El Dorado Irrigation District

FIVE YEAR

Capital Improvement Plan

2022—2026

Approved November 8, 2021

El Dorado Irrigation District

2022-2026 CAPITAL IMPROVEMENT PLAN

Approved November 8, 2021

	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$1,729,762	$396,195	$437,671	$309,191	$695,682	$3,568,501
Water	$21,987,279	$19,540,214	$21,000,000	$27,520,000	$29,065,000	$119,112,493
Wastewater	$13,229,500	$10,790,214	$7,405,000	$6,920,000	$7,075,000	$45,419,714
Recycled Water	$300,000	$375,000	$575,000	$500,000	$500,000	$2,250,000
Hydroelectric	$6,576,117	$6,210,000	$14,355,000	$5,050,000	$10,230,000	$42,421,117
Recreation	$805,000	$386,250	$322,500	$150,000	$150,000	$1,813,750
General District	$10,866,293	$5,738,000	$2,387,000	$2,020,000	$2,695,000	$23,706,293
TOTAL	**$55,493,952**	**$43,435,873**	**$46,482,171**	**$42,469,191**	**$50,410,682**	**$238,291,868**

2021-2025 CAPITAL IMPROVEMENT PLAN

Approved October 26, 2020

	2021 PLANNED	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	FIVE-YEAR PLAN TOTAL
FERC	$1,854,762	$466,195	$407,671	$394,191	$305,682	$3,428,501
Water	$49,123,068	$15,342,185	$21,125,000	$19,595,000	$18,500,000	$123,685,253
Wastewater	$5,954,000	$4,790,000	$6,870,000	$12,560,000	$10,935,000	$41,109,000
Recycled Water	$150,000	$375,000	$590,000	$400,000	$400,000	$1,915,000
Hydroelectric	$13,270,000	$5,085,000	$4,425,000	$4,635,000	$7,200,000	$34,615,000
Recreation	$140,000	$160,000	$95,000	$150,000	$100,000	$645,000
General District	$7,832,000	$4,968,000	$2,875,000	$2,174,000	$2,108,000	$19,957,000
TOTAL	**$78,323,830**	**$31,186,380**	**$36,387,671**	**$39,908,191**	**$39,548,682**	**$225,354,754**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan

FERC Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 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	10,000	10,000	10,000	0	0	30,000
06021H	FERC C37.8 Water Temperature	FERC	1	35,000	35,000	25,000	35,000	35,000	165,000
06076H	FERC C38.4b Caples Spillway Channel Stabilization	FERC	1	35,000	10,000	10,000	10,000	0	65,000
06082H	FERC: C50.1 Silver Lake Campground East Re-Construction	FERC	1	1,000,000	0	0	0	0	1,000,000
06086H	FERC C33 Lake Aloha Trout Removal	FERC	1	15,000	0	0	0	0	15,000
06087H	FERC C37.1 Fish Monitoring	FERC	1	85,000	0	0	0	85,000	170,000
06088H	FERC: C37.2 Macroinvertebrate Monitoring	FERC	1	70,000	0	0	0	70,000	140,000
06089H	FERC: C37.3 Amphibian Monitoring	FERC	1	65,000	0	0	0	100,000	165,000
06090H	FERC: C37.4 Riparian Species Composition	FERC	1	25,000	0	0	0	25,000	50,000
06091H	FERC: C37.5 Riparian Vegetation Recruitment	FERC	1	25,000	0	0	0	25,000	50,000
06092H	FERC: C37.7 Geomorphology Evaluation	FERC	1	0	0	0	0	75,000	75,000
06095H	FERC: C54 Visual Resources Management Plan	FERC	1	10,000	0	0	0	0	10,000
06096H	FERC: C55 Heritage Resources	FERC	1	55,000	0	0	0	0	55,000
06097H	FERC: C59 Facility Management Plan	FERC	1	20,000	5,000	5,000	0	0	30,000
06098H	FERC: C46 thru C49 Recreation Resource Management	FERC	1	0	70,000	10,000	0	0	80,000
07003H	FERC: C37.9 Water Quality	FERC	1	0	0	100,000	0	0	100,000
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	51,762	53,195	54,671	56,191	57,682	273,501
07010H	FERC: C15 Pesticide Use	FERC	1	80,000	80,000	90,000	80,000	80,000	410,000
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	20,000	5,000	5,000	0	0	30,000
08025H	FERC C44 Noxious Weed Monitoring	FERC	1	30,000	30,000	30,000	30,000	45,000	165,000
TOTAL:				**1,729,762**	**396,195**	**437,671**	**309,191**	**695,682**	**3,568,501**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
11032	Main Ditch - Forebay to Reservoir 1	WA	1	4,800,000	0	0	0	0	4,800,000
15024	Folsom Lake Intake Improvements Project	WA	1	3,625,100	0	0	0	0	3,625,100
17035	Green Valley Bridge Relocation	WA	1	875,000	0	0	0	0	875,000
18048	Critical Water Facility Generators	WA	1	300,000	0	0	0	0	300,000
19008	EDM 1 Relocate / Camino Safety	WA	1	745,000	0	0	0	0	745,000
19016	Main Ditch Litigation	WA	1	20,000	0	0	0	0	20,000
20017	No Name Creek Diversion Gauging	WA	1	50,000	0	0	0	0	50,000
21012	DOT Construction Projects - Water	WA	1	30,000	30,000	35,000	35,000	35,000	165,000
21040	Generator FEMA Grant - Water	WA	1	100,000	245,214	0	0	0	345,214
PLANNED	Placerville Drive Hangtown Creek Bridge Replacement	WA	1	75,000	400,000	0	0	0	475,000
PLANNED	Sly Park Spillway Improvements	WA	1	80,000	50,000	100,000	0	0	230,000
PLANNED	Water Arc Flash Risk Assessment Program	WA	1	50,000	50,000	50,000	50,000	50,000	250,000
16003	Permit 21112 Change in Point of Diversion	WA	2	550,000	200,000	200,000	0	0	950,000
17011	Crestview Pump Station Replacement Project	WA	2	50,000	500,000	0	0	0	550,000
17048	Strawberry Raw Water Pump Station	WA	2	75,000	225,000	0	0	0	300,000
18040	Forebay Road Waterline Replacement	WA	2	0	2,665,000	0	0	0	2,665,000
19019	Strawberry Self Cleaning Screens	WA	2	30,000	0	0	0	0	30,000
19033	Reservoir A WTP PLC Replacement	WA	2	100,000	1,000,000	0	0	0	1,100,000
19036	Serviceline Replacement Program	WA	2	4,850,000	5,210,000	5,210,000	5,210,000	5,210,000	25,690,000
19050	Construction Storage Facility	WA	2	75,000	75,000	1,000,000	0	0	1,150,000
20016	Camino Intertie PRS#1	WA	2	975,000	0	0	0	0	975,000
20030	Drop Off Road Waterline Extension	WA	2	0	1,250,000	0	0	0	1,250,000
20034	El Dorado Hills WTP Flow Meter Upgrade Project	WA	2	550,000	0	0	0	0	550,000
21001	AMR and Small Meter Replacement	WA	2	300,000	300,000	300,000	300,000	300,000	1,500,000
21015	Swansboro Pump Station Replacement Project	WA	2	65,000	0	0	0	0	65,000
21022	Swansboro Pump Station SCADA Hardware Replacement	WA	2	75,000	0	0	0	0	75,000
21025	Cedar Ravine 6 Inch Wholesale Meter	WA	2	0	300,000	0	0	0	300,000
21030	Reservoir 1 Storage Upgrade	WA	2	200,000	0	0	0	0	200,000
21031	EDHWTP 820 960 Air Conditioning Upgrade	WA	2	30,000	0	0	0	0	30,000
21034	Braden Court Pressure Reducing Station #1	WA	2	0	350,000	0	0	0	350,000
21051	Reservoir 2 Roof and Rafter Replacement Project	WA	2	600,000	0	0	0	0	600,000

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
PLANNED	Caldor Fire Recovery - Water	WA	2	0	0	0	0	0	-
PLANNED	Diamond Springs Main Capacity Improvements	WA	2	250,000	0	0	0	0	250,000
PLANNED	Folsom - EDH Water Treatment Plant Improvements Program	WA	2	50,000	100,000	100,000	100,000	100,000	450,000
PLANNED	Pressure Reducing Station Rehabilitation and Replacement Program	WA	2	0	725,000	725,000	925,000	925,000	3,300,000
PLANNED	Pump Station Rehabilitation and Replacement Program	WA	2	0	700,000	1,100,000	650,000	150,000	2,600,000
PLANNED	Res A SCADA RTU Replacement	WA	2	50,000	0	0	0	0	50,000
PLANNED	Reservoir 1 Water Treatment Plant Improvements Program	WA	2	100,000	475,000	500,000	600,000	100,000	1,775,000
PLANNED	ROW Vegetation Maintenance	WA	2	150,000	0	0	0	0	150,000
PLANNED	SCADA Water Hardware Replacement Program	WA	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Sly Park - Reservoir A Water Treatment Plant Improvements Program	WA	2	100,000	600,000	100,000	100,000	100,000	1,000,000
PLANNED	Sly Park Intertie Improvements	WA	2	300,000	400,000	800,000	12,700,000	12,700,000	26,900,000
PLANNED	Sly Park Outlet Control Facility Improvements	WA	2	0	50,000	200,000	75,000	0	325,000
PLANNED	Storage Replacement & Rehabilitation Program	WA	2	150,000	225,000	4,100,000	250,000	3,100,000	7,825,000
PLANNED	Transmission Assessment Project	WA	2	0	500,000	500,000	600,000	600,000	2,200,000
PLANNED	Transmission Slope Stabilization	WA	2	0	25,000	300,000	300,000	0	625,000
PLANNED	Valve Replacement Program	WA	2	100,000	100,000	100,000	100,000	100,000	500,000
PLANNED	Water Distribution Radio path design	WA	2	0	0	0	75,000	170,000	245,000
PLANNED	Water Facility Generators	WA	2	0	140,000	105,000	0	0	245,000
PLANNED	Waterline Replacement Program	WA	2	100,000	2,500,000	5,050,000	5,050,000	5,050,000	17,750,000
PLANNED	Wholesale Meter Replacement	WA	2	0	50,000	300,000	0	0	350,000
STUDY03	WTP Assessments	WA	2	452,179	0	0	0	0	452,179
STUDY10	Integrated Water Resources Master Plan	WA	2	400,000	0	0	0	0	400,000
STUDY15	El Dorado Main #2 Assessment	WA	2	410,000	0	0	0	0	410,000
PLANNED	EDM Flow Integration	WA	3	0	0	25,000	300,000	275,000	600,000
TOTAL				**21,987,279**	**19,540,214**	**21,000,000**	**27,520,000**	**29,065,000**	**119,112,493**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Wastewater Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
17034	Wastewater Collections Facility Relocation	WW	1	4,530,000	0	0	0	0	4,530,000
18063	EDHWWTP Solar Inverters	WW	1	85,000	0	0	0	0	85,000
21041	Generator FEMA Grant - Wastewater	WW	1	100,000	245,214	0	0	0	345,214
PLANNED	Camino Heights Wastewater Treatment Plant Disposal Improvements	WW	1	100,000	100,000	250,000	0	0	450,000
PLANNED	Wastewater Arc Flash Risk Assessment Program	WW	1	50,000	50,000	50,000	50,000	50,000	250,000
15036	Silva Valley - El Dorado Hills Sewerline	WW	2	250,000	350,000	400,000	0	0	1,000,000
17023	Rancho Ponderosa LS Relocation/Abandonment	WW	2	155,000	990,000	0	0	0	1,145,000
17046	Strolling Hills Pipeline Improvements	WW	2	230,000	250,000	3,300,000	0	0	3,780,000
18003	Indian Creek Lift Station Upgrades	WW	2	1,150,000	1,100,000	0	0	0	2,250,000
18035	EDHWWTP WAS DAFT Rehabilitation	WW	2	1,725,000	575,000	0	0	0	2,300,000
19032	Collections Master Radio PLC Replacement	WW	2	110,000	0	0	0	0	110,000
20023	Lift Station Communication Upgrades	WW	2	335,000	335,000	310,000	0	0	980,000
20040	Deer Park LS SCADA Hardware Replacement	WW	2	65,000	0	0	0	0	65,000
21007	Town Center Force Main PH4	WW	2	0	0	20,000	20,000	2,750,000	2,790,000
21018	2022 Collections Rehabilitation Project	WW	2	1,525,000	1,375,000	0	0	0	2,900,000
21020	Tesla Battery Sites - Wastewater	WW	2	44,500	0	0	0	0	44,500
21026	St. Andrews Lift Station Upgrades	WW	2	105,000	270,000	0	0	0	375,000
PLANNED	Collections SCADA Upgrade	WW	2	300,000	0	0	0	0	300,000
PLANNED	DCWWTP PLC Replacement Program	WW	2	0	0	150,000	150,000	150,000	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	0	250,000	250,000	300,000	800,000
PLANNED	Motherlode Forcemain Replacement Program	WW	2	200,000	2,700,000	200,000	2,700,000	200,000	6,000,000
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 Asset Replacement Program	WW	2	400,000	400,000	400,000	400,000	400,000	2,000,000
PLANNED	WWTP Assessments	WW	2	400,000	400,000	0	0	0	800,000
PLANNED	Collections Pipeline Replacement and Rehabilitation Program	WW	2	0	0	250,000	1,650,000	1,650,000	3,550,000
PLANNED	WWTP Process Improvement Program	WW	2	175,000	175,000	175,000	175,000	175,000	875,000
STUDY12	Wastewater Lift Station Upgrade Program	WW	2	670,000	1,150,000	1,150,000	1,150,000	1,150,000	5,270,000
PLANNED	EDHWWTP Spoils Management	WW	3	0	100,000	300,000	0	0	400,000

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Wastewater Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
PLANNED	El Dorado Hills Lift Station Consolidation	WW	3	150,000	0	0	0	0	150,000
PLANNED	El Dorado Lift Site Improvements	WW	3	0	0	50,000	200,000	0	250,000
PLANNED	Wastewater Modeling	WW	3	50,000	50,000	50,000	50,000	50,000	250,000
STUDY14	Collections Radio Path Design	WW	3	150,000	0	0	0	0	150,000
TOTAL				**13,229,500**	**10,790,214**	**7,405,000**	**6,920,000**	**7,075,000**	**45,419,714**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Recycled Water Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
PLANNED	Recycled Water Asset Program	RW	2	250,000	250,000	250,000	250,000	250,000	1,250,000
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	0	75,000	0	0	75,000
Total			**TOTAL:**	**300,000**	**375,000**	**575,000**	**500,000**	**500,000**	**2,250,000**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
19031	Silver Lake Dam Replacement	HY	1	350,000	400,000	600,000	350,000	450,000	2,150,000
17025	Flume 45 Abutment Replacement	HY	2	1,897,615	60,000	0	0	0	1,957,615
17028	Flume 48 Replacement/Tunnel option	HY	2	37,668	0	250,000	300,000	6,000,000	6,587,668
18010	Penstock Improvements	HY	2	400,000	470,000	370,000	160,000	160,000	1,560,000
19021	RTU Replacement Control Sites	HY	2	300,000	325,000	175,000	0	0	800,000
19024	Echo Conduit Rehabilitation	HY	2	130,000	110,000	80,000	40,000	920,000	1,280,000
21003	Diversion Repeater Site	HY	2	50,000	125,000	0	0	0	175,000
21004	A18 Fiber Communication Improvements	HY	2	75,000	225,000	0	0	0	300,000
21008	Diversion - Facility Upgrades	HY	2	294,144	0	0	0	0	294,144
21009	Diversion - Fish Ladder Improvements	HY	2	0	0	0	220,000	800,000	1,020,000
21013	Flumes 45A, 46A, 47A, and 47B Replacement	HY	2	276,690	2,050,000	0	2,000,000	0	4,326,690
21016	Penstock Stabilization	HY	2	430,000	470,000	170,000	0	0	1,070,000
21028	Powerhouse Automation Replacement	HY	2	300,000	350,000	0	0	0	650,000
PLANNED	Annual Canal and Flume Program	HY	2	445,000	75,000	75,000	75,000	75,000	745,000
PLANNED	Annual Reservoir and Dam Program	HY	2	295,000	100,000	150,000	50,000	50,000	645,000
PLANNED	Caldor Fire Recovery - Hydro	HY	2	0	0	0	0	0	0
PLANNED	Crawford Ditch SCADA Hardware Replacement	HY	2	0	0	50,000	150,000	0	200,000
PLANNED	Flume 45 Section 3 Replacement	HY	2	500,000	450,000	11,000,000	0	0	11,950,000
PLANNED	Flume 46 Replacement Project	HY	2	250,000	800,000	1,000,000	0	0	2,050,000
PLANNED	Flume 52A Replacement Project	HY	2	0	0	0	75,000	200,000	275,000
PLANNED	Hazel Creek Tunnel Automation	HY	2	0	0	50,000	200,000	0	250,000
PLANNED	Hydro Facility Replacement Program	HY	2	200,000	100,000	100,000	100,000	100,000	600,000
PLANNED	Powerhouse Turbine Runner Upgrade	HY	2	25,000	0	0	1,000,000	1,000,000	2,025,000
PLANNED	Project 184 Remote Telemetry Units Replacement	HY	2	100,000	50,000	175,000	0	0	325,000
PLANNED	Spill 3 Crib Wall Replacement	HY	2	0	0	0	0	425,000	425,000
STUDY 2022	Flume Assessment	HY	2	50,000	0	0	0	0	50,000
STUDY 2023	Canal Assessment	HY	2	0	50,000	0	0	0	50,000

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Hydroelectric Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
STUDY 2023	Canal Assessment	HY	2	0	50,000	0	0	0	50,000
STUDY 2024	Siphon Assessment	HY	2	0	0	60,000	0	0	60,000
STUDY 2025	Canal Release Points Assessment	HY	2	0	0	0	80,000	0	80,000
STUDY 2026	Tunnel Assessment	HY	2	0	0	0	0	50,000	50,000
19013	Hydro Crew Room Upgrade	HY	3	170,000	0	0	0	0	170,000
PLANNED	Camp 5 Facility Power Improvements	HY	3	0	0	50,000	250,000	0	300,000
TOTAL:				**6,576,117**	**6,210,000**	**14,355,000**	**5,050,000**	**10,230,000**	**42,421,117**

El Dorado Irrigation District

2022 - 2026 Capital Improvement Plan
Recreation Projects

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
21037	Lakewood Dr. Stabilization/Mormon Immigrant Trail Shoulde	RE	2	605,000	226,250	172,500	0	0	1,003,750
PLANNED	Caldor Fire Recovery - Recreation	RE	2	0	0	0	0	0	0
PLANNED	Recreation Facility Replacement Program	RE	2	50,000	50,000	50,000	50,000	75,000	275,000
PLANNED	Sly Park Recreation Area Facility Improvements	RE	2	125,000	110,000	100,000	100,000	75,000	510,000
18023	Acorn Day Use Area	RE	3	25,000	0	0	0	0	25,000
TOTAL:				**805,000**	**386,250**	**322,500**	**150,000**	**150,000**	**1,813,750**

2022-2026 Capital Improvement Plan
General District

PROJECT NO.	PROJECT DESCRIPTION	PROGRAM	PRIORITY	2022 PLANNED	2023 PLANNED	2024 PLANNED	2025 PLANNED	2026 PLANNED	2022-2026 TOTAL
PLANNED	2021 Security Equipment Reliability Program	GD	1	60,000	45,000	65,000	55,000	55,000	280,000
18044	WAN Upgrade	GD	2	62,896	0	0	0	0	62,896
18055	Hansen 7 Software Replacement	GD	2	4,748,000	3,000,000	540,000	0	0	8,288,000
19028	Datacenter SCADA Segmentation	GD	2	332,717	0	0	0	0	332,717
19044	Dream Reports Software	GD	2	100,000	0	0	0	0	100,000
21042	HQ Backup Power Modifications	GD	2	500,000	0	0	0	0	500,000
PLANNED	IT Business Systems Replacement	GD	2	150,000	150,000	150,000	150,000	150,000	750,000
PLANNED	IT Communication Systems Replacement	GD	2	0	80,000	125,000	50,000	100,000	355,000
PLANNED	IT Environment Controls Upgrade	GD	2	140,800	0	0	0	0	140,800
PLANNED	IT Network Infrastructure Replacement	GD	2	1,180,000	500,000	50,000	50,000	50,000	1,830,000
PLANNED	PLANNED IT Personal Productivity Replacement	GD	2	0	125,000	125,000	100,000	250,000	600,000
PLANNED	SCADA Cyber Security Improvements	GD	2	400,000	0	0	0	0	400,000
PLANNED	SCADA Master Plan Implementation	GD	2	100,000	350,000	450,000	250,000	250,000	1,400,000
PLANNED	Vehicle Replacement	GD	2	2,856,000	1,343,000	882,000	1,365,000	1,840,000	8,286,000
PLANNED	Windows 2012 Upgrade	GD	2	78,300	0	0	0	0	78,300
18043	Wireless LAN Upgrade	GD	3	157,580	145,000	0	0	0	302,580
Total				**10,866,293**	**5,738,000**	**2,387,000**	**2,020,000**	**2,695,000**	**23,706,293**

FERC
Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06019H

Project Name: FERC: C35 Oyster Creek

Project Category: Regulatory Requirements

Priority: 1 **PM:** Baron **Board Approval:** 11/08/21

Project Description:

Mandatory requirement of the FERC license. The District completed the installation of stabilization measures in Oyster Creek in 2019. Post-project monitoring 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:	$ 385,039
Spent to Date:	$375,039	2022 - 2026 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 415,039
Project Balance	$ 104,911	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 10,000	$ 10,000	$ 10,000			$ 30,000
						$ -
TOTAL	$ 10,000	$ 10,000	$ 10,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022 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:** 11/08/21

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:	$ 341,500	Expenditures through end of year:	$ 338,229
Spent to Date:	$ 313,229	2022 - 2026 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 503,229
Project Balance	$ 3,271	Additional Funding Required	$ 161,729

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$25,000	$25,000	$15,000	$25,000	$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	$ 35,000	$ 35,000	$ 25,000	$ 35,000	$ 35,000	$ 165,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%	$31,729	
		$0	
		$0	
Total	100%	$31,729	

Funding Comments: Temperature monitoring is coordinated with water quality sampling every three years (e.g., 2024)

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06076H

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

Project Category: Regulatory Requirements

Priority: 1 **PM:** Delongchamp **Board Approval:** 11/08/21

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 is required for 5-years following project construction to evaluate performance of stabilization measures. Maintenance of exclusion fencing and/or watering to protect vegetation during establishment may be required in 2022.

