

**Preliminary Feasibility Study for South San Francisco Bay Shoreline
Economic Impact Areas 1 to 10
Appendix IV: Hydraulic Analysis
Final Report**



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1.0 INTRODUCTION

As part of the Preliminary Feasibility Study in Economic Impact Areas 1 to 10 along South San Francisco Bay Shoreline, this hydraulic analysis was conducted to investigate the flow capacity of nine creeks, located within EIA 1 through EIA10, and the minimum levee/flood wall elevations to provide the 100-year flood protection level. The project site of the South San Francisco Bay Shoreline Study (SSFBSS) is located in the area south of the Dumbarton Bridge at the far southern end of San Francisco Bay. The nine creeks included in the hydraulic analysis are Matadero Creek, Barron Creek, Adobe Creek, Permanente Creek, Stevens Creek, Sunnyvale West Channel, Sunnyvale East Channel, Calabazas Creek and San Tomas Aquino Creek, as shown in Figure 1.

The hydraulic analysis was conducted based on the unsteady HEC-RAS models that were developed by the Corps for the South San Francisco Bay Shoreline Study during the Without-Project (F3 phase) study¹. In total, these nine creeks are covered in five HEC-RAS models. Barron Creek and Adobe Creek are covered in one model, Sunnyvale West Channel, Sunnyvale East Channel, Calabazas Creek and San Tomas Aquino Creek are also included in one model. It is noted that levees and floodwalls were modeled as lateral weirs in these models to allow water to overtop the levees and floodwalls. These lateral weirs were deactivated in our analysis so that the channel flow capacity is evaluated with the full 100-year flow event, not with any reduced flow discharge that may be caused by the insufficient flow capacity of the upstream reaches.

The 100-year flow hydrographs used in our analysis are the same as those incorporated in the Corps' HEC-RAS models. The flow capacity evaluation was conducted with the Mean Higher High Water (MHHW) at the mouth of the creek for the Year 0 (2017) condition, and with MHHW adding future sea level rise projections for the Year 50 (2067) condition. The "low", "intermediate", and "high" SLR rates that were determined based on the USACE guidance² were considered in our evaluation for the Year 50 condition.

¹ USACE (2013). Riverine Hydraulic Analysis for South San Francisco Bay Shoreline Study, Santa Clara & Alameda Counties, California, May 2013.

² USACE (2011). EC 1165-2-212, Sea-Level Change Considerations for Civil Works Programs. October 2011.



Figure 1. Creeks Included in the Hydraulic Analysis

2.0 CHANGE TO HEC-RAS GEOMETRIC DATA

The geometry data files that were included in the Corps' HEC-RAS models¹ for the creeks were reviewed and revised before being used in our hydraulic analysis. The major revisions to the geometry data include the following:

- (1) Replacing the downstream end “dummy” cross sections, which were artificially added in the Corps' model, with multiple “dummy” sections that can better represent the downstream channel condition. A “dummy” section was typically added in the Corps' model at a location that is a couple of thousand feet downstream of the last (bayward) surveyed section, by lowering this surveyed section by 10 feet. The purpose of adding this dummy section was to minimize the untruly impact of the downstream boundary condition on the hydraulic parameters computed for the reach of interest. The multiple “dummy” sections added by us were developed based on the NOAA navigational chart and the Google Earth images. It is noted that the model results show that adding these dummy sections has negligible or no impact to the computed 100-year water surface elevations in the reaches of interest.
- (2) Deactivating the lateral structures (weirs) along the creeks so no water will leave the channel even when the water level is higher than the levees and channel banks. The purpose is to evaluate the channel flow capacity with the full 100-year flow event, not with any reduced flow discharge that may be caused by the insufficient flow capacity of the upstream reaches. In other words, our hydraulic analysis is to predict the water levels in the channel after future levee, floodwall, and/or channel improvements.
- (3) Per discussion with the District, all the floodplain areas, which are outside of levees, floodwalls, and channel banks, are assumed to be completely blocked without conveying water. All the water is conveyed within the main channel, which is the channel within the levee/floodwalls, or between the top of banks for incised channels. The purpose is to predict the water level in the channel after future levee and floodwall improvements. This was done by using the “Unsteady Encroachment” approach in the HEC-RAS model combined with removal of some data points in the floodplain areas for a few cross sections.

The geometric coverage of the HEC-RAS model is shown in Figure 2 for Matadero Creek, in Figure 3 for Barron and Adobe Creeks, in Figure 4 per Permanente Creek, in Figure 5 for Stevens Creek, and in Figure 6 for Sunnyvale West Channel, Sunnyvale East Channel, Calabazas Creek, San Tomas Aquino Creek, and Guadalupe Slough.

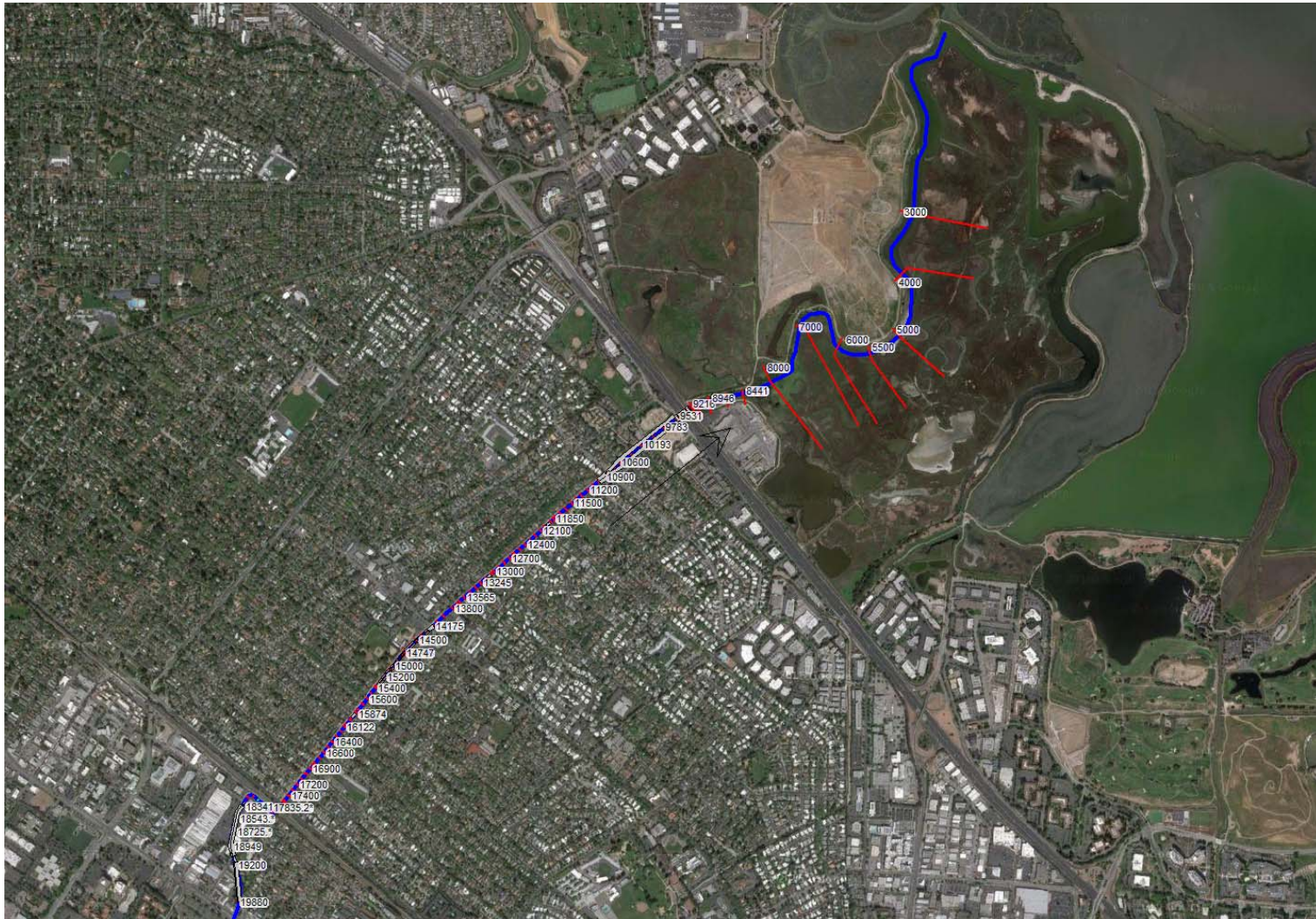


Figure 2. HEC-RAS Model Coverage for Matadero Creek

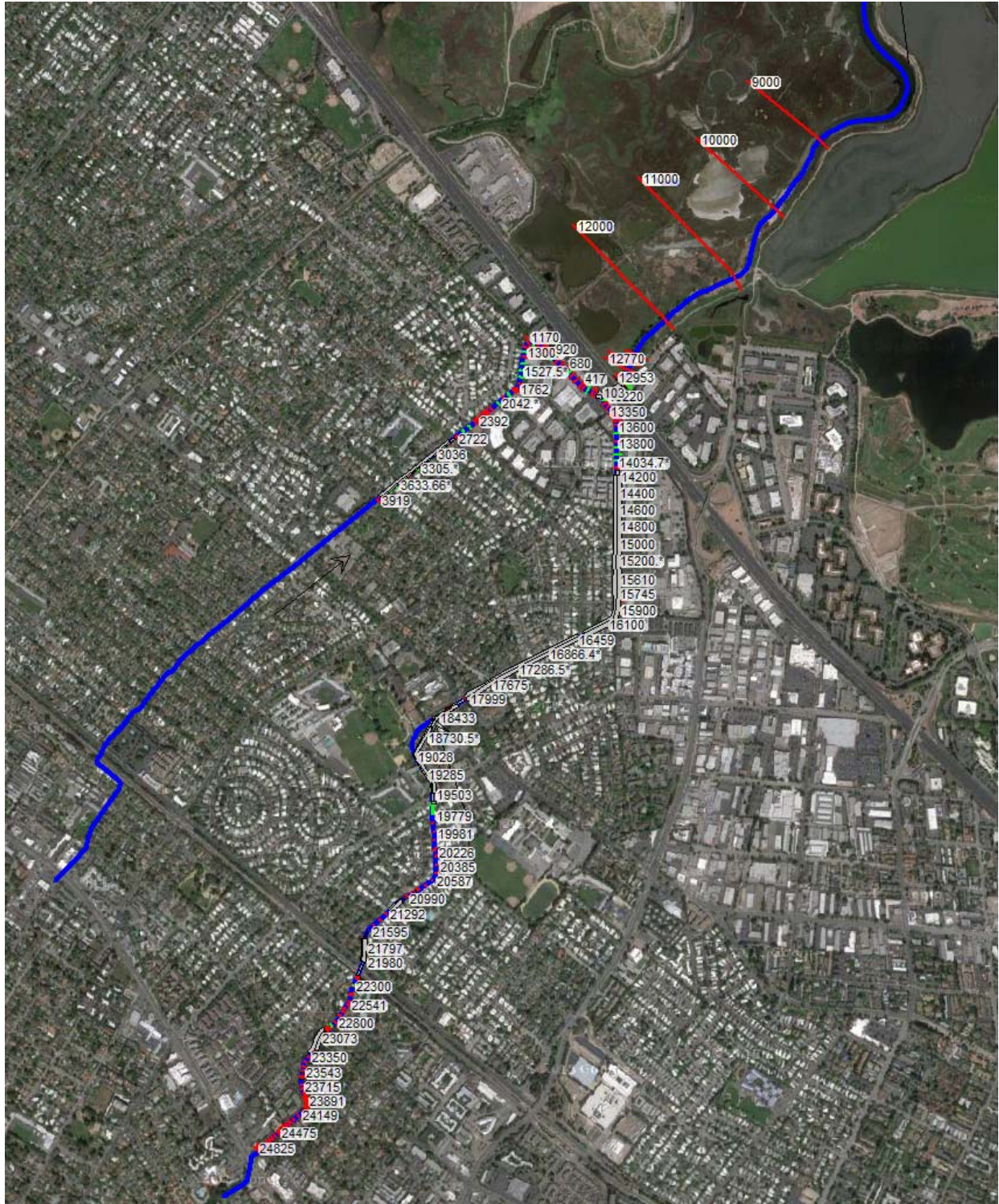


Figure 3. HEC-RAS Model Coverage for Barron Creek and Adobe Creek

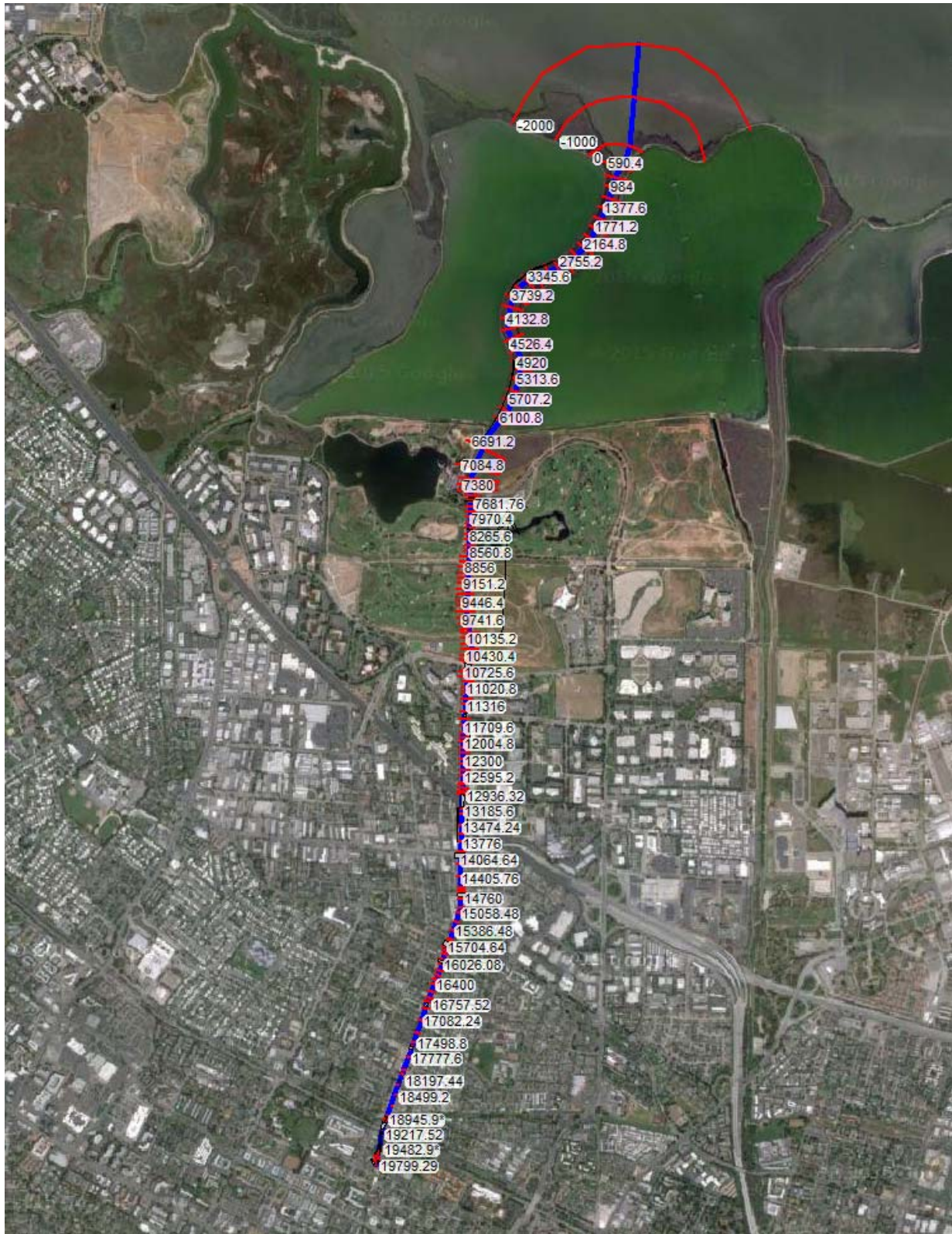


Figure 4. HEC-RAS Model Coverage for Permanente Creek

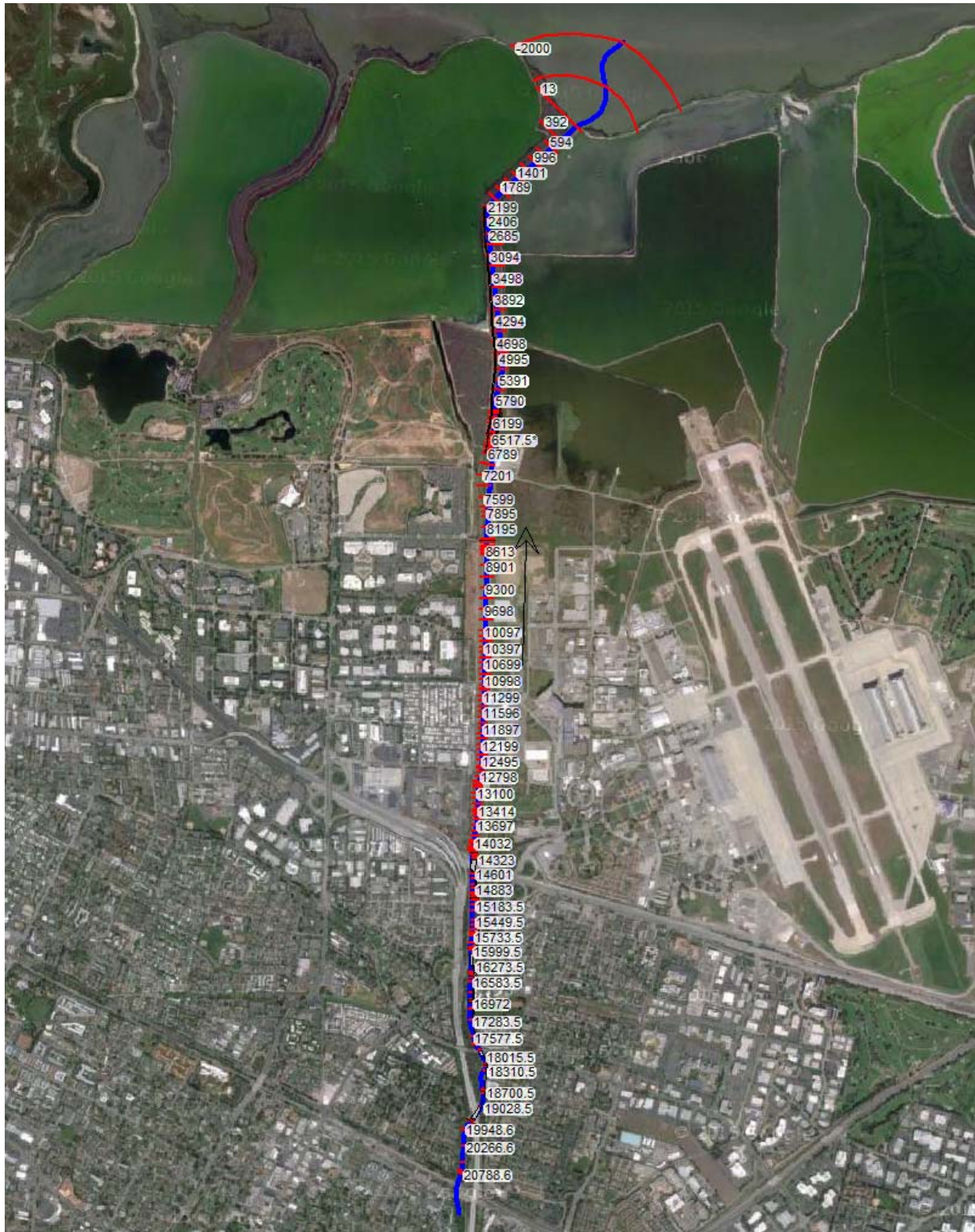


Figure 5. HEC-RAS Model Coverage for Stevens Creek

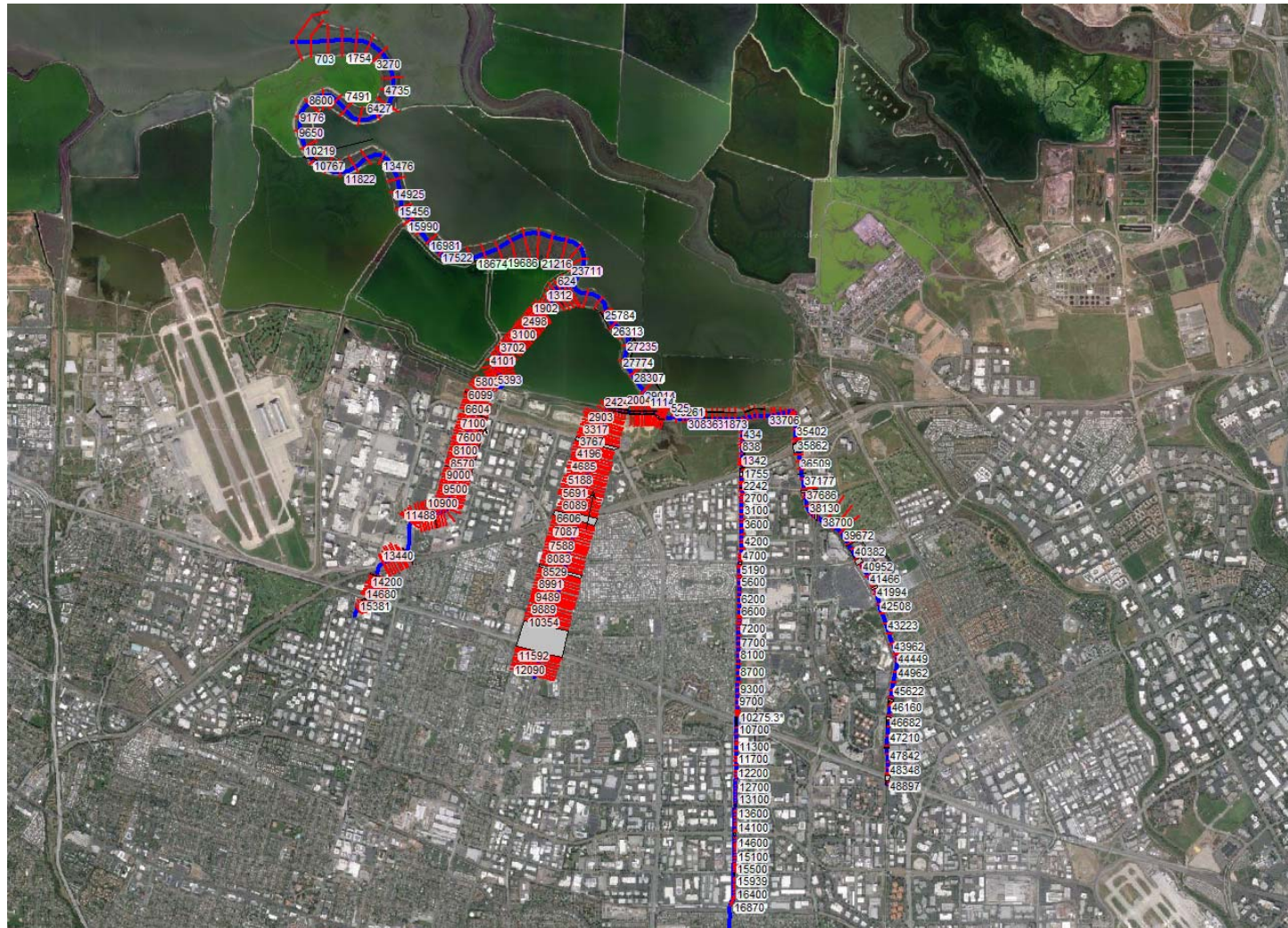


Figure 6. HEC-RAS Model Coverage for Sunnyvale West Channel, Sunnyvale East Channel, Calabazas Creek, and San Tomas Aquino Creek

3.0 HEC-RAS BOUNDARY CONDITIONS

The boundary conditions for the unsteady HEC-RAS model include the water surface elevation at the downstream boundary and the flow hydrographs at the upstream boundary and at the flow change locations along the channel, if any. Our hydraulic capacity analysis was conducted based on the Mean Higher High Water (MHHW) at the river mouth, adding various sea level rise (SLR) projects, together with the 100-year flow hydrographs that were included in the Corps' HEC-RAS models.

3.1 Downstream Water Surface Elevations

MHHW for the tidal epoch 1983-2001 was listed in Table 7 of USACE (2014) report³. It was determined to be +7.64 feet, NAVD 88 for Coyote Creek Station, NOAA ID 9414575. The future SLR starting from 1992 (mid-point of the 1983-2001 epoch) was computed using USACE (2011) guidance². The SLR was estimated to be 0.17 feet from 1992 to Year 0 (2017), and 0.51 feet, 1.01 feet, and 2.59 feet between 1992 and Year 50 (2067) for the USACE "low", "intermediate", and "high" SLR rates, respectively. MHHW adding these corresponding SLRs, as summarized in Table 1, was assigned as the downstream (Bay) water level condition for the HEC-RAS models.

3.2 Flow Hydrographs

The 100-year flow hydrographs that were included in the Corps' HEC-RAS models were directly used in our hydraulic analysis. These hydrology data sets were discussed in Chapter 7 of USACE (2013) report for the riverine hydraulic analysis. As examples, the 100-year flow hydrographs are shown in Figure 7 through Figure 11 for the modeled upstream boundaries of the nine creeks, respectively.

It is noted that the upstream channel capacities (reductions) were taken into account in USACE's (2013) hydraulic analysis for Permanente Creek and San Tomas Aquino. The reduction in flow on Permanente Creek is due to capacity limitations from Park Drive to Mountain View Road Downstream of Hale Creek. The reduction in capacity is documented in the SCVWD report, *Permanente Creek Watershed Planning Study, Project Background/Problem Definition Report, February 2004*. Flow leaves the channel in this area reducing the amount of flow downstream to 635 cfs at Villa Street, the SSFBSS study limits. On San Tomas Aquino a restriction is located at San Tomas Expressway limiting the flow to Hwy 101 to 7100 cfs. The restriction is documented in the SCVWD report, *San Tomas Creek, Planning Study, Route 237 to Highway 101, August 1995 and the San Tomas Aquino Creek*

³ USACE (2014). Tidal Flood Risk Analysis Summary Report, South San Francisco Bay Shoreline Study (SSFBS), June 18, 2014.

Levee Raising Project-Letter of Map Revision Request No. 00-009-071P, City of Santa Clara, Ca, Community No. 06035, January 24, 2000.

Table 1. Mean Higher High Water Level in the Bay

Year	MHHW (ft, NAVD 88)
2017 (Year 0)	+7.81
2067 (Year 50) with Low SLR Scenario	+8.15
2067 (Year 50) with Intermediate SLR Scenario	+8.65
2067 (Year 50) with High SLR Scenario	+10.23

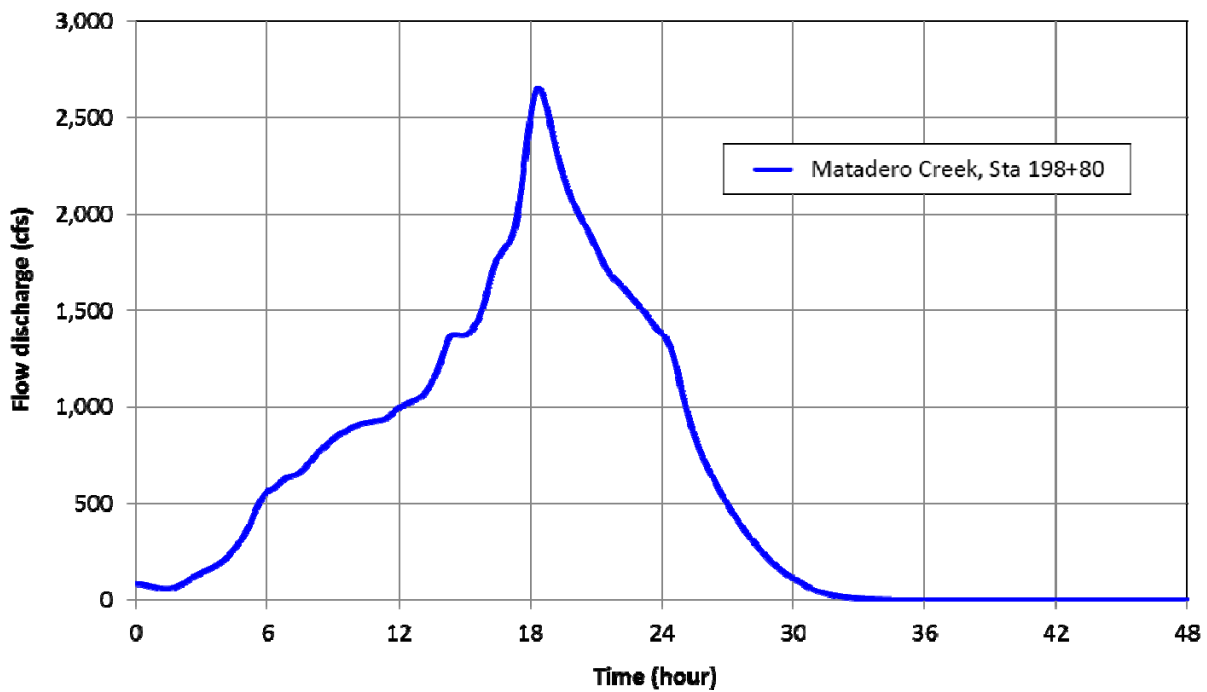


Figure 7. 100-Year Flow Hydrograph at Upstream Boundary for Matadero Creek

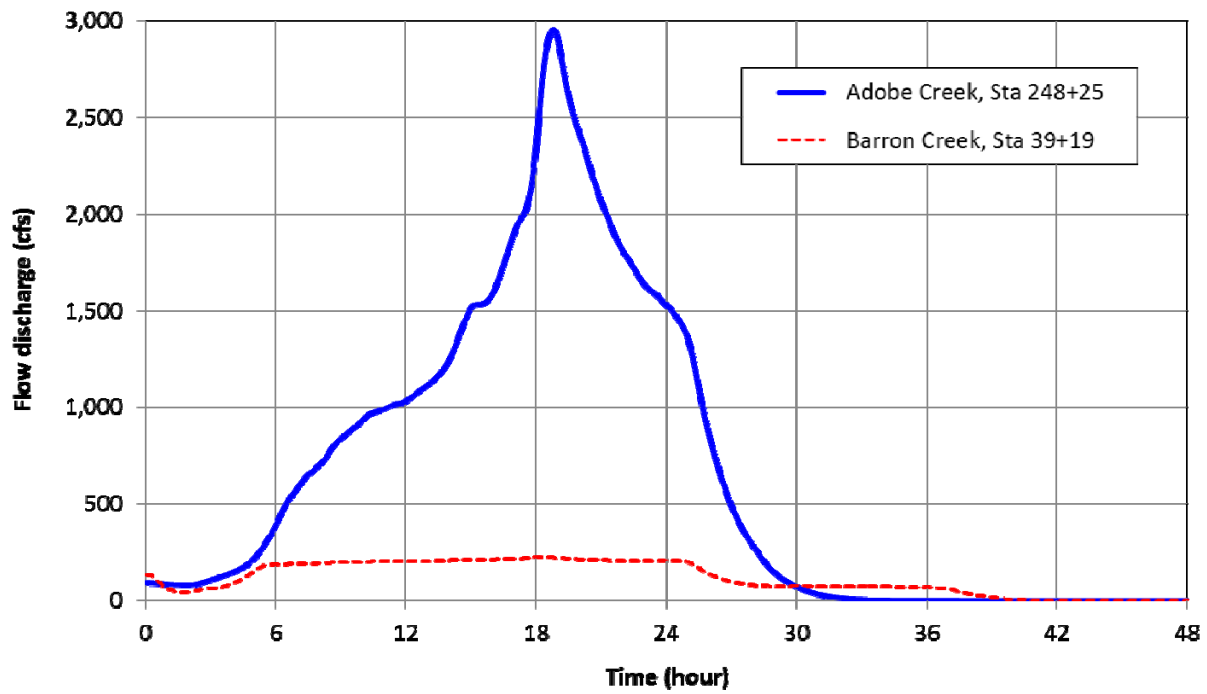


Figure 8. 100-Year Flow Hydrographs at Upstream Boundaries for Barron Creek and Adobe Creek

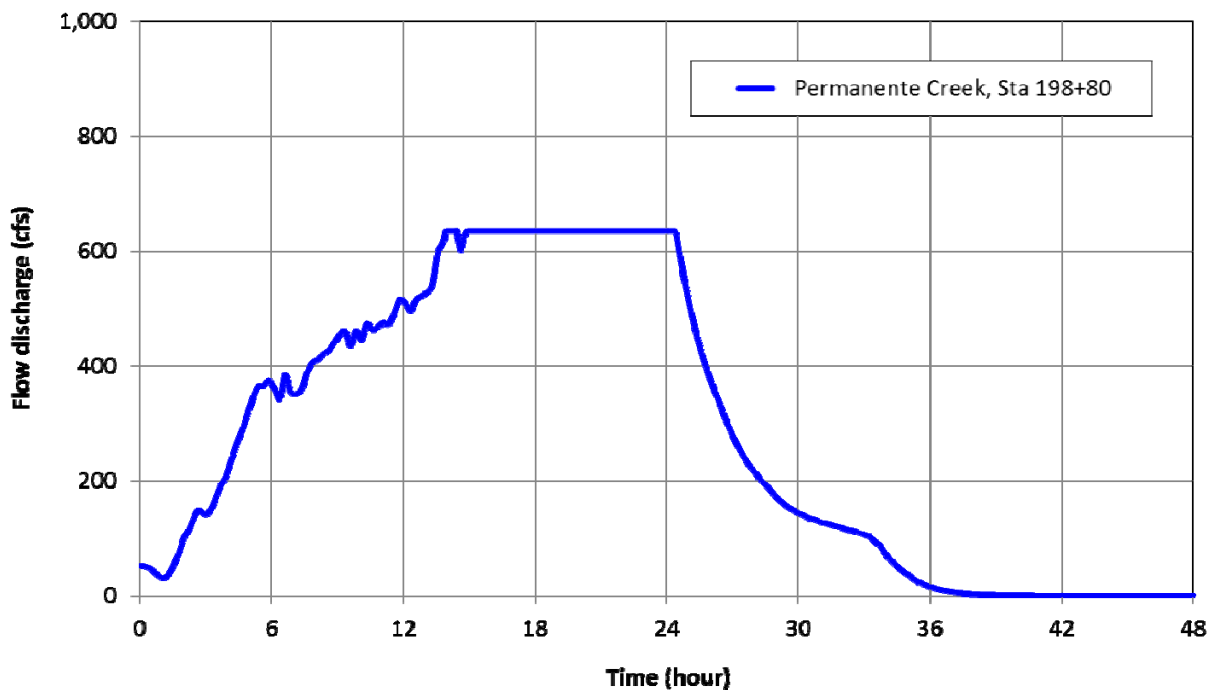


Figure 9. 100-Year Flow Hydrograph at Upstream Boundary for Permanente Creek

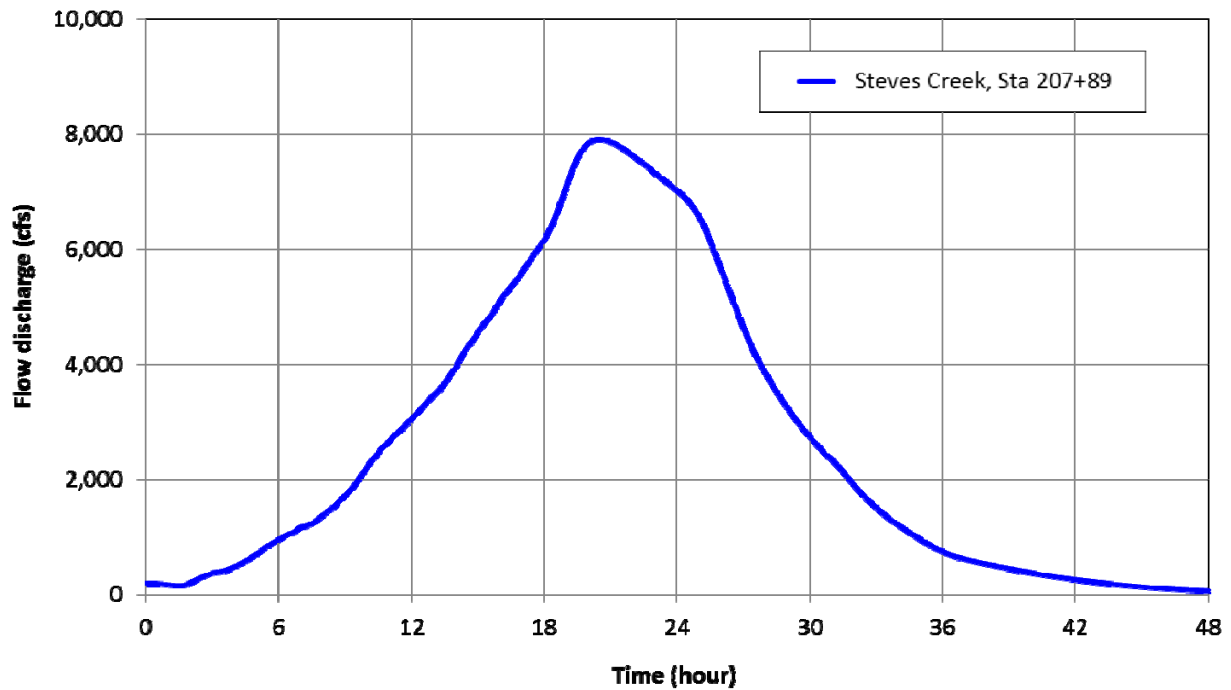


Figure 10. 100-Year Flow Hydrograph at Upstream Boundary for Stevens Creek

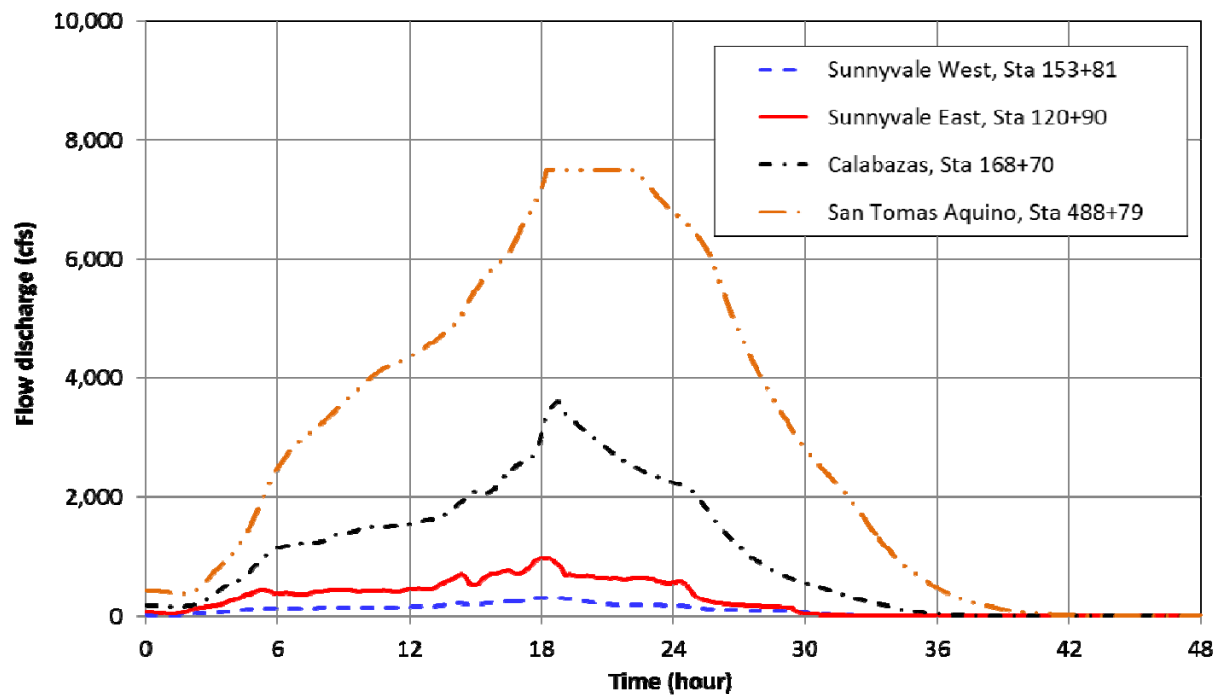


Figure 11. 100-Year Flow Hydrographs at Upstream Boundaries for Sunnyvale West Channel, Sunnyvale East Channel, Calabazas Creek, and San Tomas Aquino Creek

4.0 COMPUTED 100-YEAR WATER SURFACE ELEVATIONS

Four runs were conducted for each HEC-RAS model: one run is for the Year 0 condition, and three runs for the Year 50 condition with three SLR projections, respectively. The computed maximum water surface profile during the 100-year flow event was compared to the channel bank top elevation to determine if the channel meets the 100-year protection criteria. If the channel is protected by a levee or floodwall, the crest elevation of the levee or floodwall is defined as the bank top elevation. For incised channel, channel bank top is defined as the intersection of the channel side slope with the ground that is approximately flat. It is noted that the channel bank top elevations were determined based on the channel cross sections that were included in the Corps' HEC-RAS model, and thus the accuracy of the bank top elevations depends on the accuracy of these cross sections. The results for each creek are summarized as follows.

Matadero Creek

The computed 100-year water surface profiles for the Matadero Creek, compared to the levee/floodwall elevations, are shown in Figure 12 through Figure 15 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 2. It is noted that no free board is included in the analysis, and the required minimum channel bank top elevations are defined as the same as the computed 100-year water surface elevations. If the required channel bank elevations are higher than the existing bank elevations, they are marked in red color in Table 2. The channel flow capacity is summarized as follows.

- The 100-year water surface elevations exceed the levee/floodwall elevations in the reach between the Park Blvd. Bridge and the Lambert Avenue Bridge.
- The impact of the SLR on the channel water levels is limited to the lower reach of the channel. The 100-year water levels show no difference between the Year 0 condition and the Year 50 condition for the reach upstream of the Ross Way Bridge.

Barron Creek

The computed 100-year water surface profiles for the modeled reach of the Barron Creek, compared to the levee/floodwall elevations, are shown in Figure 16 through Figure 19 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 3. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. It is noted that only the lower reach of Barron Creek, which is from its confluence with Adobe Creek to approximately 900 feet upstream of the Louis Road Bridge, was included in the Corp's unsteady HEC-RAS model for this creek. As a result, our hydraulic analysis was also limited for this lower reach. The channel flow capacity is summarized as follows.

- The reach downstream of the Louis Road Bridge has the flow capacity for the 100-year flow event for both the Year 0 condition and the Year 50 condition with various SLR projects.
- The reach upstream of the Louis Road Bridge has the flow capacity for the Year 0 condition and for the Year 50 condition with the “low” and “intermediate” SLR scenarios. However, the 100-year water levels for the Year 50 condition with the “high” SLR projection will exceed the levee/flood wall elevations.

Adobe Creek

The computed 100-year water surface profiles for the Adobe Creek, compared to the levee/floodwall elevations, are shown in Figure 20 through Figure 23 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 4. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. The channel flow capacity is summarized as follows.

- Adobe Creek does not have the 100-year flow capacity in the reach approximately between the Louis Road Bridge and the Charleston Road Bridge, and in a short reach of incised channel upstream of an inline structure at Station 229+47 (upstream of the SPRR and Alma Street Bridge). This is true for both the Year 0 condition and the Year 50 condition with various SLR projections.
- The reach between the Meadow Drive Bridge and the Louis Road Bridge will not have the 100-year flow capacity for the Year 50 condition with the “high” SLR projection.

Permanente Creek

The computed 100-year water surface profiles for the Permanente Creek, compared to the levee/floodwall elevations, are shown in Figure 24 through Figure 27 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 5. Overall, Permanente Creek is able to provide 100-year flood protection except for some locations in the lower reach that passes through the salt ponds.

Stevens Creek

The computed 100-year water surface profiles for the Stevens Creek, compared to the levee/floodwall elevations, are shown in Figure 28 through Figure 31 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 6. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. The channel flow capacity is summarized as follows.

- Stevens Creek does not have the 100-year flow capacity in the reach that is approximately between the Hwy 101 Bridge and the Highway 85 Bridge.
- Stevens Creek does not have the 100-year flow capacity in the lower reach that passes through the salt ponds.
- SLR has negligible impact on the 100-year water levels for the reach included in the hydraulic analysis.

Sunnyvale West Channel

The computed 100-year water surface profiles for the Sunnyvale West Channel, compared to the levee/floodwall elevations, are shown in Figure 32 through Figure 35 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 7. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. The channel flow capacity is summarized as follows.

- Sunnyvale West Channel has the 100-year flow capacity for the reach that is upstream of the salt ponds.
- The lower reach of Sunnyvale West Channel that passes through the salt ponds does not have 100-year flow capacity at multiple locations. This is particularly true for the left bank, when facing downstream.

Sunnyvale East Channel

The computed 100-year water surface profiles for the Sunnyvale East Channel, compared to the levee/floodwall elevations, are shown in Figure 36 through Figure 39 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 8. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. Sunnyvale East Channel has the 100-year flow capacity for the floodwall/levee protected reach that is approximately upstream of Station 25+00. The downstream reach without floodwall/levee does not have the 100-year flow capacity.

Calabazas Creek

The computed 100-year water surface profiles for the Calabazas Creek, compared to the levee/floodwall elevations, are shown in Figure 40 through Figure 43 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 9. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. Calabazas Creek generally has the 100-

year flow capacity except for the right bank of the lower reach that is downstream of the Bay Trail crossing.

San Tomas Aquino Creek

The computed 100-year water surface profiles for the San Tomas Aquino Creek, compared to the levee/floodwall elevations, are shown in Figure 20 through Figure 23 for the Year 0 and the Year 50 conditions, respectively. The required minimum channel bank top elevations to provide the 100-year protection, compared to the existing channel bank top elevations, are listed in Table 10. If the required minimum channel bank top elevations are higher than the existing bank elevations, they are marked in red color in this table. San Tomas Aquino Creek has the 100-year flow capacity except for the lower reach downstream of the Bay Trail crossing.

**Table 2. Required Bank Top Elevations Providing the 100-Year Flood Protection
 (Matadero Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
198+80	22.36	36.39	35.17	34.54	34.54	34.54	34.54
197+80	22.36	36.39	35.17	34.44	34.44	34.44	34.44
192+00	21.27	34.24	34.19	34.22	34.22	34.22	34.22
191+56	Lambert Ave						
191+12	21.08	34.17	34.17	33.51	33.51	33.51	33.51
190+65	20.98	34.06	34.06	33.50	33.50	33.50	33.50
189+49	20.73	33.76	33.76	33.48	33.48	33.48	33.48
189+07	20.64	33.65	33.65	33.47	33.47	33.47	33.47
188+16	20.41	33.42	33.42	33.45	33.45	33.45	33.45
187+25	20.18	33.18	33.18	33.43	33.43	33.43	33.43
186+34	19.96	32.95	32.95	33.41	33.41	33.41	33.41
185+43	19.73	32.71	32.71	33.39	33.39	33.39	33.39
184+52	19.50	32.48	32.48	33.37	33.37	33.37	33.37
184+37	19.45	32.44	32.44	32.88	32.88	32.88	32.88
184+00	19.35	32.35	32.37	32.83	32.83	32.83	32.83
183+41	19.00	32.19	32.19	32.86	32.86	32.86	32.86
183+09	Park Blvd						
182+77	18.77	31.75	31.75	31.49	31.49	31.49	31.49
182+00	18.68	31.97	31.80	31.48	31.48	31.48	31.48
181+00	18.12	31.75	31.75	31.42	31.42	31.42	31.42
180+12	17.84	31.75	31.76	31.06	31.06	31.06	31.06
179+24	17.55	31.76	31.77	30.78	30.78	30.78	30.78
178+35	17.26	31.76	31.78	30.74	30.74	30.74	30.74
177+47	16.98	31.76	31.79	30.89	30.89	30.89	30.89
176+98	16.50	31.50	31.50	30.44	30.44	30.44	30.44
176+21	SPRR Box Culvert						

175+44	16.33	28.25	27.79	25.29	25.29	25.29	25.29
175+23	16.26	28.08	27.79	25.79	25.79	25.79	25.79
175+00	16.21	28.50	27.78	25.79	25.79	25.79	25.79
174+00	16.01	27.50	27.51	25.59	25.59	25.59	25.59
173+00	15.81	28.53	28.53	25.39	25.39	25.39	25.39
172+00	15.48	28.42	28.42	25.26	25.26	25.26	25.26
171+00	15.52	28.31	28.31	24.98	24.98	24.98	24.98
170+00	15.20	28.20	28.20	24.75	24.75	24.75	24.75
169+00	15.18	28.08	28.08	24.53	24.53	24.53	24.53
168+35	14.88	28.01	28.01	24.39	24.39	24.39	24.39
168+00	14.83	27.97	27.97	24.31	24.31	24.31	24.31
167+00	14.48	27.86	27.86	24.11	24.11	24.11	24.11
166+00	14.36	27.75	27.75	23.87	23.87	23.87	23.87
165+00	14.23	27.75	27.75	23.68	23.68	23.68	23.68
164+00	13.88	27.75	27.75	23.63	23.63	23.63	23.63
163+00	13.59	27.75	27.75	23.32	23.32	23.32	23.32
162+00	13.42	27.75	27.75	23.17	23.17	23.17	23.17
161+22	13.25	27.75	27.75	23.01	23.01	23.01	23.01
160+82	11.94	27.75	27.75	23.35	23.35	23.35	23.35
160+00	11.68	27.75	27.75	23.55	23.55	23.55	23.55
159+72	11.60	27.75	27.75	23.54	23.54	23.54	23.54
159+46	11.40	27.75	27.75	23.62	23.62	23.62	23.62
159+10	Waverly St						
158+74	11.40	27.75	27.75	22.12	22.12	22.12	22.12
158+55	11.36	25.68	25.68	21.74	21.74	21.74	21.74
158+00	11.23	25.48	25.48	21.74	21.74	21.74	21.74
157+00	11.15	25.12	25.12	21.59	21.59	21.59	21.59
156+00	10.93	24.82	24.82	21.60	21.60	21.60	21.60
155+00	10.66	24.78	24.78	21.60	21.60	21.60	21.60
154+00	10.39	24.78	24.78	21.62	21.62	21.62	21.62
153+75	10.35	24.78	24.78	21.55	21.55	21.55	21.55
153+58	10.63	22.43	22.43	21.48	21.48	21.48	21.48
153+34	Cowper St						

153+10	10.63	22.43	22.43	19.82	19.82	19.82	19.82
152+88	11.49	21.76	21.76	19.77	19.77	19.77	19.77
152+00	11.06	21.73	21.73	19.56	19.56	19.56	19.56
151+00	10.68	21.50	21.50	19.37	19.37	19.37	19.37
150+68	10.57	21.46	21.46	19.30	19.30	19.30	19.30
150+00	10.33	21.35	21.35	19.29	19.29	19.29	19.29
149+00	10.24	21.57	21.57	19.09	19.09	19.09	19.09
148+00	9.84	21.25	21.25	19.14	19.14	19.14	19.14
147+47	9.82	20.88	20.88	19.13	19.13	19.13	19.13
147+00	9.65	21.04	21.04	19.06	19.06	19.06	19.06
146+07	9.43	21.24	21.24	19.09	19.09	19.09	19.09
145+00	9.04	21.24	21.24	19.14	19.14	19.14	19.14
144+00	8.74	21.24	21.24	19.21	19.21	19.21	19.21
143+00	8.52	21.24	21.24	19.06	19.06	19.06	19.06
142+69	8.12	21.24	21.24	18.68	18.68	18.68	18.68
142+22	Middlefield Rd						
141+75	6.61	20.24	20.24	16.37	16.37	16.37	16.37
141+00	6.57	20.24	20.24	16.19	16.19	16.19	16.19
139+66	6.13	20.24	20.24	15.93	15.93	15.93	15.93
138+00	6.99	19.04	19.04	15.60	15.60	15.60	15.60
137+56	6.84	19.04	19.04	15.50	15.50	15.50	15.50
137+00	6.75	19.04	19.04	15.37	15.37	15.37	15.37
136+56	6.52	19.04	19.04	15.27	15.27	15.27	15.27
135+65	6.15	19.04	19.04	15.16	15.16	15.16	15.16
134+56	5.92	19.04	19.04	14.95	14.95	14.95	14.95
133+45	5.56	19.24	19.24	14.88	14.88	14.88	14.88
132+45	5.26	19.24	19.24	14.90	14.90	14.90	14.90
131+51	4.88	19.24	19.24	15.06	15.06	15.06	15.06
131+20	4.51	19.24	19.24	15.07	15.07	15.07	15.07
130+89	Ross Way						
130+58	4.51	19.24	19.24	13.02	13.04	13.06	13.25
130+31	4.57	16.55	16.55	12.95	12.97	12.99	13.19
130+00	4.41	16.55	16.55	12.87	12.88	12.91	13.12

129+00	4.07	16.54	16.54	12.62	12.64	12.66	12.90
128+00	3.70	16.54	16.54	12.38	12.40	12.43	12.73
127+00	3.41	16.53	16.53	12.15	12.17	12.21	12.66
126+31	3.22	16.53	16.53	12.01	12.04	12.08	12.66
126+00	3.06	16.53	16.53	11.99	12.03	12.09	12.79
125+00	2.85	16.52	16.52	11.81	11.86	11.93	12.75
124+00	2.60	16.52	16.52	11.63	11.68	11.77	12.70
123+00	2.16	16.51	16.51	11.64	11.72	11.85	12.83
122+00	1.77	16.51	16.51	11.71	11.80	11.94	12.89
121+00	1.61	16.50	16.50	11.58	11.68	11.83	12.84
120+23	1.50	16.50	16.50	11.66	11.75	11.90	12.87
119+83	1.21	16.50	16.50	12.41	12.48	12.59	13.34
119+52	Louis Rd						
119+21	1.21	14.28	14.28	11.48	11.54	11.63	12.30
119+00	0.42	14.28	14.28	11.07	11.14	11.26	12.07
118+50	0.37	14.24	14.24	11.03	11.10	11.22	12.04
118+00	0.56	14.24	14.24	11.38	11.45	11.55	12.31
117+15	1.27	14.21	14.21	10.87	10.95	11.08	11.96
116+21	0.86	14.18	14.18	11.12	11.19	11.31	12.11
115+00	0.52	14.14	14.14	11.47	11.54	11.64	12.37
114+00	0.65	14.11	14.11	11.17	11.24	11.36	12.16
113+18	0.56	14.08	14.08	11.16	11.23	11.35	12.15
112+00	0.41	14.04	14.04	11.09	11.17	11.29	12.11
111+00	0.29	14.02	14.02	11.08	11.16	11.28	12.10
110+00	0.05	14.02	14.02	11.04	11.11	11.24	12.07
109+00	-0.25	12.68	12.68	10.99	11.07	11.19	12.03
108+40	-0.38	12.75	12.75	11.59	11.66	11.76	12.50
108+14	Greer Rd						
107+87	-1.19	12.75	12.75	10.81	10.87	10.97	11.68
107+69	-0.95	12.75	12.75	10.79	10.85	10.96	11.67
107+00	0.41	12.75	12.75	10.64	10.72	10.83	11.59
106+00	-0.62	12.75	12.75	10.58	10.65	10.77	11.57
103+90	0.59	12.75	12.75	10.17	10.27	10.42	11.34

101+93	-0.21	12.75	12.75	9.73	9.85	10.03	11.09
99+83	0.18	12.75	12.75	9.22	9.40	9.65	10.92
97+83	-0.55	12.75	12.75	8.63	8.86	9.21	10.73
96+93	0.15	12.75	12.75	8.52	8.74	9.11	10.67
95+68	-1.20	12.30	11.70	8.63	8.84	9.19	10.72
95+50	Frontage Rd						
95+31	-1.20	12.30	11.70	8.61	8.82	9.17	10.65
95+18	-1.44	7.86	7.86	8.51	8.73	9.09	10.60
94+52	Hwy 101						
93+85	-1.44	7.86	7.86	8.40	8.64	9.01	10.40
93+72	-1.42	11.78	11.88	8.32	8.56	8.94	10.36
93+54	Frontage Rd						
93+36	-1.42	11.78	11.78	8.27	8.51	8.90	10.30
93+28	-1.04	8.46	10.16	8.19	8.44	8.84	10.26
93+22	Footbridge						
93+16	-1.04	8.46	10.16	8.18	8.44	8.84	10.26
92+16	-1.68	10.60	10.75	8.42	8.67	9.07	10.45
91+29	-1.01	9.86	10.75	8.54	8.77	9.15	10.48
89+46	-1.05	9.09	10.75	8.36	8.62	9.03	10.43
86+91	-2.30	8.87	10.75	8.24	8.52	8.94	10.38
84+41	-1.55	8.72	10.75	8.25	8.53	8.95	10.38

**Table 3. Required Bank Top Elevations Providing the 100-Year Flood Protection
 (Barron Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
39+19	5.85	10.95	10.95	9.94	10.01	10.20	11.35
38+70	5.85	10.95	10.95	9.89	9.97	10.16	11.33
38+21	5.75	11.75	11.75	9.73	9.81	10.04	11.28
37+27	5.62	11.62	11.62	9.58	9.69	9.94	11.25
36+34	5.48	11.48	11.48	9.45	9.56	9.85	11.22
35+40	5.35	11.35	11.35	9.30	9.44	9.76	11.19
34+88	5.20	10.95	10.95	9.24	9.38	9.71	11.18
34+36	5.05	10.55	10.55	9.17	9.32	9.67	11.19
33+74	4.85	10.25	10.75	9.10	9.27	9.63	11.16
33+05	4.70	10.10	10.60	9.03	9.21	9.59	11.14
32+36	4.55	9.95	10.45	8.96	9.15	9.55	11.13
31+75	4.35	9.95	10.55	8.94	9.13	9.54	11.13
31+74	4.25	12.20	10.55	8.95	9.14	9.55	11.13
31+05	4.15	12.10	10.45	8.91	9.10	9.52	11.12
30+36	4.05	12.00	10.35	8.86	9.06	9.49	11.11
29+74	3.85	11.95	10.05	8.83	9.03	9.47	11.10
28+92	3.60	11.80	9.90	8.79	9.00	9.45	11.09
28+09	3.35	11.65	9.75	8.76	8.98	9.43	11.09
28+08	3.25	11.65	11.55	8.77	8.98	9.43	11.08
28+00	3.15	11.65	11.55	8.77	8.99	9.43	11.08
27+86	3.05	11.55	11.55	8.79	9.01	9.45	11.09
27+54	Louis Rd						
27+22	2.85	12.25	12.25	8.63	8.84	9.27	10.86
26+80	2.55	12.25	12.25	8.60	8.82	9.25	10.85
25+84	2.32	12.25	12.25	8.58	8.80	9.24	10.85
24+88	2.08	12.25	12.25	8.56	8.78	9.23	10.84

23+92	1.85	12.25	12.25	8.55	8.76	9.21	10.84
23+65	1.75	12.25	12.25	8.55	8.76	9.21	10.84
23+35	1.65	12.25	12.55	8.55	8.77	9.22	10.84
23+05	1.55	12.25	12.55	8.55	8.76	9.21	10.83
22+67	1.45	12.25	12.55	8.55	8.77	9.22	10.84
22+30	1.35	12.25	12.55	8.57	8.78	9.23	10.85
22+15	1.25	12.25	12.25	8.55	8.77	9.22	10.84
22+00	1.15	12.25	12.25	8.54	8.76	9.21	10.84
21+42	0.75	12.25	12.25	8.54	8.76	9.21	10.84
20+42	0.45	12.25	12.25	8.53	8.75	9.20	10.83
19+42	0.15	12.25	12.25	8.52	8.74	9.20	10.83
18+69	0.00	12.25	12.25	8.52	8.74	9.19	10.83
17+95	-0.15	12.25	12.25	8.51	8.73	9.19	10.83
17+62	-0.25	12.25	12.25	8.51	8.73	9.19	10.82
17+52	-0.25	12.25	12.25	8.51	8.73	9.19	10.82
16+93	-0.35	12.25	12.25	8.51	8.73	9.19	10.82
16+10	-0.47	12.25	12.25	8.50	8.72	9.18	10.82
15+28	-0.60	12.25	12.25	8.49	8.72	9.18	10.82
14+45	-0.73	12.25	12.25	8.49	8.71	9.17	10.82
13+62	-0.85	12.25	12.25	8.49	8.71	9.17	10.81
13+00	-1.10	12.25	12.25	8.48	8.71	9.17	10.81
12+38	-1.35	12.25	12.25	8.48	8.71	9.17	10.81
11+70	-1.35	12.25	12.25	8.48	8.71	9.17	10.81
11+07	-1.05	12.25	12.25	8.47	8.70	9.16	10.81
10+43	-0.75	12.25	12.25	8.47	8.69	9.16	10.81
9+87	-0.85	12.25	12.25	8.48	8.71	9.17	10.82
9+53	-0.95	12.25	12.25	8.49	8.71	9.17	10.82
9+43	-0.95	12.25	12.25	8.49	8.71	9.17	10.82
9+29	-0.85	12.25	12.25	8.49	8.71	9.17	10.82
9+20	-0.85	12.25	12.25	8.49	8.71	9.17	10.82
9+08	-0.85	12.25	12.25	8.49	8.71	9.17	10.82
8+62	-0.95	12.25	12.25	8.48	8.71	9.17	10.82
8+04	-1.05	12.25	12.25	8.48	8.71	9.17	10.82

7+45	-1.15	12.25	12.25	8.48	8.71	9.17	10.82
6+80	-1.45	12.25	12.25	8.48	8.71	9.17	10.81
5+97	-1.75	12.25	12.25	8.48	8.71	9.17	10.81
5+43	-1.40	12.25	12.25	8.48	8.70	9.17	10.81
4+88	-1.05	12.25	12.25	8.48	8.70	9.16	10.81
4+17	-1.05	12.25	12.25	8.47	8.70	9.16	10.81
3+40	-0.65	12.25	12.25	8.47	8.70	9.16	10.81
2+88	-0.55	12.25	12.25	8.47	8.70	9.16	10.81
2+24	-0.40	12.25	12.25	8.46	8.69	9.16	10.81
1+60	-0.25	12.25	12.25	8.46	8.69	9.15	10.81
1+26	-0.55	12.15	12.15	8.46	8.69	9.15	10.81
1+03	-1.05	12.05	12.05	8.46	8.69	9.15	10.81
0+80	-1.25	11.85	11.85	8.45	8.68	9.15	10.80
0+35	-1.55	11.85	11.85	8.45	8.68	9.15	10.80

**Table 4. Required Bank Top Elevations Providing the 100-Year Flood Protection
 (Adobe Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
248+25	44.84	61.94	61.64	56.19	56.19	56.19	56.19
247+75	44.81	60.00	62.76	56.28	56.28	56.28	56.28
247+50	44.74	59.64	62.46	56.11	56.11	56.11	56.11
246+50	44.61	56.75	61.80	55.76	55.76	55.76	55.76
246+24	44.55	57.45	57.25	55.66	55.66	55.66	55.66
245+97	44.55	57.25	57.05	55.51	55.51	55.51	55.51
245+65	44.45	57.35	57.25	55.28	55.28	55.28	55.28
245+24	44.35	57.15	57.15	55.11	55.11	55.11	55.11
244+75	44.15	56.95	56.85	54.86	54.86	54.86	54.86
244+48	44.05	56.55	56.75	54.82	54.82	54.82	54.82
244+17	43.95	55.85	56.35	54.85	54.85	54.85	54.85
244+11	43.99	56.17	56.75	55.07	55.07	55.07	55.07
243+97	41.65	55.55	56.45	52.66	52.66	52.66	52.66
243+84	41.25	52.55	55.85	53.12	53.12	53.12	53.12
243+58	41.25	55.25	56.05	52.99	52.99	52.99	52.99
243+32	41.25	54.65	54.55	52.93	52.93	52.93	52.93
242+98	41.25	55.35	56.15	52.80	52.80	52.80	52.80
242+66	41.25	54.85	54.95	52.78	52.78	52.78	52.78
242+23	41.15	54.15	53.55	52.72	52.72	52.72	52.72
241+49	41.05	53.45	54.15	52.38	52.38	52.38	52.38
240+79	40.85	53.45	53.55	51.99	51.99	51.99	51.99
240+55	40.85	53.45	53.65	52.05	52.05	52.05	52.05
240+44	40.75	53.25	53.65	52.13	52.13	52.13	52.13
240+28	38.25	53.15	53.55	48.74	48.74	48.74	48.74
240+03	38.25	51.75	51.95	48.52	48.52	48.52	48.52
239+83	38.15	53.15	52.05	48.42	48.42	48.42	48.42

239+70	38.05	53.15	52.25	48.55	48.55	48.55	48.55
239+55	38.05	53.75	51.75	48.88	48.88	48.88	48.88
239+40	37.95	53.45	51.65	48.82	48.82	48.82	48.82
239+25	37.95	52.85	51.55	48.66	48.66	48.66	48.66
239+15	37.95	53.65	51.55	48.97	48.97	48.97	48.97
239+05	37.85	53.35	51.25	49.13	49.13	49.13	49.13
238+91	37.85	52.75	50.95	49.38	49.38	49.38	49.38
238+77	37.85	52.25	51.25	49.70	49.70	49.70	49.70
238+71	37.95	52.25	50.85	49.38	49.38	49.38	49.38
238+56	37.75	52.05	50.75	49.33	49.33	49.33	49.33
238+15	37.55	51.65	50.55	49.03	49.03	49.03	49.03
237+65	37.45	50.95	50.25	48.83	48.83	48.83	48.83
237+15	37.35	50.25	49.95	48.67	48.67	48.67	48.67
236+49	37.22	49.39	49.55	48.60	48.60	48.60	48.60
236+44	Foot Bridge						
236+39	37.20	49.26	49.49	48.46	48.46	48.46	48.46
236+15	37.15	48.95	49.35	48.45	48.45	48.45	48.45
235+64	36.95	48.15	49.05	48.37	48.37	48.37	48.37
235+43	34.35	47.15	47.45	47.11	47.11	47.11	47.11
234+90	34.35	47.35	47.55	47.01	47.01	47.01	47.01
234+30	34.25	47.55	47.35	46.85	46.85	46.85	46.85
233+50	34.05	47.15	47.25	46.84	46.84	46.84	46.84
232+34	33.85	45.85	46.95	46.60	46.60	46.60	46.60
231+49	33.85	45.85	46.45	46.51	46.51	46.51	46.51
230+73	33.55	44.85	46.45	46.43	46.43	46.43	46.43
230+13	33.55	43.75	45.55	46.49	46.49	46.49	46.49
229+70	33.05	43.75	45.15	46.44	46.44	46.44	46.44
229+67	33.05	43.75	45.15	46.41	46.41	46.41	46.41
229+47	29.65	43.15	43.15	45.13	45.13	45.13	45.13
229+27	29.57	45.32	45.32	45.09	45.09	45.09	45.09
229+00	29.31	45.21	45.21	45.02	45.02	45.02	45.02
228+61	29.30	45.05	45.05	44.87	44.87	44.87	44.87
228+60	29.30	45.55	45.55	44.87	44.87	44.87	44.87

228+00	28.88	45.28	45.28	44.71	44.71	44.71	44.71
227+00	28.49	44.88	44.88	44.39	44.39	44.39	44.39
226+41	28.25	44.65	44.65	44.21	44.21	44.21	44.21
226+40	28.24	45.14	45.14	44.20	44.20	44.20	44.20
226+00	28.08	44.99	44.99	44.08	44.08	44.08	44.08
225+41	27.85	44.75	44.75	43.90	43.90	43.90	43.90
225+40	27.86	45.26	45.26	43.89	43.89	43.89	43.89
225+00	27.70	45.10	45.10	43.77	43.77	43.77	43.77
224+12	27.35	44.75	44.75	43.49	43.49	43.49	43.49
224+11	27.32	45.22	45.22	43.49	43.49	43.49	43.49
224+00	27.28	45.18	45.18	43.46	43.46	43.46	43.46
223+00	26.88	44.78	44.78	43.16	43.16	43.16	43.16
222+93	26.85	44.75	44.75	43.14	43.14	43.14	43.14
222+92	26.89	45.29	45.29	43.14	43.14	43.14	43.14
222+00	26.52	44.92	44.92	42.88	42.88	42.88	42.88
221+82	26.45	44.85	44.85	42.82	42.82	42.82	42.82
221+58	26.51	44.75	44.75	42.75	42.75	42.75	42.75
221+57	SPRR and Alma Street						
219+80	25.80	40.13	40.13	39.83	39.83	39.83	39.83
219+77	25.67	40.17	40.17	39.71	39.71	39.71	39.71
219+72	25.65	40.15	40.15	39.68	39.68	39.68	39.68
219+63	25.55	40.05	40.05	39.61	39.61	39.61	39.61
218+98	25.35	39.85	39.85	39.25	39.25	39.25	39.25
217+97	24.95	39.45	39.45	38.69	38.69	38.69	38.69
216+96	24.55	39.05	39.05	38.08	38.08	38.08	38.08
215+95	24.15	38.65	38.65	37.45	37.45	37.45	37.45
214+94	23.75	38.25	38.25	36.75	36.75	36.75	36.75
213+93	23.29	37.79	37.79	35.97	35.97	35.97	35.97
212+92	22.89	37.39	37.39	35.03	35.03	35.03	35.03
212+31	22.65	37.15	37.15	34.35	34.35	34.35	34.35
212+29	22.67	36.67	36.67	34.34	34.34	34.34	34.34
211+91	22.52	36.52	36.52	33.85	33.85	33.85	33.85
210+97	22.15	36.15	36.15	32.62	32.62	32.62	32.62

210+76	22.05	35.55	35.55	32.32	32.32	32.32	32.31
210+55	21.95	35.45	35.45	32.68	32.69	32.69	32.69
209+90	21.53	35.03	35.03	32.30	32.30	32.30	32.30
209+56	21.35	34.85	34.85	32.11	32.11	32.11	32.11
209+55	21.35	35.25	35.25	32.10	32.10	32.10	32.10
208+89	20.95	34.85	34.85	31.68	31.68	31.68	31.68
208+34	20.64	31.35	31.35	31.41	31.41	31.41	31.41
208+29	Foot Bridge						
208+24	20.58	31.25	31.25	31.26	31.26	31.26	31.26
208+20	20.44	34.44	34.44	31.19	31.19	31.19	31.19
208+19	20.44	33.44	33.44	31.18	31.18	31.18	31.18
208+13	20.44	33.44	33.44	31.10	31.10	31.10	31.10
208+12	20.45	32.65	32.65	31.08	31.08	31.08	31.08
207+89	20.30	32.50	32.50	30.94	30.94	30.94	30.94
206+88	19.66	31.86	31.86	30.30	30.30	30.30	30.30
205+87	19.02	31.23	31.23	29.65	29.65	29.65	29.65
204+86	18.39	30.59	30.59	29.00	29.00	29.00	29.00
203+85	17.75	29.95	29.95	28.34	28.34	28.34	28.35
202+84	17.11	29.31	29.31	27.69	27.69	27.69	27.69
202+83	17.05	28.85	28.85	27.68	27.68	27.68	27.69
202+26	16.58	28.58	28.58	27.22	27.22	27.22	27.23
202+09	16.65	28.05	28.05	27.18	27.18	27.18	27.19
201+83	16.49	27.89	27.89	27.00	27.00	27.00	27.01
200+82	15.85	27.25	27.25	26.30	26.30	26.30	26.32
199+81	15.21	26.61	26.61	25.57	25.57	25.57	25.60
198+80	14.57	25.97	25.97	24.80	24.80	24.80	24.84
197+79	13.93	25.33	25.33	23.95	23.95	23.96	24.02
197+70	13.87	25.27	25.27	23.87	23.87	23.88	23.94
197+61	13.81	25.21	25.21	23.79	23.79	23.80	23.86
197+51	13.74	25.14	25.14	23.72	23.72	23.73	23.80
197+42	13.68	25.08	25.08	23.64	23.64	23.65	23.72
197+33	13.62	25.02	25.02	23.55	23.56	23.57	23.64
197+24	13.56	24.96	24.96	23.47	23.47	23.49	23.56

197+15	13.50	24.90	24.90	23.38	23.39	23.41	23.48
197+06	13.44	24.84	24.84	23.30	23.30	23.32	23.40
196+96	13.37	24.77	24.77	23.23	23.23	23.25	23.33
196+87	13.31	24.71	24.71	23.14	23.14	23.16	23.25
196+78	13.25	24.65	24.65	23.05	23.06	23.08	23.16
196+73	13.22	24.55	24.55	23.05	23.05	23.08	23.17
196+69	13.18	24.45	24.45	23.05	23.06	23.08	23.17
196+64	13.15	24.35	24.35	23.06	23.07	23.09	23.18
196+59	13.11	24.25	24.25	23.78	23.78	23.81	23.91
196+54	13.08	24.14	24.14	24.30	24.31	24.33	24.41
196+49	13.04	24.04	24.04	24.65	24.65	24.67	24.75
196+45	12.97	23.97	23.97	24.85	24.86	24.87	24.95
196+41	12.90	23.90	23.90	25.02	25.02	25.04	25.11
196+37	12.82	23.82	23.82	25.15	25.15	25.17	25.24
196+33	12.75	23.75	23.75	25.26	25.26	25.28	25.35
196+29	12.68	23.68	23.68	25.26	25.27	25.28	25.35
196+24	12.62	23.62	23.62	25.26	25.27	25.28	25.35
196+20	12.55	23.55	23.55	25.27	25.27	25.28	25.35
195+68	Charleston Rd						
195+03	12.25	22.25	22.25	23.30	23.30	23.32	23.38
194+99	12.25	22.25	22.25	23.29	23.29	23.31	23.37
194+95	12.25	22.25	22.25	23.28	23.28	23.30	23.36
194+90	12.25	22.25	22.25	23.27	23.27	23.29	23.34
194+86	12.25	22.25	22.25	23.25	23.26	23.28	23.33
194+82	12.25	22.25	22.25	23.24	23.25	23.27	23.32
194+74	12.21	22.21	22.21	23.15	23.17	23.20	23.34
194+66	12.17	22.17	22.17	23.03	23.04	23.05	23.11
194+59	12.13	22.13	22.13	22.96	22.96	22.98	23.03
194+51	12.09	22.09	22.09	22.89	22.90	22.91	22.97
194+43	12.05	22.05	22.05	22.85	22.85	22.87	22.92
194+36	12.05	22.05	22.05	22.79	22.80	22.82	22.87
194+10	11.95	21.95	21.95	22.77	22.78	22.80	22.85
192+85	11.65	21.55	21.55	22.49	22.50	22.51	22.58

191+99	11.38	21.35	21.35	22.27	22.27	22.29	22.36
191+14	11.12	21.15	21.15	22.04	22.05	22.07	22.14
190+28	10.85	20.95	20.95	21.81	21.82	21.84	21.92
189+29	10.53	20.62	20.62	21.58	21.59	21.61	21.70
188+30	10.22	20.28	20.28	21.35	21.36	21.39	21.48
187+31	9.90	19.95	19.95	21.13	21.15	21.17	21.27
186+31	9.58	19.62	19.62	20.92	20.94	20.96	21.07
185+32	9.27	19.28	19.28	20.72	20.73	20.76	20.87
184+33	8.95	18.95	18.95	20.52	20.54	20.57	20.69
183+36	8.65	18.65	18.65	20.34	20.36	20.39	20.51
182+39	8.35	18.35	18.35	20.17	20.19	20.22	20.35
182+33	8.35	18.35	18.35	20.16	20.18	20.21	20.34
181+94	8.25	18.25	18.25	20.12	20.14	20.17	20.31
181+85	8.15	18.25	18.25	20.01	20.03	20.07	20.20
181+55	8.05	18.15	18.15	19.99	20.00	20.04	20.18
181+40	8.05	18.15	18.15	19.94	19.96	20.00	20.14
181+04	7.95	18.15	18.15	19.80	19.81	19.85	20.00
180+87	7.85	18.55	18.55	19.57	19.59	19.63	19.78
180+43	Middlefield Rd						
179+99	7.55	16.55	16.55	18.11	18.12	18.16	18.31
179+85	7.55	16.55	16.55	18.05	18.07	18.11	18.26
179+52	7.45	16.45	16.45	17.98	18.00	18.04	18.20
178+83	7.25	16.28	16.28	17.52	17.54	17.59	18.44
178+14	7.05	16.10	16.10	17.69	17.71	17.76	18.02
177+44	6.85	15.93	15.93	17.38	17.41	17.46	17.75
176+75	6.65	15.75	15.75	17.40	17.43	17.48	17.75
175+99	6.40	15.63	15.63	17.23	17.26	17.32	17.60
175+23	6.15	15.50	15.50	17.07	17.09	17.16	17.46
174+47	5.90	15.38	15.38	16.90	16.93	17.00	17.31
173+71	5.65	15.25	15.25	16.74	16.78	16.84	17.17
172+87	5.40	15.10	15.08	16.56	16.60	16.67	17.02
172+02	5.15	14.95	14.90	16.39	16.42	16.50	16.86
171+18	4.90	14.80	14.73	16.21	16.25	16.33	16.72

170+33	4.65	14.65	14.55	16.05	16.09	16.17	16.57
170+01	4.55	14.55	14.45	15.98	16.03	16.11	16.52
170+00	4.53	14.55	14.45	15.99	16.03	16.11	16.52
169+33	4.32	14.43	14.35	15.86	15.91	15.99	16.41
168+66	4.11	14.31	14.25	15.74	15.79	15.88	16.31
168+00	3.90	14.19	14.15	15.62	15.67	15.76	16.21
167+33	3.69	14.07	14.05	15.51	15.55	15.65	16.11
166+66	3.48	13.95	13.95	15.39	15.44	15.54	16.02
165+97	3.26	13.75	13.75	15.28	15.33	15.44	15.92
165+28	3.05	13.55	13.55	15.17	15.22	15.33	15.83
164+59	2.83	13.35	13.35	15.06	15.11	15.23	15.74
164+12	2.69	12.95	12.95	14.98	15.04	15.15	15.67
163+92	2.63	12.85	12.85	14.95	15.01	15.13	15.65
163+59	Louis Rd						
163+22	2.48	12.75	12.75	13.14	13.21	13.37	14.05
163+04	2.44	13.02	13.02	13.09	13.17	13.33	14.02
161+00	2.07	12.66	12.66	12.65	12.74	12.92	13.69
160+00	1.89	12.68	12.68	12.42	12.52	12.72	13.54
159+00	1.71	12.71	12.71	12.20	12.30	12.52	13.38
158+37	1.66	12.66	12.66	12.03	12.14	12.37	13.27
157+91	1.63	13.13	13.13	11.91	12.03	12.27	13.69
157+45	1.59	13.59	13.59	12.13	12.24	12.47	13.91
156+50	1.51	13.51	13.51	12.38	12.48	12.71	13.88
156+10	1.47	13.47	13.47	12.35	12.45	12.68	13.78
155+70	1.44	13.44	13.44	12.37	12.47	12.70	13.64
155+30	1.33	13.41	13.41	12.39	12.50	12.72	13.66
153+00	1.23	13.23	13.23	12.39	12.50	12.72	13.66
152+00	1.15	13.15	13.15	12.31	12.42	12.65	13.60
151+00	1.07	13.07	13.07	12.23	12.35	12.58	13.55
150+00	0.99	12.99	12.99	12.16	12.27	12.51	13.50
149+00	0.91	12.91	12.91	12.08	12.20	12.44	13.44
148+00	0.83	12.83	12.83	12.00	12.12	12.37	13.39
147+00	0.75	12.75	12.75	11.92	12.05	12.31	13.34

146+00	0.67	12.67	12.67	11.85	11.98	12.24	13.29
145+00	0.59	12.59	12.59	11.77	11.90	12.17	13.24
144+00	0.51	12.51	12.51	11.69	11.83	12.10	13.19
143+00	0.43	12.43	12.43	11.62	11.75	12.04	13.14
142+50	0.39	12.39	12.39	11.60	11.74	12.03	13.13
142+00	0.36	12.35	12.35	11.40	11.54	11.84	12.98
141+99	0.36	12.35	12.35	11.40	11.54	11.84	12.98
141+69	Meadow Dr						
141+39	0.26	12.35	12.35	9.52	9.65	9.94	11.20
141+38	0.26	12.35	12.35	9.52	9.65	9.94	11.20
141+13	0.25	12.25	12.25	9.60	9.73	10.03	11.30
140+35	0.12	12.20	12.20	9.49	9.63	9.94	11.25
139+57	0.00	12.15	12.15	9.38	9.53	9.86	11.20
138+78	-0.12	12.10	12.10	9.27	9.43	9.77	11.15
138+00	-0.25	12.05	12.05	9.17	9.34	9.69	11.11
137+00	-0.40	12.05	12.05	9.04	9.22	9.59	11.05
136+00	-0.55	12.05	12.05	8.91	9.10	9.49	11.00
135+50	-0.65	11.95	11.95	8.84	9.04	9.44	10.97
135+05	-0.75	11.95	11.95	8.80	9.00	9.41	10.95
134+60	-0.75	11.95	11.95	8.71	8.93	9.36	10.96
134+20	-0.85	11.95	11.95	9.02	9.21	9.60	11.09
133+50	-0.95	11.85	11.85	8.91	9.10	9.52	11.05
132+90	-1.05	11.75	11.75	8.85	9.05	9.47	11.01
132+55	-1.10	11.80	11.75	8.45	8.68	9.15	10.80
132+20	-1.15	13.75	13.75	8.45	8.68	9.15	10.80
132+10	-1.15	13.75	13.75	8.45	8.68	9.14	10.80
131+25	Hwy 101						
129+75	-1.25	13.75	13.75	8.32	8.57	8.93	10.28
129+68	-1.55	12.15	12.75	8.33	8.57	8.93	10.29
129+61	Pedestrian Bridge						
129+53	-1.52	11.90	12.39	8.31	8.55	8.91	10.26
129+19	-1.97	12.35	9.87	7.82	8.16	8.66	10.23
128+77	-2.52		12.31	7.80	8.14	8.65	10.23

127+70	-2.76		11.04	7.81	8.15	8.65	10.23
126+68	-3.00		11.50	7.80	8.14	8.65	10.23
125+65	-4.10		12.17	7.85	8.18	8.67	10.24

**Table 5. Required Bank Top Elevations Providing the 100-Year Flood Protection
 (Permanente Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
197+99	53.77	63.81	63.81	60.12	60.12	60.12	60.12
197+92	53.77	63.81	63.81	60.12	60.12	60.12	60.12
197+85	53.70	63.80	63.80	59.76	59.76	59.76	59.76
197+78	53.64	63.86	63.78	59.92	59.92	59.92	59.92
197+53	53.35	63.68	63.53	60.02	60.02	60.02	60.02
197+28	53.05	63.48	63.29	60.09	60.09	60.09	60.09
197+23	53.28	63.29	63.22	60.06	60.06	60.06	60.06
197+08	52.95	62.96	63.12	58.86	58.86	58.86	58.86
196+53	52.31	62.35	62.48	58.91	58.91	58.91	58.91
195+98	51.66	61.73	61.83	58.97	58.97	58.97	58.97
195+43	51.02	61.12	61.19	59.00	59.00	59.00	59.00
194+83	50.60	61.25	61.30	58.95	58.95	58.95	58.95
194+23	50.19	61.37	61.42	58.90	58.90	58.90	58.90
193+62	49.77	61.50	61.53	58.86	58.86	58.86	58.86
192+31	49.38	61.52	61.52	58.75	58.75	58.75	58.75
192+18	49.07	61.51	61.71	58.52	58.52	58.52	58.52
192+04	SPRR Culvert						
191+85	48.89	59.38	59.40	57.63	57.63	57.63	57.63
191+81	48.89	59.38	59.40	57.62	57.62	57.62	57.62
191+76	48.89	59.38	59.40	57.24	57.24	57.24	57.24
191+39	47.57	58.72	58.58	57.72	57.72	57.72	57.72
190+90	Central Expressway						
190+21	47.45	58.65	58.80	56.97	56.97	56.97	56.97
190+02	47.40	58.00	58.07	57.02	57.02	57.02	57.02
189+83	47.35	57.58	57.44	57.06	57.06	57.06	57.06
189+65	47.30	57.16	56.96	55.88	55.88	55.88	55.88

189+46	47.25	56.73	56.48	55.96	55.96	55.96	55.96
189+27	47.20	56.32	56.00	56.04	56.04	56.04	56.04
189+26	47.20	56.32	56.27	56.03	56.03	56.03	56.03
189+19	Hetch						
189+09	47.17	56.27	56.27	54.56	54.56	54.56	54.56
189+08	47.17	55.83	55.84	54.55	54.55	54.55	54.55
188+93	46.95	55.45	55.48	54.69	54.69	54.69	54.69
188+77	46.99	54.86	54.86	54.61	54.61	54.61	54.61
188+76	45.14	52.84	52.84	49.63	49.64	49.64	49.64
186+96	42.88	52.00	52.00	47.96	47.96	47.96	47.96
184+99	41.01	51.15	51.64	46.56	46.56	46.57	46.56
183+02	38.91	49.80	50.33	45.99	45.99	46.00	45.99
182+65	38.61	49.55	49.72	45.99	45.99	45.99	45.99
182+63	38.61	49.55	49.72	45.98	45.98	45.98	45.98
182+30	Hackett Ave						
181+97	38.16	49.76	49.49	43.74	43.74	43.74	43.74
181+06	37.79	48.65	48.62	43.24	43.24	43.24	43.24
180+24	37.34	46.56	47.51	42.68	42.68	42.68	42.68
177+78	35.24	44.72	45.74	41.32	41.32	41.32	41.32
176+37	33.95	43.90	43.63	41.31	41.31	41.31	41.31
176+04	Montecito Ave						
175+71	33.41	42.82	43.01	38.93	38.93	38.93	38.93
174+99	33.04	43.77	43.41	38.41	38.41	38.41	38.41
173+18	31.80	41.55	41.48	37.03	37.03	37.03	37.03
170+82	29.74	40.10	40.65	35.51	35.50	35.49	35.51
168+59	27.60	39.06	39.53	35.35	35.33	35.26	35.35
168+23	27.63	37.70	37.94	35.15	35.13	35.01	35.12
168+20	27.63	37.73	37.73	35.14	35.12	35.00	35.12
167+94	San Luis Ave						
167+58	27.37	38.69	38.49	33.94	33.94	33.94	33.94
167+38	26.99	38.88	37.33	34.15	34.15	34.15	34.15
166+62	26.66	38.34	37.21	34.11	34.11	34.11	34.11
165+31	26.52	37.07	36.89	33.71	33.71	33.71	33.71

164+00	25.77	35.98	36.02	33.37	33.37	33.37	33.37
163+14	25.61	35.34	35.09	33.26	33.26	33.26	33.26
162+27	25.46	34.70	34.54	33.07	33.07	33.07	33.07
161+41	25.30	33.79	34.03	32.89	32.89	32.89	32.89
160+26	24.60	33.92	34.14	32.56	32.56	32.56	32.56
160+06	24.85	33.98	35.14	32.27	32.27	32.27	32.27
159+74	San Ramone Ave						
159+41	24.34	34.00	34.12	30.26	30.26	30.26	30.21
159+36	24.27	33.96	34.08	30.21	30.21	30.23	30.14
158+19	22.63	33.69	33.32	29.78	29.79	29.77	29.76
157+62	21.90	32.62	33.16	29.83	29.83	29.82	29.81
157+05	21.17	32.00	33.00	29.83	29.83	29.83	29.82
156+46	Middlefield Rd						
156+03	20.53	31.00	31.00	25.87	25.88	25.85	25.89
155+47	19.73	29.93	33.92	25.53	25.53	25.50	25.55
153+86	18.73	30.28	32.59	25.03	25.03	24.99	25.05
152+26	18.10	29.07	31.11	24.22	24.20	24.16	24.24
150+58	17.42	28.58	30.12	23.25	23.24	23.19	23.27
149+57	16.40	27.59	29.26	23.52	23.50	23.44	23.54
147+96	15.49	26.90	28.44	23.25	23.25	23.20	23.25
147+60	15.06	26.81	25.85	23.04	23.04	22.99	23.04
147+27	Rock St						
146+98	14.96	26.84	27.43	21.92	21.92	21.89	21.93
146+55	15.09	26.87	27.36	22.18	22.19	22.16	22.21
146+06	14.80	26.44	27.30	23.04	23.05	23.01	23.07
144+06	13.85	25.66	26.48	22.19	22.19	22.16	22.21
141+70	12.76	24.15	24.54	22.02	22.02	21.98	22.05
140+65	12.57	24.00	23.63	21.78	21.77	21.72	21.80
140+06	Old Middlefield Way						
139+66	12.34	24.00	23.67	19.40	19.40	19.39	19.42
139+40	12.50	22.74	24.11	19.84	19.84	19.83	19.86
137+76	11.91	21.72	23.56	19.46	19.46	19.44	19.48
136+28	11.58	20.99	22.70	18.91	18.92	18.90	18.93

134+74	10.93	20.01	21.19	18.16	18.16	18.15	18.17
132+84	9.84	19.55	20.47	18.47	18.48	18.47	18.49
131+86	9.19	22.00	21.00	17.93	17.94	17.93	17.95
131+46	8.01	22.00	21.00	17.57	17.58	17.56	17.60
131+20	Hwy 101						
129+36	8.40	21.39	20.93	14.47	14.48	14.48	14.46
129+23	8.86	21.26	21.51	14.42	14.42	14.42	14.48
129+07	8.86	20.90	20.11	14.83	14.84	14.84	14.89
128+90	8.86	20.74	18.63	15.11	15.11	15.11	15.15
128+22	8.53	19.95	19.13	14.93	14.93	14.93	14.98
127+46	8.53	19.64	19.19	14.81	14.82	14.82	14.87
127+20	8.53	19.64	19.40	15.11	15.11	15.11	15.16
125+95	8.23	19.46	19.10	15.21	15.21	15.22	15.26
124+97	8.20	19.10	19.88	15.08	15.08	15.08	15.13
123+98	8.20	18.98	19.37	15.02	15.02	15.03	15.08
123+00	7.87	18.84	17.47	14.98	14.98	14.98	15.03
122+02	7.87	18.81	17.33	14.88	14.88	14.89	14.94
121+03	7.87	18.46	16.84	14.76	14.76	14.76	14.82
120+05	7.91	18.28	16.46	14.67	14.67	14.68	14.74
119+29	7.91	18.00	16.39	14.67	14.68	14.68	14.74
118+38	7.91	18.14	16.67	14.57	14.58	14.58	14.65
117+10	7.58	18.46	18.35	14.56	14.56	14.57	14.63
115+92	7.58	18.32	18.04	14.48	14.49	14.49	14.56
115+62	7.15	19.45	19.52	14.26	14.27	14.27	14.34
115+13	Charleston Rd						
114+70	6.86	19.95	19.88	13.87	13.87	13.88	13.96
114+47	7.22	19.19	19.07	14.10	14.10	14.11	14.19
113+16	6.95	16.32	19.96	13.99	14.00	14.00	14.09
112+18	6.95	15.82	20.08	13.82	13.82	13.83	13.92
111+19	6.63	15.51	18.77	13.66	13.67	13.68	13.78
110+21	6.23	15.46	20.76	13.60	13.60	13.61	13.72
109+22	5.91	15.37	20.33	13.52	13.53	13.54	13.65
108+24	5.68	14.95	19.64	13.41	13.41	13.42	13.54

107+26	5.68	16.09	21.28	13.36	13.37	13.38	13.50
107+05	5.35	18.53	20.74	13.39	13.39	13.41	13.53
107+00	5.35	18.53	20.74	13.38	13.39	13.40	13.52
106+90	5.12	20.21	20.44	13.40	13.41	13.42	13.54
106+37	Amphitheater Pkwy						
105+98	5.64	19.59	19.59	13.31	13.31	13.33	13.45
105+83	5.56	18.88	19.64	13.32	13.32	13.34	13.46
105+29	5.28	16.31	19.68	13.35	13.35	13.37	13.49
104+30	5.05	16.21	15.58	13.37	13.37	13.39	13.51
103+32	4.92	16.07	15.44	13.36	13.37	13.38	13.51
102+34	4.79	15.77	20.50	13.36	13.37	13.38	13.50
101+35	4.56	20.34	21.46	13.35	13.35	13.37	13.49
100+37	4.59	24.08	19.29	13.29	13.30	13.31	13.44
99+38	4.26	22.64	20.28	13.10	13.11	13.13	13.26
98+40	4.26	19.03	21.88	13.01	13.02	13.04	13.18
97+42	4.26	14.14	23.95	12.91	12.91	12.93	13.08
96+43	3.68	15.11	24.90	12.80	12.80	12.82	12.98
95+45	4.10	17.91	23.33	12.66	12.67	12.69	12.85
94+46	4.10	18.50	21.78	12.56	12.57	12.59	12.76
93+48	4.10	19.40	17.59	12.43	12.44	12.46	12.64
92+50	4.10	18.57	24.97	12.46	12.47	12.50	12.68
91+51	4.10	21.49	26.67	12.45	12.46	12.49	12.67
90+53	4.10	21.29	24.70	12.37	12.38	12.41	12.60
89+54	4.03	19.78	24.90	12.23	12.25	12.27	12.48
88+56	3.94	14.81	19.03	12.17	12.18	12.21	12.42
88+40	3.30	15.39	17.70	12.14	12.16	12.18	12.40
88+26	2.79	15.81	16.63	12.12	12.13	12.16	12.38
88+07	New vehicle bridge						
87+94	3.22	15.16	13.43	12.10	12.11	12.14	12.36
87+81	3.48	15.09	14.84	12.08	12.09	12.12	12.35
87+58	3.94	14.87	17.60	12.06	12.07	12.10	12.33
86+59	3.97	23.52	16.47	12.00	12.02	12.05	12.28
85+61	3.94	21.03	17.19	11.92	11.93	11.96	12.21

84+62	3.77	19.09	16.93	11.84	11.85	11.89	12.15
83+64	3.77	19.06	17.39	11.75	11.76	11.80	12.07
82+66	3.71	18.64	14.93	11.68	11.70	11.74	12.02
81+90	2.20	15.52	14.60	11.63	11.64	11.68	11.97
81+80	Golf Course Footbridge						
81+67	2.33	15.65	14.50	11.61	11.63	11.66	11.96
81+61	3.71	18.41	16.31	11.59	11.61	11.65	11.94
80+69	3.71	16.37	16.11	11.51	11.52	11.56	11.88
79+70	3.71	16.11	14.90	11.36	11.38	11.43	11.77
78+72	3.71	18.21	14.70	11.30	11.32	11.36	11.72
77+74	3.71	12.99	14.96	11.28	11.31	11.35	11.72
76+82	3.12	14.34	14.73	11.19	11.21	11.26	11.65
76+75	3.61	13.81	14.67	11.18	11.20	11.25	11.64
76+65	Rengstorff House Footbridge						
76+56	2.99	14.57	14.83	11.21	11.23	11.28	11.66
76+47	3.07	14.48	13.67	11.20	11.22	11.27	11.65
76+23	3.31	14.24	13.12	11.13	11.15	11.20	11.59
76+10	Shoreline Blvd						
75+77	2.39	15.62	15.78	11.08	11.11	11.16	11.55
75+70	3.61	15.88	16.24	11.12	11.15	11.20	11.59
75+53	3.55	16.52	16.68	11.12	11.14	11.19	11.59
74+78	3.28	19.19	18.47	10.95	10.98	11.04	11.46
73+80	3.28	15.66	21.05	10.80	10.83	10.89	11.35
73+73	2.53	13.81	14.04	10.79	10.82	10.88	11.35
73+64	Boatpond Footbridge						
73+50	2.72	13.81	14.04	10.77	10.80	10.86	11.33
72+82	3.22	15.30	12.77	10.70	10.73	10.79	11.29
70+85	2.30	20.67	11.52	10.64	10.67	10.74	11.26
66+91	2.33	21.06	11.10	10.49	10.53	10.61	11.17
61+01	1.94	10.63	12.63	10.30	10.34	10.43	11.05
59+04	1.87	11.19	12.91	10.24	10.29	10.37	11.03
57+07	1.94	11.33	12.81	10.18	10.23	10.32	10.99
55+10	1.84	10.32	12.84	10.11	10.16	10.26	10.96

53+14	1.87	10.63	13.05	10.04	10.09	10.20	10.92
51+17	1.87	10.42	12.88	9.98	10.03	10.14	10.89
49+20	1.87	11.26	12.88	9.92	9.98	10.10	10.86
47+23	1.87	11.30	12.49	9.87	9.93	10.05	10.84
45+26	1.77	11.82	12.63	9.81	9.87	10.00	10.81
43+30	1.77	11.72	12.74	9.74	9.81	9.94	10.78
41+33	1.64	11.44	12.67	9.67	9.75	9.88	10.75
39+36	1.67	10.98	13.09	9.59	9.67	9.82	10.71
37+39	1.67	10.95	12.77	9.50	9.58	9.74	10.68
35+42	1.64	10.32	12.88	9.39	9.49	9.66	10.64
33+46	1.35	10.10	12.81	9.29	9.39	9.58	10.60
31+49	1.28	9.51	12.77	9.19	9.30	9.51	10.57
29+52	1.31	10.04	12.91	9.09	9.21	9.44	10.54
27+55	1.28	10.14	12.63	8.98	9.11	9.35	10.50
25+58	1.35	9.58	12.25	8.87	9.01	9.28	10.47
23+62	1.31	9.19	12.77	8.78	8.94	9.22	10.44
21+65	1.31	9.33	12.32	8.68	8.85	9.15	10.42
19+68	1.28	10.14	12.84	8.56	8.75	9.08	10.39
17+71	1.28	9.97	13.02	8.44	8.65	9.00	10.36
15+74	1.28	10.10	13.05	8.31	8.54	8.93	10.33
13+78	1.28	10.46	13.75	8.18	8.44	8.85	10.30
11+81	1.35	10.25	12.67	8.07	8.35	8.78	10.28
9+84	1.31	9.38	12.63	7.97	8.27	8.73	10.26
7+87	1.31	10.71	11.46	7.90	8.22	8.70	10.25
5+90	1.31	10.71	11.28	7.85	8.18	8.67	10.24

**Table 6. Required Bank Top Elevations for Providing the 100-Year Flood Protection
 (Stevens Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
207+89	62.15	82.95	83.25	78.84	78.84	78.84	78.84
207+65	61.85	83.02	84.75	78.66	78.66	78.66	78.66
207+32	61.55	82.75	83.02	78.38	78.38	78.38	78.38
205+89	60.25	82.05	81.08	76.88	76.88	76.88	76.88
202+67	58.95	78.95	76.55	74.60	74.61	74.61	74.61
199+49	58.75	78.45	74.75	74.12	74.13	74.13	74.13
194+49	56.55	76.97	79.85	73.65	73.65	73.65	73.65
194+37	57.35	77.97	79.95	73.03	73.04	73.04	73.04
192+84	54.45	76.75	76.75	72.65	72.65	72.65	72.65
192+74	54.45	76.75	76.75	71.89	71.96	71.96	71.96
192+29	54.45	76.75	76.75	71.89	71.95	71.95	71.95
191+29	Hwy 85						
190+29	53.05	73.75	73.75	71.01	71.04	71.04	71.04
190+28	53.05	73.75	73.75	71.01	71.04	71.04	71.04
190+26	50.25	72.77	72.02	70.35	70.44	70.44	70.44
187+26	50.05	69.89	69.39	70.08	70.21	70.21	70.21
187+01	50.05	69.05	68.89	70.03	70.11	70.11	70.11
186+95	47.65	69.01	68.96	69.96	70.03	70.03	70.03
186+61	47.55	69.06	68.96	69.96	70.03	70.03	70.03
183+11	46.95	67.02	67.25	69.91	70.01	70.01	70.01
182+26	46.85	67.02	66.03	69.74	69.85	69.85	69.85
182+11	46.87	65.77	66.47	69.56	69.67	69.67	69.67
182+01	46.85	65.75	66.45	69.57	69.67	69.67	69.67
181+86	44.85	65.75	66.35	69.52	69.55	69.55	69.55
180+16	44.55	70.05	70.05	68.80	68.83	68.83	68.83
179+43	Middlefield Rd						

178+71	44.35	62.75	64.05	62.86	62.87	62.87	62.87
178+26	44.25	62.65	63.35	62.83	62.84	62.84	62.84
177+45	44.25	62.45	63.25	62.69	62.70	62.70	62.70
177+14	42.25	61.85	62.45	61.07	61.08	61.08	61.08
176+98	42.25	61.75	62.45	61.04	61.04	61.04	61.04
175+78	42.75	60.75	60.95	60.62	60.62	60.62	60.62
172+84	42.25	58.75	59.25	59.48	59.48	59.48	59.48
170+84	41.65	58.45	58.29	58.81	58.81	58.81	58.81
170+58	40.95	58.35	58.75	58.72	58.72	58.72	58.72
169+72	40.85	57.75	58.25	58.53	58.53	58.53	58.53
169+62	36.25	57.25	56.95	56.95	56.95	56.95	56.95
169+24	36.25	56.45	55.75	56.96	56.96	56.96	56.96
169+22	38.25	56.45	55.75	56.19	56.19	56.19	56.19
167+84	38.25	55.75	53.85	55.96	55.96	55.96	55.96
165+84	36.75	54.35	53.85	55.38	55.38	55.38	55.38
165+09	36.25	54.25	53.75	55.14	55.14	55.14	55.14
164+90	36.05	54.25	53.75	55.10	55.10	55.10	55.10
164+78	33.05	53.75	54.75	54.64	54.65	54.65	54.65
164+39	32.95	53.75	53.25	54.63	54.63	54.63	54.63
164+04	32.95	51.75	50.75	54.61	54.61	54.61	54.61
162+74	32.85	50.85	51.05	54.55	54.55	54.55	54.55
161+73	Moffett Blvd						
160+73	32.75	49.25	47.75	49.70	49.70	49.70	49.70
160+00	32.65	48.75	48.99	49.58	49.58	49.58	49.58
159+48	32.65	48.75	48.14	49.42	49.42	49.42	49.42
158+69	31.35	48.35	48.02	49.14	49.14	49.14	49.14
157+34	31.65	48.05	48.06	48.69	48.69	48.69	48.69
156+84	31.35	47.75	47.98	48.51	48.51	48.51	48.51
156+34	31.35	47.25	48.02	48.32	48.32	48.32	48.32
155+34	30.95	47.85	48.75	47.86	47.86	47.86	47.86
154+50	31.25	47.55	48.25	47.45	47.45	47.45	47.45
152+84	31.25	47.25	47.75	46.66	46.70	46.69	46.69
151+84	31.15	47.25	47.75	46.09	46.16	46.15	46.15

150+83	31.05	47.75	47.75	45.51	45.62	45.60	45.62
150+43	30.75	45.75	46.75	45.39	45.51	45.49	45.51
150+35	24.75	45.35	46.75	45.20	45.21	45.21	45.21
149+84	24.75	42.95	44.75	45.18	45.19	45.19	45.19
149+59	24.65	41.95	42.75	45.20	45.21	45.21	45.21
148+83	24.78	40.29	41.55	45.05	45.05	45.05	45.06
147+99	24.75	40.02	41.08	45.14	45.14	45.14	45.15
146+98	24.67	39.33	40.94	45.16	45.16	45.17	45.18
146+01	24.49	38.54	40.38	45.22	45.22	45.22	45.24
145+87	24.48	38.54	40.14	45.19	45.19	45.20	45.21
145+69	24.46	38.54	39.94	45.20	45.20	45.20	45.22
145+63	23.72	38.54	39.87	44.91	44.91	44.91	44.93
145+49	23.55	39.00	39.74	45.05	45.05	45.06	45.07
144+00	Hwy 101						
143+23	23.40	38.67	39.27	39.72	39.72	39.72	39.72
143+15	23.40	36.67	39.27	39.69	39.70	39.70	39.70
143+00	23.41	36.61	39.27	39.59	39.60	39.60	39.60
142+50	23.38	36.98	39.26	39.24	39.25	39.25	39.25
142+22	23.30	37.42	39.25	38.99	38.99	39.00	39.00
142+17	21.58	37.50	39.00	35.86	35.86	35.87	35.87
142+13	21.18	37.56	38.99	35.78	35.78	35.78	35.78
142+06	21.03	37.69	38.97	35.65	35.65	35.65	35.65
141+93	21.34	37.91	38.93	35.48	35.48	35.48	35.48
141+82	20.28	38.13	38.90	35.35	35.35	35.35	35.35
141+68	20.04	38.41	38.92	35.19	35.19	35.19	35.19
141+55	19.61	38.54	38.83	35.04	35.04	35.05	35.05
141+37	18.92	38.49	38.87	34.85	34.85	34.85	34.85
141+24	18.45	38.53	38.72	34.71	34.72	34.72	34.72
140+96	18.47	38.69	38.63	34.48	34.48	34.48	34.48
140+32	17.92	38.55	38.78	33.96	33.96	33.96	33.96
139+94	17.14	38.19	38.53	33.66	33.66	33.66	33.66
138+97	17.01	37.85	37.98	33.02	33.02	33.02	33.02
138+00	17.64	37.48	37.46	32.34	32.34	32.34	32.34

136+97	17.57	37.14	37.23	31.61	31.61	31.61	31.61
136+00	16.91	36.50	36.80	30.28	30.28	30.28	30.28
135+27	16.84	35.15	35.80	28.54	28.54	28.54	28.54
135+00	16.35	34.50	34.35	27.84	27.83	27.83	27.84
134+63	15.75	33.59	31.90	27.18	27.18	27.18	27.18
134+43	14.58	33.06	31.67	26.96	26.95	26.96	26.96
134+14	13.20	32.35	31.47	26.64	26.64	26.64	26.64
134+02	12.19	32.26	31.38	26.54	26.54	26.54	26.54
133+00	10.74	30.37	30.45	25.93	25.93	25.93	25.93
132+01	10.61	29.14	29.27	25.56	25.56	25.56	25.56
131+00	10.07	28.52	28.46	25.31	25.31	25.31	25.31
130+01	10.43	28.20	27.91	25.06	25.06	25.06	25.06
129+45	10.84	28.01	27.97	24.86	24.86	24.86	24.86
129+00	10.96	27.86	27.84	24.73	24.73	24.73	24.73
127+98	9.96	27.39	27.38	24.44	24.43	24.43	24.43
126+94	10.20	26.98	26.86	24.30	24.30	24.30	24.30
126+39	9.59	27.44	26.62	24.26	24.26	24.26	24.26
125+98	9.95	27.44	27.30	24.21	24.21	24.21	24.21
124+95	7.96	27.37	27.24	24.18	24.17	24.17	24.18
123+98	9.00	27.40	27.12	24.09	24.09	24.09	24.09
122+96	8.56	27.40	26.93	23.97	23.96	23.96	23.97
121+99	8.35	27.12	27.12	23.84	23.84	23.84	23.84
120+98	8.14	26.87	26.55	23.72	23.71	23.71	23.71
119+97	8.07	26.74	26.55	23.60	23.59	23.59	23.60
118+97	7.65	26.62	26.30	23.48	23.47	23.47	23.48
117+99	6.16	26.49	26.12	23.36	23.35	23.35	23.35
116+95	6.90	26.37	25.11	23.23	23.22	23.22	23.23
115+96	6.88	26.30	26.24	23.10	23.09	23.09	23.10
114+96	6.79	26.18	26.05	22.96	22.96	22.96	22.96
113+98	6.66	26.18	26.05	22.84	22.84	22.84	22.84
112+99	6.52	26.12	26.05	22.84	22.83	22.83	22.84
111+96	6.39	25.80	25.61	22.69	22.69	22.69	22.69
111+70	6.36	25.80	25.80	22.65	22.64	22.64	22.65

