 (POM PRS #2) is due for replacement because of maintenance issues as the valves have outlived their useful lives. The valves that are currently in use received an emergency rebuild in the spring of 2020 and at that time it was determined that they would not accept another rebuild. The POM PRS #2 is an important pressure reducing station as the only feed to the District's Reservoir C site. From the Reservoir C site the Pleasant Oak Main transmission line, in conjunction with other transmission and distribution lines, provides water to the communities of Diamond Springs, Placerville, Cameron Park, and El Dorado Hills. Purchase of valves was completed in 2022 and construction is currently scheduled for the Winter of 2024-2025.

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 390,484	Expenditures through end of year:	$ 381,102
Spent to Date:	$ 6,102	2024 - 2028 Planned Expenditures:	$ 425,000
Cash flow through end of year:	$ 375,000	Total Project Estimate:	$ 806,102
Project Balance	$ 9,382	Additional Funding Required	$ 415,618

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000					$ 75,000
Construction	$ 100,000	$ 250,000				$ 350,000
TOTAL	$ 175,000	$ 250,000	$ -	$ -	$ -	$ 425,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$165,618
Total	100%		$165,618

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 22038

Project Name: Reservoir A Filter Valve Replacements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:** 10/23/23

Project Description:

The existing filter inlet valves (twelve in total) at Reservoir A Water Treatment Plant (Res A WTP) have reached the end of their service life and are located in a configuration that can't be safely accessed for ongoing maintenance. This project will replace the filter inlet valves and their associated piping with new AWWA compliant valves and electric operators. The valves were identified in the recently completed Draft WTP Asset Management Plan as critical infrastructure, categorized as "Very High Risk", requiring immediate replacement. The replacement of all valves is scheduled for between November 2023 through April 2024.

Basis for Priority:

If an inlet valve fails, it has the potential to remove all four adjacent filter cells, or one third of the plant capacity, from serice. This would reduce the capacity of Reservoir A well below required summer demands. Access to the existing valves also poses a significant safety hazard for District personnel. The project was identified in the Draft Water Treatment Plant Asset Mangement Plan as a high priority 2023 renewal and replacement project due to it age, condition and "High" risk category score.

Project Financial Summary:			
Funded to Date:	$ 349,280	Expenditures through end of year:	$ 749,540
Spent to Date:	$ 99,692	2024 - 2028 Planned Expenditures:	$ 1,432,917
Cash flow through end of year:	$ 649,848	Total Project Estimate:	$ 2,182,457
Project Balance	$ (400,260)	Additional Funding Required	$ 1,833,177

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design services during construction	$ 12,500					$ 12,500
Construction management and Inspection	$ 47,750					$ 47,750
Construction	$ 1,360,167					$ 1,360,167
Capitalized labor	$ 12,500					$ 12,500
TOTAL	$ 1,432,917	$ -	$ -	$ -	$ -	$ 1,432,917

Funding Sources	Percentage	2024	Amount
Water FCC	48%		$879,925
Water Rates	52%		$953,252
Total	100%		$1,833,177

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23001

Project Name: AMR and Small Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** P. Heape **Board Approval:** 10/23/23

Project Description:

This project replaces old, inaccurate, or broken meters and adds automated meter read capability to existing meters enabling reading of all meters in time for billing. It also includes the targeted replacement of all remaining 5/8" meters in our system. The project decreases labor expenses associated with manually reading meters and inputting the data into the computer system. It also avoids loss of confidence due to inaccurate or estimated reads. Continued implementation of meter replacement and AMR technology keeps the District in compliance with AB 3206 and all provisions of 23 CCR § 700. As of September 1, 2023 there are 33,234 meters that are equipped with radio read devices. Project funding allows the installation of approximately 250 radio read meters per year.

Basis for Priority:

Inaccurate or broken meters reduce revenue received by the District and prevent us from knowing the true amount of non-revenue water, potentially affecting the District's decision making processes.

Project Financial Summary:			
Funded to Date:	$ 300,000	Expenditures through end of year:	$ 300,000
Spent to Date:	$160,455	2024 - 2028 Planned Expenditures:	$ 1,945,000
Cash flow through end of year:	$ 139,545	Total Project Estimate:	$ 2,245,000
Project Balance	$ -	Additional Funding Required	$ 1,945,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Implementation	$325,000	$325,000	$350,000	$350,000	$350,000	$ 1,700,000
Capitalized Labor	$35,000	$35,000	$50,000	$50,000	$75,000	$ 245,000
TOTAL	$ 360,000	$ 360,000	$ 400,000	$ 400,000	$ 425,000	$ 1,945,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$360,000
Total	100%		$360,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23002

Project Name: Serviceline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority:	2	PM:	Russell	Board Approval:	10/23/23

Project Description:

This program consists of targeted replacement of leaking water service lines throughout the District. Replacing leaking and substandard service lines with new copper water service tubing will reduce the potential for contamination of the drinking water supply, increase reliability, reduce maintenance expenditures, and decrease losses. Serviceline projects are prioritized with operations and engineering staff based on frequency of leaks and costs of repairs. These estimates and project locations are subject to change as the projects are better defined. The replacement work is being performed by District crews.

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increase maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:	$ 4,745,546	Expenditures through end of year:	$ 3,397,752
Spent to Date:	$ 2,647,752	2024 - 2028 Planned Expenditures:	$ 14,950,000
Cash flow through end of year:	$ 750,000	Total Project Estimate:	$ 18,347,752
Project Balance	$ 1,347,794	Additional Funding Required	$ 13,602,206

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Construction (Various)	$ 2,700,000	$ 2,700,000	$ 2,950,000	$ 2,950,000	$ 3,400,000	$ 14,700,000
TOTAL	$ 2,750,000	$ 2,750,000	$ 3,000,000	$ 3,000,000	$ 3,450,000	$ 14,950,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$1,402,206
Total	100%		$1,402,206

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23009

Project Name: Reservoir 1 Storage Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The District owns and operates seven floating membrane (hypalon) covered reservoirs in its drinking water system. Hypalon covers have a life expectancy of 20-30 years depending on material selection and environmental factors, including ultraviolet light (UV) exposure from sunlight and contamination and wear from organic debris such as pine needles. All of the District's hypalon covers have exceeded their useful life and need replacement. Additionally, hypalon covers are vulnerable to wildfire, as demonstrated by the loss of several hypalon covers during the 2018 Camp Fire near the town of Paradise. Due to these vulnerabilities, the District is pursuing the replacement of the Reservoir 1 and Pollock Pines Reservoir hypalon covers.

The District is currently pursuing a grant opportunity from Federal Emergency Management Agency, through their hazard mitigation grant program for both reservoirs. This grant could cover 75% - 100% of the of the design and construction costs.

The Basis of Design Report will be complete in early 2024. Design will start in late 2024, to be complete in early 2025. Construction is expected to be complete in 2026. This CIP shows only constructing Reservoir 1 irregardless of the grant. If the District obtains the grant to also replace the Pollock Pines reservoir, the CIP will be adjusted.

Basis for Priority:

The District's floating covers on the Reservoir 1 and Pollock Pines Reservoirs are beyond their useful life and need repalcement. Additionally, the floating covers are suspectible to wildfire. The project will increase service reliability.

Project Financial Summary:			
Funded to Date:	$ 256,425	Expenditures through end of year:	$ 202,762
Spent to Date:	$ 2,762	2024 - 2028 Planned Expenditures:	$ 9,050,000
Cash flow through end of year:	$ 200,000	Total Project Estimate:	$ 9,252,762
Project Balance	$ 53,663	Additional Funding Required	$ 8,996,337

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 50,000					$ 50,000
Design	$ 500,000	$ 1,000,000				$ 1,500,000
Construction - Reservoir 1			$ 7,500,000			$ 7,500,000
Construction - Moose Hall						
FEMA Hazard Mitigation Grant						$ -
TOTAL	$ 550,000	$ 1,000,000	$ 7,500,000	$ -	$ -	$ 9,050,000

Funding Sources	Percentage	2024	Amount
Water Rates	52%		$258,095
Water FCC	48%		$238,242
Total	100%		$496,337

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23010

Project Name: Res 1 Water Treatment Plant Generator Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Petterson **Board Approval:** 10/23/23

Project Description:

The generator at Reservoir 1 is beyond its useful life and needs to be replaced. It is difficult to get parts for the generator as the unit is obsolete and past its life expectancy, in fact the District can no longer purchase parts for the generator, which means that any repairs to the generator requires a custom repair. In addition, the generator did not pass the load bank test in 2022. In addition, the sound attinuation for the generator is in a mode of failure requiriung a new enclosure around the generator. The District depends on this generator to keep the Reservoir 1 Water Treatment Plant operating during planned and unplanned power outages. In August 2023, the generator broke, and was not repairable. The District started working on ordering a replacement generator.

Basis for Priority:

Ability to maintain critical water supply during planned and unplanned power outages.

Project Financial Summary:			
Funded to Date:	$ 35,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 525,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 525,000
Project Balance	$ 35,000	Additional Funding Required	$ 490,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Replacement Generator	$ 150,000					$ 150,000
Design	$ 75,000					$ 75,000
Construction	$ 300,000					$ 300,000
TOTAL	$ 525,000	$ -	$ -	$ -	$ -	$ 525,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$490,000
Total	100%		$490,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23017

Project Name: El Dorado Hills WTP Clear Well Pump Replacement

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Petterson **Board Approval:** 10/23/23

Project Description:

Staff completes an annual clear well inspection at the El Dorado Hills Water Treatment Plant (EDHWTP), including condition assessment of the vertical turbine pumps that transmit treated water from the EDHWTP into the distribution system. Based on the most recent inspection, staff determined that pumps 311, 312, and 313 required immediate repair or replacement to continue reliably meeting customer demands of the growing El Dorado Hills region.

Basis for Priority:

Replacement has been approved by the Board. Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:	$ 153,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 153,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 153,000
Project Balance	$ 153,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Pumps And Install	$ 150,000					$ 150,000
Capitalized Labor	$ 3,000					$ 3,000
TOTAL	$ 153,000	$ -	$ -	$ -	$ -	$ 153,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 23025

Project Name: Valve Replacement EDM1 And EDM2

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 10/23/23

Project Description:

The District has many isolation valves in both the water transmission system and the distribution system that have failed and no longer provide proper isolation for any required shutdown of the system. These valves often are broken in either the open or closed position leaving staff no option but to expand any shutdown in the distribution or transmission system to a larger area where isolation is possible. The District is in need of replacing one isolation valve and adding two additional isolation valves on El Dorado Main #1 and #2 to limit future customer impacts due to emergency shutdowns.

Basis for Priority:

Existing valves are failing due to age and degradation and no longer providing proper isolation of the distribution or transmission systems.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 45,616
Spent to Date:	$ 30,616	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 195,616
Project Balance	$ 4,384	Additional Funding Required	$ 145,616

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Inspection	$50,000					$ 50,000
Construction		$100,000				$ 100,000
TOTAL	$ 50,000	$ 100,000	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$45,616
Total	100%		$45,616

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

CIP Number: 24002

CIP Name: Construction Spoils Management

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The District's water construction crews utilize hydro excavation to perform repairs on the District's water distribution system year round. Hydro excavation creates wet spoils that require processing and disposal. This project will construct a wet spoils handling facility on the western end of the District's service area to properly process and prepare spoils for disposal.

Basis for Priority:

A proper wet spoils handling facility will improve and streamline water operations efficiency in handling spoils from our excavations and replacement work.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 1,170,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,170,000
Project Balance	$ -	Additional Funding Required	$ 1,170,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 20,000					$ 20,000
Design	$ 150,000					$ 150,000
Construction	$ 250,000	$ 750,000				$ 1,000,000
						$ -
TOTAL	$ 420,000	$ 750,000	$ -	$ -	$ -	$ 1,170,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$420,000
			$0
			$0
Total	100%		$420,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: EDH Water Treatment Plant Phase 1-3 Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:** 10/23/23

Project Description:

This program consists of long term capital improvements identified in the El Dorado Hills Water Treatment Plant (EDHWTP) Master Plan prepared as part of the WTP Asset Management Plan (AMP). The improvements are organized by 4 phases of work. Phase 1-3 replace and/or upgrade all major treatment plant processes with some limited added capacity with the ability to expand the WTP plant capacity up to 30 mgd (buildout) in Phase 4. A Phase 1-3 Basis of Design report (BODR), detailed design, and the first two phases of construction are planned for the 2024-2028 CIP planning horizon. Cost estimates were prepared consistent with Association for the Advancement of Cost Engineering guidelines for a Class 4 estimate. Class 4 estimates are based on limited information and are typically used for project screening, determination of feasibility, conceptual evaluation, and preliminary budget approval for the next stage. The typical expected accuracy range for this class estimate is 30% - 50% percent on the high side. Cost estimates will be updated through the project phases with contingencies appropriate for the respective level of design detail. Note, Phase 3 construction is not included in cash flow projections as it occurs beyond 2028.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls, and end of life facilities will support regulatory compliance, improve service reliability, and reduce maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 63,039,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 63,039,000
Project Balance	$ -	Additional Funding Required	$ 63,039,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Basis of Design Report	$ 1,500,000	$ -	$ -	$ -	$ -	$ 1,500,000
Design	$ 1,000,000	$ 4,000,000	$ 1,000,000	$ -	$ -	$ 6,000,000
EIR	$ 75,000	$ 275,000	$ 200,000			$ 550,000
Phase 1 Construction			$ 8,050,000	$ 8,050,000	$ -	$ 16,100,000
Phase 2 Construction	$ -	$ -	$ -	$ 10,000,000	$ 20,500,000	$ 30,500,000
Eng. during construction			$ 1,154,000	$ 1,154,000	$ 1,154,000	$ 3,462,000
Constructon management			$ 1,154,000	$ 1,154,000	$ 1,154,000	$ 3,462,000
Inspection			$ 300,000	$ 300,000	$ 300,000	$ 900,000
Capitalized labor	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 113,000	$ 565,000
TOTAL	$ 2,688,000	$ 4,388,000	$ 11,971,000	$ 20,771,000	$ 23,221,000	$ 63,039,000

Estimated Funding Sources	Percentage	2024	Amount
2024/2027 Bond	100%		$2,688,000
Total	100%		$2,688,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: El Dorado Hills Raw Water Pump Station 4160 Enclosure

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

OSHA requires that live electrical parts be deenergized before the employee works on or near them, unless the employer can demonstrate that deenergizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. It is infeasible to troubleshoot deenergized equipment. Enclosing 4160 volt gear will protect electrical workers from harsh weather conditions and reduce the risk of electrocution. Additionally an eye wash station should not be out in the hot sun because the water in the station can become too hot and cause burns to the eyes. The American National Standards Institute (ANSI) standard Z358.1-2014 states that the flushing fluid temperature should be between 60°F and 100°F. If the water in the eye wash station is too hot, it can cause thermal burns to the eyes and skin. This project only includes design money and no construction funding until the design is complete.

Basis for Priority:

Installation of structure provides safe access for electricians during inclimate weather allowing for repairs and maintenance during winter months.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Facility Improvements						$ -
Design	$ 150,000					$ 150,000
Construction						$ -
TOTAL	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$150,000
Total	100%		$150,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Large Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program will replace old and inaccurate large meters in the District. The project is required because it provides for replacement of inaccurate large meters and enables all meters to be read on time for billing. The liability to the District if this project is not implimented includes increased labor expenses for manually reading the meters and inputting manual data into the computer system, loss of revenue due to inaccurate reads and increased apparent losses.

Basis for Priority:

Loss of revenue due to under reporting large meters.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Various Large Meters					$ 250,000	$ 250,000
TOTAL	$ -	$ -	$ -	$ -	$ 250,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Placerville Drive Hangtown Creek Bridge Replacement

Project Category: State/County Road Projects

Priority: 1 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The City of Placerville is planning on replacing the existing Placerville Drive Hangtown Creek Bridge in 2024. Currently, the District has an existing 8" waterline in the existing bridge to provide water to western Placerville. The District has a secondary connection that will be used to feed that portion of the District during construction. The District will replace the existing line with a new line in the bridge concurrent with the City's project. This will be bid as part of the City's project through an agreement with the City of Placerville. The City of Placerville anticipated completing their environmental permitting in 2023 and design for the project to be completed in 2024 with construction to begin in the spring of 2025.

Basis for Priority:

The District must replace the waterline to accommodate the City's bridge project.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 1,050,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 1,050,000
Project Balance	$ -	**Additional Funding Required**	$ 1,050,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000					$ 75,000
Construction Inspection		$ 75,000				$ 75,000
Construction		$ 900,000				$ 900,000
TOTAL	$ 75,000	$ 975,000	$ -	$ -	$ -	$ 1,050,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	**100%**		**$75,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pleasant Valley Road Bulk Water Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The existing bulk water station located at 4280 Pleasant Valley Road in Placerville has had multiple near miss accidents reported to the District. The District would like to make updates to the driveway entrance to make it safer for the public and for District staff who access the site.