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:	$ 646,657	Expenditures through end of year:	$ 543,186
Spent to Date:	$ 513,186	2022 - 2026 Planned Expenditures:	$ 65,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 608,186
Project Balance	$ 38,968	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 25,000	$ 10,000	$ 10,000	$ 10,000		$ 55,000
Maintenance	$ 10,000					$ 10,000
TOTAL	$ 35,000	$ 10,000	$ 10,000	$ 10,000	$ -	$ 65,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	53%		$0
Water Rates	47%		$0
Total	100%		$0

Funding Comments:

2022	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:** Delongchamp **Board Approval:** 11/08/21

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 located over a mile away from the campground with an existing groundwater well located in proximity to the campground. This groundwater well was previously used to supply water to the Kay's Silver Lake Resort (now the Silver Lake Boat Launch) and provides a more reliable source of water to serve both the Silver Lake East and Silver Lake West campgrounds. The Project will recommission the well and install a new water line to serve both Silver Lake East and Silver Lake West campgrounds. This portion of the project is in design review and is anticipated to be presented to the Board for award in spring 2022. The District received a one-year time extension from FERC and the new completion date for the installation of the water system is October 18, 2022.

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 2022.

Project Financial Summary:			
Funded to Date:	$ 2,919,282	Expenditures through end of year:	$ 2,621,766
Spent to Date:	$ 2,581,766	2022 - 2026 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ 40,000	Total Project Estimate:	$ 3,621,766
Project Balance	$ 297,516	Additional Funding Required	$ 702,484

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction (Water System)	$ 1,000,000					$ 1,000,000
TOTAL	$ 1,000,000	$ -	$ -	$ -	$ -	$ 1,000,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$702,484
			$0
Total	100%		$702,484

Funding Comments:

2022	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:** 11/08/21

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:	$ 87,000	Expenditures through end of year:	$ 44,683
Spent to Date:	$ 44,683	2022 - 2026 Planned Expenditures:	$ 15,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 59,683
Project Balance	$ 42,317	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$15,000	$0	$0	$0	$0	$ 15,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 15,000	$ -	$ -	$ -	$ -	$ 15,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments: Amphibian surveys also required if Lake Aloha spills; funding for amphibian surveys from CIP # 06089H

2022	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:** 11/08/21

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:	$ 297,940
Spent to Date:	$ 267,940	2022 - 2026 Planned Expenditures:	$ 170,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 467,940
Project Balance	$ 61,260	Additional Funding Required	$ 108,740

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 70,000				$ 70,000	$ 140,000
Staff time	$ 15,000				$ 15,000	$ 30,000
						$ -
TOTAL	$ 85,000	$ -	$ -	$ -	$ 85,000	$ 170,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$23,740
		$0
		$0
Total	100%	$23,740

Funding Comments: Monitoring required every 5th and 6th year of the FERC license - next monitoring event in 2022 and again in 2026

2022	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:** 11/08/21

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:	$ 259,000	Expenditures through end of year:	$ 208,757
Spent to Date:	$ 188,757	2022 - 2026 Planned Expenditures:	$ 140,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 348,757
Project Balance	$ 50,243	Additional Funding Required	$ 89,757

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 65,000				$ 65,000	$ 130,000
Staff time	$ 5,000				$ 5,000	$ 10,000
						$ -
						$ -
TOTAL	$ 70,000	$ -	$ -	$ -	$ 70,000	$ 140,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$19,757
		$0
		$0
Total	100%	$19,757

Funding Comments: Monitoring required every 5th and 6th year of the FERC license - next monitoring event in 2022 and again in 2026

2022	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:** 11/08/21

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:	$ 388,648	Expenditures through end of year:	$ 323,248
Spent to Date:	$ 298,248	2022 - 2026 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 488,248
Project Balance	$ 65,400	Additional Funding Required	$ 99,600

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
FYLF/SNYLF monitoring	$ 45,000				$ 90,000	$ 135,000
Staff time					$ 10,000	$ 10,000
SFAR flow fluctuations	$ 5,000					$ 5,000
Lake Aloha monitoring	$ 15,000					$ 15,000
						$ -
TOTAL	$ 65,000	$ -	$ -	$ -	$ 100,000	$ 165,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments: Flow fluctuation monitoring only required if license criteria is triggered. Monitoring at Lake Aloha is only necessary in years when a spill occurs over the auxiliary dams. FYLF/SNYLF monitoring required every five years of FERC license - SNYLF monitoring rescheduled from 2021 to 2022 due to Caldor Fire.

2022	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:** 11/08/21

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:	$ 36,574
Spent to Date:	$ 34,574	2022 - 2026 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 2,000	Total Project Estimate:	$ 86,574
Project Balance	$ 23,426	Additional Funding Required	$ 26,574

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 20,000				$ 20,000	$ 40,000
Staff time	$ 5,000				$ 5,000	$ 10,000
						$ -
						$ -
TOTAL	$ 25,000	$ -	$ -	$ -	$ 25,000	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$1,574
			$0
			$0
Total	100%		$1,574

Funding Comments: Monitoring required every five years of FERC license - monitoring in 2021 rescheduled to 2022 due to the Caldor Fire.

2022	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:** 11/08/21

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:	$ 60,000	Expenditures through end of year:	$ 36,093
Spent to Date:	$ 34,093	2022 - 2026 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 2,000	Total Project Estimate:	$ 86,093
Project Balance	$ 23,907	Additional Funding Required	$ 26,093

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring	$ 20,000				$ 20,000	$ 40,000
Staff Time	$ 5,000				$ 5,000	$ 10,000
						$ -
						$ -
TOTAL	$ 25,000	$ -	$ -	$ -	$ 25,000	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$1,093
			$0
			$0
Total	100%		$1,093

Funding Comments: Monitoring required every five years of FERC license - monitoring in 2021 rescheduled to 2022 due to the Caldor Fire.

2022	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:** 11/08/21

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:	$ 165,410
Spent to Date:	$ 105,410	2022 - 2026 Planned Expenditures:	$ 75,000
Cash flow through end of year:	$ 60,000	Total Project Estimate:	$ 240,410
Project Balance	$ 3,856	Additional Funding Required	$ 71,144

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring					$ 65,000	$ 65,000
Staff time					$ 10,000	$ 10,000
TOTAL	$ -	$ -	$ -	$ -	$ 75,000	$ 75,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments: Monitoring required every five years of FERC license - next monitoring event in 2026.

2022	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:** 11/08/21

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:

Project is required by Project No. 184 license conditions.

Project Financial Summary:			
Funded to Date:	$ 55,381	Expenditures through end of year:	$ -
Spent to Date:	$ 40,381	2022 - 2026 Planned Expenditures:	$ 10,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 10,000
Project Balance	$ 10,000	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 10,000					$ 10,000
						$ -
TOTAL	$ 10,000	$ -	$ -	$ -	$ -	$ 10,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06096H

Project Name: FERC: C55 Heritage Resources

Project Category: Regulatory Requirements

Priority: 1 **PM:** Deason **Board Approval:** 11/08/21

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:	$ 215,560
Spent to Date:	$ 210,560	2022 - 2026 Planned Expenditures:	$ 55,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 270,560
Project Balance	$ 64,020	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Reporting	$50,000					$ 50,000
Staff Time	$ 5,000					$ 5,000
						$ -
						$ -
TOTAL	$ 55,000	$ -	$ -	$ -	$ -	$ 55,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments: Funding is needed in 2022 to conduct an evaluation of the historic rock walls that are located along the El Dorado Canal.

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06097H

Project Name: FERC: C59 Facility Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Gibson **Board Approval:** 11/08/21

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 next plan update is scheduled for 2022. 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:

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

Project Financial Summary:			
Funded to Date:	$ 70,000	Expenditures through end of year:	$ 49,197
Spent to Date:	$ 49,197	2022 - 2026 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 79,197
Project Balance	$ 20,803	Additional Funding Required	$ 9,197

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 15,000					$ 15,000
Design						$ -
Construction	$ 5,000	$ 5,000	$ 5,000			$ 15,000
						$ -
TOTAL	$ 20,000	$ 5,000	$ 5,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 06098H

Project Name: FERC: C46 thru C49 Recreation Resource Management

Project Category: Regulatory Requirements

Priority: 1 **PM:** Hawkins **Board Approval:** 11/08/21

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:	$ 304,888	Expenditures through end of year:	$ 282,098
Spent to Date:	$ 282,098	2022 - 2026 Planned Expenditures:	$ 80,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 362,098
Project Balance	$ 22,790	Additional Funding Required	$ 57,210

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Survey		$ 70,000				$ 70,000
Reporting			$ 10,000			$ 10,000
TOTAL	$ -	$ 70,000	$ 10,000	$ -	$ -	$ 80,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments: The Recreation Survey is required every 6 years of license implementation - the next survey will be performed in 2023 and agency consultation in 2024

2022	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:** 11/08/21

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:	$ 605,258
Spent to Date:	$ 570,258	2022 - 2026 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ 35,000	Total Project Estimate:	$ 705,258
Project Balance	$ 3,742	Additional Funding Required	$ 96,258

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Monitoring			$ 60,000			$ 60,000
Lab analysis			$ 25,000			$ 25,000
Staff time			$ 15,000			$ 15,000
TOTAL	$ -	$ -	$ 100,000	$ -	$ -	$ 100,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments: Monitoring required every three years of FERC license - next monitoring event in 2024.

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07005H

Project Name: FERC: C51.3 RM Echo Trailhead

Project Category: Regulatory Requirements

Priority: 1 **PM:** Hawkins **Board Approval:** 11/08/21

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:	$ 27,593
Spent to Date:	$ 24,593	2022 - 2026 Planned Expenditures:	$ 40,000
Cash flow through end of year:	$ 3,000	Total Project Estimate:	$ 67,593
Project Balance	$ 2,407	Additional Funding Required	$ 37,593

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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	2022 Amount
Water Rates	100%	$5,593
		$0
		$0
Total	100%	$5,593

Funding Comments:

2022	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:** Hawkins **Board Approval:** 11/08/21

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:	$ 578,162	Expenditures through end of year:	$ 573,837
Spent to Date:	$ 573,837	2022 - 2026 Planned Expenditures:	$ 273,501
Cash flow through end of year:	$ -	Total Project Estimate:	$ 847,338
Project Balance	$ 4,325	Additional Funding Required	$ 269,176

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Fees	$47,762	$49,195	$50,671	$52,191	$53,682	$ 253,501
Staff time	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 4,000	$ 20,000
TOTAL	$ 51,762	$ 53,195	$ 54,671	$ 56,191	$ 57,682	$ 273,501

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$47,437
			$0
			$0
Total	100%		$47,437

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07010H

Project Name: FERC: C15 Pesticide Use

Project Category: Regulatory Requirements

Priority: 1 **PM:** Gibson **Board Approval:** 11/08/21

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:	$ 948,000	Expenditures through end of year:	$ 920,021
Spent to Date:	$ 862,021	2022 - 2026 Planned Expenditures:	$ 410,000
Cash flow through end of year:	$ 58,000	Total Project Estimate:	$ 1,330,021
Project Balance	$ 27,980	Additional Funding Required	$ 382,021

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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
Develop Plan			$ 10,000			$ 10,000
						$ -
TOTAL	$ 80,000	$ 80,000	$ 90,000	$ 80,000	$ 80,000	$ 410,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$52,021
		$0
		$0
Total	100%	$52,021

Funding Comments: Need to update the plan in 2023 which is anticipated to cost approximately $10k

2022	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:** 11/08/21

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:	$ 657,000	Expenditures through end of year:	$ 656,716
Spent to Date:	$ 644,716	2022 - 2026 Planned Expenditures:	$ 250,000
Cash flow through end of year:	$ 12,000	Total Project Estimate:	$ 906,716
Project Balance	$ 284	Additional Funding Required	$ 249,716

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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	2022 Amount
Water Rates	100%	$49,716
		$0
		$0
Total	100%	$49,716

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	FERC

Project Number: 07030H

Project Name: FERC: C57 Transportation System Management Plan

Project Category: Regulatory Requirements

Priority: 1 **PM:** Gibson **Board Approval:** 11/08/21

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 next plan update is required in 2022. Plan updates include consultation with the Forest Service. Future costs are subject to change based on the scope of the new plan.

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:	$ 77,934
Spent to Date:	$ 77,934	2022 - 2026 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 107,934
Project Balance	$ 27,066	Additional Funding Required	$ 2,934

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 5,000	$ 5,000	$ 5,000			$ 15,000
Design						$ -
Develop Plan	$ 15,000					$ 15,000
						$ -
TOTAL	$ 20,000	$ 5,000	$ 5,000	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
	47%	$0
		$0
Total	147%	$0

Funding Comments:

2022	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:** 11/08/21

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 along the 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:	$ 312,342	Expenditures through end of year:	$ 301,813
Spent to Date:	$ 266,813	2022 - 2026 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 35,000	Total Project Estimate:	$ 466,813
Project Balance	$ 10,529	Additional Funding Required	$ 154,471

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Implementation	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 40,000	$ 140,000
Reporting	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 25,000
						$ -
						$ -
TOTAL	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ 45,000	$ 165,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$19,471
		$0
		$0
Total	100%	$19,471

Funding Comments: The monitoring plan requires monitoring of areas with high priority noxious weeds every year and the entire project area to be surveyed every five years - the entire project area survey is scheduled to be conducted in 2026.

2022	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:** Hawkins **Board Approval:** 11/08/21

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:	$ 294,000	Expenditures through end of year:	$ 263,670
Spent to Date:	$ 258,670	2022 - 2026 Planned Expenditures:	$ 200,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 463,670
Project Balance	$ 30,330	Additional Funding Required	$ 169,670

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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	2022 Amount
Water Rates	100%	$9,670
		$0
		$0
Total	100%	$9,670

Funding Comments:

Water Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 11032

Project Name: Main Ditch - Forebay to Reservoir 1

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

The Upper Main Ditch is approximately three miles long and conveys a maximum of 15,080 acre-feet of raw water annually at a maximum rate of 40 cubic feet per second from Forebay Reservoir to the Reservoir 1 Water Treatment Plant. Because the Main Ditch is an unlined earthen canal, a portion of the flow up to 1,800 acre-feet per year on average, is lost to seepage and evapotranspiration. This water could be made available for drinking water or power generation. Piping the Upper Main Ditch provides: improved supply reliability; elimination of contamination potential; reduced operations and maintenance costs; water rights protection from unreasonable use claims; reduction in Folsom Reservoir pumping costs in the long term; and on an interim basis, increased hydroelectric revenues. Reclamation has committed a grant of $1 million for construction of the project. The District approved the Construction Contract on August 24, 2020. Pipe installation began in June 2021 and is expected to be complete in February 2022. Pipe installation within Blair Road started in July 2021 and is expected to be complete in November 2021.

Basis for Priority:

Improves water quality, conserves water supply, protects health and safety of customer and the public and reduces operations costs. The project is under construction.

Project Financial Summary:			
Funded to Date:	$ 17,961,198	**Expenditures through end of year:**	$ 10,018,439
Spent to Date:	$ 5,218,439	**2022 - 2026 Planned Expenditures:**	$ 4,800,000
Cash flow through end of year:	$ 4,800,000	**Total Project Estimate:**	$ 14,818,439
Project Balance	$ 7,942,759	**Additional Funding Required**	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$3,500,000					$ 3,500,000
Construction Management	$300,000					$ 300,000
Construction Admin	$1,000,000					$ 1,000,000
NET TOTAL	$ 4,800,000	$ -	$ -	$ -	$ -	$ 4,800,000

Estimated Funding Sources	Percentage	2022	Amount
2020 Bond	100%	$0	
Total	**100%**	**$0**	

Funding Comments: The project replaces an existing facility, therefore is funded by water rates. The project was awarded a $1 million USBR Watersmart grant to apply to construction.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 15024

Project Name: Folsom Lake Intake Improvements Project

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Money **Board Approval:** 11/08/21

Project Description:

The Folsom Lake Raw Water Intake delivers EID water supplied from Folsom Lake to the El Dorado Hills Water Treatment Plant (EDHWTP) and is critical to service reliability for the El Dorado Hills service area. The intake is being upgraded to provide reliability, long-term operational needs, and temperature control within the El Dorado Hills service area. Federal funding of $7,075,777 is included in the project budget. The Board awarded construction and supporting contracts in February 2020. Construction is anticipated to run through 2021 with final completion in early 2022.

Basis for Priority:

The critical nature of this pump station, age and poor condition of pumps, number of repeated pump failures, difficulty obtaining and high cost of repair parts for 1958 vintage A-side booster pumps is the basis for Priority 1 ranking. This project is needed to maintain service and meet demand for public health and safety purposes.

Project Financial Summary:			
Funded to Date:	$ 44,305,997	Expenditures through end of year:	$ 40,651,398
Spent to Date:	$ 30,351,398	2022 - 2026 Planned Expenditures:	$ 3,625,100
Cash flow through end of year:	$ 10,300,000	Total Project Estimate:	$ 44,276,498
Project Balance	$ 3,654,599	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 50,000					$ 50,000
SWPPP	$ 5,100					$ 5,100
Design/Environmental	$ 20,000					$ 20,000
Construction management	$ 150,000					$ 150,000
Construction Costs	$ 1,900,000					$ 1,900,000
Contingency	$ 1,500,000					$ 1,500,000
USBR Cooperative Agreement Offset						$ -
TOTAL	$ 3,625,100	$ -	$ -	$ -	$ -	$ 3,625,100

Estimated Funding Sources	Percentage	2022 Amount
2020 Bond	100%	$0
		$0
Total	100%	$0

Funding Comments:

2022	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:** 11/08/21

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 authorized points of diversion and re-diversion to more effectively and efficiently meet the future water demands. The additional points of diversion are proposed at the District's existing El Dorado Diversion Dam near Kyburz and at Sacramento Municipal Utilities District's (SMUD) Slab Creek Dam/Reservoir or at SMUD's White Rock Powerhouse Penstock north of Placerville near Chili Bar. To take all or any portion of Permit 21112 water upstream of Folsom Reservoir, EID must successfully petition the State Water Resources Control Board (SWRCB) for permit changes to add points of diversion and rediversion. 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; prosecution of the Petition; evidentiary hearings before the SWRCB if any protests are unresolved; and potentially administrative appeals and litigation. The planned annual expenditures reflect a timeline for CEQA compliance and Petition prosecution in 2021-2024. Any post-SWRCB hearing proceedings would require additional funding. Following completion of CEQA compliance, Petition prosecution, and resolution of any protests, additional design and environmental studies will be required for construction of the new facilities.

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, maintaining compliance with regulatory and legal obligations regarding water operations, and optimizing existing water rights. The Change Petition process can take many years, particularly if it requires a hearing before the SWRCB. Although construction of the new diversion facilities will not commence for some time, it is prudent to begin this regulatory approval process well in advance of construction.

Project Financial Summary:			
Funded to Date:	$ 1,177,574	Expenditures through end of year:	$ 701,816
Spent to Date:	$ 501,816	2022 - 2026 Planned Expenditures:	$ 950,000
Cash flow through end of year:	$200,000	Total Project Estimate:	$ 1,651,816
Project Balance	$ 475,758	Additional Funding Required	$ 474,242

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Petition Prep/Modeling	$ 150,000					$ 150,000
CEQA/Environmental	$ 400,000	$ 100,000				$ 500,000
Petition Prosecution		$ 100,000	$ 100,000			$ 200,000
SWRCB Hearing			$ 100,000			$ 100,000
TOTAL	$ 550,000	$ 200,000	$ 200,000	$ -	$ -	$ 950,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$74,242
Total	100%		$74,242

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17011

Project Name: Crestview Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

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 was not able to 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 has been subjected to failing air compressors due to being under ground 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:	$ 50,000	Expenditures through end of year:	$ 9,929
Spent to Date:	$ 9,929	2022 - 2026 Planned Expenditures:	$ 550,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 559,929
Project Balance	$ 40,071	Additional Funding Required	$ 509,929

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 50,000					$ 50,000
Construction		$ 500,000				$ 500,000
TOTAL	$ 50,000	$ 500,000	$ -	$ -	$ -	$ 550,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$9,929
Total	100%		$9,929

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17035

Project Name: Green Valley Bridge Relocation

Project Category: State/County Road Projects

Priority: 1 **PM:** Wilson **Board Approval:** 11/08/21

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 received approval of all environmental documentation. The construction funding is an estimate based on the County's last plan drawing set and is subject to change based on revised drawings and roadway alignment. Additional funding may be required for additional pipe work to relocate existing stations.

