

# South Tahoe Public Utility District Capital Improvement Program



## Annual Plan Update

April 2021

# South Tahoe

## Public Utility District

John Thiel, General Manager

### Board Members

Chris Cefalu  
Shane Romsos  
David Peterson  
Kelly Sheehan  
Nick Exline

## Memorandum

Date: April 1, 2021

To: John Thiel, General Manager  
Board of Directors

From: Julie Ryan, Engineering Department Manager

Subject: 2021 Capital Improvement Program

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The Engineering Department is pleased to present this Annual Plan Update for the 2021 Capital Improvement Program (CIP) for the South Tahoe Public Utility District (the District). This document is intended to be a desktop resource for the District's Staff and Board of Directors, which they can turn to over the coming year for basic information regarding the scope, cost and need of proposed projects. This memorandum attempts to answer some anticipated questions about the purpose, scope and content of the CIP Annual Plan Update.

### **How was this document developed?**

In the fall of each year, the Engineering Department, together with Operations and Administration, meets extensively to discuss the state of the District's water and sewer facilities.

- *We look back at projects that were identified in years past, but that have not yet been implemented. How are the facilities doing now? Are they still the top priority?*
- *We consider how conditions have changed in the past year. Are there facilities that have not been a great concern in the past, but that are now showing signs of excessive wear? Are there facilities that need to be upgraded in response to some outside factor (such as pending regulation or coordination with other agencies)?*
- *We discuss the scope and extent of the problems we are seeing. What problems can Operations handle themselves? What problems will require a more extensive project, with support from Engineering, outside contractors and consultants? This document focuses primarily on those the more extensive projects.*
- *We juggle competing priorities. We recognize that funds and staff resources are limited, and that it's impossible to implement every project simultaneously. Which projects are urgent? Which projects can safely be delayed 3 or 5 or 10 years or more without dire consequences for the long-term health of the system and our ability to deliver the quality service our customers expect?*

- *We plan for future projects.* While the CIP planning process substantially looks backwards, and focuses mostly on problems we already know about, Staff recognizes that it would be catastrophic for the District to stand by and wait for facilities to fail before taking action. To make the program more proactive, Staff also incorporates planning projects into the CIP. We discuss what information is needed to better understand the condition of the facilities. Do we need to collect more data about system operations? Do we need to perform condition assessments? Do we need to increase our routine maintenance? Can we change our operations or invest in tools to extend the life of our assets?

The Engineering Department then compiles all this information into the CIP Plan. The CIP Plan (also referred to as the “Ten-Year Plan”) is the District’s tool for budgeting Engineering project expenditures over a ten-year planning horizon, and is the primary focus of this document. Once a project or program is sufficiently well defined to assign a cost, it is considered for inclusion in the CIP Plan. If Staff agrees on its need, it is included in the Ten-Year Plan. If the scope or cost of a project is ill-defined or the need is not considered immediate, a project is moved off of the Ten-Year Plan and onto the Unconstrained List. This document does not address projects on the Unconstrained List.

### **What does this document contain?**

This document is divided into two parts (Sewer and Water) and each part has 3 pieces: the Needs-Based Ten-Year Plan, the Budgeted Ten-Year Plan, and the CIP Project Sheets.

- **Needs-Based Ten-Year Plan:** This table represents the outcome of Staff’s Annual CIP Planning process, described above. It provides the comprehensive list of projects recommended by Engineering and Operations for planning and implementation in the next 10 years, based on current system needs (as of December 2020). The table names the project, and shows the conceptual or design-level cost of the project and the fiscal year(s) (FY) recommended for design and construction. All CIP Project costs use future values for estimating purposes (current year estimates as a base cost, and assuming a 3% per year increase in project costs to the year of implementation).
- **Budget-Based Ten-Year Plan:** This table shows the same projects as the Needs-Based Ten-Year Plan, but shifts the implementation year. This version of the Ten-Year Plan is developed in coordination with the Finance Department, and takes into consideration available funds. The timing and costs on this version of the plan match the District’s Ten-Year Plan for Engineering capital expenditures.

*What assumptions does the Budget-Based Ten-Year Plan make about future funding?*  
The Budget-Based Ten-Year Plan assumes there will be no rate increases for FY22, but that rates will be raised 5% on Sewer and 6% on Water each year from FY23 to FY31. These funding levels have been assumed by the District’s Finance Department, and adopted by Engineering for consistency.

*Why are there zeroes on the Budget-Based Plan?*

There are two reasons that projects are listed on this plan, but have no funding.

- First, projects that are tracked on the Engineering CIP Plan, but funded by either the Operations Departments capital budgets or the Engineering O&M budget

will show the project cost in the implementation year, but will have a zero in the "10-Yr Totals" column and are included in annual totals sum).

- Second, this plan lists ALL of the projects recommended by Engineering and Operations for implementation in the next Ten Years. However, based on available funds and projected revenue increases, they can't all be started in that timeframe. Rather than remove the projects from the list, they've been left on the table to illustrate the shortfall between "the Needs" and "the Budget".
- **Graphs:** For each fund, Water and Sewer, a bar graph has been included, representing the Needs-Based Plan, and showing the annual anticipated expenditure by facility type.
- **CIP Project Sheets:** This section provides an information sheet for each project included on the Needs-Based Ten-Year Plan. The section begins with an index (showing project name and page number) and a key (providing a guide to interpreting the information provided on the CIP Project Sheets).

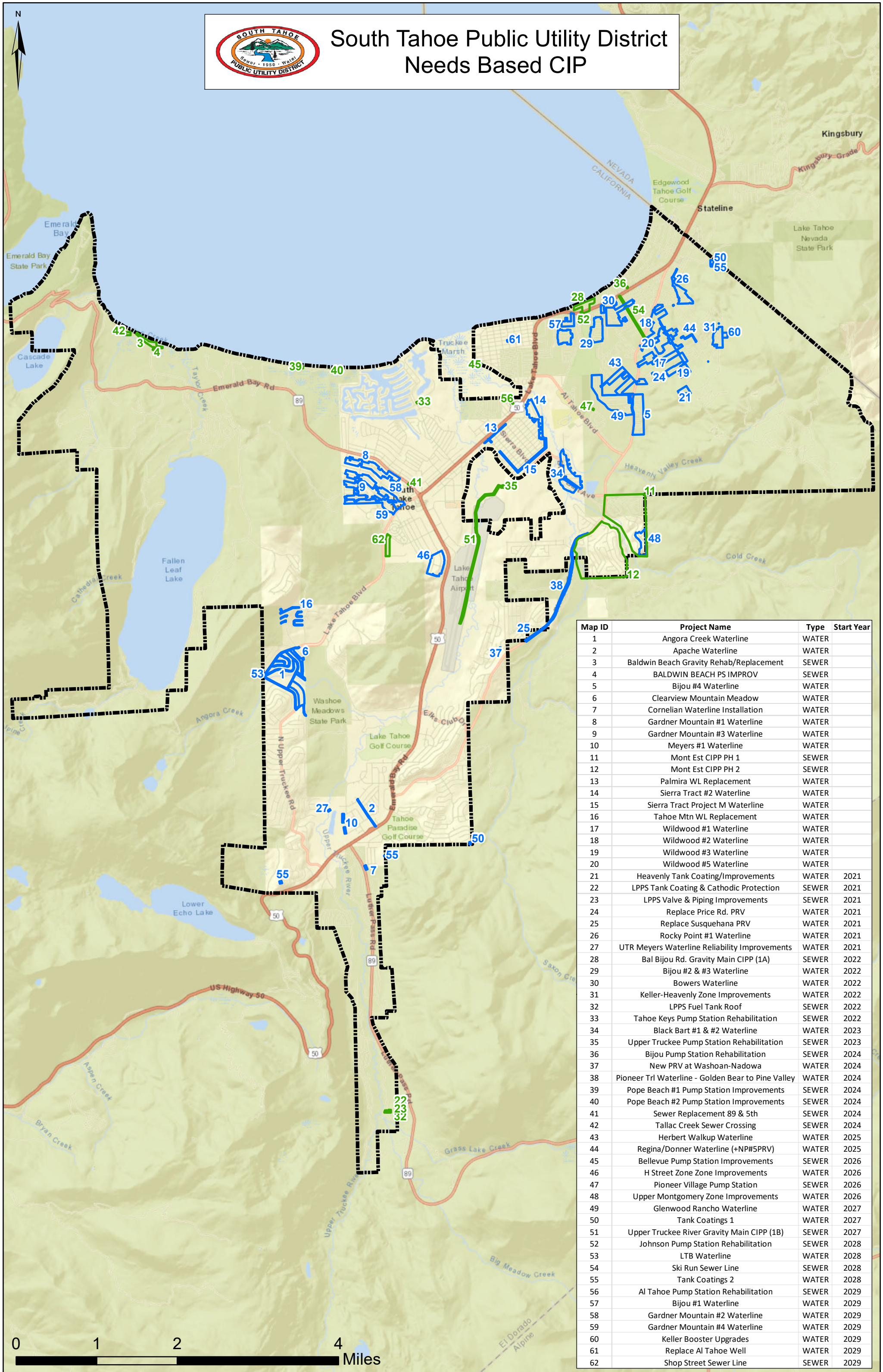
#### **When will this document be updated?**

It is the intent of the Engineering Department to update and distribute this document each year in the spring, at the conclusion of the Annual CIP planning process. The Department intends to make it available to the Staff and Board for reference during the Annual Budget process and during the coming year.





# South Tahoe Public Utility District Needs Based CIP



Map ID	Project Name	Type	Start Year
1	Angora Creek Waterline	WATER	
2	Apache Waterline	WATER	
3	Baldwin Beach Gravity Rehab/Replacement	SEWER	
4	BALDWIN BEACH PS IMPROV	SEWER	
5	Bijou #4 Waterline	WATER	
6	Clearview Mountain Meadow	WATER	
7	Cornelian Waterline Installation	WATER	
8	Gardner Mountain #1 Waterline	WATER	
9	Gardner Mountain #3 Waterline	WATER	
10	Meyers #1 Waterline	WATER	
11	Mont Est CIPP PH 1	SEWER	
12	Mont Est CIPP PH 2	SEWER	
13	Palmira WL Replacement	WATER	
14	Sierra Tract #2 Waterline	WATER	
15	Sierra Tract Project M Waterline	WATER	
16	Tahoe Mtn WL Replacement	WATER	
17	Wildwood #1 Waterline	WATER	
18	Wildwood #2 Waterline	WATER	
19	Wildwood #3 Waterline	WATER	
20	Wildwood #5 Waterline	WATER	
21	Heavenly Tank Coating/Improvements	WATER	2021
22	LPPS Tank Coating & Cathodic Protection	SEWER	2021
23	LPPS Valve & Piping Improvements	SEWER	2021
24	Replace Price Rd. PRV	WATER	2021
25	Replace Susquehana PRV	WATER	2021
26	Rocky Point #1 Waterline	WATER	2021
27	UTR Meyers Waterline Reliability Improvements	WATER	2021
28	Bal Bijou Rd. Gravity Main CIPP (1A)	SEWER	2022
29	Bijou #2 & #3 Waterline	WATER	2022
30	Bowers Waterline	WATER	2022
31	Keller-Heavenly Zone Improvements	WATER	2022
32	LPPS Fuel Tank Roof	SEWER	2022
33	Tahoe Keys Pump Station Rehabilitation	SEWER	2022
34	Black Bart #1 & #2 Waterline	WATER	2023
35	Upper Truckee Pump Station Rehabilitation	SEWER	2023
36	Bijou Pump Station Rehabilitation	SEWER	2024
37	New PRV at Washoan-Nadowa	WATER	2024
38	Pioneer Trl Waterline - Golden Bear to Pine Valley	WATER	2024
39	Pope Beach #1 Pump Station Improvements	SEWER	2024
40	Pope Beach #2 Pump Station Improvements	SEWER	2024
41	Sewer Replacement 89 & 5th	SEWER	2024
42	Tallac Creek Sewer Crossing	SEWER	2024
43	Herbert Walkup Waterline	WATER	2025
44	Regina/Donner Waterline (+NP#5PRV)	WATER	2025
45	Bellevue Pump Station Improvements	SEWER	2026
46	H Street Zone Zone Improvements	WATER	2026
47	Pioneer Village Pump Station	SEWER	2026
48	Upper Montgomery Zone Improvements	WATER	2026
49	Glenwood Rancho Waterline	WATER	2027
50	Tank Coatings 1	WATER	2027
51	Upper Truckee River Gravity Main CIPP (1B)	SEWER	2027
52	Johnson Pump Station Rehabilitation	SEWER	2028
53	LTB Waterline	WATER	2028
54	Ski Run Sewer Line	SEWER	2028
55	Tank Coatings 2	WATER	2028
56	Al Tahoe Pump Station Rehabilitation	SEWER	2029
57	Bijou #1 Waterline	WATER	2029
58	Gardner Mountain #2 Waterline	WATER	2029
59	Gardner Mountain #4 Waterline	WATER	2029
60	Keller Booster Upgrades	WATER	2029
61	Replace Al Tahoe Well	WATER	2029
62	Shop Street Sewer Line	SEWER	2029

SEWER



South Tahoe Public Utility District  
Capital Improvement Program  
**NEEDS-BASED PLAN**

SEWER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY 21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
1	WATER REUSE DIAMOND DITCH REHABILITATION	25					299,000	307,000						606,000
2	WATER REUSE ROADS	24	705,000			771,000	794,000							1,565,000
3	WATER REUSE - HAY BARN	21	309,000	52,000										52,000
4	WATER REUSE - SIPHON CIPP REPAIR	21		273,000										273,000
5	SEWER SYSTEM UNPLANNED REPAIRS	21	500,000	500,000										500,000
6	SEWER FORCE MAIN ASSET MANAGEMENT	21, 25+		25,000			466,000	111,000	114,000	117,000	121,000	125,000	128,000	1,182,000
	FM INSPECTION PORTS - BIJOU/JOHNSON	29 TO 30									718,000	1,478,000	761,000	2,957,000
7	FORCE MAIN ARV REPLACEMENT PROJECT	23 TO 24		52,000	137,000	281,000	145,000							615,000
	SEWER CROSSING CONDITION ASSESSMENT	N/A		328,000	338,000									0
	GRAVITY SEWER REHAB PROGRAM (CIPP 3300LF/YR)	23+						0	0	383,000	395,000	804,000	828,000	2,410,000
8	GRAVITY SEWER REPLACEMENT PROGRAM (1.1 MI/YR)	23+									3,778,000	3,891,000	4,008,000	11,677,000
	UNFUNDED GRAVITY SEWER REPLACEMENT PROGRAM (1.1 MI/YR)	23+			1,838,000	1,304,000	2,385,000	3,082,000	3,561,000	3,668,000				15,838,000
9	TALLAC CREEK SEWER CROSSING	24				174,000	179,000							353,000
10	BALDWIN BEACH GRAVITY REHAB/REPLACEMENT (2200 FT)	24			53,000	589,000	607,000							1,249,000
11	BAL BIJOU ROAD GRAVITY MAIN CIPP (1A)	28								374,000	386,000			760,000
12	SEWER REPLACEMENT 89 AND 5TH	23			165,000	170,000								335,000
13	UPPER TRUCKEE RIVER GRAVITY MAIN CIPP (1B)	25						714,000	736,000					1,450,000
14	SKI RUN BLVD GRAVITY MAIN REPLACEMENT (1C)	23		53,000	1,108,000	1,141,000								2,302,000
15	SHOP STREET GRAVITY MAIN REPLACEMENT (2C)	25				55,000	365,000	376,000						796,000
16	MONT EST CIPP PH 1 (6600 LF)	22		635,000	654,000									1,289,000
17	MONT EST CIPP PH 2 (6600 LF)	24				673,000	694,000							1,367,000
18	SEWER SYSTEM ACCESS IMPROVEMENTS (PH 1)	26		50,000				580,000	597,000					1,227,000
	SCADA UPGRADES	ALL	11,000	11,000										0
19	FIELD COMMUNICATION UPGRADES PHASE 2	21	128,000	132,000										132,000
20	FIELD COMMUNICATION UPGRADES PHASE 3	22		150,000	155,000									305,000
21	SEWER PUMP STATION MONITORING PROGRAM	ALL	172,000	26,000	90,000	188,000	193,000	199,000	205,000	211,000	218,000	224,000	231,000	1,759,000
22	TAHOE KEYS PUMP STATION REHABILITATION	22		3,025,000	3,116,000									6,141,000
23	UPPER TRUCKEE PUMP STATION REHABILITATION	23			2,094,000	2,157,000								4,251,000
24	BIJOU PUMP STATION REHABILITATION	24		212,000		489,000	504,000							1,205,000
25	JOHNSON PUMP STATION REHABILITATION	25				169,000	662,000	681,000						1,512,000
26	AL TAHOE PUMP STATION REHABILITATION	26					232,000	1,788,000	1,842,000					3,862,000
27	LPPS TANK COATING AND CATHODIC PROTECTION	21 TO 22	1,346,000	483,000	497,000									980,000
28	LPPS FUEL TANK	22		106,000										106,000
	LPPS PUMP EFFICIENCY MONITORING	21	103,000											0
29	WET WELL IMPROVEMENTS, COATING, REPAIRS	24				338,000	348,000							686,000
	PUMP STATION SWITCH GEAR IMPROVEMENTS	N/A		164,000										0
30	BELLEVUE PUMP STATION IMPROVEMENTS	27						246,000	535,000	551,000				1,332,000
31	POPE BEACH #1 PUMP STATION IMPROVEMENTS	24			55,000	164,000	168,000							387,000
32	POPE BEACH #2 PUMP STATION IMPROVEMENTS	24			55,000	154,000	158,000							367,000
33	PIONEER VILLAGE PUMP STATION	27						60,000	408,000	420,000				888,000
	KIVA PUMP STATION	28							61,000	296,000	305,000			662,000
34	BALDWIN BEACH PUMP STATION	28							61,000	501,000	516,000			1,078,000
	SAN MORITZ PS IMPROVEMENTS	29								63,000	1,071,000	1,103,000		2,237,000
	TROUT CREEK PUMP STATION IMPROVEMENTS	30									63,000	404,000	416,000	883,000
	CAMP RICH PS	31										65,000	621,000	686,000
	WWTP MASTER PLAN	N/A		133,000										0
	SHOP FACILITIES MASTER PLAN	N/A		109,000	113,000									0
	RECYCLED WATER MASTER PLAN	N/A		219,000	225,000									0
35	EMERGENCY BLOWER GENERATOR	21	427,000	660,000										660,000

South Tahoe Public Utility District  
Capital Improvement Program  
**NEEDS-BASED PLAN**

SEWER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY 21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
36	SECONDARY CLARIFIER 1 REHAB	23			1,362,000	1,403,000								2,765,000
37	SECONDARY CLARIFIER 2 REHAB	22		1,323,000	1,362,000									2,685,000
38	SECONDARY CLARIFIER 3 REHAB	21	1,264,000	1,302,000										1,302,000
39	PLANT PAVING (CENTER ROAD)	25				348,000								348,000
40	LOWER, FOUNTAIN SHOPS IMPROVEMENTS (3)	25 to 27				169,000	771,000	1,230,000	1,267,000	652,000				4,089,000
41	WWTP BALLAST PONDS	26						922,000	950,000					1,872,000
42	BLOWER SYSTEM IMPROVEMENTS	24	200,000	258,000		838,000	864,000							1,960,000
	AIR HEADER REPLACEMENT	24				212,000	2,041,000	2,102,000						4,355,000
43	FILTERS 1,2 REHAB	23				856,000								856,000
44	MIXED LIQUOR SPLITTER BOX; GATES, WEIR, COATINGS	29									217,000	223,000		440,000
45	EMERGENCY PS IMPROVEMENTS, CONC REHAB	29									105,000	108,000		213,000
46	AB SPLITTER BOX	29									87,000	90,000		177,000
47	PRIMARY EFFLUENT SPLITTER BOX	29									52,000	54,000		106,000
48	RAS BUILDING REHABILITATION (3)	28							184,000	1,415,000	1,457,000			3,056,000
49	PLANT ELECTRICAL UPGRADES	28							123,000	687,000	708,000			1,518,000
50	FILTERS 3,4 REHAB	30										1,053,000		1,053,000
51	BIO BUILDING ODOR CONTROL	31											71,000	71,000
52	WWTP FIRE ALARM SYSTEM STANDARDIZATION	25					116,000	119,000						235,000
53	PLANT PAVING (SOUTH ROAD)	27							190,000	196,000				386,000
54	TANKS ASSET MANAGEMENT PROGRAM	ALL		41,000					48,000	25,000	25,000			98,000
55	WWTP ELECTRICAL SUBMETERING	24				56,000	58,000							114,000
56	OPS AND SERVER ROOM HVAC UPGRADES	21		103,000										103,000
57	BIO BUILDING HVAC UPGRADES	21		31,000										31,000

ITAL = Move to 4405 or to Crews (not in totals)

Note: Project # follows Ten-Year Plan.

Projects with no # are not funded on Budget-Based Plan

SEWER TOTALS: 9,400,000   13,809,000   13,672,000   12,110,000   10,415,000   10,882,000   9,559,000   10,222,000   9,622,000   7,064,000   106,755,000

SEWER AND WATER TOTALS: 17,005,000   23,990,000   27,189,000   25,377,000   21,577,000   21,150,000   21,307,000   20,171,000   15,333,000   11,722,000   204,821,000

South Tahoe Public Utility District  
Capital Improvement Program  
**BUDGET-BASED PLAN**

SEWER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY 21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
1	WATER REUSE DIAMOND DITCH REHABILITATION	25					299,000	307,000						606,000
2	WATER REUSE ROADS	24	705,000			771,000	794,000							1,565,000
3	WATER REUSE - HAY BARN	21	309,000	52,000										52,000
4	WATER REUSE - SIPHON CIPP REPAIR	21	179,176	88,000										88,000
5	SEWER SYSTEM UNPLANNED REPAIRS	21	500,000	500,000										500,000
6	SEWER FORCE MAIN ASSET MANAGEMENT	21, 29+			25,000						524,000	125,000	128,000	802,000
	FM INSPECTION PORTS - BIJOU/JOHNSON	TBD												0
7	FORCE MAIN ARV REPLACEMENT PROJECT	26 TO 27					56,000	149,000	307,000	158,000				670,000
	SEWER FLOW MONITORING PROGRAM	ALL												0
	SEWER CROSSING CONDITION ASSESSMENT	N/A		328,000	338,000									0
	GRAVITY SEWER REHAB PROGRAM (CIPP 3300LF/YR)	25+					0	0						0
8	GRAVITY SEWER REPLACEMENT PROGRAM (5800LF/YR)	25+									2,652,000	3,154,000	4,008,000	9,814,000
	UNFUNDED GRAVITY SEWER REPLACEMENT PROGRAM (1.1 MI/YR)	NA												0
9	TALLAC CREEK SEWER CROSSING	27	48,887						190,000	196,000				386,000
10	BALDWIN BEACH GRAVITY REHAB/REPLACEMENT (2200 FT)	27						58,000	674,000	695,000				1,427,000
11	BAL BIJOU ROAD GRAVITY MAIN CIPP (1A)	31											818,000	818,000
12	SEWER REPLACEMENT 89 AND 5TH	25					175,000	181,000						356,000
13	UPPER TRUCKEE RIVER GRAVITY MAIN CIPP (1B)	25					694,000	714,000						1,408,000
14	SKI RUN BLVD GRAVITY MAIN REPLACEMENT (1C)	25			56,000	1,175,000	1,210,000							2,441,000
15	SHOP STREET GRAVITY MAIN REPLACEMENT (2C)	26				56,000	376,000	387,000						819,000
16	MONT EST CIPP PH 1 (6600 LF)	27							736,000	758,000				1,494,000
17	MONT EST CIPP PH 2 (6600 LF)	29									781,000	804,000		1,585,000
18	SEWER SYSTEM ACCESS IMPROVEMENTS	26		50,000				580,000	597,000					1,227,000
	SCADA UPGRADES	ALL	11,000											0
19	FIELD COMMUNICATION UPGRADES PHASE 2	21	128,000	132,000										132,000
20	FIELD COMMUNICATION UPGRADES PHASE 3	22		150,000	155,000									305,000
21	SEWER PUMP STATION MONITORING PROGRAM	ALL	172,000			188,000	193,000	199,000	205,000	211,000	218,000	224,000	231,000	1,669,000
22	TAHOE KEYS PUMP STATION REHABILITATION	22	20,000	3,025,000	3,116,000									6,141,000
23	UPPER TRUCKEE PUMP STATION REHABILITATION	23	134,297		2,094,000	2,157,000								4,251,000
24	BIJOU PUMP STATION REHABILITATION	24	206,000			602,000	620,000							1,222,000
25	JOHNSON PUMP STATION REHABILITATION	28							184,000	723,000	745,000			1,652,000
26	AL TAHOE PUMP STATION REHABILITATION	29								253,000	1,954,000	2,013,000		4,220,000
27	LPPS TANK COATING AND CATHODIC PROTECTION	21 TO 22	1,346,000	483,000	497,000									980,000
28	LPPS FUEL TANK	22		106,000										106,000
	LPPS PUMP EFFICIENCY MONITORING	21	103,000											0
29	WET WELL IMPROVEMENTS, COATING, REPAIRS	24				338,000	348,000							686,000
	PUMP STATION SWITCH GEAR IMPROVEMENTS	N/A		164,000										0
30	BELLEVUE PUMP STATION IMPROVEMENTS	30									269,000	584,000	602,000	1,455,000
31	POPE BEACH #1 PUMP STATION IMPROVEMENTS	25				56,000	168,000	174,000						398,000
32	POPE BEACH #2 PUMP STATION IMPROVEMENTS	25				56,000	158,000	163,000						377,000
33	PIONEER VILLAGE PUMP STATION	26					58,000	396,000	408,000					862,000
	KIVA PUMP STATION	TBD												0
34	BALDWIN BEACH PUMP STATION	27						60,000	486,000	501,000				1,047,000
	SAN MORITZ PS IMPROVEMENTS	TBD												0
	TROUT CREEK PUMP STATION IMPROVEMENTS	TBD												0
	CAMP RICH PS	TBD												0
	WWTP MASTER PLAN	N/A		260,000										0
	SHOP FACILITIES MASTER PLAN	N/A			113,000	116,000								0
	RECYCLED WATER MASTER PLAN	N/A		219,000	225,000									0

South Tahoe Public Utility District  
Capital Improvement Program  
**BUDGET-BASED PLAN**

SEWER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY 21	Proposed Budget by Fiscal Year :										10-YR TOTALS	
#	PROJECT			22	23	24	25	26	27	28	29	30	31		
35	EMERGENCY BLOWER GENERATOR	21	427,000	1,094,000											1,094,000
36	SECONDARY CLARIFIER 1 REHAB	23	25,000		1,362,000	1,403,000									2,765,000
37	SECONDARY CLARIFIER 2 REHAB	22	25,000	1,323,000	1,362,000										2,685,000
38	SECONDARY CLARIFIER 3 REHAB	21	1,264,000	1,302,000											1,302,000
39	PLANT PAVING (CENTER ROAD)	25				174,000	179,000								353,000
40	LOWER, FOUNTAIN SHOPS IMPROVEMENTS (3)	26 TO 28					174,000	794,000	1,267,000	1,305,000	672,000				4,212,000
41	WWTP BALLAST PONDS	26						922,000	950,000						1,872,000
42	BLOWER SYSTEM IMPROVEMENTS	24	200,000	258,000		838,000	864,000								1,960,000
	AIR HEADER REPLACEMENT	TBD													0
43	FILTERS 1,2 REHAB	24				882,000									882,000
44	MIXED LIQUOR SPLITTER BOX; GATES, WEIR, COATINGS	31												230,000	230,000
45	EMERGENCY PS IMPROVEMENTS, CONC REHAB	31												111,000	111,000
46	AB SPLITTER BOX	31												93,000	93,000
47	PRIMARY EFFLUENT SPLITTER BOX	31												56,000	56,000
48	RAS BUILDING REHABILITATION (3)	28							184,000	1,415,000	1,457,000				3,056,000
49	PLANT ELECTRICAL UPGRADES	28							123,000	687,000	708,000				1,518,000
50	FILTERS 3,4 REHAB	30												1,085,000	1,085,000
51	BIO BUILDING ODOR CONTROL	31												71,000	71,000
52	WWTP FIRE ALARM SYSTEM STANDARDIZATION	24				113,000	116,000								229,000
53	PLANT PAVING (SOUTH ROAD)	27							190,000	196,000					386,000
54	TANKS ASSET MANAGEMENT PROGRAM	ALL		41,000					48,000	25,000	25,000				98,000
55	WWTP ELECTRICAL SUBMETERING	24				56,000	58,000								114,000
56	OPS AND SERVER ROOM HVAC UPGRADES	21		103,000											103,000
57	BIO BUILDING HVAC UPGRADES	21		31,000											31,000

ITAL = Move to 4405 or to Crews (not in totals)

Note: Project # follows Ten-Year Plan.

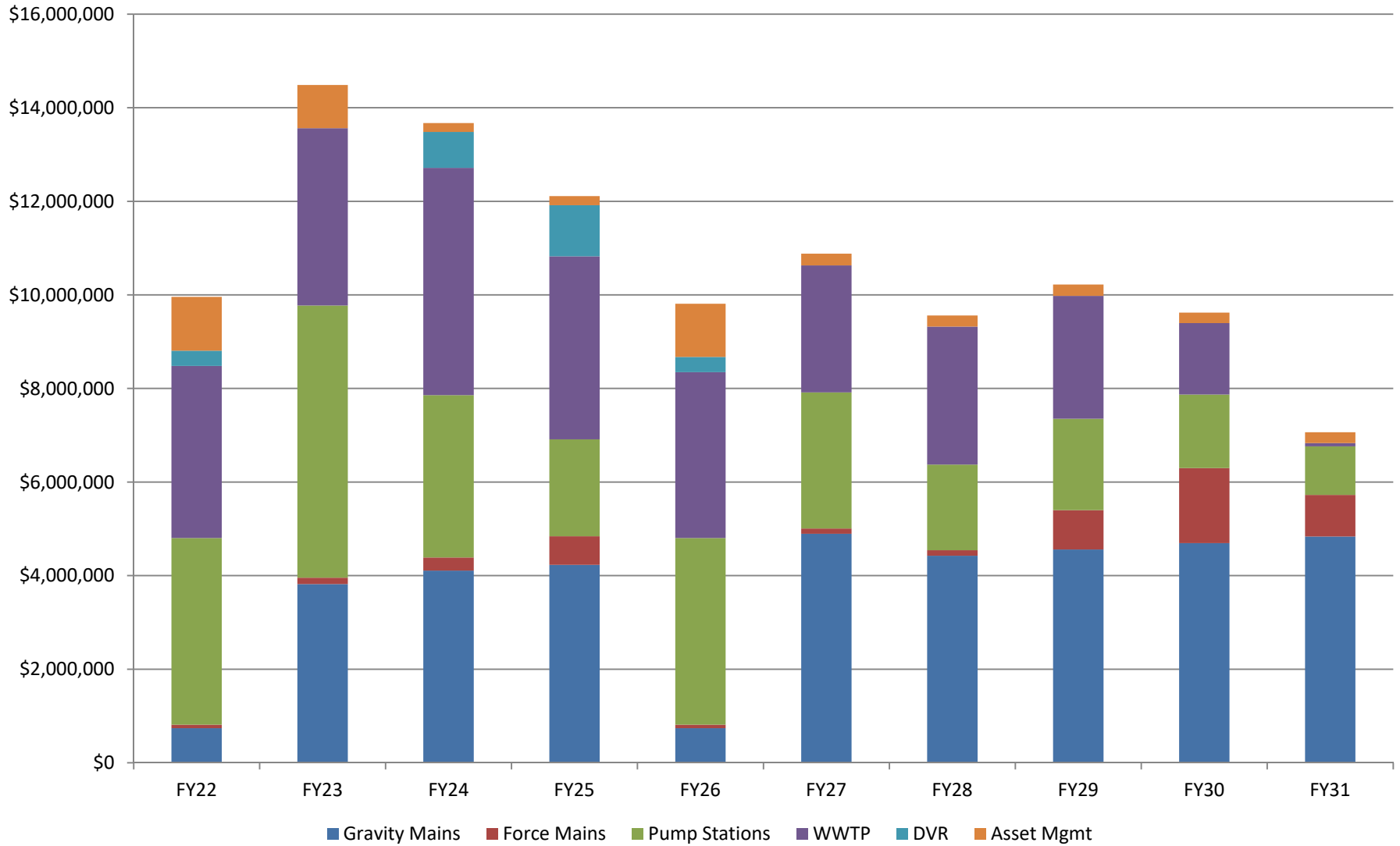
Projects with no # are not funded on Budget-Based Plan

SEWER TOTALS:    8,697,000    8,611,000    7,690,000    6,185,000    6,283,000    6,936,000    7,123,000    10,005,000    6,904,000    7,433,000    75,867,000

SEWER AND WATER TOTALS:    15,203,000    16,094,000    13,270,000    14,078,000    16,142,000    13,428,000    11,475,000    16,017,000    11,521,000    10,490,000    137,718,000



## South Tahoe Public Utility District Sewer Fund - Engineering CIP Needs-Based Plan



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary Index



Pg. No.	Project Name
1	WATER REUSE DIAMOND DITCH REHABILITATION
2	WATER REUSE ROADS (PHASES 1 AND 2)
3	WATER REUSE - HAY BARN
4	WATER REUSE - SIPHON CIPP REPAIR
5	SEWER SYSTEM UNPLANNED REPAIRS
6	SEWER FORCE MAIN ASSET MANAGEMENT
7	FM INSPECTION PORTS - BIJOU/JOHNSON
8	FORCE MAIN ARV REPLACEMENT PROJECT
9	SEWER CROSSING CONDITION ASSESSMENT
10	GRAVITY SEWER REHAB PROGRAM (CIPP 3300 LF/YR)
11	GRAVITY SEWER REPLACEMENT PROGRAM (5800 FT/YR)
12	UNFUNDED GRAVITY SEWER REPLACEMENT PROGRAM (5800 FT/YR)
13	TALLAC CREEK SEWER CROSSING
14	BALDWIN BEACH GRAVITY REHAB/REPLACEMENT (2200 FT)
15	BAL BIJOU ROAD GRAVITY MAIN CIPP (1A)
16	SEWER REPLACEMENT 89 AND 5TH
17	UPPER TRUCKEE RIVER GRAVITY MAIN CIPP (1B)
18	SKI RUN BLVD GRAVITY MAIN REPLACEMENT (1C)
19	SHOP STREET GRAVITY MAIN REPLACEMENT (2C)
20	MONTGOMERY ESTATES CIPP PH 1 (6600 LF)
21	MONTGOMERY ESTATES CIPP PH 2 (6600 LF)
22	SEWER SYSTEM ACCESS IMPROVEMENTS
23	FIELD COMMUNICATION UPGRADES PHASE 2
24	FIELD COMMUNICATION UPGRADES PHASE 3
25	SEWER PUMP STATION MONITORING PROGRAM
26	TAHOE KEYS PUMP STATION REHABILITATION
27	UPPER TRUCKEE PUMP STATION REHABILITATION
28	BIJOU PUMP STATION REHABILITATION
29	JOHNSON PUMP STATION REHABILITATION
30	AL TAHOE PUMP STATION REHABILITATION
31	LPPS TANK COATING AND CATHODIC PROTECTION
32	LPPS FUEL TANK
33	LPPS PUMP EFFICIENCY MONITORING
34	WET WELL IMPROVEMENTS, COATING, REPAIRS
35	PUMP STATION SWITCH GEAR IMPROVEMENTS