Basis for Priority:

100% safety is one of the District's guiding principles. By making updates to the driveway the District can help prevent near miss accidents.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 195,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 195,000
Project Balance	$ -	Additional Funding Required	$ 195,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 20,000				$ 20,000
Design		$ 50,000				$ 50,000
Construction			$ 125,000			$ 125,000
TOTAL	$ -	$ 70,000	$ 125,000	$ -	$ -	$ 195,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pressure Reducing Station Rehabilitation and Replacement Program

Project Category: Reliability & Service Level Improvements

Priority:	2	PM:	TBD	Board Approval:	10/23/23

Project Description:

The District has 246 pressure reducing stations throughout the service area to keep line pressures within acceptable ranges as it travels from Pollock Pines down to El Dorado Hills. Many of these stations are in varying degrees of repair or rehabilitation based on age, construction, and design life cycle. This program is to identify specific stations to rehabilitate, replace or upgrade to maintain service reliability throughout the District. Staff examines each pressure reducing station to determine if the station can be rehabilitated in place or if a new station needs to be constructed in parallel with the existing station. Staff has been able to rehabilitate the larger transmission stations in place utilizing the existing vaults while adding a protective layer of coating on the vault and all pipework, new isolation valves, and installing new pressure reducing valves. Due to the construction of the smaller below ground pressure reducing stations they typically require a complete replacement to an above ground location where possible. By moving the smaller facilities above ground it removes the confined space entry for operation and maintenance while also providing a dry environment for prolonged life for external coatings. Loss of pressure control or valve failure can result in extensive water line damage or complete failure. Program management expenditures identified include prioritizing and designing each PRS replacement. Staff reviews the list of pressure reducing valves each year and based on failures or other noted deficiencies prioritizes the stations to be included in this program. Actual PRS replacement costs for each individual station will be brought to the Board for specific approval.

2024: Design Control for DSM PRS22

2025: Construct DSM PRS22, Design EDM1 PRS13 (located at Reservoir 6)

2026: Construct EDM1 PRS13 and EDM2 PRS2 ARV, Design EDM1 PRS3

2027: Construct EDM1 PRS 3, Design EDM1 PRS8, Replace EDH PRS3 and HEP PRS1

2028: Construct EDM1 PRS 8, Replace LL PRS1

Basis for Priority:

Existing stations are incurring increasing maintenance costs and reduced service reliability due to age and degradation.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 2,250,000
Cash flow through end of year:		Total Project Estimate:	$ 2,250,000
Project Balance	$ -	Additional Funding Required	$ 2,250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$50,000	$200,000	$50,000	$100,000		$ 400,000
Construction			$700,000	$250,000	$900,000	$ 1,850,000
TOTAL	$ 50,000	$ 200,000	$ 750,000	$ 350,000	$ 900,000	$ 2,250,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Pump Station Rehabilitation and Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The District has numerous distribution pump stations throughout the water service area that operate to increase pressures to customers at higher elevations. This is an annual program to replace, rehabilitate or upgrade pump stations that have reached the end of their service life. Engineering and O&M staff identify and prioritize pump stations in need of upgrades to ensure reliable supply of the necessary pressure and flow to their respective service areas, and to comply with fire flow requirements and incorporate emergency standby power where needed. Replacement components include pumps, hydropneumatic tanks, electrical control, valves, yard piping, SCADA equipment, and buildings to accommodate equipment. Staff reviews the list of pumps each year and based on failures or other noted deficiencies prioritizes the stations to be included in this program. Actual Pump Station replacement costs for each individual station will be brought to the Board for specific approval. This programmatic CIP is for pump station replacement and rehabilitation projects tha have been idenetied, but have not been assigned a project number. Pump station replacement projects have been deferred in the CIP to meet financial plan objectives.
2024: Evaluate Strawberry raw water pump station
2025-26: Design Monte Vista Pump Station
2027: Construct Montevista Pump Station, Design Reservoir 8 Pump Station
2028: Construct Reservoir 8 Pump Station, Design Oak Lane Pump Station

Basis for Priority:

Potential interruption to service throughout the District in the event of failures and continued use of expiring equipment that may pose a threat to the health and safety of customers, employees, and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,850,000
Cash flow through end of year:		Total Project Estimate:	$ 1,850,000
Project Balance	$ -	Additional Funding Required	$ 1,850,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 75,000	$ 75,000	$ 100,000	$ 100,000		$ 350,000
Construction				$ 900,000	$ 600,000	$ 1,500,000
TOTAL	$ 75,000	$ 75,000	$ 100,000	$ 1,000,000	$ 600,000	$ 1,850,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Res 1 Water Treatment Plant Phase 1 Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program consists of long term capital improvements identified in the El Dorado Hills Water Treatment Plant (EDHWTP) Master Plan prepared as part of the WTP Asset Management Plan (AMP). The improvements are organized by 4 phases with a cost of $145 million over 20 years. Based on other WTP improvement prioities and the more immediate need to fully upgrade the El Dorado Hills WTP, only the most critical Phase 1 and 2 improvements will be addressed in this CIP planning horizion. The modified Phase 1 and 2 improvements will include a new filter washwater equalization tank, chemical building with storage and feed piping, an earthen sludge storage pond at the current reservoir location, and a new flocculation basin. Cost estimates were prepared consistent with Association for the Advancement of Cost Engineering guidelines for a Class 4 estimate. Class 4 estimates are based on limited information and are typically used for project screening, determination of feasibility, conceptual evaluation, and preliminary budget approval for the next stage. The typical expected accuracy range for this class estimate is 30% - 50% percent on the high side. Cost estimates will be updated through the project phases with contingencies appropriate for the respective level of design detail.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls, and end of life facilities will support regulatory compliance, improvement service reliability, and reduce maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 30,206,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 30,206,000
Project Balance	$ -	Additional Funding Required	$ 30,206,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Basis of Design Report	$ 425,000					$ 425,000
Design		$ 900,000	$ 1,000,000			$ 1,900,000
EIR		$ 225,000	$ 200,000			$ 425,000
Construction				$ 11,500,000	$ 11,500,000	$ 23,000,000
Service during construction				$ 861,500	$ 861,500	$ 1,723,000
Construction management				$ 861,500	$ 861,500	$ 1,723,000
Inspection				$ 225,000	$ 225,000	$ 450,000
Capitalized labor	$ 112,000	$ 112,000	$ 112,000	$ 112,000	$ 112,000	$ 560,000
TOTAL	$ 537,000	$ 1,237,000	$ 1,312,000	$ 13,560,000	$ 13,560,000	$ 30,206,000

Estimated Funding Sources	Percentage	2024	Amount
2027 Bond	100%		$537,000
Total	100%		$537,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Reservoir A Backwash to Waste Valve Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The Reservoir A WTP has backwash-to-waste valves that are an integral part of the backwashing of all twelve filter cells. These valves have reached the end of their useful life, have signs of degradation, corrosion, and operate unreliably. They are located deep in a tight pit in the center of each filter cluster with access being a safety concern due to confined spaces and a constant corrosive atmosphere. As the valves age even further the need to access the backwash-to-waste valves to assist in their proper operation has significantly increased. The unreliability of the valves to operate properly requires that a treatment plant operator be onsite while performing daily backwashes. Backwashing the filters is integral to the successful operation of the entire treatment plant. Properly operated backwashing processes can significantly reduce the risk of complete filter failures. These valves are used to drain the the daily backwash water used to begin the residual drying process and recycle the water used back to the headwork of the plant. This project will replace the backwash-to-waste valves and controls that have reached their end of service life and raise them out of the corrosive environment that they exist in now up to the filter deck eliminating the safety hazard when maintenance is performed.

Basis for Priority:

The valves do not always fully close thus allowing some waste to add to the backwash return flow being returned to the headwork and they cannot provide good isolation which impacts the overall process. Additionally, when maintenance is performed the access to the controls to manually assit closing and opening is a safety concern including confined space and safe access down into the bottom of the valve gallery. As demands pick up, and/or water quality drastically changes so can the use of these valves. Another issue we are encountering is that the age of the valves and controls makes securing repair parts very difficult. We frequently have to mix and match parts from different manufacturers and make custom modifications to the controllers to get proper operations and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 2,120,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 2,120,000
Project Balance	$ -	Additional Funding Required	$ 2,120,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 195,000				$ 195,000
Construction			$ 1,750,000			$ 1,750,000
Services During construction			$ 175,000			$ 175,000
TOTAL	$ -	$ 195,000	$ 1,925,000	$ -	$ -	$ 2,120,000

Funding Sources	Percentage	2024	Amount
Water Rates	48%		$0
Water FCC	52%		$0
			$0
Total	100%		$0

Funding Comments: This project does not increase capacity, therefore should be fundied with rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Ridgeview Pump Station Rehabilitation

Project Category: Reliability & Service Level Improvements

Priority:	2	PM:	TBD	Board Approval:	10/23/23

Project Description:

The Ridgeview pump station is located next to the 1 MG Ridgeview tank and needs to be assessed for replacement. The CIP will evaluate the facility, determine remaining useful life and identify components that must be replaced, or if full replacement is warranted.

Basis for Priority:

Life cycle evaluation of an aging asset to maintain service reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ -	Additional Funding Required	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design		$ 100,000				$ 100,000
Construction						$ -
						$ -
TOTAL	$ -	$ 100,000	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: SCADA Water Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This funding is designated to be a rolling CIP to replace end of life cycle SCADA hardware District wide. This program would focus on replacing and reprogramming of the end of life PLC hardware and associated SCADA reconfigurations. Many sites are beyond the PLC hardware life expectancy of 15 years.

Basis for Priority:

Rolling CIP to replace end of life cycle SCADA hardware, ensure service reliability, and reduce problem areas of the SCADA system that cause overtime.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Hardware	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
Professional Services	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 225,000
TOTAL	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$100,000
Total	100%		$100,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Outlet Control Facility Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The project includes design and installation of more reliable power distribution for the facility. The site currently has multiple installations dating back to 1953 and is no longer in compliance with National Fire Protection Agency. The site requires a new PG&E meter and main, automatic transfer switch, and panel board for distribution. Furthermore, the District is in need of replacing the hydraulic lines for the isolation valves at the dam. This will include the replacement of hydraulic fluid and any necessary upgrades to provide reliable isolation moving forward.

Basis for Priority:

The project will improve reliability of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 50,000				$ 50,000
Design			$ 100,000			$ 100,000
Construction						$ -
						$ -
TOTAL	$ -	$ 50,000	$ 100,000	$ -	$ -	$ 150,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Spillway Improvements

Project Category: Regulatory Requirements

Priority: 1 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

Following the February 2017 Oroville Dam Spillway failure event, the California Department of Water Resources - Division of Safety of Dams required various dam owners to perform a spillway condition assessment applying the lessons learned from Oroville. Sly Park Spillway was one of the facilities selected, and while the condition assessment found Sly Park does not currently have the significant issues as did Oroville, there were several recommendations for improvement. These include: 1) Designing and installing a more durable surface on the invert of the flip bucket near the end of the spillway chute where concrete erosion and exposure of steel reinforcement has been occurring (2025 planned construction); and 2) Reviewing spillway hydraulics, and based on the spillway rated capacity, develop plans for raising the height of sidewalls in the vicinity of the flip bucket where historic photos show a water stain reaching the top of the walls from previous spills much less than the design capacity (2025 planned construction). The risk of spill water overtopping the sidewalls is the potential for erosion of soil and rock outside the chute that could then undermine the structure and cause it to fail (as occurred at Oroville). In addition, the right bank of the channel downstream of the concrete spillway chute needs erosion protection. The exposed soil bank is oversteepened and not durable to the high velocity flows that can discharge from the spillway. If left untreated, it could compromise the spillway structure (2025 planned construction).

Basis for Priority:

Compliance with DSOD dam safety program requirements

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 320,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 320,000
Project Balance	$ -	**Additional Funding Required**	$ 320,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 120,000					$ 120,000
Construction		$ 200,000				$ 200,000
						$ -
TOTAL	$ 120,000	$ 200,000	$ -	$ -	$ -	$ 320,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$120,000
Total	**100%**		**$120,000**

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **Water**

Project Number: PLANNED

Project Name: Transmission Slope Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The District owns and maintains various transmission mains across the District to be able to provide large volumes of water from 4,000 feet to 700 feet in elevation. These facilities are typically 16" and larger and transmit water between multiple pressure reducing stations to reservoirs and tanks in the distribution system. These facilities typically are exposed to higher velocities in an effort to provide water during high flow events. Additionally, many of these facilities were constructed across rugged terrain prior to major roadways being available in the 50's, 60's, and 70's. Due to the location of these pipelines the potential for slope failure is greatly increased. During the storms of 2017 there were two major slides that occurred, one on El Dorado Main #2 and one on Moose Hall Transmission. These lines are in need of various slope stabilization measures to protect not only the pipelines but the District's access to them for future maintenance and repairs. This program will consist of completing slope stabilization designs, access improvements where possible, bidding, and construction of all necessary repairs. Actual slope stabilization project costs for each individual pipeline will be brought to the Board for specific approval.

Basis for Priority:

Slope stabilization for transmission pipelines due to slides causing damage to pipe benches and access roads to the facilities.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 675,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 675,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 675,000**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Engineering		**$75,000**				**$ 75,000**
Stabilization EDM#2			**$ 300,000**			**$ 300,000**
Stabilization Moose Hall			**$ 300,000**			**$ 300,000**
TOTAL	**$ -**	**$ 75,000**	**$ 600,000**	**$ -**	**$ -**	**$ 675,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Valve Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Russell **Board Approval:** 10/23/23

Project Description:

The District has many isolation valves in both the water transmission system and the distribution system that have failed and no longer provide proper isolation for any required shutdown of the system. These valves often are broken in either the open or closed position leaving staff no option but to expand any shutdown in the distribution or transmission system to a larger area where isolation is possible. If the valve cannot be repaired it will be replaced under this program. The District also has over 270 pressure reducing stations with isolation valves within. If the pressure reducing stations cannot be rebuilt due to failure of the isolation valves the isolation valves will be repalced under this program. This program does not identify specific valves to replace. Program management expenditures identified include prioritizing of each valve replacement.

Basis for Priority:

Existing valves are failing due to age and degradation and no longer providing proper isolation of the distribution or transmission systems.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:		Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction		$100,000	$125,000	$125,000	$150,000	$ 500,000
TOTAL	$ -	$ 100,000	$ 125,000	$ 125,000	$ 150,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 175,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Distribution Radio Path Program

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path upgrade would optimize and create reliable wireless communication options for the District's remote facilities.

Basis for Priority:

Many remote facilities depend on antiquated serial radios. Quickly evolving technology requires EID to move to an IP-based communication to retain maintainable parts. Performing large migrations without a proper design and proven concepts creates great risk for improper implementation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ -	Additional Funding Required	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor	$ 50,000	$ 50,000				$ 100,000
TOTAL	$ 50,000	$ 50,000	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Model - Validation and Update

Project Category: Reliability & Service Level Improvements

Priority:	3	PM:	Carrington	Board Approval:	10/23/23

Project Description:

The District maintains a system-wide hydraulic water model. Regular updates are needed to verify fire flow and water quality.

Basis for Priority:

Hydraulic water modeling is necessary to inform capacity limitations and water age in the system.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000		$ 50,000		$ 50,000	$ 150,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ -	$ 50,000	$ -	$ 50,000	$ 150,000

Funding Sources	Percentage	2024	Amount
Water FCCs	50%		$25,000
Water Rates	50%		$25,000
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Storage Tank Replacement & Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program consists of targeted replacement and rehabilitation of drinking water storage tanks and reservoirs within the distribution system. The District operates 24 welded steel storage tanks and 7 bolted steel storage tanks, ranging in age from 8 to 58 years of age, most of which were constructed in the last 18 years as part of the District line and cover program. Additionally, the District operates 7 floating cover drinking water reservoirs ranging in age from 26 to 33 years of age. This program is to identify specific tanks and reservoirs to rehabilitate, replace, or upgrade to maintain service reliability throughout the District. This program also includes tank recoating for the welded storage tanks. Program management expenditures identified include prioritizing and designing each tank and reservoir improvement project. Actual replacement and recoating costs for each individual tank and reservoir will be brought to the Board for specific approval.

2024: Reservoir 4 and Reservoir 7A Strucutral Replacement; Reservoir 7B Exterior Recoating

2025: Cathodic Protection in the 835 Valley View Tank and Oakridge Tanks. Design for Reservoir 6 Tank Replacement; Reservoir 4 and 7 B Recoating

2026: Design for Reservoir 6 Tank Replacement; Rancho Del Sol Tank & Reservoir 5 Tank & EDHWTP Backwash Make Up Tank Recoating

2027: Construction of Reservoir 6 Tank Replacement; Oakridge Tank #1 & Sly Park Hills Recoating

2028: Cathodic Protection in the Outingdale Lower Tank; Oak Ridge Tank #2 Recoating

Basis for Priority:

Life cycle replacement of District assets due to age and degradation.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	**$ -**
Spent to Date:		**2024 - 2028 Planned Expenditures:**	**$ 16,692,573**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 16,692,573**
Project Balance	**$ -**	**Additional Funding Required**	**$ 16,692,573**

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Planning		$ 150,000	$ 450,000			$ 600,000
Construction	$ 2,785,670	$ 2,794,723	$ 808,360	$ 6,730,209	$ 2,973,612	$ 16,092,573
TOTAL	$ 2,785,670	$ 2,944,723	$ 1,258,360	$ 6,730,209	$ 2,973,612	$ 16,692,573

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$2,785,670
Total	**100%**		**$2,785,670**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Waterline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program consists of targeted replacement of leaking waterlines including formerly private lines within the District. Replacing leaking and substandard waterlines in the distribution system will reduce the potential for contamination of the drinking water supply, increase reliability, reduce maintenance expenditures, and decrease losses. This program also targets any pipelines near leech fields, gas lines, and electrical conduits that need to be relocated to meet current District standards. Pipeline projects are prioritized with Operations and Engineering staff based on frequency of leaks and costs of repairs. Operations staff will complete main replacements where possible with available funding for high leak prone areas and where undersized pipe is causing low pressure. These estimates and project locations are subject to change as the projects are better defined. Major expenditures have been deferred in the CIP to meet financial plan objectives however specific projects may be accelerated if funding is available.