111+03	6.29	25.52	25.05	22.55	22.55	22.55	22.55
109+98	6.42	25.55	25.30	22.46	22.46	22.46	22.46
108+99	6.41	25.61	25.36	22.35	22.35	22.34	22.35
107+99	6.29	25.61	25.24	22.22	22.22	22.22	22.22
106+99	5.90	25.49	25.18	22.12	22.11	22.11	22.12
105+96	4.65	25.34	25.19	22.05	22.04	22.04	22.05
105+02	6.34	25.24	25.11	21.93	21.93	21.93	21.93
103+97	5.64	24.90	24.90	21.81	21.81	21.81	21.81
102+96	5.14	24.60	24.65	21.68	21.68	21.68	21.68
102+03	5.11	24.60	24.65	21.56	21.56	21.56	21.56
100+97	5.08	24.45	24.40	21.43	21.43	21.43	21.43
99+02	5.09	24.25	24.20	21.23	21.23	21.23	21.23
96+98	4.33	23.87	23.81	21.01	21.01	21.01	21.01
95+01	4.73	23.93	23.43	20.80	20.79	20.79	20.80
93+00	4.01	23.68	23.31	20.60	20.59	20.59	20.60
90+98	3.77	23.12	22.93	20.37	20.37	20.37	20.38
89+01	3.15	23.12	22.81	20.14	20.14	20.14	20.14
86+97	3.31	23.06	22.43	19.95	19.94	19.94	19.95
86+57	3.20	22.87	22.37	19.90	19.90	19.90	19.91
86+13	3.09	22.81	22.24	19.83	19.83	19.83	19.84
85+77	3.56	22.87	22.31	19.63	19.63	19.63	19.64
85+33	4.17	23.12	22.74	19.42	19.41	19.41	19.42
84+67	3.18	23.56	23.37	19.32	19.31	19.31	19.32
84+39	2.98	23.68	23.06	19.13	19.13	19.13	19.14
84+20	Crittenden Ln						
84+15	2.68	23.50	23.43	18.83	18.82	18.82	18.83
83+98	2.20	23.31	22.93	18.87	18.87	18.87	18.88
81+95	2.40	21.49	21.30	18.79	18.78	18.79	18.80
79+95	2.01	20.55	20.68	18.50	18.50	18.50	18.51
78+95	1.81	20.18	20.36	18.40	18.40	18.40	18.41
77+96	1.61	19.99	20.11	18.31	18.31	18.31	18.32
75+99	1.50	19.70	19.75	18.01	18.00	18.01	18.02
73+94	1.33	19.75	19.60	17.64	17.63	17.63	17.65

72+01	1.50	18.70	19.35	17.39	17.39	17.39	17.41
69+85	1.61	18.05	18.35	17.20	17.20	17.20	17.23
67+89	1.51	17.55	17.82	16.85	16.85	16.85	16.88
67+40	1.42	16.38	16.66	16.77	16.77	16.77	16.80
66+91	1.33	15.22	15.51	16.69	16.68	16.68	16.72
66+42	1.24	14.05	14.35	16.59	16.58	16.58	16.61
65+93	1.15	12.88	13.19	16.46	16.46	16.46	16.49
65+18	1.31	12.71	13.14	16.42	16.41	16.42	16.45
64+42	1.47	12.53	13.09	16.39	16.38	16.38	16.42
64+30	Ped x-ing						
64+20	1.48	12.46	13.09	16.12	16.11	16.12	16.15
63+94	1.50	12.35	13.09	16.09	16.08	16.09	16.12
62+97	1.45	11.56	12.62	16.00	16.00	16.00	16.04
61+99	1.41	10.77	12.14	15.91	15.91	15.91	15.95
61+49	1.29	11.00	12.21	15.82	15.81	15.82	15.86
60+98	1.18	11.23	12.28	15.71	15.71	15.71	15.75
60+46	1.05	11.37	12.35	15.65	15.64	15.65	15.69
59+93	0.92	11.51	12.42	15.58	15.58	15.58	15.62
57+90	1.56	11.30	12.53	15.45	15.45	15.45	15.50
55+92	1.21	11.47	12.32	15.34	15.34	15.35	15.40
53+91	1.30	10.95	12.39	15.17	15.17	15.18	15.23
51+96	0.92	10.00	12.46	15.01	15.01	15.01	15.07
49+95	1.10	10.77	12.63	14.97	14.97	14.97	15.03
48+96	1.49	10.53	12.53	14.82	14.82	14.83	14.89
46+98	1.80	10.32	11.85	14.65	14.65	14.65	14.72
44+98	1.61	10.29	11.19	14.52	14.52	14.52	14.59
42+94	1.50	10.17	11.28	14.39	14.39	14.39	14.47
40+99	1.45	10.02	11.43	14.22	14.22	14.23	14.31
38+92	1.45	9.92	11.16	14.05	14.05	14.06	14.15
36+93	1.55	9.89	10.89	13.88	13.88	13.89	13.98
34+98	1.55	9.95	11.04	13.71	13.71	13.72	13.82
32+95	1.45	9.86	10.98	13.54	13.54	13.55	13.67
30+94	1.40	10.50	11.01	13.39	13.39	13.40	13.52

28+95	1.35	10.23	11.55	13.24	13.24	13.26	13.39
26+85	1.36	9.65	11.91	13.02	13.02	13.04	13.19
24+06	0.90	11.04	11.49	12.76	12.76	12.78	12.95
21+99	0.79	12.04	11.93	12.54	12.54	12.56	12.75
19+90	0.56	11.76	11.52	12.31	12.32	12.34	12.56
17+89	1.08	9.72	9.75	12.14	12.14	12.17	12.41
15+90	0.71	9.68	10.92	11.93	11.94	11.97	12.23
14+01	1.00	11.25	11.37	11.63	11.64	11.68	11.98
11+99	0.90	11.64	11.19	11.26	11.27	11.31	11.68
9+96	1.20	11.34	11.64	10.82	10.84	10.89	11.35
7+95	1.00	11.43	11.52	10.29	10.32	10.39	10.97
5+94	1.00	11.22	11.67	9.44	9.50	9.64	10.51
3+92	1.38	9.59	11.88	8.59	8.71	8.98	10.28
0+13	1.23	10.17	11.88	7.81	8.15	8.65	10.23

**Table 7. Required Bank Top Elevations for Providing the 100-Year Flood Protection
 (Sunnyvale West Channel)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
153+81	24.37	36.68	37.51	31.15	31.15	31.15	31.15
153+54	24.46	36.34	36.89	31.19	31.19	31.19	31.19
153+00	24.78	35.42	36.71	31.09	31.09	31.09	31.09
152+01	24.73	35.47	36.39	31.06	31.06	31.06	31.06
151+59	24.40	35.90	36.17	30.81	30.81	30.81	30.81
151+50	24.20	36.53	36.58	30.55	30.55	30.55	30.55
151+31	Parking lot culvert						
151+13	24.57	38.00	38.00	28.80	28.80	28.80	28.80
151+02	24.50	37.00	37.00	28.74	28.74	28.74	28.74
150+91	24.44	37.00	37.00	29.02	29.02	29.02	29.02
150+00	23.81	36.00	36.00	29.09	29.09	29.09	29.09
149+01	23.39	37.00	37.00	29.09	29.09	29.09	29.09
148+64	23.84	35.00	35.00	28.46	28.46	28.46	28.46
148+54	23.84	35.00	35.00	28.41	28.41	28.41	28.41
147+77	Hwy 101						
146+99	23.23	35.00	33.27	28.05	28.05	28.05	28.05
146+80	23.47	36.00	32.03	27.66	27.66	27.66	27.66
146+77	23.49	36.00	31.93	27.56	27.56	27.56	27.56
146+00	22.09	33.00	30.71	27.28	27.28	27.28	27.28
145+00	21.81	31.57	29.86	26.95	26.95	26.95	26.95
144+00	21.48	31.00	30.46	26.71	26.71	26.71	26.71
142+99	21.31	31.00	29.77	26.48	26.48	26.48	26.48
142+00	20.80	31.00	31.00	26.32	26.32	26.32	26.32
141+01	20.96	31.00	31.00	26.12	26.12	26.12	26.12
139+95	21.00	31.00	31.00	25.10	25.10	25.10	25.10
139+82	20.76	31.00	31.00	25.29	25.29	25.29	25.29

139+71	20.56	32.00	32.00	25.15	25.15	25.15	25.15
137+06	Ross Dr						
134+40	20.06	29.37	28.89	21.81	21.81	21.81	21.81
134+20	19.83	29.13	28.81	21.79	21.79	21.79	21.79
134+00	19.61	28.89	28.74	21.72	21.72	21.72	21.72
133+00	18.74	27.62	27.44	21.26	21.26	21.26	21.26
132+00	17.22	26.24	26.37	20.82	20.82	20.82	20.82
131+00	16.90	26.18	25.80	20.40	20.40	20.40	20.40
130+00	16.68	25.96	25.31	20.03	20.03	20.03	20.03
129+00	16.29	25.59	25.52	19.76	19.76	19.76	19.76
128+01	15.84	25.36	25.31	19.67	19.67	19.67	19.67
127+66	15.83	25.38	25.10	19.66	19.66	19.66	19.66
127+32	15.81	25.34	25.28	19.66	19.66	19.66	19.66
127+01	15.71	25.32	25.26	19.66	19.66	19.66	19.66
126+00	14.55	24.69	24.33	19.65	19.65	19.65	19.65
125+94	14.55	24.36	24.41	19.65	19.65	19.65	19.65
120+44	Mathilda Ave						
114+88	9.20	20.00	20.00	13.95	13.95	13.96	14.00
114+74	9.05	22.00	21.93	13.86	13.86	13.87	13.94
114+03	8.31	20.00	20.00	13.96	13.97	13.98	14.07
113+69	7.94	20.00	20.00	13.91	13.92	13.93	14.02
113+35	7.56	20.00	20.00	13.87	13.87	13.89	13.98
113+01	7.19	20.00	20.00	13.81	13.82	13.84	13.93
112+00	6.88	19.00	19.00	13.83	13.84	13.85	13.95
111+00	6.88	19.00	19.00	13.65	13.66	13.68	13.79
110+00	6.85	18.00	18.00	13.57	13.58	13.59	13.71
109+00	6.85	18.00	18.00	13.42	13.43	13.46	13.58
108+00	6.85	19.00	19.00	13.34	13.36	13.38	13.51
107+00	6.75	19.00	19.00	13.26	13.27	13.3	13.44
106+57	6.46	19.00	19.00	12.88	12.9	12.93	13.09
106+52	6.48	20.00	20.00	12.77	12.78	12.81	12.97
106+26	Bordeux Dr						
106+03	6.43	20.00	20.00	12.35	12.37	12.4	12.61

105+89	6.11	19.00	19.00	12.45	12.47	12.51	12.73
105+86	6.07	19.00	19.00	12.54	12.56	12.6	12.81
105+01	5.68	17.00	17.00	12.68	12.7	12.73	12.93
104+01	5.57	17.00	17.00	12.55	12.57	12.61	12.83
103+04	5.38	17.00	17.00	12.55	12.57	12.61	12.83
102+01	5.07	16.00	16.00	12.48	12.51	12.55	12.77
101+00	4.95	16.00	16.00	12.41	12.44	12.48	12.71
100+00	4.95	16.00	16.00	12.41	12.44	12.48	12.71
99+00	4.50	15.00	15.00	12.38	12.4	12.45	12.68
98+00	4.44	15.00	15.00	12.35	12.37	12.41	12.65
97+00	4.14	15.00	15.00	12.32	12.34	12.39	12.63
96+00	4.14	15.00	15.00	12.29	12.32	12.36	12.60
95+00	4.14	15.00	15.00	12.27	12.29	12.34	12.58
94+00	4.15	15.00	15.00	12.24	12.26	12.31	12.56
93+00	3.74	15.00	15.00	12.21	12.24	12.28	12.54
92+00	3.74	15.00	15.00	12.18	12.21	12.25	12.51
91+00	3.74	15.00	15.00	12.16	12.19	12.23	12.49
90+00	3.74	15.00	15.00	12.14	12.17	12.22	12.48
89+00	3.46	15.00	15.00	12.14	12.16	12.21	12.47
88+00	3.37	16.00	16.00	12.12	12.15	12.2	12.46
87+15	2.92	16.00	16.00	12.08	12.11	12.16	12.43
87+11	2.90	15.00	15.00	12.04	12.07	12.12	12.39
87+00	2.90	16.00	16.00	11.87	11.9	11.95	12.23
86+45	Java Drive						
85+84	2.90	17.00	17.00	11.75	11.78	11.83	12.12
85+70	2.90	14.00	14.00	11.94	11.97	12.02	12.30
85+63	2.90	14.00	14.00	11.94	11.97	12.02	12.30
85+00	2.90	14.00	14.00	11.93	11.96	12.01	12.29
84+00	2.90	14.00	14.00	11.91	11.94	11.99	12.27
83+00	2.90	14.00	14.00	11.90	11.92	11.98	12.26
82+00	2.90	14.00	14.00	11.89	11.92	11.97	12.25
81+00	2.90	14.00	14.00	11.88	11.91	11.96	12.24
80+00	2.68	14.00	14.00	11.87	11.9	11.95	12.23

79+00	2.68	14.00	14.00	11.86	11.89	11.94	12.23
78+00	2.68	14.00	14.00	11.84	11.87	11.93	12.21
77+00	2.68	14.00	14.00	11.84	11.87	11.92	12.21
76+00	2.68	14.00	14.00	11.83	11.86	11.91	12.20
75+00	2.68	14.00	14.00	11.82	11.85	11.91	12.20
74+00	2.68	14.00	14.00	11.82	11.85	11.9	12.19
73+00	2.45	14.00	14.00	11.81	11.84	11.89	12.19
72+00	2.22	15.00	15.00	11.80	11.83	11.89	12.18
71+00	2.22	14.00	14.00	11.79	11.82	11.88	12.17
70+00	2.22	14.00	14.00	11.78	11.81	11.87	12.16
69+00	2.15	14.00	14.00	11.77	11.8	11.86	12.16
68+00	2.05	14.00	14.00	11.77	11.8	11.85	12.15
67+18	1.95	15.00	15.00	11.75	11.78	11.84	12.14
67+04	1.80	15.00	15.00	11.60	11.63	11.68	11.99
66+56	Caribbean Dr						
66+04	1.80	20.43	20.38	11.52	11.55	11.61	11.92
65+78	1.80	18.13	18.52	11.67	11.7	11.76	12.06
65+00	1.80	18.87	18.73	11.67	11.7	11.76	12.06
64+00	1.80	18.83	18.63	11.67	11.7	11.76	12.06
63+00	1.80	18.66	18.39	11.66	11.69	11.75	12.05
62+00	1.80	18.78	18.02	11.66	11.69	11.75	12.05
60+99	1.80	17.96	22.24	11.65	11.68	11.74	12.05
60+68	1.80	17.90	17.44	11.64	11.68	11.73	12.04
60+61	1.80	17.90	18.35	11.59	11.62	11.68	11.99
60+46	1.80	17.85	18.30	11.46	11.49	11.55	11.86
60+36	Carl Rd						
60+26	1.80	18.45	17.97	11.37	11.4	11.46	11.78
60+05	1.80	18.40	18.35	11.51	11.55	11.6	11.91
59+94	1.80	18.49	18.88	11.52	11.55	11.61	11.92
59+00	1.80	19.76	20.44	11.49	11.52	11.58	11.89
58+03	1.80	19.93	21.03	11.47	11.5	11.56	11.87
57+01	1.80	19.87	21.90	11.43	11.46	11.52	11.84
56+02	1.80	19.41	19.64	11.40	11.43	11.49	11.81

55+00	1.80	20.02	18.70	11.39	11.42	11.48	11.80
53+93	1.80	20.48	19.61	11.38	11.41	11.47	11.79
52+99	1.80	20.89	19.96	11.36	11.4	11.46	11.78
52+00	1.80	13.02	12.52	11.36	11.39	11.45	11.78
47+98	1.80	13.50	12.42	11.34	11.38	11.44	11.77
47+02	1.80	13.47	12.78	11.34	11.38	11.44	11.76
46+03	1.50	12.94	13.01	11.34	11.38	11.44	11.76
44+99	1.50	12.87	13.45	11.34	11.37	11.43	11.76
44+02	1.36	12.98	13.07	11.33	11.37	11.43	11.76
43+01	1.36	12.98	13.15	11.33	11.37	11.43	11.76
41+98	1.36	13.33	13.56	11.33	11.37	11.43	11.76
41+01	1.36	12.95	13.58	11.33	11.37	11.43	11.76
39+98	1.36	12.85	13.49	11.33	11.37	11.43	11.76
39+02	1.33	12.70	13.12	11.33	11.36	11.43	11.75
38+00	1.11	12.64	13.93	11.33	11.36	11.43	11.75
37+02	1.06	12.48	14.04	11.33	11.36	11.42	11.75
36+01	1.08	12.45	14.57	11.33	11.36	11.42	11.75
35+00	1.08	11.97	14.46	11.32	11.36	11.42	11.75
34+01	1.08	11.97	14.51	11.32	11.35	11.41	11.75
32+99	1.08	11.58	14.18	11.31	11.35	11.41	11.74
32+00	1.03	12.56	14.08	11.31	11.34	11.41	11.74
31+00	0.66	11.98	14.76	11.31	11.34	11.41	11.74
30+02	0.66	11.60	14.71	11.31	11.34	11.41	11.74
29+00	0.66	11.71	14.88	11.31	11.34	11.40	11.74
27+99	0.51	11.93	13.95	11.30	11.34	11.40	11.73
27+01	0.78	11.85	13.84	11.30	11.34	11.40	11.73
26+01	0.82	11.33	14.11	11.30	11.34	11.40	11.73
24+98	0.82	11.96	14.04	11.30	11.33	11.39	11.73
24+03	0.82	12.58	14.40	11.29	11.33	11.39	11.73
23+03	0.82	11.79	15.24	11.29	11.32	11.39	11.72
21+96	0.82	12.55	15.86	11.28	11.32	11.38	11.72
20+98	0.61	12.48	15.45	11.27	11.31	11.37	11.71
20+01	0.67	11.32	14.95	11.27	11.30	11.37	11.71

19+02	0.29	10.94	14.86	11.26	11.30	11.36	11.70
18+00	0.15	11.24	14.82	11.26	11.3	11.36	11.70
17+02	0.15	12.09	15.09	11.26	11.29	11.36	11.70
16+03	0.00	12.00	15.00	11.25	11.29	11.35	11.70
15+04	0.00	12.00	14.72	11.25	11.29	11.35	11.69
13+12	-0.58	12.43	14.72	11.25	11.29	11.35	11.69
10+17	-0.58	11.97	14.04	11.25	11.29	11.35	11.69
8+12	-0.58	11.97	14.04	11.25	11.29	11.35	11.69
6+24	-0.58	11.78	14.00	11.25	11.29	11.35	11.69
4+55	-0.58	12.00	14.00	11.25	11.28	11.35	11.69
3+04	-1.14	12.33	13.55	11.25	11.28	11.35	11.69

**Table 8. Required Bank Top Elevations for Providing the 100-Year Flood Protection
 (Sunnyvale East Channel)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation ¹ (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
108+33	Hwy 101						
103+54	8.93	28.38	29.34	18.33	18.33	18.33	18.34
102+88	8.93	28.24	28.20	18.72	18.72	18.72	18.72
102+74	8.93	28.19	28.18	18.69	18.69	18.69	18.7
101+82	8.93	28.59	27.29	18.61	18.61	18.61	18.61
100+93	8.99	28.15	27.01	18.51	18.51	18.51	18.51
99+74	8.76	27.68	26.92	18.38	18.38	18.38	18.38
98+89	8.54	27.15	26.04	18.37	18.37	18.37	18.37
97+93	8.32	26.71	25.79	18.30	18.30	18.30	18.30
96+82	8.13	26.68	25.64	18.21	18.21	18.21	18.21
95+70	7.95	26.80	25.29	18.14	18.14	18.14	18.14
95+06	7.90	26.46	25.16	18.11	18.11	18.11	18.11
94+89	7.86	26.28	25.24	18.10	18.10	18.10	18.10
94+62	7.80	24.77	24.74	17.58	17.58	17.58	17.58
93+95	7.64	25.74	25.17	17.54	17.54	17.54	17.54
93+70	7.58	24.62	24.53	18.01	18.01	18.01	18.01
93+52	7.54	24.70	24.70	18.04	18.04	18.04	18.04
92+84	7.38	26.31	25.24	18.01	18.01	18.01	18.01
91+94	7.38	26.02	25.32	17.92	17.92	17.92	17.92
91+06	7.27	24.95	25.35	17.88	17.88	17.88	17.88
89+91	7.02	24.79	25.02	17.87	17.87	17.87	17.87
88+92	6.82	25.06	25.07	17.83	17.83	17.83	17.83
87+91	6.61	25.11	24.78	17.80	17.80	17.80	17.80
86+94	6.26	24.74	24.43	17.77	17.77	17.77	17.77
85+92	5.98	24.08	23.58	17.75	17.75	17.75	17.76

85+29	5.86	24.20	24.03	17.73	17.73	17.73	17.73
85+13	5.86	24.04	24.04	17.70	17.70	17.70	17.70
84+88	5.85	24.03	24.03	17.42	17.42	17.42	17.42
84+13	5.83	27.81	27.64	17.06	17.06	17.06	17.06
83+58	Tasman Dr						
83+02	5.79	27.03	26.93	16.76	16.76	16.76	16.76
82+82	5.79	25.37	25.21	17.10	17.10	17.10	17.10
82+63	5.78	25.32	25.24	17.09	17.09	17.09	17.09
81+90	5.55	24.97	24.85	17.05	17.05	17.05	17.05
80+83	5.19	24.91	24.57	17.00	17.00	17.00	17.00
79+89	4.90	25.16	24.46	16.96	16.96	16.96	16.96
78+93	4.90	25.06	24.68	16.91	16.91	16.91	16.91
78+13	4.94	25.21	24.83	16.88	16.88	16.88	16.88
76+91	4.58	25.06	25.03	16.83	16.83	16.83	16.83
75+88	4.43	25.37	24.77	16.81	16.81	16.81	16.81
74+89	4.36	25.05	24.25	16.77	16.77	16.77	16.78
74+47	4.32	25.07	23.94	16.77	16.77	16.77	16.77
74+27	4.28	25.31	23.97	16.77	16.77	16.77	16.78
73+82	4.20	22.60	24.20	16.47	16.47	16.47	16.47
73+43	4.14	22.60	24.03	16.47	16.47	16.47	16.47
73+06	4.07	24.72	24.10	16.71	16.71	16.71	16.71
72+89	4.04	24.64	24.08	16.71	16.71	16.71	16.72
71+92	3.93	24.81	24.28	16.66	16.66	16.66	16.67
70+87	3.93	25.05	24.66	16.62	16.62	16.62	16.62
69+88	3.88	24.76	24.26	16.59	16.59	16.59	16.59
68+92	3.76	24.50	24.37	16.57	16.57	16.57	16.57
67+89	3.76	24.35	24.05	16.54	16.54	16.54	16.55
66+88	3.76	24.25	24.14	16.51	16.51	16.51	16.52
66+06	3.76	24.55	24.20	16.49	16.49	16.49	16.49
65+26	3.76	24.31	24.16	16.49	16.49	16.49	16.49
65+11	3.90	23.78	23.92	16.48	16.48	16.48	16.49
64+00	Hwy 237						
62+90	3.32	23.40	23.48	16.02	16.02	16.02	16.02

62+70	3.32	22.25	22.42	16.02	16.02	16.02	16.02
62+50	3.33	21.10	21.35	15.95	15.95	15.95	15.95
61+87	3.35	21.58	21.64	15.94	15.94	15.94	15.94
60+89	3.35	21.12	21.26	15.91	15.91	15.91	15.91
59+91	3.31	20.89	21.51	15.87	15.87	15.87	15.87
58+90	3.31	21.22	21.51	15.83	15.83	15.83	15.83
57+86	3.31	21.06	21.23	15.80	15.8	15.8	15.81
56+91	3.31	21.22	21.08	15.79	15.79	15.79	15.79
55+93	3.07	21.21	20.84	15.76	15.76	15.76	15.76
54+85	3.04	21.29	20.74	15.73	15.73	15.73	15.73
53+87	3.04	21.42	21.11	15.69	15.69	15.70	15.70
52+88	3.04	21.20	21.44	15.66	15.66	15.66	15.67
51+88	3.04	20.99	21.36	15.63	15.63	15.63	15.64
50+94	3.04	21.34	21.40	15.61	15.61	15.61	15.61
49+86	3.04	21.33	21.43	15.57	15.57	15.57	15.57
48+91	3.00	21.44	21.23	15.54	15.54	15.54	15.54
47+95	3.00	21.49	21.31	15.51	15.51	15.51	15.51
46+85	3.00	21.37	21.22	15.47	15.47	15.47	15.48
45+87	3.00	21.49	21.24	15.44	15.44	15.44	15.44
44+90	3.00	21.36	21.32	15.41	15.41	15.41	15.41
43+95	3.00	21.20	21.31	15.38	15.38	15.38	15.39
42+82	3.00	21.14	21.26	15.35	15.35	15.35	15.35
41+96	3.00	21.43	21.22	15.32	15.32	15.32	15.33
40+94	2.90	21.36	21.24	15.31	15.31	15.31	15.31
39+91	2.80	21.41	21.13	15.30	15.30	15.30	15.30
39+14	2.72	21.50	21.05	15.27	15.27	15.28	15.28
38+40	2.65	21.42	21.31	15.26	15.26	15.26	15.26
37+67	2.58	20.27	20.94	15.26	15.26	15.26	15.26
37+51	2.56	18.83	18.91	15.25	15.25	15.25	15.26
36+97	Caribbean Dr						
36+42	2.71	18.68	18.73	15.14	15.14	15.14	15.14
36+23	2.78	19.27	19.46	15.13	15.13	15.13	15.13
36+03	2.85	19.86	20.18	15.10	15.10	15.10	15.10

35+84	2.92	20.45	20.91	15.07	15.07	15.07	15.08
34+75	2.88	20.46	20.51	15.00	15.00	15.00	15.00
33+92	2.88	20.51	20.76	14.95	14.95	14.95	14.96
33+17	2.81	20.50	20.78	14.91	14.91	14.91	14.91
31+90	2.81	20.50	20.51	14.83	14.83	14.83	14.84
31+11	2.67	20.67	20.56	14.79	14.79	14.80	14.80
29+88	2.67	20.75	20.75	14.74	14.74	14.74	14.75
29+03	2.67	20.55	20.65	14.70	14.7	14.7	14.71
27+93	2.62	20.77	20.77	14.66	14.66	14.66	14.66
27+19	2.58	20.79	20.84	14.62	14.62	14.62	14.63
26+23	2.56	20.62	20.86	14.57	14.57	14.57	14.57
25+04	2.55	20.52	20.77	14.52	14.52	14.52	14.53
24+24	0.06	20.43	12.70	14.55	14.55	14.55	14.56
24+12	-2.71	13.30	12.83	14.56	14.56	14.56	14.57
23+69	-2.55	13.04	13.24	14.56	14.56	14.56	14.57
22+99	-1.22	13.18	13.23	14.56	14.56	14.56	14.56
22+03	-3.09	12.69	12.69	14.56	14.56	14.57	14.57
21+04	-3.15	12.69	12.79	14.56	14.56	14.56	14.57
20+04	-4.07	12.60	13.08	14.56	14.56	14.56	14.56
19+04	-4.06	12.42	13.84	14.56	14.56	14.56	14.56
17+99	-4.49	12.42	13.04	14.55	14.55	14.56	14.56
15+80	-3.45	12.90	13.06	14.55	14.55	14.55	14.55
14+69	-3.85	12.81	12.98	14.55	14.55	14.55	14.55
13+87	-3.80	12.90	12.86	14.55	14.55	14.55	14.55
13+12	-3.95	12.78	12.93	14.55	14.55	14.55	14.55
12+21	-4.32	12.30	12.30	14.55	14.55	14.55	14.55
11+14	-4.44	12.25	12.26	14.55	14.55	14.55	14.55
10+25	-4.46	12.21	12.32	14.54	14.54	14.55	14.55
9+46	-3.90	12.72	12.47	14.54	14.54	14.55	14.55
8+67	-3.81	12.30	12.47	14.54	14.54	14.54	14.55
7+59	-4.44	12.60	12.41	14.54	14.54	14.54	14.54
6+65	-2.36	12.64	12.54	14.53	14.53	14.53	14.53
5+98	-2.23	12.63	12.69	14.52	14.52	14.52	14.52

5+25	0.46	12.65	12.65	14.51	14.51	14.51	14.51
4+65	0.42	12.57	12.64	14.51	14.51	14.51	14.51
4+13	0.17	12.63	12.69	14.51	14.51	14.51	14.51
3+44	0.13	12.62	12.66	14.50	14.5	14.5	14.51

Note 1. The floodwall elevations as coded into the Corps 2013 HEC-RAS model were used for the reach downstream of Hwy 101 bridge, between station 101+54 downstream to Station 24+24. Those floodwall elevations were very preliminary (and sometimes set simply high enough to contain the flow). The correct design floodwall elevations can be obtained from SCVWD by request to the Sunnyvale East and West Channels flood protection project.