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary Index

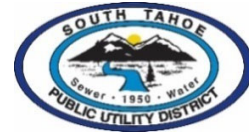


Pg. No.	Project Name
36	BELLEVUE PUMP STATION IMPROVEMENTS
37	POPE BEACH #1 PUMP STATION IMPROVEMENTS
38	POPE BEACH #2 PUMP STATION IMPROVEMENTS
39	PIONEER VILLAGE PUMP STATION IMPROVEMENTS
40	KIVA PUMP STATION
41	BALDWIN BEACH PUMP STATION
42	SAN MORITZ PS IMPROVEMENTS
43	TROUT CREEK PUMP STATION IMPROVEMENTS
44	CAMP RICH PS
45	WWTP MASTER PLAN
46	SHOP FACILITIES MASTER PLAN
47	RECYCLED WATER MASTER PLAN
48	EMERGENCY BLOWER GENERATOR
49	SECONDARY CLARIFIER 1 REHAB
50	SECONDARY CLARIFIER 2 REHAB
51	SECONDARY CLARIFIER 3 REHAB
52	PLANT PAVING (CENTER ROAD)
53	LOWER, FOUNTAIN SHOPS IMPROVEMENTS (3)
54	WWTP BALLAST PONDS
55	BLOWER SYSTEM IMPROVEMENTS
56	AIR HEADER REPLACEMENT
57	FILTERS 1,2 REHAB
58	MIXED LIQUOR SPLITTER BOX; GATES, WEIR, COATINGS
59	EMERGENCY PS IMPROVEMENTS, CONC REHAB
60	AB SPLITTER BOX
61	PRIMARY EFFLUENT SPLITTER BOX
62	RAS BUILDING REHABILITATION (3)
63	PLANT ELECTRICAL UPGRADES
64	FILTERS 3,4 REHAB
65	BIO BUILDING ODOR CONTROL
66	WWTP FIRE ALARM SYSTEM STANDARDIZATION
67	PLANT PAVING (SOUTH ROAD)
68	TANKS ASSET MANAGEMENT PROGRAM
69	WWTP ELECTRICAL SUBMETERING
70	OPS AND SERVER ROOM HVAC UPGRADES
71	BIO BUILDING HVAC UPGRADES

South Tahoe Public Utility District  
Capital Improvement Program  
Key to Interpreting Project Sheets

Key Project Information	Project Name	The project name matches the names used in the District's Ten-Year Plan, as well as the Engineering Department's Needs-Based and Budget-Based Plans.
	Project Code	The project code is assigned by Accounting to track project labor and expenses. Projects that have not yet commenced will have a "0" in this field.
	Project Contact	The project contact is the Engineering Staff taking assigned to lead the project, as of the date of publication.
	Asset Owner/Dept	The asset owner is the District Department (typically an Operations Department) that is responsible for the ongoing operation and maintenance of the facility being improved by the Project.
	Project Management Dept	The Project Management Department indicates which District Department is taking the lead to implement the project, usually Engineering
Project Description/Benefits	Project Status	One of three status options is assigned: <ul style="list-style-type: none"> <li>• "In Progress" – the Project has been budgeted in a past year, but is incomplete. Funds will be rolled forward to complete the work.</li> <li>• "10-yr Plan" – the Project is listed in the Budget-Based and Needs-Based Ten-Year Plans.</li> <li>• "Unconstrained" –the Project is either not urgent or is currently too poorly defined to develop even a conceptual level cost estimate. These projects are NOT included on the Ten-Year Plans and have NOT been included in CIP Annual Plan Update.</li> </ul>
	Project Summary	The Project Summary describes the scope of the project for budgeting purposes, and provides more detail on the need for the project.
	Need for Project	This section identifies one or more drivers for the project, selected from a menu of common drivers. These drivers have been developed from the criteria the District has adopted as its targeted <u>Levels of Service</u> for the systems.
	O&M Impacts	This section lists the expected impacts to Operations associated with implementing the Project. Workload may be decreased or increased in the future as a result of the Project.
References	Reference Document	This section identifies how the project was conceived. If the Project was recommended in a formal document prepared for the District, it is identified, along with the document year and any associated project number. If the Project was identified through the annual CIP planning process or other internal process, that is also indicated.
	CIP Project Number	The CIP Project Number is the project number assigned by Finance on the District's current Ten-Year Plan. These id numbers are also used on the Engineering Department's Budget-Based and Needs-Based Plans. If the Project has not been budgeted, there will be no CIP Project Number assigned and this entry will be blank.
Project Funding	Capital Improvement Expenditures	This area of the sheet presents the years and amounts that have been budgeted for the Project. Values have been taken directly from the Engineering Budget-Based Plan, which matches the District's Ten-Year Plan.
	Total Project Costs	This area of the sheet indicates the planning level cost estimates (and years) for the Planning, Design and Construction phases. If the Project is already partly completed or will be completed more than 10 years out, these values may exceed the amounts shown in the Capital Improvement Expenditures. Costs presented are future value (based on 3% per year increase in project costs from a current year project cost estimate. If the Project is not funded in the District's current Ten-Year Plan, it is assumed to be implemented in Year 11 and uses Year 11 future value.
	Funding Source	The Funding Source identifies secured and pending outside funding sources, if any; if no outside funding sources are expected for the Project, then this section will indicate "Capital" for funding of projects included in the Budget-Based Plan. If the Project is not funded on the Budget-Based Plan, then the Funding Source will be identified as "TBD".
Other Information	Project Location and Photos	This area of the sheet provides relevant photographs, maps and other illustrations to help describe the Project.
	Comments	This area of the sheet provides supplemental information regarding the recommended implementation of the Project.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER REUSE DIAMOND DITCH REHABILITATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	DVR
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project allows staff to address sections of ditch where the slipliner is failing and where the channel is leaking. The deteriorating concrete channel will likely be resealed. This channel is critical for delivering reused water.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Reliability/Redundancy Other Environmental Benefit	Reduced Reactionary Maintenance

## Reference Document

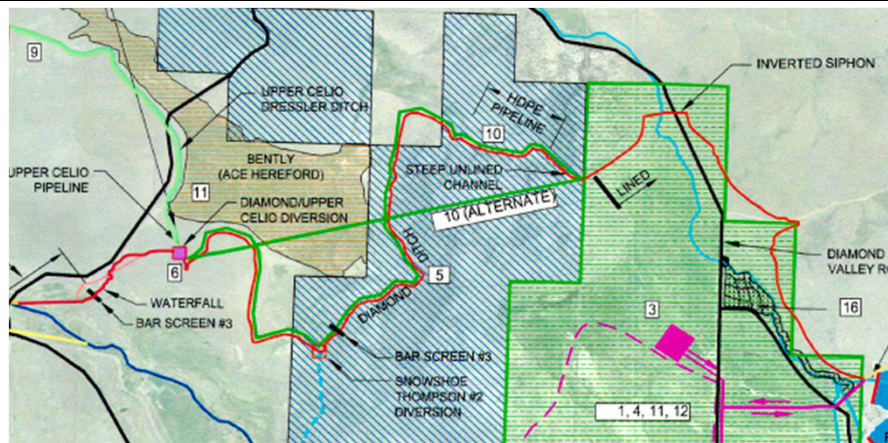
19-20 CIP Planning			CIP No. 1
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	
				0.30	0.31							\$606,000
<b>Total Capital Improvement Cost</b>											\$606,000	25

**Funding Source:** Capital

## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>WATER REUSE ROADS (PHASES 1 AND 2)</b>		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	DVR
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Improving the driving and road conditions of Diamond Valley Rd will allow safer conditions for any and all drivers working on any project at DVR and provide equipment parking area near the shop. The total length of road to restore for this project is approximately 1.6 miles. A road inspection for pavement and repairs will be conducted to target known road "failures", identify sections needing new pavement, and consider possible alternative routes for problem sections. Currently drainage on the road is not an issue and is not predicted to be an issue. The priority roads for pavement or repair include: unpaved section to the shop and the dam access road.

Need for Project	Operation and Maintenance Impacts
Safety	Safety Improvements
System Efficiency	Reduced Reactionary Maintenance
Asset Life Extension	Increase Planned Maintenance
Emergency Response	

## Reference Document

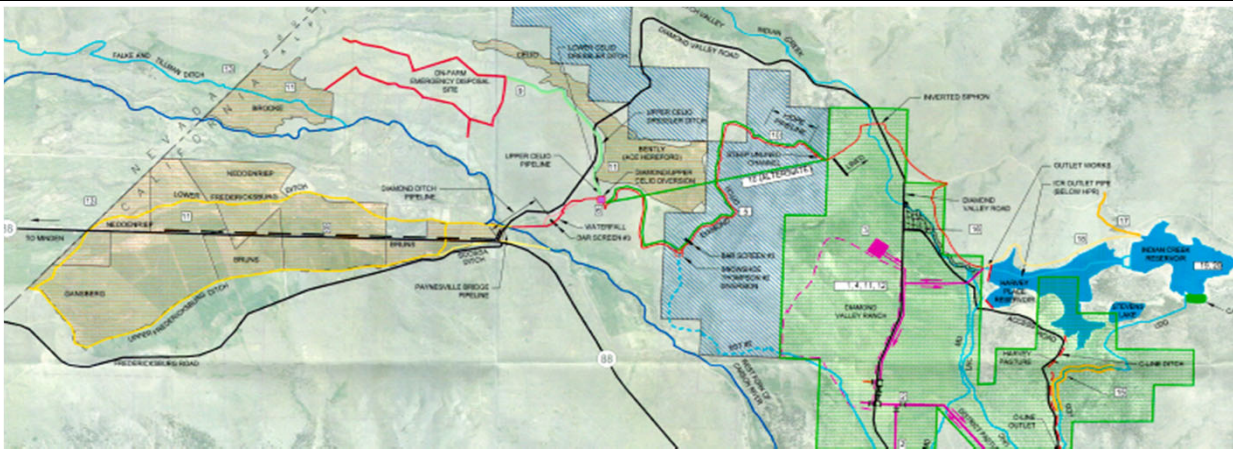
19-20 CIP Planning			CIP No. 2
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$1,565,000	24			
0.71			0.77	0.79												
<b>Total Capital Improvement Cost</b>														<b>\$1,565,000</b>		

**Funding Source:** Capital

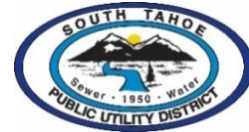
## Project Location and Photos



## Comments



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER REUSE - HAY BARN		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	DVR
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project constructs a pre-fab metal barn at the DVR Property to house the agricultural equipment and protect the harvested hay from the elements prior to sale. The proposed project is partly enclosed (for the equipment), and partly open with a roof (for the hay).</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Reliability/Redundancy Other Environmental Benefit	Reduced Reactionary Maintenance

## Reference Document

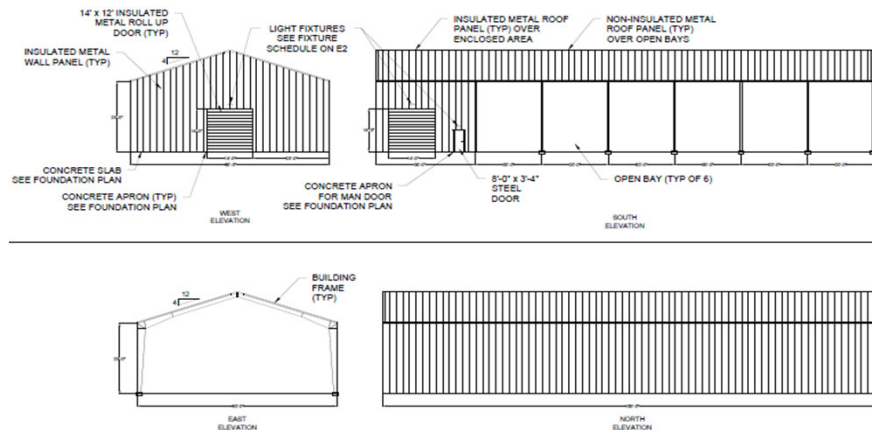
19-20 CIP Planning			CIP No. 3
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	21
0.31	0.05											
<b>Total Capital Improvement Cost</b>											\$361,000	

**Funding Source:** Capital

## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER REUSE - SIPHON CIPP REPAIR		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	DVR
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** In Progress

The Diamond Ditch is a critical facility for delivering irrigation water to ranchers as part of the District’s water reuse facility at DVR from Harvey Place Reservoir. The inverted siphon conveys effluent water under Indian Creek between two canal segments and is approximately 880 feet in length. The inverted siphon drops approximately 110 feet to the low point while having a net elevation loss of approximately 10 feet between ends. The original inverted siphon experienced a leak in 2017 that was repaired; the siphon was drained and taken out of use at that time and requires lining to prevent future leaks in an area where the discharge of effluent water is prohibited. A redundant parallel line is currently in service pending rehabilitation of the original line. Cast-in-place-pipe (CIPP) lining was identified as a cost-effective rehabilitation method that does not require major trenching and environmental permitting. The work to be performed consists of CIPP lining 880-feet of 20” and 24” diameter pipe, plus lining required inlet, outlet, and access structure terminations.

Need for Project	Operation and Maintenance Impacts
System Efficiency High Consequence of Failure Asset Life Extension	Reduced Reactionary Maintenance

## Reference Document

Prop 218 Planning (2018)			CIP No. 4
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$267,176	21
0.18	0.09												
<b>Total Capital Improvement Cost</b>													

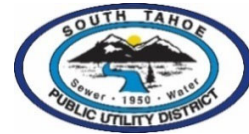
**Funding Source:** Capital

## Project Location and Photos



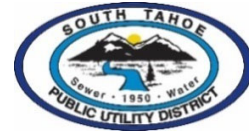
## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



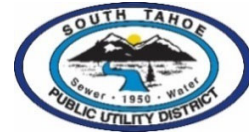
<b>Project Name:</b> SEWER SYSTEM UNPLANNED REPAIRS		<b>Asset Owner/Dept:</b> URS Pumps DVR											
<b>Project Code:</b> 0	<b>Project Management Dept:</b> Engineering												
<b>Project Contact:</b> TBD													
<b>Project Description/ Benefits</b>													
<b>Project Status:</b>	10-yr Plan												
This is a rolling fund to ensure funding is available for any unforeseen collection system, WWTP, and DVR emergencies. This money could be used for in-house costs or outside contractor.													
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>											
Emergency Response Asset Replacement/End-of-Life		Reduced Reactionary Maintenance											
<b>Reference Document</b>													
19-20 CIP Planning		CIP No. 5											
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>										
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>	<b>Year</b>	
0.50	0.50										<b>Design</b>		
											<b>Construction</b>	\$500,000	21
<b>Total Capital Improvement Cost</b>											\$500,000		
<b>Funding Source:</b> Capital													
<b>Project Location and Photos</b>													
<b>Comments</b>													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> SEWER FORCE MAIN ASSET MANAGEMENT														
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> URS													
<b>Project Contact:</b> Steve Caswell	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project is an ongoing asset management program that includes corrosion control, inspection, and flushing of collection system and export force mains. ARV Maintenance and Replacement has been funded separately, diverting funds from this program in the years it is implemented. Once these AM programs are incorporated into the Operations O&amp;M and Capital Budgets, that portion will no longer be funded through the Engineering CIP.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Life Extension High Consequence of Failure System Monitoring/Remote Control	Reduced Reactionary Maintenance Increase Planned Maintenance													
<b>Reference Document</b>														
Prop 218 Planning (2018)	CIP No. 6													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$802,000	23, 29+	
		0.03						0.52	0.13	0.13				
<b>Total Capital Improvement Cost</b>														\$802,000
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
The Needs Based Plan implements this program in 2025.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FM INSPECTION PORTS - BIJOU/JOHNSON		
<b>Project Code:</b>	AMSEWR	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

<b>Project Description/ Benefits</b>	
<b>Project Status:</b>	10-yr Plan
<p>The conceptual plan for this project is to provide 4 bypass/inspection ports on 2 FMs: 1 BJ to JN, 1 SR to JN, 2 JN to WWTP (on BJ12), 2 JN to WWTP (on BJ16). This layout provides ports at approximately 1/2 mile spacing and would allow for pigging, TV and bypass. Emergency bypass is a secondary priority of this project, if both FMs can be maintained, because BJ12 and BJ16 are redundant to each other.</p>	

<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>
High Consequence of Failure	Reduced Reactionary Maintenance
Asset Life Extension	Ease of access
System Monitoring/Remote Control	Increased Planned Maintenance
Emergency Response	

<b>Reference Document</b>	
19-20 CIP Planning	CIP No.

**Project Funding**

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$3,046,000		
													\$275,000	
													\$2,771,000	TBD
<b>Total Capital Improvement Cost</b>														

**Funding Source:** TBD

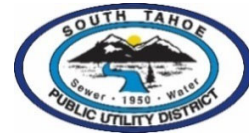
**Project Location and Photos**

**Comments**

This project is slated for construction in 2030 on the Needs Based Plan.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FORCE MAIN ARV REPLACEMENT PROJECT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Ops, Elec, IT
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces 10 of the over 150 ARVs in the sewer system, where full replacement of the ARV vault and valves is required based on results of 2019 ARV inspection.</p>	

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Addition of Assets
System Monitoring/Remote Control	Reduced Reactionary Maintenance
Asset Life Extension	Safety Improvements
Emergency Response	

### Reference Document

19-20 CIP Planning			CIP No. 7
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.06	0.15	0.31	0.16				Planning	
											Design	\$56,000
											Construction	\$614,000
											<b>Total Capital Improvement Cost</b>	<b>\$670,000</b>

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2023.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SEWER CROSSING CONDITION ASSESSMENT		
<b>Project Code:</b>	SLXNGS	<b>Asset Owner/Dept:</b>	URS, URW
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The District's sanitary sewer facilities cross various creeks at 147 locations identified to date. Because of the potential impact to the waterways, these locations have additional risk and higher consequence if they were to fail. This project's purpose is to catalog and assess the sewer crossings in the District's service area, develop potential improvements, and prioritize the projects for implementation.</p>	

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension	Reduced Reactionary Maintenance

## Reference Document

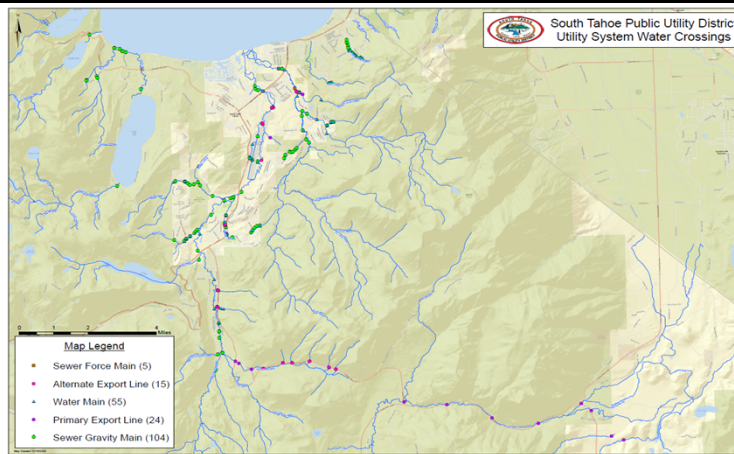
19-20 CIP Planning			CIP No. 0
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$666,000	N/A	
<b>Total Capital Improvement Cost</b>												\$666,000		

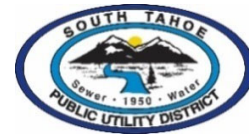
**Funding Source:** Capital

## Project Location and Photos



## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GRAVITY SEWER REHAB PROGRAM (CIPP 3300 LF/YR)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project provides a placeholder for future Cast-in-Place Pipe rehabilitation projects for gravity mains on the sewer system. CIPP is the District's technology of choice to address damaged mainlines (holes, cracks, deterioration), root intrusion and I&amp;I, where the defects are not also accompanied by sags/bellies. Based on CCTV performed in 2018 and 2019, the current condition of the sewer mains suggests that the District should be rehabilitating pipes with CIPP at a rate of 3300LF/YR. However, specific project areas may not have been delineated at the time the Ten-Year plan is created. If that's the case, then this project will hold funds for future projects at the recommended rate of completion. The scope for a CIPP project is assumed to include manhole rehabilitation, mainline lining, and a lateral "tophat" at the connection to the main, but excludes full lateral rehabilitation of the lateral from the main to the cleanout at the property line. Lateral rehabilitation/replacement would be considered on a case-by-case basis, and would increase the cost of the project proportionally to the number of laterals being fixed.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension System Efficiency Asset Management	Reduced Reactionary Maintenance Reduced Planned Maintenance

## Reference Document

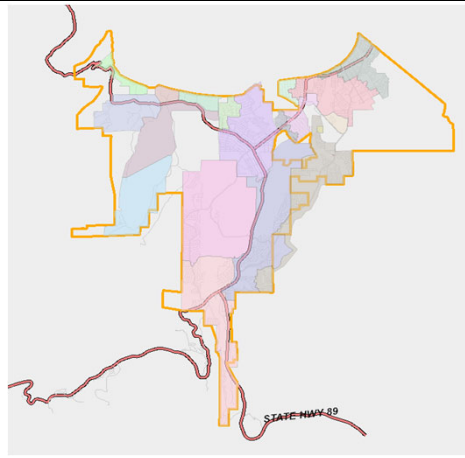
2009 CSMP			CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	
											Design	
											Construction	TBD
<b>Total Capital Improvement Cost</b>											\$0	

**Funding Source:** TBD

## Project Location and Photos



## Comments

Needs Based Plan funds this program every year (FY22-31)

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>GRAVITY SEWER REPLACEMENT PROGRAM (5800 FT/YR)</b>		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project provides a placeholder for future sewer gravity main replacement projects. Replacement of a main (and associate manholes) is typically required for the following situations: (1) where damaged mainlines (holes, cracks, deterioration), root intrusion or I&I, is accompanied by sags/bellies, (2) if the existing main alignment needs to be relocated for some reason, (3) to correct for construction defects that cannot be rectified by lining, or (4) if the larger system configuration allows for the gravity main to be steepened to minimize flat pipes and avoid future sags. Based on CCTV performed in 2018 and 2019, the current condition of the sewer mains suggests that the District should be rehabilitating pipes with CIPP at a rate of 5800LF/YR. However, specific project areas may not have been delineated at the time the Ten-Year plan is created. If that's the case, then this project will hold funds for future projects at the recommended rate of completion. The scope for a gravity main replacement project is assumed to include mainline and manhole replacement and extension/connection to the existing lateral. Lateral replacement would be considered on a case-by-case basis, and would increase the cost of the project proportionally to the number of laterals being replaced.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life	Reduced Reactionary Maintenance Reduced Planned Maintenance

## Reference Document

2009 CSMP			CIP No. 8
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$9,814,000	29+			
								2.65	3.15	4.01						
<b>Total Capital Improvement Cost</b>														<b>\$9,814,000</b>		

**Funding Source:** Capital

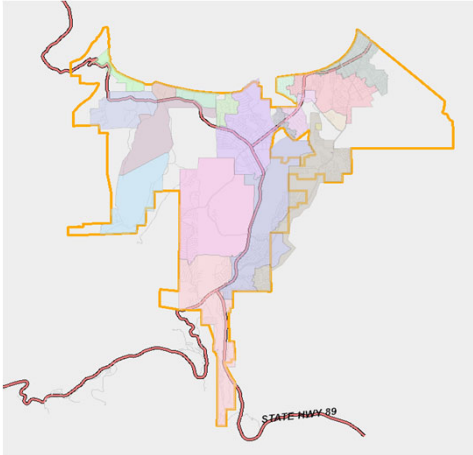

## Project Location and Photos



## Comments

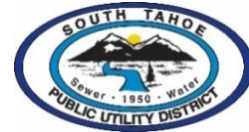
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> UNFUNDED GRAVITY SEWER REPLACEMENT PROGRAM (5800 FT/YR)														
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> URS													
<b>Project Contact:</b> Trevor Coolidge	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project is a companion to Gravity Sewer Replacement Program (5800 FT/YR), and provides a placeholder for funding of unidentified gravity sewer main replacement projects that are needed based on anticipated failure rates, but have not been budgeted in the current capital plan. Together, the two projects bring the total gravity main replacement rate to 5800 FT/YR (or 58,000 LF over 10 years)</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Replacement/End-of-Life	Reduced Reactionary Maintenance Reduced Planned Maintenance													
<b>Reference Document</b>														
2009 CSMP	CIP No.													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
<b>Total Capital Improvement Cost</b>												\$0		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
 														
<b>Comments</b>														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TALLAC CREEK SEWER CROSSING		
<b>Project Code:</b>	TLCXNG	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The District has an existing sewer crossing on Tallac Creek near Baldwin Beach. The sewer crossing is encased in concrete and the concrete is exposed in the creek. Due to natural erosion, the creek crossing has the potential to be undermined. This project would add stabilization to the creek and the sewer crossing to reduce further erosion and the associated risks to the sewer crossing. The design is substantially complete and construction is delayed until favorable groundwater conditions are present.</p>	

Need for Project	Operation and Maintenance Impacts
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Interagency Coordination Water Quality High Consequence of Failure Other Environmental Benefit	Reduced Reactionary Maintenance
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## Reference Document

19-20 CIP Planning			CIP No. 9
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$386,000	27			
0.05						0.19	0.20									
<b>Total Capital Improvement Cost</b>														\$386,000		

**Funding Source:** Capital

## Project Location and Photos



## Comments

This project is scheduled to be constructed with Baldwin Beach Gravity Main Replacement and Baldwin Beach Pump Station Rehab. Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BALDWIN BEACH GRAVITY REHAB/REPLACEMENT (2200 FT)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project removes gravity sewer mains and manholes from sensitive areas at Baldwin Beach (beach and wetland), and relocates them along the road from the west parking lot to the pump station (BJ9 to BBPS) installing approximately 2200 lf of new main and associated manholes. The existing main is hard to access and has never been inspected. The project is planned to coordinate with the completion of the Tallac XING Protection Project and the Baldwin Beach Pump Station Rehabilitation, to minimize disturbance at this environmentally sensitive and popular tourist location.</p>	

Need for Project	Operation and Maintenance Impacts
Maintenance History High Consequence of Failure Interagency Coordination Other Environmental Benefit	Reduced Reactionary Maintenance Increased Planned Maintenance

### Reference Document

20-21 CIP Planning			CIP No. 10
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
					0.06	0.67	0.70				Planning	
											Design	\$68,000
											Construction	\$1,359,000
<b>Total Capital Improvement Cost</b>											\$1,427,000	

<b>Funding Source:</b>	Capital
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### Project Location and Photos

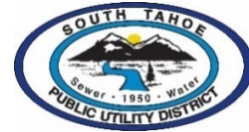


### Comments

This project is scheduled to be constructed with Tallac Creek Sewer Crossing and Baldwin Beach Pump Station Rehab. Needs Based Plan constructs this project in 2024.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BAL BIJOU ROAD GRAVITY MAIN CIPP (1A)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project rehabs pipes using cast-in-place-pipe lining of gravity sewer main with continuous defects that can be repaired with liner and do not require replacement. The project area reahabilitates PVC and AC sewer pipe from Johnson Pump Station to Bal Bijou Road, and from Timber Cove Lodge to Lakeland Village. The length of rehabilitation is 3,261 lf of sewer main identified from 2018 CCTV Condition Assessment. Cost includes manhole rehab and lateral top plate, but no lateral rehab. The project includes the following streets: Johnson, Highway 50 and Balbijou.

Need for Project	Operation and Maintenance Impacts
Maintenance History Reliability/Redundancy Asset Life Extension Water Quality	Reduced Reactionary Maintenance

### Reference Document

Prop 218 Planning (2018)			CIP No. 11
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
										0.82	Planning		
											Design	\$78,000	
											Construction	\$1,558,000	31
<b>Total Capital Improvement Cost</b>											<b>\$1,636,000</b>		

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2028.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SEWER REPLACEMENT 89 AND 5TH		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces approximately 390 LF of gravity main (TK515 to TK474) on Enhanced Cleaning list for months hydro. The segment under Highway 89 has a known belly, since at least 2009. Further upstream, frequent maintenance is required to address flat pipe and FOG from Chinese Restaurant.</p>	

Need for Project	Operation and Maintenance Impacts
Maintenance History	Reduced Reactionary Maintenance
System Efficiency	Reduced Planned Maintenance
Reliability/Redundancy	
High Consequence of Failure	

### Reference Document

2009 CSMP			CIP No. 12
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	
				0.18	0.18						Design	\$17,000
											Construction	\$339,000
<b>Total Capital Improvement Cost</b>											\$356,000	25

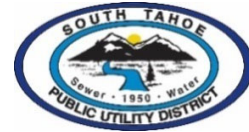
**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2023.



# Capital Improvement Program (CIP) Project Summary

<b>Project Name:</b>	UPPER TRUCKEE RIVER GRAVITY MAIN CIPP (1B)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project rehabs and raises manholes, and performs CIPP Spot Repair on the 21-in gravity main in the Upper Truckee Meadow from the Airport to the Upper Truckee Pump Station. The project will be constructed in coordination with the TRCD Johnson Meadow Restoration Project. Project cost excludes relocation of existing gravity main and improvements to easement access to accommodate changes to the river course.</p>	

Need for Project	Operation and Maintenance Impacts
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Maintenance History	Reduced Reactionary Maintenance
Reliability/Redundancy	
Asset Life Extension	
Water Quality	

## Reference Document

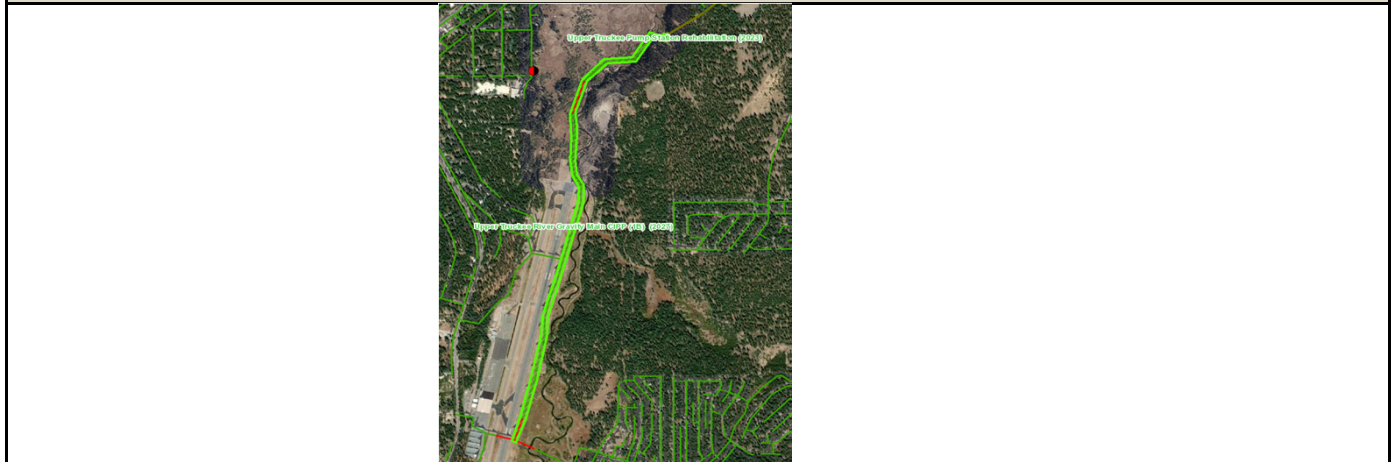
19-20 CIP Planning			CIP No. 13
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning		
				0.69	0.71						Design	\$67,000	
											Construction	\$1,341,000	25
<b>Total Capital Improvement Cost</b>											<b>\$1,408,000</b>		

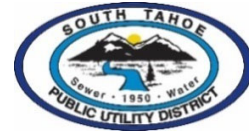
**Funding Source:** Capital

## Project Location and Photos



## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SKI RUN BLVD GRAVITY MAIN REPLACEMENT (1C)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces gravity mains where damage is of a nature that requires full replacement in lieu of CIPP lining (such as sags or flat slopes). The project area replaces AC and DIP sewer pipes in Ski Run Blvd from David Lane to Highway 50. The length of pipe to be replaced is 4,170 lf identified from 2018 CCTV Condition Assessment. Cost includes manhole rehab and lateral top plate, but no lateral rehab.</p>	

Need for Project	Operation and Maintenance Impacts
------------------	-----------------------------------

Maintenance History	Reduced Reactionary Maintenance
Reliability/Redundancy	
Asset Life Extension	
Water Quality	

### Reference Document

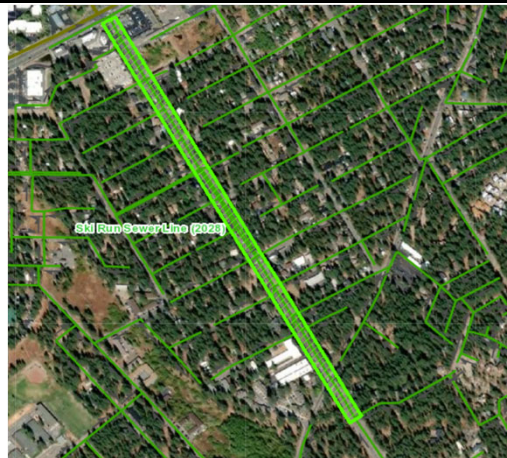
Prop 218 Planning (2018)			CIP No. 14
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
			0.06	1.18	1.21						Planning		
											Design	\$56,000	24
											Construction	\$2,385,000	25
<b>Total Capital Improvement Cost</b>											<b>\$2,441,000</b>		

**Funding Source:** Capital

### Project Location and Photos

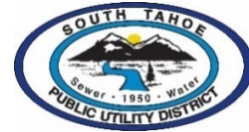


### Comments

Needs Based Plan constructs this project in 2023.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SHOP STREET GRAVITY MAIN REPLACEMENT (2C)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces gravity mains where damage is of a nature that requires full replacement in lieu of CIPP lining (such as sags or flat slope). The project area replaces VCP sewer pipe in Shop Street from Industrial Ave. to D Street. The length of rehabilitation is 1,397 lf of sewer main identified from 2018 CCTV Condition Assessment. Cost includes manhole rehab and lateral top plate, but no lateral rehab.</p>	

Need for Project	Operation and Maintenance Impacts
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Maintenance History	Reduced Reactionary Maintenance
Reliability/Redundancy	
Asset Life Extension	
Water Quality	

### Reference Document

Prop 218 Planning (2018)			CIP No. 15
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.06	0.38	0.39					Planning	
											Design	\$56,000
											Construction	\$763,000
<b>Total Capital Improvement Cost</b>											\$819,000	

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2025.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	MONTGOMERY ESTATES CIPP PH 1 (6600 LF)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project was identified as a high priority by URS due to excessive roots in clay pipes in the Montgomery Estates neighborhood. While the I&I from this neighborhood does not appear to be excessive (the Trout Creek Basin is one of the District's lowest I&I areas), the roots require increased maintenance over other areas of the system. The project would use CIPP to line mains and connections to laterals, and perform manhole rehabilitation. Lining laterals (connection to cleanout) is not included in the project scope, but may be added after additional inspection is performed. This is one of two phases (6,600 LF each) targeted at rehabilitating approximately 1/4 of the total neighborhood.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
System Efficiency	Reduced Planned Maintenance
Asset Management	

### Reference Document

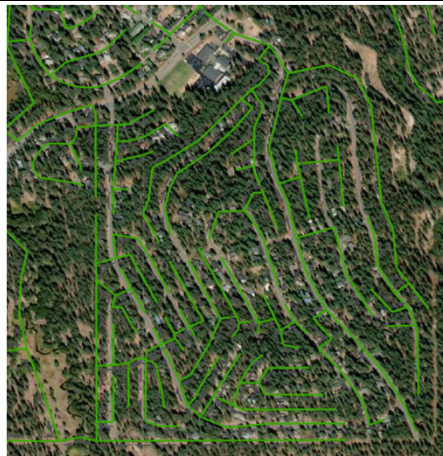
20-21 CIP Planning			CIP No. 16
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
						0.74	0.76				Planning		
											Design	\$71,000	
											Construction	\$1,423,000	27
<b>Total Capital Improvement Cost</b>											\$1,494,000		

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2022.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	MONTGOMERY ESTATES CIPP PH 2 (6600 LF)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project was identified as a high priority by URS due to excessive roots in clay pipes in the Montgomery Estates neighborhood. While the I&I from this neighborhood does not appear to be excessive (the Trout Creek Basin is one of the District's lowest I&I areas), the roots require increased maintenance over other areas of the system. The project would use CIPP to line mains and connections to laterals, and perform manhole rehabilitation. Lining laterals (connection to cleanout) is not included in the project scope, but may be added after additional inspection is performed. This is one of two phases (6,600 LF each) targeted at rehabilitating approximately 1/4 of the total neighborhood.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
System Efficiency	Reduced Planned Maintenance
Asset Management	

### Reference Document

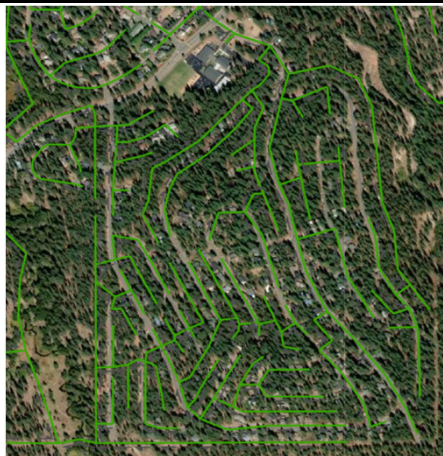
20-21 CIP Planning			CIP No. 17
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
								0.78	0.80		Planning		
											Design	\$75,000	
											Construction	\$1,510,000	29
<b>Total Capital Improvement Cost</b>											\$1,585,000		