2025: Design Highway 50 Crossings

2026: Construct Highway 50 Crossings, Design Forni Road Waterline Replacement

2027 and 2028: Construct Forni Road Waterline Replacement

Basis for Priority:

Continuous line breaks affect water quality and supply reliability to customers and increase maintenance costs. This project is required to protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 8,150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 8,150,000
Project Balance	$ -	Additional Funding Required	$ 8,150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 125,000	$ 125,000	$ 125,000	$ 525,000
Various Small Waterline Replacements			$ 80,000	$ 80,000	$ 80,000	$ 240,000
Construction (Various)			$ 1,795,000	$ 2,795,000	$ 2,795,000	$ 7,385,000
TOTAL	$ -	$ 150,000	$ 2,000,000	$ 3,000,000	$ 3,000,000	$ 8,150,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: Planned

Project Name: Wholesale Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program replaces old and inaccurate large wholesale meters in the District. The project is required because it provides for replacement of inaccurate large meters and enables all meters to be read in time for billing. The liability to the District if this project is not implemented includes increased labor expenses for manually reading the meters and inputting manual data into the computer system, loss of revenue due to inaccurate reads and increased apparent losses. Actual wholesale meter replacement costs for each individual site will be brought to the Board for specific approval.

Basis for Priority:

Loss of revenue due to under reporting large wholesale meters.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	
Spent to Date:		**2024 - 2028 Planned Expenditures:**	
Cash flow through end of year:		**Total Project Estimate:**	
Project Balance		**Additional Funding Required**	

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Woodman Circle 6" Meter		$250,000				$ 250,000
Coloma Court (Combellack Road) 8" & 2" Meters				$275,000		$ 275,000
Coloma Court 8" & 2" Meters						$ -
New Jersey 8" Fire and 2" Meters						$ -
Poverty Hill 6" Fire & 2" Meters						$ -
TOTAL	$ -	$ 250,000	$ -	$ 275,000	$ -	$ 525,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Treatment Plant Asset Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This is an annual program to replace water treatment plant assets that have failed or reached end of useful life. Assets to be replaced or upgraded under this program include mechanical, electrical and instrumentation systems, treatment plant equipment and other plant assets. This program is also used to replace assets aligned with Water Treatment Plant Master Planning efforts.

Basis for Priority:

Replacement and improvements to inefficient processes, obsolete controls and substandard facilities will support regulatory compliance, improvement service reliability and reduce maintenance costs.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,000,000
Project Balance	$ -	Additional Funding Required	$ 1,000,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Facility Improvements	$ 500,000	$ 500,000				$ 1,000,000
Design						$ -
Construction						$ -
TOTAL	$ 500,000	$ 500,000	$ -	$ -	$ -	$ 1,000,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$500,000
Total	100%		$500,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Treatment Plant Flow Meters Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This CIP is for the replacement and testing of our source water meters to establish accuracy of our source meters to comply with SB 555 and the Water Loss Reduction program which requires all public water systems to submit a level 1 validated water audit to DWR meeting the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34. The validated water audit must be prepared in accordance with the method adopted by the American Water Works Association Water Audit and Loss Control Programs, Manual M36. In this methodology all measurements to determine the value of water lost starts with the amount of watering leaving our plants and entering our distribution system. Annual calibration and testing are required to assign data validity scores to our data. By the year 2028 the District is expected to show some level of improvement of those scores year over year. Replacing existing meters that were previously tested in 2005 and in 2019, would allow us at the same time to install testing ports or locations. The District has two finished water meters and one raw water meter at the Reservoir A Water Treatment Plant. These meters have outlived their useful lives and are in need of being replaced. The meters are for the finished water transmission lines, the Camino Conduit and the Pleasant Oak Main. The raw water meter provides determines the flow entering the plant. Flow meter installation will require excavation and installation of vaults for future maintenance needs.

Basis for Priority:

Flow meters need to be upgraded to meet SB 555.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ -	Additional Funding Required	$ 100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Reservoir A Raw Water Meter Study/Design					$ 100,000	$ 100,000
Reservori A Raw Water Meter Construction						$ -
TOTAL	$ -	$ -	$ -	$ -	$ 100,000	$ 100,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

Wastewater Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 15036

Project Name: Silva Valley - El Dorado Hills Sewer Pipeline

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The 2013 Wastewater Facility Master Plan (WWMP) identified 2,100 feet of the 18"/21" sewer pipeline along Silva Valley Road and 4,500 feet of 18" sewer pipeline between Highway 50 and the El Dorado Hills Wastewater Treatment Plant as needing capacity upgrades. In order to refine the extent and timing of improvements required, flow monitoring and survey work to determine manhole invert and ground elevations was completed. Flow monitoring and survey data was incorporated into the District's collection system model to determine remaining pipeline capacity. The current capacity analysis indicates the peak wet weather flow rate in approximately 9,000 feet of sewer pipeline exceeds design capacity and is in need of capacity upgrades.

A Basis of Design (BODR) report is needed to determine the most cost effective and constructible pipe alignment considering environmental concerns and easement acquisition. Because project development is conceptual at this time, construction expenditures are not included. Once the BODR is completed, construction expenditures will be programmed into the Capital Improvement Plan.

Basis for Priority:

This project will replace undersized assets to ensure reliability and continual operation of the El Dorado Hills collection system. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:	$ 245,920	Expenditures through end of year:	$ 216,593
Spent to Date:	$ 211,593	2024 - 2028 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 1,216,593
Project Balance	$ 29,327	Additional Funding Required	$ 970,673

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 300,000	$ 250,000	$ 250,000	$ 800,000
Environmental				$ 100,000	$ 100,000	$ 200,000
Construction						$ -
TOTAL	$ -	$ -	$ 300,000	$ 350,000	$ 350,000	$ 1,000,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 17046

Project Name: Strolling Hills Pipeline Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The Motherlode Force Main transitions to gravity flow before it enters Strolling Hills Road and continues downhill toward the Deer Creek Wastewater Treatment Plant. Several services are connected directly to the 12-inch PVC pipe that conveys flows along this segment. Hydraulic capacity is restricted during large storm events and this segment of pipeline will continue to restrict flows in the Motherlode Force Main until the pipeline is upsized.

This project will include a Basis of Design report, plans and specifications, a phasing plan, and construction of approximately 6,000 feet of increased diameter pipe. The Strolling Hills pipe was identified in the 2013 Wastewater Master Plan and confirmed in the 2021 Deer Creek Collection System Modeling Project as a capacity upgrade project. The Basis of Design report will address pipe alignment and identify easement requirements.

Basis for Priority:

This project will replace undersized assets to ensure reliability and continual operation of the upstream Deer Creek collection system. This project is required to ensure full capacity of the newly upsized Motherlode Force Main can be used without compromising the strolling hills pipeline.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 31,661
Spent to Date:	$ 26,661	2024 - 2028 Planned Expenditures:	$ 6,500,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 6,531,661
Project Balance	$ 18,339	Additional Funding Required	$ 6,481,661

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 400,000					$ 400,000
Environmental	$ 100,000					$ 100,000
Construction		$ 3,000,000	$ 3,000,000			$ 6,000,000
TOTAL	$ 500,000	$ 3,000,000	$ 3,000,000	$ -	$ -	$ 6,500,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$481,661
			$0
Total	100%		$481,661

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 18003

Project Name: Indian Creek Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The Indian Creek Lift Station (ICLS) was originally constructed in 1988 and serves approximately 105 equivalent dwelling units. The lift station is comprised of a wet well to collect influent flow, a separate dry well with dry pit pumps, and an electrical control house approximately 600 feet east of the wells. ICLS is one of twenty lift stations in the collections system that has a PLC 10 years beyond its useful life and is need of replacement. The pumps, generator, and other mechanical components are also beyond useful life and in need of replacement. This configuration of the remote electrical control house and separated dry pit pumps pose operational safety concerns during regular maintenance and emergency situations.

The Indian Creek Lift Station Upgrades project would replace mechanical and electrical components consistent with the District's lift station standards. The PG&E power connection and main disconnect will remain at the remote control house while the new PLC, MCC, and generator will be installed near the wet well. New submersible pumps will be installed so that the dry pit pumps can be removed and the dry well can be abandoned. Minor civil improvements include a retaining wall and new fence installed around the lift station perimeter. This project has been deferred in the CIP to meet financial plan objectives, however the project may be accelerated based on priority and available funding.

Basis for Priority:

This project will upgrade a degrading lift station and ensure reliability and continual operation of the station.

Project Financial Summary:			
Funded to Date:	$ 495,788	Expenditures through end of year:	$ 422,459
Spent to Date:	$ 392,459	2024 - 2028 Planned Expenditures:	$ 2,575,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 2,997,459
Project Balance	$ 73,329	Additional Funding Required	$ 2,501,671

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000					$ 25,000
Environmental	$ 50,000					$ 50,000
Construction	$ 1,250,000	$ 1,250,000				$ 2,500,000
TOTAL	$ 1,325,000	$ 1,250,000	$ -	$ -	$ -	$ 2,575,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$1,251,671
			$0
Total	100%		$1,251,671

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 20040

Project Name: Deer Park LS SCADA Hardware Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This project will replace and reprogram the end of life PLC hardware and associated SCADA application at this sewer lift station.

Basis for Priority:

Replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 41,525
Spent to Date:	$ 39,525	2024 - 2028 Planned Expenditures:	$ 65,000
Cash flow through end of year:	$ 2,000	Total Project Estimate:	$ 106,525
Project Balance	$ 8,475	Additional Funding Required	$ 56,525

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000					$ 35,000
Installation	$ 15,000					$ 15,000
Capitalized Labor	$ 15,000					$ 15,000
TOTAL	$ 65,000	$ -	$ -	$ -	$ -	$ 65,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$56,525
			$0
Total	100%		$56,525

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21007

Project Name: Town Center Force Main Phase 4 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The Town Center force main and lift station were originally designed and constructed in 1980 to collect wastewater from Prospector's Plaza and pump it to the Motherlode force main at Pleasant Valley Road and Motherlode Drive. The Town Center force main was originally constructed of 8" asbestos cement (AC) pipe, which has experienced several failures causing SSO's in past years due to corrosion. The force main is in need of replacement with corrosion-resistant PVC to extend the life of this asset. Phase 4 is the final phase which will replace the force main from the upstream Town Center lift station to the beginning of phase 2A, south of Highway 50.

Project funding includes design completion and environmental only.

Basis for Priority:

This project will replace failing assets to ensure reliability and continual operation of the wastewater collection system.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 29,062
Spent to Date:	$ 24,062	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 129,062
Project Balance	$ 20,938	Additional Funding Required	$ 79,062

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design					$ 50,000	$ 50,000
Environmental					$ 50,000	$ 50,000
Construction						$ -
TOTAL	$ -	$ -	$ -	$ -	$ 100,000	$ 100,000

Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21026

Project Name: St. Andrews Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The St. Andrews Lift Station (SALS) was originally constructed in 1985 and serves approximately 5070 equivalent dwelling units. The lift station has undergone several upgrades throughout the years including new pumps, discharge piping, and electrical upgrades. This project will include discharge manifold modifications, upsizing of the bypass port for maintenance or emergency bypassing, and a programming update of the remote SCADA system. Although newer electrical equipment was previously installed, only a minimum amount of data points are collected and transmitted into the remote SCADA system. Increasing the amount of data remotely visible per District standards will aid in operational decision making to reduce the likelihood of sanitary sewer overflows.

Basis for Priority:

This project will optimize pump operation, maximize bypassing capabilities, and increase data remote visibility that informs operational decision making and reduces the likelihood sanitary sewer overflows, hazards to the public, and regulatory fines.

Project Financial Summary:			
Funded to Date:	$ 48,610	Expenditures through end of year:	$ 34,961
Spent to Date:	$ 19,961	2024 - 2028 Planned Expenditures:	$ 350,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 384,961
Project Balance	$ 13,649	Additional Funding Required	$ 336,351

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000					$ 25,000
Environmental	$ 25,000					$ 25,000
Construction	$ 50,000	$ 250,000				$ 300,000
TOTAL	$ 100,000	$ 250,000	$ -	$ -	$ -	$ 350,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$86,351
			$0
Total	100%		$86,351

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21041

Project Name: Wastewater Facility Generators - FEMA Grant

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The District applied for and was granted Hazard Mitigation Grant Program (HMGP) funding through the Federal Emergency Management Agency (FEMA) to provide a federal cost share for emergency backup generator installations at fifteen remote District facilities. Included in the application is generators for seven wastewater lift stations. This project will provide local agency funding as required by the HMGP grant.

Basis for Priority:

The project will provide continual power at seven wastewater lift stations during utility power outages. Grant timeline requires project completion by September 2022.

Project Financial Summary:			
Funded to Date:	$ 306,347	Expenditures through end of year:	$ 262,284
Spent to Date:	$ 212,284	2024 - 2028 Planned Expenditures:	$ 210,000
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 472,284
Project Balance	$ 44,063	Additional Funding Required	$ 165,937

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction	$ 1,960,000					$ 1,960,000
FEMA Funding	$ (1,750,000)					$ (1,750,000)
TOTAL	$ 210,000	$ -	$ -	$ -	$ -	$ 210,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$165,937
			$0
Total	100%		$165,937

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21081

Project Name: Motherlode Force Main Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The Motherlode force main (MLFM) was originally constructed in 1977 and conveys wastewater from the El Dorado lift station approximately nine miles west to the Deer Creek Wastewater Treatment Plant. Six additional lift stations pump directly into the force main as well as several private lift stations. The MLFM was originally constructed with 12-inch asbestos cement pipe and has several peaks and valleys as it progresses through the terrain. As wastewater is pumped over the peaks in the force main, the high points regularly become empty and are susceptible to high levels of hydrogen sulfide gas corrosion. The long term impact of hydrogen sulfide gas exposure is varying levels of degradation in the pipe.

The project began construction in 2023. To date, approximately 50% of the forcemain has been replaced with larger diameter, plastic pipe. This project will replace approximately 3.3 miles of existing 12-inch asbestos cement pipe with 18-20-inch plastic pipe.

Basis for Priority:

Project is under construction.

Project Financial Summary:			
Funded to Date:	$ 15,491,836	Expenditures through end of year:	$ 7,756,264
Spent to Date:	$ 756,264	2024 - 2028 Planned Expenditures:	$ 5,000,000
Cash flow through end of year:	$ 7,000,000	Total Project Estimate:	$ 12,756,264
Project Balance	$ 7,735,572	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design						$ -
Environmental						$ -
Construction	$ 5,000,000					$ 5,000,000
TOTAL	$ 5,000,000	$ -	$ -	$ -	$ -	$ 5,000,000

Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Camino Heights Wastewater Treatment Plant Disposal Improvements

Project Category: Regulatory Requirements

Priority: 1 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The Camino Heights Wastewater Treatment Plant (CHWWTP) was originally constructed in 1964 and serves the Camino Heights subdivision and a small commercial area along Highway 50. The plant is comprised of headworks, pond system, disinfection, and irrigation system. The irrigation system is a combination of direct land application and sub-surface drip system. In recent years, storm events have caused excess influent flows at the treatment plant as well as difficulty with effluent disposal due to saturated soil conditions. Operations staff has relied on pump trucks to haul excess flow to the Deer Creek sewer system for disposal. A recent State Resources Control Board inquiry letter required the District to reconcile the approved discharge methods with alternative methods used during storm events. A new wet weather water balance was performed and improvement alternatives to align CHWWTP with approved discharge methods have been developed.

This project will include funding necessary to engage with regulatory agencies, perform preliminary geotechnical studies, and develop construction plans and specifications for bidding. Because project development is conceptual at this time, construction expenditures are not included. Once regulatory and study efforts are complete, construction expenditures will be programmed into the Capital Improvement Plan.

Basis for Priority:

This project will respond to a regulatory compliance inquiry from the State Water Resources Control Board.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 350,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 350,000
Project Balance	$ -	Additional Funding Required	$ 350,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 150,000			$ 300,000
Environmental			$ 50,000			$ 50,000
Construction						$ -
TOTAL	$ -	$ 150,000	$ 200,000	$ -	$ -	$ 350,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Collections Pipeline Replacement and Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The District owns and operates four collection systems within El Dorado County. Aging infrastructure and limited funding necessitates active inspection and assessment of the collection system. This program will systematically develop projects to replace or rehabilitate the most critical infrastructure within the wastewater collection systems including, but not limited to pipelines and appurtenances.