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:	$ 105,000	Expenditures through end of year:	$ 90,776
Spent to Date:	$ 90,776	2022 - 2026 Planned Expenditures:	$ 875,000
Cash flow through end of year:		Total Project Estimate:	$ 965,776
Project Balance	$ 14,224	Additional Funding Required	$ 860,776

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 25,000					$ 25,000
Construction	$ 850,000					$ 850,000
TOTAL	$ 875,000	$ -	$ -	$ -	$ -	$ 875,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$860,776
Total	100%		$860,776

Funding Comments: Relocation of existing facilities.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 17048

Project Name: Strawberry Raw Water Pump Station

Project Category: Reliability & Service Level Improvements

Priority:	2	PM:	Wilson	Board Approval:	11/08/21

Project Description:

This station has numerous freeze issues and failing pumps that have outlived their useful lives. The pump station is approximately 250 feet away from the water treatment plant, is only accessible on foot, and is not on the District's property nor does it benefit from a documented easement. District staff over the past few years has spent increasing hours to keep the existing station operational. The station is currently in design to determine the exact layout of the new station in order to determine the needed environmental permits along the river.

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:	$ 99,000	Expenditures through end of year:	$ 69,462
Spent to Date:	$ 69,462	2022 - 2026 Planned Expenditures:	$ 300,000
Cash flow through end of year:		Total Project Estimate:	$ 369,462
Project Balance	$ 29,538	Additional Funding Required	$ 270,462

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design		$ 150,000				$ 150,000
Environmental	$ 75,000	$ 75,000				$ 150,000
Construction						$ -
TOTAL	$ 75,000	$ 225,000	$ -	$ -	$ -	$ 300,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$45,462
Total	100%		$45,462

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 18040

Project Name: Forebay Road Waterline Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

The waterline replacement 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. The District has reviewed all options for the main replacement list determined by operations and engineering and decided that the best use of funding would be the replacement of the 6" and 8" in Forebay Road. The District has experienced approximately 10 leaks over the past 16 years on the 5,000 feet of 6" outside diameter steel, 6" and 8" asbestos cement pipe, in Forebay Road and surrounding streets between Pony Express Trail and Deep Haven Road. The District has reviewed the current climate for mainline installation and pavement restoration and the current cost is approximately $380 per linear foot.

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:	**$ 150,000**	**Expenditures through end of year:**	**$ 82,528**
Spent to Date:	**$ 82,528**	**2022 - 2026 Planned Expenditures:**	**$ 2,665,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 2,747,528**
Project Balance	**$ 67,472**	**Additional Funding Required**	**$ 2,597,528**

Description of Work	**Estimated Annual Expenditures**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Design		**$ 15,000**				**$ 15,000**
Construction		**$ 2,500,000**				**$ 2,500,000**
Construction Inspection		**$ 150,000**				**$ 150,000**
TOTAL	**$ -**	**$ 2,665,000**	**$ -**	**$ -**	**$ -**	**$ 2,665,000**

Funding Sources	**Percentage**	**2022**	**Amount**
Water FCCs	100%		$0
Total	**100%**		**$0**

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 18048

Project Name: Critical Water Facility Generators

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

Due to re-operation of the power grid by PG&E due to wild fire issues the District is in need of adding six emergency generators and associated power equipment to critical water facilities. The District does not maintain adequate emergency back-up power for many of the water pump stations. The facilities that are in immediate need of backup power include North Canyon Pump Station, Gold Ridge Pump Station, Moosehall Reservoir, Sportsman Pump Station, Ridgeview Pump Station, and Monte Vista Pump Station. The addition of these generators will provide for adequate backup power to maintain adequate water supply at times of prolonged power outages during the fire season. The District received approval from the County to install permanent generators at both Sportsman's Pump Station and Gold Ridge Pump Station. Staff will work on procuring permanent generators for these sites as well as completing installations at each. Staff is working to install a repurposed generator at Woodside Pump Station in 2022.

Basis for Priority:

Ability to maintain critical water supply during fire season due to unreliable power source from PG&E.

Project Financial Summary:			
Funded to Date:	$ 2,033,427	**Expenditures through end of year:**	$ 1,648,439
Spent to Date:	$ 1,648,439	**2022 - 2026 Planned Expenditures:**	$ 300,000
Cash flow through end of year:		**Total Project Estimate:**	$ 1,948,439
Project Balance	$ 384,988	**Additional Funding Required**	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 300,000					$ 300,000
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
Total	**100%**	**$0**

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19008

Project Name: EDM 1 Relocate / Camino Safety

Project Category: State/County Road Projects

Priority: 1 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

The California Department of Transportation (Caltrans) is presently working on the "U.S. Highway 50 Camino Safety Project" to improve safety on Highway 50 in the Camino Corridor. The project will modify existing roadways to install a concrete median barrier, maintain existing acceleration/deceleration lanes at-grade intersections, construct a new mainline undercrossing to mitigate for loss of left-turn movements, construct access to the new mainline undercrossing for local connectivity, and construct a wildlife crossing. The project is in the Camino area, from Still Meadows Road to Upper Carson Road.

In 2020, the Board approved a utility agreement to share in the costs of relocation of EID facilities. To accommodate the project the District transmission lines EDM1 and EDM2 will need to be relocated. The relocation is included in Caltrans Project. The District is responsible for 100% of the relocation of EDM1 and Caltrans is responsible for 100% of the relocation of EDM2. EDM1 relocation is to be complete in November 2021, EDM 2 relocation is to be complete in January 2022. Punchlist items and project billing is expected to extend into spring of 2022.

Basis for Priority:

The District has facilities in both Right of Way and an Easement that will be impacted by the project. The District must pay a portion of the relocation costs. The Board has previously approved a Utility Agreement for the work and the project is under construction.

Project Financial Summary:			
Funded to Date:	$ 1,210,000	Expenditures through end of year:	$ 464,302
Spent to Date:	$ 289,302	2022 - 2026 Planned Expenditures:	$ 745,000
Cash flow through end of year:	$ 175,000	Total Project Estimate:	$ 1,209,302
Project Balance	$ 745,698	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 100,000					$ 100,000
Construction	$ 645,000					$ 645,000
TOTAL	$ 745,000	$ -	$ -	$ -	$ -	$ 745,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
Total	100%		$0

Funding Comments: Work involves relocation of existing facilities.

2022 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 19016

Project Name: Main Ditch Litigation

Project Category:

Priority: 1 **PM:** Poulsen **Board Approval:** 11/08/21

Project Description:

On April 22, 2019, the District adopted an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) for the Upper Main Ditch Piping Project, Project No. 11032. A group called Save the El Dorado Canal subsequently filed a petition for writ of mandate in El Dorado Superior Court challenging the validity of the EIR and the District's CEQA compliance. The El Dorado County Superior Court denied the petition for writ of mandate and found that the District had complied with CEQA. The Save the El Dorado Canal group then filed an appeal with the Third Appellate District Court of Appeal. The CEQA appeal is now pending and will likely be resolved in 2022. Depending on the outcome of the appeal, additional funding may be required for this litigation.

Basis for Priority:

This involves ongoing litigation. The Main Ditch piping project is under construction.

Project Financial Summary:			
Funded to Date:	$ 206,000	Expenditures through end of year:	$ 185,652
Spent to Date:	$ 166,652	2022 - 2026 Planned Expenditures:	$ 20,000
Cash flow through end of year:	$ 19,000	Total Project Estimate:	$ 205,652
Project Balance	$ 20,348	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Litigation	$ 20,000					$ 20,000
						$ -
						$ -
						$ -
TOTAL	$ 20,000	$ -	$ -	$ -	$ -	$ 20,000

Funding Sources	Percentage	2022 Amount
Water rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19019

Project Name: Strawberry Self Cleaning Screens

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The District currently has two self-cleaning screens for the Strawberry Water Treatment Plant that filter water prior to entering the membrane plant. The existing screens are leaking and cannot be rebuilt. During a state inspection two years ago the screens were identified as a deficiency as they have various leaks. The District is working on a design that will include two new low pressure screens to better increase efficiency in the plant. The screens will be designed for the low pressure application and will have an electric motor to assist cleaning during backwash cycles. The filters will backwash less and minimize the volume of water that is currently present in the backwash tank at the plant reducing operating costs. This project will be constructed by District crews including all mechanical piping and electrical work.

Basis for Priority:

Replacement of inefficient and obsolete infrastructure will support regulatory compliance, service reliability, and reduce maintenance costs.

Project Financial Summary:			
Funded to Date:	$ 85,000	Expenditures through end of year:	$ 66,967
Spent to Date:	$ 66,967	2022 - 2026 Planned Expenditures:	$ 30,000
Cash flow through end of year:		Total Project Estimate:	$ 96,967
Project Balance	$ 18,033	Additional Funding Required	$ 11,967

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 5,000					$ 5,000
Construction	$ 25,000					$ 25,000
TOTAL	$ 30,000	$ -	$ -	$ -	$ -	$ 30,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$11,967
Total	100%		$11,967

Funding Comments: Work involves upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19033

Project Name: Reservoir A WTP PLC Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The project involves replacing 7 antiquated, end of life cycle programmable logic controllers (PLC) at the Reservoir A water treatment plant. These PLC units have exceeded 15 years beyond the end of life cycle. The PLCs control all the processes at the facility.

Basis for Priority:

The PLC units have been experiencing component failure due to age and condition. The complete failure of the PLC poses a great risk of interrupting service to our customers. New parts are not available and operating system is no longer supported.

Project Financial Summary:			
Funded to Date:	$ 1,317,990	Expenditures through end of year:	$ 118,018
Spent to Date:	$ 118,018	2022 - 2026 Planned Expenditures:	$ 1,100,000
Cash flow through end of year:		Total Project Estimate:	$ 1,218,018
Project Balance	$ 1,199,972	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 100,000					$ 100,000
Inspection		$ 100,000				$ 100,000
Res A Construction		$ 900,000				$ 900,000
TOTAL	$ 100,000	$ 1,000,000	$ -	$ -	$ -	$ 1,100,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%	$	100,000
Total	100%		$100,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19036

Project Name: Serviceline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Russell **Board Approval:** 11/08/21

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:	$ 2,119,863	Expenditures through end of year:	$ 920,523
Spent to Date:	$ 920,523	2022 - 2026 Planned Expenditures:	$ 25,690,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 26,610,523
Project Balance	$ 1,199,340	Additional Funding Required	$ 24,490,660

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Construction (Various)	$ 4,800,000	$ 5,160,000	$ 5,160,000	$ 5,160,000	$ 5,160,000	$ 25,440,000
TOTAL	$ 4,850,000	$ 5,210,000	$ 5,210,000	$ 5,210,000	$ 5,210,000	$ 25,690,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$3,650,660
Total	100%		$3,650,660

Funding Comments: Project has no planned increase in potable water delivery capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 19050

Project Name: Construction Storage Facility

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

This project will provide a new storage facility in the EID upper yard to house material and equipment for increased security and protection from elements. A portion of this storage facility will need to be temperature controlled to properly store some disposable material as well as provide for freeze protection for equipment with water storage (Vacuum Excavation Truck). Additionally, the facility will be a prefabricated steel or wood building placed on a concrete foundation. Some of the design funding will be used to procure any necessary City of Placerville permits. The proposed building will be approximately 50 feet by 50 feet and have a covered storage section outside the building depending on available space in the District's upper yard. The project has been deferred in the CIP to 2024 to meet financial plan objectives but may be accelerated if funding is available.

Basis for Priority:

Improve efficiency and provide safe and adequate storage.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 38,964
Spent to Date:	$ 13,964	2022 - 2026 Planned Expenditures:	$ 1,150,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 1,188,964
Project Balance	$ 11,036	Additional Funding Required	$ 1,138,964

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design/Permitting	$ 75,000	$ 75,000				$ 150,000
Construction			$ 1,000,000			$ 1,000,000
TOTAL	$ 75,000	$ 75,000	$ 1,000,000	$ -	$ -	$ 1,150,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$63,964
Total	100%		$63,964

Funding Comments: This is for the storage of existing water construction equipment and materials.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 20016

Project Name: Camino Intertie PRS#1

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The District has numerous 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. The District has a pressure reducing station program that identifies specific stations to rehabilitate, replace or upgrade to maintain service reliability throughout the District. Loss of pressure control or valve failure can result in extensive water line damage or complete failure. The Camino Intertie Pressure Reducing Station #1 is in need of replacement due to maintenance issues due to infrastructure that has outlived its useful life. Additionally, the current valves do not have the ability to transfer 40 CFS from Reservoir 1 water treatment plant to Reservoir 2. The valves that are currently in use are undersized as there is limited access to the vault and when the original sleeve valves failed staff was unable to repair with like sized valves. This project will also improve District flexibility by adding a 6" pressure reducing valve within the Reservoir 2 pump station as well as a new 100 HP pump to provide the ability to serve Camino with multiple sources when needed. This project also consists of adding necessary flow meters for monitoring the flow rates more accurately.

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:	$ 304,226	Expenditures through end of year:	$ 59,053
Spent to Date:	$ 34,053	2022 - 2026 Planned Expenditures:	$ 975,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 1,034,053
Project Balance	$ 245,173	Additional Funding Required	$ 729,827

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 975,000					$ 975,000
TOTAL	$ 975,000	$ -	$ -	$ -	$ -	$ 975,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$729,827
Total	100%		$729,827

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 20017

Project Name: No Name Creek Diversion Gauging

Project Category: Regulatory Requirements

Priority: 1 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

Senate Bill (SB) 88, signed by Governor Brown on June 24, 2015, mandated new diversion reporting and measurement requirements for all surface water rights holders within California who divert more than 10 acre-feet per year. SB 88 has a phased effective date between January 2017 and January 2018 depending on size of diversion. The District participated in an ACWA task force in an attempt to eliminate or modify these new requirements, but the law still passed and is now phasing into effect. Staff initially evaluated the District's water right portfolio and determined many of the facilities for the smaller water rights would require modification to add measurement and/or SCADA communication. In June of 2017, the District requested extensions for the remaining four diversions in need of gauging. Three of the four diversions were completed in 2019. No Name Creek is the last of the four needing to be completed and will be constructed in the 2022 P184 outage. Original plans was to construct this during the 2021 outage, however, due to the Caldor Fire this was delayed.

Basis for Priority:

If the District does not comply with this requirement, there would be unacceptable risk to the security of the District's water rights including civil liability up to $500 per day pursuant to Water Code Section 1846.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 31,332
Spent to Date:	$ 19,332	2022 - 2026 Planned Expenditures:	$ 50,000
Cash flow through end of year:	$ 12,000	Total Project Estimate:	$ 81,332
Project Balance	$ 18,668	Additional Funding Required	$ 31,332

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
No Name Creek Installation	$ 50,000					$ 50,000
TOTAL	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%	$31,332	
Total	100%	$31,332	

Funding Comments: Project consist of installation of new stream gauges to comply with new measurement requirements, project does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 20030

Project Name: Drop Off Road Waterline Extension

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 11/08/21

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 may be combined with other waterline replacement projects in the area such as Forebay Road.

Basis for Priority:

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

Project Financial Summary:			
Funded to Date:	$ 110,000	Expenditures through end of year:	$ 27,382
Spent to Date:	$ 27,382	2022 - 2026 Planned Expenditures:	$ 1,250,000
Cash flow through end of year:		Total Project Estimate:	$ 1,277,382
Project Balance	$ 82,618	Additional Funding Required	$ 1,167,382

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction		$ 1,200,000				$ 1,200,000
Capitalized Labor		$ 50,000				$ 50,000
TOTAL	$ -	$ 1,250,000	$ -	$ -	$ -	$ 1,250,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
Total	100%		$0

Funding Comments: Work involves planning the replacement and upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 20034

Project Name: El Dorado Hills WTP Flow Meter Upgrade Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The District has two finished water meters and one raw water flow meter that have outlived their useful lives and are in need of being replaced. The meters are for the finished water pumps that send water to the District's 820 and 960 pressure zones, and the raw water flow meter determines the flow entering the plant. Replacing these meters will provide a higher degree of accuracy for plant operations, while being able to provide validation reporting to California Water Boards in order to comply with tightening Regulations. Flow meter replaced requires excavation and installation of a larger vault for future maintenance needs.

Basis for Priority:

Flow meters need to be upgraded to meet current Drinking Water Permit for El Dorado Hills Water Treatment Plant.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 50,000
Spent to Date:	$ 32,013	2022 - 2026 Planned Expenditures:	$ 550,000
Cash flow through end of year:	$ 17,987	Total Project Estimate:	$ 600,000
Project Balance	$ (0)	Additional Funding Required	$ 550,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 550,000					$ 550,000
TOTAL	$ 550,000	$ -	$ -	$ -	$ -	$ 550,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$550,000
Total	100%		$550,000

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022 CAPITAL IMPROVEMENT PLAN Program: Water

Project Number: 21001

Project Name: AMR and Small Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Heape **Board Approval:** 11/08/21

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, 2021 there are 30,513 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:	$ 200,000	**Expenditures through end of year:**	$ 200,000
Spent to Date:	$133,614	**2022 - 2026 Planned Expenditures:**	$ 1,500,000
Cash flow through end of year:	$66,386	**Total Project Estimate:**	$ 1,700,000
Project Balance	$ -	**Additional Funding Required**	$ 1,500,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Implementation	$275,000	$275,000	$275,000	$275,000	$275,000	$ 1,375,000
Capitalized Labor	$25,000	$25,000	$25,000	$25,000	$25,000	$ 125,000
TOTAL	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 1,500,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$300,000
Total	**100%**		**$300,000**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21012

Project Name: DOT Construction Projects - Water

Project Category: State/County Road Projects

Priority: 1 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

At Board direction, staff has streamlined contracting procedures with the El Dorado County Department of Transportation (DOT) and City of Placerville for joint projects. EID has many water and sewer lines in roads maintained by DOT. From time to time, DOT initiates a road project where either EID water, wastewater, or recycled waterlines need to be relocated or upgraded, which presents opportunities to join forces with DOT in the project by simultaneously upgrading and/or relocating our facilities. On August 10, 2015 the Board reauthorized the Master Reimbursement Agreement which is utilized for such projects. The agreement is good for five years.

This CIP is intended for staff coordination with DOT throughout the year and for minor projects. This CIP will also be used to fund minor water related relocations performed by the County under the Agreement. Larger utility relocation projects will have a specific CIP that identifies all the work associated with that project.

Basis for Priority:

Projects are required by law, regulation, contract, agreement or license. This includes projects required to meet requirements imposed by federal, tate, or local governments. This also includes relocation of District facilities located in the public right-of-way as necessitated by County road improvements.

Project Financial Summary:			
Funded to Date:	$ 34,183	Expenditures through end of year:	$ 27,213
Spent to Date:	$ 7,213	2022 - 2026 Planned Expenditures:	$ 165,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 192,213
Project Balance	$ 6,970	Additional Funding Required	$ 158,030

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design and Coordination	$30,000	$30,000	$35,000	$35,000	$35,000	$ 165,000
TOTAL	$ 30,000	$ 30,000	$ 35,000	$ 35,000	$ 35,000	$ 165,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$23,030
Total	100%		$23,030

Funding Comments: Typically work involves replacement or relocation of existing facilities. However, funding split will be further evaluated for each project.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21015

Project Name: Swansboro Pump Station Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

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:	$ 47,909
Spent to Date:	$ 17,909	2022 - 2026 Planned Expenditures:	$ 65,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 112,909
Project Balance	$ 43,091	Additional Funding Required	$ 21,909

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 15,000					$ 15,000
Construction	$ 50,000					$ 50,000
TOTAL	$ 65,000	$ -	$ -	$ -	$ -	$ 65,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$21,909
Total	100%		$21,909

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21022

Project Name: Swansboro Pump Station SCADA Hardware Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

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

Basis for Priority:

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

Project Financial Summary:			
Funded to Date:	$ 75,000	Expenditures through end of year:	$ 45,377
Spent to Date:	$ 377	2022 - 2026 Planned Expenditures:	$ 75,000
Cash flow through end of year:	$ 45,000	Total Project Estimate:	$ 120,377
Project Balance	$ 29,623	Additional Funding Required	$ 45,377

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 50,000					$ 50,000
Construction	$ 25,000					$ 25,000
TOTAL	$ 75,000	$ -	$ -	$ -	$ -	$ 75,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$45,377
Total	100%		$45,377

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21025

Project Name: Cedar Ravine 6 Inch Wholesale Meter

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This is part of the program that replaces old and inaccurate large wholesale meters in the District. This project includes replacing the 6" flow meter and pressure reducing station that feeds the City of Placerville. Actual wholesale meter replacement costs for each individual site will be brought to the Board for specific approval. With the revenue from this meter the District will recoup the costs of this project in approximately 6 years with revenue from the meter directly. The anticipated lost revenue from the current meter is approximately $20,000 per year at this time. The District intends to test the removed meter and determine the lost revenue accurately at the completion of this project.

Basis for Priority:

Loss of revenue to under reporting large wholesale meters.

Project Financial Summary:			
Funded to Date:	$ 25,000	Expenditures through end of year:	$ 11,976
Spent to Date:	$ 4,200	2022 - 2026 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ 7,776	Total Project Estimate:	$ 311,976
Project Balance	$ 13,024	Additional Funding Required	$ 286,976

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction		$ 300,000				$ 300,000
TOTAL	$ -	$ 300,000	$ -	$ -	$ -	$ 300,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21030

Project Name: Reservoir 1 Storage Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The District operates 7 floating cover drinking water reservoirs ranging in age from 26 to 33 years including Reservoir 1. During the operation of Reservoir 1 water treatment plant the reservoir serves as a contact basin for meeting disinfection requirements. Additionally, the reservoir serves as distribution storage for the Pollock Pines service area. This floating cover has outlived its useful life and has required extensive maintenance to keep in in service. With increasingly strict drinking water regulations the District evaluating the installation of two tanks to replace the existing reservoir. One tank will be used to meet the contact requirements for the water treatment plant and the other will be used to meet the distribution storage needs. Additionally alternatives will be evaluated, with potentially installing an aluminum dome and steel baffling within the existing reservoir. A storage analysis is being performed first to determine the required storage for Reservoir 1 with regard to future development and water treatment needs. Construction costs are not shown and will be updated next year after construction alternatives are selected.

Basis for Priority:

Maintain reliability of service for a facility critical for water treatment process and water transmission from Pollock Pines to El Dorado Hills.

Project Financial Summary:			
Funded to Date:	$ 75,000	Expenditures through end of year:	$ 33,035
Spent to Date:	$ 9,514	2022 - 2026 Planned Expenditures:	$ 200,000
Cash flow through end of year:	$ 23,521	Total Project Estimate:	$ 233,035
Project Balance	$ 41,965	Additional Funding Required	$ 158,035

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 200,000					$ 200,000
Storage Tank Construction		*				$ -
Contact Tank Construction			*			$ -
						$ -
TOTAL	$ 200,000	$ -	$ -	$ -	$ -	$ 200,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$158,035
Total	100%		$158,035

Funding Comments: Funding does not include construction costs. Project involves upgrade of existing facilities and no planned increase in capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21031

Project Name: EDHWTP 820 960 Air Conditioning Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The current El Dorado Hills Water Treatment Plant clearwell variable frequency drive pumps (both 313 and 323) have failing air conditioning units due to space limitations behind the current sound wall. The air condition units are forced to re-circulate hot air and thus are never able to shutoff even during cool nights while the VFD's are running. The project replaces and relocates the air condition units outside of the sound wall to allow for clear air travel through the units. This work will include coring the sound wall for duct work, placing concrete pads, installing all necessary conduits and wiring, and installing new air conditioning units.

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:	$ 60,000	Expenditures through end of year:	$ 30,265
Spent to Date:	$ 265	2022 - 2026 Planned Expenditures:	$ 30,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 60,265
Project Balance	$ 29,735	Additional Funding Required	$ 265

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 30,000					$ 30,000
TOTAL	$ 30,000	$ -	$ -	$ -	$ -	$ 30,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%	$265	
Total	100%	$265	

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21034

Project Name: Braden Court Pressure Reducing Station #1

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The District has numerous 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. The District has a pressure reducing station program that identifies specific stations to rehabilitate, replace or upgrade to maintain service reliability throughout the District. Loss of pressure control or valve failure can result in extensive water line damage or complete failure.

The current Braden Court PRS1 is at the end of its useful life as the valves and piping in the station are continuously leaking. Currently a repair was made to the station in 2020, however the repair took place in the vault as the piping has been concreted together. The concrete encasement for this station was completed due to thrust concerns as it currently breaks 150 PSI to 15 PSI. The project will upgrade the station given its current condition. This work would include removing the existing station and installing a new prefabricated below ground 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:	$ 90,000	Expenditures through end of year:	$ 39,421
Spent to Date:	$ 19,421	2022 - 2026 Planned Expenditures:	$ 350,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 389,421
Project Balance	$ 50,579	Additional Funding Required	$ 299,421

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction		$ 350,000				$ 350,000
TOTAL	$ -	$ 350,000	$ -	$ -	$ -	$ 350,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
Total	100%		$0

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21040

Project Name: Generator FEMA Grant - Water

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

This project will install backup emergency generators at twenty-two remote District facilities, ten of which are water pump stations. The District applied for and was awarded Hazard Mitigation Grant Program (HMGP) funding through the Federal Emergency Management Agency (FEMA) to provide a federal cost share for the installations. This project will provide local agency funding as required by the HMGP grant.

Basis for Priority:

The project will provide continual power of twelve wastewater lift stations during utility power outages.

Project Financial Summary:			
Funded to Date:	$ 256,347	Expenditures through end of year:	$ 119,933
Spent to Date:	$ 19,933	2022 - 2026 Planned Expenditures:	$ 345,214
Cash flow through end of year:	$ 100,000	Total Project Estimate:	$ 465,147
Project Balance	$ 136,414	Additional Funding Required	$ 208,800

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 100,000					$ 100,000
Construction		$ 1,110,000				$ 1,110,000
Inspection		$ 50,000				$ 50,000
FEMA Funding		$ (914,786)				$ (914,786)
TOTAL	$ 100,000	$ 245,214	$ -	$ -	$ -	$ 345,214

Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: 21051

Project Name: Reservoir 2 Roof and Rafter Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

During the recoating of Reservoir 2 tank it was discovered that the roof and rafters were in significantly worse condition than Reservoir 2A. Upon removal of individual rafters it was discovered that no wedging was completed between the top of the rafters and the roof. Thus no coating was applied to the top flange of the rafters allowing corrosion to occur immediately after the initial tank construction. Due to this level of corrosion after 17 years of not being protected all rafters now must be replaced. Additionally, inspection blasting of the roof is being performed after rafter removal. At each location where the rafter has been removed the roof in many cases has existing holes prior to blasting. Furthermore, after inspection blasting additional holes open up on every roof plate necessitating the replacement of the roof to the tank knuckle.

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:	$ 50,000	Expenditures through end of year:	$ 2,000,000
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 600,000
Cash flow through end of year:	$ 2,000,000	Total Project Estimate:	$ 2,600,000
Project Balance	$ (1,950,000)	Additional Funding Required	$ 2,550,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction	$ 600,000					$ 600,000
TOTAL	$ 600,000	$ -	$ -	$ -	$ -	$ 600,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$2,550,000
Total	100%		$2,550,000

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Caldor Fire Recovery - Water

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The 2021 Caldor fire damaged a variety of Hydroelectric, Water, and Recreation facilities. This programmatic CIP intends to replace damaged or destroyed assets to pre-fire functionality. Costs are expected to be reimbursed through insurance and/or FEMA recovery.

Basis for Priority:

Replacement of necessary damaged or destroyed assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ -
Cash flow through end of year:	$ -	Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 10,000					$ 10,000
Construction	$ 50,000					$ 50,000
Insurance/FEMA	$ (60,000)					$ (60,000)
TOTAL	$ -	$ -	$ -	$ -	$ -	$ -

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Diamond Springs Main Capacity Improvements

Project Category: Master Planning

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

The Diamond Springs Main (DSM) is a key component of the current and future water transmission system for the District between Reservoir 7 and Reservoir 12 in Cameron Park. The DSM includes approximately 12.1 miles of 16", 18", 21", 24", and 30" concrete pressure pipelines constructed in 1961. The pipeline is currently supplied by the Reservoir A WTP via the Pleasant Oak Main and delivers water to customers in Diamond Springs/El Dorado, Greenstone, Shingle Springs and Cameron Park. The flow in this pipeline at peak demand times has been maximized beyond its design criteria. For several consecutive days of peak demands in 2021 the capacity of the pipeline was not sufficient to maintain and recover storage levels along the pipeline at Reservoir 9, Reservoir 11 and Reservoir 12 in Cameron Park, which is cause for concern. The pipe has also experienced corrosion and leaks in areas, due to individual service connections tapped on the main and a lack of cathodic protection. Over the past 5 years the District has experienced 6 leaks with a significant increase over the last year. The 2013 Integrated Water Resources Master Plan identified future capacity improvements for the DSM and included a portion of a new parallel pipeline that could help resolve capacity limitations. Staff will review alternatives for improving the capacity of the DSM as part of the Water Master Plan update and may also initiate a separate feasibility study to address the project. Staff will update the CIP next year with the recommended alternative and updated costs and timeframe.

Basis for Priority:

Project provides increased capacity to maintain reliable water service for existing and future customers.

Project Financial Summary:			
Funded to Date:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:		**2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Engineering	$250,000					$ 250,000
Environmental						
Construction						$ -
TOTAL	$ 250,000	$ -	$ -	$ -	$ -	$ 250,000

Estimated Funding Sources	Percentage	2022	Amount
2025 Bond	100%		$250,000
Total	100%		$250,000

Funding Comments: Construction would likely be funded by a future bond issuance/FCC reserves.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: EDM Flow Integration

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

Design and install five to seven Pressure Reducing Station monitoring sites on El Dorado Main #1 and #2 transmission pipelines. These sites would provide valuable real-time data for control and efficiency of the system. The project would require at each site a new power service, flow meters, upstream and downstream pressure transmitters, and a RTU panel with metering section and antenna mast.

Basis for Priority:

The project will allow remote monitoring and control of the water distribution system. The remote control of the distribution system can be used to reduce pressure swings in the system and anticipate future repairs.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 600,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 600,000
Project Balance	$ -	Additional Funding Required	$ 600,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design			$ 25,000	$ 25,000		$ 50,000
Construction				$ 250,000	$ 250,000	$ 500,000
Capitalized Labor				$ 25,000	$ 25,000	$ 50,000
						$ -
TOTAL	$ -	$ -	$ 25,000	$ 300,000	$ 275,000	$ 600,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: Project involves providing visibility to an existing transmission system, with no planned increase in potable water delivery capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Folsom - EDH Water Treatment Plant Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This program consists of targeted process, control and facility improvements from the Folsom Lake Intake to and including the El Dorado Hills Water Treatment Plant. Several improvements have been identified to insure regulatory compliance, increased service reliability, reduced maintenance expenditures and extended facility life. Individual improvements may change and/or be replaced with other more critical improvements as priorities are set and projects developed. Cost estimates are at the conceptual level of confidence. As projects are better defined, individual project numbers will be established. This also includes facility improvement funding available for any unplanned assets that have failed or been found to have reached their service life and need to be replaced throughout the distribution system or treatment plant.

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. This program 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Facility Improvements	$ 50,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 450,000
TOTAL	$ 50,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 450,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%	$50,000	
Total	100%	$50,000	

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

2022	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:** 11/08/21

Project Description:

The City of Placerville will be replacing the existing Placerville Drive Hangtown Creek Bridge in 2023. 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 anticipates completing their environmental permitting in 2021 and design for the project to be completed in 2022 with construction to begin in the spring of 2023.

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Design	$ 75,000					$ 75,000
Construction		$ 400,000				$ 400,000
TOTAL	$ 75,000	$ 400,000	$ -	$ -	$ -	$ 475,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$75,000
Total	100%		$75,000

Funding Comments: Project consists of replacing existing waterline with a new waterline within the new bridge.

2022	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:** Wilson **Board Approval:** 11/08/21

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. PRS replacement has been deferred in the CIP to meet financial plan objectives.

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:		2022 - 2026 Planned Expenditures:	$ 3,300,000
Cash flow through end of year:		Total Project Estimate:	$ 3,300,000
Project Balance	$ -	Additional Funding Required	$ 3,300,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design & Construction		$725,000	$725,000	$925,000	$925,000	$ 3,300,000
TOTAL	$ -	$ 725,000	$ 725,000	$ 925,000	$ 925,000	$ 3,300,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2022	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:** Wilson **Board Approval:** 11/08/21

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. Pump station replacement projects have been deferred in the CIP to meet financial plan objectives.

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:		**2022 - 2026 Planned Expenditures:**	$ 2,600,000
Cash flow through end of year:		**Total Project Estimate:**	$ 2,600,000
Project Balance	$ -	**Additional Funding Required**	$ 2,600,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design		$ 100,000	$ 100,000		$ 100,000	$ 300,000
Oak Lane (Abandonment)				$ 100,000		$ 100,000
Ridgeview		$ 600,000	$ 1,000,000			$ 1,600,000
Quartz				$ 500,000		$ 500,000
Monte Vista						$ -
Reservoir 8 PS				$ 50,000	$ 50,000	$ 100,000
TOTAL	$ -	$ 700,000	$ 1,100,000	$ 650,000	$ 150,000	$ 2,600,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
Total	**100%**		**$0**

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service and does not increase capacity.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Reservoir 1 Water Treatment Plant Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This program consists of targeted process, control and facility improvements at the Reservoir 1 Water Treatment Plant. This also includes any improvements to the Strawberry Water Treatment Plant facility as determined by life cycled assets or regulatory requirements. Several improvements have been identified to insure regulatory compliance, increased service reliability, reduced maintenance expenditures and extended facility life. Individual improvements may change and/or be replaced with other more critical improvements as priorities are set and projects developed. Cost estimates are at the conceptual level of confidence. As projects are better defined, individual project numbers will be established. This also includes facility improvement funding available for any unplanned assets that have failed or been found to have reached their service life and need to be replaced throughout the distribution system or treatment plant. This also includes the SCADA upgrade which includes the complete replacement of all existing equipment and upgrade to current District standards.

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. This program 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:		2022 - 2026 Planned Expenditures:	$ 1,775,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,775,000
Project Balance	$ -	Additional Funding Required	$ 1,775,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Facility Improvements	$ 100,000	$ 100,000		$ 100,000	$ 100,000	$ 400,000
Sodium Hydroxide Conversion Design		$ 300,000				$ 300,000
Design SCADA Improvements		$ 75,000				$ 75,000
Construction SCADA Improvements			$ 500,000	$ 500,000		$ 1,000,000
TOTAL	$ 100,000	$ 475,000	$ 500,000	$ 600,000	$ 100,000	$ 1,775,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$100,000
Total	100%		$100,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Res A SCADA RTU Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This funding is to replace the end of life cycle Remote Telemetry System associated with the Reservoir A SCADA system. The project will replace all obsolete SCADA radios, reprogram Remote Telemetry Units, and reconfigure the master radio and PLC.

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Hardware	$ 15,000					$ 15,000
Capitalized Labor	$ 10,000					$ 10,000
Professional Services	$ 25,000					$ 25,000
TOTAL	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: ROW Vegetation Maintenance

Project Category: Regulatory Requirements

Priority: 2 **PM:** Odzakovic **Board Approval:** 11/08/21

Project Description:

El Dorado Irrigation District owns and operates drinking water transmission mains to convey water to the District's treatment plants for treatment and then to various treated water storage tanks for ultimate delivery to approximately 130,000 customers. These mains cross both public and private property, passing through a variety of terrain and vegetation types, from Pollock Pines to El Dorado Hills. Vegetation within overland (cross-country) portions of the alignments must be maintained to allow for proper access and inspection when necessary for leak detection, maintenance needs, and repairs, including emergency repairs. Staff have not been able to conduct regular maintenance of the vegetation, which has resulted in overgrown conditions that limit or preclude access for detection of leaks, periodic inspection and maintenance, and complicate access during emergency repairs. The purpose of this project is to improve maintenance and have more reliable operation of the facilities.

Basis for Priority:

Compliance with AR 5012 District Infrastructure and Facilities

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
1 - Ton Crew Truck	$ 50,000					$ 50,000
Tracked Chipper	$ 85,000					$ 85,000
Flat Bed Trailer with Storage Boxes	$ 10,000					$ 10,000
Small Equipment	$ 5,000					$ 5,000
TOTAL	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$150,000
Total	100%		$150,000

Funding Comments: Project involves ROV vegetation maintenance to extend the life of existing assets by protecting transmission lines from overgrown vegetation and secures access for regular and emergency maintenance and inspection.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: SCADA Water Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022	Amount
Water Rates	100%		$100,000
Total	100%		$100,000

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park - Reservoir A Water Treatment Plant Improvements Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This program consists of targeted process, control and facility improvements from the Sly Park Reservoir intake to and including the Reservoir A Water Treatment Plant. This also includes any improvements to the Outingdale Water Treatment Plant facility as determined by life cycled assets or regulatory requirements. Several improvements have been identified to insure regulatory compliance, increased service reliability, reduced maintenance expenditures and extended facility life. Individual improvements may change and/or be replaced with other more critical improvements as priorities are set and projects developed. Cost estimates are at the conceptual level of confidence. As projects are better defined, individual project numbers will be established. This also includes facility improvement funding available for any unplanned assets that have failed or been found to have reached their service life and need to be replaced throughout the distribution system or treatment plant.

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. This program 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Facility Improvements	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000
Access Road Restoration		$ 500,000				$ 500,000
TOTAL	$ 100,000	$ 600,000	$ 100,000	$ 100,000	$ 100,000	$ 1,000,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$100,000
Total	100%		$100,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Intertie Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

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, the 2020 Basis of Design Report (BODR) 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 updated BODR in 2020 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:	$ -	**Expenditures through end of year:**	$ -
Spent to Date:		**2022 - 2026 Planned Expenditures:**	$ 26,900,000
Cash flow through end of year:		**Total Project Estimate:**	$ 26,900,000
Project Balance	$ -	**Additional Funding Required**	$ 26,900,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Engineering	$300,000	$ 200,000	$ 500,000			$ 1,000,000
Environmental		$ 100,000	$ 200,000	$ 100,000	$ 100,000	$ 500,000
Right of Way		$100,000	$ 100,000			$ 200,000
Construction Management/Inspection				$ 1,100,000	$ 1,100,000	$ 2,200,000
Construction				$ 11,500,000	$ 11,500,000	$ 23,000,000
TOTAL	$ 300,000	$ 400,000	$ 800,000	$ 12,700,000	$ 12,700,000	$ 26,900,000

Estimated Funding Sources	Percentage	2022	Amount
2025 Bond	100%		$300,000
Total	**100%**		**$300,000**

Funding Comments: Construction would likely be funded by a future bond issuance.

2022	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:** Wilson **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Design		$ 50,000	$ 75,000	$ 75,000		$ 200,000
Electrical Construction			$ 125,000			$ 125,000
Valve Construction						$ -
TOTAL	$ -	$ 50,000	$ 200,000	$ 75,000	$ -	$ 325,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: Project involves maintenance to extend the life of existing assets, with no planned increase in potable water delivery capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Sly Park Spillway Improvements

Project Category: Regulatory Requirements

Priority: 1 **PM:** Kessler **Board Approval:** 11/08/21

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 (2023 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 (2024 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).

Basis for Priority:

Compliance with DSOD dam safety program requirements

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 230,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 230,000
Project Balance	$ -	Additional Funding Required	$ 230,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 80,000					$ 80,000
Construction		$ 50,000	$ 100,000			$ 150,000
						$ -
TOTAL	$ 80,000	$ 50,000	$ 100,000	$ -	$ -	$ 230,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$80,000
Total	100%		$80,000

Funding Comments: Project involves maintenance to extend the life of existing assets, with no planned increase in potable water delivery capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Storage Replacement & Rehabilitation Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This program consists of targeted replacement and rehabilitation of drinking water storage tanks and reservoirs within the distribution system. The District operates 36 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. Program management expenditures identified include prioritizing and designing each tank and reservoir improvement project. Actual replacement costs for each individual tank and reservoir will be brought to the Board for specific approval.

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:		2022 - 2026 Planned Expenditures:	$ 7,825,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 7,825,000
Project Balance	$ -	Additional Funding Required	$ 7,825,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design/Planning		$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 400,000
835 Valley View Catholic Protection	$ 150,000					$ 150,000
Swansboro Catholic Protection		$ 125,000				$ 125,000
Reservoir 6			$ 4,000,000			$ 4,000,000
Monte Vista					$ 3,000,000	$ 3,000,000
Greenstone (Abandonment)				$ 150,000		$ 150,000
Ridgeview						$ -
Moose Hall Aluminum Dome						$ -
Dolomite						$ -
Pollock Pines						$ -
TOTAL	$ 150,000	$ 225,000	$ 4,100,000	$ 250,000	$ 3,100,000	$ 7,825,000

Estimated Funding Sources	Percentage	2022	Amount
2025 Bond	100%		$150,000
Total	100%		$150,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Transmission Assessment Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 11/08/21

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, these facilities allow staff to complete maintenance at El Dorado Hills WTP and Reservoir 1 WTP by taking them offline. Once the Sly Park Intertie is constructed staff will also be able to take Reservoir A offline for extended periods to perform additional maintenance while the facility is offline. Over the past 4 years the District has seen a growth in transmission leaks most notably with El Dorado Main #2 (EDM #2) experiencing three leaks in the winter of 2019. Additionally, in the past 10 years the Diamond Springs Main (DSM), El Dorado Main #1 (EDM #1), and the Pleasant Oak Main (POM) have all experienced leaks of varying degrees. Many of the District's transmission mains were installed by the Bureau of Reclamation in the 50's, 60's, and 70's. Traditionally transmission mains were designed at a 75 year life cycle due to the high velocities that they are exposed to, and thus the District is in need of prioritizing each of the replacements or rehabilitations of these pipelines. Funding will be used to examine each of the facilities listed below to determine the current state of the pipeline, the potential for future failure, any measures that can be taken to extend the useful life of the asset, and the replacement or rehabilitation costs. With these assessments the District can begin to forecast the replacement schedule moving forward for each of these facilities.

Basis for Priority:

Assessment of the transmission pipelines throughout the entire District to ensuring water supply flexibility and reliability based on the condition of each facility.

Project Financial Summary:			
Funded to Date:		**Expenditures through end of year:**	$ -
Spent to Date:		**2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
DSM #1		$ 500,000				$ 500,000
EDM #1			$ 500,000			$ 500,000
POM RES C to RES 7				$ 600,000		$ 600,000
960 EDH #1					$ 600,000	$ 600,000
EDM #1 Lateral 8.0						$ -
TOTAL	$ -	$ 500,000	$ 500,000	$ 600,000	$ 600,000	$ 2,200,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	**100%**		**$0**

Funding Comments: Project may involve an increase in sizing from an existing 18" to a 24" pipeline.

