

Table E-1

Recommended Collection System Improvements Cost Estimates  
Junction City Wastewater Facilities Plan  
971.3160.0

11/15/2006

1= priority 1A  
1.5= priority 1B  
2= priority 2  
3= priority 3

Priority	Project & Location(s)	Unit Cost	Size/capacity	8" - 12" (\$/ft) Length (ft)	15" - 18" (\$/ft) Length (ft)	18" - 24" (\$/ft) Length (ft)	\$3,781 (\$/each) # Manholes	\$2,700 (\$/each) # Services	Other Costs	Constr Cost	20% 10% Constr Contingency	20% Eng	10% Legal, Permits Easement, Admin	Total Project	Rounded Total	Oversize Cost Required for Growth	Total project costs rounded to nearest \$100			
																	Prior 1A	Prior 1B	Prior 2	Prior 3
	<b>14th &amp; Elm Basin</b>																			
1	14th & Elm Pump Station		1800 gpm																	
1.5	14th Avenue (14th & Elm P.S. to East Front Street)		21 in.			180	2	0	\$ 1,188,174.84	\$1,188,175	\$118,817	\$237,635	\$118,817	\$1,663,445	\$1,663,000	\$0	\$1,663,000	\$0	\$0	\$0
1.5	East Front Street Trunk Sewer Phase I (14th to 12th Streets)		18 in.			640	2	2		\$36,725	\$3,673	\$7,345	\$3,673	\$51,416	\$51,000	\$0	\$0	\$51,000	\$0	\$0
1.5	East Front Street Trunk Sewer Phase II (12th to 10th Street)		15 in.		720		3	2		\$116,657	\$11,666	\$23,331	\$11,666	\$163,320	\$163,000	\$0	\$0	\$163,000	\$0	\$0
1.5	9th to 10th Alley Trunk Sewer (Between East Front and Elm Streets)		12 in.		470		2	8		\$121,734	\$12,173	\$24,347	\$12,173	\$170,427	\$170,000	\$0	\$0	\$170,000	\$0	\$0
	<b>9th &amp; Ivy Basin</b>									\$97,700	\$9,770	\$19,540	\$9,770	\$136,781	\$137,000	\$0	\$0	\$137,000	\$0	\$0
1	9th & Ivy Pump Station & Trunk Sewer		690 gpm/10 in.	200			2		\$ 648,095.37	\$679,420	\$67,942	\$135,884	\$217,942	\$1,101,188	\$1,101,000	\$0	\$1,101,000	\$0	\$0	\$0
	<b>17th &amp; Ivy Basin</b>																			
1.5	17th & Ivy Pump Station		405 gpm						\$ 540,079.47	\$540,079	\$54,008	\$108,016	\$54,008	\$756,111	\$756,000	\$196,000	\$0	\$756,000	\$0	\$0
	<b>3rd &amp; Maple Basin</b>																			
1.5	3rd & Maple Pump Station Phase I		770 gpm						\$ 518,476.29	\$518,476	\$51,848	\$103,695	\$51,848	\$725,867	\$726,000	\$405,000	\$0	\$726,000	\$0	\$0
3	3rd & Maple Pump Station Phase II		2740 gpm						\$ 1,080,158.95	\$1,080,159	\$108,016	\$216,032	\$108,016	\$1,512,223	\$1,512,000	\$1,512,000	\$0	\$0	\$0	\$1,512,000
3	3rd Street and Maple Street Trunk Sewer (3rd & Maple P.S. to 1st Ave.)		24 in.			720	4			\$131,779	\$13,178	\$26,356	\$13,178	\$184,491	\$184,000	\$184,000	\$0	\$0	\$0	\$184,000
3	Prairie Road Trunk Sewer (1st Ave to Bryant Street)		21 in.			965	4	14		\$209,281	\$20,928	\$41,856	\$20,928	\$292,993	\$293,000	\$293,000	\$0	\$0	\$0	\$293,000
3	Prairie Road Trunk Sewer (Bryant Street to Basin Boundary)		21 in.			1985	6	17		\$390,207	\$39,021	\$78,041	\$39,021	\$546,290	\$546,000	\$546,000	\$0	\$0	\$0	\$546,000
3	1st Ave. Trunk Sewer (Maple St. west to existing MH)		10 in.	180			1	3		\$33,269	\$3,327	\$6,654	\$3,327	\$46,576	\$47,000	\$0	\$0	\$0	\$0	\$47,000
	<b>10th &amp; Rose Basin</b>																			
2	10th & Rose Pump Station and Trunk Sewer (Rose to Tamarack)		590 gpm/10 in.	900			3	8	\$ 486,071.53	\$625,952	\$62,595	\$125,190	\$112,595	\$926,333	\$926,000	\$377,000	\$0	\$0	\$926,000	\$0
3	10th Avenue Trunk Sewer (New 10th & Rose Pump Station to Vine St.)		10 in.	600			3	3		\$90,733	\$9,073	\$18,147	\$9,073	\$177,027	\$177,000	\$177,000	\$0	\$0	\$0	\$177,000
3	Vine Street Trunk Sewer (10th to 6th Avenues)		10 in.	1300			4	27		\$242,496	\$24,250	\$48,499	\$24,250	\$339,494	\$339,000	\$339,000	\$0	\$0	\$0	\$339,000
	<b>1st &amp; Monaco Basin</b>																			
2	1st & Monaco Pump Station Phase I		80 gpm				2		\$ 162,023.84	\$169,585	\$16,958	\$33,917	\$16,958	\$237,419	\$237,000	\$0	\$0	\$0	\$237,000	\$0
3	1st & Monaco Pump Station Phase II		880 gpm/10 in.	550			2		\$ 626,492.19	\$699,403	\$69,940	\$139,881	\$69,940	\$979,164	\$979,000	\$890,000	\$0	\$0	\$0	\$979,000
3	1st Ave. Trunk Sewer (New 1st & Monaco P.S. East)		10 in.	650			2			\$84,792	\$8,479	\$16,958	\$8,479	\$118,709	\$119,000	\$119,000	\$0	\$0	\$0	\$119,000
3	1st Ave. Trunk Sewer (Old 1st & Monaco Site West)		10 in.	670			2		\$ 21,603.18	\$108,772	\$10,877	\$21,754	\$10,877	\$152,281	\$152,000	\$152,000	\$0	\$0	\$0	\$152,000
	<b>Chapel Creek Basin</b>																			
3	Chapel Creek Pump Station Pump Upgrades		680 gpm						\$ 108,015.89	\$108,016	\$10,802	\$21,603	\$10,802	\$151,222	\$151,000	\$151,000	\$0	\$0	\$0	\$151,000
	<b>Rosewood Basin</b>																			
2	Rosewood Pump Station		205 gpm						\$ 162,023.84	\$162,024	\$16,202	\$32,405	\$16,202	\$226,833	\$227,000	\$138,000	\$0	\$0	\$227,000	\$0
	<b>West 10th Basin</b>																			
3	West 10th Pump Station		1170 gpm						\$ 810,119.21	\$810,119	\$81,012	\$162,024	\$81,012	\$1,134,167	\$1,134,000	\$1,134,000	\$0	\$0	\$0	\$1,134,000
	<b>Prairie Road Basin</b>																			
3	Prairie Road Trunk Sewer (Northern Basin Boundary to Hwy 99)		21 in.			3540	10	11		\$641,074	\$64,107	\$128,215	\$64,107	\$897,504	\$898,000	\$898,000	\$0	\$0	\$0	\$898,000
3	Highway 99 Crossing		21 in.						\$ 162,023.84	\$162,024	\$16,202	\$32,405	\$16,202	\$226,833	\$227,000	\$227,000	\$0	\$0	\$0	\$227,000
3	Prairie Road Trunk Sewer (Hwy 99 to Hwy 36)		18 in.			2060	6			\$356,452	\$35,645	\$71,290	\$35,645	\$499,033	\$499,000	\$499,000	\$0	\$0	\$0	\$499,000
3	Highway 99 Trunk Sewer (Hwy 36 to South Industrial Lift Station)		18 in.			4620	12			\$793,917	\$79,392	\$158,783	\$79,392	\$1,111,484	\$1,111,000	\$1,111,000	\$0	\$0	\$0	\$1,111,000
	<b>South Industrial Basin</b>																			
3	South Industrial Lift Station		1110 gpm						\$ 810,119.21	\$810,119	\$81,012	\$162,024	\$81,012	\$1,134,167	\$1,134,000	\$1,134,000	\$0	\$0	\$0	\$1,134,000
3	South Industrial Trunk Sewer Phase I (Lift Station to Milliron Rd.)		15 in.		3430		9			\$534,193	\$53,419	\$106,839	\$53,419	\$747,870	\$748,000	\$748,000	\$0	\$0	\$0	\$748,000
3	South Industrial Trunk Sewer Phase II (Milliron Rd. to South UGB)		12/10 in.	2630			7			\$338,954	\$33,895	\$67,791	\$33,895	\$474,535	\$475,000	\$475,000	\$0	\$0	\$0	\$475,000
										\$11,882,289	\$1,188,229	\$2,376,458	\$1,438,229	\$16,885,204	\$16,882,000	\$11,705,000	\$2,764,000	\$2,003,000	\$1,390,000	\$10,725,000

Table E-2

City of Junction City, Oregon  
Wastewater Facilities Plan

COST ESTIMATE  
Level of Detail - Planning

Evaluation of Alternatives  
Comparison of Capital Costs

Design Year 2029  
Existing Population 4900  
Projected Population 9580  
Population Change 4680  
Percent of total population added during planning period 49%

Alternative

Item	Priority	Qty	Unit	Unit Cost	Construction Cost	15%	20%	10%	Total Project Cost	Oversize Cost Required for Growth	Priority 1A	Priority 1B	Priority 2	Priority 3
						Contingency	Engineering	Legal & Admin						
Alternative 2: Expand Existing WWTP, Winter Discharge to the Willamette River, Summer Land Application														
Treatment System														
Land Acquisition and Easements for WWTP Expansion	1	ALL	LS	Lump Sum	\$2,300,000	\$345,000	\$460,000	\$230,000	\$3,335,000	\$3,335,000	\$3,335,000	\$0	\$0	\$0
Wetland Mitigation	1	27	acre	\$48,000	\$1,272,000	\$50,000	\$50,000	\$25,000	\$1,397,000	\$1,397,000	\$1,397,000	\$0	\$0	\$0
New Rainfall Measurement Equipment	1	ALL	LS	Lump Sum	\$2,160	\$324	\$432	\$216	\$3,132	\$1,530	\$3,132	\$0	\$0	\$0
New Facultative Lagoons with Synthetic Liners	1	23.5	acre	\$54,000	\$1,269,000	\$190,350	\$253,800	\$126,900	\$1,840,050	\$1,840,050	\$1,840,050	\$0	\$0	\$0
Spoils Disposal	1	100,000	CY	\$2.70	\$270,000	\$40,500	\$54,000	\$27,000	\$391,500	\$391,500	\$391,500	\$0	\$0	\$0
New Transfer Structures in Existing Lagoons	1	2	Each	\$81,000	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$234,900	\$234,900	\$0	\$0	\$0
New Transfer Piping	1	1,700	LF	\$205	\$348,500	\$52,275	\$69,700	\$34,850	\$505,325	\$505,325	\$505,325	\$0	\$0	\$0
New Outlet Structure	1	1	Each	\$81,000	\$81,000	\$12,150	\$16,200	\$8,100	\$117,450	\$117,450	\$117,450	\$0	\$0	\$0
New Outlet Piping	1	600	LF	\$162	\$97,200	\$14,580	\$19,440	\$9,720	\$140,940	\$140,940	\$140,940	\$0	\$0	\$0
New Dike Riprap Protection	1	4,000	CY	\$38	\$152,000	\$22,800	\$30,400	\$15,200	\$220,400	\$220,400	\$220,400	\$0	\$0	\$0
Rehabilitation of Existing Lagoon Dike Roadways	1	2,500	CY	\$22	\$40,000	\$6,000	\$8,000	\$4,000	\$58,000	\$0	\$58,000	\$0	\$0	\$0
New Treatment Plant Building	1	2,000	SF	\$140	\$280,000	\$42,000	\$56,000	\$28,000	\$406,000	\$198,338	\$406,000	\$0	\$0	\$0
New Effluent Disinfection Equipment	1	ALL	LS	Lump Sum	\$32,400	\$4,860	\$6,480	\$3,240	\$46,980	\$22,951	\$46,980	\$0	\$0	\$0
Effluent Pump Station and Appurtenances	1	ALL	LS	Lump Sum	\$810,000	\$121,500	\$162,000	\$81,000	\$1,174,500	\$573,764	\$1,174,500	\$0	\$0	\$0
New 20-inch Effluent Force Main	1	22,500	LF	\$151	\$3,397,500	\$509,625	\$679,500	\$339,750	\$4,926,375	\$2,406,622	\$4,926,375	\$0	\$0	\$0
Outfall Diffuser	1	ALL	LS	Lump Sum	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New Chlorine Contact Chamber for Land Application	1	ALL	LS	Lump Sum	\$108,000	\$16,200	\$21,600	\$10,800	\$156,600	\$76,502	\$156,600	\$0	\$0	\$0
New Irrigation Pump Station	1	ALL	LS	Lump Sum	\$216,000	\$32,400	\$43,200	\$21,600	\$313,200	\$153,004	\$313,200	\$0	\$0	\$0
New Effluent Distribuion Piping for Land Application	1	7,000	LF	\$54	\$378,000	\$56,700	\$75,600	\$37,800	\$548,100	\$267,757	\$548,100	\$0	\$0	\$0
New 3-phase Power Service	1	ALL	LS	Lump Sum	\$43,200	\$6,480	\$8,640	\$4,320	\$62,640	\$30,601	\$62,640	\$0	\$0	\$0
New SCADA System for Wastewater Utility	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
New Auxiliary Power Unit and Automatic Transfer Switch	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
Electrical and Controls	1	ALL	LS	Lump Sum	\$216,000	\$32,400	\$43,200	\$21,600	\$313,200	\$153,004	\$313,200	\$0	\$0	\$0
Subtotal Treatment System					\$11,744,960	\$1,620,944	\$2,144,592	\$1,072,296	\$16,582,792	\$12,257,891	\$16,582,792	\$0	\$0	\$0
Forcemain Improvements														
New 6-Inch 17th & Ivy Pump Station Forcemain	1.5	1,200	LF	\$103	\$123,600	\$18,540	\$24,720	\$12,360	\$179,220	\$0	\$0	\$179,220	\$0	\$0
New 8-Inch 9th & Ivy Pump Station Forcemain	1	1,350	LF	\$108	\$145,800	\$21,870	\$29,160	\$14,580	\$211,410	\$0	\$211,410	\$0	\$0	\$0
New 6-Inch Rosewood Forcemain	2	1,400	LF	\$97	\$135,800	\$20,370	\$27,160	\$13,580	\$196,910	\$126,000	\$0	\$196,910	\$0	\$0
Upsize Existing Primary Forcemain to 18-inch (Chapel Creek to New South Primary F.M.)	1	5,500	LF	\$162	\$891,000	\$133,650	\$178,200	\$89,100	\$1,291,950	\$1,291,950	\$1,291,950	\$0	\$0	\$0
New 10-Inch 1st & Monaco Pump Station Forcemain	3	3,000	LF	\$108	\$324,000	\$48,600	\$64,800	\$32,400	\$469,800	\$469,800	\$0	\$0	\$0	\$469,800
New 14-Inch 3rd & Maple Pump Station Forcemain	3	700	LF	\$135	\$94,500	\$14,175	\$18,900	\$9,450	\$137,025	\$137,025	\$0	\$0	\$0	\$137,025
New 16-Inch South Primary Forcemain (3rd & Maple to Existing Primary F.M.)	3	8,200	LF	\$140	\$1,148,000	\$172,200	\$229,600	\$114,800	\$1,664,600	\$1,664,600	\$0	\$0	\$0	\$1,664,600
New 30-Inch Primary Forcemain (South and North Primary F.M Connection Point to WWTP)	1	1,000	LF	\$140	\$140,000	\$21,000	\$28,000	\$14,000	\$203,000	\$203,000	\$203,000	\$0	\$0	\$0
Sutotal Forcemain Improvements					\$3,002,700	\$450,405	\$600,540	\$300,270	\$4,353,915	\$3,892,375	\$1,706,360	\$179,220	\$196,910	\$2,271,425
Alternative 2 Totals					\$14,747,660	\$2,071,349	\$2,745,132	\$1,372,566	\$20,936,707	\$16,150,266	\$18,289,152	\$179,220	\$196,910	\$2,271,425

Table E-2

City of Junction City, Oregon  
Wastewater Facilities Plan

COST ESTIMATE  
Level of Detail - Planning

Evaluation of Alternatives  
Comparison of Capital Costs

Design Year2029  
Existing Population4900  
Projected Population9580  
Population Change4680  
Percent of total population added during planning period49%

Alternative

Item	Priority	Qty	Unit	Unit Cost	15%	20%	10%	Total Project Cost	Oversize Cost Required for Growth	Priority 1A	Priority 1B	Priority 2	Priority 3	
					Construction Cost	Contingency	Engineering							Legal & Admin
Alternative 3:Construct New WWTP, Winter Discharge to the Willamette River, Summer Storage														
Treatment System														
Land Acquisition and Easements for WWTP Expansion	1	ALL	LS	Lump Sum	\$1,500,000	\$225,000	\$300,000	\$150,000	\$2,175,000	\$2,175,000	\$2,175,000	\$0	\$0	\$0
Wetland Mitigation	1	5	acre	\$48,000	\$240,000	\$20,000	\$50,000	\$25,000	\$335,000	\$335,000	\$335,000	\$0	\$0	\$0
New Headworks	1	ALL	LS	Lump Sum	\$270,000	\$40,500	\$54,000	\$27,000	\$391,500	\$191,255	\$391,500	\$0	\$0	\$0
New Rainfall Measurement Equipment	1	ALL	LS	Lump Sum	\$2,160	\$324	\$432	\$216	\$3,132	\$1,530	\$3,132	\$0	\$0	\$0
New Facultative Lagoons with Synthetic Liners	1	84	acre	\$54,000	\$4,536,000	\$680,400	\$907,200	\$453,600	\$6,577,200	\$3,213,079	\$6,577,200	\$0	\$0	\$0
Inlet Piping to Primary Lagoons	1	1,500	LF	\$130	\$195,000	\$29,250	\$39,000	\$19,500	\$282,750	\$138,128	\$282,750	\$0	\$0	\$0
New Transfer Structures to Control Flow Between Lagoons	1	2	Each	\$81,000	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New Transfer Piping	1	2,400	LF	\$130	\$312,000	\$46,800	\$62,400	\$31,200	\$452,400	\$221,005	\$452,400	\$0	\$0	\$0
New Outlet Structures	1	2	Each	\$81,000	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New Outlet Piping	1	1,000	LF	\$130	\$130,000	\$19,500	\$26,000	\$13,000	\$188,500	\$92,086	\$188,500	\$0	\$0	\$0
New Dike Riprap Protection	1	16,000	CY	\$38	\$608,000	\$91,200	\$121,600	\$60,800	\$881,600	\$430,677	\$881,600	\$0	\$0	\$0
New Treatment Plant Building	1	2,000	SF	\$140	\$280,000	\$42,000	\$56,000	\$28,000	\$406,000	\$198,338	\$406,000	\$0	\$0	\$0
New Effluent Disinfection Equipment	1	ALL	LS	Lump Sum	\$32,400	\$4,860	\$6,480	\$3,240	\$46,980	\$22,951	\$46,980	\$0	\$0	\$0
Effluent Pump Station and Appurtenances	1	ALL	LS	Lump Sum	\$810,000	\$121,500	\$162,000	\$81,000	\$1,174,500	\$573,764	\$1,174,500	\$0	\$0	\$0
New 20-inch Effluent Force Main	1	5,600	LF	\$135	\$756,000	\$113,400	\$151,200	\$75,600	\$1,096,200	\$535,513	\$1,096,200	\$0	\$0	\$0
New Willamette River Outfall Diffuser	1	ALL	LS	Lump Sum	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New 3-phase Power Service	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
New SCADA System for Wastewater Utility	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
New Auxiliary Power Unit and Automatic Transfer Switch	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
Electrical and Controls	1	ALL	LS	Lump Sum	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
Decommission and Abandon Existing Treatment Plant In Place	1	ALL	LS	Lump Sum	\$500,000	\$75,000	\$100,000	\$50,000	\$725,000	\$354,175	\$725,000	\$0	\$0	\$0
Subtotal Treatment System					\$10,981,560	\$1,631,234	\$2,198,312	\$1,099,156	\$15,910,262	\$9,056,266	\$15,910,262	\$0	\$0	\$0
Forcemain Improvements														
New 6-Inch 17th & Ivy Pump Station Forcemain	1.5	1,200	LF	\$108	\$129,600	\$19,440	\$25,920	\$12,960	\$187,920	\$0	\$0	\$187,920	\$0	\$0
New 8-Inch 9th & Ivy Pump Station Forcemain	1	1,350	LF	\$119	\$160,650	\$24,098	\$32,130	\$16,065	\$232,943	\$0	\$232,943	\$0	\$0	\$0
New 6-Inch Rosewood Forcemain	2	1,400	LF	\$108	\$151,200	\$22,680	\$30,240	\$15,120	\$219,240	\$140,000	\$0	\$0	\$219,240	\$0
Replace Existing 16-inch Forcemain with new 8-12 inch Forcemain (W 10th P.S. to Chapel Creek)	1	5,500	LF	\$125	\$687,500	\$103,125	\$137,500	\$68,750	\$996,875	\$638,000	\$996,875	\$0	\$0	\$0
New 24-Inch Forcemain from 14th & Elm to Connection with South F.M	1	6,750	LF	\$124	\$837,000	\$125,550	\$167,400	\$83,700	\$1,213,650	\$592,890	\$1,213,650	\$0	\$0	\$0
New 14-Inch Forcemain (3rd & Maple to 1st & Monaco)	3	4,000	LF	\$113	\$452,000	\$67,800	\$90,400	\$45,200	\$655,400	\$655,400	\$0	\$0	\$0	\$655,400
New 16-Inch South Primary Forcemain (1st & Monaco to Connection with North Primary F.M.)	3	1,900	LF	\$119	\$226,100	\$33,915	\$45,220	\$22,610	\$327,845	\$327,845	\$0	\$0	\$0	\$327,845
New 30-Inch Primary Forcemain (South and North Primary F.M Connection Point to WWTP)	1	4,650	LF	\$162	\$753,300	\$112,995	\$150,660	\$75,330	\$1,092,285	\$533,601	\$1,092,285	\$0	\$0	\$0
Sutotal Forcemain Improvements					\$3,397,350	\$509,603	\$679,470	\$339,735	\$4,926,158	\$2,887,735	\$3,535,753	\$187,920	\$219,240	\$983,245
Alternative 3 Totals					\$14,378,910	\$2,140,837	\$2,877,782	\$1,438,891	\$20,836,420	\$11,944,001	\$19,446,015	\$187,920	\$219,240	\$983,245



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City of Junction City, Oregon  
Wastewater Facilities Plan

COST ESTIMATE  
Level of Detail - Planning

Evaluation of Alternatives  
Comparison of Capital Costs

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Projected Population 9580  
Population Change 4680  
Percent of total population added during planning period 49%

Alternative

Item	Priority	Qty	Unit	Unit Cost	Construction Cost	15%	20%	10%	Total Project Cost	Oversize Cost Required for Growth	Priority 1A	Priority 1B	Priority 2	Priority 3
						Contingency	Engineering	Legal & Admin						
Alternative 4: Construct New WWTP, Winter Discharge to the Willamette River, Summer Land Application														
Treatment System														
Land Acquisition and Easements for WWTP Expansion	1	ALL	LS	Lump Sum	\$3,200,000	\$480,000	\$640,000	\$320,000	\$4,640,000	\$4,640,000	\$4,640,000	\$0	\$0	\$0
Wetland Mitigation	1	5	acre	\$48,000	\$240,000	\$20,000	\$50,000	\$25,000	\$335,000	\$335,000	\$335,000	\$0	\$0	\$0
New Headworks	1	ALL	LS	Lump Sum	\$270,000	\$40,500	\$54,000	\$27,000	\$391,500	\$191,255	\$391,500	\$0	\$0	\$0
New Rainfall Measurement Equipment	1	ALL	LS	Lump Sum	\$2,160	\$324	\$432	\$216	\$3,132	\$1,530	\$3,132	\$0	\$0	\$0
New Facultative Lagoons with Synthetic Liners	1	70.5	acre	\$54,000	\$3,807,000	\$571,050	\$761,400	\$380,700	\$5,520,150	\$2,696,691	\$5,520,150	\$0	\$0	\$0
New Transfer Structures	1	2	Each	\$81,000	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New Transfer Piping	1	1,700	LF	\$130	\$221,000	\$33,150	\$44,200	\$22,100	\$320,450	\$156,546	\$320,450	\$0	\$0	\$0
New Outlet Structure	1	1	Each	\$81,000	\$81,000	\$12,150	\$16,200	\$8,100	\$117,450	\$57,376	\$117,450	\$0	\$0	\$0
New Outlet Piping	1	600	LF	\$130	\$78,000	\$11,700	\$15,600	\$7,800	\$113,100	\$55,251	\$113,100	\$0	\$0	\$0
New Dike Riprap Protection	1	14,000	CY	\$38	\$532,000	\$79,800	\$106,400	\$53,200	\$771,400	\$376,843	\$771,400	\$0	\$0	\$0
New Treatment Plant Building	1	2,000	SF	\$140	\$280,000	\$42,000	\$56,000	\$28,000	\$406,000	\$198,338	\$406,000	\$0	\$0	\$0
New Effluent Disinfection Equipment	1	ALL	LS	Lump Sum	\$32,400	\$4,860	\$6,480	\$3,240	\$46,980	\$22,951	\$46,980	\$0	\$0	\$0
Effluent Pump Station and Appurtenances	1	ALL	LS	Lump Sum	\$810,000	\$121,500	\$162,000	\$81,000	\$1,174,500	\$573,764	\$1,174,500	\$0	\$0	\$0
New 20-inch Effluent Force Main	1	5,600	LF	\$135	\$756,000	\$113,400	\$151,200	\$75,600	\$1,096,200	\$535,513	\$1,096,200	\$0	\$0	\$0
Outfall Diffuser	1	ALL	LS	Lump Sum	\$162,000	\$24,300	\$32,400	\$16,200	\$234,900	\$114,753	\$234,900	\$0	\$0	\$0
New Chlorine Contact Chamber for Land Application	1	ALL	LS	Lump Sum	\$108,000	\$16,200	\$21,600	\$10,800	\$156,600	\$76,502	\$156,600	\$0	\$0	\$0
New Irrigation Pump Station	1	ALL	LS	Lump Sum	\$216,000	\$32,400	\$43,200	\$21,600	\$313,200	\$153,004	\$313,200	\$0	\$0	\$0
New Effluent Distribuion Piping for Land Application	1	8,750	LF	\$54	\$472,500	\$70,875	\$94,500	\$47,250	\$685,125	\$334,696	\$685,125	\$0	\$0	\$0
New 3-phase Power Service	1	ALL	LS	Lump Sum	\$43,200	\$6,480	\$8,640	\$4,320	\$62,640	\$30,601	\$62,640	\$0	\$0	\$0
New SCADA System for Wastewater Utility	1	ALL	LS	Lump Sum	\$108,000	\$16,200	\$21,600	\$10,800	\$156,600	\$76,502	\$156,600	\$0	\$0	\$0
New Auxiliary Power Unit and Automatic Transfer Switch	1	ALL	LS	Lump Sum	\$54,000	\$8,100	\$10,800	\$5,400	\$78,300	\$38,251	\$78,300	\$0	\$0	\$0
Electrical and Controls	1	ALL	LS	Lump Sum	\$216,000	\$32,400	\$43,200	\$21,600	\$313,200	\$153,004	\$313,200	\$0	\$0	\$0
Decommission and Abandon Existing Treatment Plant In Place	1	ALL	LS	Lump Sum	\$500,000	\$75,000	\$100,000	\$50,000	\$725,000	\$354,175	\$725,000	\$0	\$0	\$0
Subtotal Treatment System					\$12,351,260	\$1,836,689	\$2,472,252	\$1,236,126	\$17,896,327	\$11,287,298	\$17,896,327	\$0	\$0	\$0
Forcemain Improvements														
New 6-Inch 17th & Ivy Pump Station Forcemain	1.5	1,200	LF	\$108	\$129,600	\$19,440	\$25,920	\$12,960	\$187,920	\$0	\$0	\$187,920	\$0	\$0
New 8-Inch 9th & Ivy Pump Station Forcemain	1	1,350	LF	\$119	\$160,650	\$24,098	\$32,130	\$16,065	\$232,943	\$0	\$232,943	\$0	\$0	\$0
New 6-Inch Rosewood Forcemain	2	1,400	LF	\$108	\$151,200	\$22,680	\$30,240	\$15,120	\$219,240	\$140,000	\$0	\$219,240	\$0	\$0
Replace Existing 16-inch Forcemain with new 8-12 inch Forcemain (W 10th P.S. to Chapel Creek)	1	5,500	LF	\$125	\$687,500	\$103,125	\$137,500	\$68,750	\$996,875	\$638,000	\$996,875	\$0	\$0	\$0
New 24-Inch Forcemain from 14th & Elm to Connection with South F.M.	1	6,750	LF	\$124	\$837,000	\$125,550	\$167,400	\$83,700	\$1,213,650	\$592,890	\$1,213,650	\$0	\$0	\$0
New 14-Inch Forcemain (3rd & Maple to 1st & Monaco)	3	4,000	LF	\$113	\$452,000	\$67,800	\$90,400	\$45,200	\$655,400	\$655,400	\$0	\$0	\$0	\$655,400
New 16-Inch South Primary Forcemain (1st & Monaco to Connection with North Primary F.M.)	3	1,900	LF	\$119	\$226,100	\$33,915	\$45,220	\$22,610	\$327,845	\$327,845	\$0	\$0	\$0	\$327,845
New 30-Inch Primary Forcemain (South and North Primary F.M Connection Point to WWTP)	1	4,650	LF	\$162	\$753,300	\$112,995	\$150,660	\$75,330	\$1,092,285	\$533,601	\$1,092,285	\$0	\$0	\$0
Sutotal Forcemain Improvements					\$3,397,350	\$509,603	\$679,470	\$339,735	\$4,926,158	\$2,887,735	\$3,535,753	\$187,920	\$219,240	\$983,245
Alternative 4 Totals					\$15,748,610	\$2,346,292	\$3,151,722	\$1,575,861	\$22,822,485	\$14,175,033	\$21,432,080	\$187,920	\$219,240	\$983,245

Table E-3  
Infiltration and Inflow Correction Plan Cost Estimates(Rehabilitate or Replace all 1948 Concrete Mortar Joint Pipe)

City of Junction City, Oregon  
Wastewater Facilities Plan  
971.3060.0

Unit Costs											
Item		Unit	Cost Per Unit								
TV Inspection		Lineal Foot	\$ 2.00								
8-Inch to 12-Inch Diameter Sewer Line		Lineal Foot	\$ 119.00								
15-Inch Diameter Sewer Line		Lineal Foot	\$ 146.00								
Manholes		Each	\$ 3,800.00								
Services		Each	\$ 2,700.00								
Engineering, Administration Costs, and Contingency		% of Construction Cost	40%								

Segment		Location	Existing Size (in)	Recom. Size (in)	Length (ft)	Manholes	Services	Engineering Admin			Notes
Number	Basin							Construction Cost	and Contingency	Project Cost	
1	14th & Elm	Alley Between Maple and Laurel Streets (MH A161 to MHA167)	8	8	900	4	21	\$ 180,800.00	\$ 72,300.00	\$ 253,100.00	
2	14th & Elm	Alley Between Laurel and Kalmia Streets (MH A157 to MH A156)	8	8	250	2	9	\$ 62,200.00	\$ 24,900.00	\$ 87,100.00	
3	14th & Elm	Alley Between Laurel and Kalmia Streets (MH A159 to MH A160)	8	8	300	2	7	\$ 62,800.00	\$ 25,100.00	\$ 87,900.00	
4	14th & Elm	Alley Between Kalmia and Juniper Streets (MH A154 to MH A155)	8	8	300	2	8	\$ 65,500.00	\$ 26,200.00	\$ 91,700.00	
5	14th & Elm	Alley Between Juniper and Ivy Streets (MH A153 to MH A152)	8	8	300	2	6	\$ 60,100.00	\$ 24,000.00	\$ 84,100.00	
6	14th & Elm	Alley Between Ivy and Holly Streets (MH A130 to MH A136)	8	8	2150	8	31	\$ 374,300.00	\$ 149,700.00	\$ 524,000.00	
7	14th & Elm	Holly Street (MH A144 to MH A145)	8	8	330	2	2	\$ 52,900.00	\$ 21,200.00	\$ 74,100.00	
8	14th & Elm	Industrial Area West of Railroad (MH A142 to MH A141)	8	8	100	2	1	\$ 22,400.00	\$ 9,000.00	\$ 31,400.00	
9	14th & Elm	Alley Between Holly and Greenwood Streets (MH A121 to MH A119)	8	8	550	3	11	\$ 107,700.00	\$ 43,100.00	\$ 150,800.00	
10	14th & Elm	Alley Between Holly and Greenwood Streets (MH A122 to MH A123)	8	8	300	2	8	\$ 65,500.00	\$ 26,200.00	\$ 91,700.00	
11	14th & Elm	Alley Between Holly and Greenwood Streets (MH A125 to MH A127)	8	8	600	3	11	\$ 113,700.00	\$ 45,500.00	\$ 159,200.00	
12	14th & Elm	Greenwood Street (MH A118 to MH A117)	8	8	250	2	3	\$ 46,000.00	\$ 18,400.00	\$ 64,400.00	
13	14th & Elm	Alley Between Greenwood and West Front Streets (MH A108 to MH A110)	8	8	650	3	15	\$ 130,600.00	\$ 52,200.00	\$ 182,800.00	
14	14th & Elm	West Front Street (MH A104 to MH A105)	10	10	320	1	3	\$ 50,600.00	\$ 20,200.00	\$ 70,800.00	
15	14th & Elm	West Front Street (MH A105 to MH A106)	8	8	330	2	3	\$ 55,600.00	\$ 22,200.00	\$ 77,800.00	
16	14th & Elm	9th Avenue (MH A129 to MH A105)	10	10	700	1	4	\$ 99,300.00	\$ 39,700.00	\$ 139,000.00	Includes Railroad Crossing likely pipe burst or CIPP
17	14th & Elm	Alley Between East Front and Elm Streets (MH A12 to MH A17)	10	12	350	2	7	\$ 68,900.00	\$ 27,600.00	\$ 96,500.00	
18	14th & Elm	Elm Street (MH A18 to MH A21)	8	8	850	4	10	\$ 145,100.00	\$ 58,000.00	\$ 203,100.00	