**Table 9. Required Bank Top Elevations for Providing the 100-Year Flood Protection
 (Calabazas Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
168+70	39.72	51.49	50.90	48.33	48.33	48.33	48.33
168+40	39.38	51.56	51.63	49.67	49.67	49.67	49.67
167+76	39.08	51.78	51.56	49.50	49.50	49.50	49.50
167+44	39.05	51.41	51.56	48.73	48.73	48.73	48.73
166+92	38.69	49.75	49.94	48.47	48.47	48.47	48.47
166+75	38.62	49.94	49.81	48.36	48.36	48.36	48.36
166+50	38.21	49.87	49.94	48.21	48.21	48.21	48.21
166+25	38.02	49.69	49.44	48.13	48.13	48.13	48.13
166+00	38.00	48.93	49.01	48.22	48.22	48.22	48.22
165+75	37.92	49.78	49.63	48.27	48.27	48.27	48.27
165+50	37.88	49.71	49.49	48.23	48.23	48.23	48.23
165+26	37.87	49.63	50.00	48.16	48.16	48.16	48.16
165+00	37.78	49.78	49.85	48.10	48.1	48.1	48.1
164+00	37.42	49.85	49.85	47.87	47.87	47.87	47.87
163+00	37.09	49.49	49.63	47.56	47.56	47.56	47.56
162+63	37.01	49.71	49.63	47.43	47.43	47.43	47.43
161+96	36.72	51.75	51.30	46.94	46.94	46.94	46.94
161+00	36.54	50.34	50.62	46.56	46.56	46.56	46.56
160+14	36.37	49.77	50.29	46.18	46.18	46.18	46.18
159+39	36.16	49.65	50.06	45.79	45.79	45.79	45.79
159+00	36.02	49.47	49.92	45.62	45.62	45.62	45.62
158+03	35.83	49.18	49.40	45.57	45.57	45.57	45.57
157+83	35.63	49.03	49.03	45.81	45.81	45.81	45.81
157+39	Kifer Rd						
156+94	35.28	48.68	48.68	45.74	45.74	45.74	45.74
156+71	35.30	48.76	49.27	45.78	45.78	45.78	45.78

155+73	35.07	49.06	49.09	46.38	46.38	46.38	46.38
155+00	34.92	49.06	49.17	45.45	45.45	45.45	45.45
154+50	34.69	49.09	49.11	45.42	45.42	45.42	45.42
154+00	34.39	49.12	49.04	45.38	45.38	45.38	45.38
152+99	34.09	49.08	49.04	45.05	45.05	45.05	45.05
152+00	33.77	48.99	49.02	44.98	44.98	44.98	44.98
151+00	33.59	48.98	49.01	44.77	44.77	44.77	44.77
150+00	33.24	49.00	49.00	44.72	44.72	44.72	44.72
149+00	32.96	49.02	48.99	44.61	44.61	44.61	44.61
148+00	32.66	49.12	48.88	44.52	44.52	44.52	44.52
147+50	32.60	49.04	48.89	44.50	44.5	44.5	44.5
147+05	32.49	49.10	48.96	44.47	44.47	44.47	44.47
146+00	32.17	49.12	48.97	44.41	44.41	44.41	44.41
144+86	31.91	49.03	48.97	44.38	44.38	44.38	44.38
144+67	31.84	49.34	49.34	43.60	43.60	43.60	43.60
143+97	Central Exp						
143+05	30.92	42.97	43.27	39.81	39.81	39.81	39.81
142+50	30.77	40.78	40.76	39.48	39.48	39.48	39.48
142+07	30.64	40.36	40.51	39.26	39.26	39.26	39.26
141+00	29.99	39.89	39.97	38.74	38.74	38.74	38.74
140+00	29.38	39.94	39.87	38.23	38.23	38.23	38.23
139+00	28.79	41.56	41.41	37.81	37.81	37.81	37.81
138+00	28.25	41.78	41.85	37.37	37.37	37.37	37.37
137+00	27.88	41.83	41.83	36.93	36.93	36.93	36.93
136+00	27.51	41.41	41.41	36.53	36.53	36.53	36.53
135+46	27.20	41.25	41.33	36.39	36.39	36.39	36.39
134+24	26.70	41.30	40.80	36.04	36.04	36.04	36.04
134+23	26.70	41.83	41.75	36.01	36.01	36.01	36.01
133+77	E Arques Ave						
133+31	26.06	39.78	39.78	34.76	34.76	34.76	34.76
133+30	26.06	40.66	40.16	34.76	34.76	34.76	34.76
133+00	25.85	37.75	36.75	34.64	34.64	34.64	34.64
132+00	25.41	36.71	36.71	34.18	34.18	34.18	34.18

131+00	24.94	36.24	36.24	33.73	33.73	33.73	33.73
130+00	24.47	35.77	35.77	33.28	33.28	33.28	33.28
129+00	24.00	35.30	35.30	32.84	32.84	32.84	32.84
128+00	23.53	34.83	34.83	32.41	32.41	32.41	32.41
127+00	23.06	34.36	34.36	32.01	32.01	32.01	32.01
126+74	22.94	34.24	34.24	31.91	31.91	31.91	31.91
125+00	22.12	33.42	33.42	31.34	31.34	31.34	31.34
124+00	21.65	32.95	32.95	31.11	31.11	31.11	31.11
123+00	21.25	33.05	33.85	30.91	30.91	30.91	30.91
122+00	20.95	33.55	33.55	30.43	30.43	30.43	30.43
120+00	20.25	32.65	32.65	29.71	29.71	29.71	29.71
118+35	19.75	32.25	32.25	28.98	28.98	28.98	28.98
118+00	19.55	33.25	33.25	28.87	28.87	28.87	28.87
117+00	18.85	33.25	33.25	28.94	28.94	28.94	28.94
115+00	18.25	33.25	33.25	28.34	28.34	28.34	28.34
113+00	17.75	33.25	33.25	27.82	27.82	27.82	27.82
112+00	17.55	33.25	33.25	27.52	27.52	27.52	27.52
111+00	17.25	33.23	33.19	27.33	27.33	27.33	27.33
109+00	16.55	33.28	33.28	26.90	26.90	26.90	26.90
107+00	15.75	33.55	33.55	26.62	26.62	26.62	26.62
106+26	15.37	33.08	33.08	27.13	27.13	27.13	27.13
104+63	HWY 101						
103+00	14.64	29.25	29.25	21.12	21.12	21.12	21.12
102+75	14.51	29.25	29.25	21.04	21.04	21.04	21.04
102+51	14.38	29.25	29.25	20.76	20.76	20.76	20.76
102+26	14.25	29.25	29.25	21.54	21.54	21.54	21.54
102+00	13.85	29.25	29.25	21.65	21.65	21.65	21.65
101+46	13.25	28.65	28.65	21.67	21.67	21.67	21.67
101+00	13.15	28.65	28.65	21.56	21.56	21.56	21.56
99+00	12.75	28.35	28.35	21.25	21.25	21.25	21.25
97+00	12.55	27.95	27.95	21.02	21.02	21.02	21.02
95+00	11.85	27.75	27.75	20.81	20.81	20.81	20.81
93+00	11.75	27.55	27.55	20.61	20.61	20.61	20.61

91+00	11.55	27.35	27.35	20.42	20.42	20.42	20.42
89+00	10.95	27.25	27.25	20.22	20.22	20.22	20.22
87+00	10.75	27.05	27.05	20.03	20.03	20.03	20.03
85+00	10.55	26.85	26.85	19.80	19.80	19.80	19.80
83+00	10.25	26.65	26.65	19.56	19.56	19.56	19.56
81+00	9.75	26.45	26.45	19.36	19.36	19.36	19.36
79+00	9.05	26.35	26.35	19.15	19.15	19.15	19.15
77+00	6.25	26.15	26.15	18.93	18.93	18.93	18.93
75+00	7.75	25.95	25.95	18.78	18.78	18.78	18.78
73+00	6.25	25.75	25.75	18.50	18.50	18.50	18.50
72+00	6.85	25.65	25.65	18.40	18.40	18.40	18.40
71+00	6.75	25.55	25.55	18.29	18.29	18.29	18.29
70+00	6.65	25.55	25.55	18.21	18.21	18.21	18.21
69+00	6.95	25.45	25.45	18.15	18.15	18.15	18.15
68+00	6.75	25.35	25.35	18.16	18.16	18.16	18.16
66+00	6.75	25.15	25.15	18.08	18.08	18.08	18.08
64+00	5.75	24.95	24.95	17.98	17.98	17.98	17.98
62+00	6.25	24.75	24.75	17.87	17.87	17.87	17.87
60+00	5.75	24.55	24.55	17.72	17.72	17.72	17.72
58+00	5.75	24.45	24.45	17.65	17.65	17.65	17.65
56+00	6.25	24.45	24.45	17.56	17.56	17.56	17.56
55+00	5.75	24.45	24.45	17.53	17.53	17.53	17.53
54+00	4.75	24.45	24.45	17.42	17.42	17.42	17.42
51+90	5.75	24.45	24.45	17.28	17.28	17.28	17.28
51+00	5.75	24.45	24.45	17.28	17.28	17.28	17.28
50+36	5.25	20.15	20.15	17.26	17.26	17.26	17.26
49+98	Tasman Dr						
49+59	4.25	20.15	20.15	17.28	17.28	17.28	17.28
49+00	4.25	24.25	24.25	17.26	17.26	17.26	17.26
48+00	4.25	24.25	24.25	17.25	17.25	17.25	17.25
47+00	4.25	24.15	24.15	17.17	17.17	17.17	17.17
45+00	2.75	24.05	24.05	17.17	17.17	17.17	17.17
43+00	3.25	23.85	23.85	17.10	17.1	17.1	17.1

42+00	3.25	23.75	23.81	17.11	17.11	17.11	17.12
40+00	3.75	23.75	23.68	17.04	17.04	17.04	17.04
38+00	4.25	23.50	23.45	16.95	16.95	16.95	16.95
36+00	3.25	23.43	23.35	16.88	16.88	16.88	16.88
35+00	3.25	23.25	23.25	16.86	16.86	16.86	16.86
33+00	4.75	23.15	23.15	16.74	16.74	16.74	16.74
31+00	2.75	23.05	23.05	16.66	16.66	16.66	16.66
29+00	3.75	22.95	22.95	16.50	16.50	16.50	16.50
28+00	2.75	22.95	22.95	16.32	16.32	16.32	16.32
27+00	2.75	22.95	22.95	16.18	16.18	16.18	16.18
26+00	2.75	22.95	22.95	15.97	15.97	15.97	15.97
24+70	1.75	22.95	22.95	16.11	16.11	16.11	16.11
24+00	2.25	22.95	22.95	16.13	16.13	16.13	16.13
23+99	2.25	18.75	18.75	16.12	16.12	16.12	16.12
23+83	Old Mt. View-Alviso Rd						
23+67	2.25	18.75	18.75	16.10	16.10	16.10	16.10
22+42	1.75	21.80	21.74	15.80	15.80	15.80	15.80
21+42	1.75	21.68	21.62	15.68	15.68	15.68	15.68
19+42	2.25	21.43	21.43	15.24	15.24	15.24	15.24
18+96	1.25	24.25	24.25	15.37	15.37	15.37	15.37
18+26	HWY 237						
17+55	1.25	24.37	24.31	15.01	15.01	15.01	15.01
17+49	1.00	22.60	23.50	15.04	15.04	15.04	15.04
17+42	0.75	20.95	22.75	15.03	15.03	15.03	15.03
16+81	0.75	20.75	17.79	15.08	15.08	15.08	15.08
16+68	Bay Trail						
16+54	0.75	20.75	17.86	15.01	15.01	15.01	15.01
15+42	0.75	20.24	16.67	14.80	14.80	14.80	14.80
14+92	0.75	19.85	16.39	15.23	15.23	15.23	15.23
14+42	0.75	19.30	15.99	15.23	15.23	15.23	15.23
13+42	0.75	19.30	15.39	15.21	15.21	15.21	15.22
11+38	0.55	19.00	13.93	15.17	15.17	15.17	15.17
9+38	0.25	18.90	14.74	15.12	15.12	15.12	15.12

8+38	-0.25	18.93	14.74	15.10	15.10	15.10	15.10
7+38	-0.25	18.75	14.42	15.08	15.08	15.08	15.08
6+38	-0.25	18.81	14.30	15.06	15.06	15.06	15.06
4+34	-0.25	18.68	13.98	15.02	15.02	15.02	15.02
2+34	-0.75	18.68	13.80	14.97	14.97	14.97	14.98
0+34	-1.25	18.68	13.80	14.94	14.94	14.94	14.94

**Table 10. Required Bank Top Elevations for Providing the 100-Year Flood Protection
 (San Tomas Aquino Creek)**

River Station	Channel bottom elevation (ft,NAVD88)	Existing bank top elevation (ft, NAVD88)		Required minimum bank top elevation (ft, NAVD88)			
		Left	Right	Yr 0	Yr 50 w/ SLR 1	Yr 50 w/ SLR 2	Yr 50 w/ SLR 3
488+97	16.74	36.86	37.25	31.36	31.36	31.36	31.36
488+96	16.74	36.86	37.25	31.35	31.35	31.35	31.35
488+50	16.74	36.86	37.25	31.27	31.27	31.27	31.27
488+06	15.80	37.38	34.61	31.15	31.15	31.15	31.15
486+77	Hwy 101						
485+52	15.38	34.41	35.02	30.01	30.01	30.01	30.01
485+13	16.87	35.11	34.68	30.11	30.11	30.11	30.11
483+48	14.78	35.06	34.41	29.82	29.82	29.82	29.82
481+43	14.10	34.06	33.36	29.06	29.06	29.06	29.06
478+42	13.28	33.81	32.93	28.45	28.45	28.45	28.45
476+42	12.92	35.97	35.48	27.84	27.84	27.84	27.84
476+21	Pedestrian bridge						
476+13	13.32	35.88	35.60	27.79	27.79	27.79	27.79
475+44	13.84	34.46	31.95	27.59	27.59	27.59	27.59
472+10	12.45	31.60	30.98	26.77	26.77	26.77	26.77
468+91	11.88	31.30	30.52	26.10	26.10	26.10	26.10
466+82	11.47	29.65	29.55	26.30	26.30	26.30	26.30
466+11	Mission Creek Blvd						
465+03	11.38	29.86	29.40	26.17	26.17	26.17	26.17
461+60	10.65	28.96	28.70	25.80	25.80	25.80	25.80
461+21	10.46	27.54	28.95	25.75	25.75	25.75	25.75
460+40	10.85	26.74	28.95	25.91	25.91	25.91	25.91
459+95	Agnew Rd						
458+61	10.47	28.56	28.15	24.96	24.96	24.96	24.96
456+22	10.09	28.27	27.59	24.69	24.69	24.69	24.69
453+45	9.43	28.05	27.81	24.51	24.51	24.51	24.51

449+62	8.87	27.93	27.18	24.18	24.18	24.18	24.18
446+04	8.57	27.74	27.49	23.93	23.93	23.93	23.93
444+49	8.58	27.06	27.43	23.82	23.82	23.82	23.82
443+26	8.21	26.74	27.37	23.71	23.71	23.71	23.71
439+62	7.92	27.31	26.68	23.46	23.46	23.46	23.46
435+92	7.11	26.99	26.37	23.31	23.31	23.31	23.31
432+23	6.71	26.68	26.18	23.11	23.11	23.11	23.11
428+45	5.06	26.37	25.80	22.92	22.92	22.92	22.92
425+08	5.81	25.99	25.43	22.74	22.74	22.74	22.74
421+45	4.31	25.34	24.96	22.55	22.55	22.55	22.55
419+94	4.04	25.71	26.32	22.47	22.47	22.47	22.47
419+24	Bridge to parking lot						
418+38	6.32	25.36	26.18	21.97	21.97	21.97	21.97
414+66	6.47	24.75	24.35	21.63	21.63	21.63	21.63
411+04	6.28	24.70	23.55	21.16	21.16	21.16	21.16
409+52	6.99	24.25	24.65	20.94	20.94	20.94	20.94
408+65	Tasman Dr						
408+02	2.00	21.49	23.25	20.95	20.95	20.95	20.95
407+22	2.00	21.43	23.12	20.86	20.86	20.86	20.86
403+82	2.43	22.74	23.06	20.48	20.48	20.48	20.48
401+89	Pedestrian Bridge						
401+62	3.08	22.83	23.25	19.82	19.82	19.82	19.82
399+83	2.78	22.24	21.18	19.64	19.64	19.64	19.64
396+72	3.00	22.69	21.42	19.51	19.51	19.51	19.51
393+83	1.75	21.93	21.38	19.33	19.33	19.33	19.33
390+08	0.56	21.87	20.85	18.97	18.97	18.97	18.97
387+00	2.31	21.80	21.15	18.89	18.89	18.89	18.89
386+23	Great America Pkwy						
385+19	0.90	21.49	20.30	18.61	18.61	18.61	18.61
384+03	1.91	21.18	21.23	18.16	18.16	18.16	18.16
381+30	0.95	20.86	20.43	17.89	17.89	17.89	17.89
378+34	1.15	21.05	20.05	17.40	17.40	17.40	17.40
376+86	1.68	19.80	19.40	17.37	17.37	17.37	17.37

376+22	Old Mt View/Alviso Rd						
375+35	1.81	20.30	20.24	17.13	17.13	17.13	17.13
371+77	1.05	19.90	19.95	16.95	16.95	16.95	16.95
369+94	Pedestrian Bridge						
368+35	1.16	20.11	21.24	16.61	16.61	16.61	16.61
365+09	1.73	19.90	19.40	16.20	16.20	16.20	16.20
362+68	0.40	22.81	19.42	15.82	15.82	15.82	15.82
361+09	SR 237						
358+62	0.24	20.55	21.49	15.06	15.06	15.06	15.06
358+30	0.24	20.55	21.49	15.01	15.01	15.01	15.02
358+27	Bay Trail						
357+99	-0.34	19.06	20.41	14.71	14.71	14.71	14.71
357+19	-1.07	15.52	19.45	15.43	15.43	15.43	15.43
354+02	0.00	13.12	20.82	15.32	15.32	15.32	15.32
351+21	-0.28	12.61	18.52	15.22	15.22	15.22	15.22
349+40	-0.53	12.43	17.74	15.21	15.21	15.21	15.21
348+36	-0.79	12.37	17.46	15.19	15.19	15.19	15.19
347+46	-1.23	12.35	18.17	15.19	15.19	15.19	15.20
346+78	-1.53	12.35	19.95	15.20	15.20	15.20	15.20
344+85	-2.06	12.37	21.56	15.16	15.16	15.16	15.16
343+05	-3.64	12.75	19.00	15.14	15.14	15.14	15.14
341+17	-1.54	12.63	19.81	15.12	15.12	15.12	15.12
339+58	-1.20	12.79	18.24	15.10	15.10	15.10	15.10
337+06	-1.20	12.51	16.61	15.06	15.06	15.06	15.06
334+64	-1.51	12.47	13.86	15.04	15.04	15.04	15.05
332+88	-1.00	12.45	12.97	15.02	15.02	15.02	15.02
330+63	-1.29	12.03	12.38	15.00	15.00	15.00	15.00
330+60	-1.29	12.03	12.38	15.00	15.00	15.00	15.00

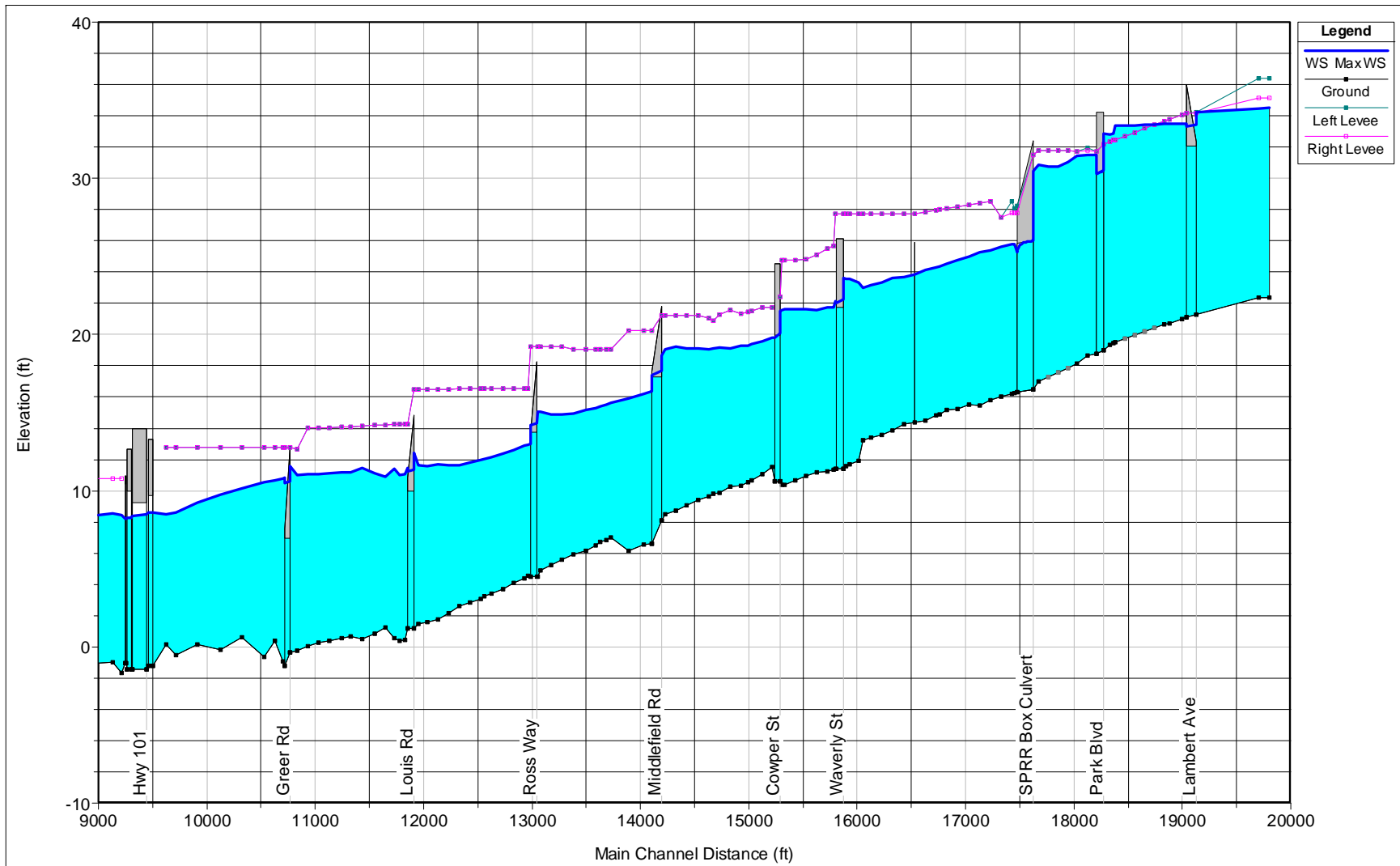


Figure 12. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Matadero Creek (Year 0)

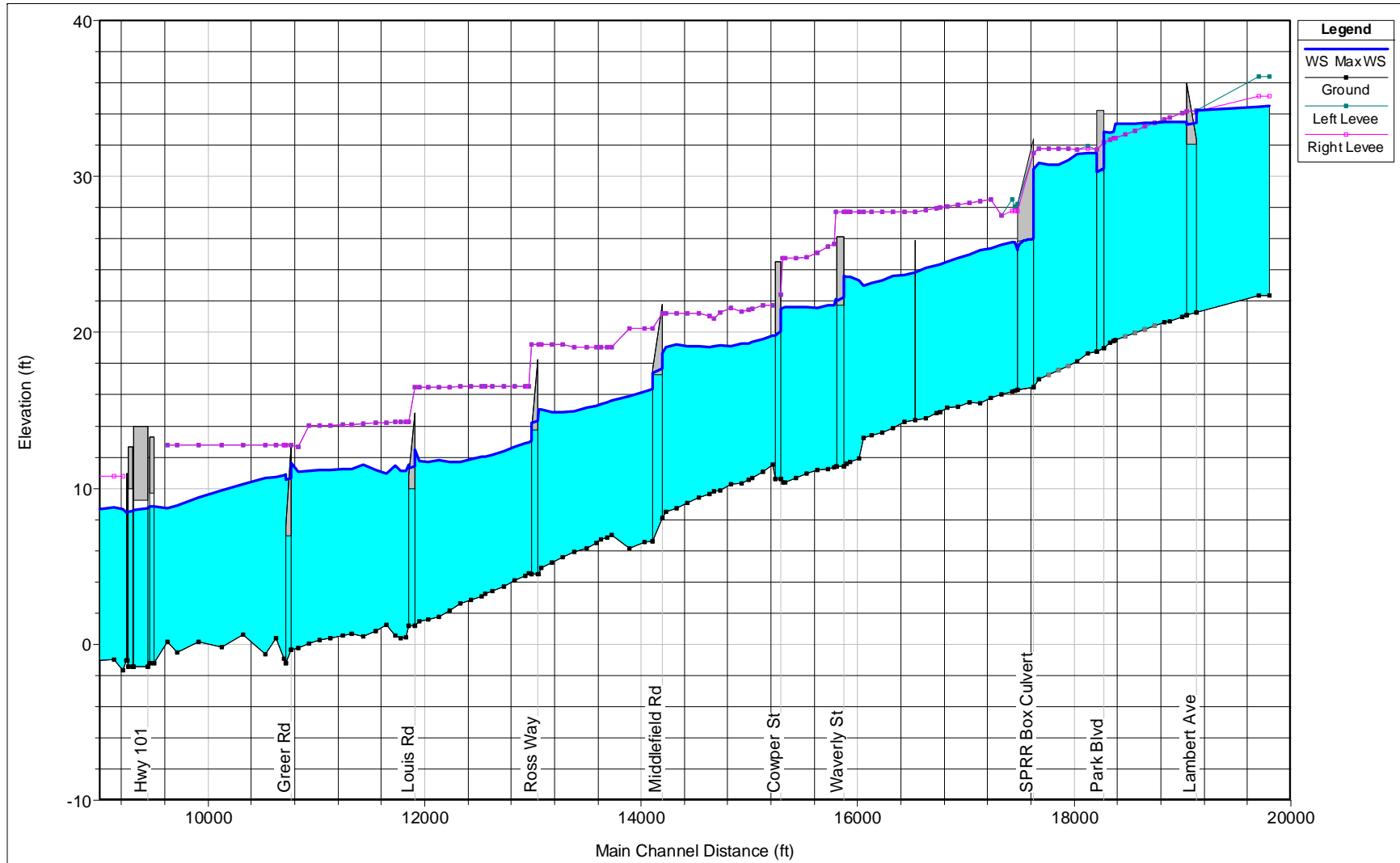


Figure 13. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Matadero Creek (Year 50 with SLR 1)

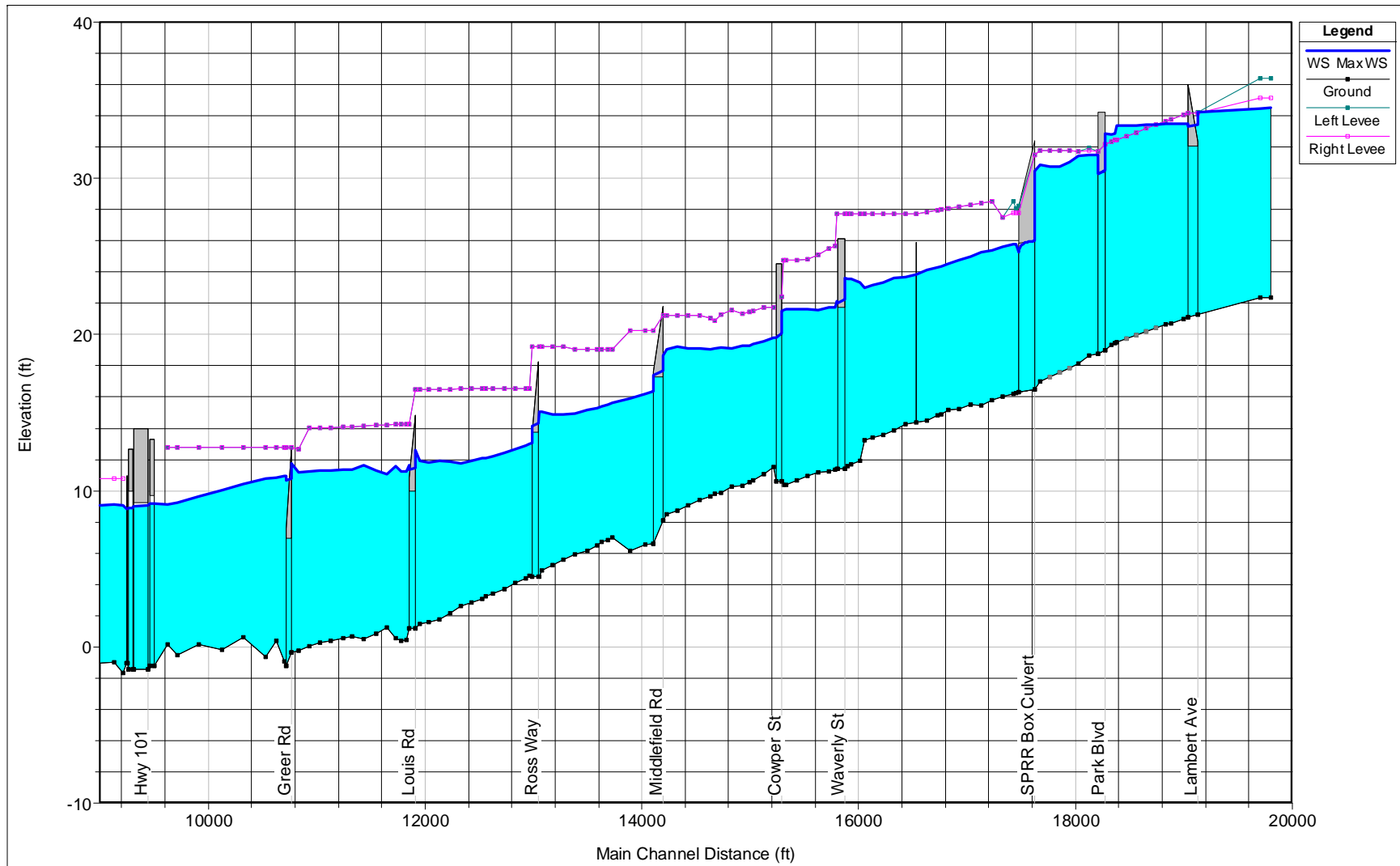


Figure 14. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Matadero Creek (Year 50 with SLR 2)

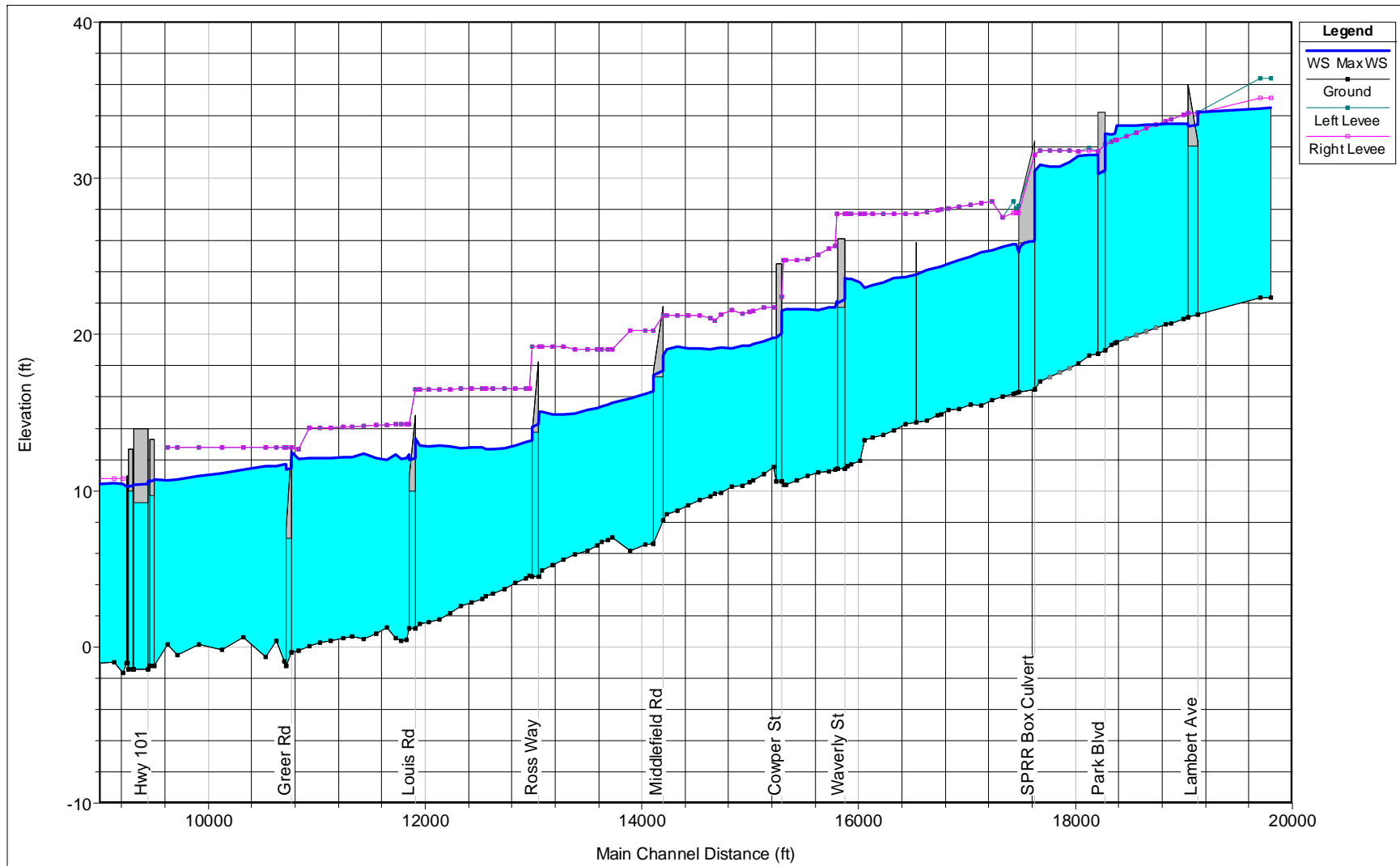


Figure 15. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Matadero Creek (Year 50 with SLR 3)

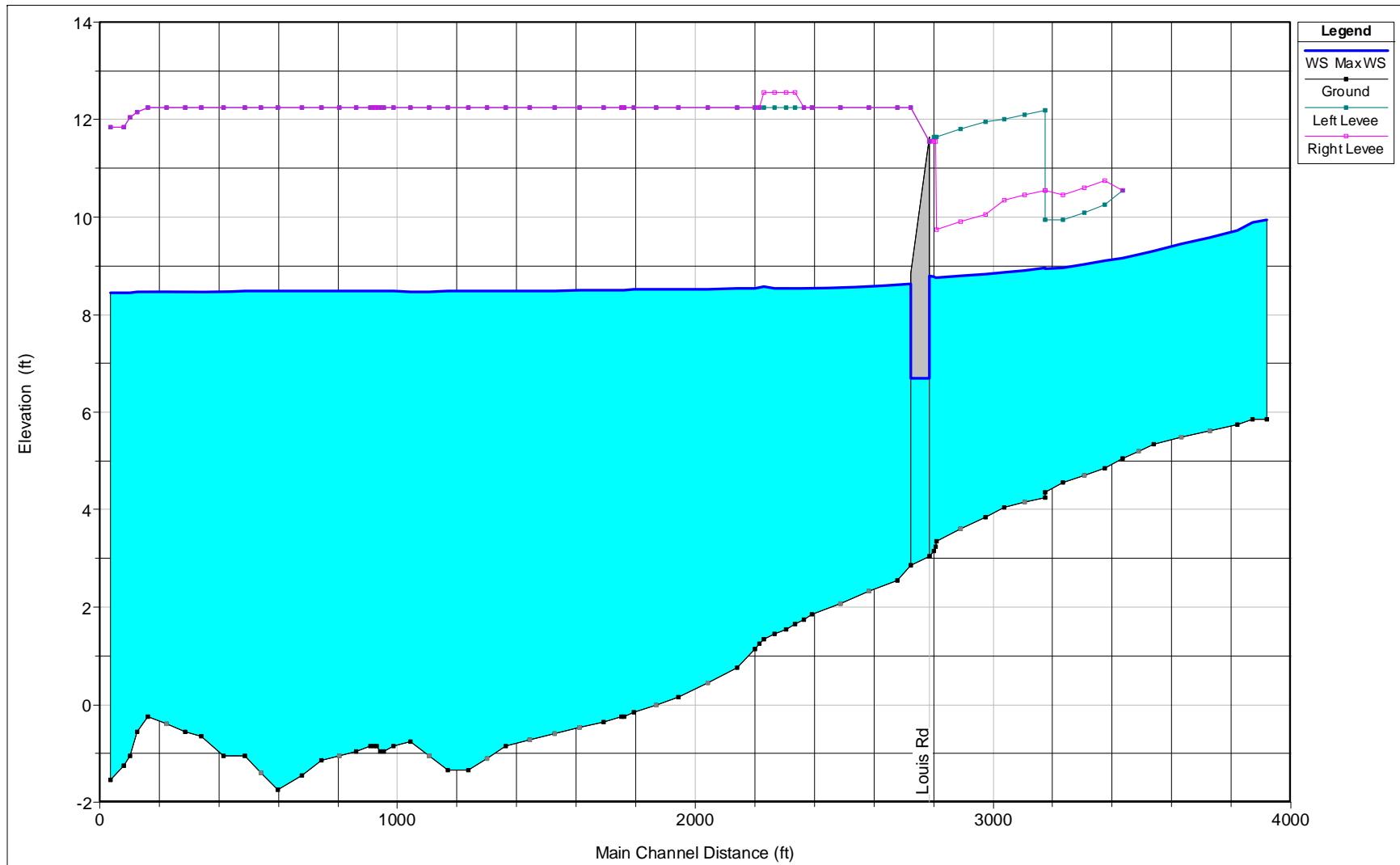


Figure 16. Computed 100-Year Water Surface Elevations Compared to Levee/Bank Elevations for Barron Creek (Year 0)

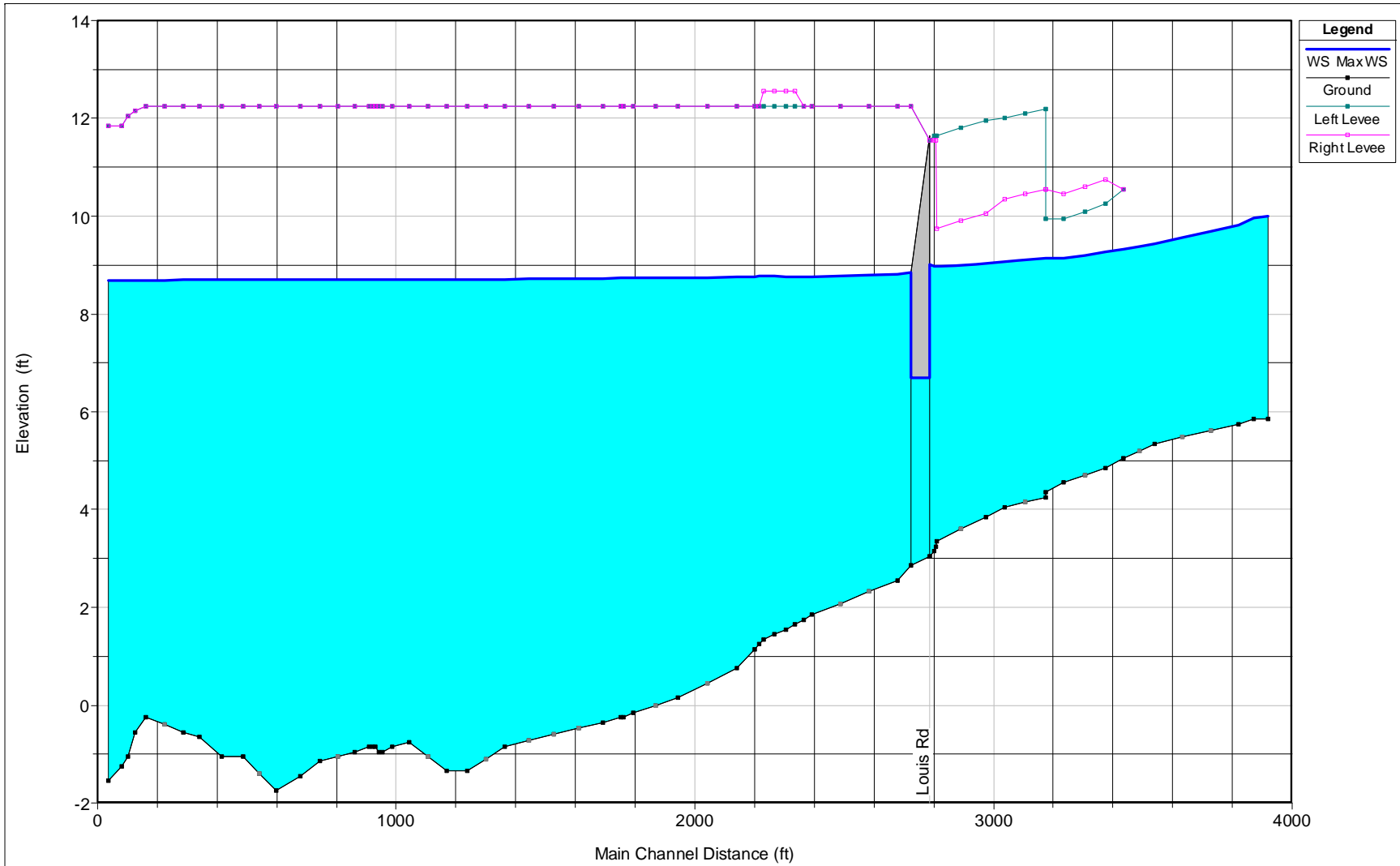


Figure 17. Computed 100-Year Water Surface Elevations Compared to Levee/Bank Elevations for Barron Creek (Year 50 with SLR 1)

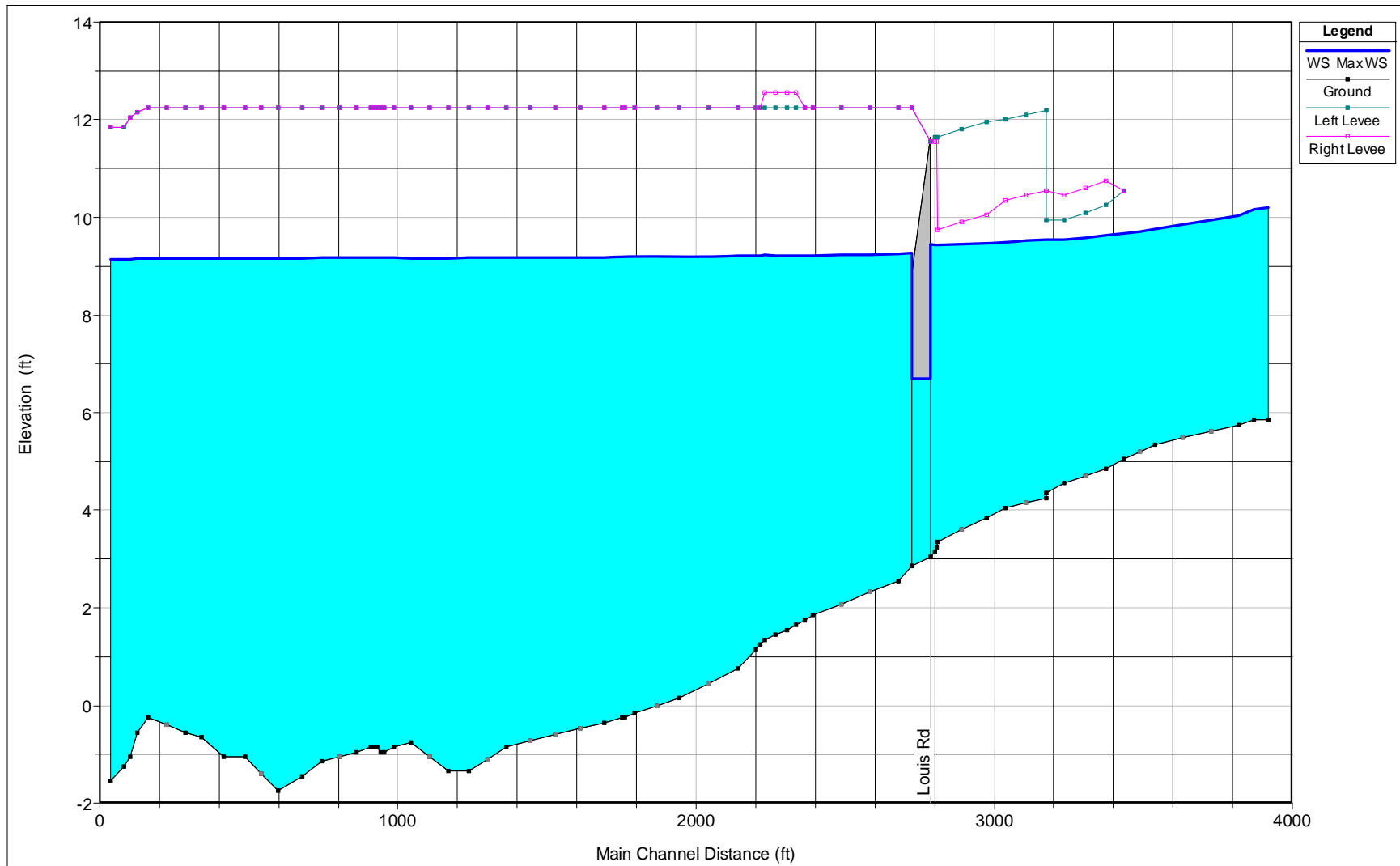


Figure 18. Computed 100-Year Water Surface Elevations Compared to Levee/Bank Elevations for Barron Creek (Year 50 with SLR 2)

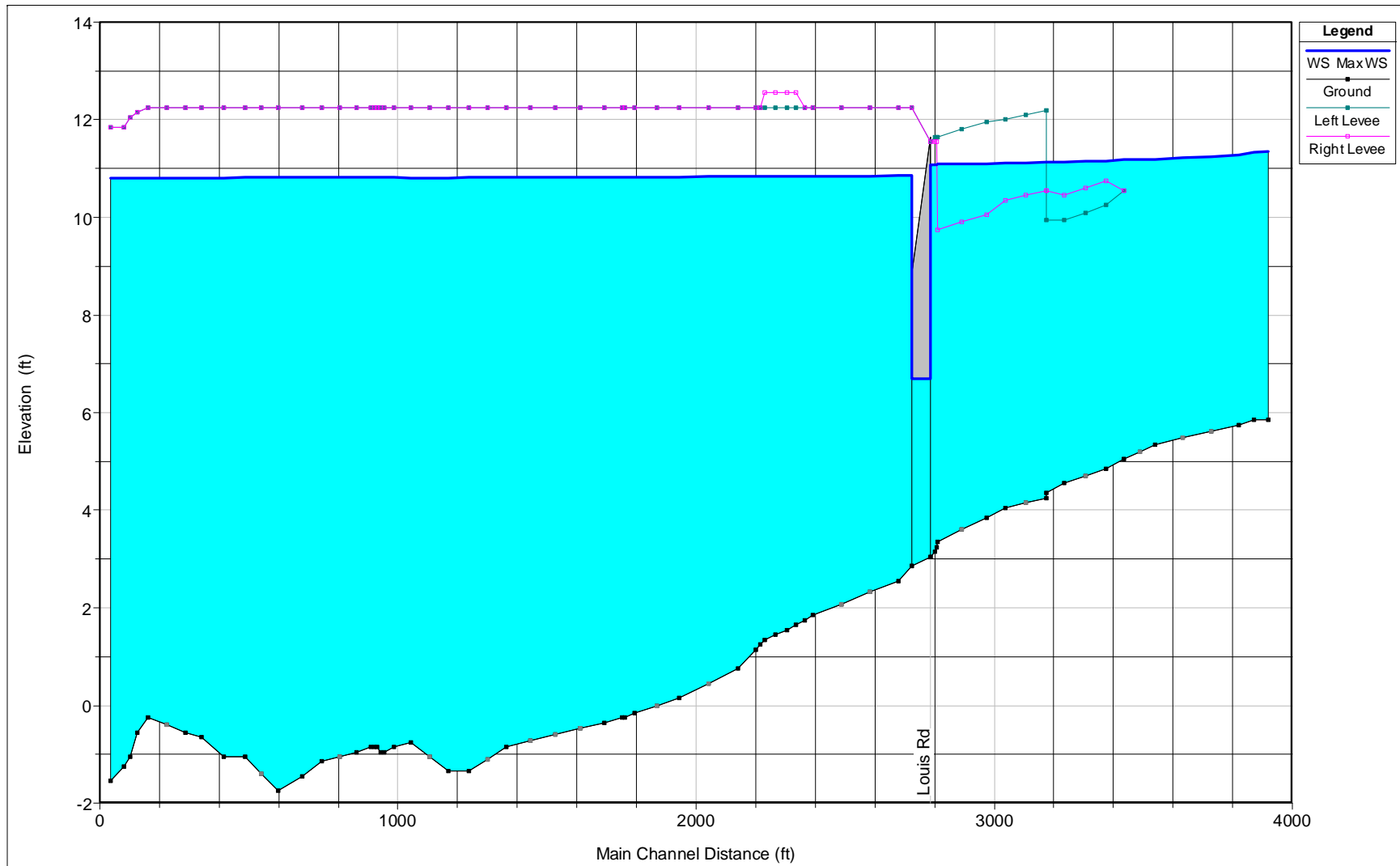


Figure 19. Computed 100-Year Water Surface Elevations Compared to Levee/Bank Elevations for Barron Creek (Year 50 with SLR 3)

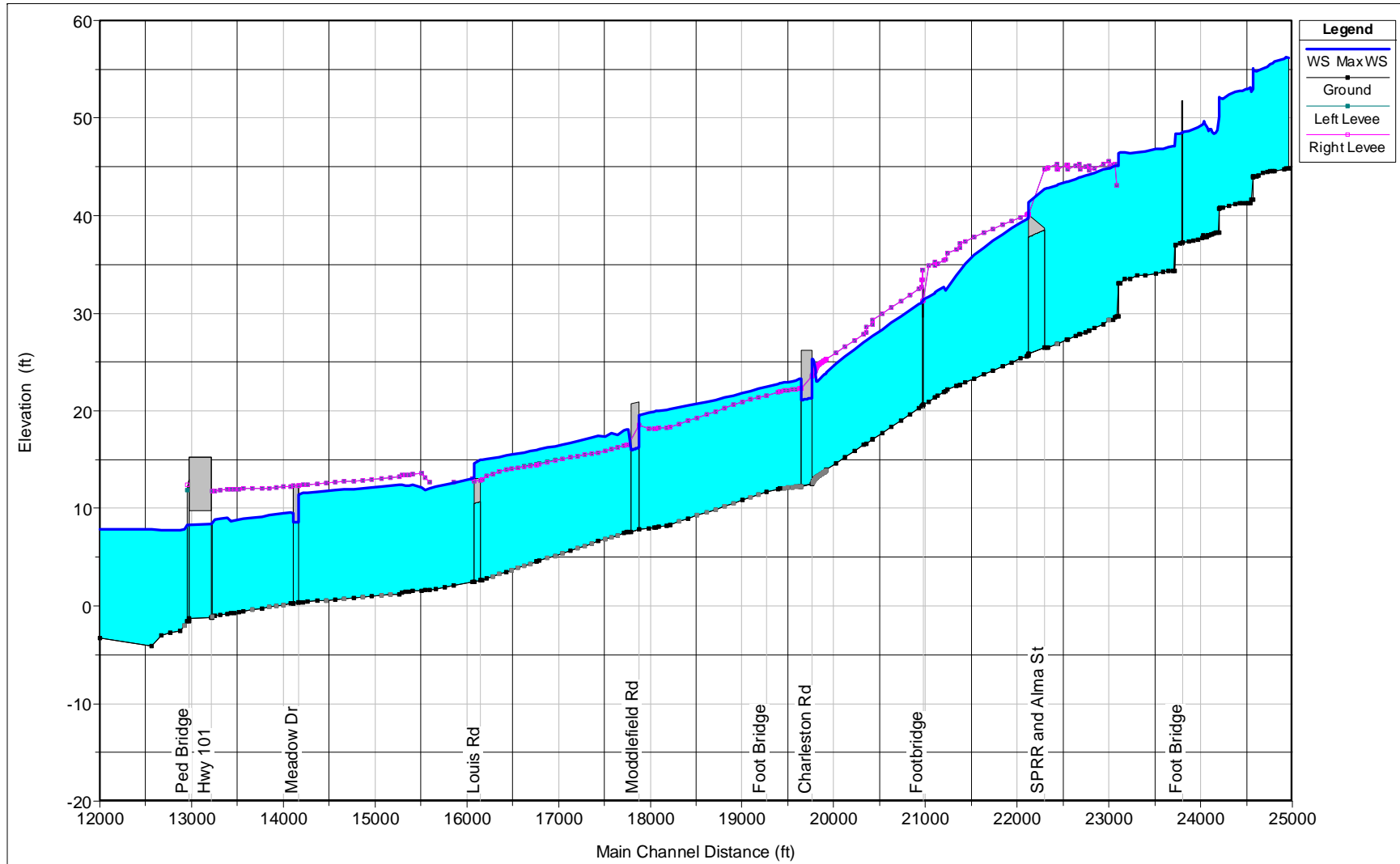


Figure 20. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Adobe Creek (Year 0)