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **Water**

Project Number: PLANNED

Project Name: Transmission Slope Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

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:		**2022 - 2026 Planned Expenditures:**	**$ 625,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 625,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 625,000**

Description of Work	**Estimated Annual Expenditures**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Engineering		**$ 25,000**				**$ 25,000**
Stabilization EDM#2			**$ 300,000**	**$ 300,000**		**$ 600,000**
Stabilization Moose Hall						**$ -**
TOTAL	**$ -**	**$ 25,000**	**$ 300,000**	**$ 300,000**	**$ -**	**$ 625,000**

Estimated Funding Sources	**Percentage**	**2022**	**Amount**
Water FCCs	100%		$0
Total	**100%**		**$0**

Funding Comments:

2022	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:** 11/08/21

Project Description:

The District has many isolation valves in both the transmission and 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 to a larger area where isolation is possible. If the valve cannot be repaired it will be replaced 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Construction	$100,000	$100,000	$100,000	$100,000	$100,000	$ 500,000
TOTAL	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 500,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$100,000
Total	100%		$100,000

Funding Comments: Projects involve upgrade of existing facilities and no planned increase in capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Volcansek **Board Approval:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022	Amount
Water Rates	100%		$50,000
Total	100%		$50,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Distribution Radio path design

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path design would include a radio study to determine most optimal and reliable wireless communication options for the District's remote facilities. The design would identify future backbone SCADA and business network locations. The design would also include field radio path verification of the modeled radio telemetry design. This design will encompass water 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:	$ -	2022 - 2026 Planned Expenditures:	$ 245,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 245,000
Project Balance	$ -	Additional Funding Required	$ 245,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Radio Path Study				$ 75,000		$ 75,000
Radio Path Survey					$ 50,000	$ 50,000
Radio Path Design					$ 100,000	$ 100,000
Capitalized Labor					$ 20,000	$ 20,000
TOTAL	$ -	$ -	$ -	$ 75,000	$ 170,000	$ 245,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Water Facility Generators

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

Due to re-operation of the power grid by PG&E due to wild fire issues the District is in need of adding two permanent generators and associated power equipment to critical water facilities. The District purchased mobile generators for Sportsman's Hall Pump Station and Gold Ridge Pump Station for immediate use due to not having enough property to set permanent generators. The District continued to work with El Dorado County in an effort to place permanent generators at each of these pump stations. The County recently approved the District to install a permanent generator at each site. Through this planned CIP the District wants to purchase two generators and complete installation. The mobile generators for these sites will be repurposed to fleet needs to provide backup power during generator failures at Reservoir 1 WTP, Reservoir A WTP, Saint Andrews LS, or any pump station not currently supplied with backup generators. The addition of these generators will provide for adequate backup power to maintain adequate water supply at times of prolonged power outages during the fire season or flex alerts. Staff will work on procuring permanent generators for these sites as well as completing installations at each.

Basis for Priority:

Ability to maintain critical water supply during fire season due to unreliable power source from PG&E.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2022 - 2026 Planned Expenditures:	$ 245,000
Cash flow through end of year:		Total Project Estimate:	$ 245,000
Project Balance	$ -	Additional Funding Required	$ 245,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design & Consulting		$ 25,000	$ 25,000			$ 50,000
Bid Construction			$ 50,000			$ 50,000
Permanent Construction Gold Ridge			$ 15,000			$ 15,000
Permanent Construction Sportsman's			$ 15,000			$ 15,000
Procuring Stationary Generators		$ 115,000				$ 115,000
TOTAL	$ -	$ 140,000	$ 105,000	$ -	$ -	$ 245,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: Work involves planning the upgrade of existing facilities for reliability of service.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: PLANNED

Project Name: Waterline Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

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.

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:		2022 - 2026 Planned Expenditures:	$ 17,750,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 17,750,000
Project Balance	$ -	Additional Funding Required	$ 17,750,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 100,000		$ 50,000	$ 50,000	$ 50,000	$ 250,000
Sly Park Hills Waterline		$ 2,500,000				$ 2,500,000
Construction (Various)			$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 15,000,000
TOTAL	$ 100,000	$ 2,500,000	$ 5,050,000	$ 5,050,000	$ 5,050,000	$ 17,750,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$100,000
Total	100%		$100,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: Planned

Project Name: Wholesale Meter Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Wilson **Board Approval:** 11/08/21

Project Description:

This program replaces old and inaccurate large wholesale meters in the District. The project is mission 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 to under reporting large wholesale meters.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	
Spent to Date:		2022 - 2026 Planned Expenditures:	
Cash flow through end of year:		Total Project Estimate:	
Project Balance		Additional Funding Required	

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design		$50,000				$ 50,000
Woodman Circle 6"			$300,000			$ 300,000
TOTAL	$ -	$ 50,000	$ 300,000	$ -	$ -	$ 350,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: Projects involve upgrade of existing facilities and no planned increase in capacity, therefore funding is 100% water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: STUDY03

Project Name: WTP Assessments

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:** 11/08/21

Project Description:

The purpose of this project is to better understand the needs of Reservoir A, Reservoir 1, El Dorado Hills, and Strawberry Water Treatment Plants for future capital improvement projects and to help aid in creating an asset management plan. This assessment will look at each of the plants individually and provide a roadmap for future work on 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. 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. Additionally, recommendations will include timelines for the use in future CIP projects, including budgetary level cost estimates for each recommendation made. Phase 1 of the assessment has been completed and Phase 2 was approved by the Board in 2021 in the amount of $566,629. Phase 2 included further assessment and evaluations, additional improvement recommendations, cost estimates, a probability and consequences of failure analysis, CIP prioritization and an Asset Management Plan for each treatment plant.

Basis for Priority:

Determine replacement and improvement strategy to support regulatory compliance, improve service reliability, and reduce maintenance costs. This study will protect and preserve the health and safety of customers and the public.

Project Financial Summary:			
Funded to Date:	$ 1,056,492	Expenditures through end of year:	$ 604,313
Spent to Date:	$ 349,612	2022 - 2026 Planned Expenditures:	$ 452,179
Cash flow through end of year:	$ 254,701	Total Project Estimate:	$ 1,056,492
Project Balance	$ 452,179	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized labor	$ 45,000					$ 45,000
Phase 2 Assessment Engineering	$ 407,179					$ 407,179
						$ -
						$ -
TOTAL	$ 452,179	$ -	$ -	$ -	$ -	$ 452,179

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
Total	100%		$0

Funding Comments: The project prioritizes existing WTP assets and provides triggers for necessary upgrades and replacement based on reliability and maintenance factors, therefore is funded by water rates.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: STUDY10

Project Name: Integrated Water Resources Master Plan

Project Category: Master Planning

Priority: 2 **PM:** Mueller **Board Approval:** 11/08/21

Project Description:

The District's Integrated Water Resources Master Plan was approved in 2013 and is due for an update. Demand projections from the 2020 Urban Water Management Plan will be used to update the timing and costs of large infrastructure components such as the White Rock diversion and associated water facilities. Existing initiatives such as the P21112 water rights change in point of diversion will be incorporated. The Master Plan update will also review existing and future capacity limitations in the water transmission and distribution systems and develop a long term capital improvement plan to provide adequate capacity for new development approved by El Dorado County.

Basis for Priority:

Updates to master plans are needed periodically to ensure the District is planning water supply and infrastructure needs appropriately.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 29,625
Spent to Date:	$ 14,625	2022 - 2026 Planned Expenditures:	$ 400,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 429,625
Project Balance	$ 20,375	Additional Funding Required	$ 379,625

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 400,000					$ 400,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 400,000	$ -	$ -	$ -	$ -	$ 400,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$379,625
			$0
			$0
Total	100%		$379,625

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Water

Project Number: STUDY15

Project Name: El Dorado Main #2 Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Delongchamp **Board Approval:** 11/08/21

Project Description:

In an effort to better understand the remaining life of El Dorado Main #2 for future capital improvement projects the District is in need of completing a condition assessment of the pipeline. The District had three pipeline failures last winter on EDM #2 that required emergency replacement and reoperation of other transmission mains to maintain service to its customers. Due to the significance of this pipeline and given its original construction in 1975, it is time to determine its current condition and remaining useful life. This assessment will look at the entire pipeline and provide a roadmap for future work to maintain service to the communities of Placerville, Cameron Park, and El Dorado Hills. The general goal and objectives are to review, evaluate, and assess the condition of the pipeline taking into account past and future maintenance activities and operation of the pipeline.

Basis for Priority:

Determine replacement and improvement strategy to improve service reliability and reduce maintenance costs. This study will protect and preserve the health and safety of customers and the public.

Project Financial Summary:					
Funded to Date:	$	55,000	Expenditures through end of year:	$	50,091
Spent to Date:	$	20,091	2022 - 2026 Planned Expenditures:	$	410,000
Cash flow through end of year:	$	30,000	Total Project Estimate:	$	460,091
Project Balance	$	4,909	Additional Funding Required	$	405,091

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 60,000					$ 60,000
Technical Memo	$ 350,000					$ 350,000
TOTAL	$ 410,000	$ -	$ -	$ -	$ -	$ 410,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$405,091
Total	100%		$405,091

Funding Comments: The project prioritizes future capital improvement projects on El Dorado Main #2 based on condition assessment of the pipeline. Projects are based on maintenance and condition assessment, therefore is funded by water rates.

Wastewater Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 15036

Project Name: Silva Valley - El Dorado Hills Sewerline

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The 2013 Wastewater Facility Master Plan (WWMP) identified 2,100 feet of the 18"/21" sewer line along Silva Valley Road and 4,500 feet of 18" sewer line between Silva Valley Rd and the EDH Wastewater Treatment Plant as needing capacity upsizing in the future. In order to further 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 has been incorporated into the District collection system model to determine remaining pipeline capacity. The current capacity analysis indicates the peak wet weather flow rate in 12,000 feet of pipeline exceeds design capacity and of that 4,700 feet is in a surcharged condition, i.e. water backing up into manholes. Additional wet weather flow data has been collected to calibrate the model further.

The hydraulic modeling update in 2020 included a refinement of necessary pipeline sizing as well as a list of improvement options. A Basis of Design (BODR) report is needed to determine the most cost effective and constructable 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:	$ 220,920	Expenditures through end of year:	$ 207,206
Spent to Date:	$ 197,206	2022 - 2026 Planned Expenditures:	$ 1,000,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 1,207,206
Project Balance	$ 13,714	Additional Funding Required	$ 986,286

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 150,000					$ 150,000
Environmental	$ 100,000	$ 100,000				$ 200,000
Easement Acquisition		$ 50,000	$ 200,000			$ 250,000
Design		$ 200,000	$ 200,000			$ 400,000
Construction						$ -
						$ -
TOTAL	$ 250,000	$ 350,000	$ 400,000	$ -	$ -	$ 1,000,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$236,286
Total	100%		$236,286

Funding Comments: The project provides capacity for new wastewater customers, therefore is funded with wastewater FCCs.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 17023

Project Name: Rancho Ponderosa LS Relocation/Abandonment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The existing Rancho Ponderosa Wastewater Lift Station was constructed in the 1960's to serve 16 EDU's and does not have a viable property easement to access and service the lift station. In addition to deteriorating condition, the existing site is constrained and difficult to access with maintenance equipment. Access to the site currently requires the use of an adjacent property owner's gated driveway that services their personal residence.

Recently the District was required to negotiate continued access to the site which entails the District paying the property owner on a monthly basis for access and that the station be relocated.

This project will evaluate relocating the lift station to include a feasible access solution. Engineered plans and specifications and a construction contract will then be developed for the selected alternative.

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:	$ 160,680	Expenditures through end of year:	$ 133,766
Spent to Date:	$ 83,766	2022 - 2026 Planned Expenditures:	$ 1,145,000
Cash flow through end of year:	$ 50,000	Total Project Estimate:	$ 1,278,766
Project Balance	$ 26,914	Additional Funding Required	$ 1,118,086

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Environmental	$ 40,000					$ 40,000
Easement Acquisition	$ 40,000					$ 40,000
Design	$ 75,000					$ 75,000
Construction		$ 900,000				$ 900,000
Inspection/CM		$ 90,000				$ 90,000
TOTAL	$ 155,000	$ 990,000	$ -	$ -	$ -	$ 1,145,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$128,086
Total	100%		$128,086

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 17034

Project Name: Wastewater Collections Facility Relocation

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The corporation yard used to support the sewer collection crew will be moved from Bass Lake to El Dorado Hills Wastewater Treatment Plant. The Bass Lake property has been sold to the El Dorado Hills CSD and the sewer collection crew is scheduled to relocate in 2022.

Basis for Priority:

The Bass Lake property has been sold and the District is currently leasing back the property.

Project Financial Summary:			
Funded to Date:	$ 956,167	Expenditures through end of year:	$ 898,001
Spent to Date:	$ 698,001	2022 - 2026 Planned Expenditures:	$ 4,530,000
Cash flow through end of year:	$ 200,000	Total Project Estimate:	$ 5,428,001
Project Balance	$ 58,166	Additional Funding Required	$ 4,471,834

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Construction Engineering Services	$ 95,000					$ 95,000
Construction	$ 4,000,000					$ 4,000,000
Inspection/CM	$ 365,000					$ 365,000
Permitting	$ 70,000					$ 70,000
						$ -
TOTAL	$ 4,530,000	$ -	$ -	$ -	$ -	$ 4,530,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$4,471,834
			$0
Total	100%		$4,471,834

Funding Comments: Bass Lake sale proceeds are not included above

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 17046

Project Name: Strolling Hills Pipeline Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 elevated flows have been experienced.

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 as a candidate for increased capacity and necessary sizing was confirmed in the 2020 Deer Creek Collection System Modeling 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.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 36,139
Spent to Date:	$ 26,139	2022 - 2026 Planned Expenditures:	$ 3,780,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 3,816,139
Project Balance	$ 13,861	Additional Funding Required	$ 3,766,139

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 80,000					$ 80,000
Design	$ 150,000	$ 150,000				$ 300,000
Easement Acquisition		$ 100,000				$ 100,000
Construction			$ 3,000,000			$ 3,000,000
Inspection/CM			$ 300,000			$ 300,000
TOTAL	$ 230,000	$ 250,000	$ 3,300,000	$ -	$ -	$ 3,780,000

Estimated Funding Sources	Percentage	2022 Amount
Wastewater FCCs	100%	$216,139
		$0
		$0
Total	100%	$216,139

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 18003

Project Name: Indian Creek Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 be replaced 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 site improvements including a four foot retaining wall and new fencing will be installed around the lift station perimeter. 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:	$ 407,788	Expenditures through end of year:	$ 367,747
Spent to Date:	$ 287,747	2022 - 2026 Planned Expenditures:	$ 2,250,000
Cash flow through end of year:	$ 80,000	Total Project Estimate:	$ 2,617,747
Project Balance	$ 40,041	Additional Funding Required	$ 2,209,959

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 50,000					$ 50,000
Construction	$ 1,000,000	$ 1,000,000				$ 2,000,000
Inspection/CM	$ 100,000	$ 100,000				$ 200,000
TOTAL	$ 1,150,000	$ 1,100,000	$ -	$ -	$ -	$ 2,250,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$1,109,959
			$0
Total	100%		$1,109,959

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 18035

Project Name: EDHWWTP WAS DAFT Rehabilitation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Money **Board Approval:** 11/08/21

Project Description:

The waste-activated-sludge dissolved-air-floatation-thickener (WAS DAFT) located at the El Dorado Hills Wastewater Treatment Plant (EDHWWTP) has reached the end of its useful life. The WAS DAFT is utilized to control the amount of microorganisms in the wastewater treatment process by thickening waste-activated sludge before is pumped to the anaerobic digester.

This project will rehabilitate the WAS DAFT concrete unit, replace the air dissolution system, replace the mechanical components within the unit, and update the PLC controller. Various mechanical components to be replaced include the center drive, distribution well, skimmer arm, bottom scraper arms, float box, baffle skirt, DAF feed well connection pipe, walkway system, and necessary valves, boxes, meters, and piping.

The PLC that controls the WAS DAFT was replaced in 2020 as a predecessor to the structural and mechanical upgrades. The project has been deferred one year to meet financial plan objectives.

Basis for Priority:

Wastewater at the EDHWWTP is biologically treated with waste-activated-sludge. The deteriorating WAS DAFT unit is utilized to control the amount of microorganisms to create an efficient treatment process. This rehabilitation project will ensure process function and reduce the risk of a spill during a storm event.

Project Financial Summary:			
Funded to Date:	$ 434,408	Expenditures through end of year:	$ 364,687
Spent to Date:	$ 324,687	2022 - 2026 Planned Expenditures:	$ 2,300,000
Cash flow through end of year:	$ 40,000	Total Project Estimate:	$ 2,664,687
Project Balance	$ 69,721	Additional Funding Required	$ 2,230,279

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design						$ -
Construction	$ 1,500,000	$ 500,000				$ 2,000,000
Inspection/CM	$ 225,000	$ 75,000				$ 300,000
TOTAL	$ 1,725,000	$ 575,000	$ -	$ -	$ -	$ 2,300,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$1,655,279
			$0
Total	100%		$1,655,279

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 18063

Project Name: EDHWWTP Solar Inverters

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Money **Board Approval:** 11/08/21

Project Description:

This project is to address the end-of-useful life solar inverters at the El Dorado Hills Wastewater Treatment Plant. One of the four original central inverters has already failed and has been replaced in the recent past. The existing central inverter technology is being phased out in the solar industry and is being replaced by string inverters. This project will assess the current production and remaining life of the solar panels, determine viable options for inverter replacement, and implement the most appropriate replacement solution.

In 2020, the necessary studies were completed to determine the proper central inverter replacement technology. The replacement equipment has been purchased and installation will occur in 2021/2022.

Basis for Priority:

This project will replace failing assets to ensure reliability and continual operation of the existing solar field at El Dorado Hills Wastewater Treatment Plant.

Project Financial Summary:			
Funded to Date:	$ 459,649	Expenditures through end of year:	$ 383,902
Spent to Date:	$ 233,902	2022 - 2026 Planned Expenditures:	$ 85,000
Cash flow through end of year:	$ 150,000	Total Project Estimate:	$ 468,902
Project Balance	$ 75,747	Additional Funding Required	$ 9,253

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 80,000					$ 80,000
Inspection/CM	$ 5,000					$ 5,000
TOTAL	$ 85,000	$ -	$ -	$ -	$ -	$ 85,000

Funding Sources	Percentage	2022 Amount
Wastewater Rates	100%	$9,253
		$0
Total	100%	$9,253

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 19032

Project Name: Collections Master Radio PLC Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The project is to design, install, and program a new Sewer Collections master PLC. The District's current master PLC has passed its end of life cycle and District staff is finding it difficult to locate and purchase affordable replacement parts to keep this unit in service.

Basis for Priority:

This project will replace end of life assets to ensure reliability and continual operation of the wastewater collection radio system. Project completion will significantly reduce communication disruptions and potential failures in the collection radio system.

Project Financial Summary:			
Funded to Date:	$ 175,200	Expenditures through end of year:	$ 82,071
Spent to Date:	$ 57,071	2022 - 2026 Planned Expenditures:	$ 110,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 192,071
Project Balance	$ 93,129	Additional Funding Required	$ 16,871

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 100,000					$ 100,000
Inspection/CM	$ 10,000					$ 10,000
TOTAL	$ 110,000	$ -	$ -	$ -	$ -	$ 110,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$16,871
			$0
Total	100%		$16,871

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN Program: Wastewater

Project Number: 20023

Project Name: Lift Station Communication Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

Existing PLCs at 20 of 60 sewer lift stations are approximately 30 years old and 10 years beyond their expected useful life. Additionally, these PLCs only provide 10-20% of the monitoring capabilities compared to current standard PLC's (3 to 5 monitoring points versus 30) meaning these facilities have no ability to report pump failures or incrementally report on wet well levels before reaching the high water limit. Also, they can go up to 24 hours before alerting of a communications or control issue, while current standard PLCs will alert within 5 minutes. Locating replacement parts and technical support for the old PLCs is nearly impossible.

This project will include electrical upgrades to stations Starbuck, Summit View No. 1, Marina Hills, Motherlode, Bar J, North Uplands, Bass Lake Village, Summit 5, and Diamond Industrial.

Basis for Priority:

This project will replace end-of-life assets to ensure reliability and continual operation of the wastewater collection radio system. These units are 10 years beyond end of life (15 years in some cases) and require above normal maintenance attention.

Project Financial Summary:			
Funded to Date:	$ 95,000	Expenditures through end of year:	$ 80,425
Spent to Date:	$ 60,425	2022 - 2026 Planned Expenditures:	$ 980,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 1,060,425
Project Balance	$ 14,575	Additional Funding Required	$ 965,425

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 25,000	$ 25,000				$ 50,000
Construction	$ 250,000	$ 250,000	$ 250,000			$ 750,000
Inspection/CM	$ 60,000	$ 60,000	$ 60,000			$ 180,000
TOTAL	$ 335,000	$ 335,000	$ 310,000	$ -	$ -	$ 980,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$320,425
			$0
			$0
Total	100%		$320,425

Funding Comments:

2022	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:** Volcansek **Board Approval:** 11/08/21

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:	$ 32,285
Spent to Date:	$ 22,285	2022 - 2026 Planned Expenditures:	$ 65,000
Cash flow through end of year:	$ 10,000	Total Project Estimate:	$ 97,285
Project Balance	$ 17,715	Additional Funding Required	$ 47,285

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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	2022 Amount
Wastewater Rates	100%	$47,285
		$0
Total	100%	$47,285

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21007

Project Name: Town Center Force Main PH4

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The Town Center Force Main and lift station were originally designed and constructed in 1980 to collect Prospector's Plaza wastewater and pump to the Mother Lode Force Main at Pleasant Valley Road and Mother Lode Drive. Town Center Force Main was constructed out of 8" asbestos cement (AC) pipe which has experienced several failures causing SSO's in the past few years due to corrosion. The force main is in need of replacement with PVC which will withstand the corrosive raw sewage. 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.

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:	$ 48,203
Spent to Date:	$ 8,203	2022 - 2026 Planned Expenditures:	$ 2,790,000
Cash flow through end of year:	$ 40,000	Total Project Estimate:	$ 2,838,203
Project Balance	$ 1,797	Additional Funding Required	$ 2,788,203

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design			$ 20,000	$ 20,000		$ 40,000
Construction					$ 2,500,000	$ 2,500,000
Inspection/CM					$ 250,000	$ 250,000
TOTAL	$ -	$ -	$ 20,000	$ 20,000	$ 2,750,000	$ 2,790,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21018

Project Name: 2022 Collections Rehabilitation Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 project will rehabilitate nineteen access structures, eleven pipes, and multiple sewer laterals.

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:	$ 50,000	Expenditures through end of year:	$ 49,744
Spent to Date:	$ 11,744	2022 - 2026 Planned Expenditures:	$ 2,900,000
Cash flow through end of year:	$ 38,000	Total Project Estimate:	$ 2,949,744
Project Balance	$ 256	Additional Funding Required	$ 2,899,744

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 150,000					$ 150,000
Construction	$ 1,250,000	$ 1,250,000				$ 2,500,000
Inspection/CM	$ 125,000	$ 125,000				$ 250,000
TOTAL	$ 1,525,000	$ 1,375,000	$ -	$ -	$ -	$ 2,900,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$1,524,744
			$0
			$0
Total	100%		$1,524,744

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21020

Project Name: Tesla Battery Sites - Wastewater

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Money **Board Approval:** 11/08/21

Project Description:

This project incorporates Tesla battery storage equipment that is 100% funded under the California Public Utilities Commisions (CUPC) Self-Generation Incentive Program (SGIP) program. Incorporation of this storage equipment will allow the District to reduce electrical charges at various sites through peak shaving as well as provide instantaneous power backup at these sites for limited durations. Costs included for this CIP are for capitalized labor and include project managment and construction instection services by District staff.

Basis for Priority:

Grant funding, energy cost savings, limited duration battery backup power provides operational flexibility to operations staff during large power outages.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 5,500
Spent to Date:	$ 500	2022 - 2026 Planned Expenditures:	$ 44,500
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 50,000
Project Balance	$ 44,500	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor	$ 44,500					$ 44,500
						$ -
						$ -
TOTAL	$ 44,500	$ -	$ -	$ -	$ -	$ 44,500

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21026

Project Name: St. Andrews Lift Station Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 installation of a discharge flow meter for more efficient pump control, 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:

Optimizing pump operation, increasing bypassing capabilities, and increasing data remote visibility will aid in operational decision making and reduce the likelihood sanitary sewer overflows, hazards to the public, and regulatory fines.

Project Financial Summary:			
Funded to Date:	$ 30,600	Expenditures through end of year:	$ 21,375
Spent to Date:	$ 1,375	2022 - 2026 Planned Expenditures:	$ 375,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 396,375
Project Balance	$ 9,225	Additional Funding Required	$ 365,775

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 50,000					$ 50,000
Construction	$ 50,000	$ 250,000				$ 300,000
Inspection/CM	$ 5,000	$ 20,000				$ 25,000
TOTAL	$ 105,000	$ 270,000	$ -	$ -	$ -	$ 375,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$95,775
			$0
			$0
Total	100%		$95,775

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: 21041

Project Name: Generator FEMA Grant - Wastewater

Project Category: Reliability & Service Level Improvements

Priority: 1 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The District applied for 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 twenty-two remote District facilities. Included in the application is generators for twelve 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 of twelve wastewater lift stations during utility power outages.

Project Financial Summary:			
Funded to Date:	$ 256,347	Expenditures through end of year:	$ 120,406
Spent to Date:	$ 20,406	2022 - 2026 Planned Expenditures:	$ 345,214
Cash flow through end of year:	$ 100,000	Total Project Estimate:	$ 465,620
Project Balance	$ 135,941	Additional Funding Required	$ 209,273

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 100,000					$ 100,000
Construction		$ 1,110,000				$ 1,110,000
Inspection		$ 50,000				$ 50,000
FEMA Funding		$ (914,786)				$ (914,786)
TOTAL	$ 100,000	$ 245,214	$ -	$ -	$ -	$ 345,214

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	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:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 100,000	$ 100,000				$ 200,000
Design			$ 250,000			$ 250,000
Construction				***	***	$ -
						$ -
TOTAL	$ 100,000	$ 100,000	$ 250,000	$ -	$ -	$ 450,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$100,000
			$0
			$0
Total	100%		$100,000

Funding Comments:

2022	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:** Carrington **Board Approval:** 11/08/21

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 collections system 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:		2022 - 2026 Planned Expenditures:	$ 3,550,000
Cash flow through end of year:		Total Project Estimate:	$ 3,550,000
Project Balance	$ -	Additional Funding Required	$ 3,550,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design			$ 250,000			$ 250,000
Construction				$ 1,500,000	$ 1,500,000	$ 3,000,000
Inspection/CM				$ 150,000	$ 150,000	$ 300,000
TOTAL	$ -	$ -	$ 250,000	$ 1,650,000	$ 1,650,000	$ 3,550,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Collections SCADA Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This project is to implement required updates to the collections SCADA application. Once master collections communication PLC is programmed and replaced, new SCADA system will be needed. This project will review the existing network rack and implement improvements needed per industry standards.

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Professional Services	$ 200,000					$ 200,000
Construction	$ 50,000					$ 50,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 300,000	$ -	$ -	$ -	$ -	$ 300,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$300,000
			$0
			$0
Total	100%		$300,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: DCWWTP PLC Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022	Amount
Wastewater FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: DCWWTP Process Control Device Integration

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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 efficency 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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022 Amount
Wastewater Rates	100%	$75,000
		$0
Total	100%	$75,000

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: EDHWWTP PLC Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

Replacement of end of life PLC equipment.

Basis for Priority:

This hardware is failing and has been a service reliability and maintenance issue. This equipment is life cycled out. The original installation was over 25 years ago. Parts are no longer being made for these units and they are difficult to service.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2022 - 2026 Planned Expenditures:	$ 800,000
Cash flow through end of year:		Total Project Estimate:	$ 800,000
Project Balance	$ -	Additional Funding Required	$ 800,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design			$ 250,000			$ 250,000
Construction PLC 5				$ 250,000		$ 250,000
Construction PLC 3					$ 300,000	$ 300,000
Construction PLC 6						$ -
						$ -
TOTAL	$ -	$ -	$ 250,000	$ 250,000	$ 300,000	$ 800,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%	$	-
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: EDHWWTP Spoils Management

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

El Dorado Hills Wastewater Treatment Plant (EDHWWTP) receives sewer vactor spoils and will soon receive hydroexcavation spoils and dry construction spoils from District maintenance activities in the service area. This project will construct improvements to contain odors, isolate run off, and streamline operation of spoils management.

Basis for Priority:

Project provides funding to construct proper containment for construction spoils to maintain No Exposure Coverage for the EDHWWTP NPDES permit.

Project Financial Summary:			
Funded to Date:		Expenditures through end of year:	$ -
Spent to Date:		2022 - 2026 Planned Expenditures:	$ 400,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 400,000
Project Balance	$ -	Additional Funding Required	$ 400,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design		$ 100,000				$ 100,000
Construction			$ 300,000			$ 300,000
						$ -
TOTAL	$ -	$ 100,000	$ 300,000	$ -	$ -	$ 400,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: PLANNED

Project Name: El Dorado Lift Site Improvements

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

El Dorado Lift is located adjacent to Pleasant Valley Road in 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 collections system. This project will dedicate funding to design and construct material storage bays and site improvements to augment construction material storage at the site. By housing both dry cosntruction spoils and new construction materials on the same site, crews will gain daily efficiencies by minimizing transit time during repair activities.

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:		**2022 - 2026 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**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Study/Planning						**$ -**
Design			**$ 50,000**			**$ 50,000**
Construction				**$ 200,000**		**$ 200,000**
						$ -
TOTAL	**$ -**	**$ -**	**$ 50,000**	**$ 200,000**	**$ -**	**$ 250,000**

Funding Sources	**Percentage**	**2022**	**Amount**
Wastewater Rates	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: **PLANNED**

Project Name: **El Dorado Hills Lift Station Consolidation**

Project Category: **Reliability & Service Level Improvements**

Priority: **3** **PM:** **Money** **Board Approval:** **11/08/21**

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 lift stations. 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:		**2022 - 2026 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**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Study/Planning	**$ 150,000**					**$ 150,000**
Design						**$ -**
Construction						**$ -**
						$ -
TOTAL	**$ 150,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 150,000**

Funding Sources	**Percentage**	**2022**	**Amount**
Wastewater FCCs	100%		$150,000
			$0
			$0
Total	**100%**		**$150,000**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Motherlode Forcemain Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The Motherlode Forcemain (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 lift station 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.

To date, approximately four of the nine miles of forcemain has been replaced with larger diameter, plastic pipe. This programmatic project aims to analyze the condition of existing 12-inch asbestos pipe in multiple locations and systematically replace the remaining five miles of pipe. The 2022-2026 Capital Improvement Plan includes a high-level estimate for construction expenditures of 2.5 miles of forcemain replacement. As the design is finalized, estimates of construction expenditures will be refined and additional replacement phases will be included.

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:		2022 - 2026 Planned Expenditures:	$ 6,000,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 6,000,000
Project Balance	$ -	Additional Funding Required	$ 6,000,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 200,000		$ 200,000		$ 200,000	$ 600,000
Construction		$ 2,500,000		$ 2,500,000		$ 5,000,000
Inspection/CM		$ 200,000		$ 200,000		$ 400,000
TOTAL	$ 200,000	$ 2,700,000	$ 200,000	$ 2,700,000	$ 200,000	$ 6,000,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$200,000
			$0
			$0
Total	100%		$200,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Promontory Village Inflow & Infiltration Study

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 sewerlines 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning				$ 25,000	$ 100,000	$ 125,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ 25,000	$ 100,000	$ 125,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **Wastewater**

Project Number: PLANNED

Project Name: SCADA Wastewater Hardware Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:	$ -	**2022 - 2026 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**					
	2022	**2023**	**2024**	**2025**	**2026**	**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**	**2022**	**Amount**
Wastewater Rates	100%		$100,000
			$0
Total	**100%**		**$100,000**

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Arc Flash Risk Assessment Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Volcansek **Board Approval:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022	Amount
Wastewater Rates	100%		$50,000
			$0
Total	100%		$50,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

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

Priority: 2 **PM:** Money **Board Approval:** 11/08/21

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:		2022 - 2026 Planned Expenditures:	$ 2,000,000
Cash flow through end of year:		Total Project Estimate:	$ 2,000,000
Project Balance	$ -	Additional Funding Required	$ 2,000,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 2,000,000
						$ -
TOTAL	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 2,000,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$400,000
			$0
Total	100%		$400,000

Funding Comments: Funding split based on available plant capacity

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: Wastewater Modeling

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Carrington **Board Approval:** 11/08/21

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 sewerlines 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000

Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$50,000
			$0
			$0
Total	100%		$50,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: PLANNED

Project Name: WWTP Assessments

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

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 future work on 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 proper 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 the use in future CIP projects, including budgetary level cost estimates for each recommendation offered.

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:		2022 - 2026 Planned Expenditures:	$ 800,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 800,000
Project Balance	$ -	Additional Funding Required	$ 800,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Deer Creek WWTP	$ 400,000					$ 400,000
El Dorado Hills WWTP		$ 400,000				$ 400,000
						$ -
						$ -
TOTAL	$ 400,000	$ 400,000	$ -	$ -	$ -	$ 800,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$400,000
			$0
			$0
Total	100%		$400,000

Funding Comments: The project prioritizes existing WWTP assets and provides triggers for necessary upgrades and replacement based on reliability and maintenance factors, therefore is funded by wastewater rates.

2022	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:** 11/08/21

Project Description:

This project is to perform minor modifications to civil, mechanical, and electrical components within the wastewater treatment plants. Modifications included in this project 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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design/CM	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 125,000
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	2022	Amount
Wastewater Rates	100%		$175,000
Total	100%		$175,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: STUDY12

Project Name: Wastewater Lift Station Upgrade Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Money **Board Approval:** 11/08/21

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 finalize a draft condition assessment of several common lift station deficiencies in 2022. Using the recommendations of the condition assessment future projects will be prioritized and then designed with and intent of rehabilitating one lift station every other year, or bundling similar scopes such as roof or wet well rehabiliation across several smaller lift stations. District staff will also evaluate smaller projects aimed at rehabilitating or replacing portions of existing stations where possible to prolong the useful life of the remaining 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:	$ 50,000	Expenditures through end of year:	$ 8,265
Spent to Date:	$ 8,265	2022 - 2026 Planned Expenditures:	$ 5,270,000
Cash flow through end of year:		Total Project Estimate:	$ 5,278,265
Project Balance	$ 41,735	Additional Funding Required	$ 5,228,265

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 20,000					$ 20,000
Design	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 750,000
Construction	$ 500,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 4,500,000
TOTAL	$ 670,000	$ 1,150,000	$ 1,150,000	$ 1,150,000	$ 1,150,000	$ 5,270,000

Estimated Funding Sources	Percentage	2022	Amount
Wastewater FCCs	100%		$628,265
			$0
Total	100%		$628,265

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Wastewater

Project Number: STUDY14

Project Name: Collections Radio Path Design

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Money **Board Approval:** 11/08/21

Project Description:

This CIP follows recommendations outlined in the SCADA masterplan. The radio path design would include a radio study to determine most optimal and reliable wireless communication options for the District's remote facilities. The design would identify future backbone SCADA and business network locations. The design would also include field radio path verification of the modeled radio telemetry design. This design will encompass wastewater collections and treatment 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:	$ 336,093	Expenditures through end of year:	$ 206,257
Spent to Date:	$ 6,257	2022 - 2026 Planned Expenditures:	$ 150,000
Cash flow through end of year:	$ 200,000	Total Project Estimate:	$ 356,257
Project Balance	$ 129,836	Additional Funding Required	$ 20,164

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 150,000					$ 150,000
						$ -
						$ -
						$ -
TOTAL	$ 150,000	$ -	$ -	$ -	$ -	$ 150,000

Funding Sources	Percentage	2022	Amount
Wastewater Rates	100%		$20,164
			$0
Total	100%		$20,164

Funding Comments:

Recycled Water Projects

2022	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:** 11/08/21

Project Description:

This is an annual program to replace or upgrade recycled water assets that have failed, reached end of useful life, or would increase operational efficiency. This program differs from ongoing maintenance programs in that the equipment, facilities, and labor attributed to these assets constitute a replacement or installation of a capitalized asset. Assets 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 to be replaced or upgraded 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:	$ -	2022 - 2026 Planned Expenditures:	$ 1,250,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,250,000
Project Balance	$ -	Additional Funding Required	$ 1,250,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
Construction	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 1,000,000
						$ -
TOTAL	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 1,250,000

Funding Sources	Percentage	2022	Amount
Recycled Water Rates	100%		$250,000
			$0
Total	100%		$250,000

Funding Comments:

2022	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:** 11/08/21

Project Description:

The District owns and operates a recycled water distribution system to provide reclaimed water to portions of El Dorado Hills and Cameron Park. Original pipelines and appurtenances in the recycled water system 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:

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 50,000	$ 25,000				$ 75,000
Design		$ 100,000				$ 100,000
Construction			$ 250,000	$ 250,000	$ 250,000	$ 750,000
Inspection/CM						$ -
TOTAL	$ 50,000	$ 125,000	$ 250,000	$ 250,000	$ 250,000	$ 925,000

Funding Sources	Percentage	2022	Amount
Recycled Water Rates	100%		$50,000
			$0
			$0
Total	100%		$50,000

Funding Comments:

2022	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:** Volcansek **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	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	2022	Amount
Recycled Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

Hydroelectric Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 17025

Project Name: Flume 45 Abutment Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

This section of Flume 45 is an elevated wood flume approximately 100 feet in length and last replaced in 1945. This portion of the flume was constructed to span a section of the historic rock bench that had previously failed. An exemption on a small section of the historic rock wall has been obtained by the USFS to help in the replacement of this section of flume. In 2014 the District crews made interim repairs to ensure the continued safe operation. The replacement of this 100 foot section of flume is scheduled to occur during the scheduled canal outage in the 2022. This project will only address the abutment section. Construction cost estimates will be revised upon completion of the geotechnical assessment and design.

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:	$ 554,841	Expenditures through end of year:	$ 457,226
Spent to Date:	$ 182,226	2022 - 2026 Planned Expenditures:	$ 1,957,615
Cash flow through end of year:	$ 275,000	Total Project Estimate:	$ 2,414,841
Project Balance	$ 97,615	Additional Funding Required	$ 1,860,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning/Env						$ -
Geo/Design	$ 97,615					$ 97,615
Construction	$ 1,800,000					$ 1,800,000
QCIP/Warranty		$ 60,000				$ 60,000
TOTAL	$ 1,897,615	$ 60,000	$ -	$ -	$ -	$ 1,957,615

Estimated Funding Sources	Percentage	2022	Amount
2020 Bond	100%		$1,800,000
			$0
			$0
Total	100%		$1,800,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 17028

Project Name: Flume 48 Replacement/Tunnel option

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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 will begin evaluating two replacement alternatives for this degraded flume. Alternative 1 is to stabilize the hand-stacked rock bench utilizing stabilization measures developed and employed at Flume 41 and the degraded wood flume would be replaced with steel reinforced 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. Design and construction costs are unknown at this time, and will be updated in 2021 after further alternatives analysis. Construction costs are shown from the 30% design and will be updated as design progresses. 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:	$ 424,244
Spent to Date:	$ 274,244	2022 - 2026 Planned Expenditures:	$ 6,587,668
Cash flow through end of year:	$ 150,000	Total Project Estimate:	$ 7,011,912
Project Balance	$ 37,668	Additional Funding Required	$ 6,550,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning/Env	$ 37,668		$ 50,000	$ 50,000		$ 137,668
Design/Env			$ 200,000	$ 250,000		$ 450,000
Construction					$ 6,000,000	$ 6,000,000
Warranty-FERC QCIP						$ -
TOTAL	$ 37,668	$ -	$ 250,000	$ 300,000	$ 6,000,000	$ 6,587,668

Estimated Funding Sources	Percentage	2022 Amount
2025 Bond	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments: Construction funding will likely be from future bond proceeds

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 18010

Project Name: Penstock Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 11/08/21

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 to support conducting O&M and capital improvements safely
2) 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
3) Investigating restoring the tramway to service along the high-pressure penstock
4) Improving the anchoring of the surge tank to meet seismic loading;

Work planned for 2022 includes construction for improving access and developing plans and specifications, and conducting environmental review/permitting for subsequent phases. Relining of the surge tank and portions of the penstock are scheduled for 2023. The cost of improvements beyond 2022 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 $5 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:	$ 122,642
Spent to Date:	$ 77,642	2022 - 2026 Planned Expenditures:	$ 1,560,000
Cash flow through end of year:	$ 45,000	Total Project Estimate:	$ 1,682,642
Project Balance	$ 237,358	Additional Funding Required	$ 1,322,642

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	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	$ 320,000	$ 400,000	$ 300,000	$ 100,000	$ 100,000	$ 1,220,000
						$ -
TOTAL	$ 400,000	$ 470,000	$ 370,000	$ 160,000	$ 160,000	$ 1,560,000

Estimated Funding Sources	Percentage	2022 Amount
Water FCCs	100%	$162,642
		$0
		$0
Total	100%	$162,642

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN Program: Hydroelectric

Project Number: 19013

Project Name: Hydro Crew Room Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Kessler **Board Approval:** 11/08/21

Project Description:

The crewroom at Camp 5 was built in 1951 and is in need of some improvements. The room is too small for the amount of staff working in the Hydro Division requiring some people to stand during meetings. There is only one unisex bathroom for over 20 employees. The plan is to add an additional 300 sq feet of space to the crew room by removing a wall, and extending into a storage room. There are 2 different ceiling heights that would be redone. At the same time, the ceiling lights will be upgraded to LED energy efficient lighting. The restroom will be modified to be ADA compliant, and to have two separate unisex sections. The building electrical panel will be upgraded to meet current electrical standards. The heating and air conditioning air distribution unit and ductwork will be relocated. The Building Permit is pending the County's final approval of revised plans addressing their initial review comments. The Fire Dept. has approved the plans. Construction is scheduled for Spring 2022.

Basis for Priority:

The crew room was built in 1951 and needs improvements to meet capacity requiremmets, comply with ADA standards, improve lighting efficiency and upgrade an outdated electrical panel.

Project Financial Summary:			
Funded to Date:	$ 205,294	Expenditures through end of year:	$ 50,852
Spent to Date:	$ 50,852	2022 - 2026 Planned Expenditures:	$ 170,000
Cash flow through end of year:		Total Project Estimate:	$ 220,852
Project Balance	$ 154,442	Additional Funding Required	$ 15,558

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
						$ -
Design Support	$ 10,000					$ 10,000
Construction	$ 160,000					$ 160,000
						$ -
TOTAL	$ 170,000	$ -	$ -	$ -	$ -	$ 170,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$15,558
			$0
			$0
Total	100%		$15,558

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 19021

Project Name: RTU Replacement Control Sites

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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.

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:	$ 40,000	Expenditures through end of year:	$ 34,615
Spent to Date:	$ 4,615	2022 - 2026 Planned Expenditures:	$ 800,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 834,615
Project Balance	$ 5,385	Additional Funding Required	$ 794,615

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design/Planning	$ 125,000					$ 125,000
Construction	$ 150,000	$ 300,000	$ 150,000			$ 600,000
Capitalized Labor	$ 25,000	$ 25,000	$ 25,000			$ 75,000
TOTAL	$ 300,000	$ 325,000	$ 175,000	$ -	$ -	$ 800,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$294,615
			$0
			$0
Total	100%		$294,615

Funding Comments:

2022 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:** 11/08/21

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 is resulting in diminishing options for repair. If the pipeline were to rupture, it could cause significant environmental damage and affect traffic safety on Highway 50.

Therefore, the pipeline section will need to be replaced in the near term with new pipe and the supporting substructure. The current plans include considering a two-year phased approach for pipeline replacement based on access limitations, including replacement of the canal section with pipeline. 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. Construction costs for the rehabilitation will be updated upon completion of design. Conceptual engineering for the foundation, elevated section, pipeline, and consideration of constructability was completed in 2021. Detailed design and supplemental biological and cultural resource surveys are planned for 2022, and environmental review/permitting for 2023. Construction is planned over 2 summer seasons during 2024 and 2025.

Basis for Priority:

The Echo conduit needs to be repaired so the District can continue to use this water supply. The water rights are pre-1914 and are critical for water supply during drought years and to provide revenue from power generation.

Project Financial Summary:			
Funded to Date:	$ 100,000	**Expenditures through end of year:**	$ 94,816
Spent to Date:	$ 84,816	**2022 - 2026 Planned Expenditures:**	$ 1,280,000
Cash flow through end of year:	$ 10,000	**Total Project Estimate:**	$ 1,374,816
Project Balance	$ 5,184	**Additional Funding Required**	$ 1,274,816

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 30,000	$ 70,000	$ 40,000	$ 20,000	$ 10,000	$ 170,000
Design	$ 100,000	$ 40,000	$ 40,000	$ 20,000	$ 10,000	$ 210,000
Construction					$ 900,000	$ 900,000
						$ -
TOTAL	$ 130,000	$ 110,000	$ 80,000	$ 40,000	$ 920,000	$ 1,280,000

Estimated Funding Sources	Percentage	2022 Amount
Water FCCs	100%	$124,816
		$0
		$0
Total	**100%**	**$124,816**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

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

Priority: 1 **PM:** Kessler **Board Approval:** 11/08/21

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 beginning in 2021 with preparing a Basis of Design Memorandum, conducting a geotechnical investigation to establish foundation conditions, and performing initial environmental review and permitting. 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 (none included at this time). Funding is expected to be subject to a future bond issuance.

This project continues the work of the previously approved and funded PN's 11005H and 06017H.

Basis for Priority:

Compliance with FERC and DSOD dam safety program requirements.

Project Financial Summary:			
Funded to Date:	$ 125,648	Expenditures through end of year:	$ 32,517
Spent to Date:	$ 17,517	2022 - 2026 Planned Expenditures:	$ 2,150,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 2,182,517
Project Balance	$ 93,131	Additional Funding Required	$ 2,056,869

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$50,000	$100,000	$ 300,000	$ 50,000	$ 50,000	$ 550,000
Design	$300,000	$ 300,000	$ 300,000	$ 300,000	$ 400,000	$ 1,600,000
Construction						$ -
TOTAL	$ 350,000	$ 400,000	$ 600,000	$ 350,000	$ 450,000	$ 2,150,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$256,869
			$0
Total	100%		$256,869

Funding Comments: Preliminary construction cost estimate not included in 5 year planning horizon. Construction is assumed to take place beyond 5-years due to design, environmental and regulatory approval processes.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21003

Project Name: Diversion Repeater Site

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:	$ 6,815
Spent to Date:	$ 1,815	2022 - 2026 Planned Expenditures:	$ 175,000
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 181,815
Project Balance	$ 43,185	Additional Funding Required	$ 131,815

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 25,000					$ 25,000
Construction		$ 100,000				$ 100,000
Capitalized Labor	$ 25,000	$ 25,000				$ 50,000
						$ -
TOTAL	$ 50,000	$ 125,000	$ -	$ -	$ -	$ 175,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$6,815
			$0
			$0
Total	100%		$6,815

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21004

Project Name: A18 Fiber Communication Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:	$ 25,755
Spent to Date:	$ 755	2022 - 2026 Planned Expenditures:	$ 300,000
Cash flow through end of year:	$ 25,000	Total Project Estimate:	$ 325,755
Project Balance	$ 24,245	Additional Funding Required	$ 275,755

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Professional Services	$ 50,000					$ 50,000
Construction		$ 200,000				$ 200,000
Capitalized Labor	$ 25,000	$ 25,000				$ 50,000
						$ -
TOTAL	$ 75,000	$ 225,000	$ -	$ -	$ -	$ 300,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$50,755
			$0
			$0
Total	100%		$50,755

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21008

Project Name: Diversion - Facility Upgrades

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

The project is to design and 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.

Other Diversion facility 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.

Cost and schedule will be updated as design progresses.

Basis for Priority:

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

Project Financial Summary:			
Funded to Date:	$ 341,636	Expenditures through end of year:	$ 297,492
Spent to Date:	$ 24,492	2022 - 2026 Planned Expenditures:	$ 294,144
Cash flow through end of year:	$ 273,000	Total Project Estimate:	$ 591,636
Project Balance	$ 44,144	Additional Funding Required	$ 250,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 44,144					$ 44,144
Construction	$ 250,000					$ 250,000
						$ -
TOTAL	$ 294,144	$ -	$ -	$ -	$ -	$ 294,144

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$250,000
			$0
			$0
Total	100%		$250,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21009

Project Name: Diversion - Fish Ladder Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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. The project will be designed in 2022 with a 2023 construction. 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:	$ 29,495
Spent to Date:	$ 14,495	2022 - 2026 Planned Expenditures:	$ 1,020,000
Cash flow through end of year:	$ 15,000	Total Project Estimate:	$ 1,049,495
Project Balance	$ 20,505	Additional Funding Required	$ 999,495

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning				$ 20,000		$ 20,000
Design				$ 200,000		$ 200,000
Construction					$ 800,000	$ 800,000
						$ -
TOTAL	$ -	$ -	$ -	$ 220,000	$ 800,000	$ 1,020,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022 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:** Mutschler **Board Approval:** 11/08/21

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. It 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 it is believed that one general design can be done for all four flumes and reap a cost savings on the design process. 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:	$ 276,578
Spent to Date:	$ 31,578	2022 - 2026 Planned Expenditures:	$ 4,326,690
Cash flow through end of year:	$ 245,000	Total Project Estimate:	$ 4,603,268
Project Balance	$ 276,690	Additional Funding Required	$ 4,050,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning/Env		$ 50,000				$ 50,000
Design	$ 276,690					$ 276,690
Construction 45A		$ 2,000,000				$ 2,000,000
Construction 47A				$ 2,000,000		$ 2,000,000
TOTAL	$ 276,690	$ 2,050,000	$ -	$ 2,000,000	$ -	$ 4,326,690

Funding Sources	Percentage	2022 Amount
Water FCCs	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: 21016

Project Name: Penstock Stabilization

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 11/08/21

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 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 2022;
2) Performing drainage improvements to the high-pressure penstock section where a channel continues to erode including around some of the anchor blocks - planned for 2023

An updated geotechnical assessment and design were initiated in 2021 which should enable the District to conduct environmental review/permitting and construct improvements in 2022 and 2023. 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 $5 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:	**$ 400,611**	**Expenditures through end of year:**	**$ 125,457**
Spent to Date:	**$ 5,457**	**2022 - 2026 Planned Expenditures:**	**$ 1,070,000**
Cash flow through end of year:	**$ 120,000**	**Total Project Estimate:**	**$ 1,195,457**
Project Balance	**$ 275,154**	**Additional Funding Required**	**$ 794,846**

Description of Work	**Estimated Annual Expenditures**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Study/Planning	**$ 30,000**	**$ 20,000**	**$ 10,000**			**$ 60,000**
Design	**$ 50,000**	**$ 50,000**	**$ 60,000**			**$ 160,000**
Construction	**$ 350,000**	**$ 400,000**	**$ 100,000**			**$ 850,000**
						$ -
TOTAL	**$ 430,000**	**$ 470,000**	**$ 170,000**	**$ -**	**$ -**	**$ 1,070,000**

Estimated Funding Sources	**Percentage**	**2022**	**Amount**
Water Rates	100%		$154,846
			$0
			$0
Total	**100%**		**$154,846**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: 21028

Project Name: Powerhouse Automation Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:	$ 50,000	Expenditures through end of year:	$ 33,093
Spent to Date:	$ 3,093	2022 - 2026 Planned Expenditures:	$ 650,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 683,093
Project Balance	$ 16,907	Additional Funding Required	$ 633,093

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 150,000					$ 150,000
Construction	$ 100,000	$ 300,000				$ 400,000
Capitalized Labor	$ 50,000	$ 50,000				$ 100,000
TOTAL	$ 300,000	$ 350,000	$ -	$ -	$ -	$ 650,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$283,093
			$0
			$0
Total	100%		$283,093

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Annual Canal and Flume Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Gibson **Board Approval:** 11/08/21

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. 2022 expenditures include additional 25 flume boxes purchased, approximately $200,000 along with $100,000 for warehouse racking system for flume material, & 4 Beat access bridge, $70,000. Expenditures for 2022, 2023, 2024, 2025, 2026 will include $75,000 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:		2022 - 2026 Planned Expenditures:	$ 745,000
Cash flow through end of year:	$ 93,340	Total Project Estimate:	$ 838,340
Project Balance	$ 363,994	Additional Funding Required	$ 381,006

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 445,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 745,000
						$ -
TOTAL	$ 445,000	$ 75,000	$ 75,000	$ 75,000	$ 75,000	$ 745,000

Estimated Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$81,006
			$0
			$0
Total	100%		$81,006

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Annual Reservoir and Dam Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Gibson **Board Approval:** 11/08/21

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 2022 includes the following:
- Caples Lake Auxiliary Dam - Replacement spillway log booms ($65K)
- Caples Lake - Investigate/assess outlet gate condition ($35K).
- Caples Main Dam - Plan & carry out investigation of adequacy of filter/drain blanket ($50K)
- Echo Lake - Restore rock armoring at the base of the upstream gunite face to eliminate undercutting by wave action ($30K) - Weber Reservoir - Prepare design to modify outlet to add a low-flow regulating valve ($35K)
- Weber Dam - Rehabilitate upstream dam face ($20K)
- El Dorado Forebay - Reline spillway pipe ($50K)

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:	$ -	2022 - 2026 Planned Expenditures:	$ 645,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 645,000
Project Balance	$ -	Additional Funding Required	$ 645,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 10,000					$ 10,000
Design						$ -
Construction	$ 285,000	$ 100,000	$ 150,000	$ 50,000	$ 50,000	$ 635,000
						$ -
TOTAL	$ 295,000	$ 100,000	$ 150,000	$ 50,000	$ 50,000	$ 645,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$295,000
			$0
			$0
Total	100%		$295,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Caldor Fire Recovery - Hydro

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The 2021 Caldor fire damaged a variety of Hydroelectric, Water, and Recreation facilities. This programmatic CIP intends to replace damaged or destroyed assets to pre-fire functionality.

Basis for Priority:

Replacement of necessary damaged or destroyed assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ -
Cash flow through end of year:	$ -	Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 100,000	$ 100,000				$ 200,000
Construction	$ 1,000,000	$ 1,000,000				$ 2,000,000
Insurance/FEMA	$ (1,100,000)	$ (1,100,000)				$ (2,200,000)
TOTAL	$ -	$ -	$ -	$ -	$ -	$ -

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **Hydroelectric**

Project Number: **PLANNED**

Project Name: **Camp 5 Facility Power Improvements**

Project Category: **Reliability & Service Level Improvements**

Priority: **3** **PM:** **Volcansek** **Board Approval:** **11/08/21**

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. 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 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:	**$ -**	**2022 - 2026 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**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Design			**$ 50,000**			**$ 50,000**
Construction				**$ 250,000**		**$ 250,000**
						$ -
TOTAL	**$ -**	**$ -**	**$ 50,000**	**$ 250,000**	**$ -**	**$ 300,000**

Funding Sources	**Percentage**	**2022 Amount**
Water Rates	100%	$0
		$0
		$0
Total	**100%**	**$0**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Crawford Ditch SCADA Hardware Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Design			$ 50,000			$ 50,000
Construction				$ 150,000		$ 150,000
TOTAL	$ -	$ -	$ 50,000	$ 150,000	$ -	$ 200,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%	$	-
Total	100%		$0

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

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Flume 45 Section 3 Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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 replacement of this flume section is scheduled to occur during the scheduled canal outage in the 2024. Construction cost estimates will be revised upon completion of the geotechnical assessment and design.

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:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 11,950,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 11,950,000
Project Balance	$ -	Additional Funding Required	$ 11,950,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 100,000	$ 50,000				$ 150,000
Design	$ 400,000	$ 400,000				$ 800,000
Construction			$ 11,000,000			$ 11,000,000
						$ -
TOTAL	$ 500,000	$ 450,000	$ 11,000,000	$ -	$ -	$ 11,950,000

Funding Sources	Percentage	2022	Amount
2025 Bond	100%		$500,000
			$0
			$0
Total	100%		$500,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: Planned

Project Name: Flume 46 Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

Flume 46 is a 3340 foot long wooden flume that is located below the "Narrows". This is the longest wooden flume structure in the district and sits mostly on the edge of a very steep mountian side. The wooden flume is in good condition, but with the recent destruction and emergency replacement of four flumes due to the Caldor Fire, the District needs to prioritize the replacement of our remaining wooden flumes that are at greatest risk for future fires in the area. If Flume 46 was destroyed by a fire, the District would have a severe and prolonged water outage from this source due to the length of the flume and the long timeframe to reconstruct a flume of this magnitude in this location. The District will be prioritizing this long wooden flume for replacement to avoid future fire or related damages. The District will first evaluate alternatives to replace this wooden structure with more permanent material, including construction of a large underground siphon to completely bypass the flume section. Estimated feasibility, design, environmental and permitting costs are $2,500,000.

Basis for Priority:

Flume 46 is part of the Project 184 conveyance system that provides one-third of the consumptive water supply for the District as well as hydropower generation.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 2,050,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 2,050,000
Project Balance	$ -	Additional Funding Required	$ 2,050,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 150,000					$ 150,000
Design/Env	$ 100,000	$ 800,000	$ 1,000,000			$ 1,900,000
Construction				*	*	$ -
						$ -
TOTAL	$ 250,000	$ 800,000	$ 1,000,000	$ -	$ -	$ 2,050,000

Funding Sources	Percentage	2022	Amount
2025 Bond	100%		$250,000
			$0
			$0
Total	100%		$250,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Flume 52A Replacement Project

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

Flume 52A is approximately 377 feet in length and last replaced in the early 1953. It underwent a partial rebuild in 2013. The timbers are undersized and overstressed and in need of replacement. It is anticipated to be replaced with U-shaped canal on a mechanically stabilized earth bench. Priority and costs were developed with the Canal and Flume Assessments Studies. Cost will be updated aS design progresses.

Basis for Priority:

The flume will continue to deteriorate, potentially causing flume 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:	$ -	2022 - 2026 Planned Expenditures:	$ 275,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 275,000
Project Balance	$ -	Additional Funding Required	$ 275,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning/Env				$ 25,000		$ 25,000
Design				$ 50,000	$ 200,000	$ 250,000
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ 75,000	$ 200,000	$ 275,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hazel Creek Tunnel Automation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

Hazel Creek Tunnel is in a remote section of the Project 184 system and diverts water to Jenkinson Lake to augement water storage for Reservoir A. During winter and spring the site can be difficult to access to adjust flows for the diversion. The Automation project will provide power and a SCADA controlled actuator to allow adjustments to diversion flows.

Basis for Priority:

Hazel Creek Tunnel is part of the Project 184 system the provides one-third of the water supply for the District. Having the ability to move water from one watershed to another during drought years is critical to keep the Districts water supply flexible.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design			$ 50,000			$ 50,000
Construction				$ 200,000		$ 200,000
						$ -
TOTAL	$ -	$ -	$ 50,000	$ 200,000	$ -	$ 250,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Hydro Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Gibson **Board Approval:** 11/08/21

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 road and building improvements that will extend the life of the asset. In 2022, the powerhouse road, 5 Beat access road (SPW 44, 46), and Alarm 17 road all need to be graded, rocked and reditched. Improvements to Camp 5 include materials/sand shed.

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:	$ -	2022 - 2026 Planned Expenditures:	$ 600,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 600,000
Project Balance	$ -	Additional Funding Required	$ 600,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 600,000
						$ -
TOTAL	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 600,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$200,000
Total	100%		$200,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Powerhouse Turbine Runner Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Kessler **Board Approval:** 11/08/21

Project Description:

The 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 of the two turbines 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 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. The 2022 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 study will also evaluate the economy of purchasing two vs. one runner at a time considering the design will likely be custom, and there would be savings in casting two runners concurrently compared to at different times.

Basis for Priority:

Both powerhouse turbine-generator units have turbine runners that operated significantly past their predicted service life and are subject to failure. The revenue loss for waiting for a turbine wheel to be manufactured is approximately $3 million. Staff believes it is prudent to study options for replacing the runners, either minimally to maintain a spare, or to consider replacing both runners in light of overall manufacturing cost savings, and potential reliability/efficiency improvements.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 2,025,000
Cash flow through end of year:		Total Project Estimate:	$ 2,025,000
Project Balance	$ -	Additional Funding Required	$ 2,025,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 25,000					$ 25,000
Design						$ -
Construction				$ 1,000,000	$ 1,000,000	$ 2,000,000
						$ -
TOTAL	$ 25,000	$ -	$ -	$ 1,000,000	$ 1,000,000	$ 2,025,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$25,000
		$0
		$0
Total	100%	$25,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Project 184 Remote Telemetry Units Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

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:		2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Design	$ 50,000					$ 50,000
Construction	$ 25,000	$ 25,000	$ 150,000			$ 200,000
Capitalized Labor	$ 25,000	$ 25,000	$ 25,000			$ 75,000
						$ -
TOTAL	$ 100,000	$ 50,000	$ 175,000	$ -	$ -	$ 325,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$100,000
			$0
			$0
Total	100%		$100,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: PLANNED

Project Name: Spill 3 Crib Wall Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 Planned Expenditures:	$ 425,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 425,000
Project Balance	$ -	Additional Funding Required	$ 425,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning/Env					$ 25,000	$ 25,000
Design					$ 400,000	$ 400,000
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ -	$ 425,000	$ 425,000

Funding Sources	Percentage	2022	Amount
Water FCCs	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments: Construction costs unknown until further study

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY 2022

Project Name: Flume Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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. Intermittent checking of the flumes has been done in 2017 and 2019. 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:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 50,000					$ 50,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$50,000
			$0
			$0
Total	100%		$50,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY 2023

Project Name: Canal Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning		$ 50,000				$ 50,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ 50,000	$ -	$ -	$ -	$ 50,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Hydroelectric

Project Number: STUDY 2024

Project Name: Siphon Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning			$ 60,000			$ 60,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ 60,000	$ -	$ -	$ 60,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$0
			$0
			$0
Total	100%		$0

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: STUDY 2025

Project Name: Canal Release Points Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

Project Description:

This project will evaluate the Project 184 canal release points 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:	$ -	2022 - 2026 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					
	2022	2023	2024	2025	2026	Total
Study/Planning				$ 80,000		$ 80,000
Design						$ -
Construction						$ -
						$ -
TOTAL	$ -	$ -	$ -	$ 80,000	$ -	$ 80,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022 CAPITAL IMPROVEMENT PLAN **Program:** **Hydroelectric**

Project Number: STUDY 2021

Project Name: Tunnel Assessment

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Mutschler **Board Approval:** 11/08/21

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:		**2022 - 2026 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**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Study/Planning					**$ 50,000**	**$ 50,000**
Design						**$ -**
Construction						**$ -**
						$ -
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ 50,000**	**$ 50,000**

Estimated Funding Sources	**Percentage**	**2022**	**Amount**
Water Rates	100%		$0
			$0
			$0
Total	**100%**		**$0**

Funding Comments:

Recreation Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: 18023

Project Name: Acorn Day Use Area

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Hawkins **Board Approval:** 11/08/21

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 securing 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 securing grant funding during 2021 or 2022 to offset the cost of construction in 2023. 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:	$ 126,409
Spent to Date:	$ 96,409	2022 - 2026 Planned Expenditures:	$ 25,000
Cash flow through end of year:	$ 30,000	Total Project Estimate:	$ 151,409
Project Balance	$ 22,569	Additional Funding Required	$ 2,431

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 5,000					$ 5,000
Study/Planning	$ 20,000					$ 20,000
TOTAL	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000

Funding Sources	Percentage	2022	Amount
Water Rates	100%		$2,431
			$0
			$0
Total	100%		$2,431

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: 21037

Project Name: Lakewood Dr. Stabilization/Mormon Immigrant Trail Shoulder Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eden-Bishop **Board Approval:** 11/08/21

Project Description:

This project was identified in the "Planned Recreation Facility Replacement Program" with an estimated annual expenditure of $50,000 in 2021 for planning, design and environmental activities. In 2022, funding will be used for construction to stabilize the shoreline to protect water quality, roadways and day use areas. Stabilization consists of extending the existing riprap installed in 2006 along the shoreline between Chimney and Hazel Campgrounds. This area has experienced ground movement over the last three winters, and preventative measures, including riprap, are needed to be placed to ensure Lakewood Drive does not slide into Jenkinson Lake as it did in 2006. The area north of the Main Boat Launch has experienced extensive wave action erosion that requires stabilization to preserve a day use area. The improvements will include backfilling eroded areas and the placement of riprap. Shoulder improvements along Mormon Immigrant Trail near the Main Boat Launch are needed to halt erosion (caused by pedestrian traffic) that is threatening to undermine the road. The improvements will include restoring the shoulder, installing a stairway, and fencing that will guide pedestrians to improved access points. The construction cost estimate includes a 25% contingency based on a 10% design level of confidence. The construction cashflow assumes that one area will be completed each year over a three year period.