Basis for Priority:

This programmatic project will replace or rehabilitate the most critical aging infrastructure in the collection system. One significant spill to waters of the state could cost the District $10 per gallon in fines.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 5,500,000
Cash flow through end of year:		Total Project Estimate:	$ 5,500,000
Project Balance	$ -	Additional Funding Required	$ 5,500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000		$ 150,000		$ 300,000
Environmental		$ 100,000		$ 100,000		$ 200,000
Construction	$ 2,500,000		$ 1,250,000		$ 1,250,000	$ 5,000,000
TOTAL	$ 2,500,000	$ 250,000	$ 1,250,000	$ 250,000	$ 1,250,000	$ 5,500,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$2,500,000
Total	100%		$2,500,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Collections SCADA and PLC Upgrade Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This program is to upgrade overall communication at the remote lift station sites. Initially, the program will implement required updates to the collections system back-end SCADA application. Once back-end programming is complete, user interface programming and replacement of end of life PLC and radio equipment at the remote lift station sites will be completed.

Basis for Priority:

The project will update the system to todays industry standards and improve reliability of a critical wastewater equipment.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,100,000
Project Balance	$ -	Additional Funding Required	$ 1,100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 200,000	$ 100,000				$ 300,000
Environmental	$ 50,000					$ 50,000
Construction	$ 150,000	$ 300,000	$ 300,000			$ 750,000
						$ -
TOTAL	$ 400,000	$ 400,000	$ 300,000	$ -	$ -	$ 1,100,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$400,000
			$0
Total	100%		$400,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: DCWWTP PLC Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This project is to replace remaining aged PLC controllers at the facility. The spare parts are becoming scarce and very expensive to repair. This project will replace and reprogram the end of life PLC hardware and associated SCADA application at DCWWTP.

Basis for Priority:

Replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 450,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 450,000
Project Balance	$ -	Additional Funding Required	$ 450,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services		$ 75,000	$ 75,000	$ 75,000		$ 225,000
Construction		$ 50,000	$ 50,000	$ 50,000		$ 150,000
Capitalized Labor		$ 25,000	$ 25,000	$ 25,000		$ 75,000
						$ -
TOTAL	$ -	$ 150,000	$ 150,000	$ 150,000	$ -	$ 450,000

Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: DCWWTP Process Control Device Integration

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This funding is designated to install process control hardware and instrumentation; project will provide system integration of existing monitoring and control devices; project will replace monitoring and control devices that are past the end of life cycle. The upgrades will aid in facility operations and improve efficiency of the system. DCWWTP lacks instrumentation and control devices in certain key areas of the plant. The improvements will contribute in energy savings at the plant. DCWWTP SCADA system lacks integration with CHWWTP, recycled water and radio system. This project will address needed remote facility integration and allow remote operations.

Basis for Priority:

CIP to replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 150,000
Project Balance	$ -	Additional Funding Required	$ 150,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Hardware	$ 35,000	$ 35,000				$ 70,000
Capitalized Labor	$ 15,000	$ 15,000				$ 30,000
Professional Services	$ 25,000	$ 25,000				$ 50,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ -	$ -	$ -	$ 150,000

Estimated Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$75,000
		$0
Total	100%	$75,000

Funding Comments: The project replaces existing facilities, therefore is funded by wastewater rates.

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: EDHWWTP PLC Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

Replacement of end of life PLC equipment at the El Dorado Hills Wastewater Treatment Plant.

Basis for Priority:

This project will replace end-of-life assets to ensure reliability and continual operation of the communication network servicing the El Dorado Hills Wastewater Treatment Plant.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:		Total Project Estimate:	$ 1,100,000
Project Balance	$ -	Additional Funding Required	$ 1,100,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 250,000				$ 250,000
Environmental		$ 50,000				$ 50,000
Construction			$ 400,000	$ 400,000		$ 800,000
TOTAL	$ -	$ 300,000	$ 400,000	$ 400,000	$ -	$ 1,100,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%	$	-
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: El Dorado Hills Lift Station Consolidation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The 2019 El Dorado Hills Collection System Modeling Project identified capacity issues within the system as well as lift station consolidation opportunities. Six lift stations on the western side of El Dorado Hills, bordering Folsom Lake, can potentially be consolidated to a larger lift station near the Brown's Ravine area. This project includes a Basis of Design Report to identify and describe necessary improvements to consolidate the six lift stations and compare to the alternative of continual operation and upgrades of the existing stations independently.

Basis for Priority:

Project will investigate operational efficiencies and methods to reduce Capital Improvement Expenditures via consolidating lift stations.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 300,000
Project Balance	$ -	Additional Funding Required	$ 300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 50,000			$ 200,000
Environmental			$ 100,000			$ 100,000
Construction						$ -
TOTAL	$ -	$ 150,000	$ 150,000	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: El Dorado Lift Station Site Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The El Dorado lift station is located adjacent to Pleasant Valley Road in the town of El Dorado. The site has a large vacant area that is currently used to store spare pipe segments and appurtenances for routine or emergency repairs of the collection system. This project will dedicate funding to design and construct material storage bays and improve access to the site. Additionally, the existing wastewater vactor dump station will be improved for maneuverability and odor containment.

Basis for Priority:

Improve efficiency and provide safe and adequate storage.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 200,000			$ 200,000
Environmental			$ 50,000			$ 50,000
Construction						$ -
TOTAL	$ -	$ -	$ 250,000	$ -	$ -	$ 250,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Ponderosa Heights Force Main Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The Ponderosa Heights force main was originally constructed in 1977 to convey wastewater from the Ponderosa Heights lift station in Shingle Springs. During exploratory activties, staff discovered the asbestos cement force main pipe in a degraded condition and is in need of replacement.

Basis for Priority:

This project will replace failing assets to ensure reliability and continual operation of the wastewater collection system.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,750,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,750,000
Project Balance	$ -	Additional Funding Required	$ 1,750,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 200,000				$ 200,000
Environmental		$ 50,000				$ 50,000
Construction			$ 750,000	$ 750,000		$ 1,500,000
TOTAL	$ -	$ 250,000	$ 750,000	$ 750,000	$ -	$ 1,750,000

Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Promontory Village Inflow & Infiltration Study

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The 2020 update of the El Dorado Hills Collection System Hydraulic Model indicated capacity issues in the Promontory Village subdivision. Flow monitoring indicates higher than normal peak flow rates which is typically due to inflow and infiltration (I&) within the collection system. If location(s) of I&I are determined then improvements will be focused on reducing peak wet weather flow rather than more costly system upgrades.

Basis for Priority:

The collection system model identified these gravity sewer pipelines as having capacity limitations. Performing an I&I study will attempt to located the source of additional flows during storm events. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 125,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 125,000
Project Balance	$ -	Additional Funding Required	$ 125,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design				$ 25,000	$ 100,000	$ 125,000
Environmental						$ -
Construction						$ -
TOTAL	$ -	$ -	$ -	$ 25,000	$ 100,000	$ 125,000

Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: SCADA Wastewater Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This funding is designated to be a rolling CIP to replace end of life cycle wastewater SCADA hardware District wide. This program would focus on replacing and reprogramming of the end of life PLC hardware and associated SCADA reconfigurations. Many sites are beyond the 15 year life expectancy for the PLC hardware.

Basis for Priority:

Rolling CIP to replace end of life cycle SCADA hardware, ensure service reliability and to reduce problem areas of the SCADA system causing overtime.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Hardware	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 200,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
Professional Services	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 45,000	$ 225,000
						$ -
TOTAL	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$100,000
			$0
Total	100%		$100,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 175,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
						$ -
						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED
Project Name: Wastewater Asset Replacement Program
Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

This is an annual program to replace wastewater assets that have failed or reached end of useful life. This program differs from ongoing maintenance programs in that the equipment, facilities, and labor attributed to these assets constitute a replacement of a capitalized asset. Assets to be replaced or upgraded under this program include, but are not limited to mechanical, electrical and instrumentation systems, treatment plant and lift station equipment, generators, and collection system assets that with replacement will extend the life of the associated system or facility. Items to be replaced each year will be prioritized using ongoing condition assessments and the asset management policies of the District.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 2,500,000
Cash flow through end of year:		Total Project Estimate:	$ 2,500,000
Project Balance	$ -	Additional Funding Required	$ 2,500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design						$ -
Environmental						$ -
Construction	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 2,500,000
TOTAL	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 2,500,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$500,000
Total	100%		$500,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Collection System Hydraulic Modeling

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The District commissioned two hydraulic modeling updates for the collection system; one for the El Dorado Hills system and one for the Deer Creek system. As new developments are presented to the District and as capital projects are completed, it is beneficial to update the model to confirm available capacity or update capacity on a system level.

Basis for Priority:

The collection system model identifies gravity sewer pipelines that have capacity limitations. If the capacity limitations are not corrected, sanitary sewer overflows could occur and future connections to the collection system will be limited.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Environmental						$ -
Construction						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2024	Amount
Wastewater FCCs	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Lift Station Upgrade Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The District currently maintains sixty wastewater lift stations. Twenty-nine of these lift stations are within the Deer Creek shed, and the remaining thirty-one are in the El Dorado Hills shed.

The age, condition, and capacity of each station varies significantly. In order to prioritize rehabilitation and replacement efforts District staff will continue to assess and prioritize repairs at deficient lift stations.

Basis for Priority:

This project provides replacement of failing components at this critical facility; thereby providing safe, reliable collection system assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 5,525,000
Cash flow through end of year:		Total Project Estimate:	$ 5,525,000
Project Balance	$ -	Additional Funding Required	$ 5,525,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 150,000	$ 100,000	$ 200,000		$ 450,000
Environmental		$ 25,000	$ 25,000	$ 25,000		$ 75,000
Construction			$ 1,500,000	$ 1,250,000	$ 2,250,000	$ 5,000,000
TOTAL	$ -	$ 175,000	$ 1,625,000	$ 1,475,000	$ 2,250,000	$ 5,525,000

Estimated Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Treatment Plant Assessments

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:** 10/23/23

Project Description:

The Deer Creek and El Dorado Hills Wastewater Treatment Plants were originally constructed in the 1960's and have undergone several expansions beginning in the early 1990's. This assessment will look at each of the plants individually and provide a roadmap for projects at the plants. Due to the overall age of the facilities, key elements of the existing treatment process need to be examined for rehabilitation or replacement to maintain permit compliance and capacity. The general goal and objectives are to review, evaluate, and assess the condition of the structures and equipment taking into account past and future maintenance activities and regulatory requirements. Additionally, recommendations will include timelines for use in future CIP projects, including budgetary level cost estimates for each recommendation offered. The assessments will be completed in phases similar to the recently completed Water Treatment Plant Assessments

Basis for Priority:

Determine replacement and improvement strategy to support regulatory compliance, improve service reliability, and reduce maintenance costs.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 700,000
Project Balance	$ -	Additional Funding Required	$ 700,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 200,000	$ 250,000	$ 250,000		$ 700,000
Environmental						$ -
Construction						$ -
TOTAL	$ -	$ 200,000	$ 250,000	$ 250,000	$ -	$ 700,000

Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: WWTP Process Improvement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This program is to perform minor modifications to civil, mechanical, and electrical components within the wastewater treatment plants. Modifications included in this program, but not limited to, variable frequency drives, cathodic protection, and reconfiguration of piping.

Basis for Priority:

This programmatic project will enhance reliability at the wastewater treatment plants.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 875,000
Cash flow through end of year:		Total Project Estimate:	$ 875,000
Project Balance	$ -	Additional Funding Required	$ 875,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 125,000
Environmental						$ -
Construction	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 750,000
TOTAL	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 175,000	$ 875,000

Estimated Funding Sources	Percentage	2024 Amount
Wastewater Rates	100%	$175,000
		$0
Total	100%	$175,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: WWTP Solids Handling Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The El Dorado Hills and Deer Creek Wastewater Treatment Plants both utilize a belt press to dewater solids from the treatment process. Both belt presses are past their useful life and are showing signs of deterioration. This project will analyze available soilds handling technologies and construct a cost effective solution to replace the belt press units.

Basis for Priority:

This project will replace deteriorating assets at the wastewater treatment plants.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 4,300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 4,300,000
Project Balance	$ -	Additional Funding Required	$ 4,300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 250,000				$ 250,000
Environmental		$ 50,000				$ 50,000
Construction			$ 2,000,000	$ 2,000,000		$ 4,000,000
						$ -
TOTAL	$ -	$ 300,000	$ 2,000,000	$ 2,000,000	$ -	$ 4,300,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

Recycled Water Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Storage Tank Replacement & Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This program consists of targeted replacement and rehabilitation of recyled water tanks tanks within the recycled water distribution system. The District operates 4 steel storage tanks, ranging in age from 14 to 21 years of age. This program is to identify specific tanks and reservoirs torehabilitate, replace, or upgrade to maintain service reliability. This program also includes tank recoating for the welded storage tanks. Program management expenditures identified include prioritizing and designing each tank and reservoir improvement project. Actual replacement and recoating costs for each individual tank and reservoir will be brought to the Board for specific approval.

Basis for Priority:

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 4,172,074
Cash flow through end of year:	$ -	Total Project Estimate:	$ 4,172,074
Project Balance	$ -	Additional Funding Required	$ 4,172,074

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Planning	$ 75,000	$ 100,000	$ 100,000	$ 100,000		$ 375,000
Construction/structural	$ 784,084	$ 1,088,510	$ 1,289,340	$ 635,140		$ 3,797,074
TOTAL	$ 859,084	$ 1,188,510	$ 1,389,340	$ 735,140	$ -	$ 4,172,074

Funding Sources	Percentage	2024	Amount
Recycled Water Rates	100%		$859,084
Total	100%		$859,084

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Water Asset Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This is an annual program to replace or upgrade recycled water assets and facilities that have failed, reached the end of useful life, or require increased operational efficiency or redundancy. The equipment, facilities, and labor attributed to these assets constitute a replacement or installation of a capitalized asset, which distinguishes this program from ongoing maintenance programs. Assets and facilities to be replaced or upgraded under this program include, but are not limited to, mechanical, electrical and instrumentation systems, pump station equipment, generators, and distribution system assets that with replacement or upgrade will extend the life of the associated system or facility. Items that need to be replaced or upgraded each year will be prioritized based on ongoing condition assessments and the District's asset management policies.

Basis for Priority:

Program purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 475,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 475,000
Project Balance	$ -	Additional Funding Required	$ 475,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 100,000
Environmental	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
Construction	$ 50,000	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 350,000
TOTAL	$ 75,000	$ 175,000	$ 75,000	$ 75,000	$ 75,000	$ 475,000

Funding Sources	Percentage	2024 Amount
Recycled Water Rates	100%	$75,000
		$0
Total	100%	$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Water Distribution Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The District owns and operates a recycled water distribution system that serves portions of El Dorado Hills and Cameron Park with reclaimed water. The recycled water system's original pipelines and appurtenances were installed in 1974 and are now in need of condition inspection and assessment to determine necessary replacements and improvements. This program will systematically develop projects to replace or rehabilitate most critical and high risk pipelines and appurtenances within the recycled distribution system.

Basis for Priority:

Program purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 925,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 925,000
Project Balance	$ -	Additional Funding Required	$ 925,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 45,000	$ 100,000				$ 145,000
Environmental	$ 5,000	$ 25,000				$ 30,000
Construction			$ 250,000	$ 250,000	$ 250,000	$ 750,000
TOTAL	$ 50,000	$ 125,000	$ 250,000	$ 250,000	$ 250,000	$ 925,000

Funding Sources	Percentage	2024	Amount
Recycled Water Rates	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recycled Water

Project Number: PLANNED

Project Name: Recycled Water Radio Path Design and Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path design would include radio study to determine the most optimal and reliable wireless communication options for the District's remote facilities. The design would include field radio path verification of the modeled radio telemetry design. This design will encompass recycled water facilities.

Basis for Priority:

Many remote facilities rely on antiquated serial radios. Quickly evolving technology requires EID to move to an IP based communication to retain maintainable parts. Performing large migrations without a proper design and proven concepts creates great risk for improper implementation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 75,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 75,000
Project Balance	$ -	Additional Funding Required	$ 75,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 35,000				$ 35,000
Construction		$ 25,000				$ 25,000
Capitalized Labor		$ 15,000				$ 15,000
						$ -
TOTAL	$ -	$ 75,000	$ -	$ -	$ -	$ 75,000

Funding Sources	Percentage	2024 Amount
Recycled Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

Hydroelectric Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 17028

Project Name: Flume 48 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

Flume 48 was originally constructed of wood in 1876 and supported by an un-mortared, hand-stacked rock bench located north of Highway 50 near Camp 5. In 1948, the wooden flume was completely replaced. District crews have been performing extensive maintenance work of the asset to extend the service life of the critically degraded structure until the full replacement can occur. The District is evaluating two replacement alternatives for this flume. Alternative 1 is to stabilize the hand-stacked rock bench utilizing stabilization measures and the degraded wood flume would be replaced with new concrete precast flume. Alternative 2 would be to construct a 500 foot tunnel between Flume 48 and Highway 50 and abandon approximately 700 feet of canal and 448 feet of elevated wood flume. Option 2, if feasible, could result in significantly lower construction costs but would require acquisition of an easement on an adjacent parcel and a FERC boundary adjustment. The District was able to purchase the parcel that the majority of the tunnel would be placed in 2018. This parcel will also be used as a staging area whether or not the tunnel option is feasible. A geotechnical study was conducted in 2019 and determined that Option 2 is feasible. During the design process the costs of Options 1 and 2 will be determined. The costs below reflect completing alternatives analysis and design to get the project ready for construction, however construction costs have been deferred assuming the Sly Park Intertie is constructed thereby increasing the reliability of the water system should we have an unplanned outage of the flume. Funding will be timed with a future bond issuance that is yet to be determined.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that may result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the District's water supply would be out of service for an extended period to make emergency repairs resulting in possible interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 461,912	Expenditures through end of year:	$ 457,224
Spent to Date:	$ 432,224	2024 - 2028 Planned Expenditures:	$ 700,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 1,157,224
Project Balance	$ 4,688	Additional Funding Required	$ 695,312

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000	$ 150,000	$ 150,000	$ 150,000		$ 500,000
Environmental		$ 50,000	$ 100,000	$ 50,000		$ 200,000
Construction						$ -
Warranty-FERC QCIP						$ -
TOTAL	$ 50,000	$ 200,000	$ 250,000	$ 200,000	$ -	$ 700,000

Estimated Funding Sources	Percentage	2024 Amount
Water FCCs	53%	$24,015
Water Rates	47%	$21,296
		$0
Total	100%	$45,312

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 18010

Project Name: Penstock Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

Water is provided from Forebay Reservoir to the El Dorado Powerhouse through a 60-inch diameter penstock for power generation. FERC regulations and our standard operating procedures require the penstock to be inspected and assessed at regular intervals. This project was initiated in 2015 to perform a comprehensive assessment of the penstock and determine if any upgrades or replacements need to be made for continued reliability. The condition assessment continued into 2017 and identified the following needed improvements:

1) Improving access in the steepest section of penstock to support conducting O&M and capital improvements safely
2) Restoring grounds across compression couplings in the low-pressure section of penstock;
3) Relining the interior of the surge tank and the buried section between the penstock tunnel and surge tank at welded joints where the original lining was applied in the field;
4) Investigating restoring the tramway to service along the high-pressure penstock;
5) Improving the anchoring of the surge tank to meet seismic loading;

Work planned for 2024 includes construction for improving access on the steepest section of the penstock; In addition, 2024 work will include preparing plans and specifications, and conducting environmental review/permitting for subsequent phases. Relining of the surge tank and portions of the penstock are scheduled for 2025. The cost of improvements beyond 2024 will be updated upon completion of design for later phases. Penstock stabilization is being planned and performed under CIP 21016.

Basis for Priority:

The project is to maintain penstock safety and service reliability. The ability for the District to receive an average $4 million annually in power generation revenues depends on the availability of the penstock. The penstock is one of the highest pressure and oldest in the United States.

Project Financial Summary:			
Funded to Date:	$ 360,000	Expenditures through end of year:	$ 122,671
Spent to Date:	$ 122,671	2024 - 2028 Planned Expenditures:	$ 745,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 867,671
Project Balance	$ 237,329	Additional Funding Required	$ 507,671

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 30,000	$ 20,000	$ 10,000	$ 10,000	$ 10,000	$ 80,000
Design	$ 50,000	$ 50,000	$ 60,000	$ 50,000	$ 50,000	$ 260,000
Construction	$ 120,000	$ 130,000	$ 115,000	$ 20,000	$ 20,000	$ 405,000
						$ -
TOTAL	$ 200,000	$ 200,000	$ 185,000	$ 80,000	$ 80,000	$ 745,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 19021

Project Name: Canal RTU Replacement Control Sites

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement of alarm and spillway control sites located along the Project 184 canal. The current system has served the District well, unfortunately it is no longer supported by a modern computer. Costs will be revised when design is completed.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability and operational capabilities of the system. Additionally, new replacement parts are not available due to obsolescence. This system cannot be supported on a modern computer.

Project Financial Summary:			
Funded to Date:	$ 80,000	Expenditures through end of year:	$ 48,214
Spent to Date:	$ 48,214	2024 - 2028 Planned Expenditures:	$ 1,125,000
Cash flow through end of year:		Total Project Estimate:	$ 1,173,214
Project Balance	$ 31,786	Additional Funding Required	$ 1,093,214

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design/Planning	$ 125,000					$ 125,000
Construction		$ 300,000	$ 300,000	$ 300,000		$ 900,000
Capitalized Labor	$ 25,000	$ 25,000	$ 25,000	$ 25,000		$ 100,000
TOTAL	$ 150,000	$ 325,000	$ 325,000	$ 325,000	$ -	$ 1,125,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$118,214
		$0
Total	100%	$118,214

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 19024H

Project Name: Echo Conduit Rehabilitation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

The Echo Conduit was installed in 1922 and is comprised of approximately 2,320 lineal feet of 36" diameter steel pipeline, 750 lineal feet of canal, and 1,106 lineal feet of tunnel. In 1953 and 1967, sections of the 36-inch diameter pipe were replaced. After experiencing a tunnel collapse in 2005, the timber-reinforced tunnel was lined with a 36" diameter HDPE pipeline, including filling the annular space with grout. The pipe is overall degraded and misshaped from snow load and rock fall, and is not a candidate for slip lining. While the pipeline has been maintained serviceable with weld repairs and neoprene patches held with steel band strapping, the extent of pipe wall thinning and deformation is resulting in diminishing options for repair. If the pipeline were to rupture, it could cause significant environmental damage, affect traffic safety on Highway 50 and diminish District water supplies for consumptive and power generation use. Typically over 1,500 acre feet of water is drawn from storage or directly diverted annually from Echo Lake for water supply and power generation. Conceptual engineering for the foundation, elevated section, pipeline, and consideration of constructability was completed in 2021.

Damage from snow load occurred during winter 2022/2023 necessitating emergency replacement of the trestle section consisting of 200 lf, and an additional on-grade section upstream for 400 lf. Planning, constructability and design for remaining sections of pipe including planning for pipe installation in the canal section is planned for 2024. Converting canal section to pipeline effectively improves capacity over the entire range of operating conditions, leading to fuller utilization of storage during the normal 3-week drawdown period between Labor Day and annual outage season starting in October. The construction schedule for replacing the balance of pipeline and installing pipe in the canal section will be established according to information gathered during annual condition assessments.

Basis for Priority:

Maintaining operability of Echo Conduit provides the District continued use of this pre-1914 water right for consumptive water supply and power generation. Replacing the conduit restores diminished capacity as has occurred over time, and improves the District's ability to utilize its storage and direct diversion water rights.

Project Financial Summary:			
Funded to Date:	$ 100,000	Expenditures through end of year:	$ 86,579
Spent to Date:	$ 86,579	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 166,579
Project Balance	$ 13,421	Additional Funding Required	$ 66,579

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 30,000					$ 30,000
Design	$ 50,000					$ 50,000
Construction						$ -
						$ -
TOTAL	$ 80,000	$ -	$ -	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$66,579
			$0
			$0
Total	100%		$66,579

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN Program: Hydroelectric

Project Number: 19031
Project Name: Silver Lake Dam Replacement
Project Category: Regulatory Requirements

Priority: 1 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

The long-term reliability of the dam came into question in the spring of 2015 when a sink hole was discovered. In response, DSOD restricted the reservoir level, and the District conducted emergency repairs and a geotechnical investigation. The likely cause of the sink hole was the creation of voids in the dam as a result of rotting interior logs that have been encapsulated as fill and were part of the original rock and soil filled timber crib structure constructed in 1876. Other evidence of voids occurring within the fill of the dam is uneven crest settlement and shifting locations of leakage discharge. In addition, the upstream gunite face of Silver Lake Dam is at the end of its useful life and no longer reliable. Repairs have been employed since the late 1990's to stem leakage and extend the life of the 50-year old gunite. However, the gunite continues to thin, crack and crumble making repairs increasingly less durable and sustainable. Unforeseeable periods of leakage have also caused delayed filling or early drawdown of the reservoir resulting in loss of water supply and power generation. The leakage through the dam has to be controlled to acceptable rates in order to prevent creation of more voids in the dam as caused by soil particle migration (piping).

The District has evaluated rehabilitation/replacement alternatives to remediate the three major defects (upstream face, interior fill, spillway capacity). The alternatives analysis was submitted to FERC and DSOD in fall 2016, and District staff met with their representatives in January 2017. FERC and DSOD agreed with the District's preliminary findings that the most effective, reliable and least cost alternative is to replace the dam. The project will need to undergo a progression of design and environmental activities over the next several years. In 2022, the Design Criteria Memorandum and subsurface exploration plan was completed, and subsurface exploration was conducted by performing drilling and seismic refraction surveys to support the next phases of design. In 2023, 30% design and initial environmental review are being performed. The project will require environmental assessment under CEQA, NEPA and a FERC License Amendment, as well as various federal, state and local permits. As these steps and the design evolve to better define the project, the District will have a basis for estimating construction costs (preliminary estimate included at this time). Construction is scheduled for 2027. Funding is expected to be subject to a future bond issuance with possible grant support.

Basis for Priority:

Compliance with FERC and DSOD dam safety program requirements.

Project Financial Summary:			
Funded to Date:	$ 3,256,395	**Expenditures through end of year:**	$ 844,419
Spent to Date:	$ 744,419	**2024 - 2028 Planned Expenditures:**	$ 49,880,000
Cash flow through end of year:	$ 100,000	**Total Project Estimate:**	$ 50,724,419
Project Balance	$ 2,411,976	**Additional Funding Required**	$ 47,468,024

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Environmental	$200,000	$300,000	$ 700,000			$ 1,200,000
Design/CM	$500,000	$ 1,680,000	$ 1,500,000	$ 2,500,000	$ 2,500,000	$ 8,680,000
Construction				$ 20,000,000	$ 20,000,000	$ 40,000,000
TOTAL	$ 700,000	$ 1,980,000	$ 2,200,000	$ 22,500,000	$ 22,500,000	$ 49,880,000

Estimated Funding Sources	Percentage	2024	Amount
2027 Bond	100%		$0
			$0
Total	**100%**		**$0**

Funding Comments: Seeking Grant opportunities; Construction Cost is Order-of-Magnitude until 30% Design is completed in September

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21003

Project Name: Diversion Repeater Site

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

The project is to design and implement more reliable communication path for the diversion facility and for the Project 184 upper country radio system. The repeater site would serve as a primary communication pathway and would be independent of unreliable service from PG&E and AT&T.

Basis for Priority:

The project will improve reliability of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 3,194
Spent to Date:	$ 3,194	2024 - 2028 Planned Expenditures:	$ 175,000
Cash flow through end of year:		Total Project Estimate:	$ 178,194
Project Balance	$ 46,806	Additional Funding Required	$ 128,194

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 25,000					$ 25,000
Construction	$ 100,000					$ 100,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 175,000	$ -	$ -	$ -	$ -	$ 175,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$128,194
		$0
		$0
Total	100%	$128,194

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21004

Project Name: A18 Fiber Communication Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This project is to install fiber optic line from the new A18 building to the Upper Butterfly Valve House. Second phase of the project will replace end of life cycle fiber optic line that spans to the Powerhouse. The new fiber optic line will drastically improve the efficiency and reliability of the powerhouse operation and maintaining the Forebay lake level.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability and operational capabilities of the system. The existing fiber is aged and has no available spare fiber pairs.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 3,974
Spent to Date:	$ 3,974	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 303,974
Project Balance	$ 46,026	Additional Funding Required	$ 253,974

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 50,000					$ 50,000
Construction	$ 200,000					$ 200,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$253,974
		$0
		$0
Total	100%	$253,974

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21008

Project Name: Diversion - Facility Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The project is to implement a more reliable power distribution from utility and backup generator. Currently the site has multiple voltage feeds, large voltage swings and suffers from load imbalances. The load imbalance and voltage swings are causing faster equipment degradation and increasing maintenance cost. Consolidating power to a single feed will alleviate the current problems and improve reliability of the site. The current generator is no longer sized adequately for the current load at the facility. This project will include installation of a larger generator. Otherfacility improvements include relocating the air compressor/fish screen blower system outside of the existing control room to reduce heat load to electrical and network equipment and enclosing the compressor tank to prevent temperature issues.

The project was awarded for Construction in April 2023. The building and generator will be installed in the fall of 2023. Construction is expected to continue into spring of 2024 due to electrical procurement issues.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility. This project started Construction in September 2023.

Project Financial Summary:			
Funded to Date:	$ 1,378,727	**Expenditures through end of year:**	$ 1,075,271
Spent to Date:	$ 275,271	**2024 - 2028 Planned Expenditures:**	$ 300,000
Cash flow through end of year:	$ 800,000	**Total Project Estimate:**	$ 1,375,271
Project Balance	$ 303,456	**Additional Funding Required**	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Capitalized Labor	$ 50,000					$ 50,000
Construction Inspection	$ 50,000					$ 50,000
Construction	$ 200,000					$ 200,000
						$ -
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$0
Water Rates	47%		$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21009

Project Name: Diversion - Fish Ladder Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The project is to design and add a new flow meter to precisely and more instantaneously measure instream flow releases reducing the over-release caused by the existing controls, and increasing the water that can be diverted into the El Dorado Canal and improve the fish ladder as required by CA Dept. of Fish & Wildlife. Schedule and costs will be updated as the project progresses.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 20,093
Spent to Date:	$ 20,093	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:		Total Project Estimate:	$ 120,093
Project Balance	$ 29,907	Additional Funding Required	$ 70,093

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Permitting		$ 50,000				$ 50,000
Design/Permitting			$ 50,000			$ 50,000
Construction						$ -
						$ -
TOTAL	$ -	$ 50,000	$ 50,000	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$0
Water Rates	47%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21013

Project Name: Flumes 45A, 46A, 47A, and 47B Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

The CIP will seek design services for Flume 45A, 46A, 47A, and 47B. These four flumes are similar in nature in that they are between 128 to 200 foot long elevated flumes located on previous landslide locations. A brief description of the flumes are as follows:

- Flume 45A is 155 feet in length and is constructed of wood supports with fiberglass flume section and was last replaced in 2001.
- Flume 46A is 128 feet in length and is a wood flume with timber supports and was last replaced in 2011.
- Flume 47A is 201 feet in length and is a wood flume with timber supports and was last replaced in 1990.
- Flume 47b is 128 feet in length and is a wood flume with timber supports and was last replaced in 1990.

Since these flumes are similar in nature one general design has been done for all four flumes. Priority and costs were developed with the Canal and Flume Assessment Studies. Costs will be updated as design progresses.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 553,268	Expenditures through end of year:	$ 386,802
Spent to Date:	$ 386,802	2024 - 2028 Planned Expenditures:	$ 2,000,000
Cash flow through end of year:		Total Project Estimate:	$ 2,386,802
Project Balance	$ 166,466	Additional Funding Required	$ 1,833,534

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Construction 45A						$ -
Construction 46A						$ -
Construction 47A						$ -
Construction 47B					$ 2,000,000	$ 2,000,000
TOTAL	$ -	$ -	$ -	$ -	$ 2,000,000	$ 2,000,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$0
Water Rates	47%		$0
			$0
Total	100%		$0

Funding Comments:

2024 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: 21016

Project Name: Penstock Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

Water is provided from Forebay Reservoir to the El Dorado Powerhouse through a 60-inch diameter penstock for power generation. The penstock tapers and bifurcates as it approaches the powerhouse. FERC regulations and our standard operating procedures require the penstock condition and suitability for reliable service to be assessed through inspection and comprehensive evaluations at regular intervals. This project was initiated in 2015 to perform a comprehensive assessment of the penstock and determine if any upgrades or replacements need to be made for continued reliability. The condition assessment continued into 2017 and identified the following needed improvements under this Penstock Stabilization CIP:

1) Stabilizing the bench and slopes above and below the penstock downstream of the penstock tunnel section where rockfall and landslide potential exists - planned for 2025;
2) Performing drainage improvements to the high-pressure penstock section where a channel continues to erode including around saddles and anchor blocks - planned for 2025

The geotechnical assessment and design are in-progress, and will continue into early 2024. Concurrently, the District will conduct environmental review/permitting such that stabilization and drainage improvements can be constructed in 2025. Other penstock improvements are being planned and performed under CIP 18010.

Basis for Priority:

The project is to maintain penstock stabilization and service reliability. The ability for the District to receive an average $4 million annually in power generation revenues depends on the reliability of the penstock. The high-head section of penstock operates up to 830 psi, and is the original hammer-forge welded steel pipe installed in 1924.

Project Financial Summary:			
Funded to Date:	**$ 400,611**	**Expenditures through end of year:**	**$ 170,840**
Spent to Date:	**$ 170,840**	**2024 - 2028 Planned Expenditures:**	**$ 770,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 940,840**
Project Balance	**$ 229,771**	**Additional Funding Required**	**$ 540,229**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning	**$ 30,000**	**$ 20,000**	**$ 10,000**			**$ 60,000**
Design	**$ 50,000**	**$ 50,000**	**$ 60,000**			**$ 160,000**
Construction		**$ 450,000**	**$ 100,000**			**$ 550,000**
						$ -
TOTAL	**$ 80,000**	**$ 520,000**	**$ 170,000**	**$ -**	**$ -**	**$ 770,000**

Estimated Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21028

Project Name: Powerhouse Automation Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

The project is to design, replace and reprogram end of life hydro-turbine governors, PLC hardware, and related SCADA reconfigurations.

Basis for Priority:

The project will enhance reliability of a critical power generation facility. This hardware is failing, and posing a service reliability and maintenance issue. The life of this equipment is cycling out. The original installation took place over 25 years ago. Parts for these units are no longer manufactured, and they are difficult to service.

Project Financial Summary:			
Funded to Date:	$ 269,460	Expenditures through end of year:	$ 266,792
Spent to Date:	$ 126,792	2024 - 2028 Planned Expenditures:	$ 575,000
Cash flow through end of year:	$ 140,000	Total Project Estimate:	$ 841,792
Project Balance	$ 2,668	Additional Funding Required	$ 572,332

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design						$ -
Construction		$ 500,000				$ 500,000
Capitalized Labor	$ 75,000					$ 75,000
TOTAL	$ 75,000	$ 500,000	$ -	$ -	$ -	$ 575,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$72,332
		$0
		$0
Total	100%	$72,332

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 22014

Project Name: Flume 45 Section 3 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This section of Flume 45 is an elevated wood flume approximately 940 feet in length and last replaced in 2001. This portion of the flume was constructed to span a section of the historic rock bench that had previously failed and replaced by PG&E. Because of the historic rock wall, the design will need to be approved by the State Historic Preservation Office. The design will be finalized and the wall will be monitored until construction funding is scheduled.

Basis for Priority:

The flume will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 776,523	Expenditures through end of year:	$ 407,250
Spent to Date:	$ 257,250	2024 - 2028 Planned Expenditures:	$ 540,000
Cash flow through end of year:	$ 150,000	Total Project Estimate:	$ 947,250
Project Balance	$ 369,273	Additional Funding Required	$ 170,727

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 400,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 440,000
Environmental	$ 100,000					$ 100,000
Construction						$ -
						$ -
TOTAL	$ 500,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 540,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$69,285
Water Rates	47%		$61,442
			$0
Total	100%		$130,727

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 22030

Project Name: Flume 47A Replacement

Project Category: Reliability & Service Level Improvements

Priority:	2	PM:	Carrington	Board Approval:	10/23/23

Project Description:

Flume 47A is a wood flume with timber supports approximately 201 feet in length and last replaced in 1990. Design is complete and the replacement of this flume section is scheduled to occur during the 2024 scheduled canal outage.

Basis for Priority:

The flumes will continue to deteriorate potentially causing flume failures that would result in significant impacts to the public, Highway 50, and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 100,000	Expenditures through end of year:	$ 40,924
Spent to Date:	$ 30,924	2024 - 2028 Planned Expenditures:	$ 3,200,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 3,240,924
Project Balance	$ 59,076	Additional Funding Required	$ 3,140,924

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 3,200,000					$ 3,200,000
						$ -
TOTAL	$ 3,200,000	$ -	$ -	$ -	$ -	$ 3,200,000

Funding Sources	Percentage	2024 Amount
Water FCCs	53%	$1,664,690
Water Rates	47%	$1,476,234
		$0
Total	**100%**	**$3,140,924**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 23016

Project Name: Camp 2 Structure

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The District maintained a residence at Camp 2, near the Plum Creek siphon, along Project 184. This residence burned in 2021 during the Caldor Fire. The Camp 2 location is critical for accessing Plum Creek Siphon House as well as an access point for the Project 184 conveyance system. Staff desires to rebuild a structure for storage adjoined with a warming shed, water, and wastewater service in lieu of a full residence. This project will include design, necessary permits, and construction of the Camp 2 Structure. District staff anticipates insurance reimbursement.

Basis for Priority:

This project will replace a damaged asset necessary for the operation and maintenance of Project 184.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 250,000
Project Balance	$ -	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 75,000			$ 75,000
Environmental			$ 25,000			$ 25,000
Construction			$ 150,000			$ 150,000
						$ -
TOTAL	$ -	$ -	$ 250,000	$ -	$ -	$ 250,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Diversion - A11 Flow Control

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The project is to implement a more reliable and accurate flow control method. The site currently has two over sized gates the struggle and regularly fail to control the facilty during low flow periods. After hours time is required of staff to regualy troubleshoot and keep in service gates 1 & 2 of the canal flow.

A study was done by Water Works Engineering to determine the correct gate sizes and the limitations of the current gates. Their study confirmed that the acutators that are installed are in fact being used in an incorrect application and that the gates are too big to shave off the revenue generating flow that the Disitrict requires during low flow periods. Their study recommends to add a third smaller gate to be used as a fine tuning device during low flows. Reinforcement of the existing dam will be required.

Costs have been updated based on final design and the design engineers estimate. Project is scheduled to bid early next year for a Fall construction.

Basis for Priority:

The project will improve reliability and improve operational capabilities of a critical water facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:		Total Project Estimate:	$ 80,000
Project Balance	$ -	Additional Funding Required	$ 80,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design	$ 5,000					$ 5,000
Construction	$ 75,000					$ 75,000
						$ -
TOTAL	$ 80,000	$ -	$ -	$ -	$ -	$ 80,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$80,000
			$0
			$0
Total	100%		$80,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: 14 Mile Tunnel Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

14-Mile Tunnel is approximately 490 feet long and delivers water from the Project 184 canal, underneath Forebay Road to the Forebay Reservoir. Due to water intrusion, the concrete near the upstream portal is beginning to weaken. The project will stabilize this section of the tunnel after the approved Forebay waterline replacement should eliminate the water intrusion. Construction cost estimates will be refined as the design progresses.

Basis for Priority:

The degradation of the existing concrete will continue to weaken the tunnel support and will lead to the failure of the upstream portion of the tunnel. This failure will mean that 1/3 of the Districts water supply will not be able to get to Forebay Reservoir for water consumption and hydroelectric generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 2,200,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 2,200,000
Project Balance	$ -	Additional Funding Required	$ 2,200,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design	$ 200,000					$ 200,000
Construction		$ 2,000,000				$ 2,000,000
						$ -
TOTAL	$ 200,000	$ 2,000,000	$ -	$ -	$ -	$ 2,200,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$106,000
Water Rates	47%		$94,000
			$0
Total	100%		$200,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Annual Canal and Flume Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:** 10/23/23

Project Description:

Canals and flumes are assessed annually by District staff to assess and prioritize necessary improvements that will be implemented during the annual Canal outage. These improvements are needed to extend the service life of the asset and maintain system reliability. Improvements to the degraded canal and flume sections include materials, concrete, shotcrete, helicopter support, equipment, and District crew labor. Canal rehabilitation, flume, and spillway improvements are necessary in order to maintain reliability of the water supply. Annual system improvements will be determined by District Hydro Operations each spring for implementation to be achieved during the scheduled Canal outage. Expenditures for 2024, 2025, 2026, 2027, 2028 will include $75,000 for canal & flume maintenance such as re-lining and concrete repairs. Expenditures for 2024, will include $425,000 for canal & flume maintenance such as re-lining and concrete repairs. Expenditures for 2025, 2026, 2027, and 2028 will include $300,000 for canal & flume maintenance such as re-lining and concrete repairs.

Basis for Priority:

These are projects that provide measurable advancement towards attaining the objectives of the District, but over which the District has a moderate level of control as to when they should be performed.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ 93,340
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 1,625,000
Cash flow through end of year:	$ 93,340	Total Project Estimate:	$ 1,718,340
Project Balance	$ 363,994	Additional Funding Required	$ 1,261,006

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 425,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,625,000
						$ -
TOTAL	$ 425,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,625,000

Estimated Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$32,333
Water Rates	47%		$28,673
			$0
Total	100%		$61,006

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Annual Reservoir and Dam Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:** 10/23/23

Project Description:

The District dams and reservoirs are in need of upgrades to extend their life and comply with safety standards. Many of these improvements are follow-up items/requirements resulting from inspections performed by staff, FERC and DSOD dam safety personnel in order to meet dam safety standards. Work planned for 2024 includes the following:
- Caples Lake Auxiliary Dam - Repair spalling concrete ($30K)
- Echo Lake - Restore rock armoring at the base of the upstream gunite face to eliminate undercutting by wave action ($35K)
- Weber Dam - Rehabilitate upstream dam face ($20K)
- Lake Aloha Dam - Develop plan for adding remote control to outlet gate ($30K) -

Repair spalling to Stream Gage Weirs A-6 in Caples Creek and A-9 in Silver Fork American River ($50K)
For 2025, 2026, 2027, and 2028 funds will be used to conduct minor repairs on the dams as waranted.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 365,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 365,000
Project Balance	$ -	Additional Funding Required	$ 365,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 30,000					$ 30,000
Design						$ -
Construction	$ 135,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 335,000
						$ -
TOTAL	$ 165,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 365,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$165,000
		$0
		$0
Total	100%	$165,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Camp 5 Generator Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

The project is to design and implement more reliable power distribution from utility and backup generator. The site currently has multiple voltage feeds, large voltage swings, and suffers from load imbalances. The load imbalance and voltage swings are accelerating equipment degradation and increasing maintenance cost. The current generator is no longer sized adequately for the current load at the facility. This project would require installation of a larger generator.

Basis for Priority:

The project will improve power reliability to the facility.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 300,000
Project Balance	$ -	Additional Funding Required	$ 300,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 50,000				$ 50,000
Construction			$ 250,000			$ 250,000
						$ -
TOTAL	$ -	$ 50,000	$ 250,000	$ -	$ -	$ 300,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Ditch SCADA Hardware Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement sites are: Crawford Ditch, North Fork Ditch, Camp Creek Ditch, and associated repeater radio system at Reservoir B. This system has served the district well and is no longer supported. This CIP will replace the existing system over multiple years.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability of the system. Additionally, new replacement parts are not available due to obsolescence. This system is not longer supported on a modern computer.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 200,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 200,000
Project Balance	$ -	Additional Funding Required	$ 200,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 50,000			$ 50,000
Construction				$ 150,000		$ 150,000
TOTAL	$ -	$ -	$ 50,000	$ 150,000	$ -	$ 200,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%	$	-
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Flume 4 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

Flume 4 is approximately 200 feet in length and is an elevated flume that spans a steep portion of the forest. This elevated section could not be quickly replaced after the Caldor Fire and thus underwent repairs. The wood substructure was constructed in 1993 and the wood members are currently undersized. In addition to the elevated section, there is just upstream of Flume 4 a section of canal that has a rock cribbed wall that has experienced a failure in 2022. This cribbed wall would be replaced with an MSE wall and have the drainage system upgraded. Funding is to initiate design in 2024. No construction costs are indicated.

Basis for Priority:

Fume 4 will continue to deteriorate potentially cause a flume failures that would result in significant impacts to the public and the South Fork of the American River. Additionally, 1/3 of the Districts water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning		$ 50,000				$ 50,000
Design		$ 200,000	$ 250,000			$ 450,000
Construction						$ -
						$ -
TOTAL	$ -	$ 250,000	$ 250,000	$ -	$ -	$ 500,000

Funding Sources	Percentage	2024	Amount
Water FCC's	53%		$0
Water Rates	47%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for the District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 215,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 215,000
Project Balance	$ -	Additional Funding Required	$ 215,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 35,000	$ 50,000	$ 35,000	$ -	$ 35,000	$ 155,000
Capitalized Labor	$ 15,000	$ 15,000	$ 15,000	$ -	$ 15,000	$ 60,000
						$ -
						$ -
TOTAL	$ 50,000	$ 65,000	$ 50,000	$ -	$ 50,000	$ 215,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Equipment and Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** M. Heape **Board Approval:** 10/23/23

Project Description:

This is a program to replace equipment and facilities used in the hydro system that have failed or reached end of useful life. Funding will be used for hydro facilities rehabilitation, such as building improvements that will extend the life of the asset. In 2024, the Building J and Krakoski building need to be repaired. Improvements to Camp 5 include materials/sand shed, as well as other hydro facility assets.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Lakes Remote Telemetry Units Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This project is to replace end of life cycle SCADA Hardware, specifically the Moscad L RTUs and level/flow measurement equipment. Replacement is for monitoring sites at Echo Lake, Aloha Lake, Silver Lake and associated radio communication equipment. This system has served the district well and is no longer supported.

Basis for Priority:

This equipment is at the end of its life cycle and warrants replacement to retain the reliability of the system. Additionally, new replacement parts are not available due to obsolescence. This system cannot be supported on a modern computer.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 325,000
Cash flow through end of year:		Total Project Estimate:	$ 325,000
Project Balance	$ -	Additional Funding Required	$ 325,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000					$ 50,000
Construction		$ 200,000				$ 200,000
Capitalized Labor		$ 75,000				$ 75,000
						$ -
TOTAL	$ 50,000	$ 275,000	$ -	$ -	$ -	$ 325,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$50,000
			$0
			$0
Total	100%		$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Powerhouse Equipment and Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This is a program to replace equipment used in the powerhouse that have failed or reached end of useful life. Funding will be used for powerhouse equipment rehabilitation, such as replacing the relay protection systems (Beckwith), rebuilding cooling pumps, replacing/rebuilding HPS systems, instrumentation, trip sensor and other aged out and critical components.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000
						$ -
TOTAL	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 375,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$75,000
Total	100%		$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY 26

Project Name: Powerhouse Turbine Runner Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 10/23/23

Project Description:

The Unit 1 and Unit 2 Pelton turbine runners (impulse turbines or water wheels) were installed in 1958 with a life expectancy of 30 - 40 years depending on operating and water conditions. It requires approximately 18 months to procure a new turbine runner if one were to fail. A spare turbine runner can be used for either of the two turbine-generator units as the units are identical. The estimated revenue loss of waiting for a new runner to be manufactured is $3 million based on loss of availability of one 10 MW unit for 18 months. The existing turbine runners are constructed of carbon steel and are not as resilient to wear and cracking as modern runners constructed of stainless steel. The District expended approximately $150,000 in welding and restoration of the two turbine runners in 2016. The primary risk of continuing to extend the service life of the aging turbine runners is that they can incur a sudden failure from stresses induced by previous weld repairs, and associated with the accumulation of start-ups and shutdowns of the turbine-generator units. While staff carefully inspects and monitors the condition of the runners for early warning signs, and makes repairs to areas subject to cracking and wear, the risk of sudden failure increases with time. In 2023, the District contracted for a detailed inspection of the turbines with results supporting the need for replacement. The 2024 costs are to explore options for replacing the turbine runner with a modern design which will also consider improvements in efficiency (to produce more power per unit of water over a greater span of its operating range). The 2024 work will also address upgrades to the needle/servo assembly where two previous failures have occurred and to the unit alignment where differences in hydraulic and magnetic center are causing excesive wear to the bearings.

Basis for Priority:

Both generating units have turbine runners that have operated significantly past their predicted service life, and are subject to failure. The revenue loss in waiting for a new runner to be manufactured is approximately $3 million. Staff believes it is prudent to study options for replacing both runners together in consideration of: 1) Lost revenue associated with a risk of failure that increases over time; 2) Manufacturing cost savings of two runners together; and 3) Potential reliability/efficiency improvements. Preliminary indication from turbine suppliers is that efficiency improvements of new runners could yield additional annual generation revenue on the order of $100,000 - $200,000/year. This estimate would be updated with higher confidence when the District seeks proposals.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 36,499
Spent to Date:	$ 34,999	2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ 1,500	Total Project Estimate:	$ 136,499
Project Balance	$ 13,501	Additional Funding Required	$ 86,499

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning	$ 50,000	$ 50,000				$ 100,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ 50,000	$ -	$ -	$ -	$ 100,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$36,499
		$0
		$0
Total	100%	$36,499

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Spill 3 Crib Wall Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** TBD **Board Approval:** 10/23/23

Project Description:

This section of canal has Spillway No. 3 and is located on the south side of the American River above the USFS 30-Mile Tract subdivision. Spillway No. 3 is no longer used due to the presence of erosive soils in the spillway channel. The spillway structure and canal bench at this location is supported by an earth fill bench and degraded timber crib wall, which was identified for replacement during a recent comprehensive inspection of all flumes and spillways in the Project 184 conveyance between Kyburz and Forebay Reservoir. In 2018 District staff placed temporary measures to buttress the canal to hold in place until design and construction can be completed. Priority for this project was developed with the Canal and Flume Assessment studies. Construction costs are not known. Cost will be developed as design progresses.

Basis for Priority:

The canal has temporary measures in place to keep the integrity in place. Failures that would result in significant impacts to environmentally sensitive areas. Additionally, one third of the District's water supply would be out of service for an extended period to make emergency repairs resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 325,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 325,000
Project Balance	$ -	Additional Funding Required	$ 325,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning/Env			$ 25,000			$ 25,000
Design			$ 100,000	$ 200,000		$ 300,000
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ 125,000	$ 200,000	$ -	$ 325,000

Funding Sources	Percentage	2024	Amount
Water FCCs	53%		$0
Water Rates	47%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2024 Canal Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This project will evaluate the Project 184 canal and provide a condition assessment report. This report will be used to categorize the canal system for future CIP projects. Canal assessments are planned to occur every 5 years to give an overall condition of the system and to prioritize projects.

Basis for Priority:

The canal system was last assessed in 2018. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a canal breach resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:		Total Project Estimate:	$ 50,000
Project Balance	$ -	Additional Funding Required	$ 50,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 50,000					$ 50,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	100%	$50,000
		$0
		$0
Total	100%	$50,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2025 Canal Release Points Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This project will evaluate the Project 184 canal release points and provide a condition assessment report. This report will be used to categorize the release points system for future CIP projects. Canal release point assessments are planned to occur every 5 years to give an overall condition of the system, track changes, and to prioritize projects.

Basis for Priority:

The canal release points were evaluated in 2021. It takes 14 hours for water to travel from the American River Diversion to Forebay Reservoir, making spillway releases at intervals along the canal a critical component of the Project 184 operations. Evaluating the release points for erosion and overall condition is required by Condition No. 41 of our FERC license.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 80,000
Cash flow through end of year:		Total Project Estimate:	$ 80,000
Project Balance	$ -	Additional Funding Required	$ 80,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design		$ 80,000				$ 80,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ 80,000	$ -	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2027 Flume Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This project will provide structural and geotechnical evaluation on the wooden Flumes and geotechnical evaluation on the concrete flumes. Flume material, year built and length will also be verified and included in the update. This study is set for every five years to evaluate the flumes.

Basis for Priority:

The Project 184 flumes have not been fully evaluated by structural and geotechnical experts since around 2012. Flumes were last inspected in 2022. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a flume failure resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 49,069
Spent to Date:	$ 69	2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 49,000	Total Project Estimate:	$ 99,069
Project Balance	$ 931	Additional Funding Required	$ 49,069

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design				$ 50,000		$ 50,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ 50,000	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2024 Siphon Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

Plume Creek and Alder Creek Siphon were last inspected in 2019 and 2018 respectively. Siphon assessments should be completed every five years to determine the condition of the siphon and to note any changes from the last inspection. A list of CIP projects will be developed from the assessment and a report generated. The inspection of the siphons are done with cameras that are mounted on guided remote operated vehicles and done while the siphon is empty.

Basis for Priority:

One third of the District's water supply would be out of service for an extended period in the event of a failure in the siphon resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 60,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 60,000
Project Balance	$ -	**Additional Funding Required**	$ 60,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design	$ 60,000					$ 60,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ 60,000	$ -	$ -	$ -	$ -	$ 60,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$60,000
			$0
			$0
Total	**100%**		**$60,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY

Project Name: 2026 Tunnel Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 10/23/23

Project Description:

This project will evaluate the following tunnels and provide a condition assessment report:

- Mill to Bull Tunnel
- Hazel Creek
- Pacific
- Esmerelda
- El Dorado
- 14 Mile
- Camp Creek

The tunnels were inspected in 2021 as part of the 5 year assessment. This inspection will be done by EID staff only. Tunnel assessments are being scheduled every 5 years.

Basis for Priority:

The Project 184 tunnels should be inspected by competent persons every 5 years to determine what issues are needing to be addressed. Additionally, one third of the District's water supply would be out of service for an extended period in the event of a tunnel collapse resulting in interruption of the reliable delivery of water for consumptive use and hydroelectric power generation.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 50,000
Cash flow through end of year:		Total Project Estimate:	$ 50,000
Project Balance	$ -	Additional Funding Required	$ 50,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design			$ 50,000			$ 50,000
Environmental						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ 50,000	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

Recreation Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: 18023

Project Name: Acorn Day Use Area

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

Funds will be used to design an expansion of Day Use parking capacity near the entrance of Sly Park Recreation Area (SPRA) by creating a new day use parking area that will be known as the Acorn Day Use Area. The area will include the addition of 30 parking stalls, 2 handicap accessible parking stalls, 2 handicap accessible bathroom stalls, a handicap accessible trail to the lake, and scattered picnic tables along the trail. Funds will also be used to hire a consultant to look into the possibility of seeking grant funding to apply towards the development and construction of this project. The District will have a "shovel ready" project which will increase the possibility of seeking grant funding during 2024 to offset the cost of construction in fall of 2025. SPRA has experienced an annual average increase of 8% in the number of day use visitors over the last 5 years, often resulting in the closure of the park on busy summer weekends due to safety concerns and a lack of parking and amenities. Increasing the day use capacity near the entrance of the park will help offset the amount of time the park is closed and allow the capture of some of the lost revenue. The rate of return on this project is estimated to be 15-20 years without grant funding.

Basis for Priority:

Revenue generation and increased customer satisfaction.

Project Financial Summary:			
Funded to Date:	$ 148,978	Expenditures through end of year:	$ 109,163
Spent to Date:	$ 109,163	2024 - 2028 Planned Expenditures:	$ 25,000
Cash flow through end of year:		Total Project Estimate:	$ 134,163
Project Balance	$ 39,815	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Planning	$ 5,000					$ 5,000
Design		$ 20,000				$ 20,000
TOTAL	$ 5,000	$ 20,000	$ -	$ -	$ -	$ 25,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Boat Launching Facility Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Kelsch **Board Approval:** 10/23/23

Project Description:

The two boat launching facilities located within the Sly Park Recreation Area experience heavy use and require repair and improvements The four-lane boat ramp at the main boat launching facility reduces to one lane when the lake drops below 60% capacity in the summer, restricting access to the lake. This project scope includes widening the and extending the boat ramp at the main boat launching facility. Improvements will also include repair to parking and stalls, replacement of restrooms, and addition fish cleaning stations. solar lighting and bear-resistant garbage enclosures. The district has applied for funding from the California State Parks Division of Boating and Waterways to fund the design of improvements to the two facilities, and will apply for construction funding once design is complete.

Basis for Priority:

Project purpose is to repair and maintain boat launching facilities, increase ADA accessibility and maintain use of boat launching facilities when lake levels are low.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 25,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 25,000
Project Balance	$ -	Additional Funding Required	$ 25,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Grant Management	$ 25,000					$ 25,000
Design	$ 300,000					$ 300,000
Construction						$ -
DBW Grant	$ (300,000)					$ (300,000)
TOTAL	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000

Funding Sources	Percentage	2024	Amount
Water Rates	100%		$25,000
			$0
			$0
Total	100%		$25,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Recreation Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

This is a program to replace infrastructure at District-owned recreation facilities that have failed or reached end of useful life. Funding will be used for recreation facilities such as road and campground improvements that will extend the life of the asset. Shoreline stabilization projects to protect water quality and existing assets such as road ways, boat ramps, day use areas and campgrounds. Need to make numerous repairs to the roadways within SPRA; all campground access roads need to be replaced and have storm water mitigation features incorporated. Campground spurs require paving or aprons to prevent damage to existing pavement and campsites. Retaining walls at Jenkinson Campground are crumbling and need to be replaced. Within the next five years, the main park roadway and Lakewood Drive will need to be resealed. Access road to Scout Hill youth camp should be chip sealed, at a minimum, to reduce the amount of annual rehabilitation that occurs every spring. Sierra Campground Loop is nearing the end of its useful life and needs to be resurfaced and improved with storm water control devices to reduce sediment laden runoff from entering Jenkinson Lake. Silver Lake West Campground and Sandy Cove Day Use area will need roadways and restrooms replaced due to end of life for those amenities.

Basis for Priority:

Project purpose is to maintain existing assets and prolong their useful service life and reliability.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 500,000
Cash flow through end of year:		Total Project Estimate:	$ 500,000
Project Balance	$ -	Additional Funding Required	$ 500,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Jenkinson Campground	$ 150,000					$ 150,000
Sierra CG Loop Paving	$ 25,000	$ 100,000				$ 125,000
Hilltop CG Loop Paving			$ 25,000	$ 100,000		$ 125,000
Scout Hill Paving					$ 100,000	$ 100,000
TOTAL	$ 175,000	$ 100,000	$ 25,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$175,000
Total	100%		$175,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Silver Lake West Campground Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Delongchamp **Board Approval:** 10/23/23

Project Description:

The 2021 Caldor fire operations along the Highway 88 resulted in damage to the pavement at the District's Silver Lake West Campground. Repaving will be completed in conjunction with other improvements following the construction of the Silver Lake Dam, to minimize mobilization costs to the remote area.

Basis for Priority:

Replacement of necessary damaged or destroyed assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 175,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 175,000
Project Balance	$ -	Additional Funding Required	$ 175,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Design				$ 35,000		$ 35,000
Capitalized Labor					$ 25,000	$ 25,000
Construction					$ 115,000	$ 115,000
TOTAL	$ -	$ -	$ -	$ 35,000	$ 140,000	$ 175,000

Funding Sources	Percentage	2024 Amount
Water Rates	100%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Sly Park Recreation Area Facility Improvements

Project Category: Master Planning

Priority: 3 **PM:** Bertram **Board Approval:** 10/23/23

Project Description:

The scope of this program will be to analyze and implement park improvements as described in the Sly Park Master Plan. The addition of these new facilities will generate more income, enhance the level of environment protection, improve water quality, provide facilities that enhance the visitor's experience, and increase the level of safety for park visitors and EID employees. These projects would include but would not be limited to;

1) Expanding the number of day use facilities, improving and enlarging existing day use facilities and the associated parking areas, and developing new day use facilities on the south side of the lake. This expansion/improvement would help reduce the need to close the park during periods of high use, resulting in increased revenue. These improvements would also reduce camper/day user conflict and provide a way to lessen the impact to the Mormon Immigrant Trail accessed day use areas. Day Use access to SPRA was restricted for one (1) to three (3) hours every Sat & Sun, from 5/27/17-9/3/2017 due to reaching facility capacity thresholds.
2) Improved campsite parking spur delineation and campground roadways to reduce soil compaction and improve storm water runoff control and capture to reduce erosion and improve water quality. Currently, many of the day use areas and campgrounds in SPRA have minimal or zero storm water management systems in place. Storm water could be directed and contaminants captured before entering Jenkinson Lake by clearly delineating parking areas and improving roadways with culverts and oil separators. Clearly defined parking areas will also reduce the amount of soil compaction which and lead to increased revegetation throughout SPRA, thus improving water quality.
3) Repositioning the Sly Park Recreation Area (SPRA) entrance gatehouse to increase the distance between the gate and CR E-16, thus reducing traffic backups on E-16 and the potential for traffic accidents.

Basis for Priority:

Continued increased risk to the environment and water quality, health and safety risk for SPRA visitors and EID staff, revenue generation and increased customer satisfaction.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 200,000
Cash flow through end of year:		Total Project Estimate:	$ 200,000
Project Balance	$ -	Additional Funding Required	$ 200,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Bumpy Meadows / Waterfall Trailhead Parking and DUA Expansion	$ 25,000	$ 125,000				$ 150,000
Day Use Area Upgrades			$ 25,000			$ 25,000
Main DUA Expansion				$ 25,000		$ 25,000
TOTAL	$ 25,000	$ 125,000	$ 25,000	$ 25,000	$ -	$ 200,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	100%		$25,000
Total	100%		$25,000

Funding Comments:

General District Projects

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 18044

Project Name: WAN Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

Project implements new network router equipment and establishes new fiber-optic service delivery points to provide needed upgrades to the District's existing Wide Area Network (WAN) infrastructure. The project deploys a next generation solution to meet the District's site to site connectivity requirements, improves service reliability and performance while creating a more scalable and flexible architecture to meet future business needs.

The remaining location to complete for this project scope is Camino Heights in mid 2024.

Basis for Priority:

Major elements of the District's Wide Area Network (WAN) essential to District operations, services, and security, have reached the end of their useful life and require replacement.

Project Financial Summary:			
Funded to Date:	$ 479,697	Expenditures through end of year:	$ 448,153
Spent to Date:	$ 448,153	2024 - 2028 Planned Expenditures:	$ 15,000
Cash flow through end of year:		Total Project Estimate:	$ 463,153
Project Balance	$ 31,544	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 15,000					$ 15,000
						$ -
TOTAL	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000

Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: 18055

Project Name: Hansen 7 Software Replacement

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Sundaram **Board Approval:** 10/23/23

Project Description:

This project replaces the existing Hansen 7 enterprise software application with a modern enterprise solution providing superior features and functionality, including mobile device access and easier integration to other District systems. The project is anticipated to transform and streamline many current business processes and operations that now require time-consuming workarounds developed to overcome limitations in the current software.

Basis for Priority:

The Hansen 7 enterprise software application has reached the end of its useful and can no longer be adapted to meet business needs. The software is used daily by over 150 employees for customer service, utility billing, asset maintenance, and many other purposes.

Project Financial Summary:			
Funded to Date:	**$ 11,008,557**	**Expenditures through end of year:**	**$ 8,650,940**
Spent to Date:	**$ 8,140,940**	**2024 - 2028 Planned Expenditures:**	**$ 2,374,000**
Cash flow through end of year:	**$ 510,000**	**Total Project Estimate:**	**$ 11,024,940**
Project Balance	**$ 2,357,617**	**Additional Funding Required**	**$ 16,383**

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Consulting Services	**$ 1,800,000**	**$ -**				**$ 1,800,000**
Software & Equipment	**$ 24,000**					**$ 24,000**
Capitalized Labor	**$ 550,000**	**$ -**				**$ 550,000**
						$ -
TOTAL	**$ 2,374,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 2,374,000**

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$9,830
Wastewater Rates	40%		$6,553
Total	**100%**		**$16,383**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 19027

Project Name: Windows Server 2016 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

This project replaces about 60 individual Windows 2008 Server applications which have been in service for up to 10 years with the District's current Windows Server solution. Expecting to complete this project by early 2024.

Basis for Priority:

The systems have reached their functional or technical limits and can no longer be adapted to meet essential needs, including regulatory, operational, technology, or security requirements. Continued use of obsolete or failing IT infrastructure causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse.

Project Financial Summary:			
Funded to Date:	$ 180,000	Expenditures through end of year:	$ 132,565
Spent to Date:	$ 112,565	2024 - 2028 Planned Expenditures:	$ 35,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 167,565
Project Balance	$ 47,435	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 35,000					$ 35,000
						$ -
TOTAL	$ 35,000	$ -	$ -	$ -	$ -	$ 35,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 19028

Project Name: Datacenter SCADA Segmentation

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Proctor **Board Approval:** 10/23/23

Project Description:

The project replaces end-of-life network equipment and makes improvements to the secure gateway into the Supervisory and Data Acquision (SCADA) network. The SCADA network provides mission critical industrial process control of automated treatment and operations functions. The solution implements segmentation and controls between the District's business and SCADA networks that is designed to meet current security best practices while also improving performance and reliability.

Basis for Priority:

Equipment that comprises significant portions of the secure SCADA network gateway has reached the end of its useful life and requires replacement. If the aging equipment or operating system software was to fail or become unavailable for any reason, the best case scenario is a minor financial impact due to a loss of productivity. However, the potential for significant disruption, or worse, is very real.

Project Financial Summary:			
Funded to Date:	$ 324,569	Expenditures through end of year:	$ 268,794
Spent to Date:	$ 248,794	2024 - 2028 Planned Expenditures:	$ 33,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 301,794
Project Balance	$ 55,775	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 33,000					$ 33,000
						$ -
TOTAL	$ 33,000	$ -	$ -	$ -	$ -	$ 33,000

Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 22021

Project Name: Camino Heights SCADA Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Proctor **Board Approval:** 10/23/23

Project Description:

This project aims to replace existing the existing rack mounted servers at the SCADA site with a full hardware upgrade to match other SCADA sites. This will include 3 servers, VMware Licensing, 1 storage array, 2 switches, 2 firewalls and 1 stand-alone server rack with climate control.

Basis for Priority:

The current support for the Dell servers expired in July 2021 and is currently under support with Service Express. This site only has two servers and is currently monitored by Deer Creek Waste Water. The goal is to upgrade this site to be the same as the other 10 remote SCADA sites.

Project Financial Summary:			
Funded to Date:	$ 40,000	Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 100,000
Project Balance	$ 40,000	Additional Funding Required	$ 60,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 100,000					$ 100,000
						$ -
TOTAL	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2024	Amount
Wastewater Rates	100%		$60,000
			$0
			$0
Total	100%		$60,000

Funding Comments: Original funding ($40k) was for design. Estimating the total cost of the project will be $140,000. Need $100,000 in additional funding.

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 22022

Project Name: Network Perimeter Security Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

IT staff have identified needed upgrades to the District's existing firewalls, two factor authentication and cellular modems infrastructure. The focus of this project is to design and deploy a next generation solution to meet the District's cyber security and backup data paths for site-to-site connectivity requirements. With an emphasis on incorporating a solution that reduces cost, speeds deployment, integrates security and creates a more agile architecture to support todays and future business needs.

Basis for Priority:

Major elements of the District's Network Perimeter essential to District operations, services, and security, have reached the end of their useful life and require replacement.

Project Financial Summary:			
Funded to Date:	$ 264,630	Expenditures through end of year:	$ 231,258
Spent to Date:	$ 161,258	2024 - 2028 Planned Expenditures:	$ 32,000
Cash flow through end of year:	$ 70,000	Total Project Estimate:	$ 263,258
Project Balance	$ 33,372	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction			$ 32,000			$ 32,000
						$ -
TOTAL	$ -	$ -	$ 32,000	$ -	$ -	$ 32,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastwater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 22044

Project Name: Remote Site Wireless Deployment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

The "IT Network Infrastructure Replacement" is an ongoing project that maintains the reliability and performance of the District's networks, data processing, storage and network security systems required to conduct daily District business by implementing new technologies, replacing end-of-life or over-utilized equipment and systems.

IT staff have identified a need to deploy wireless to the District's remote sites to support the increasing number of wireless devices utilized by District staff. The focus of this project is to design and deploy a next generation wireless solution with an emphasis on incorporating a solution that reduces cost, speeds deployment, integrates security and creates a more agile architecture to support todays and future business needs.

The funding for this project is contained in the "IT Network Infrastructure Replacement" CIP that is included in the currently adopted 2022-26 Capital Improvement Plan.

Basis for Priority:

Project Financial Summary:			
Funded to Date:	$ 68,000	Expenditures through end of year:	$ 45,099
Spent to Date:	$ 45,099	2024 - 2028 Planned Expenditures:	$ 22,901
Cash flow through end of year:		Total Project Estimate:	$ 68,000
Project Balance	$ 22,901	Additional Funding Required	$ 0

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 22,901					$ 22,901
						$ -
TOTAL	$ 22,901	$ -	$ -	$ -	$ -	$ 22,901

Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This program is intended to comply with regulatory requirements imposed by OSHA in regards to electrical safety of qualified workers. Majority of the electrical equipment in the District is no longer in compliance with the current regulatory requirements and National Fire Protection Association code (NFPA 70E 2021 Standard for Electrical Safety in the Workplace). In order for District to comply and avoid potential fines, Arc Flash Risk Assessment needs to be performed for each District facility that contains electrical hazards. Due to large amount of facilities and electrical equipment, this compliance requirement cannot be completed in a single year and must be separated into manageable portions. This program will assure District stays in compliance.

Basis for Priority:

Maintain electrical safety regulatory requirements of OSHA and NFPA70E. Determine replacement and improvement strategy to support regulatory compliance, improve service reliability and safety. This study will protect and preserve the health and safety of employees and the public.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2024 - 2028 Planned Expenditures:	$ 89,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 89,000
Project Balance	$ -	Additional Funding Required	$ 89,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Professional Services	$ 30,000	$ -	$ -	$ -	$ 35,000	$ 65,000
Capitalized Labor	$ 12,000	$ -	$ -	$ -	$ 12,000	$ 24,000
						$ -
						$ -
TOTAL	$ 42,000	$ -	$ -	$ -	$ 47,000	$ 89,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$25,200
Wastewater Rates	40%		$16,800
Total	**100%**		**$42,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: Headquarter Facility Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Royal **Board Approval:** 10/23/23

Project Description:

The following building upgrade projects are planned for 2024 - 2028
2024: Convert remaining indoor lighting to LED, upgrade fire alarm system pannel to new upgraded pannel. install security gates behind HQ building, access walkway.
2025: Walkway accessibility from upper yard to H/Q building improvement. Backup power supply for upper fleet yard to support fleet operations and warehouse operations using old existing generator from HQ.
2026: Covered parking improvement for upper parking lot. Parking and road improvement for construction and fleet yard. 2027: none
2028: none

Roof repair project No.23027 = $322,641.00 funded for 2023 cip project start date is September 25 2023 finish date is oct 15,2023 HVAC control project No. 23030 = $131,372.00 funded for the 2023 start project in november 2023.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 200,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 200,000
Project Balance	$ -	Additional Funding Required	$ 200,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design						$ -
Construction	$ 200,000			$ -	$ -	$ 200,000
TOTAL	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$120,000
Wastewater Rates	40%		$80,000
Total	100%		$200,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Business Systems Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Sundaram **Board Approval:** 10/23/23

Project Description:

Ongoing program to ensure the reliability, security, and performance of technologies and software used by staff daily to perform business processes in support of District operations. Technologies are typically a mix of cloud-based services and on-premise equipment or database software, and include:

- Administration Technologies: document management, accounting, purchasing, contracting, or support desk systems
- Engineering Technologies: asset management, drafting, modeling, analyzing, or construction management systems
- Operations Technologies: work management, specialty inspections, energy management, or laboratory information management systems

Business system technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Anticipated initiatives include:
2023 - Upgrade to next generation modeling software, develop contract management and IT change management solutions in ITSM software.
2024 - Develop plant operator rounds solution in LIMS software.
2025 - Upgrade to next generation GIS software.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Business system technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 455,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 455,000
Project Balance	$ -	Additional Funding Required	$ 455,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Admin & Finance Technology	$ 50,000	$ 25,000	$ 250,000			$ 325,000
Operations Technology		$ 30,000				$ 30,000
Engineering Technology	$ 25,000		$ 25,000	$ 50,000		$ 100,000
TOTAL	$ 75,000	$ 55,000	$ 275,000	$ 50,000	$ -	$ 455,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$45,000
Wastewater Rates	40%	$30,000
Total	100%	$75,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Communication Systems Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

Ongoing program to ensure the reliability, security, and performance of technologies and software used by staff daily to communicate, collaborate, and coordinate with other staff, customers, vendors, regulators, and others in support of District operations. Technologies are typically a mix of cloud-based services and on-premise equipment, and include:

- Voice & Video Calling: telephones, voice or video gateway equipment, call processing or routing software
- Meeting Technology: audio-visual equipment and software to conduct and manage physical or virtual meetings
- Email & Messaging: software applications to compose, manage, search and securely send or receive message and file transmissions
- Sharing & Collaboration: software platforms for individuals, teams or groups to create and publish content to an intranet or the Internet

Communications and collaboration technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Communications and collaboration technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 525,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 525,000
Project Balance	$ -	Additional Funding Required	$ 525,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Voice & Video Calling Upgrades	$ 75,000	$ 50,000			$ 100,000	$ 225,000
Meeting Technology Upgrades	$ 25,000		$ 50,000	$ 100,000		$ 175,000
Cloud Email & Intranet Upgrades		$ 125,000				$ 125,000
TOTAL	$ 100,000	$ 175,000	$ 50,000	$ 100,000	$ 100,000	$ 525,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	60%		$60,000
Wastewater Rates	40%		$40,000
Total	100%		$100,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT End-User Technology Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

Ongoing program to ensure the reliability, security, and performance of workstations, productivity software and related technology used by staff daily to operate the District. End-user technologies include:

- Virtual Machines (VMs): cloud-based workstations served by Virtual Desktop Infrastructure (VDI), client terminals and imaging software
- Personal Computers (PCs): traditional physical desktop and laptop computers, operating software, and computer management software
- Personal Productivity Software Suites: common software applications to create, view, edit and manage files or documents
- Endpoint Security Software: software designed to secure workstations from a variety of cyber threats

End-user technologies evolve quickly and manufacturers will typically cease product support and security fixes when the product is beyond five years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Planned initiatives include:
2023-24: Windows 10 replacement on all physical PCs and VMs
2024: Virtual desktop infrastructure and VM image replacement
2024-25: Replace end-of-life VM terminals and physical PCs unable to support Win 10 replacement

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Personal productivity technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched personal computer systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 675,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 675,000
Project Balance	$ -	Additional Funding Required	$ 675,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
VM Upgrades	$ 100,000	$ 100,000				$ 200,000
PC Upgrades	$ 50,000	$ 125,000		$ 100,000		$ 275,000
Personal Productivity & Security Software Upgrades		$ 100,000	$ 100,000			$ 200,000
TOTAL	$ 150,000	$ 325,000	$ 100,000	$ 100,000	$ -	$ 675,000

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	60%		$90,000
Wastewater Rates	40%		$60,000
Total	100%		$150,000

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Network Infrastructure Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

Ongoing program to ensure the reliability, security, and performance of mission critical networking and data processing technologies include:
- Local & Wide Area Networks (LANs/WANs): network equipment providing connectivity to facilities, servers, workstations, and other services
- Data Processing & Storage: cloud or on premise platforms providing shared computing, data storage and backup
- Access & Identity Management: enterprise software to manage, monitor and control access to computers, software, data, and services
- Network Security Systems: equipment and software designed to monitor, detect, and respond to a variety of cyber threats

Network infrastructure technologies evolve steadily and manufacturers will typically cease new feature development 3 to 5 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 to 10 years of age. The program tracks technologies in use at the District and provides modern, efficient, flexible, scalable, and secure replacement solutions before current equipment, systems, or services lose manufacturer support and/or fail with potentially catastrophic results.

Basis for Priority:

Continued use of obsolete or failing technology causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse. Network infrastructure technologies typically have Internet access which exposes them regularly to a multitude of advanced persistent cyber threats. While access to the Internet can provide tremendous benefit, outdated or unpatched computer systems or software can become compromised in a matter of minutes.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 987,500
Cash flow through end of year:	$ -	Total Project Estimate:	$ 987,500
Project Balance	$ -	Additional Funding Required	$ 987,500

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Network Upgrades	$ 150,000	$ 100,000	$ 50,000	$ 50,000	$ 50,000	$ 400,000
Server, Data Processing & Storage Upgrades	$ 200,000	$ 87,500		$ 50,000		$ 337,500
Identity, Access & Security Upgrades	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
TOTAL	$ 400,000	$ 237,500	$ 100,000	$ 150,000	$ 100,000	$ 987,500

Estimated Funding Sources	Percentage	2024	Amount
Water Rates	60%		$240,000
Wastewater Rates	40%		$160,000
Total	100%		$400,000

Funding Comments:

2024 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: **Planned**

Project Name: **New Security Systems**

Project Category: **Regulatory Requirements**

Priority: **1** **PM:** **Newsom** **Board Approval:** **10/23/23**

Project Description:

There are six treated water facilities that need a security system. In addition, all 20 current District security systems need a new security system. Currently, about 30% of sensors that are used for alarms are not working. Operations management reports that personnel are being called out after-hours and that supervisors are receiving a lot of false alarms. The District's alarm and access control systems need to be replaced right now. This process is expected to take two years. After each site is converted, a new monitoring company will be used. Six new security systems will be installed between 2026 and 2030, as well as additional cameras and the replacement of existing ones, to conform with industry standards or the recommendations of the RFI security assessment. The new cameras will have better analytics to reduce false alarms, and supervisors will have the ability to review footage quickly on their mobile devices if needed. Materials, labor costs, license fees, and monitoring are all included in the price of this project.

Following a review of the RFI security evaluation, several of the components of the District's current security systems have either reached end of life or are no longer functional. The District has attempted to replace components that have broken here and there, but the security systems continue to malfunction. The District spends around $25,000 per year on a maintenance contract with a security firm to replace broken equipment as needed. After the alarm systems have been changed, that contract will no longer be required. Furthermore, no contractor in the Sacramento area currently understands how to work on our current access control system Entre. In the last 5-10 years, security technology has advanced dramatically. For similar reasons, both South Tahoe PUD and El Dorado County recently installed new security systems.

Basis for Priority:

Meet the requirements of the Safe Drinking Water Act and America's Water Infrastructure Act through compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Department of Homeland Security, Federal Emergency Management Agency, California Government Code requirements for routine video storage, and the Department of Energy requirements for Emergency Action Plans and Critical Infrastructure security

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	$ 2,171,000
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ 2,171,000
Project Balance	$ -	**Additional Funding Required**	$ 2,171,000

Description of Work	**Estimated Annual Expenditures**					
	2024	**2025**	**2026**	**2027**	**2028**	**Total**
Study/Planning						$ -
Design						$ -
Construction	$ 500,000	$ 515,000	$ 371,000	$ 385,000	$ 400,000	$ 2,171,000
						$ -
TOTAL	$ 500,000	$ 515,000	$ 371,000	$ 385,000	$ 400,000	$ 2,171,000

Funding Sources	**Percentage**	**2024**	**Amount**
Water Rates	60%		$300,000
Wastewater Rates	40%		$200,000
			$0
Total	**100%**		**$500,000**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: SCADA Master Plan Implementation

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Leanos **Board Approval:** 10/23/23

Project Description:

This CIP outlines improvements and sustainability plan as recommended by our hired consultant. Please refer to the SCADA Master Plan.

Basis for Priority:

Meet the requirements of the Department of Homeland Security to maintain Critical Infrastructure security and software up to date and supported.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 375,000
Project Balance	$ -	Additional Funding Required	$ 375,000

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
EDHWW SCADA upgrade		$ 200,000				$ 200,000
Camp 5 SCADA upgrade			$ 100,000			$ 100,000
SCADA Enterprise System Upgrade				$ 75,000		$ 75,000
TOTAL	$ -	$ 200,000	$ 100,000	$ 75,000	$ -	$ 375,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: Security Equipment Reliability Program

Project Category: Regulatory Requirements

Priority: 2 **PM:** Newsom **Board Approval:** 10/23/23

Project Description:

Integrated security systems have been protecting District critical infrastructure and key resources since 2006, providing alarm verification through real-time CCTV system viewing of alarm events. As technology evolves and our systems reach end of life cycle we acquire the most effective solutions in hardware and software to maintain integrated security systems that provide timely detection and law enforcement response elements to mitigate theft, vandalism, trespassing, other malevolent incidents impacting critical infrastructure. The integrated system also provides an important emergency response capability required for compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Emergency Operations and Department Emergency Actions Plans as required by the Federal Safe Drinking Water Act, Title IV - Drinking Water Security and Safety, and America's Water Infrastructure Act of 2018.

Basis for Priority:

Meet the requirements of the Safe Drinking Water Act and America's Water Infrastructure Act through compliance with the District Drinking Water Risk Assessment, FERC Security Assessment, Department of Homeland Security, Federal Emergency Management Agency, and the Department of Energy requirements for Emergency Action Plans and Critical Infrastructure security.

Project Financial Summary:			
Funded to Date:	$ 680,000	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ 210,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 280,000
Project Balance	$ 680,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Consulting Services	$ 10,000					$ 10,000
Replacement	$ 100,000	$ 100,000				$ 200,000
						$ -
TOTAL	$ 110,000	$ 100,000	$ -	$ -		$ 210,000

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
		$0
Total	100%	$0

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: Planned

Project Name: Vehicle Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Royal **Board Approval:** 10/23/23

Project Description:

The following vehicle replacements are planned for 2024 - 2028.
2024: (3) 1/2 ton pickups, (1) compact 4x4 pickup truck, (10) 1 ton utility truck 4x4, (3) 1 ton 4x4 pickup truck,
(1) 1-1/2 ton utility 4x4 truck with crane, (1) 1-1/2 ton cab and chassis 4x4 truck (2) 1 1/2 ton mechanic service truck, (4) 1 1/2 ton crew cab utility 4x4 crew truck with power unit (1) 52,000lb septic pumper truck, (1) 4 thousand gallon water truck. **Note**: (6) dump trucks and (1) 4 thousand gallon water truck were ordered in 2022 but will not show up until 2024.
2025: (5) 1/2 ton pickups, (4) suv's, (1) 3/4 ton pickup 4x4, (1) 21-24 ft patrol boat, (2) 410 backhoe, (1) fx40 vacuum excavation trailer.
2026: (11) 1/2 ton pickup's, (1) 4 door sedan's, (3) suv's, (1) 3/4 ton utility 4x2 truck, (1) 1 ton 4x4 pickup (1) 1 ton flatbed 4x4 truck's, (1) jeep 4x4, (1) 410 backhoe, (1) truck vactor hydro cleaning 10-12 yard
2027: (3) 1/2 ton pickup's, (1) 1 ton utility 4x2 truck, (1) 1-1/2 ton flatbed dump 4x4, (1) sewer service foam truck, (1) truck dump 10-11 cubic yard with plow (1) 410 backhoe. (1) sewer camera inspection truck
2028: (9) 1/2 ton pickups, (2) compact 4x4 pickup trucks, (2) 1 ton utility truck 4x2. (2) TKT40LP tilt equipment trailers.

Basis for Priority:

Enhances District assets through life-cycle replacement of existing vehicles.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	$ -
Spent to Date:	$ -	**2024 - 2028 Planned Expenditures:**	
Cash flow through end of year:	$ -	**Total Project Estimate:**	$ -
Project Balance	$ -	**Additional Funding Required**	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Vehicles/Equipment	$ 3,050,500	$ 945,000	$ 1,000,000	$ 1,000,000	$ 500,000	$ 6,495,500
						$ -
TOTAL	$ 3,050,500	$ 945,000	$ 1,000,000	$ 1,000,000	$ 500,000	$ 6,495,500

Estimated Funding Sources	Percentage	2024 Amount
Water Rates	60%	$1,830,300
Wastewater Rates	40%	$1,220,200
		$0
Total	**100%**	**$3,050,500**

Funding Comments:

2024	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: Planned

Project Name: Windows 2012 Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Stevenson **Board Approval:** 10/23/23

Project Description:

This project replaces about 60 individual Windows 2012 Server applications which have been in service for up to 10 years with the District's current Windows Server solution.

Basis for Priority:

The systems have reached their functional or technical limits and can no longer be adapted to meet essential needs, including regulatory, operational, technology, or security requirements. Continued use of obsolete or failing IT infrastructure causes operational inefficiencies at a minimum, and quite possibly increased risk of service interruptions, regulatory fines, data breach, or worse.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2024 - 2028 Planned Expenditures:	$ -
Cash flow through end of year:		Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2024	2025	2026	2027	2028	Total
Study/Planning						$ -
Design		$ 13,500				$ 13,500
Implementation			$ 64,800			$ 64,800
						$ -
TOTAL	$ -	$ 13,500	$ 64,800	$ -	$ -	$ 78,300

Funding Sources	Percentage	2024	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments: