

# SLCWD PUBLIC INFORMATION MEETING- WATER SYSTEM

May 2, 2024

# WATER SYSTEM RECOMMENDATIONS OVERVIEW

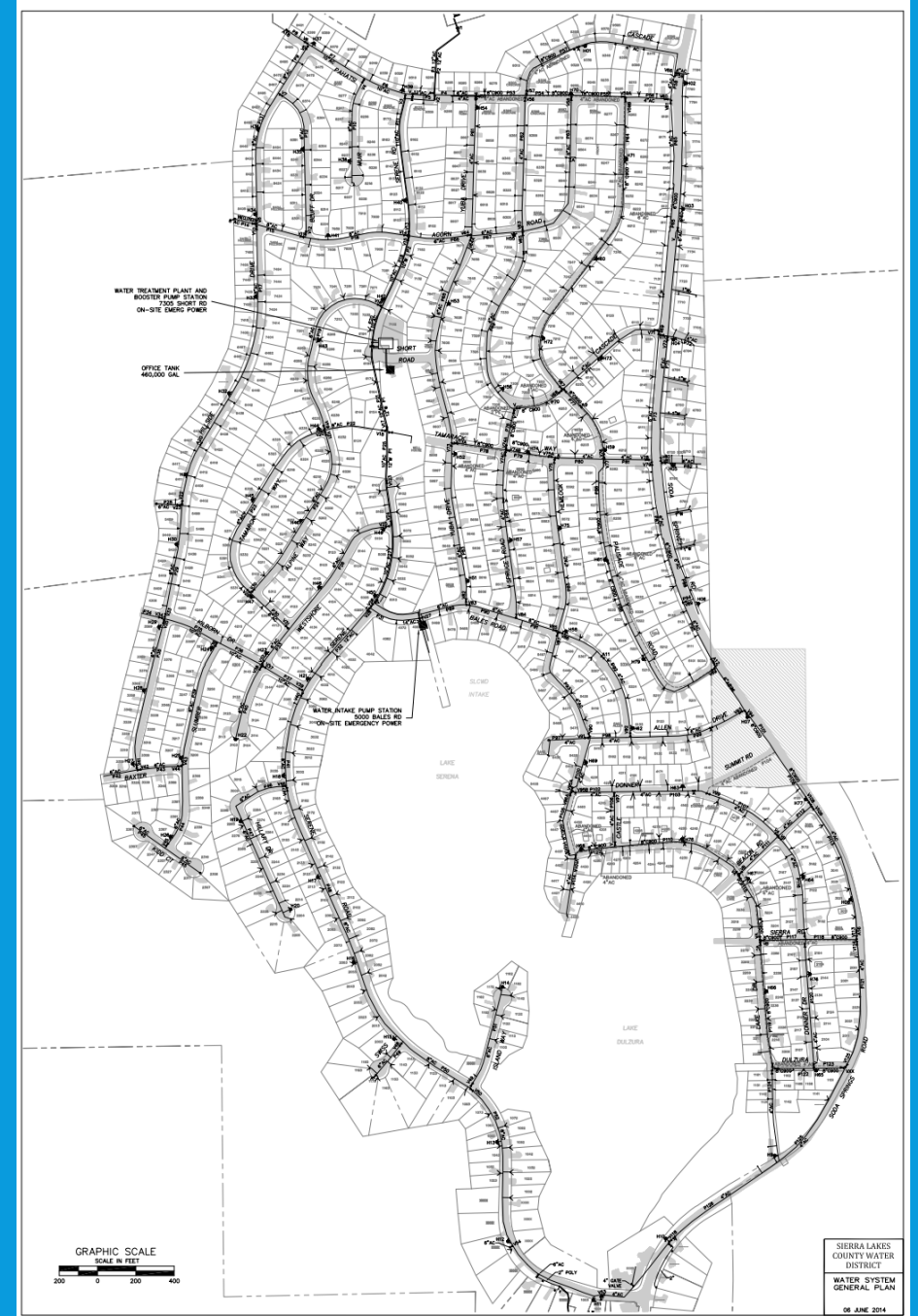
- Water Master Plan completed January 2024
- A few specific projects, discussed later
- Replace over 52,000 feet of ACP (asbestos cement pipe)
- Recommend replacing in 20 years = average \$4,000 per year CIP Charge
- Board considering starting at up to \$500 annual (\$125 quarterly) Water CIP charge; replace in 250 years
- Assumes annual CPI (Consumer Price Index) increase

# WATER PRESENTATION OUTLINE

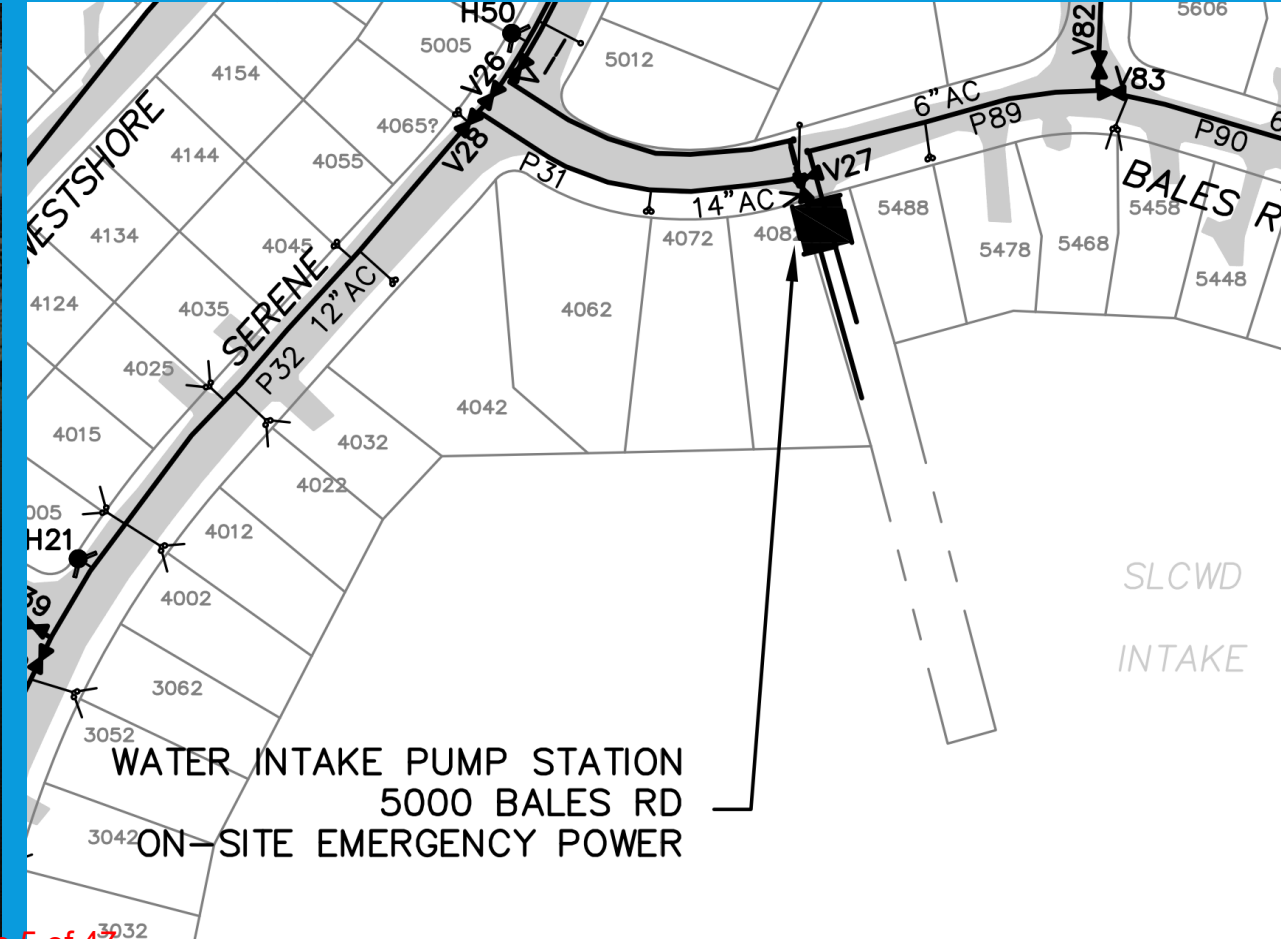
- Water system operation
- Recommended capital improvement projects
- Master Plan Schedule
- Proposed District Schedule

# OVERALL WATER SYSTEM

- Raw water intake
- Raw water pump station
- Water treatment plant
- Office tank
- Hill tank
- Well
- System Distribution



# RAW WATER INTAKE



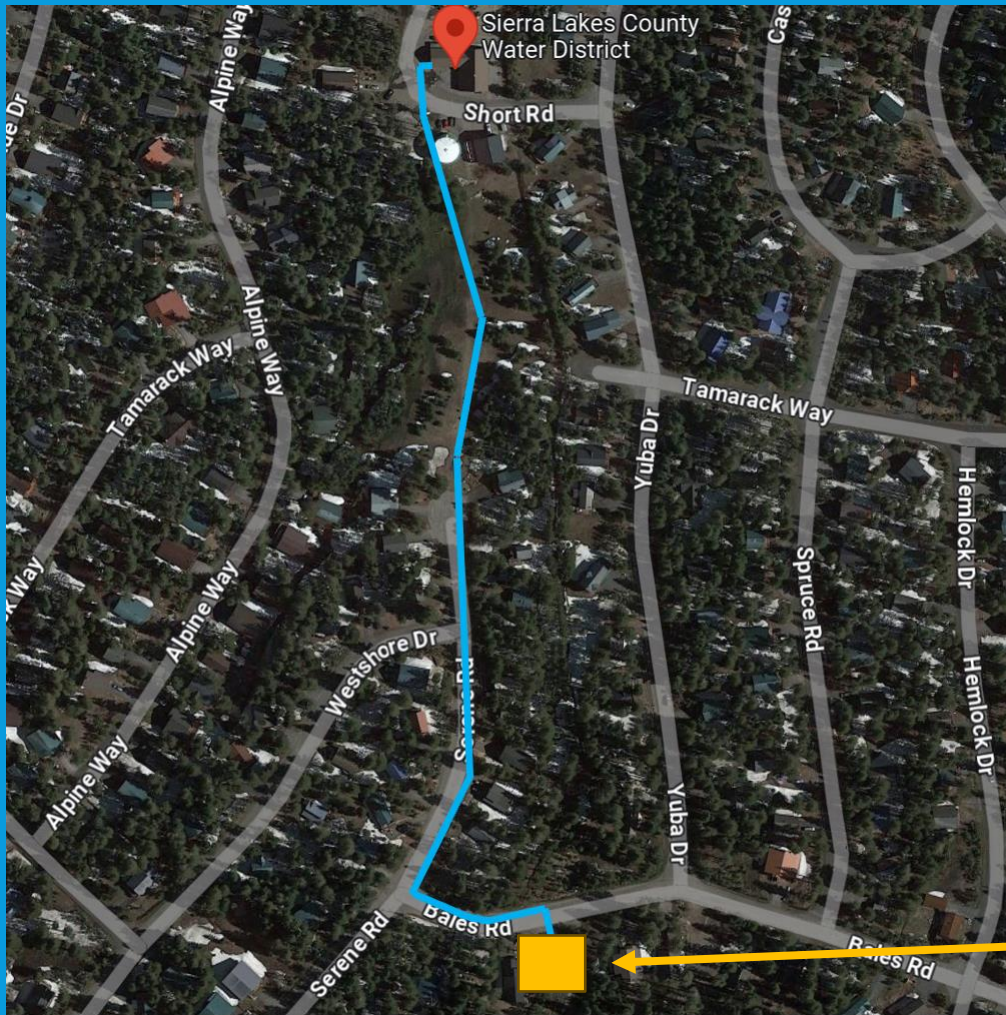
# RAW WATER PUMP STATION



# RAW WATER PUMP STATION FACILITIES



# RAW WATER PIPELINE



- 12-inch raw water pipeline
- Dedicated pipeline from Pump Station to WTP
- Pumped under pressure from raw water pump station to Water Treatment Plant (WTP)

Raw Water Pump Station



# WATER TREATMENT PLANT



Raw water comes from Intake PS into Clarifier



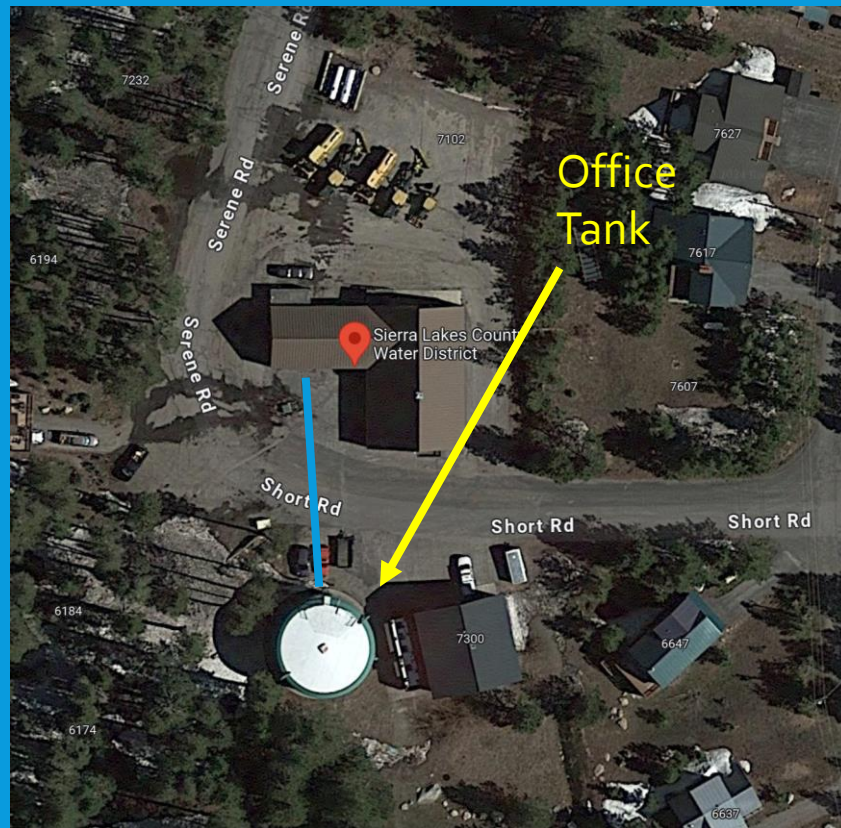
From the Clarifier to the Filters



A standby generator for power outages

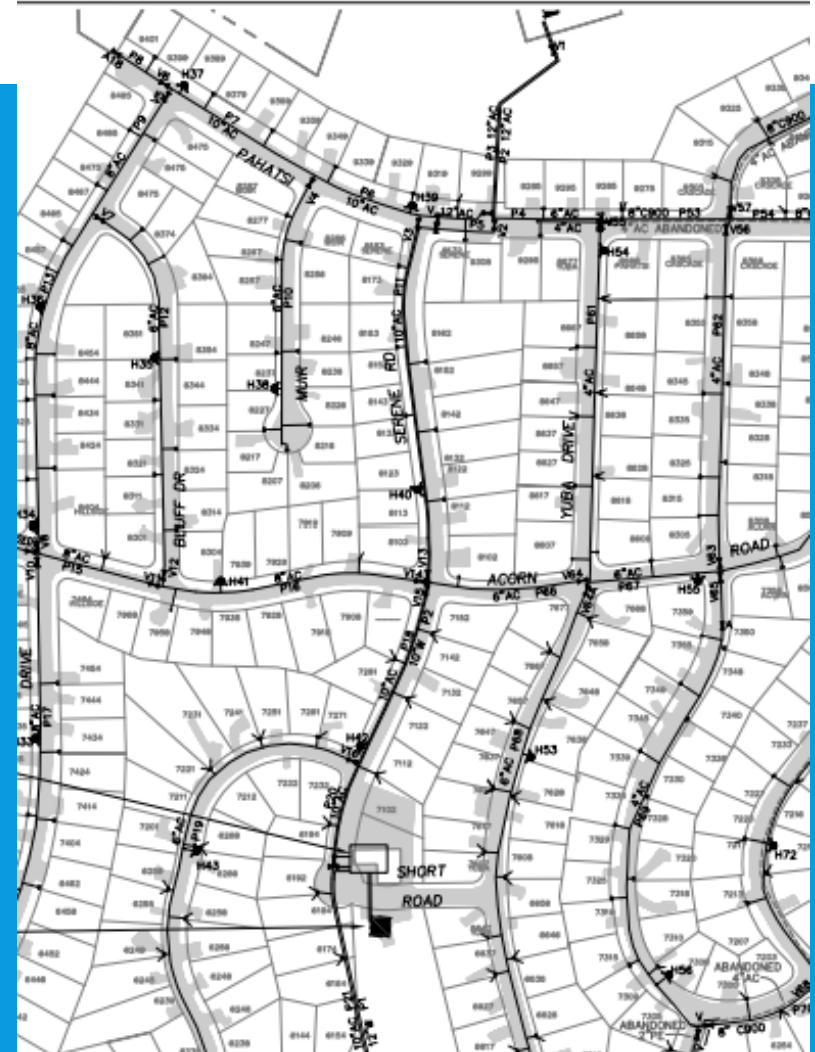
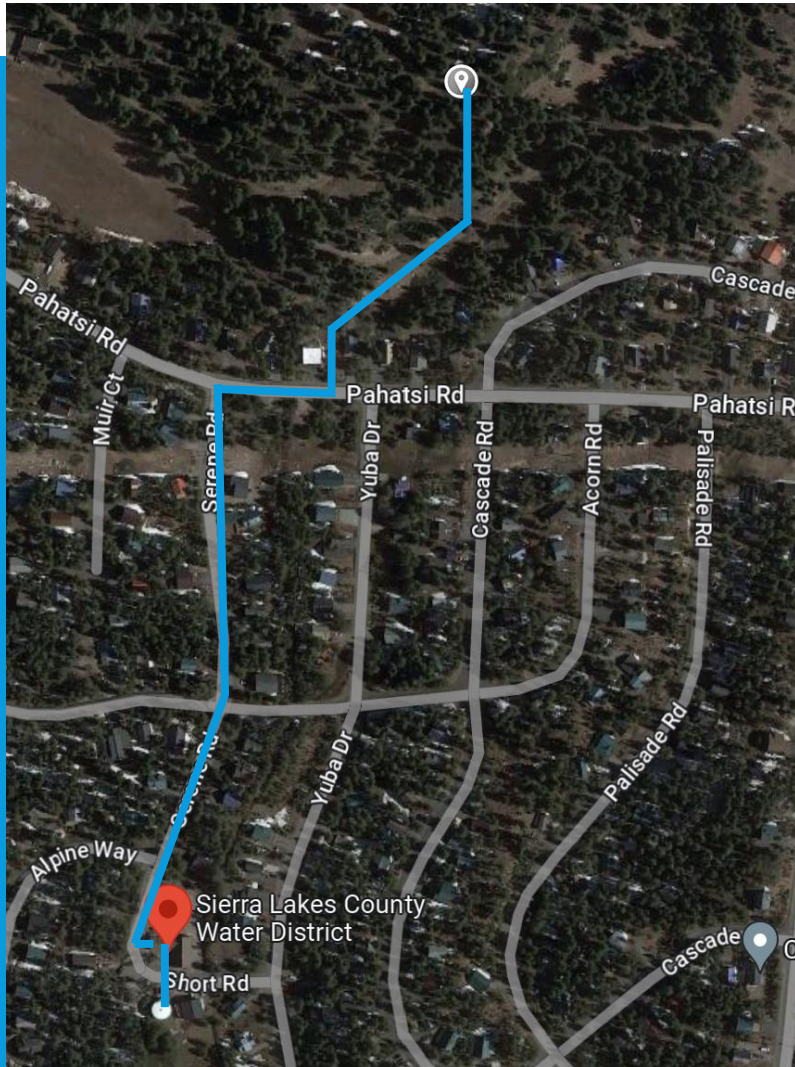
WTP controls

# OFFICE TANK

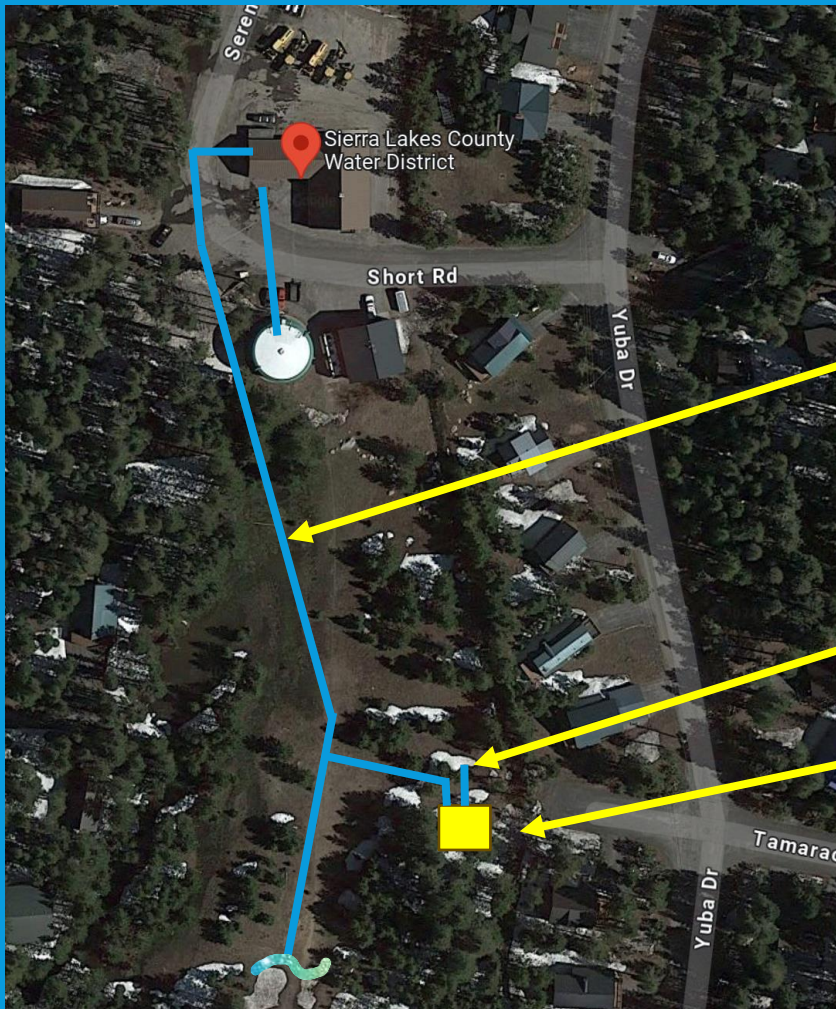


PS from Office Tank  
to Hill Tank (located  
at WTP)

# OFFICE TANK TO HILL TANK



# GROUNDWATER WELL



Raw water pipeline from Lake Intake

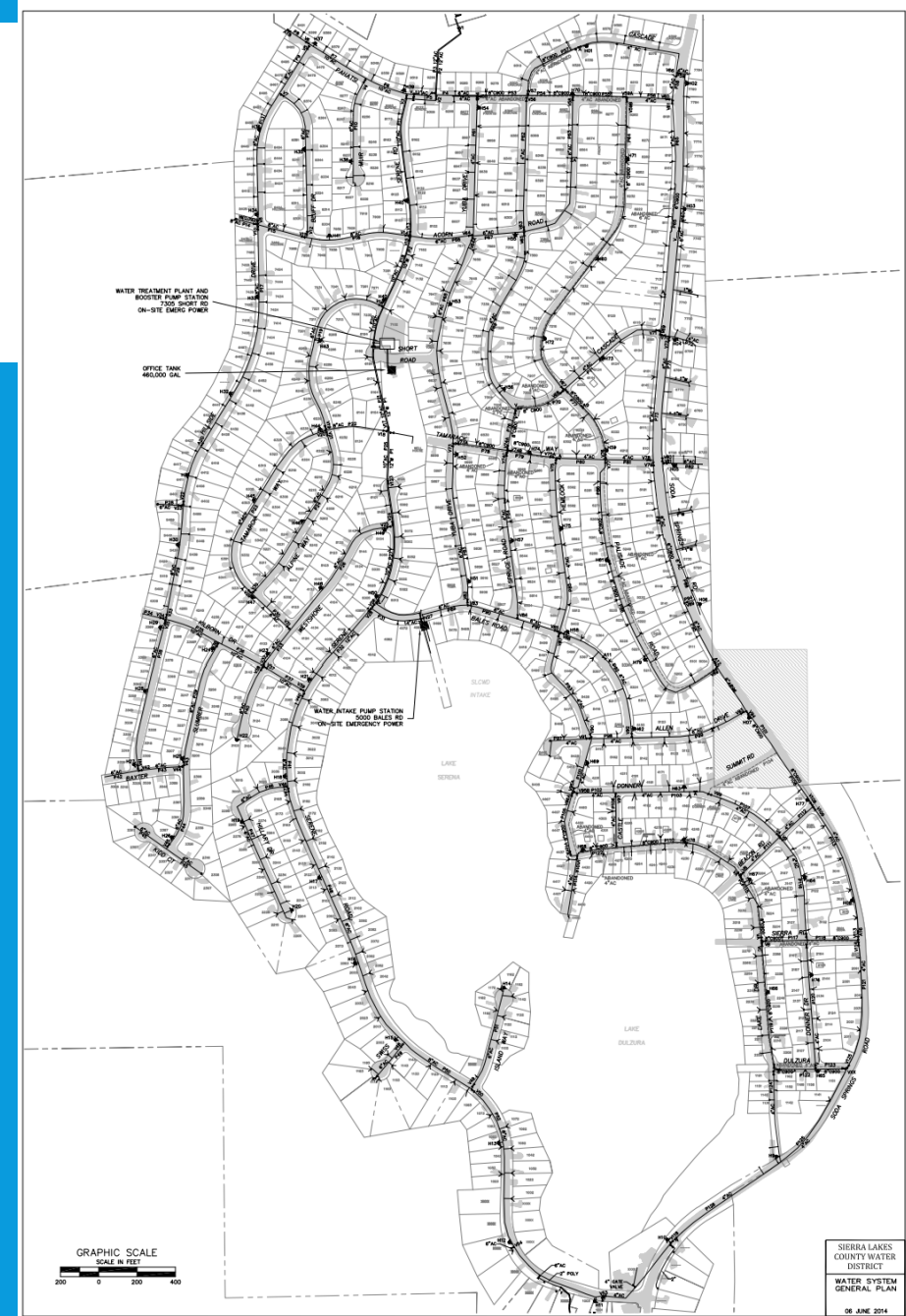
Well #01

Arsenic Filter System



# SYSTEM DELIVERY

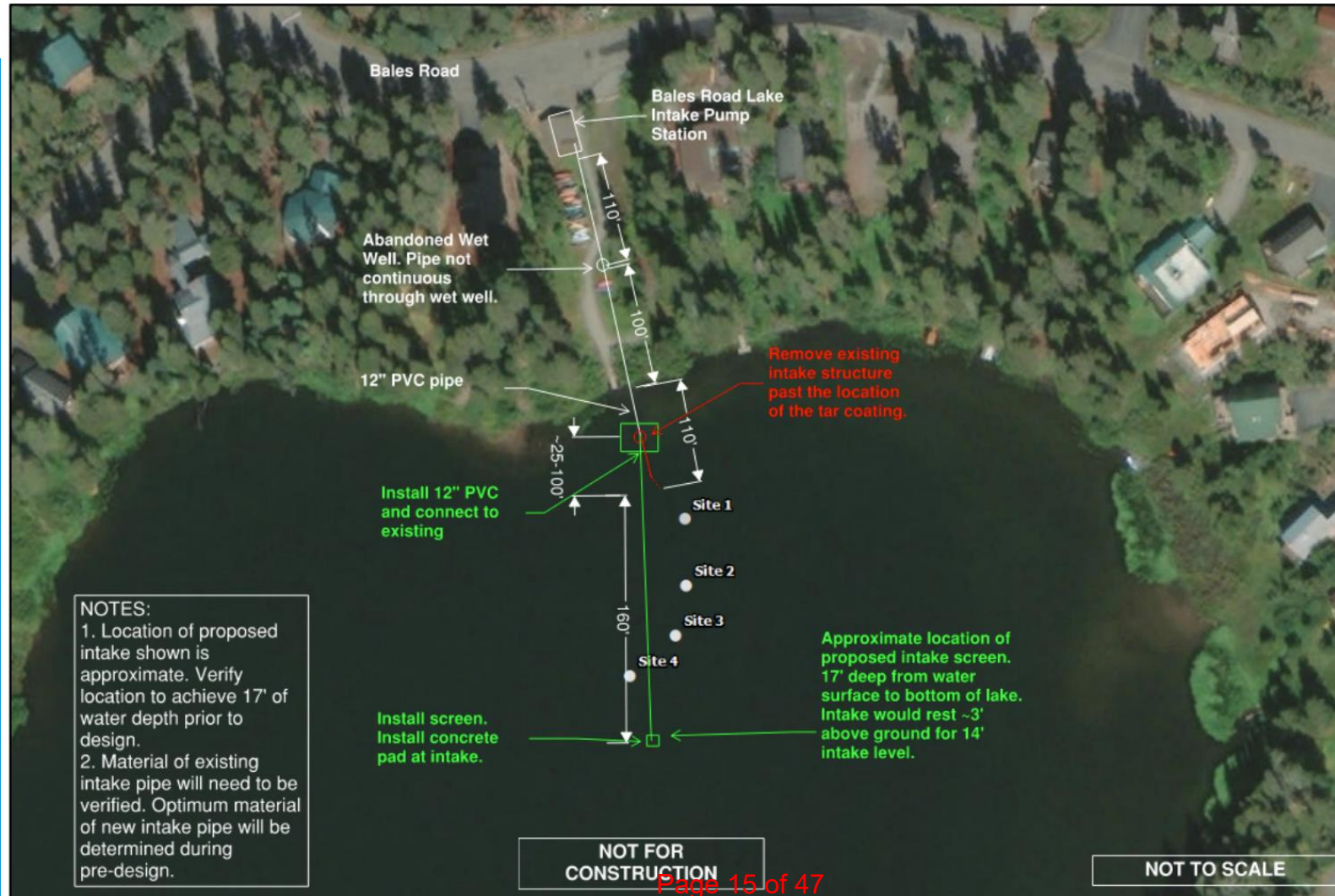
- Water flows out of Hill Tank
- Delivered by gravity to entire water system
- The south points longest travel time



# WATER CIP PROJECTS

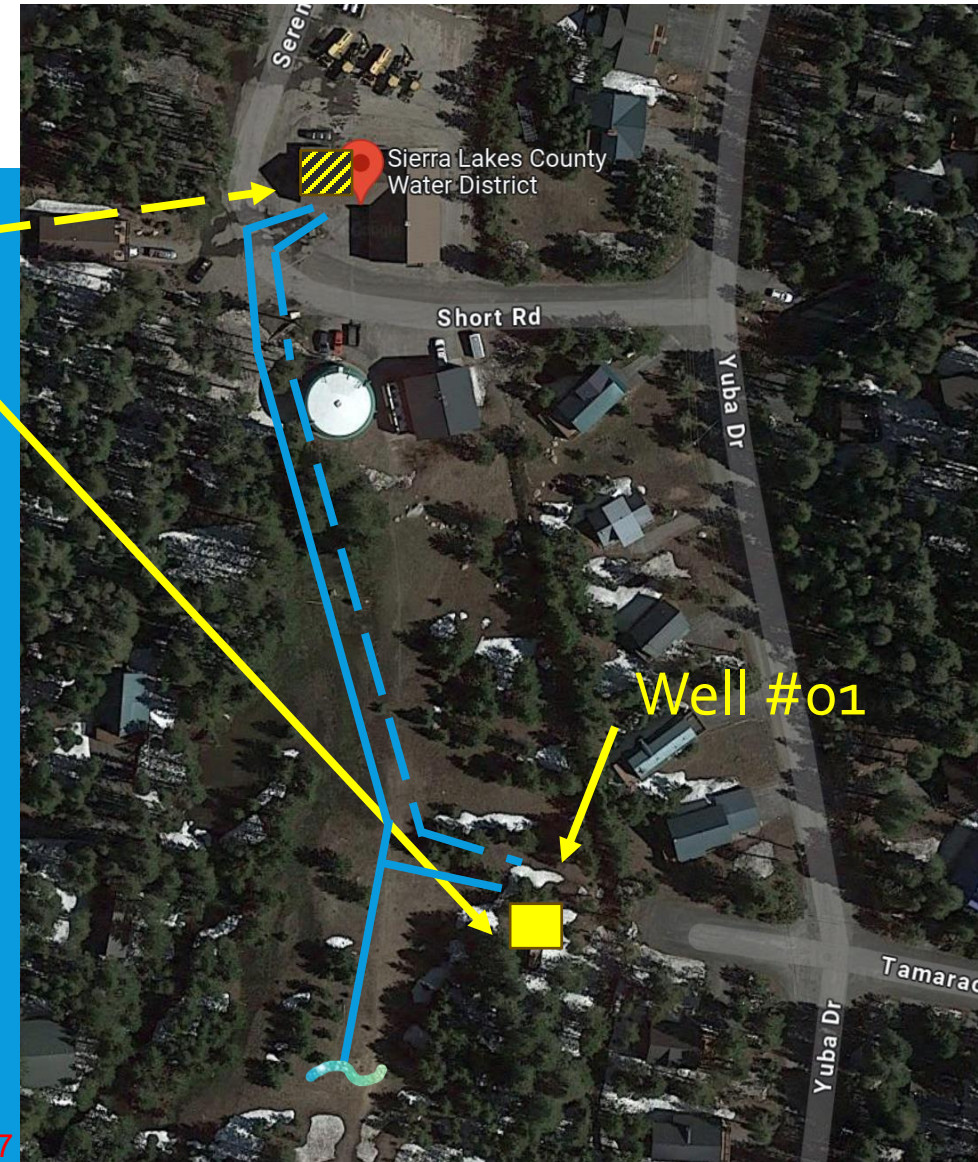
- Raw Water Intake
- Well #1 Treatment Relocation & Discharge Line
- Hill Tank Flow Meter
- Raw Water Line Leak Detection
- Annual Water Pipeline Replacements

# RAW WATER INTAKE EXTENSION



# WELL #1 TREATMENT RELOCATION & DISCHARGE LINE

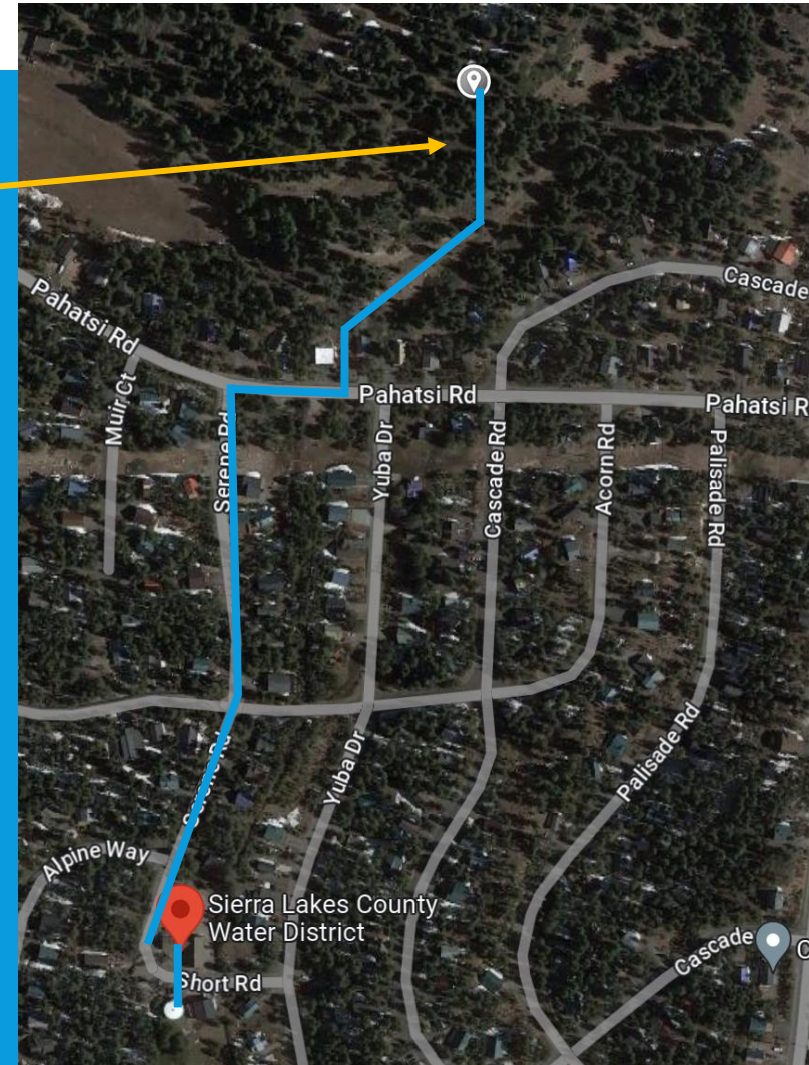
- Move Arsenic Filter System from existing location To WTP
- Determine if Well #1 can use raw water pipeline if treatment moved to WTP, if not, construct dedicated pipeline from Well #1 to WTP chlorination system
- If treatment not moved to WTP, dedicated pipeline from Well #1 to WTP chlorination system required





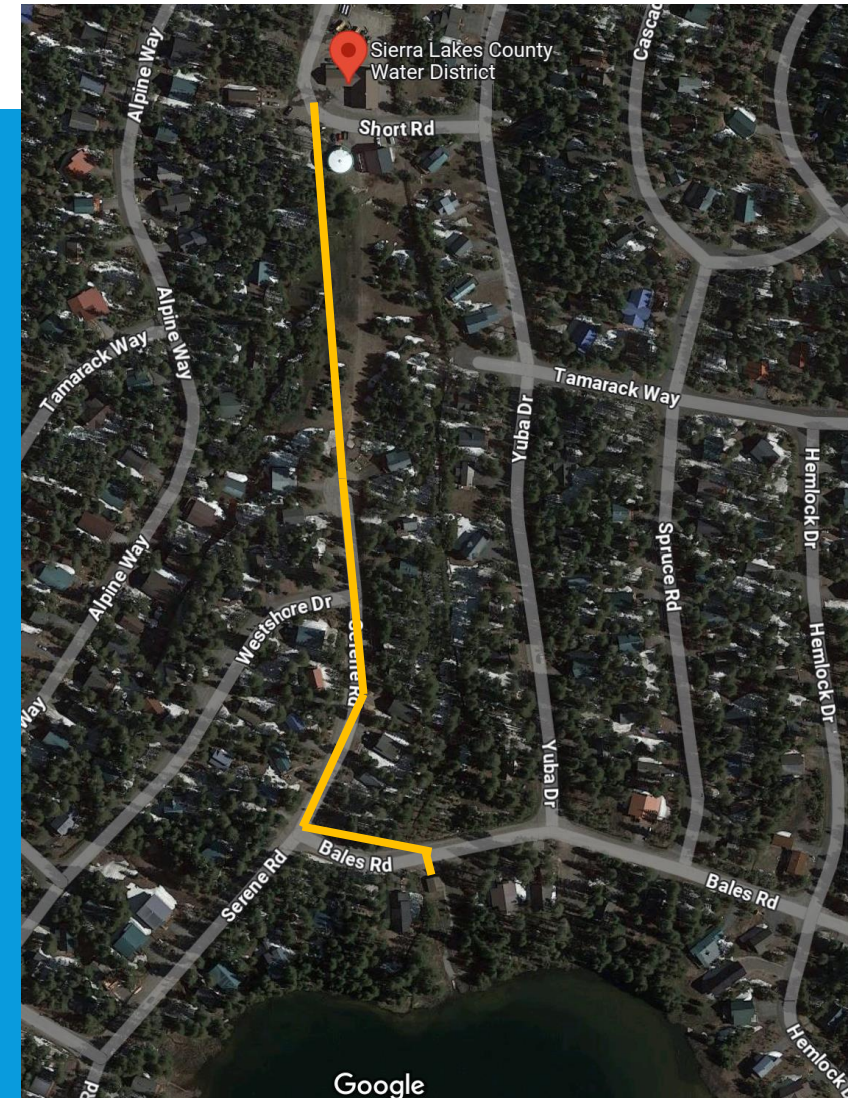
# HILL TANK FLOW METER

- Construct a flow meter to monitor amount of water used by system



# RAW WATER LINE LEAK DETECTION

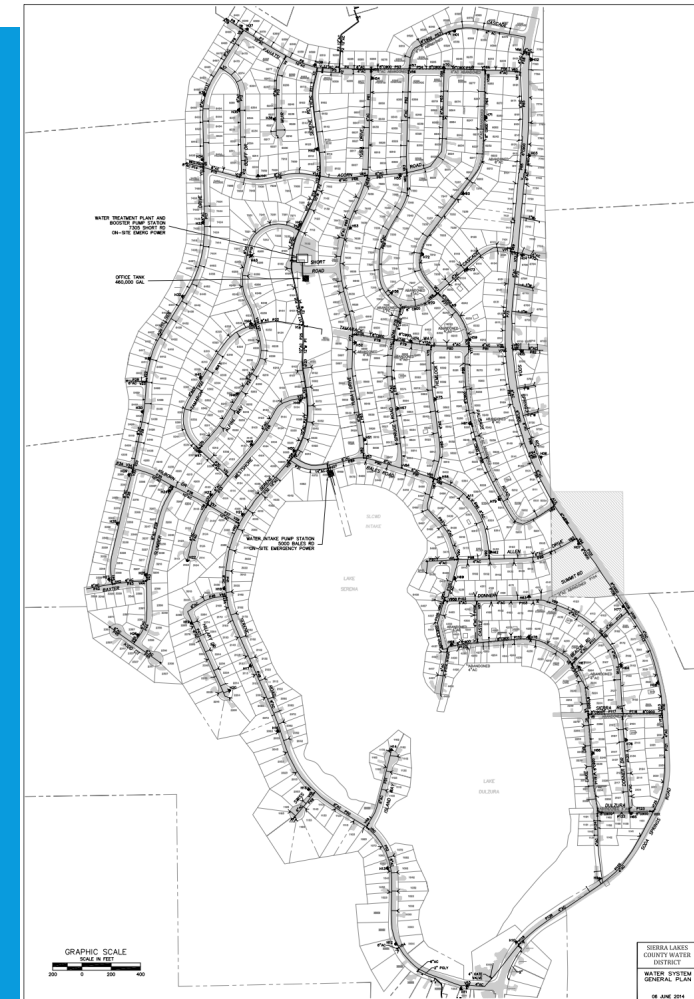
- Raw water pumped from the Lake flows under pressure to the WTP
- This pipeline has leaks, but where and what size are unknown
- Leak detection on this line is planned



# ANNUAL WATER PIPELINE REPLACEMENTS

- 13 miles of pipelines (over 68,000 feet)
- Majority from original construction in 1960s and 1970s
- 52,852 feet of AC pipe
- 3,842 of unknown material

Pipe Material	Total Length (ft)
Asbestos Cement, AC	52,852
C900 PVC	11,514
Unknown	3,842



# MASTER PLAN RECOMMENDED CIP SCHEDULE

Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Water Main Replacement PER	\$104,000									
Intake Pipe Extension	\$332,000									
Utility Rate Study	\$26,000									
System GIS	\$9,000									
Water Main Replacement Phase 1		\$2,987,000								
Water Age and WTP Process Analysis		\$76,000								
Water Main Replacement Phase 2			\$3,101,000							
Well 01 Treatment Relocation & Discharge Line			\$694,000							
Raw Water Line Leak Detection & Investigation			\$56,000							
Water Main Replacement Phase 3				\$3,218,000						
WTP SCADA Improvements				\$29,000						
KMNO4 Titration Unit Replacement				\$29,000						
Hill Tank Flow Meter				\$239,000						
Water Main Replacement Phase 4					\$3,341,000					
Water Main Replacement Phase 5						\$3,468,000				
Water Main Replacement Phase 6							\$3,599,000			
Water Main Replacement Phase 7								\$3,736,000		
Water Main Replacement Phase 8									\$3,878,000	
Water Main Replacement Phase 9										\$4,026,000
Water System Master Plan Update										\$290,000
Total Annual Capital Cost	\$473,024	\$3,065,025	\$3,853,026	\$3,517,027	\$3,343,028	\$3,470,029	\$3,601,030	\$3,738,031	\$3,880,032	\$4,318,033
Annual Water Rate CIP Charge per Customer	\$563	\$3,649	\$4,587	\$4,187	\$3,980	\$4,131	\$4,287	\$4,450	\$4,619	\$5,141
TOTAL WATER MAIN REPLACEMENT OVER 10 YEARS		\$31,354,000								

# DISTRICT PROPOSED CIP SCHEDULE

Projects Included in SRF Loan	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Intake Pipe Extension		\$332,000								
Wall 01 Treatment Relocation & Discharge Line			\$894,000							
Hill Tank Flow Meter				\$239,000						
Raw Water Line Leak Detection & Investigation			\$56,000							
Total:	\$0	\$332,000	\$750,000	\$239,000	\$0	\$0	\$0	\$0	\$0	\$0
Project Total for Loan	\$1,321,000									

Cash Projects	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Water Main Replacement PER	\$104,000									
Utility Rate Study	\$26,000									
System GIS	\$9,000									
Water Main Replacement Phase 1		\$364,100								
Water Age and WTP Process Analysis										
Water Main Replacement Phase 2			\$377,078							
Water Main Replacement Phase 3				\$332,445						
WTP SCADA Improvements				\$29,000						
KMNO4 Titration Unit Replacement				\$29,000						
Water Main Replacement Phase 4					\$404,214					
Water Main Replacement Phase 5						\$418,395				
Water Main Replacement Phase 6							\$433,002			
Water Main Replacement Phase 7								\$448,047		
Water Main Replacement Phase 8									\$463,543	
Water Main Replacement Phase 9										\$189,505
Water System Master Plan Update										\$290,000
Loan repayments		\$68,500	\$68,500	\$68,500	\$68,500	\$68,500	\$68,500	\$68,500	\$68,500	\$68,500
Total Annual Capital Cost	\$141,024	\$434,625	\$447,604	\$460,972	\$474,742	\$488,924	\$503,532	\$518,578	\$534,075	\$550,038
Annual charge increased by CPI	\$420,000	\$432,600	\$445,578	\$458,945	\$472,714	\$486,895	\$501,502	\$516,547	\$532,043	\$548,005
Annual Water Rate CIP Charge per Customer	\$500	\$515	\$530	\$546	\$563	\$580	\$597	\$615	\$633	\$652

# QUESTIONS AND COMMENTS?

# SLCWD PUBLIC INFORMATION MEETING – SEWER SYSTEM

May 2, 2024

# SEWER SYSTEM RECOMMENDATIONS OVERVIEW

- Sewer Master Plan completed January 2024
- A few specific projects, discussed later
- Replace over 60,000 feet of ACP (asbestos cement pipe), VCP (vitrified clay pipe)
- Recommend replacing in 20 years = average \$4,500 per year CIP Charge
- Board considering starting at up to \$700 annual (\$175 per quarter) Sewer CIP charge; replace in 250 years
- Assumes annual CPI (Consumer Price Index) increase

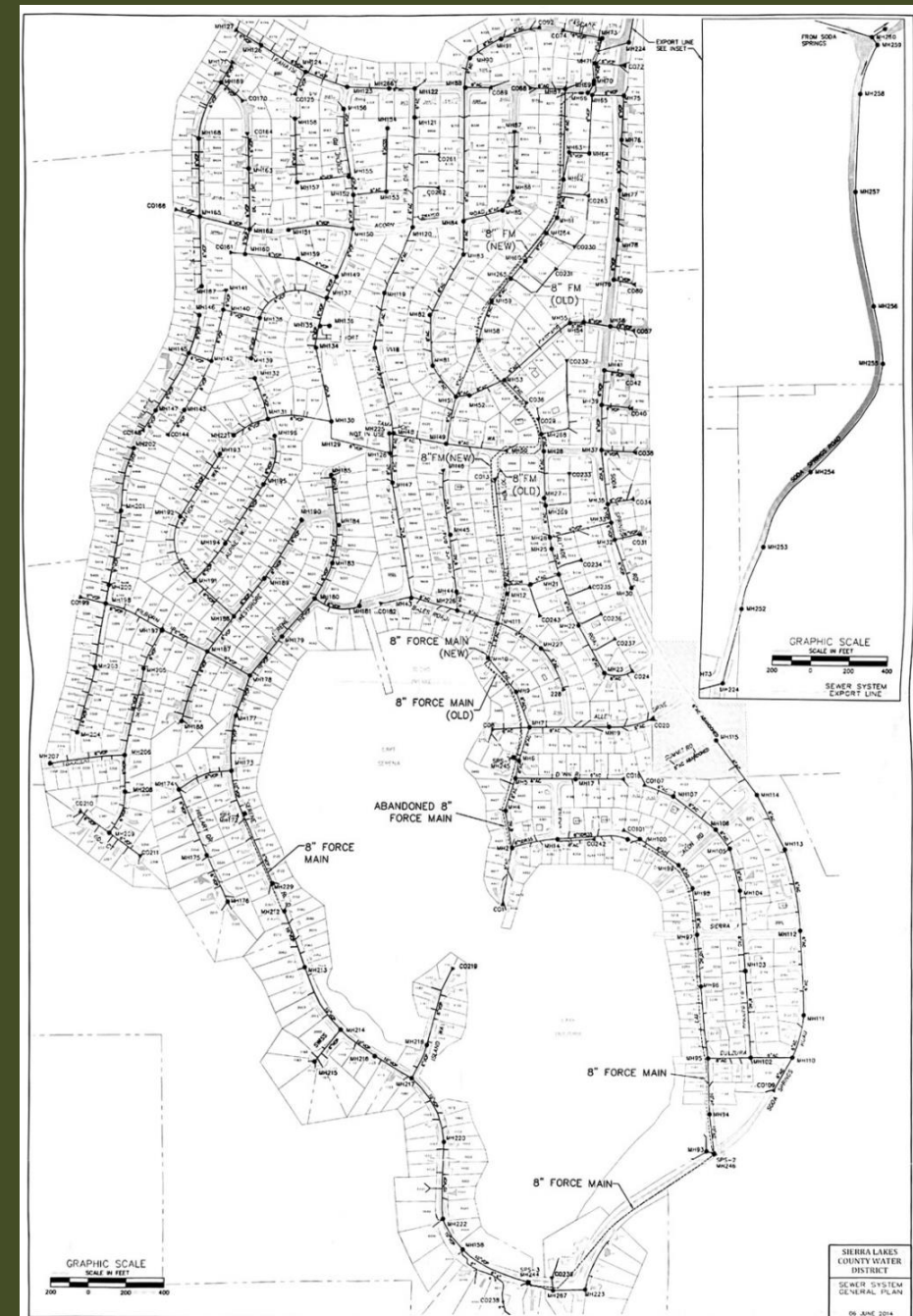


# SEWER PRESENTATION OUTLINE

- Sewer system operation
- Recommended capital improvement projects
- Master Plan Schedule
- Proposed District Schedule

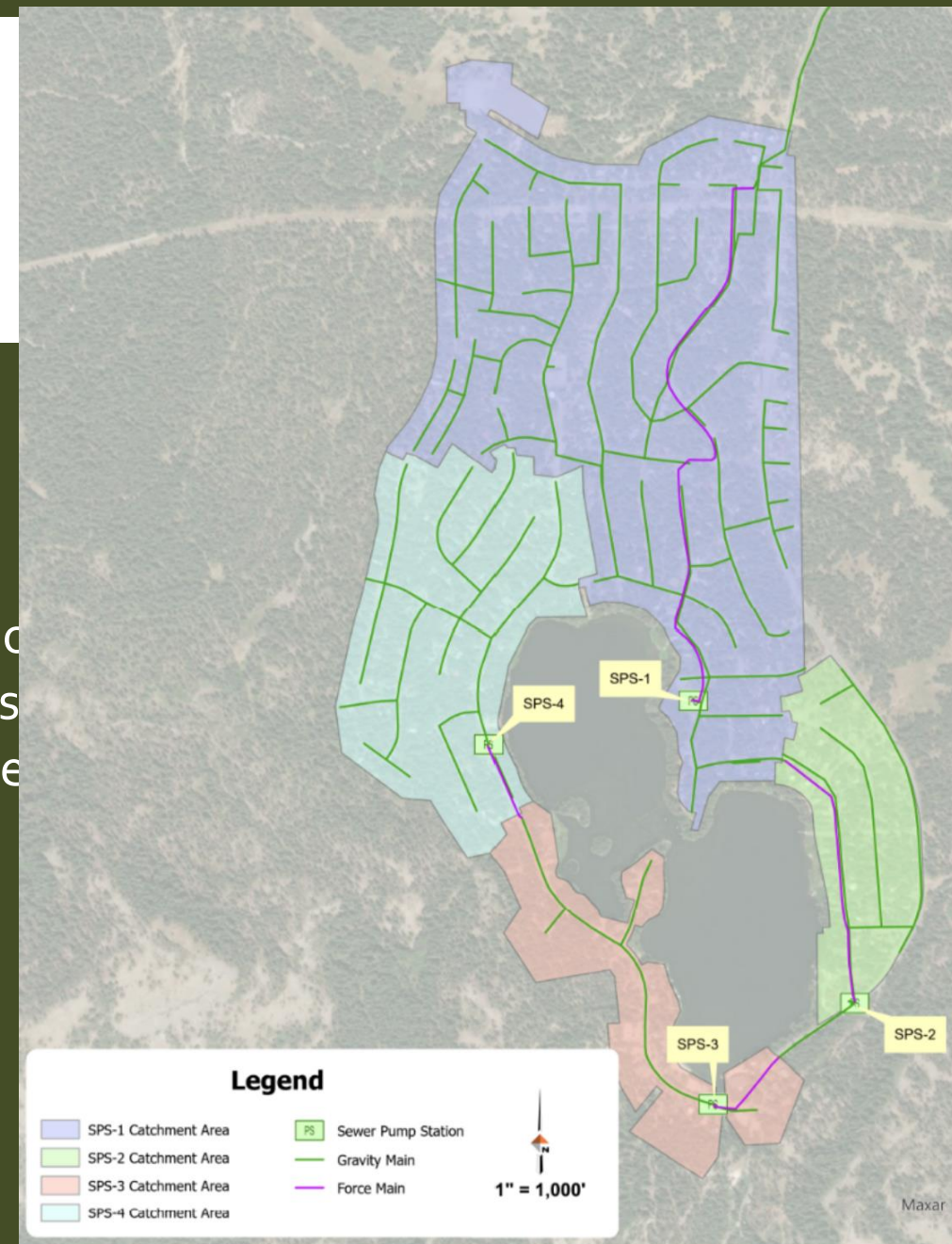
# SANITARY SEWER SYSTEM

- Overall Collection System
- Collection Areas
- Sewer Pump Station Wet Well
- Sewer Pump Station Building
- Layout
- Sewer Pump Station Electrical/Controls



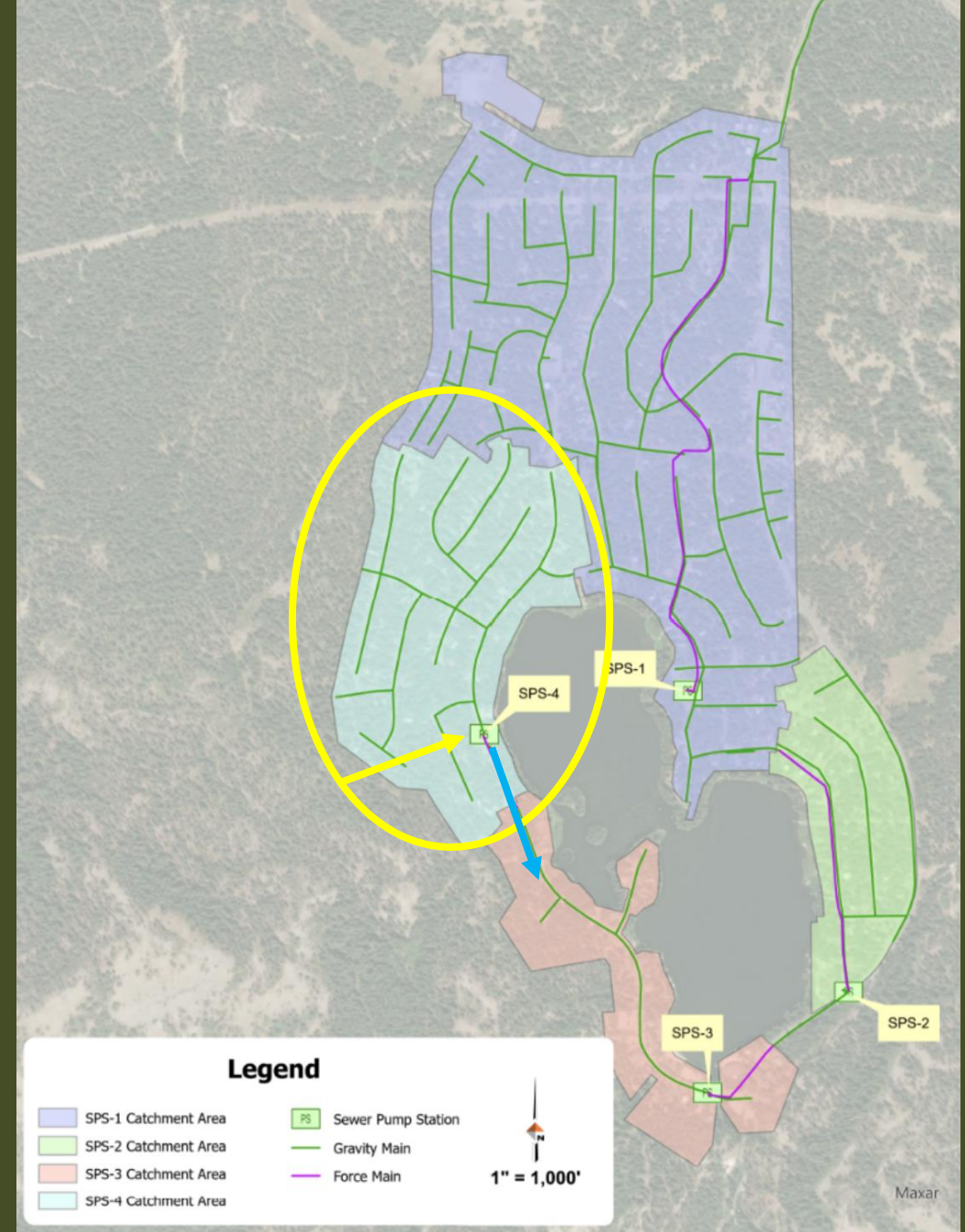
# COLLECTION SYSTEM

- Consists of gravity sections that flow to pump stations
- Pump stations pump sewage through force mains to an elevation where they can gravity to next pump station
- The collection system generally flows in a counterclockwise direction around the lakes, starting on the west side of the
- The northern portion of the service area flows down to the east of the lakes.
- Ultimately, all of the sewage is pumped over the hill to be treated by DSPUD



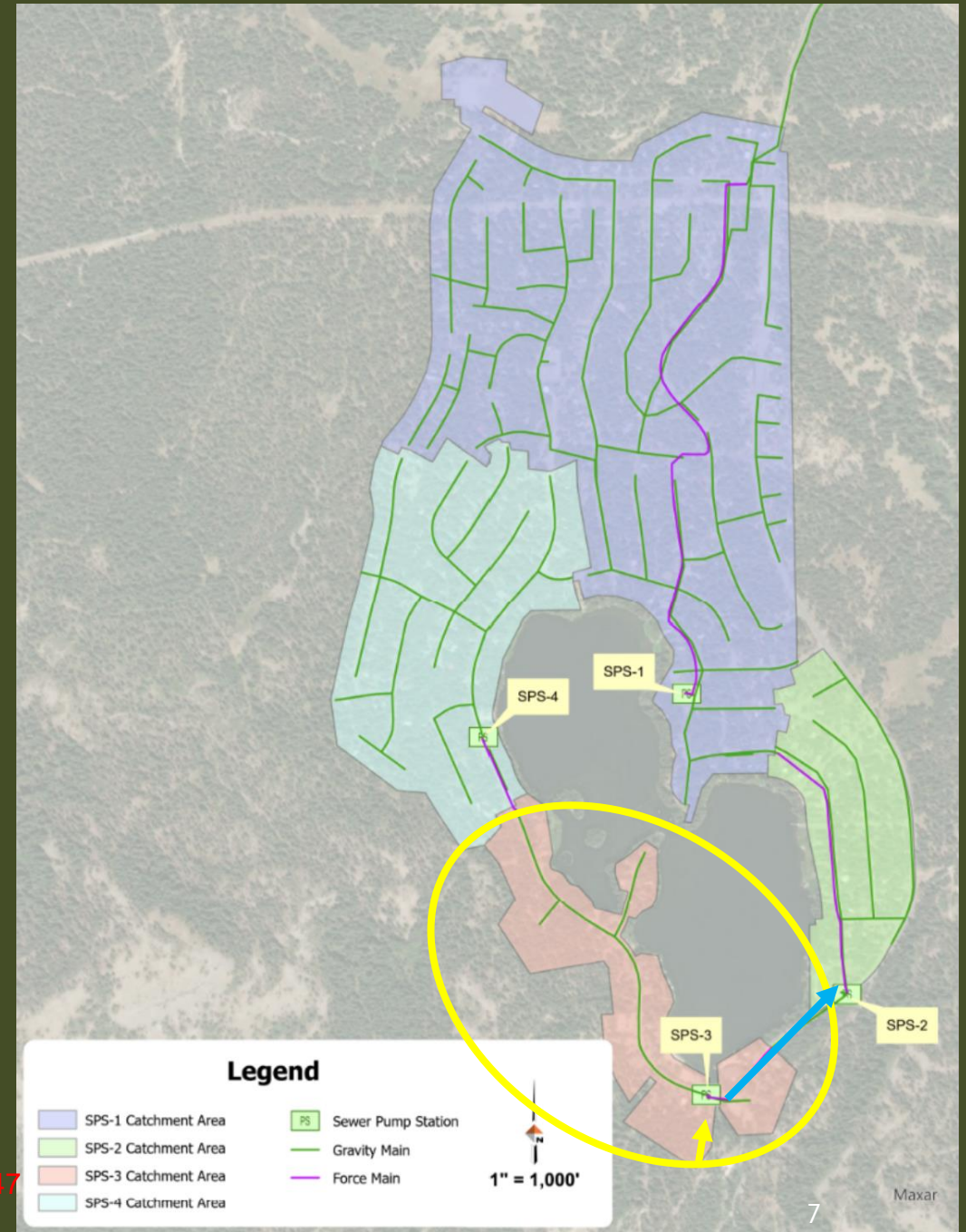
# SPS#4 COLLECTION AREA

- The area in the yellow circle (green area) flows into SPS#4
- SPS#4 pumps the collected sewage through a force main into the area that flows by gravity to SPS#3, as shown by the blue arrow



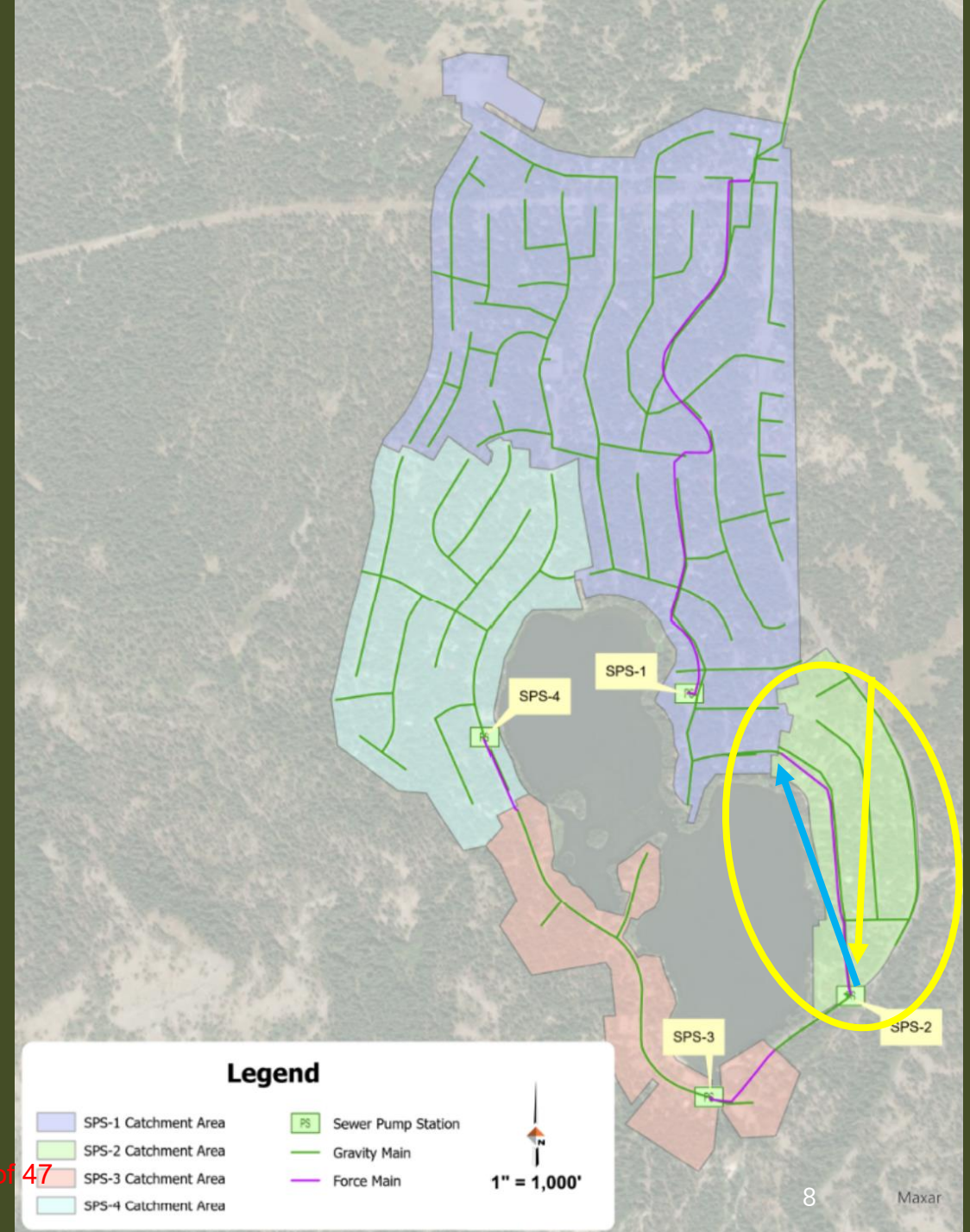
# SPS#3 COLLECTION AREA

- The area in the yellow circle (orange area) flows into SPS#3
- SPS#3 pumps the collected sewage through a force main into SPS#2, as shown by the blue arrow (this includes both the green area and orange area sewage)



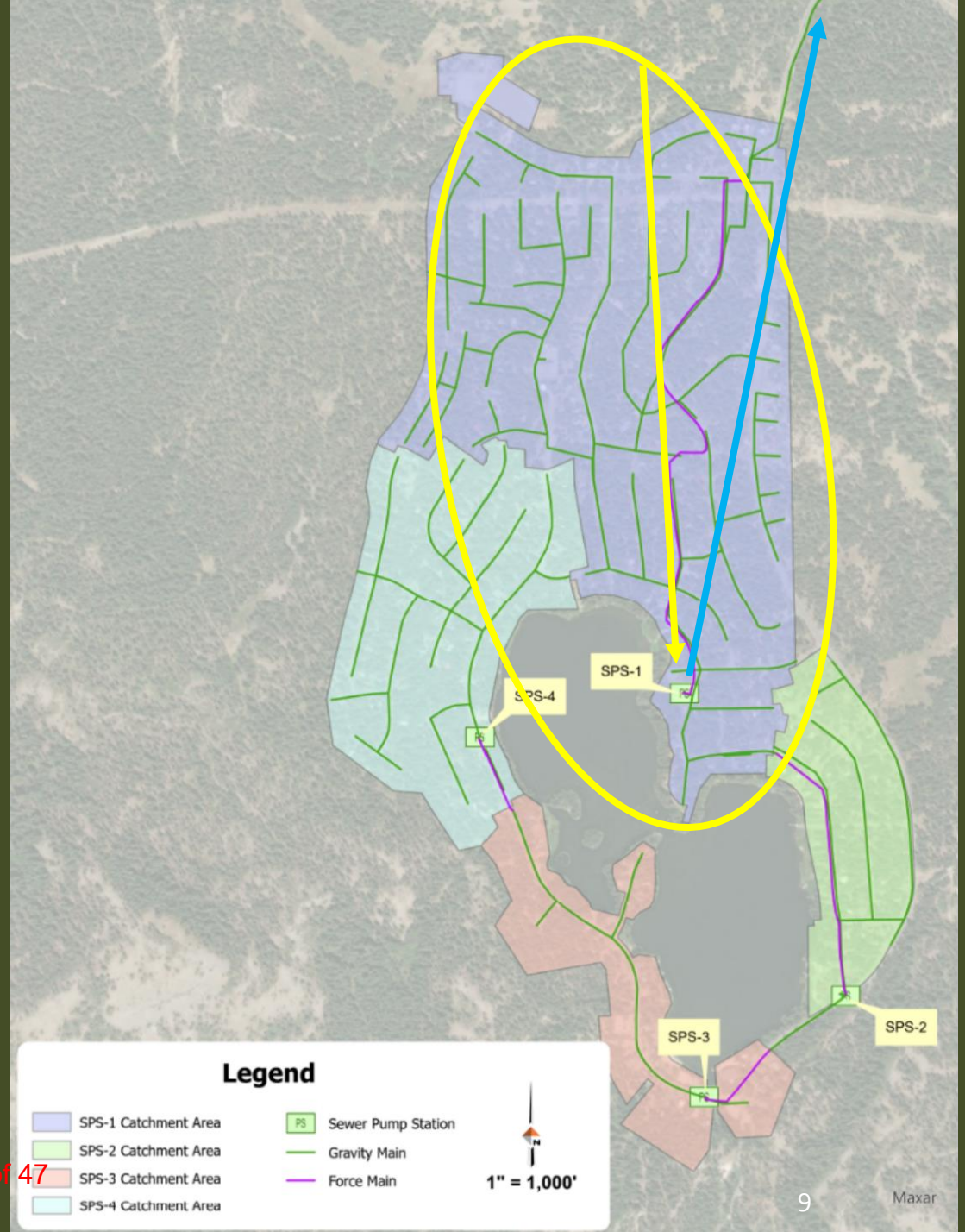
# SPS#2 COLLECTION AREA

- The area in the yellow circle (green area) flows into SPS#2
- SPS#2 pumps the collected sewage through a force main into the area that flows by gravity into SPS#1, as shown by the blue arrow (this includes sewage from both green areas and the orange area)

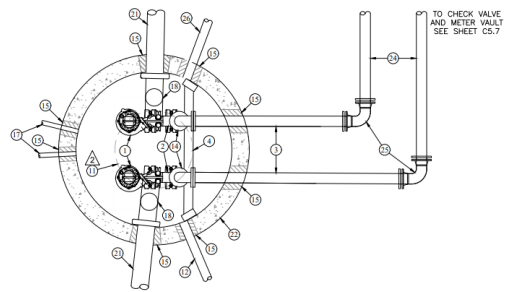


# SPS#1 COLLECTION AREA

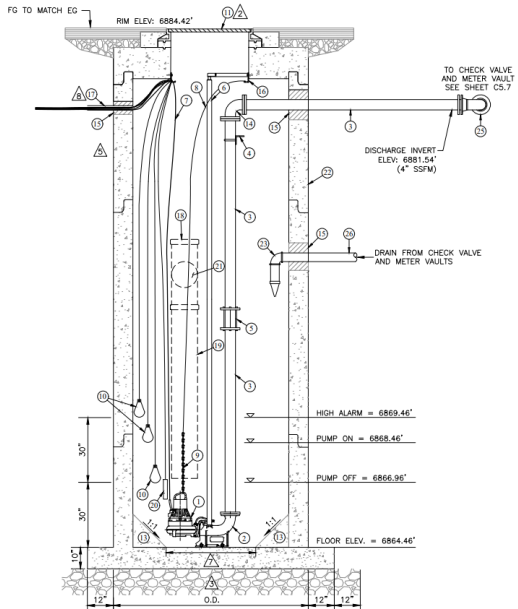
- The area in the yellow circle (purple area) flows into SPS#1
- SPS#1 pumps the sewage collected from the whole system through a force main over the hill to DSPUD for treatment.



# SEWER PUMP STATIONS (USING SPS<sub>4</sub>) – WET WELL



PLAN VIEW



PROFILE VIEW

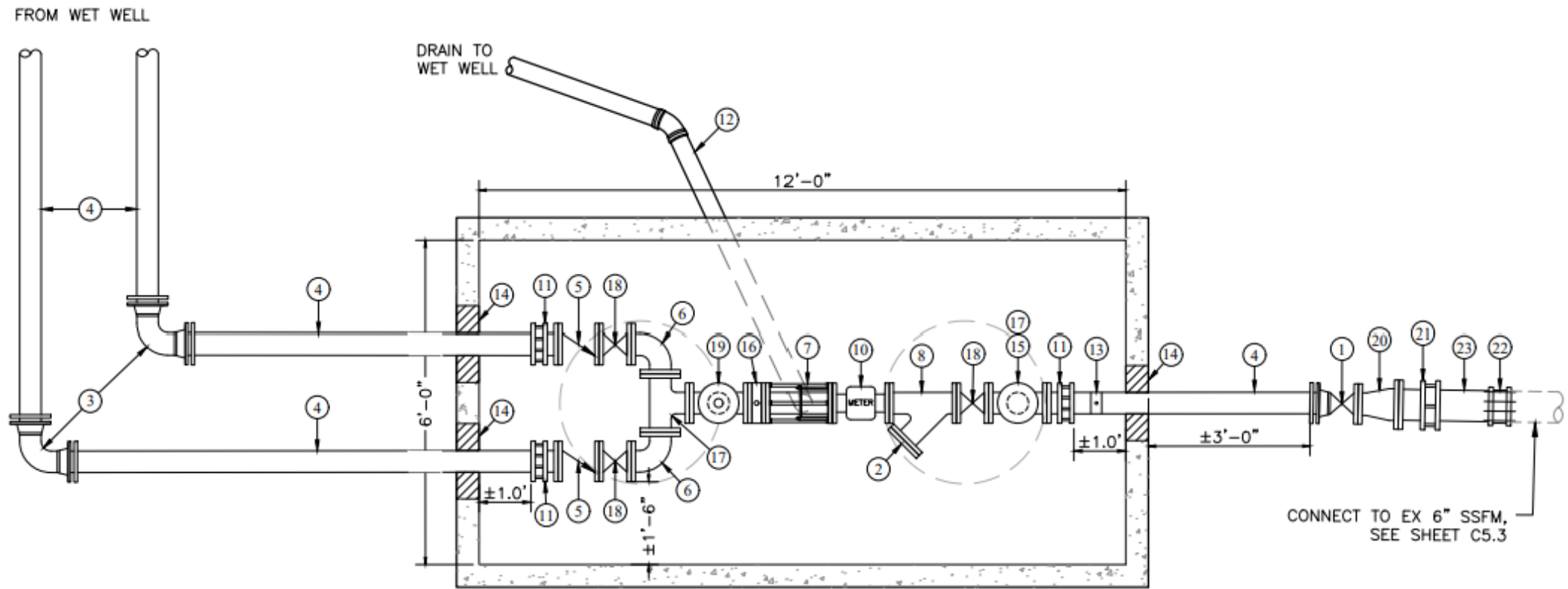
SEWER PUMP STATION 4 WET WELL DETAIL

SCALE: 1"=2'

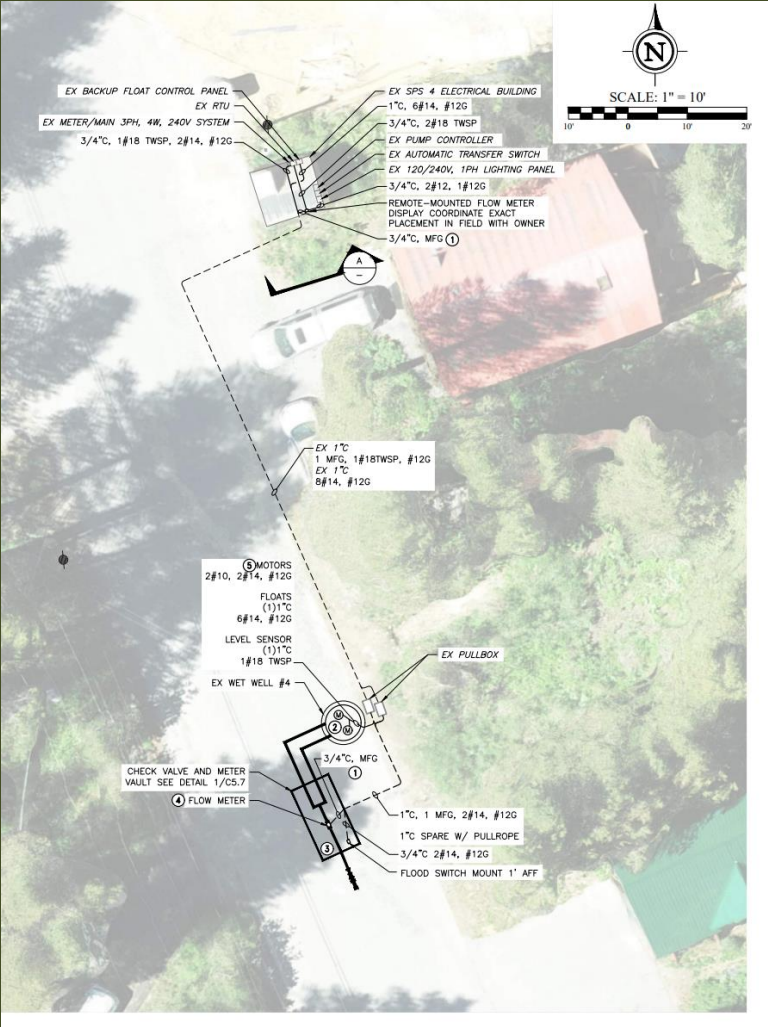




# SEWER PUMP STATION – BUILDING LAYOUT



# SEWER PUMP STATION – ELECTRICAL/CONTROLS



# SEWER CIP PROJECTS

- Sewer Pump Station (SPS) #2 Rehabilitation
- SPS #3 Rehabilitation
- Annual Sewer Mainlines Replacements

# SEWER PUMP STATION #3 REHABILITATION

- Rehabilitate SPS #3
- Replace force main to SPS#2
- Old WWTP storage at SPS#3 to be rehabilitated (emergency overflow)
- construction of a new housing building for the emergency storage basin
- construction of a small building to house the SPS-3 pump controls.



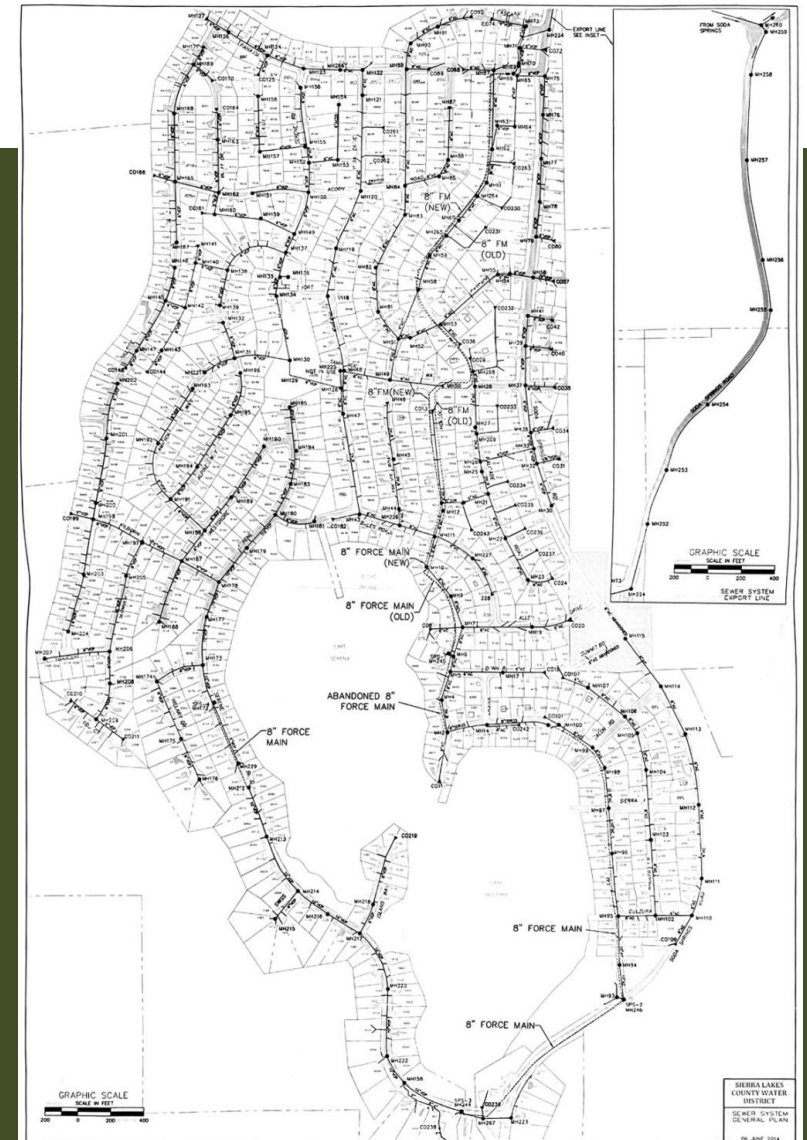
# SEWER PUMP STATION #2 REHABILITATION

- Rehabilitate SPS #2
- Replace force main to SPS#1 drainage area for gravity flow



# ANNUAL SEWER PIPELINE REPLACEMENTS

- 11.5 miles of gravity pipelines (60,420 feet)
- 1.5 miles of force mains (7,163 feet)
- Significant amount of Infiltration and Inflow
- Replacing all ACP and VCP is \$58,485,850
- Recommend 20 year schedule



Pipe Material	Length (ft)
ACP	23,827
PVC	758
VCP	29,298
Unknown	6,537
<b>Total</b>	<b>60,420</b>

# MASTER PLAN RECOMMENDED CIP SCHEDULE

Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Sewer Main Replacement PER	\$104,000									
SPS-4 Flow Meter SCADA Connect	\$26,000									
Utility Rate Study	\$26,000									
Sewer System GIS	\$9,000									
System Condition Assessment	\$78,000									
Sewer Main Replacement Phase 1		\$3,151,000								
Sewer Main Replacement Phase 2			\$3,271,000							
SPS-2 Rehabilitation			\$2,072,000							
Sewer Main Replacement Phase 3				\$3,395,000						
SPS-3 Rehabilitation				\$2,795,000						
Sewer Main Replacement Phase 4					\$3,524,000					
Sewer Main Replacement Phase 5						\$3,658,000				
Sewer Main Replacement Phase 6							\$3,797,000			
Sewer Main Replacement Phase 7								\$3,941,000		
Sewer Main Replacement Phase 8									\$4,091,000	
Sewer Main Replacement Phase 9										\$4,247,000
Sewer System Master Plan Update										\$290,000
<b>Total Annual Capital Cost</b>	\$243,000	\$3,151,000	\$5,343,000	\$6,190,000	\$3,524,000	\$3,658,000	\$3,797,000	\$3,941,000	\$4,091,000	\$4,537,000
Annual Sewer Charge per Customer	\$289	\$3,751	\$6,361	\$7,369	\$4,195	\$4,355	\$4,520	\$4,692	\$4,870	\$5,401
Total Sewer Line Replacement over ten years		\$33,075,000								

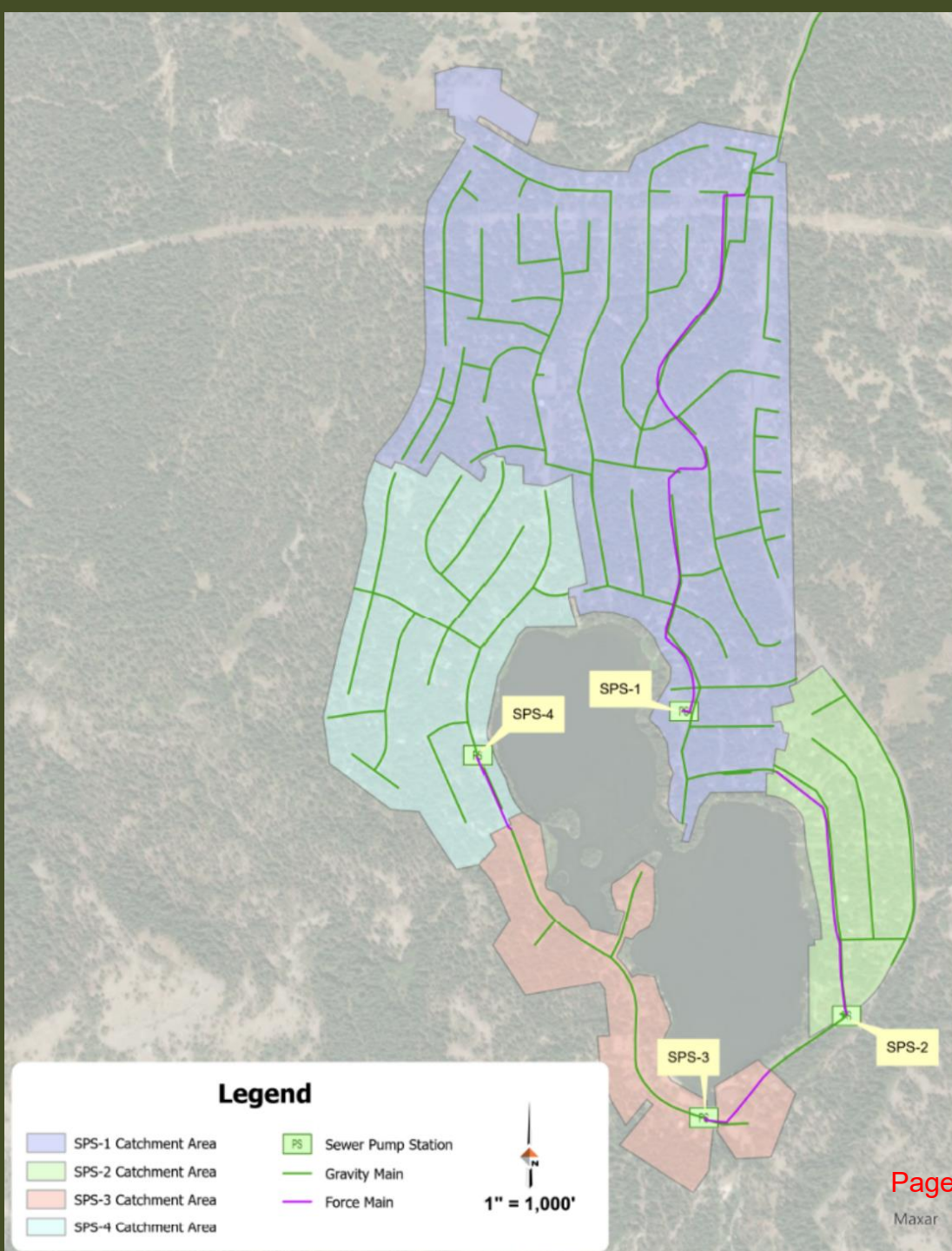
# DISTRICT PROPOSED CIP SCHEDULE

Projects Included in SRF Loan	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
SPS-2 Rehabilitation			\$2,072,000							
SPS-3 Rehabilitation				\$2,795,000						
<b>Total</b>	0	0	\$2,072,000	\$2,795,000	0	0	0	0	0	0
<b>Project total for Loan</b>	\$4,867,000									

Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Sewer Main Replacement PER	\$104,000									
SPS-4 Flow Meter SCADA Connect	\$26,000									
Utility Rate Study	\$26,000									
Sewer System GIS	\$9,000									
System Condition Assessment	\$78,000									
Sewer Main Replacement Phase 1		\$353,640								
Sewer Main Replacement Phase 2			\$371,809							
Sewer Main Replacement Phase 3				\$390,523						
Sewer Main Replacement Phase 4					\$409,799					
Sewer Main Replacement Phase 5						\$429,653				
Sewer Main Replacement Phase 6							\$450,103			
Sewer Main Replacement Phase 7								\$471,166		
Sewer Main Replacement Phase 8									\$492,861	
Sewer Main Replacement Phase 9										\$225,207
Sewer System Master Plan Update										\$290,000
<b>Loan repayments</b>		\$252,000	\$252,000	\$252,000	\$252,000	\$252,000	\$252,000	\$252,000	\$252,000	\$252,000
<b>Total Annual Capital Cost</b>	\$243,000	\$605,640	\$623,809	\$642,523	\$661,799	\$681,653	\$702,103	\$723,166	\$744,861	\$767,207
Annual charge increased by CPI	\$588,000	\$605,640	\$623,809	\$642,523	\$661,799	\$681,653	\$702,103	\$723,166	\$744,861	\$767,207
Annual Water Rate CIP Charge per Customer	\$700	\$721	\$743	\$765	\$788	\$811	\$836	\$861	\$887	\$913



# QUESTIONS and COMMENTS



# DISTRICT BUDGET OVERVIEW

May 2, 2024

# DISTRICT INCOME

INCOME		
Water and Sewer Service	\$2,333,660	
County Tax and Other	\$605,375	
TOTAL INCOME		\$2,939,035

# DISTRICT EXPENSES (1/2)

EXPENSES		
Salaries and Payroll		
Director Salaries	\$21,600	
Maintenance Salaries	\$399,635	
Payroll	\$204,143	
Total Payroll		\$625,378
General and Admin		
Legal	\$30,000	
Prof Fees - Ops (GM)	\$265,000	
Prof Fees -office (finance)	\$137,280	
Comp equip	\$65,163	
Insur and misc G&A	\$135,613	
Total G&A		\$633,056

# DISTRICT EXPENSES (2/2)

Water Treatment and Filter Plant		\$70,000
Water Distribution		\$82,020
Wastewater Collection		
District Costs	\$54,500	
Export Costs (DSPUD)	\$557,000	
Total Wastewater		\$611,500
Vehicles		\$40,500
Operation and Maint Projects		
District Engineer Services	\$150,000	
Sewer Ops and Maint	\$88,000	
Water Ops and Maint	\$30,000	
Misc jobs, tools, safety, bld	\$81,000	
Lake Management	\$16,000	
Water Quality	\$64,785	
Total O&M Projects		\$429,785
TOTAL EXPENSES		\$2,492,239

# DISTRICT INCOME-EXPENSES

INCOME - EXPENSES		\$446,796
OTHER EXPENSES		
Debt Inter USDA Revenue bonds	\$109,000	
Interest Assessments	\$500	
Depreciation	\$270,000	
DSPUD Capital Costs	\$40,000	
TOTAL OTHER EXPENSES		\$419,500
NET INCOME-OTHER EXPENSES		\$27,296
USDA Revenue Bond reserve		\$27,000
NET DISTRICT INCOME		\$296

# STAFF REPORT

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TO: Board of Directors

FROM: Shauna Lorance, General Manager

SUBJECT: Authorization to Award Bid

DATE: May 2, 2024, Special Board Meeting

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## **Staff Recommendation**

Staff recommend authorizing the General Manager to award the Soda Springs Waterline Replacement Project to the lowest responsive bidder, with a not-to-exceed limit of \$500,000.

## **Background**

The District has been responding to multiple leaks associated with the waterline along Soda Springs Road between Dulzura Road and Sierra Road. The existing 4-inch asbestos cement pipe is being abandoned and replaced with a new 8-inch C900 PVC pipe.

The advertisement for bids states that the notice to proceed will be issued no later than June 1, 2024, and the Contractor will be allowed 84 days (12 weeks) from the notice to proceed to complete the work.

The full documents are available on the District website, with a link under News on the home page.

## **Current Status**

Scheduling a second meeting in May was not successful, so the Board is being requested to consider granting approval to the General Manager to award the contract to the lowest responsive bidder. The engineer's estimate for the project is between n \$387,000. and \$473,000, based on the last pipeline construction project completed at the District. Based on the engineer's cost estimate, staff is requesting authorization to award up to \$500,000.