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SEWER SYSTEM ACCESS IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URS
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project will work with URS and property owners to identify access needs and make the most critical improvements needed for ongoing maintenance and inspection of sewer mains. Many sewer mains lie in hard-to-reach sensitive areas, and so have received little to no periodic maintenance, and have only received visual inspection (no CCTV). This project is the first step in what is expected to be a larger and ongoing asset management effort.</p>	

Need for Project	Operation and Maintenance Impacts
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Maintenance History	Increased Planned Maintenance Ease of access
High Consequence of Failure	
Emergency Response	
Other Environmental Benefit	

## Reference Document

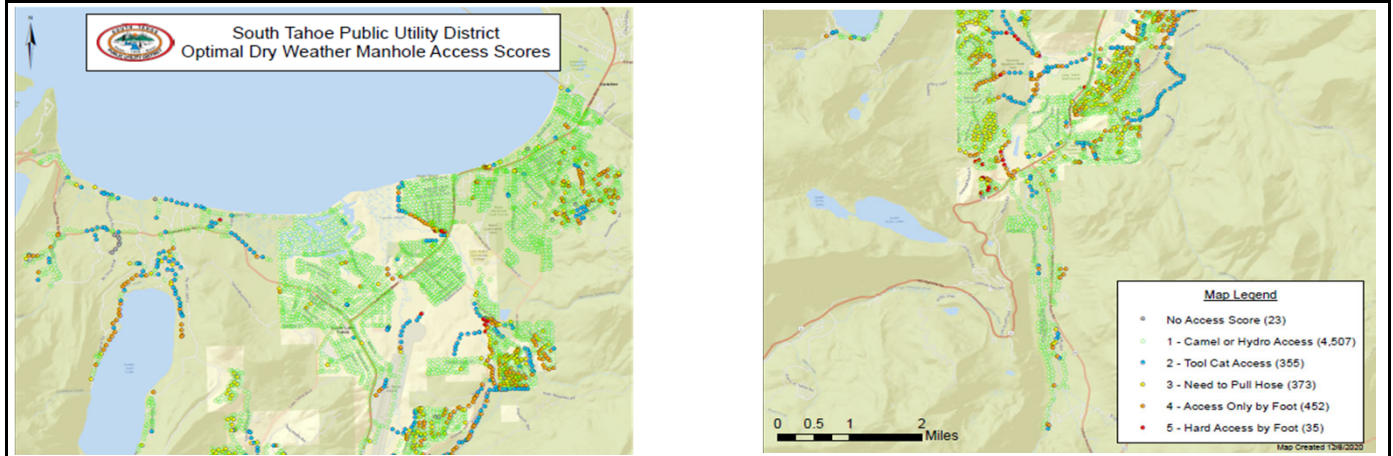
Other			CIP No. 18
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$50,000	22
	0.05				0.58	0.60						\$1,177,000	26
<b>Total Capital Improvement Cost</b>												<b>\$1,227,000</b>	

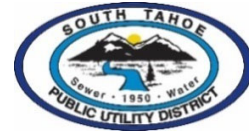
**Funding Source:** Capital

## Project Location and Photos



## Comments

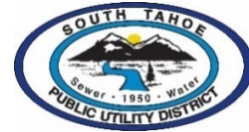
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> FIELD COMMUNICATION UPGRADES PHASE 2		<b>Asset Owner/Dept:</b> Pumps, Ops, Elec, IT												
<b>Project Code:</b> SCDS01, TPTOWR		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> Julie Ryan														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project will focus on the improvements for Flagpole Tower (Tower 3), and all upgrades needed at remote sites that will connect to Tower 3. Adds 5Ghz wireless ethernet radio and FIU at Flagpole. Connections over 173 MHz will be built out from remote water system sites near Tower 3. It is recommended that a ring configuration is created so that Flagpole Tower data is relayed to the Plant. This phase also includes installing a taller radio tower at the WWTP.</p>														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Reliability/Redundancy System Monitoring/Remote Control Asset Life Extension Emergency Response		Addition of Assets Reduced Reactionary Maintenance Safety Improvements												
<b>Reference Document</b>														
Communication Study Report (2018)		CIP No. 19												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
0.13	0.13													
<b>Total Capital Improvement Cost</b>												\$132,000	21	
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FIELD COMMUNICATION UPGRADES PHASE 3		
<b>Project Code:</b>	SCDS01	<b>Asset Owner/Dept:</b>	Pumps, Ops, Elec, IT
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project focuses on communication improvements for Keller Tower (Tower 1), upgrades needed for remote water and sewer sites that will connect to tower 1, and any upgrades at remote sites that will connect directly to the WWTP (Control 1). Adds 5 Ghz wireless ethernet and FIU at Keller. Connections over 173 MHz will be built out from remote sites near Tower 1.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Addition of Assets
System Monitoring/Remote Control	Reduced Reactionary Maintenance
Asset Life Extension	Safety Improvements
Emergency Response	

## Reference Document

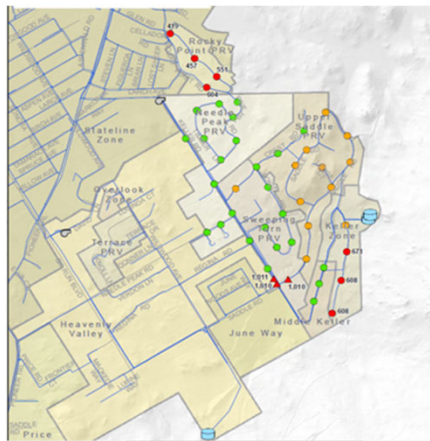
Communication Study Report (2018)			CIP No. 20
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
	0.15	0.16									Planning	
											Design	
											Construction	\$305,000
												22
<b>Total Capital Improvement Cost</b>											\$305,000	

**Funding Source:** Capital

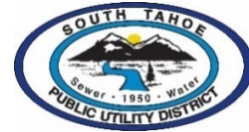
## Project Location and Photos



## Comments

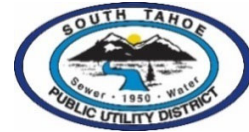


# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> SEWER PUMP STATION MONITORING PROGRAM													
<b>Project Code:</b> AMPMPS	<b>Asset Owner/Dept:</b> Pumps, Elec												
<b>Project Contact:</b> Julie Ryan	<b>Project Management Dept:</b> Eng												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>This project will allow staff to monitor mechanical, and electrical assets at sewer pump stations, by adding new instrumentation for ongoing monitoring such as pump efficiency, vibration, and temperature tracking and analysis. This project will be deployed by the Electrical Department, with support from Engineering and Pumps, over the duration of the 10-year plan.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
System Monitoring/Remote Control System Efficiency Asset Life Extension	Reduced Reactionary Maintenance Increased Planned Maintenance Addition of Assets												
<b>Reference Document</b>													
Prop 218 Planning (2018)	CIP No. 21												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$1,669,000	ALL
0.17			0.19	0.19	0.20	0.21	0.21	0.22	0.22	0.23			
<b>Total Capital Improvement Cost</b>													
<b>Funding Source:</b> Capital													
<b>Project Location and Photos</b>													
<b>Comments</b>													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TAHOE KEYS PUMP STATION REHABILITATION		
<b>Project Code:</b>	TKSPSR	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This station relies on two aging pumps with high vibration; standard for sewer is three pumps. The recommended alternative will replace the wetwell and pump motors and electrical systems. The new wetwell will accommodate three pumps.</p>	

Need for Project	Operation and Maintenance Impacts
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Maintenance History Asset Life Extension Asset Replacement/End-of-Life Reliability/Redundancy	Reduced Reactionary Maintenance Addition of Assets
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### Reference Document

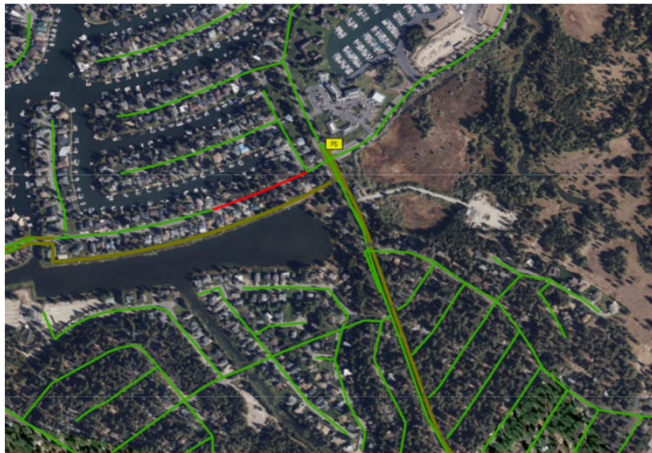
Big 5 Pump Station Alternatives Evaluation (2018)			CIP No. 22
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
0.02	3.03	3.12									Planning	
											Design	\$20,000
											Construction	\$6,141,000
<b>Total Capital Improvement Cost</b>											<b>\$6,161,000</b>	

**Funding Source:** SRF

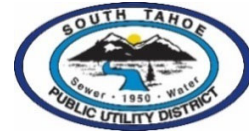
### Project Location and Photos



### Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	UPPER TRUCKEE PUMP STATION REHABILITATION		
<b>Project Code:</b>	UTSPSR	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This station experiences high I&amp;I, and relies on aging pumps with exposed drive rotating drive shaft. The recommended rehabilitations are replacing the pumps, install Flygt with Multismart; raise and seal the manhole cover; install a new bypass; replace the generator; install fall protection; replace panels, MCCs, and VFDs; install bypass vaults.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
Asset Replacement/End-of-Life	Safety Improvements
Maintenance History	
High Consequence of Failure	

## Reference Document

Big 5 Pump Station Alternatives Evaluation (2018)			CIP No. 23
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning		
0.13		2.09	2.16								Design	\$130,000	21
											Construction	\$4,251,000	23
<b>Total Capital Improvement Cost</b>											<b>\$4,381,000</b>		

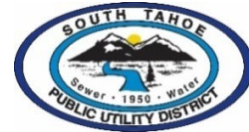
<b>Funding Source:</b>	SRF (Pending)
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## Project Location and Photos

## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BIJOU PUMP STATION REHABILITATION		
<b>Project Code:</b>	BJUSPS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Based on the STPUD Alt Evaluation by Carollo, there are two high priority projects for the Bijou pump station. These two projects are replacing the power supply and equipment as well as repairing the roof and skylight. There is one medium priority project which is to replace the mismatched pumps.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance

## Reference Document

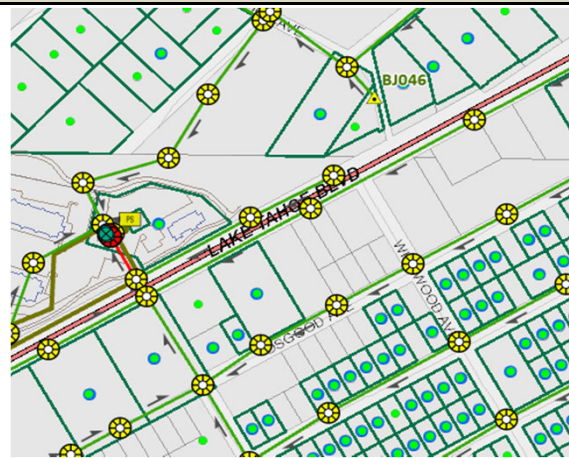
Big 5 Pump Station Alternatives Evaluation (2018)			CIP No. 24
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
0.21			0.60	0.62							Planning	
											Design	\$206,000
											Construction	\$1,222,000
<b>Total Capital Improvement Cost</b>											\$1,428,000	

**Funding Source:** SRF (Pending)

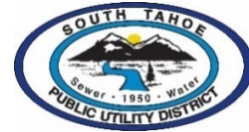
## Project Location and Photos



## Comments



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	JOHNSON PUMP STATION REHABILITATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Based on the STPUD Alt Evaluation by Carollo, there is one high priority project recommended for the Johnson Pump Station which is to install fall protection. There are multiple medium priority recommendations such as installing a new bypass, replacing the pumps, and installing a semi-permanent Godwin pump.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
Safety	Safety Improvements
High Consequence of Failure	Addition of Assets
Emergency Response	
Reliability/Redundancy	

### Reference Document

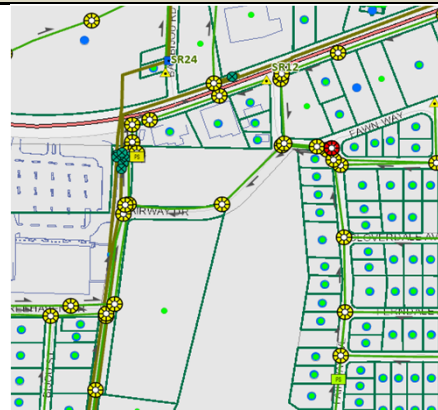
Big 5 Pump Station Alternatives Evaluation (2018)		CIP No. 25
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
						0.18	0.72	0.75			Planning		
											Design	\$184,000	27
											Construction	\$1,468,000	28
<b>Total Capital Improvement Cost</b>											\$1,652,000		

**Funding Source:** Capital

### Project Location and Photos

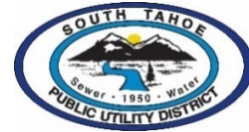


### Comments

Needs Based Plan constructs this project in 2025.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	AL TAHOE PUMP STATION REHABILITATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Based on the STPUD Alt Evaluation by Carollo, there are multiple high priority rehabilitation projects to address at the Al Tahoe Pump Station. The recommended rehabilitations are replacing the pumps, install Flygt with Multismart; rehabilitate the old wetwell; replace the generator; install fall protection; and replace panels, MCC's, and VFD's.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Replacement/End-of-Life High Consequence of Failure	Reduced Reactionary Maintenance

### Reference Document

Big 5 Pump Station Alternatives Evaluation (2018)			CIP No. 26
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
							0.25	1.95	2.01		Planning	
											Design	\$384,000
											Construction	\$3,836,000
<b>Total Capital Improvement Cost</b>											<b>\$4,220,000</b>	

<b>Funding Source:</b>	Capital
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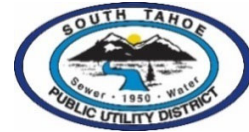
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2026.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LPPS TANK COATING AND CATHODIC PROTECTION		
<b>Project Code:</b>	LPTNKS	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

The project will allow staff to address various deficiencies noted during the 2016 & 2018 interior inspections. These include corrosion in the headspace, and Tank 1 shell requires structural reinforcement, either with steel plate or carbon fiber wrap. This project will also address structural degradation of Tank 2 and associated operational concerns, including replacement of Tank 2 on the existing foundation. The tanks currently use an impressed current cathodic protection system. Both tanks will be switched to a passive cathodic protection system.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Safety Water Quality High Consequence of Failure	Reduced Reactionary Maintenance Safety Improvements

### Reference Document

19-20 CIP Planning			CIP No. 27
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	21 to 22		
1.35	0.48	0.50											\$211,000	
													\$2,115,000	
<b>Total Capital Improvement Cost</b>											\$2,326,000			

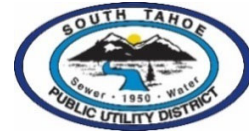
**Funding Source:** Capital

### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LPPS FUEL TANK		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, HM
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces the existing 6,000 gallon fuel tank with a new 12,000 gallon fuel tank in the same footprint. Project may require upgrades to the existing retaining wall, and will demolish the unneeded tertiary containment basin under the tank.</p>	

Need for Project	Operation and Maintenance Impacts
<p>Emergency Response</p> <p>Other Environmental Benefit</p>	

## Reference Document

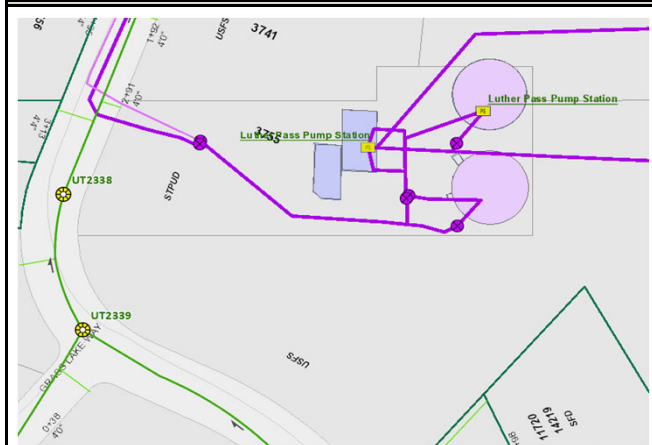
19-20 CIP Planning			CIP No. 28
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$106,000	22			
	0.11															
<b>Total Capital Improvement Cost</b>														\$106,000		

<b>Funding Source:</b>	Capital
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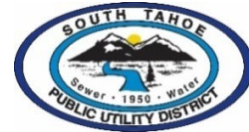
## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LPPS PUMP EFFICIENCY MONITORING		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Ops, Elec
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	In Progress
<p>This project will allow staff to install Riventa Freeflow at 4 pump locations. The stations would have their own control panels and would need temperature sensors on the suction/discharge piping. The connection to pump pressure and power consumption data would also be required.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
System Efficiency	Increased Planned Maintenance
System Monitoring/Remote Control	

### Reference Document

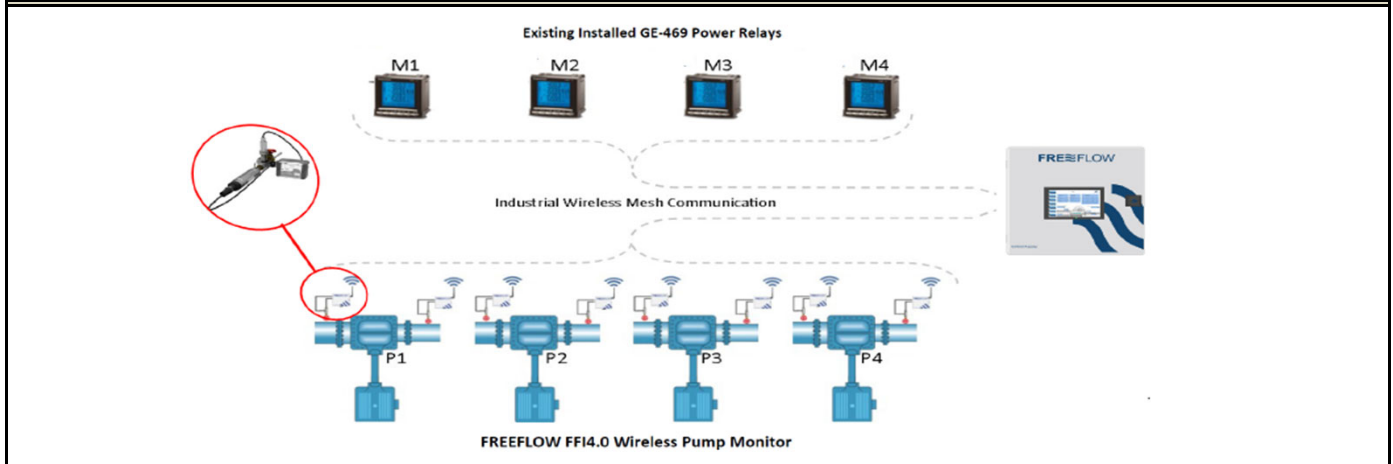
19-20 CIP Planning			CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$103,000	21			
0.10																
<b>Total Capital Improvement Cost</b>														\$103,000		

**Funding Source:** Capital

### Project Location and Photos

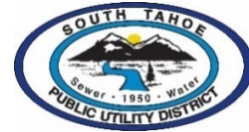


### Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WET WELL IMPROVEMENTS, COATING, REPAIRS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces or coats 7 steel wetwells in 1960s era stations that do not have PS Rehabs within 10 yrs: Taylor Ck, Kiva, Camp Rich, Venice, Trout Ck, San Moritz and Beecher. These stations were outfitted with impressed current cathodic protection in 2012; anodes will be tested and replaced if necessary.</p>	

Need for Project	Operation and Maintenance Impacts
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Safety	Safety Improvements
Asset Life Extension	

## Reference Document

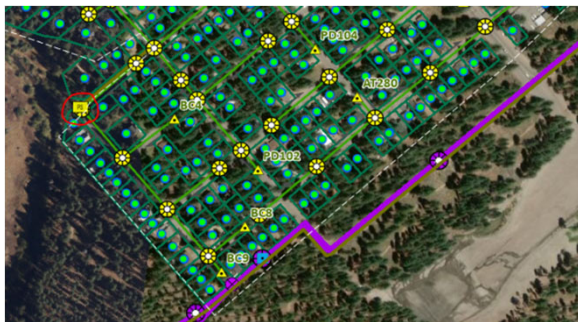
19-20 CIP Planning			CIP No. 29
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	Total \$33,000 \$653,000	Year 23 24			
			0.34	0.35												
<b>Total Capital Improvement Cost</b>														<b>\$686,000</b>		

**Funding Source:** Capital

## Project Location and Photos



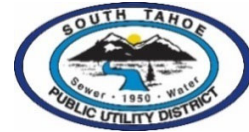
<- Beecher  
Pioneer Village ->



## Comments

This project is scheduled to be completed with Pope Beach Pump Stations 1 and 2 for economy of scale

**South Tahoe Public Utility District  
Capital Improvement Program (CIP) Project Summary**



<b>Project Name:</b>	<b>PUMP STATION SWITCH GEAR IMPROVEMENTS</b>		
<b>Project Code:</b>	ELECCS	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

**Project Description/ Benefits**

<b>Project Status:</b>	10-yr Plan
<p>This project will allow District staff to complete a condition assessment of the electrical switch gear at sewer pump stations and make improvements which will likely include replacement of the entire electrical switch gear.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Safety System Efficiency	Reduced Reactionary Maintenance Safety Improvements

**Reference Document**

2009 CSMP			CIP No.
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**Project Funding**

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	\$164,000	22
											Design		
											Construction		
<b>Total Capital Improvement Cost</b>												\$164,000	

**Funding Source:** Capital

**Project Location and Photos**



**Comments**

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BELLEVUE PUMP STATION IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The pump station site is subject to flooding from proximity to the meadow. This project will allow staff to address the issue of the station floor being too low and to replace the pumps (circa 1960) and electrical equipment.</p>	

Need for Project	Operation and Maintenance Impacts
Maintenance History Asset Replacement/End-of-Life Emergency Response	Reduced Reactionary Maintenance

### Reference Document

2009 CSMP			CIP No. 30
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
								0.27	0.58	0.60	Planning	
											Design	\$269,000
											Construction	\$1,186,000
<b>Total Capital Improvement Cost</b>											\$1,455,000	

**Funding Source:** Capital

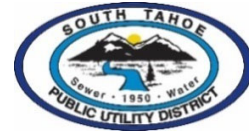
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2027.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	POPE BEACH #1 PUMP STATION IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project allows staff to convert the can station (vacuum) to a wet well. The electrical will be moved outside and repairs will be made to the wet well. Price based on reduced scope, excluding wetwell. Revisit scope for package station upgrades, like Taylor Ck. Pumps circa 1973</p>	

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life Safety	Safety Improvements
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### Reference Document

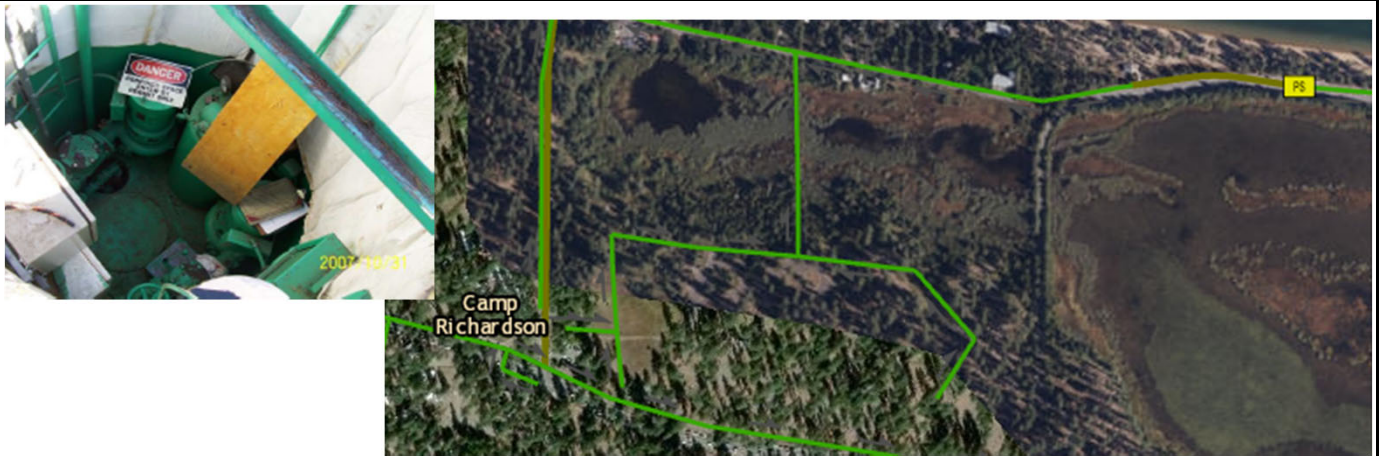
2009 CSMP			CIP No. 31
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.06	0.17	0.17						Planning	
											Design	\$56,000
											Construction	\$342,000
<b>Total Capital Improvement Cost</b>											\$398,000	

**Funding Source:** Capital

### Project Location and Photos

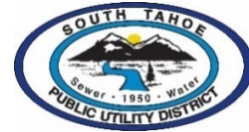


### Comments

This project is scheduled to be completed with Pope Beach #2 and the Wetwell Improvements Project for economy of scale. Needs Based Plan constructs this project in 2024.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	POPE BEACH #2 PUMP STATION IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project allows staff to convert the can station (vacuum) to a wet well. The electrical will be moved outside and repairs will be made to the wet well. Price based on reduced scope, excluding wetwell. Revisit scope for package station upgrades, like Taylor Ck. Pumps circa 1973</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Safety	Safety Improvements

## Reference Document

2009 CSMP			CIP No. 32
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.06	0.16	0.16						Planning	
											Design	\$56,000
											Construction	\$321,000
<b>Total Capital Improvement Cost</b>											\$377,000	

**Funding Source:** Capital

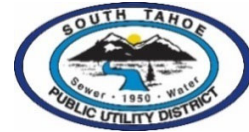
## Project Location and Photos



## Comments

This project is scheduled to be completed with Pope Beach #1 and the Wetwell Improvements Project for economy of scale. Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	PIONEER VILLAGE PUMP STATION IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This pump station has a deteriorated steel can wetwell and 1967 pumps. This project is expected to replace the wetwell, pumps and electrical gear with a new packaged submersible pump station. The existing building will be refurbished.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Safety	Safety Improvements

### Reference Document

2009 CSMP			CIP No. 33
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.06	0.40	0.41					Planning	
											Design	\$58,000
											Construction	\$804,000
<b>Total Capital Improvement Cost</b>											\$862,000	

**Funding Source:** Capital

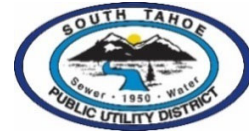
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2027.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	KIVA PUMP STATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This pump station has a deteriorated steel can wetwell and 1968 pumps. This project is expected to replace the wetwell, pumps and electrical gear with a new packaged submersible pump station. The existing building will be refurbished. Price based on pkg pump station upgrades like Taylor Ck. Pumps circa 1968.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life System Efficiency Safety	Reduced Reactionary Maintenance Safety Improvements

### Reference Document

2009 CSMP			CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$76,000	TBD
											Construction	\$609,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$685,000</b>		

**Funding Source:** Capital

### Project Location and Photos

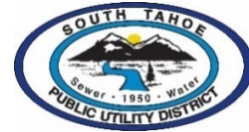


### Comments

This project is slated for construction in 2028 on the Needs Based Plan.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BALDWIN BEACH PUMP STATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This pump station has a deteriorated steel can wetwell and 1968 pumps. This project is expected to replace the wetwell, pumps and electrical gear with a new packaged submersible pump station. The existing building will be refurbished. Price based on pkg pump station upgrades like Taylor Ck. Pumps circa 1968.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life System Efficiency Safety	Reduced Reactionary Maintenance Safety Improvements

## Reference Document

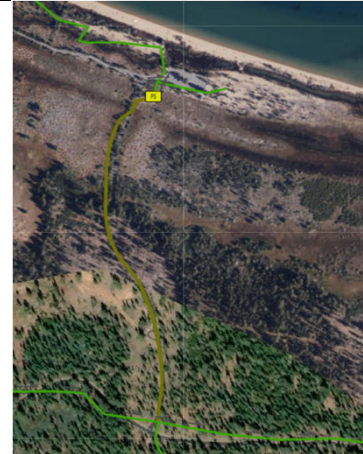
2009 CSMP			CIP No. 34
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
					0.06	0.49	0.50				Planning	
											Design	\$60,000
											Construction	\$987,000
<b>Total Capital Improvement Cost</b>											<b>\$1,047,000</b>	

<b>Funding Source:</b>	Capital
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## Project Location and Photos

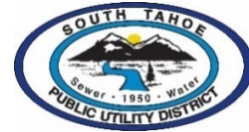


## Comments

This project is scheduled to be constructed with Baldwin Beach Gravity Main Replacement and Tallac Creek Sewer Crossing. Needs Based Plan constructs this project in 2028.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SAN MORITZ PS IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This pump station has a deteriorated steel can wetwell and 1968 pumps. This project is expected to replace the wetwell, pumps and electrical gear with a new packaged submersible pump station. The existing building will be refurbished. Price based on pkg pump station upgrades like Taylor Ck. Pumps circa 1968.

Need for Project	Operation and Maintenance Impacts
------------------	-----------------------------------

Asset Replacement/End-of-Life System Efficiency Safety	Reduced Reactionary Maintenance Safety Improvements
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### Reference Document

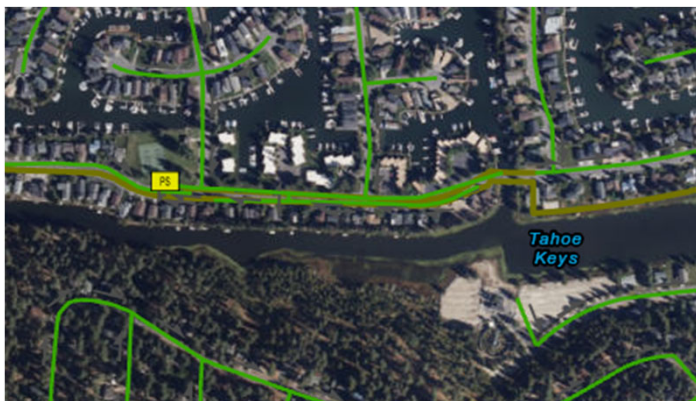
2009 CSMP			CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$67,000	TBD
											Construction	\$2,140,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$2,207,000</b>		

**Funding Source:** Capital

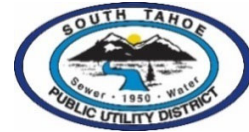
### Project Location and Photos



### Comments

This project is slated for construction in 2029 on the Needs Based Plan

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TROUT CREEK PUMP STATION IMPROVEMENTS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The District condensed the scope of this project to include piping modifications, replacement of electrical gear, replacement of sluice gate, and coat the wetwell. Project cost does not include REPLACEMENT of wetwell, but Pumps is concerned that it might be necessary.

Need for Project	Operation and Maintenance Impacts
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Asset Life Extension	Reduced Reactionary Maintenance
Asset Replacement/End-of-Life	

## Reference Document

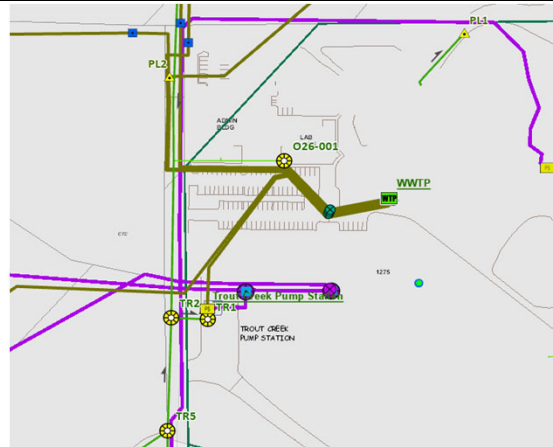
2009 CSMP			CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
													\$67,000	TBD
													\$807,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$874,000</b>			

**Funding Source:** Capital

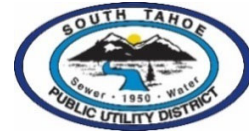
## Project Location and Photos



## Comments

This project is slated for construction in 2030 on the Needs Based Plan

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	CAMP RICH PS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This station has a steel can wetwell in decent condition (as of 2019). The pumps are original (1968) and oversized. This pump station rehabilitation project would downsize pumps and force main.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Reliability/Redundancy	Reduced Reactionary Maintenance

## Reference Document

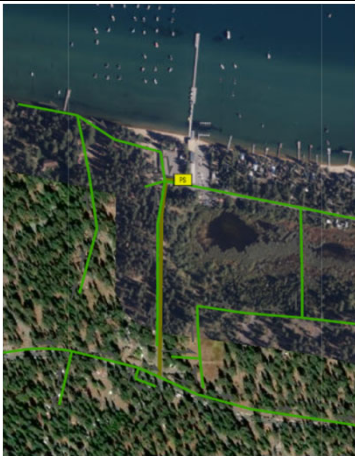
Prop 218 Planning (2018)			CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$67,000	TBD
											Construction	\$1,243,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$1,310,000</b>		

<b>Funding Source:</b>	Capital
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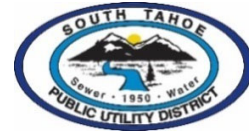
## Project Location and Photos



## Comments

This project is slated for construction in 2031 on the Needs Based Plan

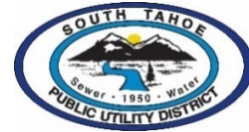
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> WWTP MASTER PLAN		<b>Asset Owner/Dept:</b> Ops, Elec, HM												
<b>Project Code:</b> WWTPMP		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> Julie Ryan														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
This project addresses those elements of the WWTP condition assessment that require expert support: electrical, structural, and underground piping evaluation.														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Asset Management		Increase Planned Maintenance												
<b>Reference Document</b>														
19-20 CIP Planning			CIP No.											
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	\$389,000	22	
												Design		
												Construction		
<b>Total Capital Improvement Cost</b>											\$389,000			
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														

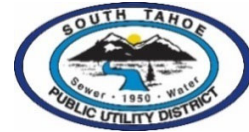


# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> SHOP FACILITIES MASTER PLAN		<b>Asset Owner/Dept:</b> All Ops														
<b>Project Code:</b> SHOPMP		<b>Project Management Dept:</b> Eng														
<b>Project Contact:</b> Trevor Coolidge																
<b>Project Description/ Benefits</b>																
<b>Project Status:</b> 10-yr Plan																
This master plan will lay out a plan for addressing the issues facing the lower shops facilities, which include a need for covered parking, safety and access improvements for the offices, and modernization of the shop facilities.																
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>														
Asset Replacement/End-of-Life Safety		Safety Improvements														
<b>Reference Document</b>																
19-20 CIP Planning			CIP No.													
<b>Project Funding</b>																
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>													
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$229,000	23 to 24			
<b>Total Capital Improvement Cost</b>												\$229,000				
<b>Funding Source:</b> Capital																
<b>Project Location and Photos</b>																
<b>Comments</b>																

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	RECYCLED WATER MASTER PLAN		
<b>Project Code:</b>	RECWMP	<b>Asset Owner/Dept:</b>	Ops, DVR
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The Porter-Cologne Act was implemented over 50 years ago. This project will focus on writing a new Recycled Water Master Plan, assessing the District's Recycled Water system holistically and making a roadmap for future efforts.</p>	

Need for Project	Operation and Maintenance Impacts
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Asset Management	
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## Reference Document

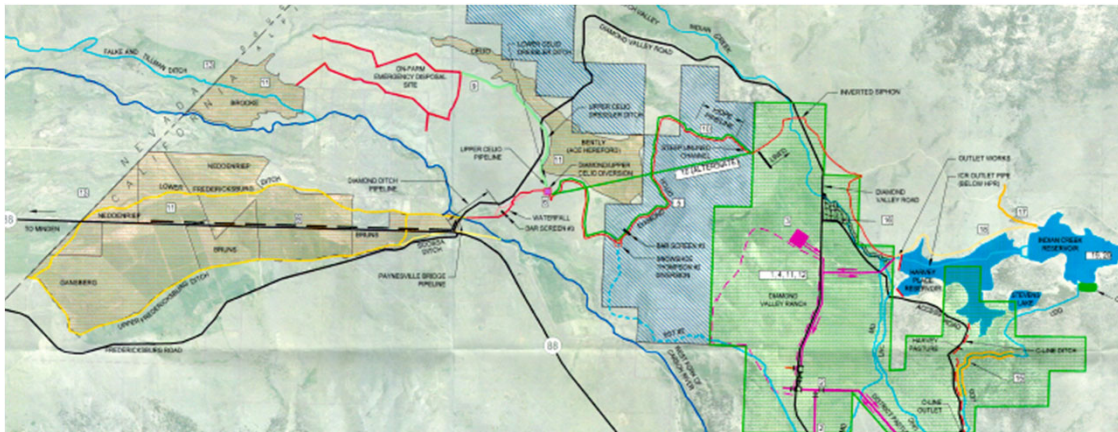
19-20 CIP Planning			CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$444,000	22 to 23	
<b>Total Capital Improvement Cost</b>												\$444,000		

**Funding Source:** Capital

## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	EMERGENCY BLOWER GENERATOR		
<b>Project Code:</b>	BLOWER	<b>Asset Owner/Dept:</b>	Ops, Elec, VM
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

A backup generator is needed to supply power to the wate water treatment plant's blower system. The current diesel blower does not meet air quality regulations and will be out of compliance by 2020. This project will include an addition of a new permanent generator and planning for associated upgrades to the electrical. Will be constructed with the Clarifiers 1 and 2 project in 2021.

Need for Project	Operation and Maintenance Impacts
Regulatory Mandate Emergency Response	Addition of Assets

### Reference Document

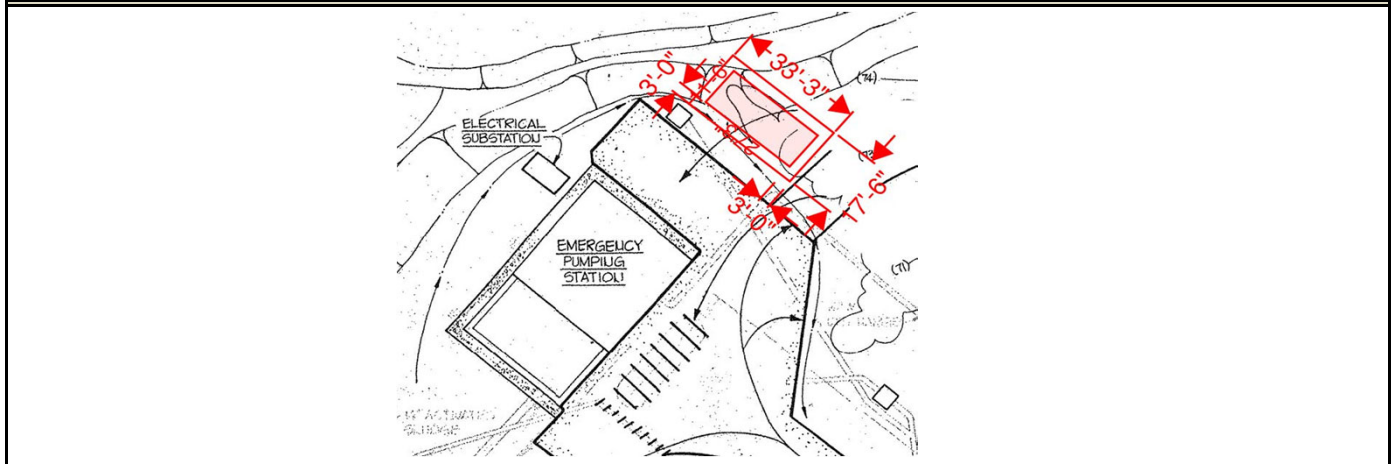
19-20 CIP Planning			CIP No. 35
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
0.43	1.09										Planning	
											Design	\$427,000
											Construction	\$1,094,000
<b>Total Capital Improvement Cost</b>											\$1,521,000	

**Funding Source:** FEMA

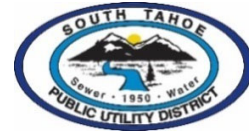
### Project Location and Photos



### Comments

This project will be contracted with Secondary Clarifier 1 and 2 for coordination and economy of scale

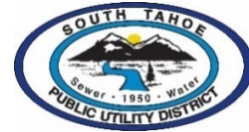
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> SECONDARY CLARIFIER 1 REHAB													
<b>Project Code:</b> SC1RHB	<b>Asset Owner/Dept:</b> Ops, HM												
<b>Project Contact:</b> Steve Caswell	<b>Project Management Dept:</b> Eng												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>This project repairs or replaces the mechanism and drives, which have been in service since the late 1960's. It also repairs the concrete basin, addresses seismic stability, and considers process improvements. This project will be designed and constructed in conjunction with Secondary Clarifier 2 and 3, but constructed under a contract with SC2 and the Blower Generator.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
Asset Life Extension High Consequence of Failure Maintenance History Reliability/Redundancy	Reduced Reactionary Maintenance												
<b>Reference Document</b>													
HDR Condition Assessment (2013)	CIP No. 36												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction		
0.03		1.36	1.40									\$30,000	21
												\$2,765,000	23
<b>Total Capital Improvement Cost</b>											\$2,795,000		
<b>Funding Source:</b> SRF (Pending); FEMA (pending)													
<b>Project Location and Photos</b>													
<b>Comments</b>													
This project will be contracted with Secondary Clarifier 2 and the Blower Generator for coordination and economy of scale.													



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



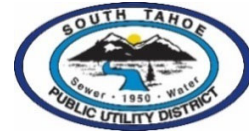
<b>Project Name:</b> SECONDARY CLARIFIER 2 REHAB													
<b>Project Code:</b> SC2RHB	<b>Asset Owner/Dept:</b> Ops, HM												
<b>Project Contact:</b> Steve Caswell	<b>Project Management Dept:</b> Eng												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>This project repairs or replaces the mechanism and drives, which have been in service since the late 1960's. It also repairs the concrete basin, addresses seismic stability, and considers process improvements. This project will be designed and constructed in conjunction with Secondary Clarifier 1 and 3, but constructed under a contract with SC1 and the Blower Generator.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
Asset Life Extension High Consequence of Failure Maintenance History Reliability/Redundancy	Reduced Reactionary Maintenance												
<b>Reference Document</b>													
HDR Condition Assessment (2013)	CIP No. 37												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction		
0.03	1.32	1.36										\$30,000	21
												\$2,685,000	22
<b>Total Capital Improvement Cost</b>											\$2,715,000		
<b>Funding Source:</b> SRF (Pending); FEMA (pending)													
<b>Project Location and Photos</b>													
<b>Comments</b>													
This project will be contracted with Secondary Clarifier 1 and the Blower Generator for coordination and economy of scale.													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



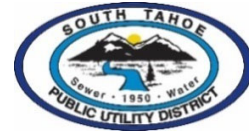
<b>Project Name:</b> SECONDARY CLARIFIER 3 REHAB													
<b>Project Code:</b> SC3RHB	<b>Asset Owner/Dept:</b> Ops, HM												
<b>Project Contact:</b> Steve Caswell	<b>Project Management Dept:</b> Eng												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>This project repairs or replaces the mechanism and drives, which have been in service since the late 1960's. It also repairs the concrete basin, addresses seismic stability, and considers process improvements. This project will be designed in conjunction with Secondary Clarifiers 1 and 2, but constructed first under its own contract.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
Asset Life Extension High Consequence of Failure Maintenance History Reliability/Redundancy	Reduced Reactionary Maintenance												
<b>Reference Document</b>													
HDR Condition Assessment (2013)	CIP No. 38												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>													
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	<b>Total</b>	<b>Year</b>
1.26	1.30											\$2,566,000	21
<b>Total Capital Improvement Cost</b>												\$2,566,000	
<b>Funding Source:</b> SRF (Pending); FEMA (pending)													
<b>Project Location and Photos</b>													
<b>Comments</b>													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> PLANT PAVING (CENTER ROAD)														
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> HM													
<b>Project Contact:</b> Brent Goligoski	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project will address the failing and deteriorating pavement in the plant and will also address the poor drainage sites. The proposed project area for this improvement is the center access road between the Aeration Basins and Secondary Clarifiers. This project will be completed after the secondary clarifier project and before lower shops.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Life Extension Water Quality Other Environmental Benefit	Reduced Reactionary Maintenance Safety Improvements													
<b>Reference Document</b>														
19-20 CIP Planning	CIP No. 39													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
			0.17	0.18									\$17,000	
													\$336,000	24
<b>Total Capital Improvement Cost</b>												\$353,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
This project is scheduled to occur after the Secondary Clarifiers and before the RAS Building Upgrades, but may be pushed out for better project coordination.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LOWER, FOUNTAIN SHOPS IMPROVEMENTS (3)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	All Ops
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project implements the recommendations for rehabilitation and/or replacement of the Lower Shops and Fountain Shops, coming out of the Shop Facilities Master Plan. This project will address structural stability and workplace safety concerns, and will modernize shops and garages.</p>	

Need for Project	Operation and Maintenance Impacts
System Efficiency	Addition of Assets
Asset Replacement/End-of-Life	Safety Improvements
Safety	
Regulatory Mandate	

### Reference Document

19-20 CIP Planning			CIP No. 40
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
				0.17	0.79	1.27	1.31	0.67					\$174,000	24
													\$4,038,000	26 to 28
<b>Total Capital Improvement Cost</b>											\$4,212,000			

**Funding Source:** Capital

### Project Location and Photos



<- Fountain Shops

Lower Shops ->

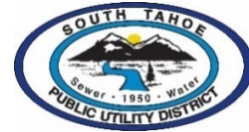


### Comments

This project is scheduled to occur after the Secondary Clarifiers, but before the RAS Improvements, and in combination with the Ballast Pond Improvements. Needs Based Plan constructs this project in 2025.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WWTP BALLAST PONDS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will replace, repair, and/or rehabilitate the concrete in the ballast ponds. Considerations include addition of safety rail, replacement of all joint sealant with an appropriate material and recoating all carbon steel pipelines. Updates will prevent rocks and grit being pumped to LPPS and increase lifespan of pumps. Project will also give consideration to underground tanks with increased volume to improve process efficiencies, reduce maintenance, and optimize plant space.

Need for Project	Operation and Maintenance Impacts
System Efficiency Asset Life Extension Safety	Reduced Reactionary Maintenance Safety Improvements

### Reference Document

19-20 CIP Planning			CIP No. 41
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.90	0.92						Planning	
											Design	\$87,000
											Construction	\$1,731,000
<b>Total Capital Improvement Cost</b>											\$1,818,000	

**Funding Source:** Capital

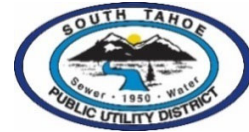
### Project Location and Photos



### Comments

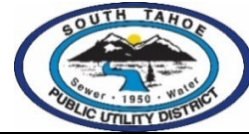
This project is scheduled to be constructed in conjunction with the Lower Shops Improvements

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> BLOWER SYSTEM IMPROVEMENTS														
<b>Project Code:</b> BLOSYS	<b>Asset Owner/Dept:</b> Ops, Elec, HM													
<b>Project Contact:</b> Brent Goligoski	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b>	10-yr Plan													
<p>Jockey blower to replace diesel blower. Efficiency upgrades and address pipe leaks. Blowers, controls, control valves for zone control - pipe leaks TBD. Pipe leaks are odorous air. Current estimate includes blower, controls, and electrical upgrades. Estimated costs for one blower and electrical upgrades total \$1,581,000.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Life Extension Asset Replacement/End-of-Life System Monitoring/Remote Control System Efficiency	Addition of Assets													
<b>Reference Document</b>														
19-20 CIP Planning	CIP No. 42													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	\$200,000	20	
0.20	0.26		0.84	0.86								Design	\$258,000	21
												Construction	\$1,702,000	24
<b>Total Capital Improvement Cost</b>											\$2,160,000			
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
Project is scheduled to be constructed with WWTP Fire Alarm System Standardization and WWTP Electrical Submetering for economy of scale.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	AIR HEADER REPLACEMENT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project as currently scoped replaces the existing buried thin-wall stainless steel pipe that feeds the aeration basins with process air. This pipe is known to be riddled with holes, resulting in a 50% increase in energy consumption for the aeration process, and putting the District at risk for air emissions violations. The new piping would be stainless steel in a hybrid (buried/above-ground) configuration. Staff is seeking to refine the project description to reduce cost, before proceeding with design.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life System Efficiency Other Environmental Benefit	

### Reference Document

20-21 CIP Planning			CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$269,000	
											Construction	\$5,020,000	TBD
<b>Total Capital Improvement Cost</b>											\$5,289,000		

**Funding Source:** TBD

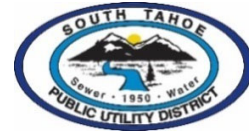
### Project Location and Photos



### Comments

This project is slated for construction in 2024 on the Needs Based Plan.

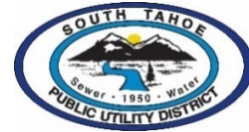
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FILTERS 1,2 REHAB												
<b>Project Code:</b>	0					<b>Asset Owner/Dept:</b>	Ops, HM						
<b>Project Contact:</b>	Brent Goligoski					<b>Project Management Dept:</b>	Eng						
<b>Project Description/ Benefits</b>													
<b>Project Status:</b>	10-yr Plan												
<p>The District's filters were evaluated and a staged approach to rehabilitation was adopted. Filters 5 and 6 were replaced in 2010. Filters 1 and 2 represent the next two filters to be rehabilitated. Rehabilitation includes repairing failed surface wash piping, removal and replacement of media and underdrain system, recoating interior, replace the anodes and replace interior supply header. External Mechanical piping, valves, and controls replaced in 2010.</p>													
<b>Need for Project</b>						<b>Operation and Maintenance Impacts</b>							
Asset Life Extension													
Water Quality													
<b>Reference Document</b>													
19-20 CIP Planning						CIP No. 43							
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning		
			0.88									Design	\$42,000
												Construction	\$840,000
<b>Total Capital Improvement Cost</b>											\$882,000		
<b>Funding Source:</b> Capital													
<b>Project Location and Photos</b>													
<b>Comments</b>													
<p>This project is scheduled to be constructed after Secondary Clarifier 1 is complete. The Needs Based Plan constructs this project in 2023.</p>													



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	MIXED LIQUOR SPLITTER BOX; GATES, WEIR, COATINGS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The Mixed Liquor Splitter Box is a critical piece of the treatment plant that is in need of rehabilitation to extend its life. The concrete will be rehabilitated and a coating added. The metal gates and weirs are corroded and need to be replaced. This project will be constructed with the Emergency Pump Station Concrete Rehab, AB Splitter Box, and Primary Effluent Splitter Box.

Need for Project	Operation and Maintenance Impacts
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High Consequence of Failure Asset Life Extension	Reduced Reactionary Maintenance
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## Reference Document

HDR Condition Assessment (2013)			CIP No. 44
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
										0.23	Planning		
											Design	\$22,000	
											Construction	\$438,000	31
<b>Total Capital Improvement Cost</b>											\$460,000		

**Funding Source:** Capital

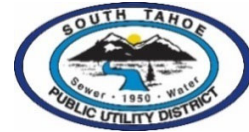
## Project Location and Photos

Figure 5.0 – Mixed Liquor Split Box

## Comments

This project is scheduled to be constructed with the Emergency PS Concrete Rehab, AB Splitter Box and Primary Effluent Splitter Box. Needs Based Plan constructs this project in 2029.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	EMERGENCY PS IMPROVEMENTS, CONC REHAB		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will include coating the exterior walls of the sump and the floor. This project will be constructed with the Mixed Liquor Splitter Box, AB Splitter Box, and Primary Effluent Splitter Box.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	

### Reference Document

HDR Condition Assessment (2013)			CIP No. 45
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
										0.11	Planning	
											Design	\$11,000
											Construction	\$211,000
<b>Total Capital Improvement Cost</b>											\$222,000	

**Funding Source:** Capital

### Project Location and Photos



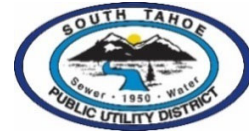
Figure 20 Emergency Pump Station - Horizontal crack of the vertical walls in the sump pit. Crack spans all 4 walls.



### Comments

This project is scheduled to be constructed with the Mixed Liquor, AB Splitter Box and Primary Effluent Splitter Box. Needs Based Plan constructs this project in 2029.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	AB SPLITTER BOX		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The inspection performed in 2013 determined that the splitter box should have the concrete coated with flexible 100% solid polyurethane. The floors still need to be inspected since they were covered during the inspection. All the pipes will be recoated with a chemical resistant epoxy material. This project will be constructed with the Mixed Liquor Splitter Box, Emergency Pump Station Concrete Rehab, and Primary Effluent Splitter Box.

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension	

## Reference Document

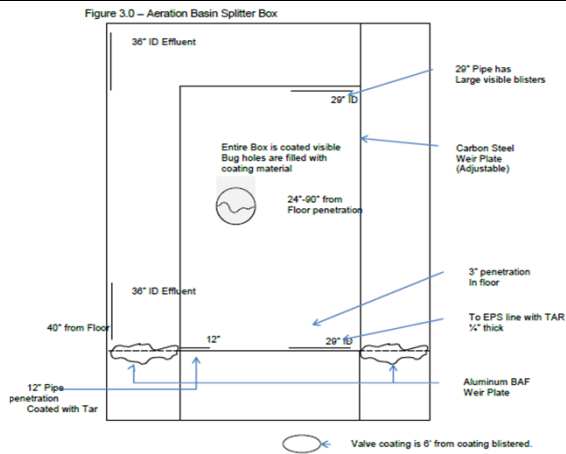
HDR Condition Assessment (2013)		CIP No. 46
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
										0.09	Planning	
											Design	\$9,000
											Construction	\$177,000
<b>Total Capital Improvement Cost</b>											\$186,000	31

**Funding Source:** Capital

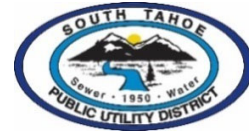
## Project Location and Photos



## Comments

This project is scheduled to be constructed with the Mixed Liquor, Emergency PS Concrete Rehab, and Primary Effluent Splitter Box. Needs Based Plan constructs this project in 2029.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	PRIMARY EFFLUENT SPLITTER BOX		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project is based out of the 2013 Concrete and Coating Evaluation to where the entire primary effluent splitter box will have new concrete and fresh coatings. This project will be constructed with the Mixed Liquor Splitter Box, Emergency Pump Station Concrete Rehab, and AB Splitter Box.

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension	

### Reference Document

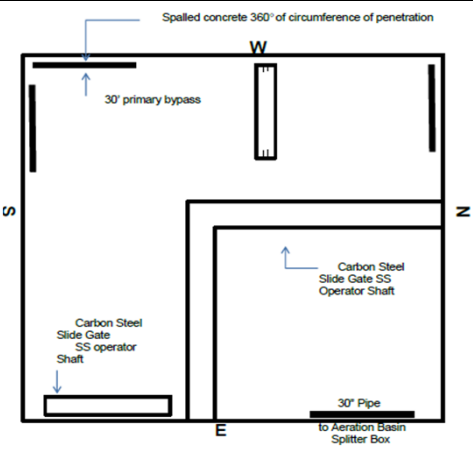
HDR Condition Assessment (2013)		CIP No. 47
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
										0.06	Planning	
											Design	\$5,000
											Construction	\$107,000
											<b>Total Capital Improvement Cost</b>	<b>\$112,000</b>

**Funding Source:** Capital

### Project Location and Photos

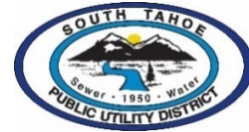


### Comments

This project is scheduled to be constructed with the Mixed Liquor, Emergency PS Concrete Rehab, and AB Splitter Box. Needs Based Plan constructs this project in 2029.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	RAS BUILDING REHABILITATION (3)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, Elec, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project will focus on upgrading the structural and electrical system in the RAS building only. If a full RAS Building replacement is required, additional budget will be needed.</p>	

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension Safety	Safety Improvements Reduced Reactionary Maintenance

### Reference Document

Prop 218 Planning (2018)			CIP No. 48
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
						0.18	1.42	1.46			Planning	
											Design	\$184,000
											Construction	\$2,872,000
<b>Total Capital Improvement Cost</b>											\$3,056,000	

<b>Funding Source:</b>	Capital
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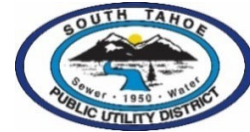
### Project Location and Photos



### Comments

This project is scheduled to be completed in conjunction with the Plant Electrical Upgrades, and after the Lower Shops and Ballast Ponds, but may be moved ahead if deemed critical.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	PLANT ELECTRICAL UPGRADES		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Elec, Ops
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Budget accounts for replacement ~1/3 of electrical gear in WWTP for an Asset Management approach to electrical systems. While the actual scope has not yet been determined, it is expected that to increase reliability and safety of the electrical equipment, the Lower shops, and the filter building's basement will be replaced. To ensure all equipment is within its usable lifetime the single phase transformer and the 110v distribution panel in the filter building's basement will be replaced. The manually activated transfer switch in the lower shops will be replaced to an automatic switch to reduce potential injuries.

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension Safety	Reduced Reactionary Maintenance Safety Improvements

## Reference Document

Prop 218 Planning (2018)			CIP No. 49
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
						0.12	0.69	0.71			Planning	
											Design	\$123,000
											Construction	\$1,395,000
<b>Total Capital Improvement Cost</b>											<b>\$1,518,000</b>	

**Funding Source:** Capital

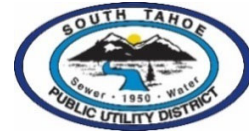
## Project Location and Photos



## Comments

This project is scheduled to be completed in conjunction with the RAS Building Rehab and after the Lower Shops and Ballast Ponds, but may be moved ahead if deemed critical.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FILTERS 3,4 REHAB		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

The District's filters were evaluated and a staged approach to rehabilitation was adopted. Filters 5 and 6 were replaced in 2010. Filters 1 and 2 are the next two filters to be rehabilitated in 2024. Filters 3 and 4 will be last. Rehabilitation includes repairing failed surface wash piping, removal and replacement of media and underdrain system, recoating interior, replace the anodes and replace interior supply header. External Mechanical piping, valves, and controls replaced in 2010.

Need for Project	Operation and Maintenance Impacts
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Asset Life Extension	
Water Quality	

### Reference Document

19-20 CIP Planning			CIP No. 50
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
										1.09	Planning		
											Design	\$52,000	
											Construction	\$1,033,000	31
<b>Total Capital Improvement Cost</b>											\$1,085,000		

**Funding Source:** Capital

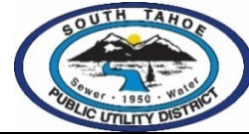
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2030.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BIO BUILDING ODOR CONTROL		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Ops, Elec, HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Anticipate strobic fan and assess results. Carbon scrubber has long been considered in bio building, previously only identified for construction based on complaints. Currently focused on dispersion as solution with strobic fan based on modeling for odor reduction. Fan install would require roof improvements/modifications.</p>	

Need for Project	Operation and Maintenance Impacts
Other Environmental Benefit	Addition of Assets

## Reference Document

2008 Odor Control Study			CIP No. 51
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
										0.07	Planning Design Construction	\$71,000	31
<b>Total Capital Improvement Cost</b>											\$71,000		

<b>Funding Source:</b>	Capital
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## Project Location and Photos

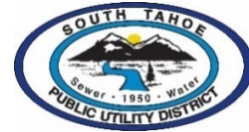


## Comments

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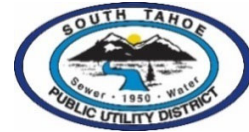


# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> WWTP FIRE ALARM SYSTEM STANDARDIZATION		<b>Asset Owner/Dept:</b> Ops, Elec, HM												
<b>Project Code:</b> 0		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
Three different fire alarm systems were installed for each of the last 3 major projects at the WWTP (Admin/Ops, 2018 Emergency Generator, and Headworks). Pre-qualify these three to bid on upgrading the older fire systems at the WWTP (Filters, Small Generator, Hypo, Bio and Blowers. [The same manufacturer will then be named for the Lower Shops Project.]														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Reliability/Redundancy Asset Life Extension		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
19-20 CIP Planning		CIP No. 52												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
			0.11	0.12								<b>Design</b>		
												<b>Construction</b>	\$229,000	24
<b>Total Capital Improvement Cost</b>												\$229,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
Project is scheduled to be constructed with WWTP Electrical Submetering and Blower System Improvements for economy of scale. Needs Based Plan constructs this project in 2025.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> PLANT PAVING (SOUTH ROAD)		<b>Asset Owner/Dept:</b> Ops, Elec, HM												
<b>Project Code:</b> 0		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> <span style="border: 1px solid black; padding: 2px;">10-yr Plan</span>														
The south road will be repaved from the South Gate to the Lower Shops Parking Area.														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Reliability/Redundancy Asset Life Extension		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
Prop 218 Planning (2018)		CIP No. 53												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
						0.19	0.20					<b>Design</b>	\$18,000	
												<b>Construction</b>	\$368,000	27
<b>Total Capital Improvement Cost</b>												\$386,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
This project is scheduled to occur after the Lower Shops Improvements.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANKS ASSET MANAGEMENT PROGRAM		
<b>Project Code:</b>	TNKSWR	<b>Asset Owner/Dept:</b>	Ops, Pumps
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Pumps HM

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project implements an ongoing water and sewer tank management program, including dry inspections/repairs on a five-year cycle. Program will be deployed by HM/Pumps with support from Engineering to hire contractors for more substantial repairs (ie., coating touchup in headspace).

## Need for Project

Asset Life Extension	Increased Planned Maintenance
Asset Management	

## Reference Document

Prop 218 Planning (2018)	CIP No. 54
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$139,000	ALL
						0.05	0.03	0.03					
<b>Total Capital Improvement Cost</b>												<b>\$139,000</b>	

**Funding Source:** TBD

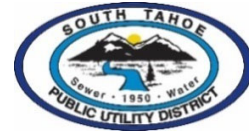
## Project Location and Photos

Tank Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
1 Flagpole Tank 2	DRY		COAT	WARRANTY		DIVE			DIVE		DRY			DIVE		DRY			DIVE		
2 Ironquois Tank 1	DRY			DIVE		DRY		COAT	WARRANTY		DIVE			DIVE		DRY			DIVE		
3 H Street Tank	DRY			DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE			DIVE		
4 Lookout Tank									DIVE		DRY			DIVE		DRY			COAT	WARRANTY	
5 Stateline Tank 2		DRY		COAT	WARRANTY		DIVE			COAT	WARRANTY		DRY		DIVE		DRY			DIVE	
6 Angora Tank		DRY		DIVE		DRY			COAT	WARRANTY		DRY			DIVE		DRY		DIVE		
7 Ironquois Tank 2		DRY		DIVE		DRY			COAT	WARRANTY		DRY			DIVE		DRY		DIVE		
8 Flagpole Tank 1		DIVE							DIVE		DRY			DIVE		DRY			COAT	WARRANTY	
9 Stateline Tank 1	DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY			DIVE		DRY		DRY		
10 Echo View Tank	DIVE		DRY		DIVE		DRY		DRY	WARRANTY		DIVE			DIVE		DRY		DRY		
11 Gardner Mtn Tank 2	DIVE		DRY		DIVE		DRY		COAT	WARRANTY		DIVE			DIVE		DRY		DIVE		
12 Keller Tank	WARRANTY		DIVE		DIVE		DRY		DRY		DIVE			DRY		DIVE			DRY	COAT	
13 Gardner Mtn Tank 1		DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY			DIVE			DIVE		
14 Forest Mtn Tank		DIVE		DRY		DIVE		DRY		DRY		COAT	WARRANTY		DIVE		DRY		DIVE		
15 Christmas Valley Tank		DIVE		DRY		DIVE		DRY		DRY		COAT	WARRANTY		DIVE		DRY		DIVE		
16 Arrowhead Tank			DIVE		DRY		COAT	WARRANTY		DIVE		DRY		DIVE		DRY			DIVE	DRY	
17 Country Club Tank			DIVE		DRY		DRY		DIVE		DRY		COAT	WARRANTY		DIVE			DIVE	DRY	
18 Cold Creek Tank			DIVE		DRY		DIVE		DIVE		DRY		DIVE		DRY		COAT	WARRANTY	DIVE	DRY	
19 Heavenly Tank			DIVE		DRY		DIVE		DIVE		DRY		DIVE		DRY		COAT	WARRANTY	DIVE	DRY	
20 Luther Tank 2		COAT	WARRANTY				DRY				DRY						DRY		COAT	DRY	
21 Luther Tank 1			COAT	WARRANTY				DRY			DRY						DRY			DRY	
22 WWTP Backwash Tank		DRY				DRY				DRY			COAT	WARRANTY						DRY	
23 WWTP Sludge Storage Tank		DRY				DRY				DRY			COAT	WARRANTY						DRY	
Annual Cost of Maintenance (Water)	\$68,000	\$68,000	\$70,000	\$66,000	\$86,000	\$68,000	\$66,000	\$68,000	\$48,000	\$68,000	\$66,000	\$68,000	\$68,000	\$48,000	\$68,000	\$68,000	\$68,000	\$68,000	\$68,000	\$48,000	\$68,000
Annual Cost of Maintenance (Sewer)	\$40,000	\$0	\$0	\$0	\$0	\$40,000	\$20,000	\$20,000	\$0	\$40,000	\$20,000	\$20,000	\$20,000	\$0	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$0

## Comments

Funds will be transferred to Pumps and HM for implementation.

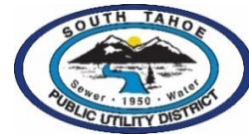
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> WWTP ELECTRICAL SUBMETERING														
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> Ops													
<b>Project Contact:</b> Brent Goligoski	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project installs or replaces power meters on major processes within the WWTP (such as Final/Secondary Pumps, Bio Building, etc), which have no larger projects included in the Ten-Year Plan, and brings pertinent information from all sub-meters into SCADA and the Historian for reporting. This project will be implemented in conjunction with the Blower Systems Improvements Project.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Replacement/End-of-Life Reliability/Redundancy	Reduced Reactionary Maintenance													
<b>Reference Document</b>														
Prop 218 Planning (2018)	CIP No. 55													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
			0.06	0.06										
<b>Total Capital Improvement Cost</b>												\$114,000	24	
<b>Funding Source:</b> TBD														
<b>Project Location and Photos</b>														
<b>Comments</b>														
<p>Project is scheduled to be constructed with WWTP Fire Alarm System Standardization and Blower System Improvements for economy of scale.</p>														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	OPS AND SERVER ROOM HVAC UPGRADES		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project corrects a known issue with the Ops Buildin HVAC system, which is located above the SCADA Server Room and requires a water connection. A prior incident with the HVAC resulted in a flood in the Server Room. The scope of the project is to relocate the rooftop HVAC system, and to provide ventilation protection systems within the Server Room.</p>	

Need for Project	Operation and Maintenance Impacts
Safety Reliability/Redundancy	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning			CIP No. 56
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	Design	Construction
	0.10												
												\$103,000	21
<b>Total Capital Improvement Cost</b>												\$103,000	

**Funding Source:** Capital

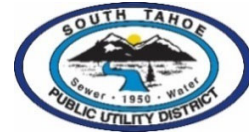
### Project Location and Photos



### Comments

Project is scheduled to construct with the Admin HVAC and the Bio Building HVAC for economy of scale.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BIO BUILDING HVAC UPGRADES		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The existing HVAC System was installed in 2004 with a control system that is no longer supported. The proposed scope of work converts the system to a basic, manually operated system for simplicity and reliability since the spaces aren't occupied full time.</p>	

Need for Project	Operation and Maintenance Impacts
Safety Reliability/Redundancy	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning			CIP No. 57
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	Design	Construction
	0.03												
												\$31,000	21
<b>Total Capital Improvement Cost</b>												\$31,000	

**Funding Source:** Capital

### Project Location and Photos



### Comments

Project is scheduled to construct with the Ops and Server Room HVAC and Admin HVAC for economy of scale.

**WATER**

South Tahoe Public Utility District  
Capital Improvement Program  
**NEEDS-BASED PLAN**

WATER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
1	WATER SYSTEM UNPLANNED REPAIRS	21	500,000	500,000										500,000
2	HEAVENLY TANK COATING/IMPROVEMENTS	23	155,000		164,000									164,000
3	KELLER-HEAVENLY ZONE IMPROVEMENTS (3)	21 and 22	279,000	1,979,000	1,442,000	1,114,000								4,535,000
4	METERS - CLEANUP	21 to 24		397,000	408,000	421,000	433,000							1,659,000
5	LEAK DETECTION	ALL		77,000	80,000	82,000	84,000	87,000	90,000	92,000	95,000	98,000	101,000	809,000
6	CATHODIC PROTECTION ON WATER SERVICES (PHASE 1)	23			80,000	554,000								554,000
	WATER CROSSINGS ASSESSMENT	N/A		52,000	53,000									0
	STATELINE ZONE CAPACITY IMPROVEMENTS	N/A		106,000										0
7	ROCKY POINT #1 WATERLINE	21	923,000	947,000										947,000
8	REPLACE SUSQUEHANNA PRV	21	170,000	175,000										175,000
9	REPLACE PRICE ROAD PRV	21	170,000	175,000										175,000
10	CORNELIAN WATERLINE INSTALLATION	21		126,000										126,000
11	VALVE AND FIRE HYDRANT REPLACEMENTS	ALL		339,000	349,000	359,000	370,000	381,000	393,000	404,000	417,000	429,000	442,000	3,544,000
12	AMI TOWER REPLACEMENT	25 TO 27					29,000	60,000	61,000	32,000				182,000
13	FUTURE HYDRANTS	24				969,000	998,000							1,967,000
14	BOWERS WATERLINE	22		1,302,000	1,341,000									2,643,000
15	BIJOU #2 AND #3 WATERLINE	22		851,000	876,000									1,727,000
16	BLACK BART #1 AND #2 WATERLINE	23		52,000	1,578,000	1,625,000								3,255,000
17	FLAGPOLE FCV TO ARROWHEAD	27							63,000	65,000				128,000
18	GLENWOOD RANCHO WATERLINE	25					2,433,000	2,506,000						4,939,000
19	HERBERT WALKUP WATERLINE	23		52,000	2,071,000	2,134,000								4,257,000
20	LTB WATERLINE	24				1,404,000	1,446,000							2,850,000
	ANGORA CREEK WATERLINE	26						2,078,000	2,140,000					4,218,000
	CLEARVIEW MOUNTAIN MEADOW WATERLINE	27							1,909,000	1,966,000				3,875,000
	TAHOE MTN WL REPLACEMENT	31											1,121,000	1,121,000
21	APACHE AVE WL IMPROVEMENTS	23		52,000	428,000	441,000								921,000
22	BIJOU #1 WATERLINE	25					1,226,000	1,263,000						2,489,000
23	GARDNER MOUNTAIN #2 WATERLINE	26						852,000	878,000					1,730,000
24	GARDNER MOUNTAIN #4 WATERLINE	26						865,000	891,000					1,756,000
25	WILDWOOD #3 WATERLINE	27							1,103,000	1,136,000				2,239,000
26	WILDWOOD #5 (+PRV) WATERLINE	27							886,000	912,000				1,798,000
	SIERRA TRACT #2 WATERLINE	28								1,168,000	1,203,000			2,371,000
	SIERRA TRACT PROJECT M WATERLINE	28								1,843,000	1,899,000			3,742,000
	PALMIRA WL REPLACEMENT	28								351,000	362,000			713,000
	BIJOU #4 WATERLINE	28								2,092,000	2,155,000			4,247,000
	WILDWOOD #2 WATERLINE	29									1,128,000	1,162,000		2,290,000
	MEYERS #1 WATERLINE	28								221,000	227,000			448,000
	WILDWOOD #1 WATERLINE	29									1,103,000	1,136,000		2,239,000
	GARDNER MOUNTAIN #3 WATERLINE	30										1,158,000	1,193,000	2,351,000
	GARDNER MOUNTAIN #1 WATERLINE	30										1,081,000	1,113,000	2,194,000
27	PIONEER TRAIL WATERLINE - GOLDEN BEAR TO PINE VALLEY	24		103,000		1,208,000	1,500,000							2,811,000
28	REPLACE PT/MARSHALL AND PT/KOKANEE PRV	24				300,000	310,000							610,000
29	NEW PRV AT WASHOAN-NADOWA	24				169,000	174,000							343,000
30	NEW PRV AT JICARILLA/PT (SUSQ ZONE)	24				169,000	174,000							343,000
31	UTR MEYERS WATERLINE RELIABILITY IMPROVEMENTS	22	64,000		233,000									233,000
32	REGINA/DONNER WATERLINE	24				78,000	80,000							158,000
33	REPLACE NEEDLE PEAK #5 PRV	24				186,000	191,000							377,000
	ELECTRICAL IMPROVEMENTS AT 16 SITES	N/A		198,000										0
	SCADA UPGRADES	ALL	11,000	11,000										0



South Tahoe Public Utility District  
Capital Improvement Program  
**NEEDS-BASED PLAN**

WATER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
34	FIELD COMMUNICATION UPGRADES PHASE 2	21	128,000	132,000										132,000
35	FIELD COMMUNICATION UPGRADES PHASE 3	22		150,000	155,000									305,000
36	GENERATORS AT KELLER AND PALOMA	22			393,000									393,000
37	UPPER MONTGOMERY BOOSTER, FIRE PUMP, WATERLINE (1)	25				113,000	725,000	747,000						1,585,000
38	H STREET ZONE BOOSTER, FIRE PUMP	25				113,000	598,000	616,000						1,327,000
39	REPLACE AL TAHOE WELL	24			109,000	527,000	543,000							1,179,000
40	KELLER BOOSTER UPGRADES	24			55,000	123,000	126,000							304,000
	CORNELIAN FIRE PUMP	27							154,000	317,000	326,000			797,000
	DAVID LANE BOOSTER IMPROVEMENTS, GEN CONNECT	28								359,000	370,000			729,000
41	WELL TESTING, INSPECTION AND REHABILITATION PROGRAM	ALL		25,000	25,000	26,000	27,000	28,000	29,000	30,000	30,000	31,000	32,000	258,000
42	WATER BOOSTER STATION AND WELL MONITORING	26+						523,000	538,000	130,000	134,000	138,000	143,000	1,606,000
43	TANKS BACKUP POWER	21	166,000	171,000										171,000
	WATER EFFICIENCY IMPROVEMENTS	26						514,000	530,000					1,044,000
	WATER LOSS TRACKING (STATELINE DMAS)	24				908,000	935,000							1,843,000
44	TANK COATINGS (STATELINE NO. 1)	25					351,000	361,000						712,000
45	TANK COATINGS (GARDNER NO. 1)	26						181,000	186,000					367,000
46	TANK COATINGS (STATELINE NO.2)	24				428,000	440,000							868,000
47	TANK COATINGS (FLAGPOLE NO. 2)	22		123,000	126,000									249,000
48	TANK COATINGS (ARROWHEAD)	27							336,000	347,000				683,000
	TANK COATINGS (IROQUOIS 1)	28								202,000	208,000			410,000
	TANK COATINGS (ANGORA)	29									206,000	212,000		418,000
	TANK COATINGS (ECHO VIEW)	30										203,000	209,000	412,000
	TANK COATINGS (FOREST MTN)	31											213,000	213,000
49	TANKS ASSET MANAGEMENT PROGRAM	ALL	36,000	29,000	30,000	66,000	74,000	100,000	81,000	81,000	86,000	63,000	91,000	701,000
50	ELKS CLUB WELL PUMP/MOTOR REPLACEMENT	22		258,000										258,000
51	BAKERSFIELD PUMP/MOTOR REPLACEMENT	23			265,000									265,000
52	MW INSTALLATIONS - STPUD GSA	22			53,000									53,000
53	ADMIN HVAC UPGRADES	21		31,000										31,000

ITAL = Move to 4405 or to Crews (not in totals)

Note: Project # follows Ten-Year Plan.

Projects with no # are not funded on Budget-Based Plan

WATER TOTALS:    7,605,000    10,181,000    13,517,000    13,267,000    11,162,000    10,268,000    11,748,000    9,949,000    5,711,000    4,658,000    98,066,000

SEWER AND WATER TOTALS:    17,005,000    23,990,000    27,189,000    25,377,000    21,577,000    21,150,000    21,307,000    20,171,000    15,333,000    11,722,000    204,821,000

South Tahoe Public Utility District  
Capital Improvement Program  
**BUDGET-BASED PLAN**

WATER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY21	Proposed Budget by Fiscal Year :										10-YR TOTALS	
#	PROJECT			22	23	24	25	26	27	28	29	30	31		
1	WATER SYSTEM UNPLANNED REPAIRS	21	500,000	500,000										500,000	
2	HEAVENLY TANK COATING/IMPROVEMENTS	23	244,531		21,000									21,000	
3	KELLER-HEAVENLY ZONE IMPROVEMENTS (3)	21 and 22	2,063,403	1,531,000	1,082,000									2,613,000	
4	METERS - CLEANUP	21 to 24		534,000	361,000	372,000	383,000							1,650,000	
5	LEAK DETECTION	ALL			80,000	82,000	84,000	87,000	90,000	92,000	95,000	98,000	101,000	809,000	
6	CATHODIC PROTECTION ON WATER SERVICES (PHASE 1)	24			80,000		571,000							651,000	
	WATER CROSSINGS ASSESSMENT	N/A		52,000	53,000									0	
	STATELINE ZONE CAPACITY IMPROVEMENTS	N/A												0	
7	ROCKY POINT #1 WATERLINE	21	1,022,155	722,000										722,000	
8	REPLACE SUSQUEHANNA PRV	21	186,969	91,000										91,000	
9	REPLACE PRICE ROAD PRV	21	186,969	1,000										1,000	
10	CORNELIAN WATERLINE INSTALLATION	21		76,000										76,000	
11	VALVE AND FIRE HYDRANT REPLACEMENTS	ALL	366,000		356,000	367,000	378,000	389,000	401,000	413,000	425,000	438,000	451,000	3,618,000	
12	AMI TOWER REPLACEMENT	25 TO 27					29,000	60,000	61,000	32,000				182,000	
13	FUTURE HYDRANTS	26						1,028,000	1,059,000					2,087,000	
14	BOWERS WATERLINE	22	49,177	1,302,000	1,341,000									2,643,000	
15	BIJOU #2 AND #3 WATERLINE	22		851,000	876,000									1,727,000	
16	BLACK BART #1 AND #2 WATERLINE	23	49,205		1,578,000	1,626,000								3,204,000	
17	FLAGPOLE FCV TO ARROWHEAD	27							63,000	65,000				128,000	
18	GLENWOOD RANCHO WATERLINE	26						2,506,000	2,581,000					5,087,000	
19	HERBERT WALKUP WATERLINE	25		52,000			2,198,000	2,263,000						4,513,000	
20	LTB WATERLINE	27									1,628,000	1,676,000		3,304,000	
	ANGORA CREEK WATERLINE	TBD												0	
	CLEARVIEW MOUNTAIN MEADOW WATERLINE	TBD												0	
	TAHOE MTN WL REPLACEMENT	TBD												0	
21	APACHE AVE WL IMPROVEMENTS	23		52,000	428,000	441,000								921,000	
22	BIJOU #1 WATERLINE	28								1,340,000	1,380,000			2,720,000	
23	GARDNER MOUNTAIN #2 WATERLINE	28								904,000	931,000			1,835,000	
24	GARDNER MOUNTAIN #4 WATERLINE	28								918,000	946,000			1,864,000	
25	WILDWOOD #3 WATERLINE	29											1,205,000	1,242,000	2,447,000
26	WILDWOOD #5 (+PRV) WATERLINE	29											968,000	997,000	1,965,000
	SIERRA TRACT #2 WATERLINE	31												0	
	SIERRA TRACT PROJECT M WATERLINE	30												0	
	PALMIRA WL REPLACEMENT	31												0	
	BIJOU #4 WATERLINE	TBD												0	
	WILDWOOD #2 WATERLINE	TBD												0	
	MEYERS #1 WATERLINE	TBD												0	
	WILDWOOD #1 WATERLINE	TBD												0	
	GARDNER MOUNTAIN #3 WATERLINE	TBD												0	
	GARDNER MOUNTAIN #1 WATERLINE	TBD												0	
27	PIONEER TRAIL WATERLINE - GOLDEN BEAR TO PINE VALLEY	24		52,000		1,235,000	1,528,000							2,815,000	
28	REPLACE PT/MARSHALL AND PT/KOKANEE PRV	24				300,000	310,000							610,000	
29	NEW PRV AT WASHOAN-NADOWA	24				169,000	174,000							343,000	
30	NEW PRV AT JICARILLA/PT (SUSQ ZONE)	24				169,000	174,000							343,000	
31	UTR MEYERS WATERLINE RELIABILITY IMPROVEMENTS	22	64,000		233,000									233,000	
32	REGINA/DONNER WATERLINE	25					80,000	83,000						163,000	
33	REPLACE NEEDLE PEAK #5 PRV	25					191,000	197,000						388,000	

South Tahoe Public Utility District  
Capital Improvement Program  
**BUDGET-BASED PLAN**

WATER ENGINEERING -- 10YR CIP		Calendar Year Planned for Construction	Current Budget FY21	Proposed Budget by Fiscal Year :										10-YR TOTALS
#	PROJECT			22	23	24	25	26	27	28	29	30	31	
	ELECTRICAL IMPROVEMENTS AT 16 SITES	N/A		198,000										0
	SCADA UPGRADES	ALL	11,000	11,000										0
34	FIELD COMMUNICATION UPGRADES PHASE 2	21	128,000	132,000										132,000
35	FIELD COMMUNICATION UPGRADES PHASE 3	22		150,000	155,000									305,000
36	GENERATORS AT KELLER AND PALOMA	22			393,000									393,000
37	UPPER MONTGOMERY BOOSTER, FIRE PUMP, WATERLINE (1)	26					116,000	747,000	769,000					1,632,000
38	H STREET ZONE BOOSTER, FIRE PUMP	26					116,000	616,000	634,000					1,366,000
39	AL TAHOE WELL REHABILITATION	25				113,000	543,000	560,000						1,216,000
40	KELLER BOOSTER UPGRADES	25				56,000	126,000	130,000						312,000
	CORNELIAN FIRE PUMP	TBD												0
	DAVID LANE BOOSTER IMPROVEMENTS, GEN CONNECT	TBD												0
41	WELL TESTING, INSPECTION AND REHABILITATION PROGRAM	ALL		25,000	25,000	26,000	27,000	28,000	29,000	30,000	30,000	31,000	32,000	258,000
42	WATER BOOSTER STATION AND WELL MONITORING	26+						523,000	538,000	130,000	134,000	138,000	143,000	1,606,000
43	TANKS BACKUP POWER	21	166,000	171,000										171,000
	WATER EFFICIENCY IMPROVEMENTS	TBD												0
	WATER LOSS TRACKING (STATELINE DMAS)	TBD												0
44	TANK COATINGS (STATELINE NO. 1)	25					351,000	361,000						712,000
45	TANK COATINGS (GARDNER NO. 1)	26						181,000	186,000					367,000
46	TANK COATINGS (STATELINE NO.2)	24				428,000	440,000							868,000
47	TANK COATINGS (FLAGPOLE NO. 2)	23					126,000	130,000						256,000
48	TANK COATINGS (ARROWHEAD)	28								347,000	357,000			704,000
	TANK COATINGS (IROQUOIS 1)	TBD												0
	TANK COATINGS (ANGORA)	TBD												0
	TANK COATINGS (ECHO VIEW)	TBD												0
	TANK COATINGS (FOREST MTN)	TBD												0
49	TANKS ASSET MANAGEMENT PROGRAM	ALL	36,000	29,000	30,000	66,000	74,000	100,000	81,000	81,000	86,000	63,000	91,000	672,000
50	ELKS CLUB WELL PUMP/MOTOR REPLACEMENT	22		258,000										258,000
51	BAKERSFIELD PUMP/MOTOR REPLACEMENT	23			265,000									265,000
52	MW INSTALLATIONS - STPUD GSA	22			53,000									53,000
53	ADMIN HVAC UPGRADES	21		31,000										31,000

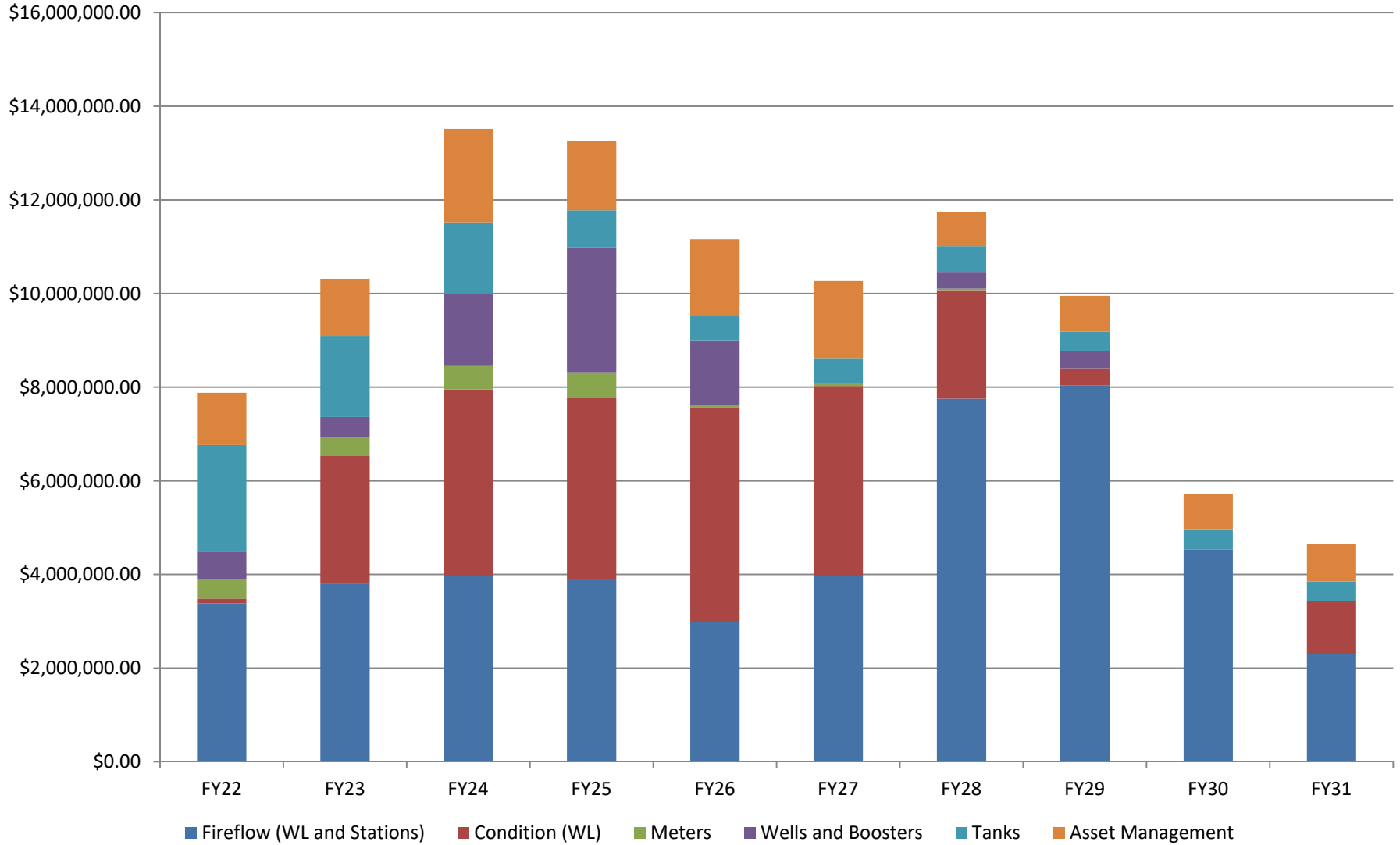
ITAL = Move to 4405 or to Crews (not in totals)

Note: Project # follows Ten-Year Plan.

Projects with no # are not funded on Budget-Based Plan

WATER TOTALS:	6,506,000	7,483,000	5,580,000	7,893,000	9,859,000	6,492,000	4,352,000	6,012,000	4,617,000	3,057,000	61,851,000
SEWER AND WATER TOTALS:	15,275,000	16,094,000	13,270,000	14,078,000	16,142,000	13,428,000	11,475,000	16,017,000	11,521,000	10,490,000	137,718,000

# South Tahoe Public Utility District Water Fund - Engineering CIP Needs-Based Plan





# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary Index



Pg. No.	Project Name
1	WATER SYSTEM UNPLANNED REPAIRS
2	HEAVENLY TANK COATING/IMPROVEMENTS
3	KELLER-HEAVENLY ZONE IMPROVEMENTS (3)
4	METERS - CLEANUP
5	LEAK DETECTION
6	CATHODIC PROTECTION ON WATER SERVICES (PHASE 1)
7	WATER CROSSINGS CONDITION ASSESSMENT
8	STATELINE ZONE CAPACITY IMPROVEMENTS
9	ROCKY POINT #1 WATERLINE
10	REPLACE SUSQUEHANNA PRV
11	REPLACE PRICE ROAD PRV
12	CORNELIAN WATERLINE INSTALLATION
13	VALVE AND FIRE HYDRANT REPLACEMENTS
14	AMI TOWER REPLACEMENT
15	FUTURE HYDRANTS
16	BOWERS WATERLINE
17	BIJOU #2 AND #3 WATERLINE
18	BLACK BART #1 AND #2 WATERLINE
19	FLAGPOLE FCV TO ARROWHEAD
20	GLENWOOD RANCHO WATERLINE
21	HERBERT WALKUP WATERLINE
22	LTB WATERLINE
23	ANGORA CREEK WATERLINE
24	CLEARVIEW MOUNTAIN MEADOW WATERLINE
25	TAHOE MTN WL REPLACEMENT
26	APACHE AVE WL IMPROVEMENTS
27	BIJOU #1 WATERLINE
28	GARDNER MOUNTAIN #2 WATERLINE
29	GARDNER MOUNTAIN #4 WATERLINE
30	WILDWOOD #3 WATERLINE
31	WILDWOOD #5 (+PRV) WATERLINE
32	SIERRA TRACT #2 WATERLINE
33	SIERRA TRACT PROJECT M WATERLINE
34	PALMIRA WL REPLACEMENT
35	BIJOU #4 WATERLINE

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary Index



Pg. No.	Project Name
36	WILDWOOD #2 WATERLINE
37	MEYERS #1 WATERLINE
38	WILDWOOD #1 WATERLINE
39	GARDNER MOUNTAIN #3 WATERLINE
40	GARDNER MOUNTAIN #1 WATERLINE
41	PIONEER TRAIL WATERLINE - GOLDEN BEAR TO PINE VALLEY
42	REPLACE PT/MARSHALL AND PT/KOKANEE PRV
43	NEW PRV AT WASHOAN-NADOWA
44	NEW PRV AT JICARILLA/PT (SUSQ ZONE)
45	UTR MEYERS WATERLINE RELIABILITY IMPROVEMENTS
46	REGINA/DONNER WATERLINE
47	REPLACE NEEDLE PEAK #5 PRV
48	ELECTRICAL IMPROVEMENTS AT 16 SITES
49	FIELD COMMUNICATION UPGRADES PHASE 2
50	FIELD COMMUNICATION UPGRADES PHASE 3
51	GENERATORS AT KELLER AND PALOMA
52	UPPER MONTGOMERY BOOSTER, FIRE PUMP, WATERLINE (1)
53	H STREET ZONE BOOSTER, FIRE PUMP
54	AL TAHOE WELL REHABILITATION
55	KELLER BOOSTER UPGRADES
56	CORNELIAN FIRE PUMP
57	DAVID LANE BOOSTER IMPROVEMENTS, GEN CONNECT
58	WELL TESTING, INSPECTION AND REHABILITATION PROGRAM
59	WATER BOOSTER STATION AND WELL MONITORING
60	TANKS BACKUP POWER
61	WATER EFFICIENCY IMPROVEMENTS
62	WATER LOSS TRACKING (STATELINE DMAS)
63	TANK COATINGS (STATELINE NO. 1)
64	TANK COATINGS (GARDNER NO. 1)
65	TANK COATINGS (STATELINE NO. 2)
66	TANK COATINGS (FLAGPOLE NO. 2)
67	TANK COATINGS (ARROWHEAD)
68	TANK COATINGS (IROQUOIS NO. 1)
69	TANK COATINGS (ANGORA)
70	TANK COATINGS (ECHO VIEW)

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary Index



Pg. No. Project Name

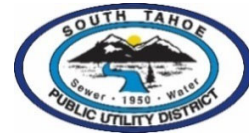
71	TANK COATINGS (FOREST MTN)
72	TANKS ASSET MANAGEMENT PROGRAM
73	ELKS CLUB WELL PUMP/MOTOR REPLACEMENT
74	BAKERSFIELD PUMP/MOTOR REPLACEMENT
75	MW INSTALLATIONS - STPUD GSA
76	ADMIN HVAC UPGRADES

South Tahoe Public Utility District  
Capital Improvement Program  
Key to Interpreting Project Sheets

Key Project Information	Project Name	The project name matches the names used in the District's Ten-Year Plan, as well as the Engineering Department's Needs-Based and Budget-Based Plans.
	Project Code	The project code is assigned by Accounting to track project labor and expenses. Projects that have not yet commenced will have a "0" in this field.
	Project Contact	The project contact is the Engineering Staff taking assigned to lead the project, as of the date of publication.
	Asset Owner/Dept	The asset owner is the District Department (typically an Operations Department) that is responsible for the ongoing operation and maintenance of the facility being improved by the Project.
	Project Management Dept	The Project Management Department indicates which District Department is taking the lead to implement the project, usually Engineering
Project Description/Benefits	Project Status	One of three status options is assigned: <ul style="list-style-type: none"> <li>• "In Progress" – the Project has been budgeted in a past year, but is incomplete. Funds will be rolled forward to complete the work.</li> <li>• "10-yr Plan" – the Project is listed in the Budget-Based and Needs-Based Ten-Year Plans.</li> <li>• "Unconstrained" –the Project is either not urgent or is currently too poorly defined to develop even a conceptual level cost estimate. These projects are NOT included on the Ten-Year Plans and have NOT been included in CIP Annual Plan Update.</li> </ul>
	Project Summary	The Project Summary describes the scope of the project for budgeting purposes, and provides more detail on the need for the project.
	Need for Project	This section identifies one or more drivers for the project, selected from a menu of common drivers. These drivers have been developed from the criteria the District has adopted as its targeted <u>Levels of Service</u> for the systems.
	O&M Impacts	This section lists the expected impacts to Operations associated with implementing the Project. Workload may be decreased or increased in the future as a result of the Project.
References	Reference Document	This section identifies how the project was conceived. If the Project was recommended in a formal document prepared for the District, it is identified, along with the document year and any associated project number. If the Project was identified through the annual CIP planning process or other internal process, that is also indicated.
	CIP Project Number	The CIP Project Number is the project number assigned by Finance on the District's current Ten-Year Plan. These id numbers are also used on the Engineering Department's Budget-Based and Needs-Based Plans. If the Project has not been budgeted, there will be no CIP Project Number assigned and this entry will be blank.
Project Funding	Capital Improvement Expenditures	This area of the sheet presents the years and amounts that have been budgeted for the Project. Values have been taken directly from the Engineering Budget-Based Plan, which matches the District's Ten-Year Plan.
	Total Project Costs	This area of the sheet indicates the planning level cost estimates (and years) for the Planning, Design and Construction phases. If the Project is already partly completed or will be completed more than 10 years out, these values may exceed the amounts shown in the Capital Improvement Expenditures. Costs presented are future value (based on 3% per year increase in project costs from a current year project cost estimate. If the Project is not funded in the District's current Ten-Year Plan, it is assumed to be implemented in Year 11 and uses Year 11 future value.
	Funding Source	The Funding Source identifies secured and pending outside funding sources, if any; if no outside funding sources are expected for the Project, then this section will indicate "Capital" for funding of projects included in the Budget-Based Plan. If the Project is not funded on the Budget-Based Plan, then the Funding Source will be identified as "TBD".
Other Information	Project Location and Photos	This area of the sheet provides relevant photographs, maps and other illustrations to help describe the Project.
	Comments	This area of the sheet provides supplemental information regarding the recommended implementation of the Project.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER SYSTEM UNPLANNED REPAIRS		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Various
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	In Progress
<p>This fund is a rolling fund to ensure funding is available for any unforeseen Water emergencies. This money could be used for in house costs or contactor billing.</p>	

Need for Project	Operation and Maintenance Impacts
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Emergency Response	
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### Reference Document

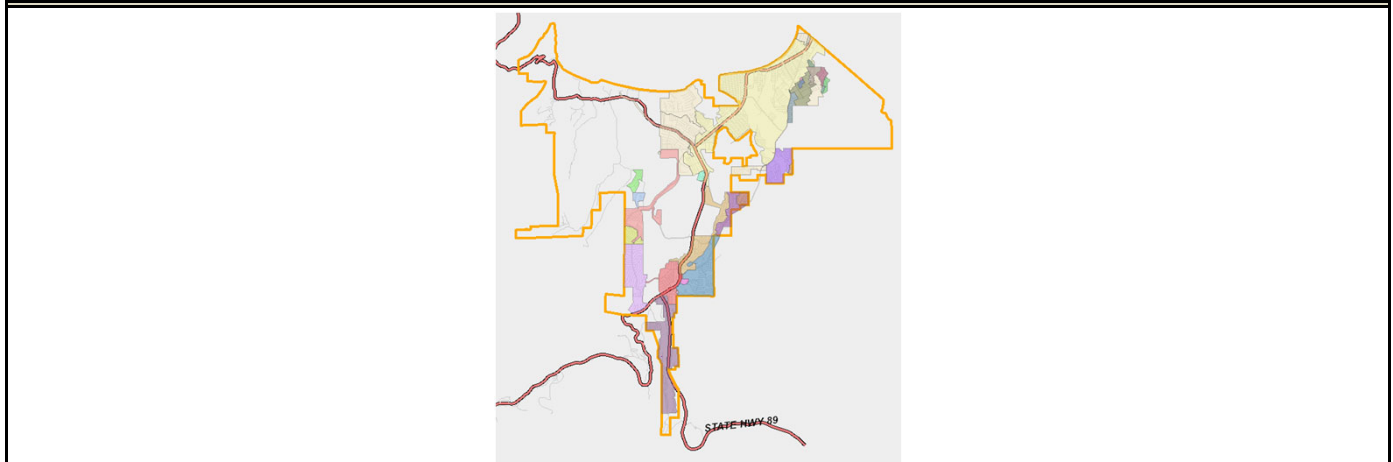
19-20 CIP Planning			CIP No. 1
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$500,000	21
0.50	0.50												
<b>Total Capital Improvement Cost</b>													

**Funding Source:** Capital

### Project Location and Photos



### Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	HEAVENLY TANK COATING/IMPROVEMENTS		
<b>Project Code:</b>	HVNTNK	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

The tank interior was coated and site stabilization measures were installed in 2019, but the tank exterior was removed from the contract, due to the onset of winter, to be rebid at a later date. Tank exterior coating is in poorer condition than 2019 bid documents accounted for, so more extensive repairs are required. Tank was dive inspected in 2006 and recommended for full interior coating replacement, but no exterior coating was recommended at that time.

Need for Project	Operation and Maintenance Impacts
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Asset Life Extension	
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### Reference Document

Tank Coatings Evaluation			CIP No. 2
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
0.24		0.02									Design	\$21,000	
											Construction	\$245,000	
<b>Total Capital Improvement Cost</b>												\$266,000	23

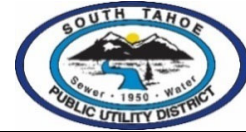
**Funding Source:** Capital

### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> KELLER-HEAVENLY ZONE IMPROVEMENTS (3)													
<b>Project Code:</b> 15W007	<b>Asset Owner/Dept:</b> Pumps												
<b>Project Contact:</b> Trevor Coolidge	<b>Project Management Dept:</b> Eng												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>The Keller Water System provides water to the area adjacent to and above the California Lodge at the Heavenly Ski Resort. The service area includes both resort and residential properties with a Wildland Urban Interface area. The Keller-Heavenly Water System Improvements Project includes upsizing of water mains, replacement and instrumentation of PRVs and vaults, communication upgrades, and replacement of the Keller water tanks. Stabilization of the mountainside is also a key project element. Project will be constructed in 3 phases over 2-3 years.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
Safety	Safety Improvements												
Asset Life Extension	Addition of Assets												
<b>Reference Document</b>													
Water System Optimization Plan (WSOP)	Project No. A9 CIP No. 3												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>													
		<b>Total</b>	<b>Year</b>										
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		
2.06	1.53	1.08									<b>Design</b>	\$261,000	19
											<b>Construction</b>	\$4,415,000	21 and 22
<b>Total Capital Improvement Cost</b>												\$4,676,000	
<b>Funding Source:</b> SRF													
<b>Project Location and Photos</b>													
<b>Comments</b>													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>METERS - CLEANUP</b>		
<b>Project Code:</b>	METER6	<b>Asset Owner/Dept:</b>	CS, URW
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Over a period of 5 years from 2021 to 2025, this project will install approximately 110 remaining meters into the distribution system system. The remaining meters were skipped during the past meter project, due to their complexity. These locations will be tackled a few at a time, primarily as add-ons to other larger CIP projects. The State of California requires that all services be metered by 2025.

Need for Project	Operation and Maintenance Impacts
System Efficiency Regulatory Mandate	Addition of Assets Increase Planned Maintenance

## Reference Document

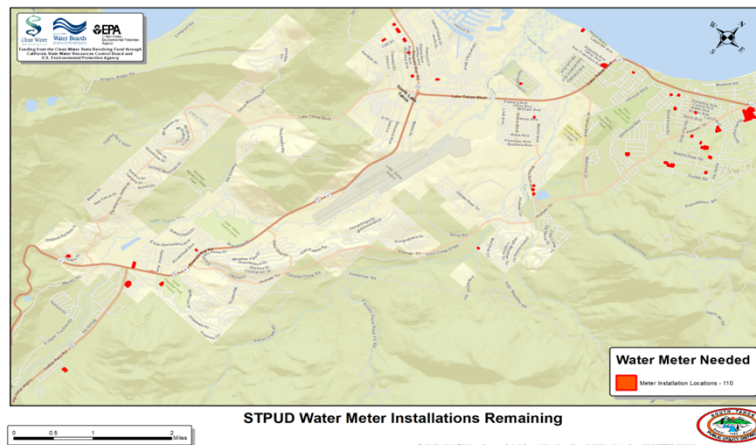
20-21 CIP Planning	CIP No. 4
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
	0.53	0.36	0.37	0.38							Planning Design	\$166,000
											Construction	\$1,484,000
<b>Total Capital Improvement Cost</b>											\$1,650,000	21 to 24

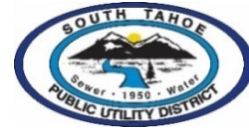
**Funding Source:** Capital

## Project Location and Photos



## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LEAK DETECTION		
<b>Project Code:</b>	AMWATR	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	URW Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project provides an annual funding mechanism for implementing leak detection monitoring, based on the State's expectation of annual costs for a leak detection program of a system of this size. As of 2021, the scope of the program is in development, but is expected to include a combination of satellite and acoustic leak detection, and possible real-time monitoring of critical waterlines, with full system assessment on a bi-annual basis. Annually, the funds will be distributed between URW and ENG O&M budgets for program implementation. Once the program is rolling and the O&M budgets reflect the costs from year-to-year, this program will be removed from the CIP.

Need for Project	Operation and Maintenance Impacts
Regulatory Mandate	Increase Planned Maintenance
System Efficiency	Reduced Reactionary Maintenance
Asset Management	
Funding Opportunity	

## Reference Document

Water System Optimization Plan (WSOP)	Project No. A1	CIP No. 5
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$809,000	ALL	
		0.08	0.08	0.08	0.09	0.09	0.09	0.10	0.10	0.10				
<b>Total Capital Improvement Cost</b>												\$809,000		

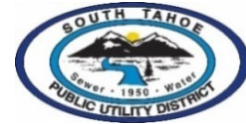
**Funding Source:** EDWA (Planning)

## Project Location and Photos

## Comments



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> CATHODIC PROTECTION ON WATER SERVICES (PHASE 1)														
<b>Project Code:</b> ANODE2	<b>Asset Owner/Dept:</b> URW													
<b>Project Contact:</b> Steve Caswell	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b>	10-yr Plan													
Approximately 54% (135 mi) of the 250 miles of water main in the STPUD system is steel. Assume 2/3 of the steel pipe is in condition that could be improved with cathodic protection. This project improves the first 3 miles of pipe (~111 customers at \$2000/each plus 28 test stations @ \$6K/ea), as a pilot program.														
<b>Need for Project</b>														
Asset Life Extension Funding Opportunity	<b>Operation and Maintenance Impacts</b> Reduced Reactionary Maintenance													
<b>Reference Document</b>														
Other	CIP No. 6													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>														
											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
		0.08		0.57									\$80,000	23
													\$571,000	24
<b>Total Capital Improvement Cost</b>												\$651,000		
<b>Funding Source:</b> EDWA (Planning)														
<b>Project Location and Photos</b>														
<b>Comments</b>														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER CROSSINGS CONDITION ASSESSMENT		
<b>Project Code:</b>	WLXINGS	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>The District's potable water facilities cross various creeks at 55 locations identified to date. Because of the potential impact to the waterways, these locations have additional risk and higher consequence if they were to fail. This project's purpose is to catalog and assess the water crossings in the District's service area, develop potential improvements, and prioritize the projects for implementation.</p>	

Need for Project	Operation and Maintenance Impacts
High Consequence of Failure Asset Life Extension	Reduced Reactionary Maintenance

## Reference Document

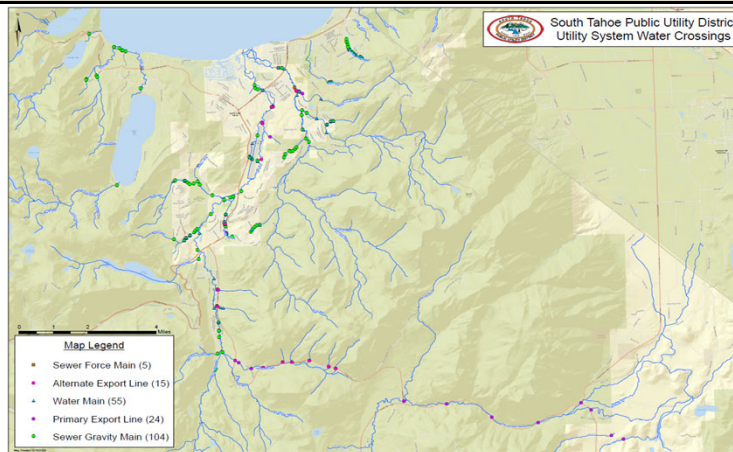
19-20 CIP Planning	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$105,000	N/A	
<b>Total Capital Improvement Cost</b>												\$105,000		

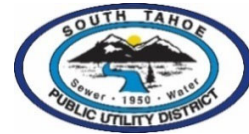
**Funding Source:** Capital

## Project Location and Photos



## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	STATELINE ZONE CAPACITY IMPROVEMENTS		
<b>Project Code:</b>	TKSPLY	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project will assess water shortage and delivery constraints in the area of "the Y", giving consideration to providing supplemental water to Tahoe Keys and Lukins. This is a planning project only, and resulting construction projects will be funded separately.</p>	

Need for Project	Operation and Maintenance Impacts
Capacity/Hydraulic Deficiencies Interagency Coordination	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

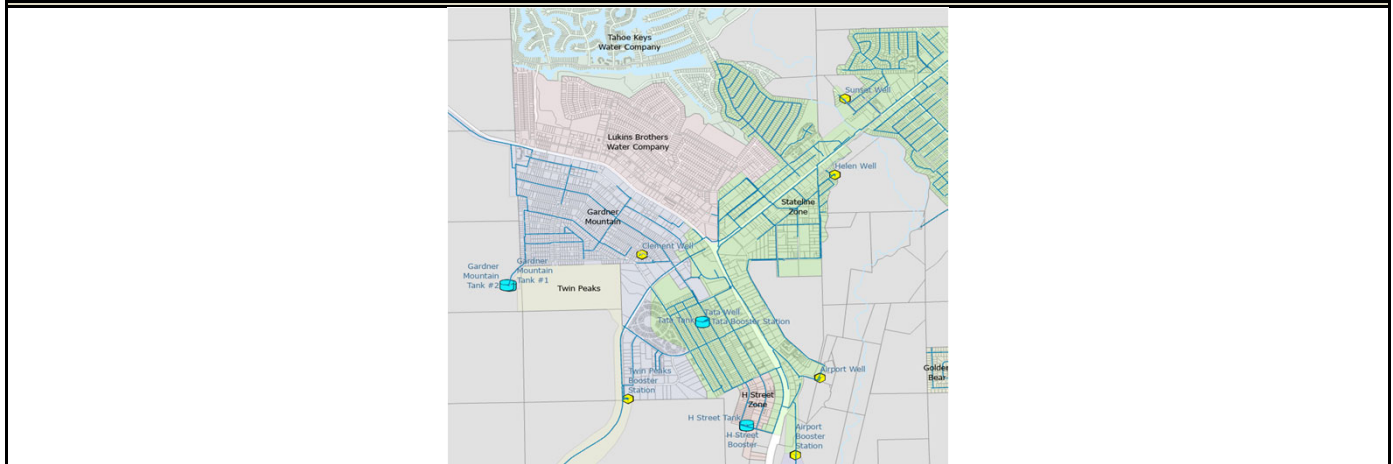
Water System Optimization Plan (WSOP)	Project No. A2	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$106,000	N/A			
<b>Total Capital Improvement Cost</b>														\$106,000		

**Funding Source:** TBD

## Project Location and Photos



## Comments

This condition assessment was budgeted for 2022 on the Needs Based Plan.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	ROCKY POINT #1 WATERLINE		
<b>Project Code:</b>	ROCKY1	<b>Asset Owner/Dept:</b>	Pumps, URW
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The Rocky Point #1 Waterline replacement project addresses undersized pipes, pressure relief and check valve, and deficient hydrant spacing. This project will upsize the pipes and add fire hydrants along Rocky Point Rd. Adds a check valve between Stateline Zone & Rocky Zone, to allow passive flow into Rocky in a fire emergency and relieves pressure in case of overpressurization. It is estimated that this project will replace approximately 4240 L.F. of pipe. Approximately 700 LF of pipeline on Stewart Way will also be replaced and a large meter will be installed to Whispering Pines Apartments. This project ranks 17 out of 39.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Reliability/Redundancy Capacity/Hydraulic Deficiencies Maintenance History	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

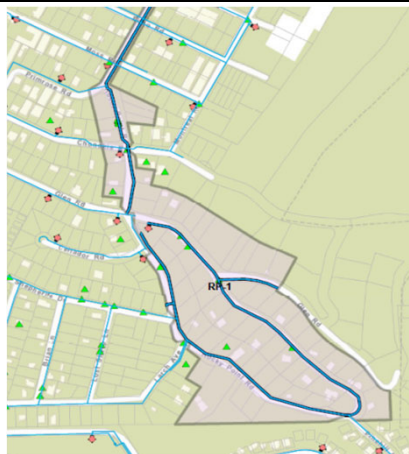
Waterline Prioritization Plan 2018	CIP No. 7
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
1.02	0.72										Planning Design Construction	\$80,000 \$1,664,000	21
<b>Total Capital Improvement Cost</b>											<b>\$1,744,000</b>		

**Funding Source:** SRF, BOR

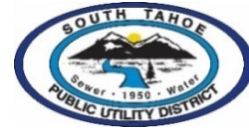
## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	REPLACE SUSQUEHANNA PRV		
<b>Project Code:</b>	PRVSUS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project focuses on replacing the pressure regulating valve at Susquehanna as well as adding instrumentation for data collection and remote control. It is one of multiple PRV improvement projects throughout the District. This PRV is currently the sole source of water delivery to approximately 145 customers. The project will replace internal workings of the PRV Station, but reuse the existing concrete vault.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life System Monitoring/Remote Control Funding Opportunity	Reduced Reactionary Maintenance Improved Alarming/Data Collection Addition of Assets

### Reference Document

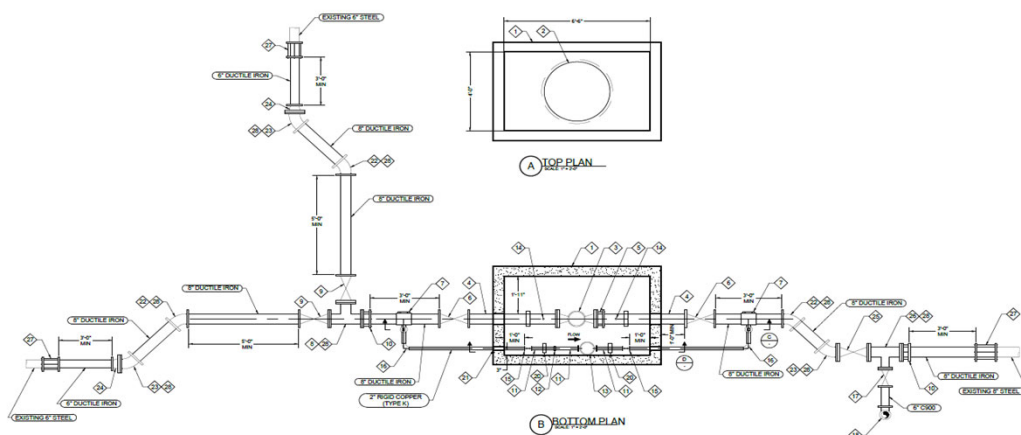
WSOP Condition Assessment	CIP No. 8
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	21		
0.19	0.09												\$36,000	
<b>Total Capital Improvement Cost</b>													\$278,000	

**Funding Source:** BOR

### Project Location and Photos

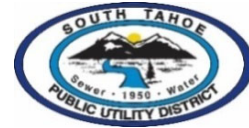


### Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	REPLACE PRICE ROAD PRV		
<b>Project Code:</b>	PRV/PRI	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project focuses on replacing the pressure regulating valve at Price Road as well as adding instrumentation for data collection and remote control. It is one of multiple PRV improvement projects throughout the District. The existing PRV is in a below ground vault, and will be replaced in an above ground enclosure. This eliminates a confined space from the District's field stations. This PRV is currently the sole source water delivery to approximately 125 customers. The project will replace existing below grade, hard-to-access below grade concrete vault, with an above-grade insulated roadside enclosure.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life	Reduced Reactionary Maintenance
System Monitoring/Remote Control	Improved Alarming/Data Collection
System Efficiency	Addition of Assets
Safety	

### Reference Document

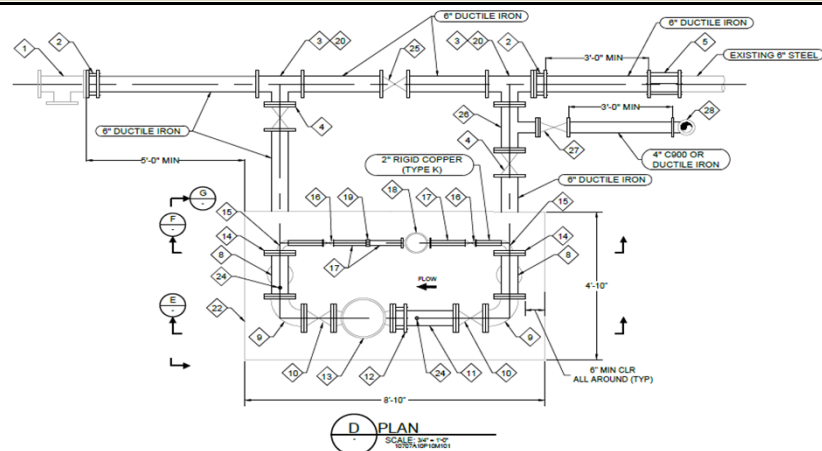
WSOP Condition Assessment	CIP No. 9
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
0.19	0.00										Planning	
											Design	\$36,000
											Construction	\$152,000
<b>Total Capital Improvement Cost</b>											<b>\$188,000</b>	<b>21</b>

**Funding Source:** BOR

### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>CORNELIAN WATERLINE INSTALLATION</b>		
<b>Project Code:</b>	CORNWL	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Install 300 ft of 8-inch waterline to loop Christmas Valley Zone at the discharge of the Cornelian Booster Station. This project addresses fire flow deficiencies and water quality issues in the northernmost reaches of Christmas Valley Zone.

Need for Project	Operation and Maintenance Impacts
------------------	-----------------------------------

Capacity/Hydraulic Deficiencies	Addition of Assets
Water Quality	
Emergency Response	

## Reference Document

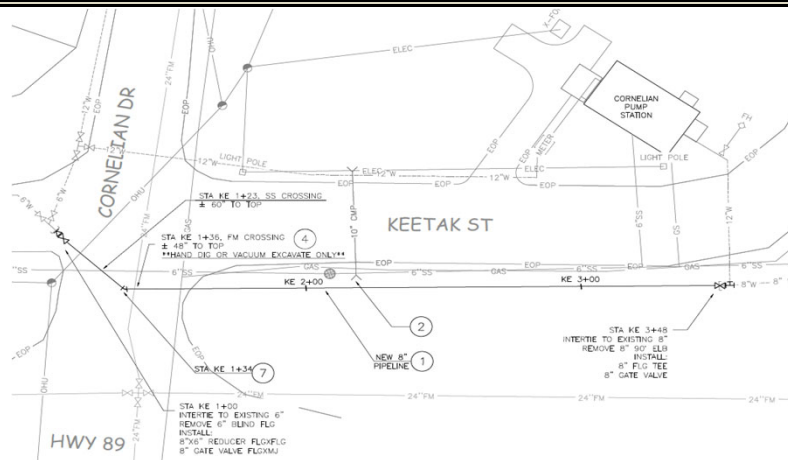
Water System Optimization Plan (WSOP)	Project No. A28	CIP No. 10
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
	0.08										Planning	
											Design	\$12,000
											Construction	\$64,000
<b>Total Capital Improvement Cost</b>											<b>\$76,000</b>	<b>21</b>

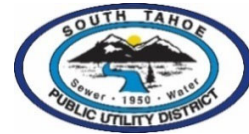
**Funding Source:** Capital

## Project Location and Photos



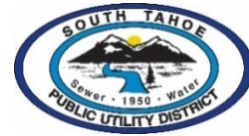
## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> VALVE AND FIRE HYDRANT REPLACEMENTS													
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> URW												
<b>Project Contact:</b> Chris Stanley	<b>Project Management Dept:</b> URW												
<b>Project Description/ Benefits</b>													
<b>Project Status:</b> 10-yr Plan													
<p>This project supplements the URW budget to test and replace critical valves and fire hydrants that do not function. This ensures that valves and fire hydrants are accessible in an emergency. Assumes 38 FHs are replaced by URW and 10 Critical Valves are replaced by a contractor each year. The program uses a 2-person crew to exercise all 3,687 system valves every 2 years and all 1,903 fire hydrants every 5 years. Budget assumes the crew works 105 days per year to keep this pace.</p>													
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>												
Asset Management	Safety Improvements Increase Planned Maintenance												
<b>Reference Document</b>													
Non-Waterline Water Projects	CIP No. 11												
<b>Project Funding</b>													
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction		
0.37		0.36	0.37	0.38	0.39	0.40	0.41	0.43	0.44	0.45			
												\$3,618,000	ALL
<b>Total Capital Improvement Cost</b>											\$3,618,000		
<b>Funding Source:</b> Capital													
<b>Project Location and Photos</b>													
<b>Comments</b>													

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	AMI TOWER REPLACEMENT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	IT
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This program sets aside funds for the replacement of hardware for the AMI tower system, which has a 10-15 year life. There are 5 antenna located at the following tanks: Gardner Mtn, Forest Mtn, Cold Creek, Flagpole and Heavenly.

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life	
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### Reference Document

19-20 CIP Planning	CIP No. 12
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.03	0.06	0.06	0.03				Planning	
											Design	
											Construction	\$182,000
<b>Total Capital Improvement Cost</b>											\$182,000	25 to 27

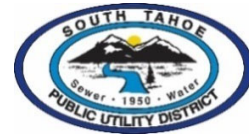
**Funding Source:** SRF



### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> FUTURE HYDRANTS		<b>Asset Owner/Dept:</b> URW												
<b>Project Code:</b> 0		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
72 fire hydrants remain to be installed on pipelines throughout the sytem, mostly greater than 6-inch with no fire hydrants within 500 ft in developed areas and 1000 ft spacing in undeveloped areas.														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Emergency Response Safety Hydrant Spacing		Safety Improvements Addition of Assets												
<b>Reference Document</b>														
Non-Waterline Water Projects		CIP No. 13												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
					1.03	1.06						<b>Design</b>	\$100,000	
												<b>Construction</b>	\$1,987,000	26
<b>Total Capital Improvement Cost</b>												\$2,087,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
														
<b>Comments</b>														

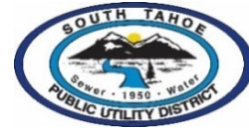


# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> BOWERS WATERLINE		<b>Asset Owner/Dept:</b> URW	
<b>Project Code:</b> BOWERS		<b>Project Management Dept:</b> Eng	
<b>Project Contact:</b> Adrian Combes			
<b>Project Description/ Benefits</b>			
<b>Project Status:</b> 10-yr Plan			
<p>The Bowers Waterline project addresses the issue of undersized pipes. The project will focus on replacing 1-inch pipe along Bill Ave between Herbert Ave &amp; Bowers. The project will also focus on replacing 2-inch pipe along Ham Ln, Vanda Lee, and Osgood Ave near Maple Ave, Forrest Ave between Bowers Ave &amp; Sonora Ave, Bobby Grey Cr, and Larch Ave between Bowers Ave &amp; Ski Run. The 6-inch pipe along Shirley Ave &amp; Bowers Ave will be replaced. This will replace approximately 6200 LF of pipe and add in additional fire hydrants. This project ranks 1 out of 39.</p>			
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>	
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Hydrant Spacing		Reduced Reactionary Maintenance Addition of Assets	
<b>Reference Document</b>			
Waterline Prioritization Plan 2018		CIP No. 14	
<b>Project Funding</b>			
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>
FY 21	22	23	24
0.05	1.30	1.34	
25	26	27	28
29	30	31	
<b>Total Capital Improvement Cost</b>			<b>\$2,693,000</b>
<b>Funding Source:</b> SRF			
<b>Project Location and Photos</b>			
<b>Comments</b>			

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> BIJOU #2 AND #3 WATERLINE		<b>Asset Owner/Dept:</b> URW												
<b>Project Code:</b> BIJU23		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> Adrian Combes														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>Much of the neighborhood is up to standard with respect to line size however the Deer Park neighborhood is deficient in line size and hydrants. These two projects focus on replacing a 1.5-inch pipe along Ferndale Ave, Blackwood Rd, and Deer Ln between Fairway Ave and Glenwood Ave. The 2-inch pipe along Cloverdale Ave between Fairway Ave and Glenwood Ave will be replaced as well as the 2-inch pipe along Fairway Ave between Blackwood Rd and Glenwood Way. This project will add in fire hydrants and affect approximately 4050 LF of pipe. This project ranks 7 out of 39.</p>														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Hydrant Spacing		Reduced Reactionary Maintenance Addition of Assets												
<b>Reference Document</b>														
Waterline Prioritization Plan 2018		CIP No. 15												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
	0.85	0.88										<b>Design</b>	\$75,000	
												<b>Construction</b>	\$1,652,000	22
<b>Total Capital Improvement Cost</b>												\$1,727,000		
<b>Funding Source:</b> SRF														
<b>Project Location and Photos</b>														
<b>Comments</b>														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BLACK BART #1 AND #2 WATERLINE		
<b>Project Code:</b>	BLKBRT	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Trevor Coolidge	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The Black Bart Waterline project addresses the issue of undersized pipes. Project 1 focuses on replacing 2-inch pipe along Meadowcrest Dr between Chinquapin Dr and Black Bart; and along Muir Ln, Clear Creek, and Genoa Ave. Project 2 focuses on replacing 2-inch pipe along Hank Monk between Black Bart and 2741 Hank Monk, as well as along Horace Greely, Snow Shoe Thompson Dr, and Ormsby Dr. This will add in new fire hydrants and will affect approximately 3230 LF for Black Bart #1 and 4075 LF for Black Bard #2. This ranks 3 out of 39.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Hydrant Spacing	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

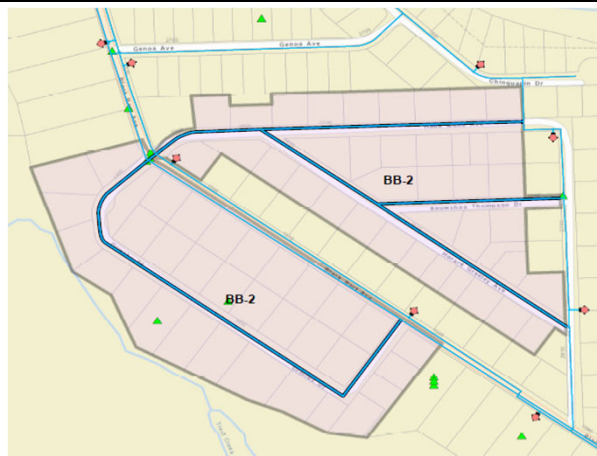
Waterline Prioritization Plan 2018	CIP No. 16
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
0.05		1.58	1.63								Planning Design Construction	\$150,000 \$3,104,000
<b>Total Capital Improvement Cost</b>											<b>\$3,254,000</b>	<b>23</b>

**Funding Source:** SRF

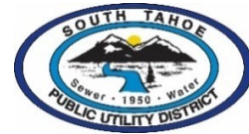
## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FLAGPOLE FCV TO ARROWHEAD		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, URW
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>A Flow Control Valve is to be installed between the Flagpole and Arrowhead zones in this project. This is intended to increase system reliability by providing a redundant water source to the Arrowhead Zone. Currently, water can only flow from Arrowhead zone to Flagpole Zone. Once the Flow Control Valve is installed water will be able to flow from Flagpole to Arrowhead.</p>	

Need for Project	Operation and Maintenance Impacts
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Reliability/Redundancy	Addition of Assets
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## Reference Document

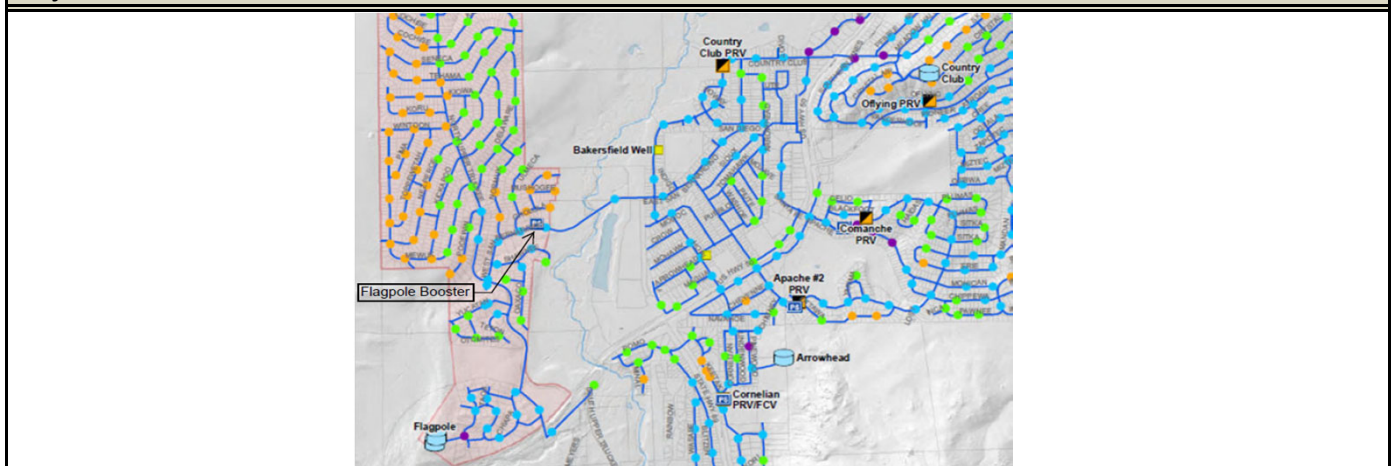
19-20 CIP Planning	CIP No. 17
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
						0.06	0.07				Planning	
											Design	\$12,000
											Construction	\$116,000
												27
<b>Total Capital Improvement Cost</b>											\$128,000	

**Funding Source:** Capital

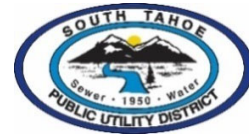
## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GLENWOOD RANCHO WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces approximately 10,600 LF of poor condition steel water main, identified by URW. Project includes the following streets: Glenwood, Rancho, Becca, Bruce, Janet, Plum, Jackson, Allen Rae and Andy Jo.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Maintenance History	Reduced Reactionary Maintenance

## Reference Document

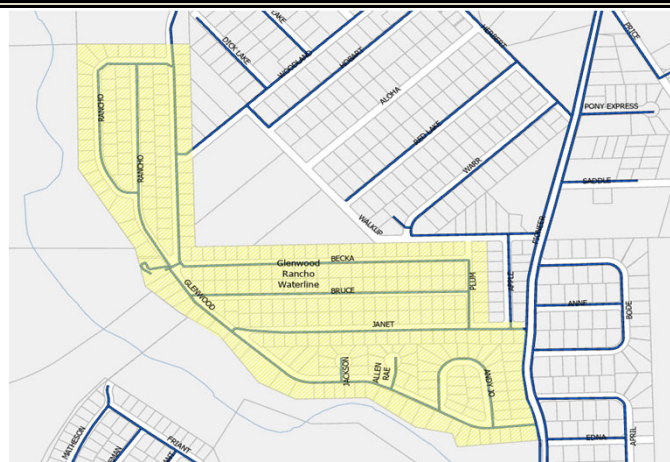
19-20 CIP Planning	CIP No. 18
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
					2.51	2.58					<b>Planning</b> <b>Design</b> <b>Construction</b>	 \$100,000 \$4,987,000	  26
<b>Total Capital Improvement Cost</b>											<b>\$5,087,000</b>		

**Funding Source:** Capital

## Project Location and Photos

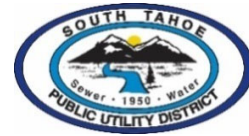


## Comments

Needs based plan constructs this project in 2025.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	HERBERT WALKUP WATERLINE		
<b>Project Code:</b>	HERBWL	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces approximately 9,930 LF of poor condition steel water main, identified by URW. Project includes the following streets: Herbert, Walkup, Woodland, Hobart, Red Lake and Warr.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Maintenance History	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

19-20 CIP Planning	CIP No. 19
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
	0.05			2.20	2.26						<b>Planning</b> <b>Design</b> <b>Construction</b>	 \$100,000 \$4,413,000	  25
<b>Total Capital Improvement Cost</b>											\$4,513,000		

**Funding Source:** SRF (Pending Stimulus)

## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2023.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	LTB WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces approximately 6,300 LF of poor condition steel water main, identified by URW. Project includes the following streets: Lake Tahoe Blvd.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Maintenance History	Reduced Reactionary Maintenance

## Reference Document

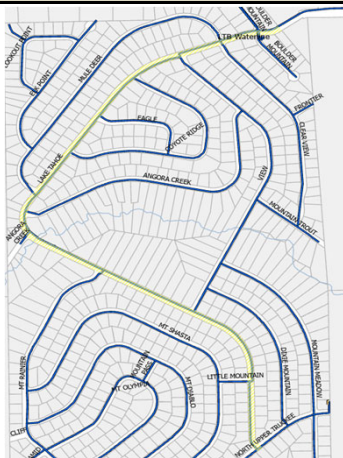
19-20 CIP Planning	CIP No. 20
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
								1.63	1.68		<b>Planning</b>	
											<b>Design</b>	\$100,000
											<b>Construction</b>	\$3,204,000
											<b>Total Capital Improvement Cost</b>	\$3,304,000

**Funding Source:** SRF

## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	ANGORA CREEK WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project replaces approximately 8,790 LF of poor condition steel water main, identified by URW. The project includes the following streets: Angora Creek, View, Coyote Ridge and Eagle.

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life	Reduced Reactionary Maintenance
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## Reference Document

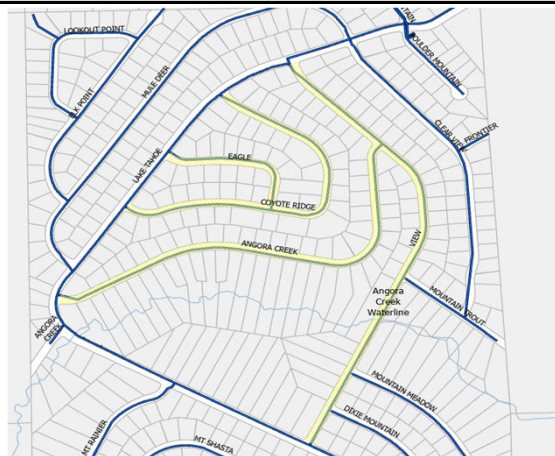
Waterline Prioritization Plan 2018	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$100,000	
											Construction	\$4,719,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$4,819,000</b>		

**Funding Source:** SRF

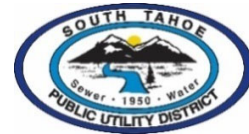
## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2026.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	CLEARVIEW MOUNTAIN MEADOW WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project replaces approximately 7,840 LF of poor condition steel water main, identified by URW. The project includes the following streets: Clearview, Frontier, Mountain Trout, Dixie Mountain, Mountain Meadow and North Upper Truckee.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Maintenance History	Reduced Reactionary Maintenance

## Reference Document

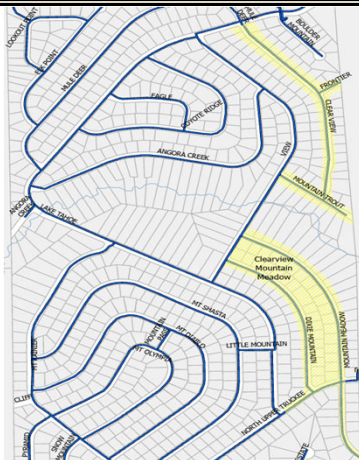
Waterline Prioritization Plan 2018	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$100,000	
											Construction	\$4,198,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$4,298,000</b>		

<b>Funding Source:</b>	SRF
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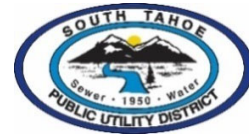
## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2027.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TAHOE MTN WL REPLACEMENT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project replaces approximately 4,090 LF of poor condition steel water mains, identified by URW. Project includes the following streets: Iron Mtn, Granite Mtn, Forest Mtn, Brush and Cone.

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life Maintenance History	Reduced Reactionary Maintenance
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## Reference Document

20-21 CIP Planning	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$100,000	
											Construction	\$2,142,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$2,242,000</b>		

## Funding Source:

## Project Location and Photos

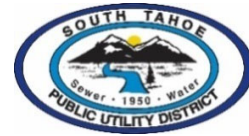


## Comments

Needs Based Plan constructs this project in 2031.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	APACHE AVE WL IMPROVEMENTS		
<b>Project Code:</b>	APACHE	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project replaces approximately 2,100 LF of 4-in and 6-in AC water main on Apache Ave from Hwy 50 to East San Bernardino in coordination with the County of El Dorado Complete Streets Project. This water main was originally part of the Meyers#2 Waterline Project, which was found to be a Non-Fireflow Undersize Waterline Project. However, because of the failed condition of numerous valves along this stretch, future need to replace water services, and the anticipated need to relocate the main at storm drain crossings in coordination with the County project, this water main replacement is elevated in priority.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Interagency Coordination	Reduced Reactionary Maintenance

## Reference Document

Waterline Prioritization Plan 2018	CIP No. 21
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
	0.05	0.43	0.44								Planning Design	\$52,000	
											Construction	\$869,000	23
<b>Total Capital Improvement Cost</b>											\$921,000		

**Funding Source:** SRF (pending stimulus)

## Project Location and Photos



## Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BIJOU #1 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Much of the neighborhood is up to standard with respect to line size however the Deer Park neighborhood is deficient in line size and hydrants. This project focuses on replacing undersize water mains and adding fire hydrants in Deer Park, as well as upzizing mains on Mono and Treehaven. This project replaces approximately 5,926 LF of water main, on Takela, Tree Haven, Mono, Juniper, Long Valley, Ash, Pickett and Fir. This project was ranked 5 out of 39 waterline projects for priority.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Maintenance History Capacity/Hydraulic Deficiencies Hydrant Spacing	Reduced Reactionary Maintenance

## Reference Document

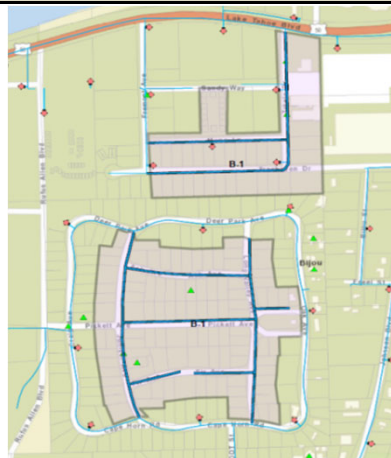
Waterline Prioritization Plan 2018	CIP No. 22
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
							1.34	1.38			Planning Design	\$50,000	
											Construction	\$2,670,000	28
<b>Total Capital Improvement Cost</b>											\$2,720,000		

**Funding Source:** Capital

## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2025.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GARDNER MOUNTAIN #2 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

Gardner Mountain is somewhat deficient with respect to fire flow and hydrant spacing. There are several long blocks of narrow lots on undersized waterlines with no intermediate fire hydrants. This project will focus on replacing a 4-inch pipe along Clement St between Gardner St & Clement Well. This project will affect approximately 3605 L.F. of pipe, on Clement, Gardner and Tata. This project ranks 9 out of 39.

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life  
Capacity/Hydraulic Deficiencies

Reduced Reactionary Maintenance  
Safety Improvements

### Reference Document

Waterline Prioritization Plan 2018

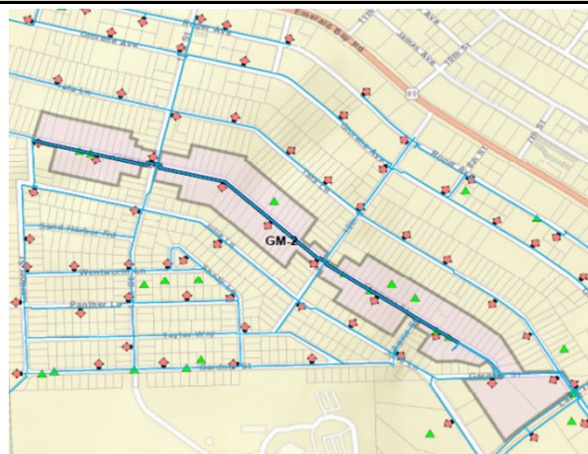
CIP No. 23

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	28		
							0.90	0.93					\$50,000	
<b>Total Capital Improvement Cost</b>													\$1,835,000	

**Funding Source:** Capital

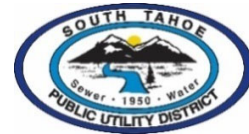
### Project Location and Photos



### Comments

Constructs with Gardner Mountain #4 Waterline. Needs Based Plan constructs this project in 2026.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GARDNER MOUNTAIN #4 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Gardner Mountain is somewhat deficient with respect to fire flow. There are several long blocks of narrow lots on undersized waterlines with no intermediate fire hydrants. Gardner Mountain #4 Waterline project will address deficiencies in line size such as replacing the 4-inch pipe along south branch of Gardner Street to Julie Lane. All of the 8-inch and 10-inch pipe along Julie Lane from Agate Street to Lake Tahoe Blvd will be replaced with a 12-inch main to feed the High School. This will affect approximately 3,660 LF of pipe. This project ranks 10 out of 39.

## Need for Project

Asset Replacement/End-of-Life  
Capacity/Hydraulic Deficiencies

## Operation and Maintenance Impacts

Reduced Reactionary Maintenance

## Reference Document

Waterline Prioritization Plan 2018

CIP No. 24

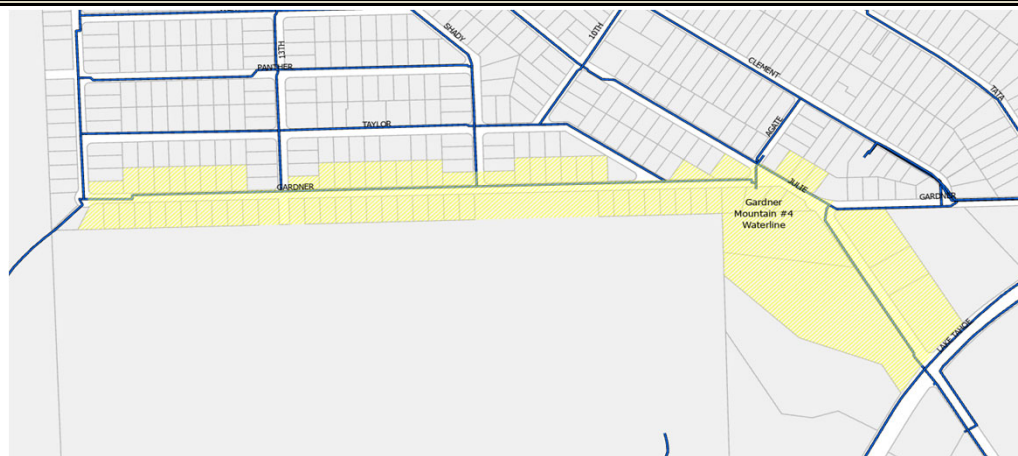
## Project Funding

### Capital Improvement Expenditures (Millions)

FY 21	22	23	24	25	26	27	28	29	30	31	Planning	Total	Year
							0.92	0.95			Design	\$50,000	
											Construction	\$1,814,000	28
<b>Total Capital Improvement Cost</b>												\$1,864,000	

**Funding Source:** Capital

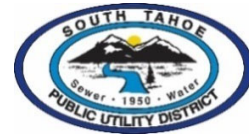
## Project Location and Photos



## Comments

Constructs with Gardner Mountain #2 Waterline. Needs Based Plan constructs this project in 2026.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WILDWOOD #3 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Wildwood Project 3 allows staff to upsize 6-inch and 4-inch lines along Wildwood Avenue between Saddle Road and Ruby Way. Fire hydrants will be added to improve flow, which those improved flows will be required for Wildwood Project 5. Wildwood Project 3 needs to be addressed before Wildwood Project 5 can begin. This project will affect approximately 4,530 LF of pipe. This project ranks 21 out of 39.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Hydrant Spacing Capacity/Hydraulic Deficiencies	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

Waterline Prioritization Plan 2018	CIP No. 25
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
									1.21	1.24	Planning	
											Design	\$50,000
											Construction	\$2,397,000
<b>Total Capital Improvement Cost</b>											<b>\$2,447,000</b>	<b>30</b>

**Funding Source:** Capital

## Project Location and Photos



## Comments

Constructs with Wildwood #5 Waterline. Needs Based Plan constructs this project in 2027.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WILDWOOD #5 (+PRV) WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Wildwood Project 5 allows the District to upsize existing pipes to meet community demands. This project will also allow staff to consolidate the Terrace and Overlook PRV, which together are the sole source of water delivery to approximately 50 customers. This project will affect approximately 2,803 LF of pipe and must be addressed after Wildwood Project 3. This project ranks 10 out of 39. The project includes the following streets: Knoll, Terrace and Overlook.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Hydrant Spacing Capacity/Hydraulic Deficiencies	Reduced Reactionary Maintenance Eliminates Asset

## Reference Document

Waterline Prioritization Plan 2018	CIP No. 26
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
									0.97	1.00	<b>Planning</b>		
											<b>Design</b>	\$50,000	
											<b>Construction</b>	\$1,915,000	30
<b>Total Capital Improvement Cost</b>											\$1,965,000		

**Funding Source:** Capital

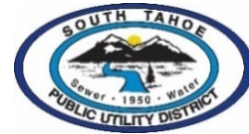
## Project Location and Photos



## Comments

Constructs with Wildwood #3 Waterline. Needs Based Plan constructs this project in 2027.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> SIERRA TRACT #2 WATERLINE		<b>Asset Owner/Dept:</b> URW												
<b>Project Code:</b> 0		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>The Sierra Tract #2 Waterline project focuses on undersized pipes in the neighborhood. This project focuses on replacing 1.5-inch and 2-inch along Blue Lake Ave between Young St &amp; Armstrong Ave. The 1.5-inch, 2-inch, and 4-inch pipes will be replaced along Armstrong Ave between Charles Ave and Blue Lake Ave. The 1.5-inch pipe will be replaced along Marjorie Ave. The 1.5-inch, 2-inch, and 4-inch pipes along Omalley Dr between Armstrong Ave and Rose Ave will also be replaced. This project will add in fire hydrants and will affect approximately 4655 L.F. of pipe. This project ranks 8 out of 39.</p>														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Reliability/Redundancy Capacity/Hydraulic Deficiencies Hydrant Spacing		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
Water System Optimization Plan (WSOP)		Project No. B11	CIP No.											
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
												<b>Design</b>	\$50,000	
												<b>Construction</b>	\$2,502,000	TBD
<b>Total Capital Improvement Cost</b>												\$2,552,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
Constructs with Sierra Tract Project M Waterline and Palmira Waterline. This project is slated for construction in 2028 on the Needs Based Plan.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	SIERRA TRACT PROJECT M WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project creates a loop around Sierra Tract, in combo with Sierra Tract #2. O'Malley from Rose to Martin, Fountain from Martin to Lodi, Lodi from Fountain to Knox, Lodi from Chris to Palmira. This project replaces approximately 3,675 LF of undersized waterline,.</p>	

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life Hydrant Spacing Capacity/Hydraulic Deficiencies Maintenance History	Reduced Reactionary Maintenance Addition of Assets
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## Reference Document

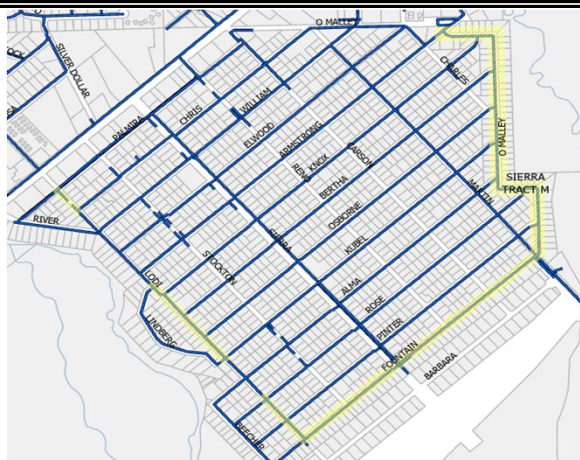
Waterline Prioritization Plan 2018	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$3,979,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$4,029,000</b>		

**Funding Source:** Capital

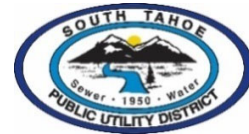
## Project Location and Photos



## Comments

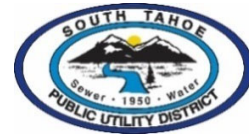
Constructs with Sierra Tract #2 Waterline and Palmira Waterline. This project is slated for construction in 2028 on the Needs Based Plan.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> PALMIRA WL REPLACEMENT		<b>Asset Owner/Dept:</b> URW												
<b>Project Code:</b> 0		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project finishes the loop around Sierra Tract, in combo with Project M and Sierra Tract #2. This project also consolidates two parallel mains (4" and 8"), eliminating a unneeded assets and valving confusion. The project replaces approximately 1400 lf of water main on Palmira from River to Reno. As of 2021, there are 16 leaks recorded along this stretch. When planning this project, also consider upsizing all or part of this line as a second feed across the Upper Truckee River, in coordination with the TRCD Johnson Meadow Restoration Project (not included in cost).</p>														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Interagency Coordination		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
20-21 CIP Planning		CIP No.												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
												<b>Design</b>	\$25,000	
												<b>Construction</b>	\$743,000	TBD
<b>Total Capital Improvement Cost</b>												\$768,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														
Constructs with Sierra Tract #2 Waterline and Sierra Tract Project M Waterline. This project is slated for construction in 2028 on the Needs Based Plan.														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BIJOU #4 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project replaces most of the piping in the Ralph Zone. Bijou 4 will focus on upsizing the 4-inch pipe on Ralph Dr, Norma Dr, April Dr, Edna St, Bode Dr, and Anne St. This project area received fire hydrants on 4" mains in 2017. The project will consider reconnecting these relatively new fire hydrants to the new main as a cost-saving measure. This project will affect approximately 5,990 LF of pipe. This project ranks 14 out of 39.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Hydrant Spacing Capacity/Hydraulic Deficiencies	Reduced Reactionary Maintenance

### Reference Document

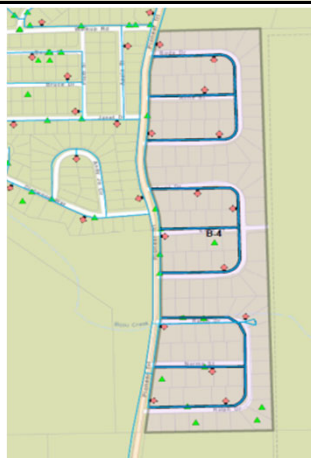
Waterline Prioritization Plan 2018	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$4,522,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$4,572,000</b>		

**Funding Source:** Capital

### Project Location and Photos

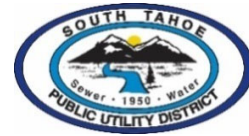


### Comments

Needs Based Plan constructs this project in 2028.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WILDWOOD #2 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

Wildwood #2 focuses on pipe replacement such as the 4-inch pipe along Ruby Way between Wildwood and David Ln. Another 4-inch pipe will be replaced along David Ln between Ski Run and Wildwood. The 6-inch on Wildwood Ave will be replaced between Pioneer Trl and Ruby Way. The 4-inch pipe along Markofer Way will be replaced between Wildwood and Keller. A 6-inch pipe will be installed along Wildwood Ave and David Ln to create a loop for Ruby Ln. This project will affect approximately 4,465 LF of pipe. This project ranks 13 out of 39.

Need for Project	Operation and Maintenance Impacts
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Asset Replacement/End-of-Life Hydrant Spacing Capacity/Hydraulic Deficiencies Maintenance History	Reduced Reactionary Maintenance
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### Reference Document

Waterline Prioritization Plan 2018		CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$2,343,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$2,393,000</b>		

**Funding Source:** Capital

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2029.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	MEYERS #1 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project was originally conceived by the 2018 WL Prioritization Plan as an upsizing project of 3,095 lf of water main to improve fire flows to new FHs on dead-end streets Crow, Mohawk, Arrowhead and Magua (off Hopi). However, during the 2018 Fire Hydrant installation project, several lines identified in GIS as 4" were found to be 6" Steel. There are few leaks in this area. Project scope has been reconceived as a loop-line project, adding 880 lf of 8" water main, connecting the dead end of four blocks from Modoc to Mowhawk along an existing easement.

Need for Project	Operation and Maintenance Impacts
Capacity/Hydraulic Deficiencies Proximity to Urban Wildland Interface	Addition of Assets

## Reference Document

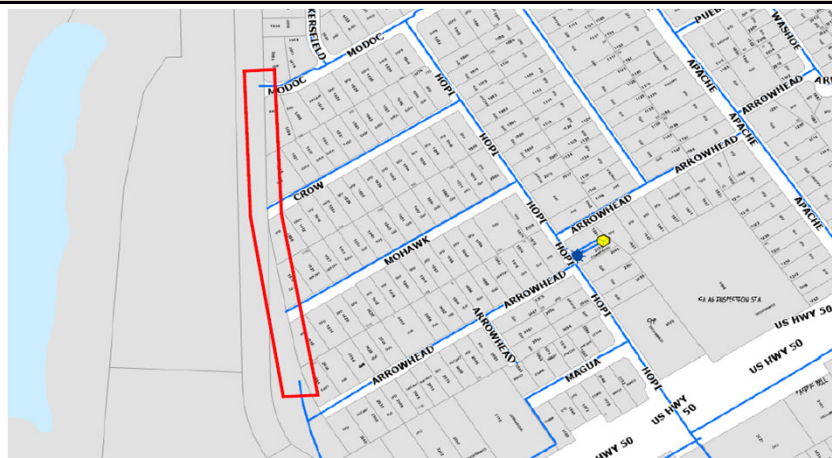
20-21 CIP Planning	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$433,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$483,000</b>		

**Funding Source:** Capital

## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2028.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WILDWOOD #1 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

There are five projects that have been identified in the Wildwood area that address fire flow and hydrant spacing deficiencies. Project 1 addresses fire flow deficiencies by improving the line sizes in the area. The 4-inch pipe along Regina Rd between Ski Run and Wildwood will be upsized. The 4-inch pipe along Needle Peak Rd from Pioneer to ¾ of the way to Ski Run will be upsized. The 6-inch pipe along Saddle Rd between Ski Run and Wildwood will be upsized. The 4-inch pipe along Pony Express Way will be upsized as well as the 2-inch pipe along Charlesworth Ct. This will affect approximately 4,269 LF of pipe. This project ranks 14 out of 39.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Proximity to Urban Wildland Interface Capacity/Hydraulic Deficiencies	Reduced Reactionary Maintenance

## Reference Document

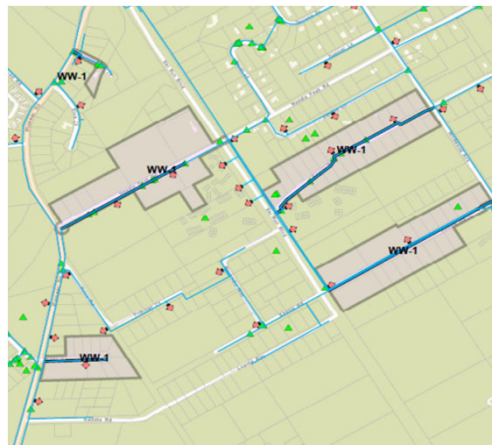
Waterline Prioritization Plan 2018	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$2,291,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$2,341,000</b>		

**Funding Source:** Capital

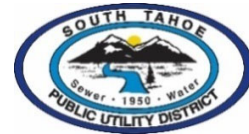
## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2029.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GARDNER MOUNTAIN #3 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

The pipes that will be replaced are the 2-inch pipes along Sand Harbor Road and Taylor Way between Shady Lane and Gardner Street. There will also be the replacement of the 2-inch pipe between 10th Street and south portion of Gardner Street. The 4-inch pipe along 13th Street between Gardner Street and Clement Street will also be replaced in this project. This will affect approximately 4,350 LF of pipe. This project ranks 23 out of 39.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Hydrant Spacing Proximity to Urban Wildland Interface	Reduced Reactionary Maintenance

## Reference Document

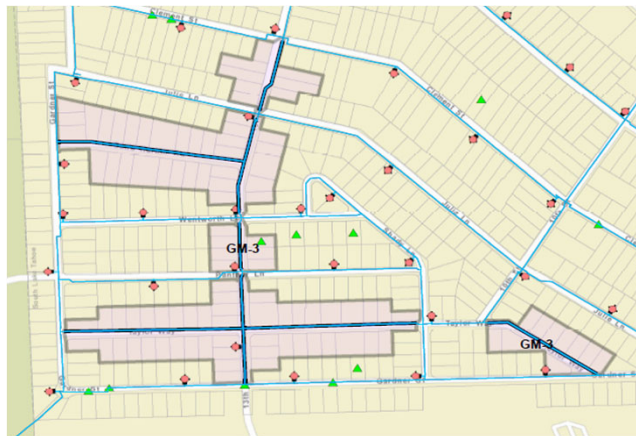
Waterline Prioritization Plan 2018	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$50,000	
											Construction	\$2,336,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$2,386,000</b>		

**Funding Source:** Capital

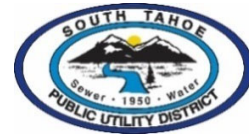
## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2030.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GARDNER MOUNTAIN #1 WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Gardner Mountain #1 focuses on pipe replacement along 8th St between Rodger Ave and Glorene Ave. More pipe will be replaced along Glorene Ave between 15th St and 10th St as well as along Rodger Ave between 10th St and midway to 5th St. Check valves will be installed as described in the FF TM. This will affect approximately 4,060 LF of pipe. This project ranks 29 out of 39.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life Capacity/Hydraulic Deficiencies Maintenance History	Reduced Reactionary Maintenance

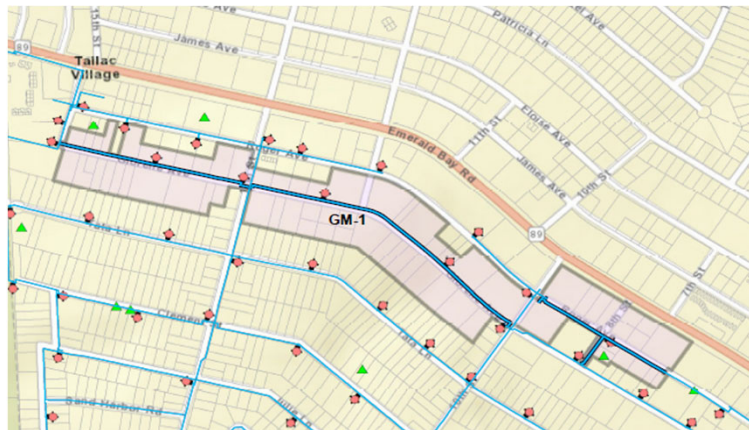
Reference Document		
Waterline Prioritization Plan 2018		CIP No.

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
											Planning	
											Design	\$50,000
											Construction	\$2,177,000
<b>Total Capital Improvement Cost</b>											<b>\$2,227,000</b>	<b>TBD</b>

<b>Funding Source:</b>	Capital
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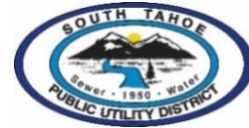
### Project Location and Photos



<b>Comments</b>
Needs Based Plan constructs this project in 2030.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	PIONEER TRAIL WATERLINE - GOLDEN BEAR TO PINE VALLEY		
<b>Project Code:</b>	PTLWL	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project installs approximately 1.5 miles of new 10-12" waterline on Pioneer Trail from Marshall Trail (Montgomery Estates Zone) to Susquehana (Pine Valley Zone). This project will loop the distribution system and improve fire flow to approximately 1000 customers in Pine Valley and Susquehana Zones. This project will install fire hydrants at 1000 ft spacing along the urban-wildland interface.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy Capacity/Hydraulic Deficiencies Proximity to Urban Wildland Interface Hydrant Spacing	Addition of Assets

## Reference Document

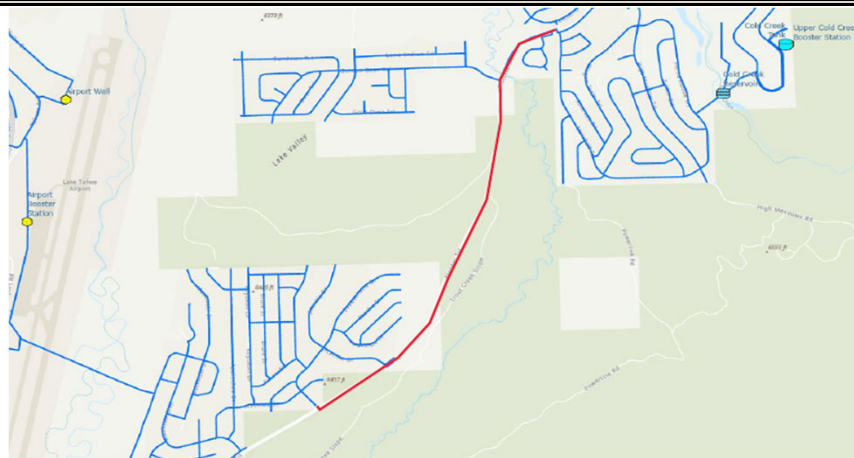
AM Planning (2019 Prop 211)	CIP No. 27
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
	0.05		1.24	1.53							Planning	
											Design	\$52,000
											Construction	\$2,763,000
<b>Total Capital Improvement Cost</b>											<b>\$2,815,000</b>	

**Funding Source:** SRF (Pending Stimulus)

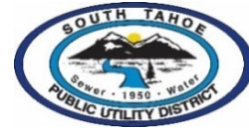
## Project Location and Photos



## Comments

Constructs with Replace PT/Marshall and PT/Kokanne PRVs, New PRV at Washoan-Nadowa, and New PRV at PT/Jicarilla.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	REPLACE PT/MARSHALL AND PT/KOKANEE PRV		
<b>Project Code:</b>	PRVPIO	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project consolidates two existing PRVs (PT/Kokanee and PT/Marshall), which were constructed in the late 19080's and are currently nearing the end of their useful lives. The stations are located in below grade vaults within the Pioneer Trail traffic lanes. The new PRV station will be a single above-ground enclosure housing both PRVs that is relocated to a low traffic side street. Theses PRVs are the sole source of water supply to approximately 330 customers in the Kokanee and Golden Bear Zones. The project will also connect Montgomery Estates Zone to the Meadow Lakes Neighborhood through a third domestic PRV at the Staion, providing a necessary secondary source of supply to the 100+ located in this area.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life	Ease of access
High Consequence of Failure	Safety Improvements
System Monitoring/Remote Control	Eliminates Asset
Reliability/Redundancy	Reduced Reactionary Maintenance

### Reference Document

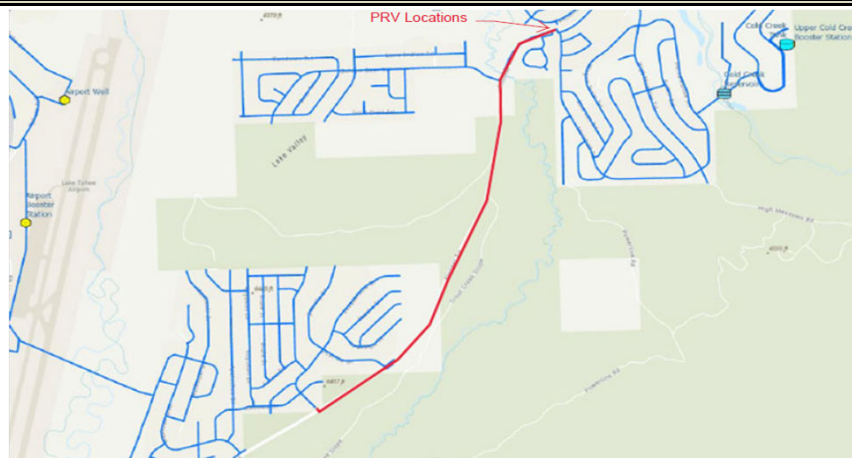
Water System Optimization Plan (WSOP)	Project No. A8	CIP No. 28
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.30	0.31							Planning	
											Design	\$25,000
											Construction	\$585,000
<b>Total Capital Improvement Cost</b>											\$610,000	

**Funding Source:** BOR (Pending Grant), SRF (Pending Stimulus)

### Project Location and Photos



### Comments

Constructs with Pioneer Trail Waterline.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	NEW PRV AT WASHOAN-NADOWA		
<b>Project Code:</b>	PRVWAS	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will install a new pressure reducing valve station. This will be located at Washoan Blvd and Nadowa St at a normally closed valve (M33-047). It will allow water to move from Pine Valley Zone to the remote reaches of Country Club Zone. The north portion of Country Club Zone is fed from the south part of the zone through a single 6-inch diameter pipeline and from the Airport Booster Station which has limited capacity and is normally off. The Airport Booster is a small pump and does not provide much supply for fire flow. If the hydrants are opened at Airport then Onnontioga St pressures drop below 20 psi.

Need for Project	Operation and Maintenance Impacts
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Capacity/Hydraulic Deficiencies Asset Management	Addition of Assets
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## Reference Document

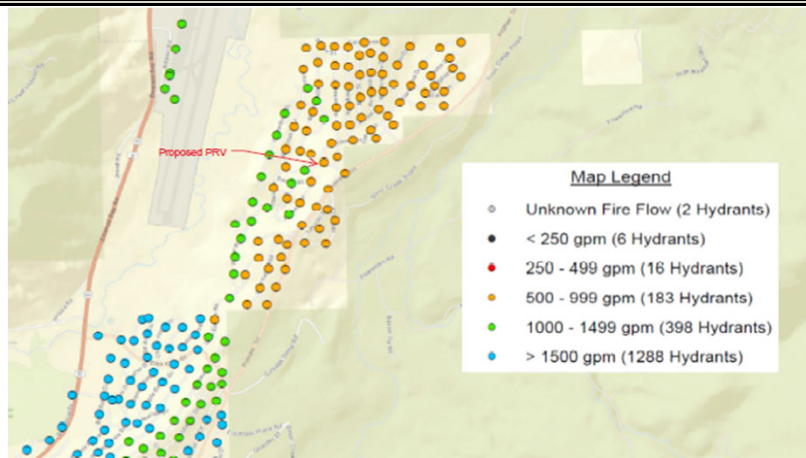
Water System Optimization Plan (WSOP)	Project No. A18	CIP No. 29
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.17	0.17							Planning	
											Design	\$25,000
											Construction	\$318,000
<b>Total Capital Improvement Cost</b>											\$343,000	

**Funding Source:** BOR (Pending Grant), SRF (Pending Stimulus)

## Project Location and Photos



## Comments

Constructs with Pioneer Trail Waterline.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	NEW PRV AT JICARILLA/PT (SUSQ ZONE)		
<b>Project Code:</b>	PRVJIC (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project installs a new PRV Station with a Fireflow and Domestic PRVs to feed Susquehana Zone with a redundant supply. This PRV station will be located at the intersection of Pioneer Trail and Jicarilla, and will provide supplemental supply from the Montgomery Estates Zone via the new Pioneer Trail Waterline. The Susquehana Zone is currently one of most fire flow deficient areas of the system, due to inadequate supply, with all hydrants in the zone expected to produce less than 1000 gpm.

Need for Project	Operation and Maintenance Impacts
Capacity/Hydraulic Deficiencies Reliability/Redundancy	Addition of Assets

## Reference Document

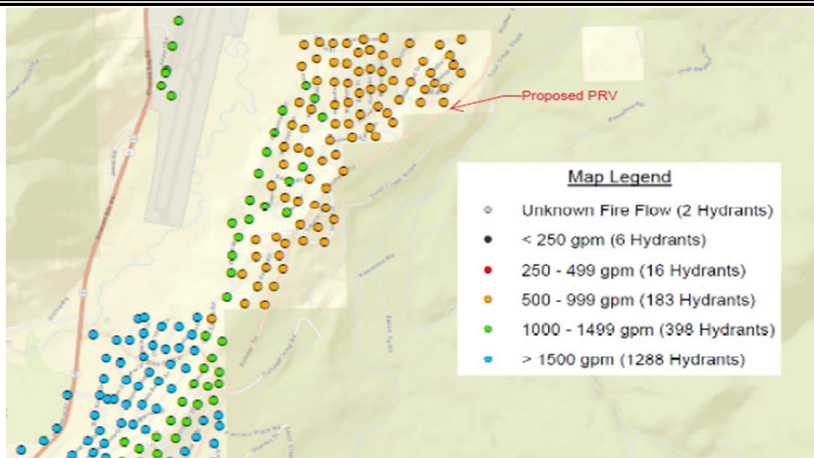
20-21 CIP Planning	CIP No. 30
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.17	0.17							Planning	
											Design	\$25,000
											Construction	\$318,000
<b>Total Capital Improvement Cost</b>											\$343,000	

**Funding Source:** BOR (Pending Grant), SRF (Pending Stimulus)

## Project Location and Photos



## Comments

Constructs with Pioneer Trail Waterline.

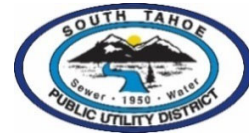
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> UTR MEYERS WATERLINE RELIABILITY IMPROVEMENTS														
<b>Project Code:</b> UTRMWR	<b>Asset Owner/Dept:</b> URW													
<b>Project Contact:</b> Adrian Combes	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
<p>This project constructs a redundant waterline crossing the Upper Truckee River in Meyers, in coordination with the County's pedestrian bridge crossing at Tahoe Paradise Park. The existing 10" diameter asbestos cement water main has been in service for over 60 years, and is the sole source of supply to the Flagpole and Twin Peaks Zones (over 1400 customers) during the summer months. The existing pipe is in a shallow river crossing protected by a sheet pile wall. The redundant pipe will hang from the new bridge.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Reliability/Redundancy Asset Replacement/End-of-Life Interagency Coordination High Consequence of Failure	Reduced Reactionary Maintenance Addition of Assets													
<b>Reference Document</b>														
Water System Optimization Plan (WSOP)	Project No. B11 CIP No. 31													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>														
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>	<b>Total</b>	<b>Year</b>	
0.06		0.23										Design	\$64,000	21
												Construction	\$233,000	23
<b>Total Capital Improvement Cost</b>												\$297,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	REGINA/DONNER WATERLINE		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project adds a new 350-ft waterline to tie the existing main on Needle Peak Rd to Donner Lane, tying together Heavenly Valley and Needle Peak pressure zones and eliminating two dead ends. This project also facilitates metering of 4 landlocked parcels from the front, which are currently served from the back. All residential meters must be installed by 2025.

Need for Project	Operation and Maintenance Impacts
System Efficiency Reliability/Redundancy Water Quality	Addition of Assets

### Reference Document

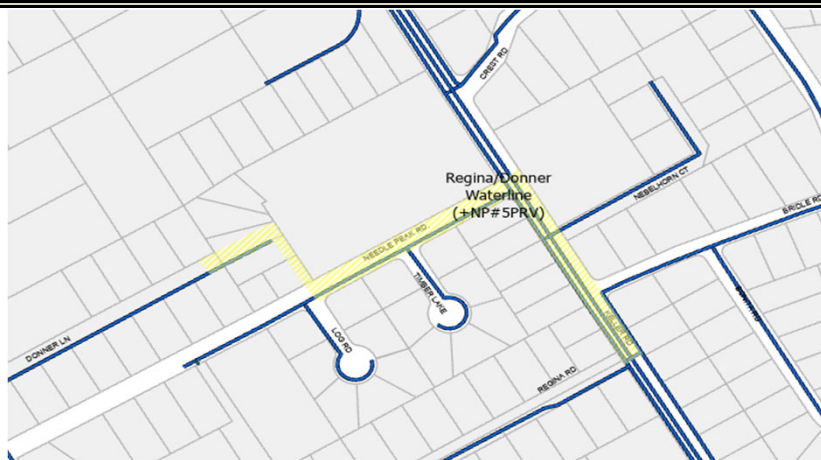
Waterline Prioritization Plan 2018	CIP No. 32
------------------------------------	------------

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
				0.08	0.08						Planning Design	\$25,000	
											Construction	\$138,000	25
<b>Total Capital Improvement Cost</b>												\$163,000	

**Funding Source:** SRF (Pending Stimulus)

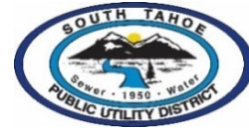
### Project Location and Photos



### Comments

This project constructs with Needle Peak (Keller#5) PRV Replacement. Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	REPLACE NEEDLE PEAK #5 PRV		
<b>Project Code:</b>	PRVNP5 (Future)	<b>Asset Owner/Dept:</b>	URW
<b>Project Contact:</b>	Steve Caswell	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project replaces the existing Needle Peak PRV (Keller #5), which has reached the end of its useful life and is located in an undersized below grade concrete vault, with a new PRV including instrumentation and communications. This PRV is currently the sole source of water delivery to approximately 165 customers.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life	Reduced Reactionary Maintenance

### Reference Document

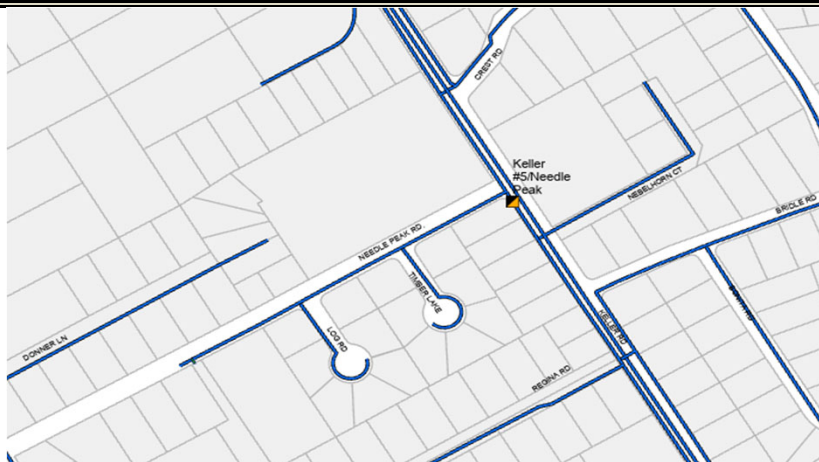
Waterline Prioritization Plan 2018	CIP No. 33
------------------------------------	------------

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.19	0.20						Planning	
											Design	\$25,000
											Construction	\$363,000
<b>Total Capital Improvement Cost</b>											\$388,000	25

**Funding Source:** BOR (Pending Grant), SRF (Pending Stimulus)

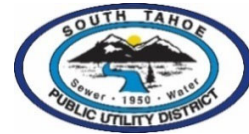
### Project Location and Photos



### Comments

This project constructs with Regina/Donner Waterline.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	ELECTRICAL IMPROVEMENTS AT 16 SITES		
<b>Project Code:</b>	ELECWS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will complete a condition assessment of the electrical switchgear at wells and booster stations, to inform future projects for electrical improvements.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy Asset Management	Reduced Reactionary Maintenance

### Reference Document

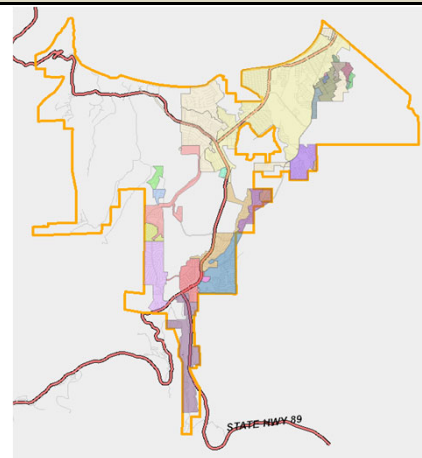
Water System Optimization Plan (WSOP)	Project No. A7 and C2	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$198,000	N/A	
<b>Total Capital Improvement Cost</b>												\$198,000		

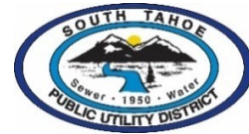
**Funding Source:** Capital

### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FIELD COMMUNICATION UPGRADES PHASE 2		
<b>Project Code:</b>	SCDW01, TPTOWR	<b>Asset Owner/Dept:</b>	Pumps, Ops, Elec, IT
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will focus on the improvements for Flagpole Tower (Tower 3), the radio control tower Control 1, and all upgrades needed at remote sites that will connect to Tower 3. Adds 5Ghz wireless ethernet radio and FIU at Flagpole. Connections over 173 MHz will be built out from remote sites near Tower 3. It is recommended that a ring configuration is created so that Flagpole Tower data is relayed to the Plant.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Addition of Assets
System Monitoring/Remote Control	Reduced Reactionary Maintenance
Asset Life Extension	Safety Improvements
Emergency Response	

## Reference Document

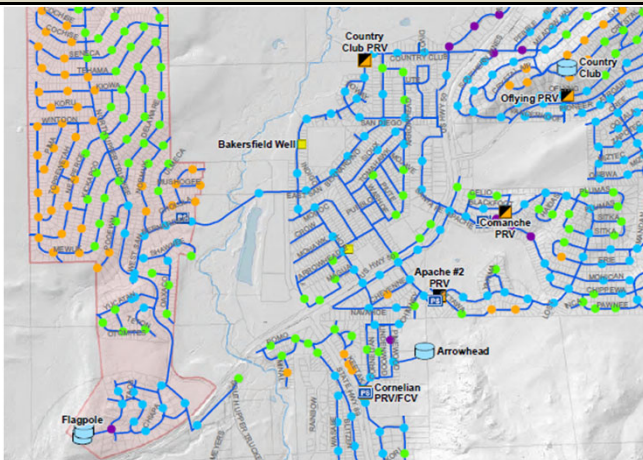
Communication Study Report (2018)	CIP No. 34
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	
0.13	0.13											21
<b>Total Capital Improvement Cost</b>											<b>\$260,000</b>	

**Funding Source:** Capital

## Project Location and Photos



## Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	FIELD COMMUNICATION UPGRADES PHASE 3		
<b>Project Code:</b>	SCDW01	<b>Asset Owner/Dept:</b>	Pumps, Ops, Elec, IT
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project focuses on communication improvements for Keller Tower (Tower 1) and Area 3 which includes any upgrades at remote sites that will connect directly to Control 1. Adds 5 Ghz wireless ethernet and Flu at Keller. Connections over 173 MHz will be built out from remote sites near Tower 1.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Addition of Assets
System Monitoring/Remote Control	Reduced Reactionary Maintenance
Asset Life Extension	Safety Improvements
Emergency Response	

## Reference Document

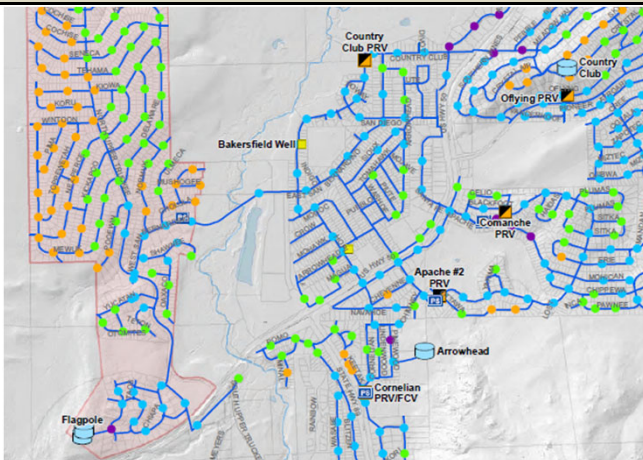
Communication Study Report (2018)	CIP No. 35
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
	0.15	0.16									Planning Design Construction	\$305,000	22
<b>Total Capital Improvement Cost</b>											\$305,000		

**Funding Source:** Capital

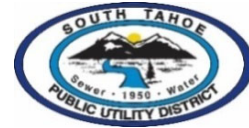
## Project Location and Photos



## Comments



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	GENERATORS AT KELLER AND PALOMA		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project installs permanent emergency diesel generators at two critical water facilities. Keller Booster Station supplies the Keller Tanks (150,000 gallons pending construction in 2022), which is the sole source of supply to approximately 70 customers and backup supply to the Heavenly Zones. Paloma Well is currently backup supply to the main Stateline Zone producers (Al Tahoe and Bayview Wells). Bayview has no generator due to its service voltage. Al Tahoe is an antiquated right-angle drive scheduled for replacement and addition of a station generator under a separate project.</p>	

Need for Project	Operation and Maintenance Impacts
Emergency Response Reliability/Redundancy	Reduced Reactionary Maintenance Addition of Assets

## Reference Document

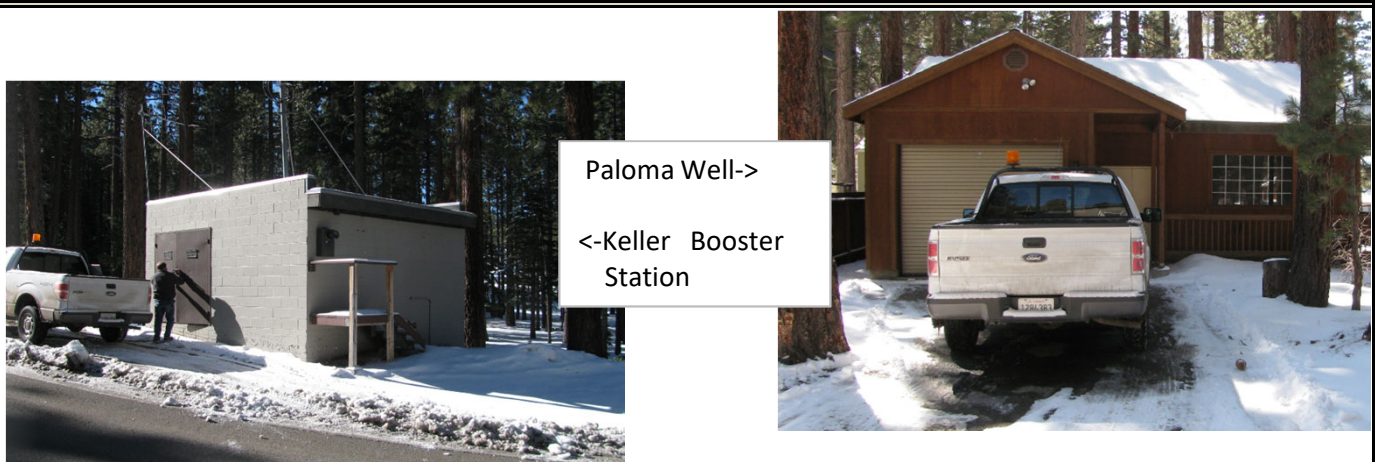
Water System Optimization Plan (WSOP)	Project No. A30	CIP No. 36
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	
		0.39										
<b>Total Capital Improvement Cost</b>											<b>\$393,000</b>	<b>23</b>

**Funding Source:** FEMA (Pending grant)

## Project Location and Photos



## Comments

This project constructs with Bowers/Bijou Waterline. Stateline Zone backup power deficiencies and needs were identified in a 2019 internal memo titled "Backup Power for Water and Sewer Facilities."

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	UPPER MONTGOMERY BOOSTER, FIRE PUMP, WATERLINE (1)		
<b>Project Code:</b>	COLDBS	<b>Asset Owner/Dept:</b>	Pumps, URW
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

Currently a small booster pump serves the Upper Montgomery Estates Zone. This station is dilapidated, and undersized based on modern facility standards. The elevation range in the Montgomery Estates Zone makes it difficult to maintain the District's acceptable system pressure standards and to provide enough water for redundancy and fire protection. An engineering study is to be conducted to determine the best way to re-zone the Upper Montgomery Estates Zone with the larger Montgomery Estates Zone to achieve the most efficient zone break and provide reliable service to water customers. It is expected that the existing undersized and aged booster station will be replaced. This project will affect the entire Montgomery Estates Zone and Upper Montgomery Estates Zone.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Reduced Reactionary Maintenance
Safety	Safety Improvements
Emergency Response	Improved Alarming/Data Collection

## Reference Document

Water System Optimization Plan (WSOP)	Project No. A25,A29	CIP No. 37
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.12	0.75	0.77					Planning	
											Design	\$116,000
											Construction	\$1,516,000
<b>Total Capital Improvement Cost</b>											\$1,632,000	26

**Funding Source:** EDWA (Planning)

## Project Location and Photos

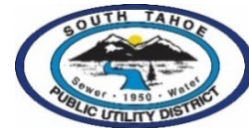


<-Cold Creek Tank  
Booster Station->

## Comments

Needs Based Plan constructs this project in 2025.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	H STREET ZONE BOOSTER, FIRE PUMP		
<b>Project Code:</b>	HSTRBS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project will aim to improve reliability and redundancy of the pressure zone and provide emergency water service by adding a check valve between Stateline and H-St Zone, allowing passive flow from Stateline Zone should the booster fail. H-St Booster Pump Station will be upgraded to meet water reliability goals by providing sufficient fire flow and redundancy. This station is undersized based on modern facility standards. Full station replacement will be considered. Adds a fire pump to H-Street Booster Station. The nearby upper reaches of Stateline Zone frequently experience service pressures below the District's minimum service standard (40 psi). the project will also consider the expansion of H street Zone and upsizing the booster pumps.

Need for Project	Operation and Maintenance Impacts
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Asset Management	Addition of Assets
Emergency Response	Safety Improvements
Capacity/Hydraulic Deficiencies	Reduced Reactionary Maintenance
Reliability/Redundancy	Improved Alarming/Data Collection

## Reference Document

Water System Optimization Plan (WSOP)	Project No. A3, B15	CIP No. 38
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.12	0.62	0.63					Planning	
											Design	\$116,000
											Construction	\$1,250,000
<b>Total Capital Improvement Cost</b>											<b>\$1,366,000</b>	<b>26</b>

**Funding Source:** EDCWA (Planning)

## Project Location and Photos

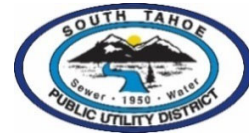


## Comments

Needs Based Plan constructs this project in 2025.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	AL TAHOE WELL REHABILITATION		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

The Al Tahoe Well is one of two primary water supplies for the Stateline Zone. The right-angle drive while electrically efficient has reached the end of its life. The project will replace the right-angle drive with a submersible pump and motor, replace the station's electrical gear, add station efficiency monitoring, add a diesel generator, and rehabilitate the well casing.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life High Consequence of Failure System Monitoring/Remote Control Safety	Reduced Reactionary Maintenance Safety Improvements Improved Alarming/Data Collection

### Reference Document

Prop 218 Planning/Water Efficiency Improvements (2018)	CIP No. 39
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
			0.11	0.54	0.56						Planning	
											Design	\$113,000
											Construction	\$1,103,000
<b>Total Capital Improvement Cost</b>											\$1,216,000	25

**Funding Source:** Capital

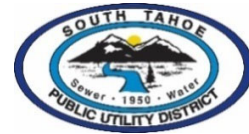
### Project Location and Photos



### Comments

This project constructs with Keller Booster Upgrades for economy of scale. Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	KELLER BOOSTER UPGRADES		
<b>Project Code:</b>	KELLBS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Brent Goligoski	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>This project will allow staff to replace check valves, suction pipes, electrical gear, instrumentation, and SCADA. This project does not include pump replacement/upsizing or backup power. Keller Booster Station serves as the sole source of supply to approximately 70 customers and as a backup to David Lane Booster Station for the Heavenly Zones.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension	Reduced Reactionary Maintenance
Asset Replacement/End-of-Life	Improved Alarming/Data Collection
System Monitoring/Remote Control	
High Consequence of Failure	

## Reference Document

Water System Optimization Plan (WSOP)	Project No. A9, C4	CIP No. 40
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
			0.06	0.13	0.13						Planning		
											Design	\$56,000	24
											Construction	\$256,000	25
<b>Total Capital Improvement Cost</b>											\$312,000		

<b>Funding Source:</b>	Capital
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## Project Location and Photos

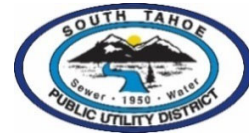


## Comments

This project constructs with AI Tahoe Well Rehabilitation for economy of scale. It would be best to coordinate switchgear replacement with ATS/generator installation (2022), but budget does not allow. The Needs Based plan constructs this project in 2024.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	CORNELIAN FIRE PUMP		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project upsizes the existing fire pump that serves the Christmas Valley Zone with a new 1000 gpm pump. The required fireflow for this zone is 2500 gpm for 2 hours, due to the USFS, LVFD and Caltrans yards (near the Arrowhead Zone Boundary). With existing sources within the zone also available (SUT Well = 1250 gpm), the existing storage will provide ample supply for domestic plus fire needs, if the fire pump is increased to 1000 gpm.

Need for Project	Operation and Maintenance Impacts
Emergency Response	

### Reference Document

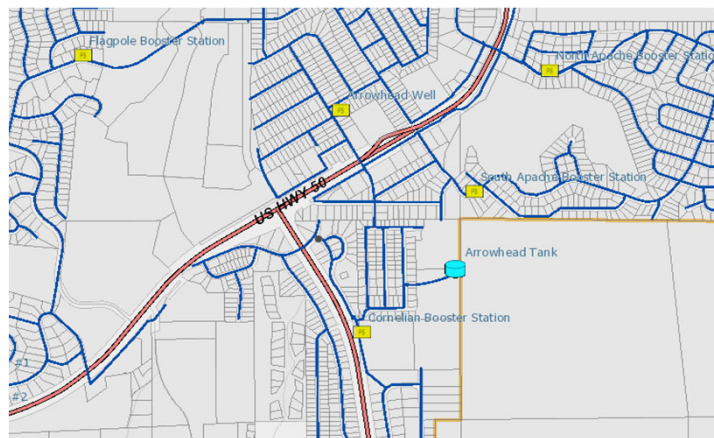
Water System Optimization Plan (WSOP)	Project No. A28	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
											Planning	
											Design	\$207,000
											Construction	\$659,000
<b>Total Capital Improvement Cost</b>											\$866,000	TBD

**Funding Source:** Capital

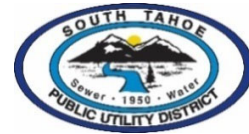
### Project Location and Photos



### Comments

Alternatively, consider moving the large facilities to Arrowhead Zone, which has ample fire capacity; this change would require a minimum of 500 LF of new water main to be installed. This project is slated for 2028 on the Needs Based Plan.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	DAVID LANE BOOSTER IMPROVEMENTS, GEN CONNECT		
<b>Project Code:</b>	DAVEBS	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project focuses on improving the David Lane Booster station by replacing pumps, electrical, and the roof. This will improve system reliability and update old equipment. This will also improve the safety of the station by replacing an old roof. It adds a generator hookup and repairs site improvements.

Need for Project	Operation and Maintenance Impacts
Asset Replacement/End-of-Life	Addition of Assets
System Monitoring/Remote Control	Reduced Reactionary Maintenance
Emergency Response	Improved Alarming/Data Collection
Maintenance History	

### Reference Document

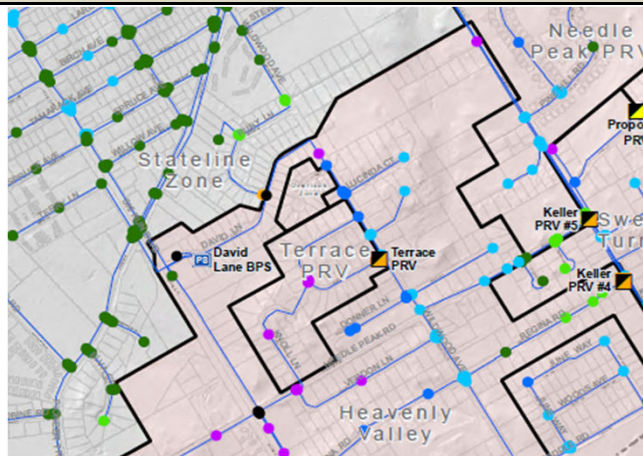
Water Efficiency Improvements (2018)/WSOP	A30	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
											Planning	
											Design	\$75,000
											Construction	\$710,000
<b>Total Capital Improvement Cost</b>											\$785,000	TBD

**Funding Source:** TBD

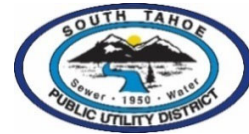
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2028.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WELL TESTING, INSPECTION AND REHABILITATION PROGRAM		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This is a compilation of projects that focus on testing the conditions inside wells. In addition, this will encompass inspection and rehabilitation of the wells and pumps. There is the assumption that 4 wells will be tested per year as routine well and pump performance testing and there will be a short-term specific capacity test every two months that will include 6 wells per year which was factored into the budget.

Need for Project	Operation and Maintenance Impacts
------------------	-----------------------------------

Reliability/Redundancy	Increase Planned Maintenance
Asset Life Extension	
System Monitoring/Remote Control	

### Reference Document

Standard Operation Procedure Manuals		
Water System Optimization Plan (WSOP)	Project No. B12	CIP No. 41

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year				
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	\$258,000	ALL			
		0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03						
<b>Total Capital Improvement Cost</b>														\$258,000		

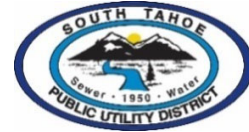
**Funding Source:** Capital

### Project Location and Photos

Pumping Well: _____ Test Date: _____ Location: _____ Station No. (S/N): _____ Operation Dept: _____ Pumping (S/N) (S/N): _____ Pump On (S/N): _____ Total Operation (S/N) (S/N): _____ Pump Off (S/N): _____ Totalizer Read (S/N): _____ Pump Depth (S/N): _____ Totalizer Read (S/N): _____ Storage Tank Level: _____ Total Station Permits: _____ Test Log: _____ Station Permits Total: _____ Station: _____ Station (S/N): _____ COMMENTS: _____	
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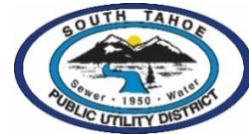
### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> WATER BOOSTER STATION AND WELL MONITORING														
<b>Project Code:</b> 0	<b>Asset Owner/Dept:</b> Pumps, Elec													
<b>Project Contact:</b> Julie Ryan	<b>Project Management Dept:</b> Eng Pumps													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
Additional monitoring equipment will be installed at multiple well and booster station sites that are not being upgraded through other CIP projects. The equipment will monitor pressure, temperature, and vibration. This is an ongoing asset management program, to provide continual funding for replacement and upkeep of monitoring instruments at water stations.														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
System Monitoring/Remote Control System Efficiency Asset Life Extension	Addition of Assets Increase Planned Maintenance Improved Alarming/Data Collection													
<b>Reference Document</b>														
Prop 218 Planning	CIP No. 42													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
					0.52	0.54	0.13	0.13	0.14	0.14				
<b>Total Capital Improvement Cost</b>												<b>\$1,606,000</b>	<b>26+</b>	
												<b>\$1,606,000</b>		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANKS BACKUP POWER		
<b>Project Code:</b>	TNKPWR	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

There are 12 tank sites in the water system that do not have adequate backup power to continue sending tank levels during an extended power outage. The tank levels drop to zero in SCADA as a result. Operators must deploy to boosters and wells during power outages to run pumps in hand, so as to not overtop tanks. The proposed project will install whole-house backup batteries at 11 of 12 tank sites to carry essential loads during power outages. The batteries will be sized to run the instrumentation and communication systems for 7 days, and will be equipped with a hookup for a diesel generator as well. Battery technology was selected over generators, because they do not need refueling and these remote sites are very difficult to access during winter months.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy System Monitoring/Remote Control	Addition of Assets Reduced Reactionary Maintenance Improved Alarming/Data Collection

## Reference Document

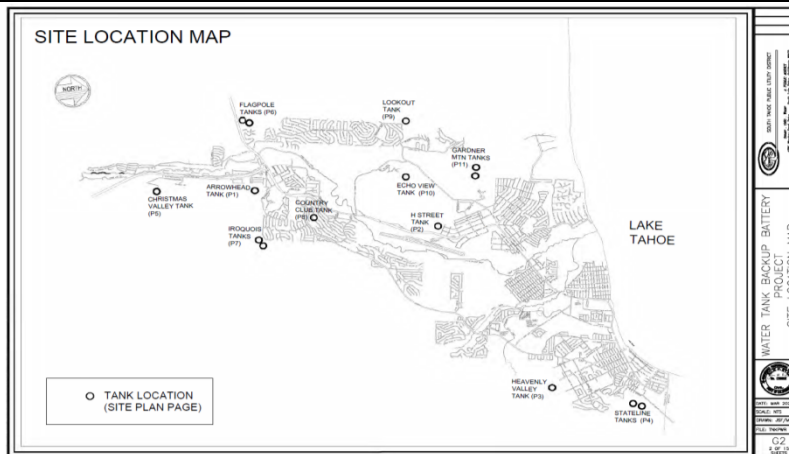
19-20 CIP Planning	CIP No. 43
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	Design	Construction
0.17	0.17											\$20,000	
												\$317,000	21
<b>Total Capital Improvement Cost</b>												\$337,000	

**Funding Source:** FEMA

## Project Location and Photos

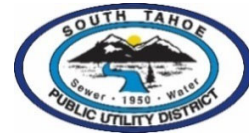


## Comments

This project will be constructed with the Blower Generator and Secondary Clarifiers 1&2. The project must be completed in 2021 to meet FEMA funding deadline.



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>WATER EFFICIENCY IMPROVEMENTS</b>		
<b>Project Code:</b>	SCDW02	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
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This project installs pump and power monitoring equipment at 6 wells: South Upper Truckee, Sunset, Valhalla, Bayview, Bakersfield, and Al Tahoe. This project has completed 90% Design.

Need for Project	Operation and Maintenance Impacts
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Asset Life Extension	Addition of Assets
System Efficiency	Increase Planned Maintenance
System Monitoring/Remote Control	Improved Alarming/Data Collection

## Reference Document

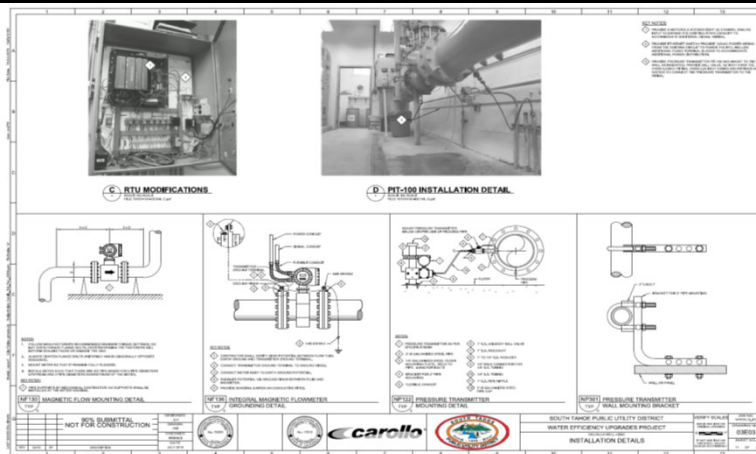
Water Efficiency Improvements (2018)	CIP No.
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design	Construction
											\$50,000	
											\$1,143,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$1,193,000</b>	

**Funding Source:** BOR (Pending)

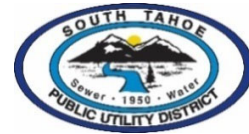
## Project Location and Photos



## Comments

Needs Based Plan constructs this project in 2026.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	WATER LOSS TRACKING (STATELINE DMAS)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps, Elec
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This project installs insertion magnetic flow meters in vaults at 15 locations throughout Stateline Zone to track the movement of water through the system for water loss monitoring.

Need for Project	Operation and Maintenance Impacts
System Monitoring/Remote Control System Efficiency Funding Opportunity	Increase Planned Maintenance Addition of Assets Improved Alarming/Data Collection

### Reference Document

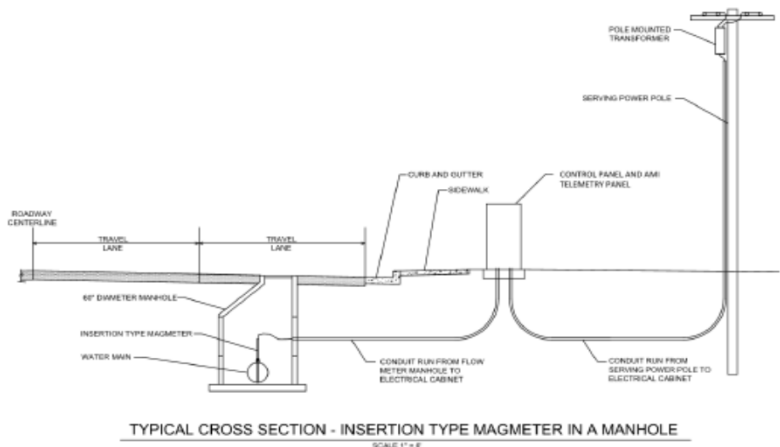
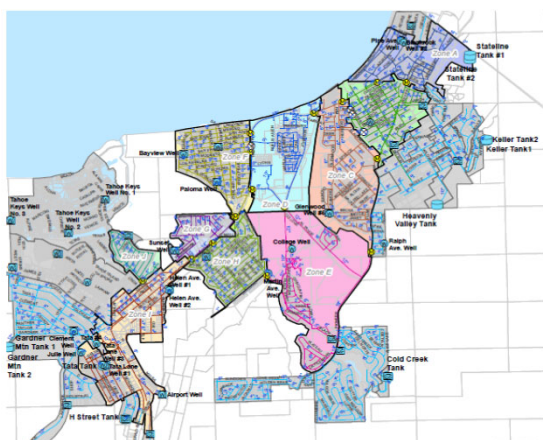
19-20 CIP Planning	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
											Planning	
											Design	\$100,000
											Construction	\$2,133,000
<b>Total Capital Improvement Cost</b>											<b>\$2,233,000</b>	TBD

**Funding Source:** EDWA (Planning)

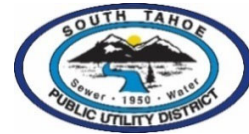
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2024.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (STATELINE NO. 1)		
<b>Project Code:</b>	KOTST1 (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

Project includes recoating both interior and exterior of this 1.3M gallon tank. Tank was last coated in 1994. The coating has failed, putting the tank at risk for structural degradation, and increasing the potential for water quality problems. The maximum expected life of a tank coating in Tahoe conditions is 20 years.

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning	CIP No. 44
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
				0.35	0.36						Planning	
											Design	\$25,000
											Construction	\$687,000
<b>Total Capital Improvement Cost</b>											\$712,000	25

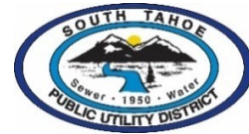
**Funding Source:** Capital

### Project Location and Photos



### Comments

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (GARDNER NO. 1)		
<b>Project Code:</b>	KOTGM1 (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Project includes recoating both interior and exterior of this 212K gallon tank. Tank was last coated in 2002. The coating has failed, putting the tank at risk for structural degradation, and increasing the potential for water quality problems. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning	CIP No. 45
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
					0.18	0.19					Planning	
											Design	\$25,000
											Construction	\$342,000
												26
<b>Total Capital Improvement Cost</b>											\$367,000	

<b>Funding Source:</b>	Capital
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### Project Location and Photos



### Comments

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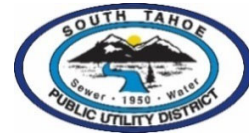
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> TANK COATINGS (STATELINE NO. 2)														
<b>Project Code:</b> KOTST2 (Future)	<b>Asset Owner/Dept:</b> Pumps													
<b>Project Contact:</b> Adrian Combes	<b>Project Management Dept:</b> Eng													
<b>Project Description/ Benefits</b>														
<b>Project Status:</b>	10-yr Plan													
<p>Project includes recoating both interior and exterior of this 2.3M gallon tank. Tank was last coated in 1994. The coating has failed, putting the tank at risk for structural degradation, and increasing the potential for water quality problems. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>														
<b>Need for Project</b>	<b>Operation and Maintenance Impacts</b>													
Asset Life Extension Asset Management	Reduced Reactionary Maintenance													
<b>Reference Document</b>														
20-21 CIP Planning	CIP No. 46													
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>											<b>Total</b>	<b>Year</b>		
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction			
			0.43	0.44									\$25,000	
													\$843,000	24
<b>Total Capital Improvement Cost</b>												\$868,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (FLAGPOLE NO. 2)		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Adrian Combes	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Project includes recoating both interior and exterior of this 204K gallon tank. Tank was last coated in 1999. The coating has failed, putting the tank at risk for structural degradation, and increasing the potential for water quality problems. DDW has also flagged this tank for repair on prior inspection due to failed coatings. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management Regulatory Mandate	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning	CIP No. 47
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31		
		0.13	0.13								Planning	
											Design	\$25,000
											Construction	\$231,000
<b>Total Capital Improvement Cost</b>											\$256,000	23

<b>Funding Source:</b>	Capital
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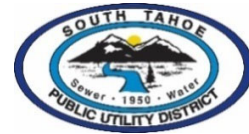
### Project Location and Photos



### Comments

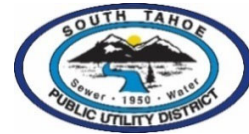
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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> TANK COATINGS (ARROWHEAD)		<b>Asset Owner/Dept:</b> Pumps												
<b>Project Code:</b> KOTARO (Future)		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
Project includes recoating both interior and exterior of this 1.1M gallon tank. Tank was last coated in 1995. The coating has blistered, but as of 2020 dive inspection has not yet failed. The maximum expected life of a tank coating in Tahoe conditions is 20 years.														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Asset Life Extension Asset Management		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
20-21 CIP Planning		CIP No. 48												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
							0.35	0.36			<b>Design</b>	\$25,000		
											<b>Construction</b>	\$679,000	28	
<b>Total Capital Improvement Cost</b>												\$704,000		
<b>Funding Source:</b> Capital														
<b>Project Location and Photos</b>														
<b>Comments</b>														

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (IROQUOIS NO. 1)		
<b>Project Code:</b>	KOTIR1 (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Project includes recoating both interior and exterior of this 301K gallon tank. Tank was last coated in 2001. The exterior coating is deteriorated, and interior needs touchup, but as of 2019 dive inspection has not yet failed. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management	Reduced Reactionary Maintenance

### Reference Document

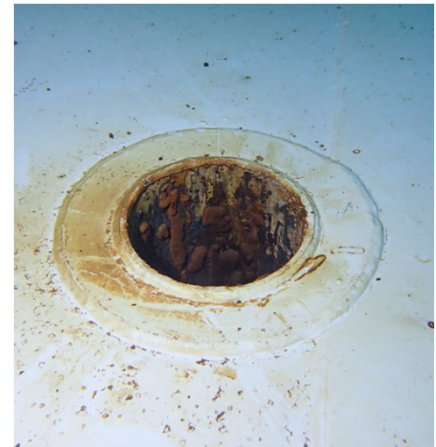
20-21 CIP Planning	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$25,000	
											Construction	\$418,000	TBD
<b>Total Capital Improvement Cost</b>											\$443,000		

**Funding Source:** TBD

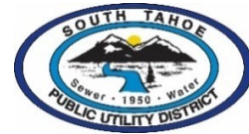
### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2028.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (ANGORA)		
<b>Project Code:</b>	KOTANG (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Project includes recoating both interior and exterior of this 259K gallon tank. Tank was last coated in 2010. The interior rafters have failed as of 2020 dive inspection. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management	Reduced Reactionary Maintenance

### Reference Document

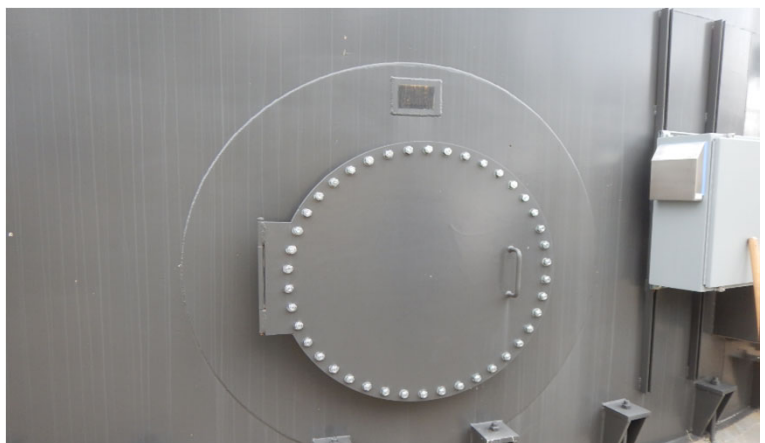
20-21 CIP Planning	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$25,000	
											Construction	\$413,000	TBD
<b>Total Capital Improvement Cost</b>											<b>\$438,000</b>		

**Funding Source:** TBD

### Project Location and Photos

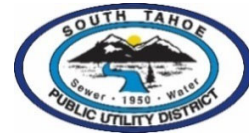




### Comments

The rafters are slated for repair in 2021 under Tanks Asset Management Program. Needs Based Plan constructs this project in 2029.



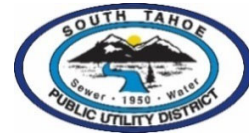
# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b> TANK COATINGS (ECHO VIEW)		<b>Asset Owner/Dept:</b> Pumps												
<b>Project Code:</b> KOTECO (Future)		<b>Project Management Dept:</b> Eng												
<b>Project Contact:</b> TBD														
<b>Project Description/ Benefits</b>														
<b>Project Status:</b> 10-yr Plan														
Project includes recoating both interior and exterior of this 209K gallon tank. Tank was last coated in 2010. The interior rafters have failed as of 2020 dive inspection. The maximum expected life of a tank coating in Tahoe conditions is 20 years.														
<b>Need for Project</b>		<b>Operation and Maintenance Impacts</b>												
Asset Life Extension Asset Management		Reduced Reactionary Maintenance												
<b>Reference Document</b>														
20-21 CIP Planning		CIP No.												
<b>Project Funding</b>														
<b>Capital Improvement Expenditures (Millions)</b>			<b>Total</b>											
FY 21	22	23	24	25	26	27	28	29	30	31	<b>Planning</b>		<b>Year</b>	
												<b>Design</b>	\$25,000	
												<b>Construction</b>	\$394,000	TBD
<b>Total Capital Improvement Cost</b>												\$419,000		
<b>Funding Source:</b> TBD														
<b>Project Location and Photos</b>														
														
<b>Comments</b>														
The rafters are slated for repair in 2021 under Tanks Asset Management Program. Needs Based Plan constructs this project in 2030.														



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	TANK COATINGS (FOREST MTN)		
<b>Project Code:</b>	KOTFOR (Future)	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
<p>Project includes recoating both interior and exterior of this 159K gallon tank. Tank was last coated in 2009. Coating is in good condition as of 2020 Dive Inspection. The maximum expected life of a tank coating in Tahoe conditions is 20 years.</p>	

Need for Project	Operation and Maintenance Impacts
Asset Life Extension Asset Management	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning	CIP No.
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
											Planning		
											Design	\$25,000	
											Construction	\$189,000	TBD
<b>Total Capital Improvement Cost</b>											\$214,000		

**Funding Source:** TBD

### Project Location and Photos



### Comments

Needs Based Plan constructs this project in 2031.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	<b>TANKS ASSET MANAGEMENT PROGRAM</b>		
<b>Project Code:</b>	TNKWTR	<b>Asset Owner/Dept:</b>	Eng
<b>Project Contact:</b>	Julie Ryan	<b>Project Management Dept:</b>	Pumps

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project implements an ongoing water and sewer tank management program, including dry inspections/repairs on a five-year cycle. Program will be deployed by HM/Pumps with support from Engineering to hire contractors for more substantial repairs (ie., coating touchup in headspace).

Need for Project	Operation and Maintenance Impacts
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Asset Management Asset Life Extension Water Quality	Increase Planned Maintenance
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## Reference Document

20-21 CIP Planning	CIP No. 49
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning	\$50,000	
0.04		0.03	0.07	0.07	0.10	0.08	0.08	0.09	0.06	0.09	Design	\$50,000	
											Construction	\$572,000	ALL
<b>Total Capital Improvement Cost</b>												<b>\$672,000</b>	

**Funding Source:** SRF

## Project Location and Photos

WARRANTY = DRY inspection year after COAT to check for defects and install new anodes (No cost to District)  
 DIVE = Dive Inspect/Vacuum/Underwater Touchup in Fall of Year (\$2K/tank/yr in 2020)  
 DRY = Dry Inspect/Repair/Touchup Coatings on Interior Roof and exterior (\$20K/tank/yr in 2020)  
 COAT = Interior and Exterior Recoat on 20-year cycle (Price varies by tank)

REVISED 12/01/20 - Alternating Dive/Dry Inspection on 5-year schedule/ 20-yr Recoat Cycle (19 Water Tanks and 2 Recycled Water Tanks)

Tank Name	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
1 Flagpole Tank 2	DRY		COAT	WARRANTY	DIVE									DIVE		DRY				DIVE
2 Iroquois Tank 1	DRY			DIVE		DRY		COAT	WARRANTY		DIVE			DIVE		DRY				DIVE
3 H Street Tank	DRY			DIVE		DRY				DIVE			COAT	WARRANTY		DIVE				DIVE
4 Lookout Tank		DIVE				DRY			DIVE					DIVE		DRY			COAT	WARRANTY
5 Stateline Tank 2		DRY		COAT	WARRANTY		DIVE			DIVE		DRY			DIVE		DRY			DIVE
6 Angora Tank		DRY			DIVE		DRY		COAT	WARRANTY		DIVE			DIVE		DRY			DIVE
7 Iroquois Tank 2		DRY			DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE			DIVE
8 Flagpole Tank 1		DIVE				DRY			DIVE			DRY			DIVE		DRY		COAT	WARRANTY
9 Stateline Tank 1		DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY		DIVE		DRY			DIVE
10 Echo View Tank		DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY		DIVE
11 Gardner Mtn Tank 2		DIVE		DRY			DIVE		DRY			DIVE		COAT	WARRANTY		DIVE		DRY	COAT
12 Keller Tank	WARRANTY		DIVE			DIVE		DRY		DIVE		DRY		DIVE		DIVE		DRY		COAT
13 Gardner Mtn Tank 1		DIVE		DRY		COAT	WARRANTY		DIVE		DRY		DIVE		DIVE		DIVE		DRY	DRY
14 Forest Mtn Tank		DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY		DRY
15 Christmas Valley Tank		DIVE		DRY			DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE	DIVE
16 Arrowhead Tank			DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY		DRY		DIVE		DRY
17 Country Club Tank			DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE		DIVE		DRY	DRY
18 Cold Creek Tank			DIVE		DRY			DIVE		DRY			DIVE		DRY		COAT	WARRANTY		DIVE
19 Heavens Tank			DIVE		DRY			DIVE		DRY			DIVE		DRY		DIVE		COAT	DRY
20 Luther Tank 1		COAT	WARRANTY					DRY				DRY							DRY	
21 Luther Tank 2			COAT	WARRANTY				DRY				DRY							DRY	
22 WWTP Backwash Tank		DRY				DRY				DRY		DRY		COAT	WARRANTY					DRY
23 WWTP Sludge Storage Tank		DRY				DRY				DRY		DRY		COAT	WARRANTY					DRY
Annual Cost of Maintenance (Water)	\$68,000	\$68,000	\$70,000	\$66,000	\$86,000	\$68,000	\$66,000	\$68,000	\$48,000	\$68,000	\$68,000	\$68,000	\$68,000	\$48,000	\$68,000	\$68,000	\$68,000	\$68,000	\$48,000	\$68,000
Annual Cost of Maintenance (Sewer)	\$40,000	\$0	\$0	\$0	\$0	\$40,000	\$20,000	\$20,000	\$0	\$0	\$40,000	\$20,000	\$20,000	\$0	\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$0

## Comments

Project will be contracted in combination with the tank recoating project scheduled for that year.

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	ELKS CLUB WELL PUMP/MOTOR REPLACEMENT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This motor, which has had maintenance issues in the past, has mercury seals which are no longer allowed in water systems. This project will remove and properly dispose of existing motor, install a new motor, and if needed also install a new pump.

Need for Project	Operation and Maintenance Impacts
Water Quality Regulatory Mandate Asset Replacement/End-of-Life	Reduced Reactionary Maintenance

<b>Reference Document</b>		
20-21 CIP Planning		CIP No. 50

### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
	0.26										Planning		
											Design	\$25,000	
											Construction	\$233,000	
<b>Total Capital Improvement Cost</b>												\$258,000	22

**Funding Source:** Capital

### Project Location and Photos



**Comments**

# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	BAKERSFIELD PUMP/MOTOR REPLACEMENT		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Pumps
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

**Project Status:** 10-yr Plan

This motor, which has had maintenance issues in the past, has mercury seals which are no longer allowed in water systems. This project will remove and properly dispose of existing motor, install a new motor, and if needed also install a new pump.

Need for Project	Operation and Maintenance Impacts
Water Quality Regulatory Mandate Asset Replacement/End-of-Life	Reduced Reactionary Maintenance

### Reference Document

20-21 CIP Planning	CIP No. 51
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31			
		0.27									Planning		
											Design	\$25,000	
											Construction	\$240,000	
<b>Total Capital Improvement Cost</b>												\$265,000	23

**Funding Source:** Capital

### Project Location and Photos



### Comments



# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	MW INSTALLATIONS - STPUD GSA		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	Laboratory
<b>Project Contact:</b>	Ivo Bergsohn	<b>Project Management Dept:</b>	Eng

### Project Description/ Benefits

<b>Project Status:</b>	10-yr Plan
Placeholder for construction of future Observation Wells to be added to the Tahoe South Subbasin Groundwater Monitoring Network.	

Need for Project	Operation and Maintenance Impacts
Water Quality Other Environmental Benefit	None

### Reference Document

20-21 CIP Planning/TSS Alternative	CIP No. 52
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### Project Funding

Capital Improvement Expenditures (Millions)											Total	Year	
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction		
		0.05										\$53,000	23
<b>Total Capital Improvement Cost</b>											\$53,000		

**Funding Source:** District Funds, EDCWA (Planning), DWR SGMA Implementation Grant

### Project Location and Photos

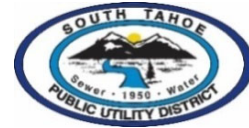


### Comments

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# South Tahoe Public Utility District Capital Improvement Program (CIP) Project Summary



<b>Project Name:</b>	ADMIN HVAC UPGRADES		
<b>Project Code:</b>	0	<b>Asset Owner/Dept:</b>	HM
<b>Project Contact:</b>	TBD	<b>Project Management Dept:</b>	Eng

## Project Description/ Benefits

**Project Status:** 10-yr Plan

This project adds reliability to the Admin Building HVAC system, which was installed with only a single boiler (ie., no backup). Without a functioning HVAC system, the Admin Building (which is occupied by approximately 50 District Staff) is uninhabitable. The scope of the project is to integrate the control system for the Ops/Admin building with basic reporting to SCADA, so that HVAC system issues are reported immediately so they can be addressed timely.

Need for Project	Operation and Maintenance Impacts
Reliability/Redundancy	Reduced Reactionary Maintenance

## Reference Document

20-21 CIP Planning	CIP No. 53
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## Project Funding

Capital Improvement Expenditures (Millions)											Total	Year
FY 21	22	23	24	25	26	27	28	29	30	31	Planning Design Construction	
	0.03											
<b>Total Capital Improvement Cost</b>											<b>\$31,000</b>	<b>22</b>

**Funding Source:** Capital

## Project Location and Photos



## Comments

Project is scheduled to construct with the Ops and Server Room HVAC and the Bio Building HVAC for economy of scale.