Basis for Priority:2

The project maintains and enhances an existing asset by stabilizing the shoreline and road shoulder, and improving access by installing a stairway and fencing to guide pedestrians to improved access points to the lake.

Project Financial Summary:			
Funded to Date:	$ 85,000	Expenditures through end of year:	$ 85,000
Spent to Date:	$ 2,106	2022 - 2026 Planned Expenditures:	$ 1,003,750
Cash flow through end of year:	$ 82,894	Total Project Estimate:	$ 1,088,750
Project Balance	$ -	Additional Funding Required	$ 1,003,750

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Capitalized Labor (construction management)	$ 10,000					$ 10,000
Construction Inspection	$ 25,000					$ 25,000
Design Services during Construction	$ 25,000					$ 25,000
Construction	$ 545,000	$ 226,250	$ 172,500			$ 943,750
						$ -
TOTAL	$ 605,000	$ 226,250	$ 172,500	$ -	$ -	$ 1,003,750

Funding Sources	Percentage	2022 Amount
Water Rates	100%	$605,000
		$0
		$0
Total	100%	$605,000

Funding Comments: Water rates are an appropriate funding source for an existing drinking water facility.

2022	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Caldor Fire Recovery - Recreation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Carrington **Board Approval:** 11/08/21

Project Description:

The 2021 Caldor fire damaged a variety of Hydroelectric, Water, and Recreation facilities. This programmatic CIP intends to replace damaged or destroyed assets to pre-fire functionality.

Basis for Priority:

Replacement of necessary damaged or destroyed assets.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ -
Cash flow through end of year:	$ -	Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 10,000					$ 10,000
Design/Construction Management	$ 15,000	$ 10,000				$ 25,000
Construction	$ 75,000	$ 75,000				$ 150,000
Insurance/FEMA	$ (100,000)	$ (85,000)				$ (185,000)
TOTAL	$ -	$ -	$ -	$ -	$ -	$ -

Funding Sources	Percentage	2022 Amount
Water Rates	100%	$0
		$0
		$0
Total	100%	$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Recreation Facility Replacement Program

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Hawkins **Board Approval:** 11/08/21

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 building 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. 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. Lakewood Drive stabilization is to extend the existing riprap installed in 2006 along the shoreline between Chimney and Hazel Campgrounds. This area has seen ground movement over the last three winters and preventative measures, such as riprap, need to be implemented to ensure Lakewood Drive does not slide into Jenkinson Lake, as it did in 2006. 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 restroom's 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:		**2022 - 2026 Planned Expenditures:**	**$ 275,000**
Cash flow through end of year:		**Total Project Estimate:**	**$ 275,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 275,000**

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Sierra CG Loop Paving	$ 50,000					$ 50,000
Scout Hill Paving		$ 50,000				$ 50,000
Silver Lake West CG Water System Upgrade			$ 50,000			$ 50,000
Silver Lake West CG & Sandy Cove DUA Paving				$ 50,000	$ 50,000	$ 100,000
Hilltop CG Loop Paving					$ 25,000	$ 25,000
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 75,000	$ 275,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$50,000
Total	**100%**		**$50,000**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	Recreation

Project Number: PLANNED

Project Name: Sly Park Recreation Area Facility Improvements

Project Category: Master Planning

Priority: 2 **PM:** Hawkins **Board Approval:** 11/08/21

Project Description:

The scope of this project 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 visitors experience, and increase the level of safety for park visitors and EID employees. These projects would include but would not be limited too; 1) Repositioning the Sly Park Recreation Area (SPRA) entrance gatehouse to increase the distance between the gate and CR E-16, thus reducing traffic back ups on E-16 and the potential for traffic accidents. 2) Expanding the number of day use facilities, improving and enlarging existing day use facilities and improving and enlarging the associated parking areas. 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 potentially lessen the impact to the Morman 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. 3) 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 will lead to increased revegetation throughout SPRA, thus improving water quality.

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:		**2022 - 2026 Planned Expenditures:**	$ 510,000
Cash flow through end of year:		**Total Project Estimate:**	$ 510,000
Project Balance	$ -	**Additional Funding Required**	$ 510,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Pinecone DUA & Campground Loop Paving	$ 125,000					$ 125,000
Main DUA Expansion		$ 95,000				$ 95,000
Bumpy Meadows / Waterfall Trailhead Parking and DUA Expansion		$ 15,000	$ 100,000			$ 115,000
Main Boat Launch Road & Parking Lot Paving				$ 100,000		$ 100,000
Other Projects					$ 75,000	$ 75,000
TOTAL	$ 125,000	$ 110,000	$ 100,000	$ 100,000	$ 75,000	$ 510,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	100%		$125,000
Total	**100%**		**$125,000**

Funding Comments:

General District Projects

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 18043

Project Name: Wireless LAN Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 3 **PM:** Eberhard **Board Approval:** 11/08/21

Project Description:

Project implements wireless networks and network access control security system in all major District facilities. The project establishes new secure Wi-Fi service delivery points to provide needed network access to mobile devices within the District's plants, corporate yards, and office buildings which frequently lack cellular service coverage. The project provides a modern solution to meet the District's growing mobile workforce connectivity requirements, improves network security and performance while creating a more scalable and flexible architecture to meet current and future business needs.

Basis for Priority:

The District's mobile workforce frequently encounters poor or no cellular service within District plants, corporate yards, and buildings. Mobile communications provide staff with mission critical alerts and decision support to ensure safety, service quality and reliability, while also increasing efficiency.

Project Financial Summary:			
Funded to Date:	$ 50,000	Expenditures through end of year:	$ 47,420
Spent to Date:	$ 42,420	2022 - 2026 Planned Expenditures:	$ 302,580
Cash flow through end of year:	$ 5,000	Total Project Estimate:	$ 350,000
Project Balance	$ 2,580	Additional Funding Required	$ 300,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 157,580	$ 145,000				$ 302,580
						$ -
TOTAL	$ 157,580	$ 145,000	$ -	$ -	$ -	$ 302,580

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$93,000
Wastewater Rates	40%		$62,000
			$0
Total	100%		$155,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 18044

Project Name: WAN Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eberhard **Board Approval:** 11/08/21

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.

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:	$ 416,801
Spent to Date:	$ 266,801	2022 - 2026 Planned Expenditures:	$ 62,896
Cash flow through end of year:	$ 150,000	Total Project Estimate:	$ 479,697
Project Balance	$ 62,896	Additional Funding Required	$ 0

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 62,896					$ 62,896
						$ -
TOTAL	$ 62,896	$ -	$ -	$ -	$ -	$ 62,896

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 18055

Project Name: Hansen 7 Software Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Sundaram **Board Approval:** 11/08/21

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:	$ 2,605,811
Spent to Date:	$ 1,205,811	2022 - 2026 Planned Expenditures:	$ 8,288,000
Cash flow through end of year:	$ 1,400,000	Total Project Estimate:	$ 10,893,811
Project Balance	$ 8,402,746	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Consulting Services	$ 3,500,000	$ 1,800,000	$ 270,000			$ 5,570,000
Software & Equipment	$ 48,000					$ 48,000
Capitalized Labor	$ 1,200,000	$ 1,200,000	$ 270,000			$ 2,670,000
						$ -
TOTAL	$ 4,748,000	$ 3,000,000	$ 540,000	$ -	$ -	$ 8,288,000

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
			$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 19028

Project Name: Datacenter SCADA Segmentation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Proctor **Board Approval:** 11/08/21

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:	$ 30,000	Expenditures through end of year:	$ 7,283
Spent to Date:	$ 4,283	2022 - 2026 Planned Expenditures:	$ 332,717
Cash flow through end of year:	$ 3,000	Total Project Estimate:	$ 340,000
Project Balance	$ 22,717	Additional Funding Required	$ 310,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design						$ -
Construction	$ 332,717					$ 332,717
						$ -
TOTAL	$ 332,717	$ -	$ -	$ -	$ -	$ 332,717

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$186,000
Wastewater Rates	40%		$124,000
			$0
Total	100%		$310,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 19044

Project Name: Dream Reports Software

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This CIP project funding is to develop automated reports that will aid the District in analyzing pump and motor (wire to water) efficiencies for water and wastewater facilities. These reports will empower operators and management with the information necessary to make informed decisions about pump operation, including time of day use and set points, which ultimately affect energy consumption and cost.

Basis for Priority:

The District's currently lacks an integrated reporting solution for compliance data. The current process to collect, analyze, and produce compliance reports is complicated, labor intensive, and time consuming.

Project Financial Summary:			
Funded to Date:	$ 93,000	Expenditures through end of year:	$ 79,954
Spent to Date:	$ 59,954	2022 - 2026 Planned Expenditures:	$ 100,000
Cash flow through end of year:	$ 20,000	Total Project Estimate:	$ 179,954
Project Balance	$ 13,046	Additional Funding Required	$ 86,954

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Consulting	$ 50,000					$ 50,000
Capitalized Labor	$ 50,000					$ 50,000
						$ -
						$ -
TOTAL	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$52,172
Wastewater Rates	40%		$34,782
			$0
Total	100%		$86,954

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: 21042

Project Name: HQ Backup Power Modifications

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Money **Board Approval:** 11/08/21

Project Description:

This project upgrades the power distribution system at the Placerville Headquarters (HQ) building to include full generator backup for the whole building. Currently the majority of HVAC units, elevators, some bathroom fans and large portion of the older building are not backed during power outages. The fire suppression system and building alarms are also not properly backed up.

This project also incorporates Tesla battery storage equipment that is 100% funded under the California Public Utilities Commisions (CUPC) Self-Generation Incentive Program (SGIP) program. Incorporation of this storage equipment will allow the District to reduce electrical charges at HQ through peak shaving as well as provide full and instantaneous power backup to the building for limited durations.

Basis for Priority:

Safety concern due to lack of fire suppression system and building alarm when running on backup generator. Adequate air circulation in the building is currently not available when running on backup power. Grant funding, energy cost savings, limited duration battery backup power provides operational flexibility to operations staff during large power outages.

Project Financial Summary:			
Funded to Date:	$ 95,000	Expenditures through end of year:	$ 63,697
Spent to Date:	$ 3,697	2022 - 2026 Planned Expenditures:	$ 500,000
Cash flow through end of year:	$ 60,000	Total Project Estimate:	$ 563,697
Project Balance	$ 31,303	Additional Funding Required	$ 468,697

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Design	$ 50,000					$ 50,000
Construction	$ 400,000					$ 400,000
Capitalized labor	$ 50,000					$ 50,000
						$ -
TOTAL	$ 500,000	$ -	$ -	$ -	$ -	$ 500,000

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$281,218
Wastewater Rates	40%		$187,479
			$0
Total	100%		$468,697

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: 2021 Security Equipment Reliability Program

Project Category: Regulatory Requirements

Priority: 1 **PM:** Newsom **Board Approval:** 11/08/21

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:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 280,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 35,000
Project Balance	$ -	Additional Funding Required	$ 280,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Consulting Services	$ 20,000					$ 20,000
Replacement	$ 40,000	$ 45,000	$ 65,000	$ 55,000	$ 55,000	$ 260,000
						$ -
TOTAL	$ 60,000	$ 45,000	$ 65,000	$ 55,000	$ 55,000	$ 280,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	60%	$36,000
Wastewater Rates	40%	$24,000
		$0
Total	**100%**	**$60,000**

Funding Comments:	After review of the current system and ongoing project to improve our security posture I have made some small adjustments to our expense planning to continuously evaluate and improve our system with the goal to proactively plan for end of life cycle replacement of hardware, evaluate our compliance with applicable regulation's and design our integrated security system to comply with and protect our critical infrastructure and our personnel.

2022	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:** 11/08/21

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.

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:	$ -	2022 - 2026 Planned Expenditures:	$ 750,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 750,000
Project Balance	$ -	Additional Funding Required	$ 750,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Administration Technology	$ 150,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 350,000
Operations Technology		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 200,000
Engineering Technology		$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 200,000
TOTAL	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000	$ 750,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	60%	$90,000
Wastewater Rates	40%	$60,000
Total	100%	$150,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Communication Systems Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eberhard **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 Planned Expenditures:	$ 355,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 355,000
Project Balance	$ -	Additional Funding Required	$ 355,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Voice & Video Calling Upgrades		$ 80,000				$ 80,000
Meeting Technology Upgrades				$ 50,000	$ 100,000	$ 150,000
Cloud Email & Intranet Upgrades			$ 125,000			$ 125,000
TOTAL	$ -	$ 80,000	$ 125,000	$ 50,000	$ 100,000	$ 355,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	60%		$0
Wastewater Rates	40%		$0
Total	100%		$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Environment Controls Upgrade

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Tarbox **Board Approval:** 11/08/21

Project Description:

The project replaces 9 end-of-life air conditioning (AC) units and 6 wall-mount enclosures dedicated for IT equipment essential to operate critical District plants and facitlities. The current AC units have reached their end of useful life and are no longer reliable. The current wall-mount enclosures can no longer be adapted to meet new standard IT equipment size and environmental requirements.

Basis for Priority:

The units identified have reached the end of their service life and must be replaced. Failure to maintain a stable environment with adequate heat and dust control can quickly lead to overheating that shortens equipment life or causes equipment failure. Equipment failure can cause a loss of facility communications or process control that can disrupt service to customers, lead to regulatory violations and fines, or worse.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 140,800
Cash flow through end of year:	$ -	Total Project Estimate:	$ 140,800
Project Balance	$ -	Additional Funding Required	$ 140,800

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning	$ 1,600					$ 1,600
Design	$ 4,400					$ 4,400
Construction	$ 134,800					$ 134,800
						$ -
TOTAL	$ 140,800	$ -	$ -	$ -	$ -	$ 140,800

Funding Sources	Percentage	2022 Amount
Water Rates	60%	$84,480
Wastewater Rates	40%	$56,320
		$0
Total	**100%**	**$140,800**

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: IT Network Infrastructure Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eberhard **Board Approval:** 11/08/21

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:	$ -	2022 - 2026 Planned Expenditures:	$ 1,830,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,830,000
Project Balance	$ -	Additional Funding Required	$ 1,830,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Network Upgrades	$ 550,000	$ 150,000				$ 700,000
Data Processing & Storage Upgrades	$ 580,000	$ 300,000				$ 880,000
Identity, Access & Security Upgrades	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 250,000
TOTAL	$ 1,180,000	$ 500,000	$ 50,000	$ 50,000	$ 50,000	$ 1,830,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	60%		$708,000
Wastewater Rates	40%		$472,000
Total	100%		$1,180,000

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: PLANNED IT Personal Productivity Replacement

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Eberhard **Board Approval:** 11/08/21

Project Description:

Ongoing program to ensure the reliability, security, and performance of personal workstations and productivity software used by staff daily to operate the District. Personal productivity technologies include:

- Virtual Machines (VMs): cloud-based workstations comprised of Virtual Desktop Infrastructure (VDI), client terminals and computer 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

Personal productivity technologies evolve quickly and manufacturers will typically cease new feature development 2 to 3 years after the product was initially released and usually end all support and security fixes when the product reaches about 5 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. 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:	$ -	2022 - 2026 Planned Expenditures:	$ 600,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 600,000
Project Balance	$ -	Additional Funding Required	$ 600,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
VM Upgrades				$ 100,000	$ 150,000	$ 250,000
PC Upgrades					$ 100,000	$ 100,000
Personal Productivity & Security Software Upgrades		$ 125,000	$ 125,000			$ 250,000
TOTAL	$ -	$ 125,000	$ 125,000	$ 100,000	$ 250,000	$ 600,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	60%	$0
Wastewater Rates	40%	$0
Total	100%	$0

Funding Comments:

2022	CAPITAL IMPROVEMENT PLAN	Program:	General District

Project Number: PLANNED

Project Name: SCADA Cyber Security Improvements

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This project will implement technology to identify and alert District staff as to nefarious network activity on the District's control systems network. Such activates would include: a persistent threat on our control network that breached our systems, malfunctioning equipment and detecting known vulnerabilities within our network. This system would also serve as a tool to actively defend and document cyberattacks.

Basis for Priority:

Establish a cybersecurity appliances to reduce risk and exposure time to cyber incidents on District's process control network related to the critical infrastructure.

Project Financial Summary:			
Funded to Date:	$ -	Expenditures through end of year:	$ -
Spent to Date:	$ -	2022 - 2026 Planned Expenditures:	$ 400,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 400,000
Project Balance	$ -	Additional Funding Required	$ 400,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
HW/SW	$ 250,000					$ 250,000
Professional Services	$ 100,000					$ 100,000
Capitalized Labor	$ 50,000					$ 50,000
TOTAL	$ 400,000	$ -	$ -	$ -	$ -	$ 400,000

Estimated Funding Sources	Percentage	2022	Amount
Water Rates	60%		$240,000
Wastewater Rates	40%		$160,000
Total	100%		$400,000

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: PLANNED

Project Name: SCADA Master Plan Implementation

Project Category: Reliability & Service Level Improvements

Priority: 2 **PM:** Volcansek **Board Approval:** 11/08/21

Project Description:

This CIP outlines an 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:	$ -	2022 - 2026 Planned Expenditures:	$ 1,400,000
Cash flow through end of year:	$ -	Total Project Estimate:	$ 1,400,000
Project Balance	$ -	Additional Funding Required	$ 1,400,000

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Master Plan Update	$ 100,000					$ 100,000
Res 1 SCADA upgrade		$ 350,000				$ 350,000
EDHWW SCADA upgrade			$ 450,000			$ 450,000
Camp 5 SCADA upgrade				$ 250,000		$ 250,000
SCADA Enterprise System Upgrade					$ 250,000	$ 250,000
TOTAL	$ 100,000	$ 350,000	$ 450,000	$ 250,000	$ 250,000	$ 1,400,000

Estimated Funding Sources	Percentage	2022 Amount
Water Rates	60%	$60,000
Wastewater Rates	40%	$40,000
		$0
Total	**100%**	**$100,000**

Funding Comments:

2022 **CAPITAL IMPROVEMENT PLAN** **Program:** **General District**

Project Number: **Planned**

Project Name: **Vehicle Replacement**

Project Category: **Reliability & Service Level Improvements**

Priority: **2** **PM:** **Warden** **Board Approval:** **11/08/21**

Project Description:

The following vehicle replacements are planned for 2022 - 2026. (2021 annual purchase delayed and consolidated with 2022)

2022: 7-1/2 ton 4X4 pickups, 5-1/2 ton 4X2 pickups, 3-4X4 SUV's, 2-1 ton 4X4 service truck, 2-1 1/2 ton 4X4 service truck with crane, 1-1 1/2 ton 4X4 service truck with power unit, 1-4 thousand gal water truck, 1- 1 ton water valve truck, 1- snow cat, 3-used 6-7 yard dump trucks, 2- 1 1/2 ton 4X4 service truck, 1- compact excavator, 1 vactor truck, 2- 4X4 quad runners.
2023: 4-1/2 ton 4X4 pickups, 3-used 6-7 yard dump trucks,1-used 10 yard dump truck, 1-used transfer truck, 1- 1 1/2 ton 4X4 service truck, 1-1 ton 4X4 service truck.
2024: 5-1/2 ton 4X4 pickups, 5-1 ton 4X4 service trucks, 1- vacuum pumper truck 52,000 lb, 1- 1 1/2 ton 4X4 service truck, 1-4X4 SUV's.
2025: 1- 410 4X4 backhoe, 1- 21' boat, 4 4X4 SUV's, 1- vacuum pumper truck 52,000 lb, 3- 1/2 ton 4X4 pickups, 1-1 1/2 ton 4X4 service truck with power unit, 2- 1 ton 4X4 service truck, 1- 3/4 ton 4X4 pickup, 1- 1 1/2 ton 4X4 flat bed, 1- vacuum excavation trailer.
2026: 3/4 ton flat bed 4x4, 1 jeep 4x4, 2 sedans, 3-4x4 SUVs, 4-1 ton 4x4 utility truck, 3/4 ton 2x4 utility truck, 1 ton flat bed 4x4, 1 ton utility truck, 7-1/2 ton 4X4 pickups, 5-1/2 ton 4X2 pickups.

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:	**$ -**	**2022 - 2026 Planned Expenditures:**	**$ 8,286,000**
Cash flow through end of year:	**$ -**	**Total Project Estimate:**	**$ 8,286,000**
Project Balance	**$ -**	**Additional Funding Required**	**$ 8,286,000**

Description of Work	**Estimated Annual Expenditures**					
	2022	**2023**	**2024**	**2025**	**2026**	**Total**
Vehicles/Equipment	**$ 2,856,000**	**$ 1,343,000**	**$ 882,000**	**$ 1,365,000**	**$ 1,840,000**	**$ 8,286,000**
						$ -
TOTAL	**$ 2,856,000**	**$ 1,343,000**	**$ 882,000**	**$ 1,365,000**	**$ 1,840,000**	**$ 8,286,000**

Estimated Funding Sources	**Percentage**	**2022 Amount**
Water Rates	60%	$1,713,600
Wastewater Rates	40%	$1,142,400
		$0
Total	**100%**	**$2,856,000**

Funding Comments: Funding sources will be based on each vehicle cost center (water or wastewater)

2022	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:** 11/08/21

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:	$ -	2022 - 2026 Planned Expenditures:	$ -
Cash flow through end of year:		Total Project Estimate:	$ -
Project Balance	$ -	Additional Funding Required	$ -

Description of Work	Estimated Annual Expenditures					
	2022	2023	2024	2025	2026	Total
Study/Planning						$ -
Design	$ 13,500					$ 13,500
Implementation	$ 64,800					$ 64,800
						$ -
TOTAL	$ 78,300	$ -	$ -	$ -	$ -	$ 78,300

Funding Sources	Percentage	2022	Amount
Water Rates	60%		$46,980
Wastewater Rates	40%		$31,320
			$0
Total	100%		$78,300

Funding Comments: