

Hollister Urban Area Water and Wastewater Master Plan
Table 1. Facility Requirements

	Units	BASE CASE	Alternatives				
			1A	1B	2A	3A	3B
			Blend Recycled Water with Ag CVP and Reallocate Ag CVP	Reallocate Unused M/I CVP Entitlements	Utilize Local Surface Water Supplies	Demineralization to Meet MOU Goals	Phased Demineralization
Raw Water Storage and ASR Facilities							
ASR	ac-ft				6,578		
Water Supply Facilities							
10-in Supply Pipelines	lf				10,960		
14-in Supply Pipelines	Lf				45,000		
16-in Supply Pipelines	Lf				1,000		
CVP Water Transfer	ac-ft		4,200	1,200			
Pumping Station	hp				751		
New Wells	gpm	417	0	0	4,075	1,320	1,320
SSCWD New Well	gpm	2,000	2,000	2,000	2,000	2,000	2,000
Seasonal Dam - Arroyo Dos Picachos	ac-ft				1,422		
Seasonal Dam - Arroyo Los Viboras	ac-ft				1,377		
Seasonal Dam - Pacheco Creek	ac-ft				3,779		
Water Treatment Facilities							
Lessalt WTP Hydraulic Upgrades	mgd	3	3	3	3	3	3
Lessalt Expansion (3 to 4 mgd)	mgd			1.1			
Surface Water Treatment Plant	mgd		3.7				
Treatment For ASR System	mgd				5.9		
Demineralization	mgd		8.2	9.9	7.5	16.0	7.1
SSCWD Softening at Well #8	gpm	1,300	1,300	1,300	1,300	1,300	1,300
SSCWD Softening Plant	gpm	3,800	3,800	3,800	3,800	3,800	3,800
SSCWD Demineralization Project	gpm	2,000	2,000	2,000	2,000	2,000	2,000
SSCWD Deep Well Injection	na	X	X	X	X	X	X
Treated Water Reservoirs							
Storage to Meet Existing Demands	MG	5	5	5	5	5	5
Storage to Meet Future Demands	MG		6	6	6	6	6
Wastewater Treatment							
DWTP Expansion (4 to 5 mgd)	mgd	5	5	5	5	5	5
SSCWD Ridgemark WWTP	mgd	0.5	0.5	0.5	0.5	0.5	0.5
Recycled Water							
Phase 2A Recycled Water Project	na	X	X	X	X	X	X
SSCWD Recycled Water Project	na	X	X	X	X	X	X

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Table 2. Capital Costs

	BASE CASE	Alternatives				
		1A	1B	2A	3A	3B
		Blend Recycled Water with Ag CVP and Reallocate Ag CVP	Reallocate Unused MI CVP Entitlements	Utilize Local Surface Water Supplies	Demineralization to Meet MOU Goals	Phased Demineralization
Raw Water Storage and ASR Facilities						
ASR				Included in Well Costs		
Water Supply Facilities						
10-in Supply Pipelines				1,960,000		
14-in Supply Pipelines				9,900,000		
16-in Supply Pipelines				400,000		
Pump Station				1,570,000		
New Wells	860,000	0	0	6,890,000	1,730,000	1,730,000
SSCWD New Well (2000 gpm)	800,000	800,000	800,000	800,000	800,000	800,000
Seasonal Dam - Arroyo Dos Picachos				5,330,000		
Seasonal Dam - Arroyo Los Viboras				5,330,000		
Seasonal Dam - Pacheco Creek				7,420,000		
Water Treatment Facilities						
Lessalt Upgrade Project	3,110,000	3,110,000	3,110,000	3,110,000	3,110,000	3,110,000
Expansion of Lessalt (3 to 4 mgd)			2,440,000			
New Water Treatment Plant		14,800,000				
Treatment for ASR System				20,650,000		
Demineralization		78,600,000	85,000,000	60,600,000	114,800,000	57,400,000
SSCWD Softening at Well #8	4,520,000	4,520,000	4,520,000	4,520,000	4,520,000	4,520,000
SSCWD Softening Plant	11,650,000	11,650,000	11,650,000	11,650,000	11,650,000	11,650,000
SSCWD Demineralization Project	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
SSCWD Deep Well Injection	7,020,000	7,020,000	7,020,000	7,020,000	7,020,000	7,020,000
Treated Water Reservoirs						
Storage to Meet Existing Demands	6,950,000	6,950,000	6,950,000	6,950,000	6,950,000	6,950,000
Storage to Meet Growth Demands		4,780,000	4,780,000	4,780,000	4,780,000	4,780,000
Wastewater Treatment						
DWTP Expansion (4 to 5 mgd)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
SSCWD Ridgemark WWTP	9,720,000	9,720,000	9,720,000	9,720,000	9,720,000	9,720,000
Recycled Water						
Phase 2A Recycled Water Project	10,455,000	10,455,000	10,455,000	10,455,000	10,455,000	10,455,000
SSCWD Ridgemark Recycled Water	3,940,000	3,940,000	3,940,000	3,940,000	3,940,000	3,940,000
Total	70,025,000	167,345,000	161,385,000	193,995,000	190,475,000	133,075,000
Less Base Case	70,025,000	70,025,000	70,025,000	70,025,000	70,025,000	70,025,000
Marginal Cost of Alternative		97,320,000	91,360,000	123,970,000	120,450,000	63,050,000

Does not include projects currently under construction estimated at \$100,000,000. These projects include the DWTP, seasonal storage reservoir, Phase 1 recycled water facilities, and the two new SSCWD wells (Lico and Bray).

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Table 3. Operation and Maintenance Costs

	BASE CASE	Alternatives				
		1A	1B	2A	3A	3B
		Blend Recycled Water with Ag CVP and Reallocate Ag CVP	Reallocate Unused M/I CVP Entitlements	Utilize Local Surface Water Supplies	Demineralization to Meet MOU Goals	Phased Demineralization
Raw Water Storage and ASR Facilities						
ASR				Included in Well Costs		
Water Supply Facilities						
10-in Supply Pipelines				10,000		
14-in Supply Pipelines				50,000		
16-in Supply Pipelines				2,000		
Pump Station				221,000		
Wells ¹	120,000	0	0	190,000	120,000	120,000
SSCWD New Well (2000 gpm)	50,000	50,000	50,000	50,000	50,000	50,000
Seasonal Dam - Arroyo Dos Picachos				80,000		
Seasonal Dam - Arroyo Los Viboras				80,000		
Seasonal Dam - Pacheco Creek				80,000		
Water Treatment Facilities						
Lessalt Upgrade Project	290,000	290,000	290,000	290,000	290,000	290,000
Expansion of Lessalt (3 to 4 mgd)			210,000			
New Water Treatment Plant		860,000				
Treatment for ASR System				1,320,000		
Demineralization		6,860,000	7,590,000	6,260,000	9,340,000	6,010,000
SSCWD Softening at Well #8	310,000	310,000	310,000	310,000	310,000	310,000
SSCWD Softening Plant	890,000	890,000	890,000	890,000	890,000	890,000
SSCWD Demineralization Project	860,000	860,000	860,000	860,000	860,000	860,000
SSCWD Deep Well Injection ²	180,000	180,000	180,000	180,000	180,000	180,000
Treated Water Reservoirs						
Storage to Meet Existing Demands	110,000	110,000	110,000	110,000	110,000	110,000
Storage to Meet Growth Demands	0	72,000	72,000	72,000	72,000	72,000
Wastewater Treatment						
DWTP Expansion (4 to 5 mgd)	640,000	640,000	640,000	640,000	640,000	640,000
SSCWD Ridgemark WWTP	350,000	350,000	350,000	350,000	350,000	350,000
Recycled Water						
Phase 2A Recycled Water Project	3,808,000	3,808,000	3,808,000	3,808,000	3,808,000	3,808,000
SSCWD Ridgemark Recycled Water	160,000	160,000	160,000	160,000	160,000	160,000
Total³	7,768,000	15,440,000	15,520,000	16,013,000	17,180,000	13,850,000
Less Base Case	7,768,000	7,768,000	7,768,000	7,768,000	7,768,000	7,768,000
Marginal Cost of Alternative		7,672,000	7,752,000	8,245,000	9,412,000	6,082,000

¹ Includes the cost to operate and maintain both new and existing wells and is based upon the proportional average of estimated groundwater demands during dry and normal years.

² O&M costs were not readily available. Costs presented are estimated based upon injection pressures and well capacity presented in Deep Well Injection Feasibility Study, prepared by ALL Consulting, January 2008. Additionally, labor,

³ Does not include O&M to support projects currently under construction. These projects include the DWTP, seasonal storage reservoir, and the Phase 1 recycled water facilities.

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Table 4. Present Worth Costs

	BASE CASE	Alternatives				
		1A	1B	2A	3A	3B
		Blend Recycled Water with Ag CVP and Reallocate Ag CVP	Reallocate Unused M/I CVP Entitlements	Utilize Local Surface Water Supplies	Demineralization to Meet MOU Goals	Phased Demineralization
Water Supply Facilities						
Capital Costs	1,660,000	800,000	800,000	39,600,000	2,530,000	2,530,000
O&M Costs	170,000	50,000	50,000	763,000	170,000	170,000
Water Treatment Facilities						
Capital Costs	36,300,000	129,700,000	123,740,000	117,550,000	151,100,000	93,700,000
O&M Costs	2,530,000	10,250,000	10,330,000	10,110,000	11,870,000	8,540,000
Treated Water Reservoirs						
Capital Costs	6,950,000	11,730,000	11,730,000	11,730,000	11,730,000	11,730,000
O&M Costs	110,000	182,000	182,000	182,000	182,000	182,000
Wastewater Treatment						
Capital Costs	10,720,000	10,720,000	10,720,000	10,720,000	10,720,000	10,720,000
O&M Costs	110,000	182,000	182,000	182,000	182,000	182,000
Recycled Water						
Capital Costs	14,395,000	14,395,000	14,395,000	14,395,000	14,395,000	14,395,000
O&M Costs	3,968,000	3,968,000	3,968,000	3,968,000	3,968,000	3,968,000
Totals						
Total Capital Costs	70,025,000	167,345,000	161,385,000	193,995,000	190,475,000	133,075,000
O&M Costs	6,888,000	14,632,000	14,712,000	15,205,000	16,372,000	13,042,000
Avoided Consumer Costs	0	-2,620,000	-2,650,000	-2,610,000	-2,670,000	-2,580,000
Equivalent O&M Costs	6,888,000	12,012,000	12,062,000	12,595,000	13,702,000	10,462,000
Present Value Equivalent O&M Costs (3%, 20yr)	102,480,000	178,710,000	179,450,000	187,380,000	203,850,000	155,650,000
Present Worth Costs	172,505,000	346,055,000	340,835,000	381,375,000	394,325,000	288,725,000
Less Base Case	172,505,000	172,505,000	172,505,000	172,505,000	172,505,000	172,505,000
Marginal Present Worth of Alternative		173,550,000	168,330,000	208,870,000	221,820,000	116,220,000

Capital costs do not include projects currently under construction estimated at \$100,000,000. These projects include the DWTP, seasonal storage reservoir, and the Phase 1 recycled water facilities. O&M Costs do not include costs to operate these facilities.