

TABLE 14
Burney Water District
Water Master Plan
RECOMMENDED IMPROVEMENTS & CAPACITY CHARGE BASIS (1)

Item No.	Description	ESTIMATED COST ⁽²⁾			% Attributed to Growth	Cost Attributed to Growth
		Immediate Term (2012-2022)	Near Term (2022-2032)	Long Term (2032-2042)		
GENERAL WATER SYSTEM IMPROVEMENTS						
1	Replace 700' of (E) 6" on Toronto Ave with 8" (Pis. 1 to 2)	\$52,000			0%	\$0
2	Replace 300' of (E) 6" on HWY 299 from Elm to Cedar with 8" (Pt. 3)	\$22,000			0%	\$0
3	Replace 900' of (E) 6" AC pipe on HWY 299 with 8" PVC (Pt. 4)	\$67,000			0%	\$0
4	Replace 1,300' of (E) 6" AC pipe on Black Ranch Road with 8" PVC (Pt. 5)	\$96,000			0%	\$0
5	Replace 1,500' of (E) 6" on Tamarack Ave to Las Colinas Trailer Park with 10" (Pis. 6 to 7)	\$130,000			0%	\$0
6	Replace 1,300' of (E) 6" on HWY 299 from Mountain View to Roff with 8" (Pis. 8 to 9)	\$66,000			0%	\$0
7	Parallel 1,400' on HWY 299 from Ayrns to Crews Way East with 8" (Pis. 10 to 11)	\$105,000			0%	\$0
8	Replace 500' of (E) 6" on Commerce Way with 8" (Pt. 12)		\$37,000		0%	\$0
9	Parallel 5,000' at Burney High & Elementary Schools with 12" (Pis. 13 to 14)		\$510,000		0%	\$0
10	Parallel 950' from Timber Drive Tank to Juniper with 10" (Pis. 15 to 16)			\$82,000	26%	\$21,320
11	Replace 700' of (E) 2" steel main on Fir east of Tamarack with 8" (Pis. 17 to 18)	\$52,000			0%	\$0
12	Replace 700' of (E) 1" and 1 1/2" steel mains on Cedar from Woods to Tamarack with 8" (Pis. 19 to 20)	\$52,000			0%	\$0
13	Replace 1,200' of (E) 2" and 3" steel mains on Mountain View with 12" (Pis. 21 to 22)		\$122,000		0%	\$0
14	New fire hydrants - 7 complete			\$40,000	0%	\$0
15	Radio read meter replacement at 5% (~70 meters) per year	\$28,000	\$28,000	\$28,000	26%	\$14,560
16	Steel pipeline replacement at 2% (~1,060 LF) per year for 50 years	\$745,000	\$745,000	\$745,000	26%	\$387,400
	GENERAL WATER SYSTEM IMPROVEMENTS SUBTOTAL:	\$1,244,000	\$1,643,000	\$895,000		\$423,000
BOOSTER PUMP STATION IMPROVEMENTS						
17	New pumps, valves, and electrical	\$200,000			0%	\$0
18	75KW portable diesel generator & trailer	\$60,000			0%	\$0
19	Manual transfer switch	\$10,000			0%	\$0
	BOOSTER PUMP STATION IMPROVEMENTS SUBTOTAL:	\$270,000	\$0	\$0		\$0
WELL IMPROVEMENTS						
20	New well at Washburn Park with 300' of 12" main to Park Ave	\$500,000			0%	\$0
21	VFD pump, motor, & electrical at Well No. 7		\$60,000		0%	\$0
22	VFD pump, motor, & electrical at Well No. 6			\$80,000	26%	\$20,800
23	Rotork valve and piping at Well No. 7		\$50,000		0%	\$0
24	Emergency generator at Well No. 7	\$50,000			0%	\$0
25	Emergency generator at Well No. 6		\$50,000		0%	\$0
26	Upgrade Well No. 6 from oil lubed to water lubed		\$10,000		0%	\$0
27	Misc Improvements - bolt all wells to pedestals and balance, well sounder access, exterior lights, phone line, remove trees	\$25,000			0%	\$0
28	SCADA hardware & software upgrade	\$60,000			0%	\$0
	WELL IMPROVEMENTS SUBTOTAL:	\$635,000	\$170,000	\$80,000		\$21,000
STORAGE IMPROVEMENTS						
29	Mountain View Tank exterior recoat and interior touch-ups immediately, complete recoat in 30 years	\$100,000		\$690,000	0%	\$0
30	Ivan Marx Tank fencing		\$20,000		0%	\$0
31	Ivan Marx Tank recoating interior and exterior		\$300,000		0%	\$0
32	Timber Drive Tank recoating interior and exterior		\$250,000		0%	\$0
33	Demolish 0.4 MG concrete tank	\$40,000			0%	\$0
	STORAGE IMPROVEMENTS SUBTOTAL:	\$140,000	\$570,000	\$690,000		\$0
TOTAL ESTIMATED CONSTRUCTION COSTS:		\$2,289,000	\$2,383,000	\$1,685,000		\$444,000
Contingency & Indirect Costs (45%):		\$1,030,000	\$1,072,000	\$749,300		\$200,000
TOTAL ESTIMATED PROJECT COSTS:		\$3,319,000	\$3,455,000	\$2,414,000		\$644,000
Cumulative Project Costs:		\$3,319,000	\$6,774,000	\$9,188,000		
Total Cumulative Project Costs w/o Growth Components:			\$8,544,000			
Average Yearly Cost for 30 Years:			\$284,800			
Number of Existing HES:			2335			
Average Yearly Cost per HE:			\$121.97			
Average Monthly Cost per HE:			\$10.16			
Additional HES Over Next 30 Years:						834
Additional Future Capacity Charge Per HE:						\$772
Existing Capacity Charge:						\$3,488
Total Future Capacity Charge:						\$4,260

⁽¹⁾ Based on a 1% annual growth rate.

⁽²⁾ All costs in February 2014 dollars at an ENR Index of 9681.

TABLE 7
Burrey Water District
Sewer Master Plan

RECOMMENDED IMPROVEMENTS & CAPACITY CHARGE BASIS ⁽¹⁾

Item No.	ESTIMATED COST ⁽²⁾				% Attributed to Growth	Cost Attributed to Growth
	Immediate Term (2012-2022)	Near Term (2022-2032)	Intermediate Term (2032-2052)	Long Term (2052-2072)		
GENERAL COLLECTION SYSTEM IMPROVEMENTS						
1	Replace 700' of 8" Bartel St Sewer with 12" (Pis. 1 to 2)	\$160,000			0%	\$0
2	Parallel 1,500' of 8" Park Ave Sewer with 8" (Pis. 2 to 3)		\$265,000		46%	\$121,900
3	Parallel 2,500' of 15" Sewer Prior to Main LS with 15" (Pis. 4 to 5)			\$450,000	46%	\$207,000
4	Parallel 900' of 15" Sewer Prior to Main LS with 18" (Pis. 5 to 6)			\$205,000	46%	\$94,300
5	Parallel 1,500' of 8" Missouri Way & Grogan St Sewer with 8" (Pis. 7 to 8)			\$190,000	46%	\$87,400
6	Parallel 400' of 15" Ontario Ave Sewer with 12" (Pt. 9)			\$65,000	46%	\$29,900
7	Parallel 200' of 6" Orchard Way Sewer with 8" (Pt. 10)			\$25,000	46%	\$11,500
8	Aging Sewer Main Replacements ⁽³⁾	\$500,000	\$500,000	\$1,000,000	0%	\$0
BARTHEL LIFT STATION IMPROVEMENTS						
9	Manual Transfer Switch	\$10,000			0%	\$0
10	Portable Generator	\$40,000			0%	\$0
11	Pump Removal System	\$30,000			0%	\$0
12	O&M Manual	\$5,000			0%	\$0
13	Replace 2 Centrifugal Pumps with Starters			\$80,000	46%	\$36,800
MAIN LIFT STATION IMPROVEMENTS						
14	8-inch Mag Meter	\$16,000			0%	\$0
15	Fall Prevention System	\$10,000			0%	\$0
16	2 Centrifugal Pumps with Starters	\$80,000			46%	\$36,800
17	Bypass Piping		\$25,000		0%	\$0
18	Force Main Piggng		\$10,000		0%	\$0
19	Replace 3 Centrifugal Pumps with Starters			\$120,000	46%	\$55,200
20	Replace Generator			\$70,000	46%	\$32,200
GENERAL COLLECTION SYSTEM IMPROVEMENTS SUBTOTAL:		\$651,000	\$800,000	\$1,735,000		\$713,000
WWTP IMPROVEMENTS						
21	Replace HDPE Liner	\$140,000			0%	\$0
22	Influent Screening Unit	\$200,000			0%	\$0
23	15 Hp Floating Aerator	\$25,000			0%	\$0
24	Vacuum Truck	\$250,000				
25	Replace brush aerator w/ floating aerators, complete w/ updated electrical		\$100,000			
26	15 Hp RASWAS Pump	\$30,000			0%	\$0
27	SCADA System - Integrate with Lift Stations, Complete	\$200,000			0%	\$0
28	50-foot Clarifier		\$800,000		48%	\$368,000
29	Fall Prevention System & Freeze Protection for RAS Vault	\$15,000			0%	\$0
30	Rehab Existing Clarifier Mechanical, Complete		\$250,000		46%	\$115,000
31	Oxidation Pond Cleaning & Paving	\$10,000	\$10,000	\$20,000	0%	\$0
32	Handrails/Walkways at Oxidation Ponds	\$50,000				
33	Yearly Sludge Dredging	\$370,000	\$100,000	\$200,000	0%	\$0
34	Sludge Lagoon Aerators	\$20,000	\$20,000	\$200,000	46%	\$18,400
35	New Sludge Lagoon		\$250,000		46%	\$115,000
36	WWTP HVAC System		\$10,000		0%	\$0
37	Replace MCC& Update Electrical, Complete			\$300,000	46%	\$138,000
38	Replace 2 RASWAS Pumps			\$60,000	46%	\$27,600
39	Replace Scum Pump			\$10,000	48%	\$4,600
WWTP IMPROVEMENTS SUBTOTAL:		\$1,310,000	\$1,540,000	\$290,000		\$787,000
TOTAL ESTIMATED CONSTRUCTION COSTS:		\$2,161,000	\$2,340,000	\$2,025,000		\$1,500,000
Contingency & Indirect Costs (45%):		\$972,000	\$1,053,000	\$911,000		\$675,000
TOTAL ESTIMATED PROJECT COSTS:		\$3,133,000	\$3,393,000	\$2,936,000		\$2,175,000
Cumulative Project Costs:		\$3,133,000	\$6,526,000	\$9,462,000		
Total Cumulative Project Costs w/o Growth Components:			\$10,173,000			
Average Yearly Cost for 60 Years:			\$169,550			
Number of Existing HES:			1538			
Average Yearly Cost per HE:			\$110.24			
Average Monthly Cost per HE:			\$9.19			
Additional HES Over Next 60 Years:						1317
Additional Future Capacity Charge per HE:						\$1,651.48
Existing Capacity Charge:						\$6,130.60
Total Future Capacity Charge:						\$7,782

⁽¹⁾ Based on a 1% annual growth rate.

⁽²⁾ All costs in Jan 2014 dollars at an ENR Index of 9664.

⁽³⁾ Costs shown would result in ~20% of systemwide sewer main replacement after 60 years.