19	14th & Elm	Alley Between Elm and Deal Streets (MH A15 to MH A16)	8	8	550	3	18	\$ 126,600.00	\$ 50,600.00	\$ 177,200.00	
20	14th & Elm	East 10th Avenue (MH A104 to MH A11)	10	10	120	1	0	\$ 18,300.00	\$ 7,300.00	\$ 25,600.00	Railroad Crossing likely pipe burst or CIPP
21	14th & Elm	East 10th Avenue (MH A11 to MH A12)	12	15	120	0	1	\$ 20,500.00	\$ 8,200.00	\$ 28,700.00	
22	14th & Elm	East 10th Avenue (MH A12 to MH A13)	10	10	110	1	0	\$ 17,100.00	\$ 6,800.00	\$ 23,900.00	
23	14th & Elm	East 10th Avenue (MH A13 to MH A14)	8	8	150	0	1	\$ 20,900.00	\$ 8,400.00	\$ 29,300.00	
Subtotal 14th & Elm Basin					10580	52	180	\$ 1,967,400.00	\$ 786,800.00	\$ 2,754,200.00	
24	9th & Ivy	Alley Between Nyssa and Maple Streets (MH B40 to MH B44)	8	8	1550	6	36	\$ 307,600.00	\$ 123,000.00	\$ 430,600.00	
25	9th & Ivy	Alley Between Maple and Laurel Streets (MH B32 to MH B31)	8	8	200	2	9	\$ 56,100.00	\$ 22,400.00	\$ 78,500.00	
26	9th & Ivy	Alley Between Maple and Laurel Streets (MH B33 to MH B38)	8	8	1500	6	33	\$ 293,400.00	\$ 117,400.00	\$ 410,800.00	
27	9th & Ivy	Alley Between Laurel and Kalmia Streets (MH B24 to MH B25)	8	8	600	3	17	\$ 129,900.00	\$ 52,000.00	\$ 181,900.00	
28	9th & Ivy	Alley Between Laurel and Kalmia Streets (MH B26 to MH B27)	8	8	300	2	7	\$ 62,800.00	\$ 25,100.00	\$ 87,900.00	
29	9th & Ivy	Alley Between Kalmia and Juniper Streets (MH B22 to MH B20)	8	8	550	3	18	\$ 126,600.00	\$ 50,600.00	\$ 177,200.00	
30	9th & Ivy	Alley Between Kalmia and Juniper Streets (MH B18 to MH 19)	8	8	350	2	3	\$ 58,100.00	\$ 23,200.00	\$ 81,300.00	
31	9th & Ivy	Alley Between Kalmia and Juniper Streets (MH B12 to MH 16)	8	8	1200	5	30	\$ 245,200.00	\$ 98,100.00	\$ 343,300.00	
32	9th & Ivy	Alley Between Juniper and Ivy Streets (MH B6 to MH B4)	8	8	600	3	16	\$ 127,200.00	\$ 50,900.00	\$ 178,100.00	
33	9th & Ivy	Alley Between Juniper and Ivy Streets (MH B3 to MH B2)	8	8	300	2	6	\$ 60,100.00	\$ 24,000.00	\$ 84,100.00	
34	9th & Ivy	Alley Between Juniper and Ivy Streets (MH B8 to MH B10)	8	8	350	3	12	\$ 86,200.00	\$ 34,500.00	\$ 120,700.00	
35	9th & Ivy	7th Avenue (MH B12 to MH B8)	8	8	300	0	0	\$ 36,300.00	\$ 14,500.00	\$ 50,800.00	
Subtotal 9th & Ivy Basin					7800	37	187	\$ 1,589,500.00	\$ 635,700.00	\$ 2,225,200.00	
36	17th & Ivy	Alley Between Kalmia and Juniper Streets (MH AA7 to MH AA16)	8	8	1200	5	21	\$ 220,900.00	\$ 88,400.00	\$ 309,300.00	
37	17th & Ivy	Alley Between Juniper and Ivy Streets (MH AA11 to MH AA10)	8	8	250	2	5	\$ 51,400.00	\$ 20,600.00	\$ 72,000.00	
38	17th & Ivy	Alley Between Ivy and Holly Streets (MH AA3 to MH AA4)	8	8	400	2	3	\$ 64,100.00	\$ 25,600.00	\$ 89,700.00	
39	17th & Ivy	7th Avenue (MH AA5 to MH AA3)	8	8	300	2	0	\$ 43,900.00	\$ 17,600.00	\$ 61,500.00	Highway crossing likely pipe burst or CIPP
Subtotal 17th & Ivy Basin					2150	11	29	\$ 380,300.00	\$ 152,200.00	\$ 532,500.00	
Grand Total					20530	100	396	\$ 3,937,200.00	\$ 1,574,700.00	\$ 5,511,900.00	