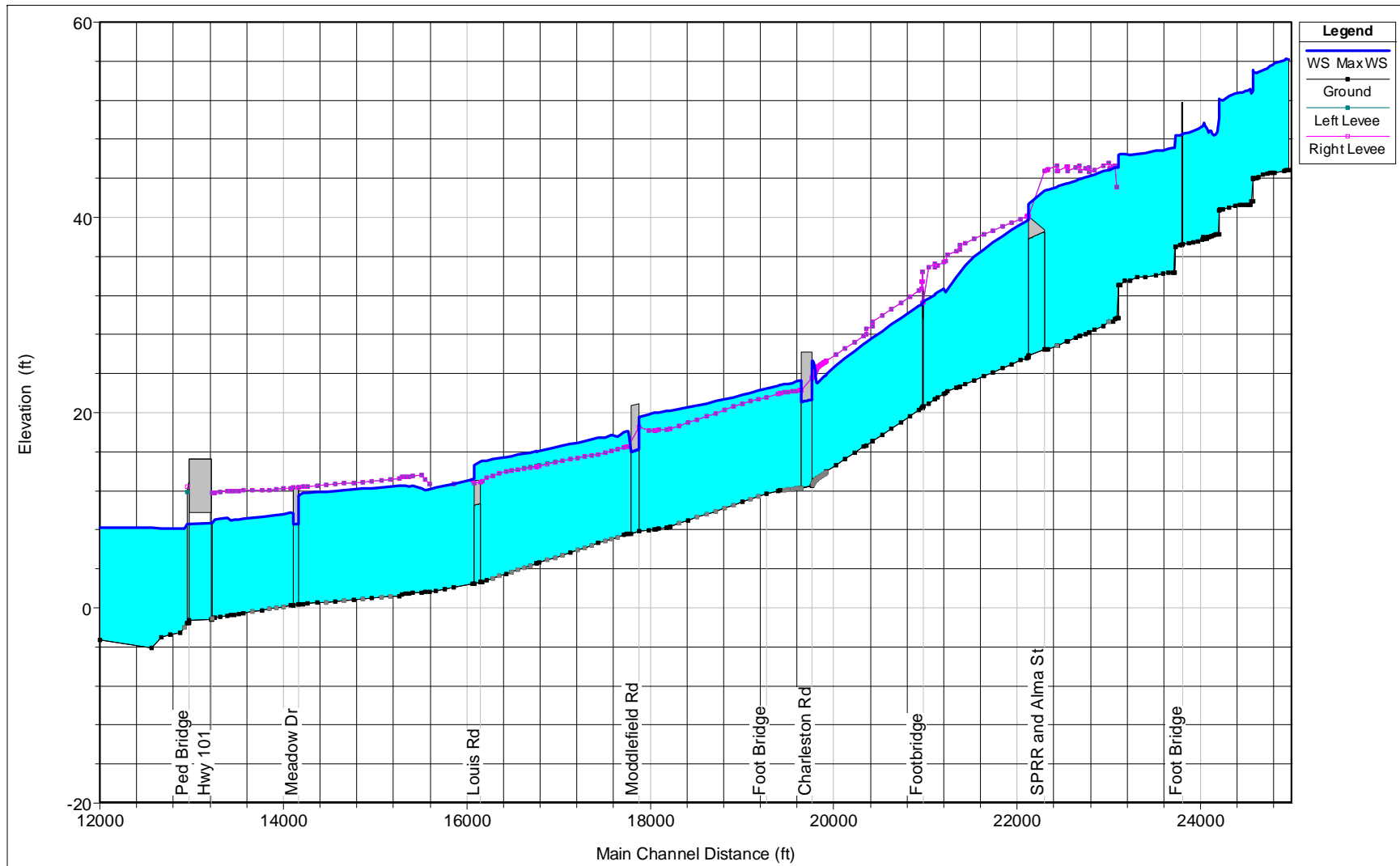


Figure 21. Computed 100-Year Water Surface Elevations Compared to Levee/Floodwall Elevations for Adobe Creek (Year 50 with SLR 1)

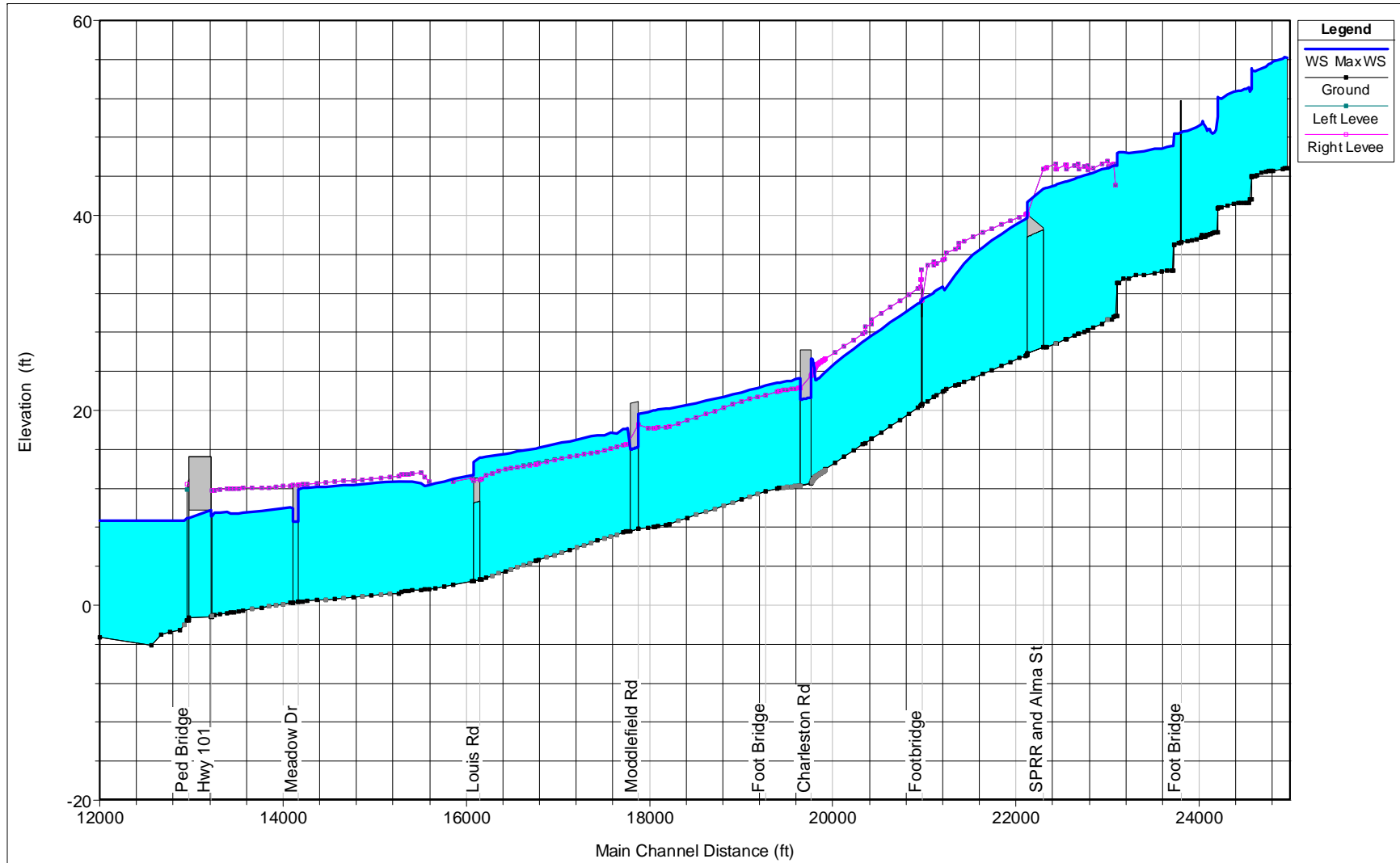
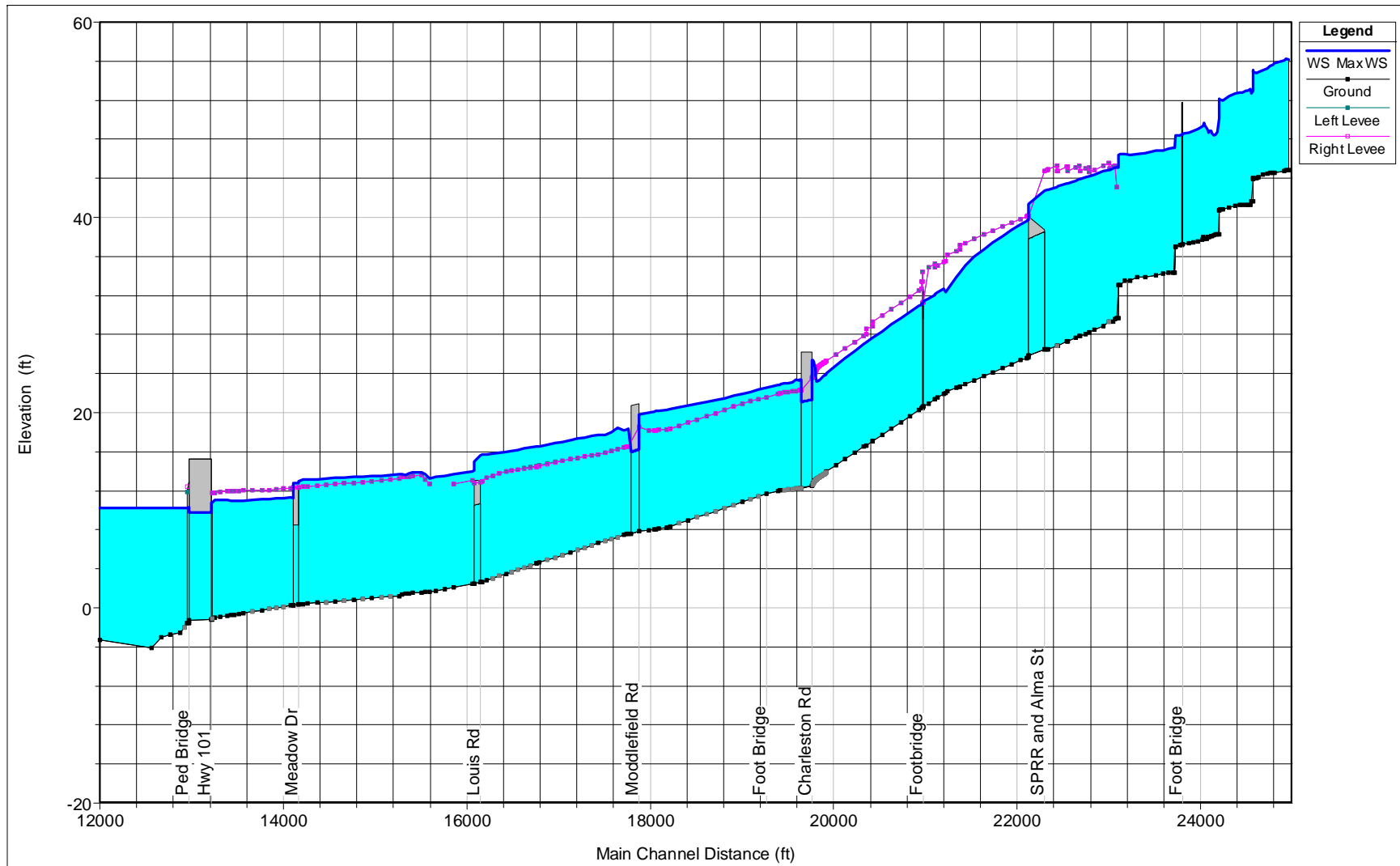


Figure 22. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Adobe Creek (Year 50 with SLR 2)



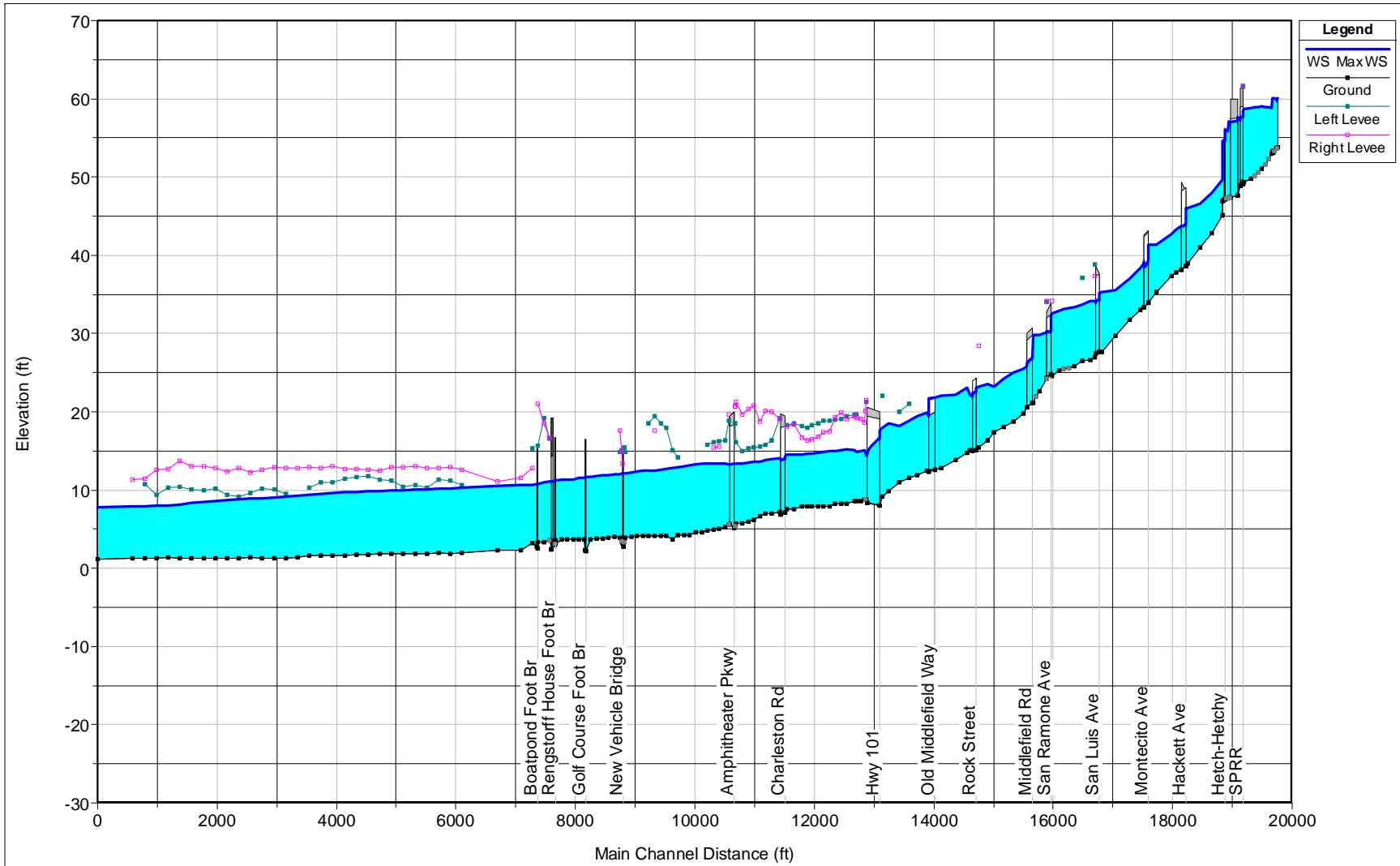


Figure 24. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Permanente Creek (Year 0)

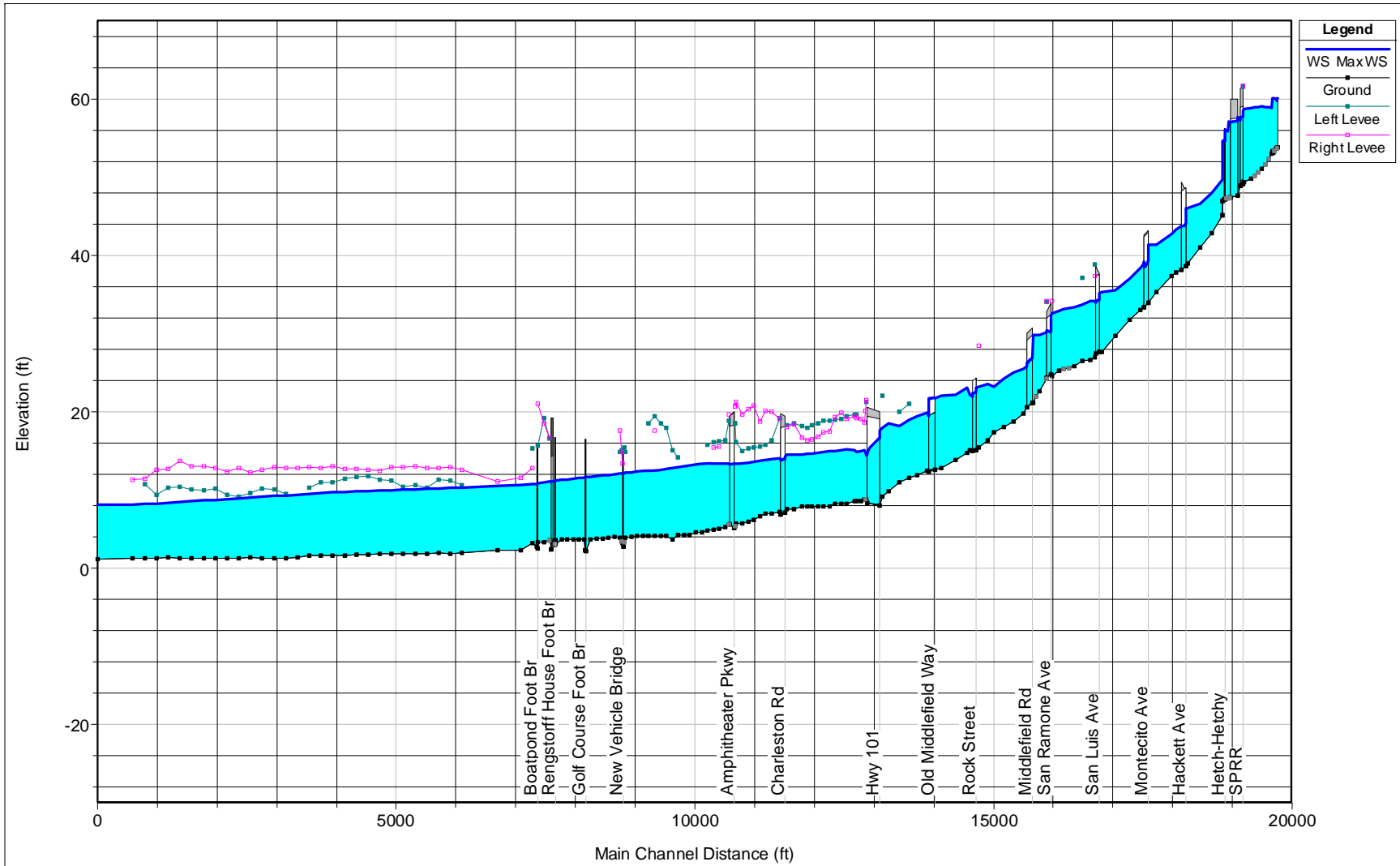


Figure 25. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Permanente Creek (Year 50 with SLR 1)

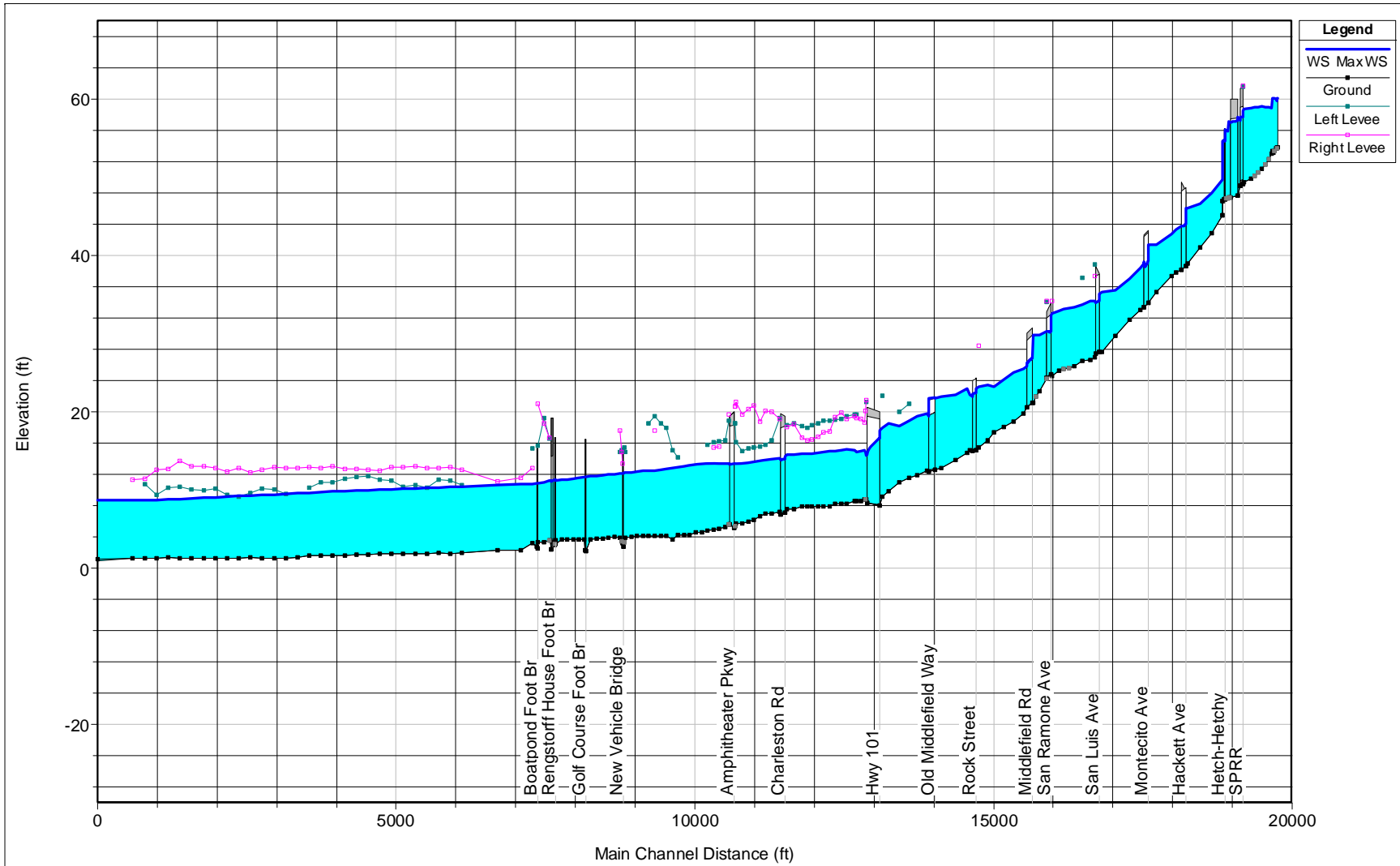


Figure 26. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Permanente Creek (Year 50 with SLR 2)

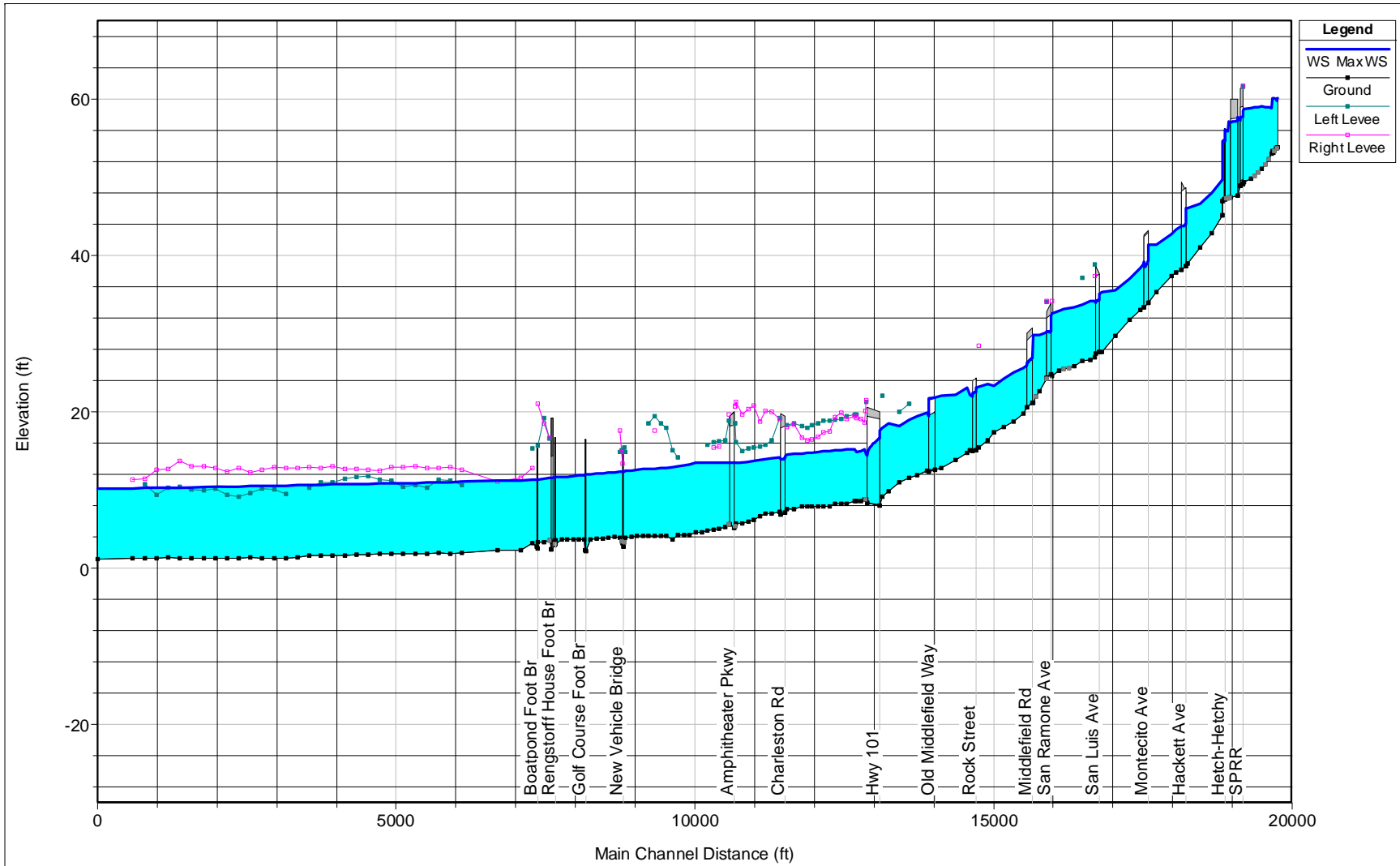


Figure 27. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Permanente Creek (Year 50 with SLR 3)

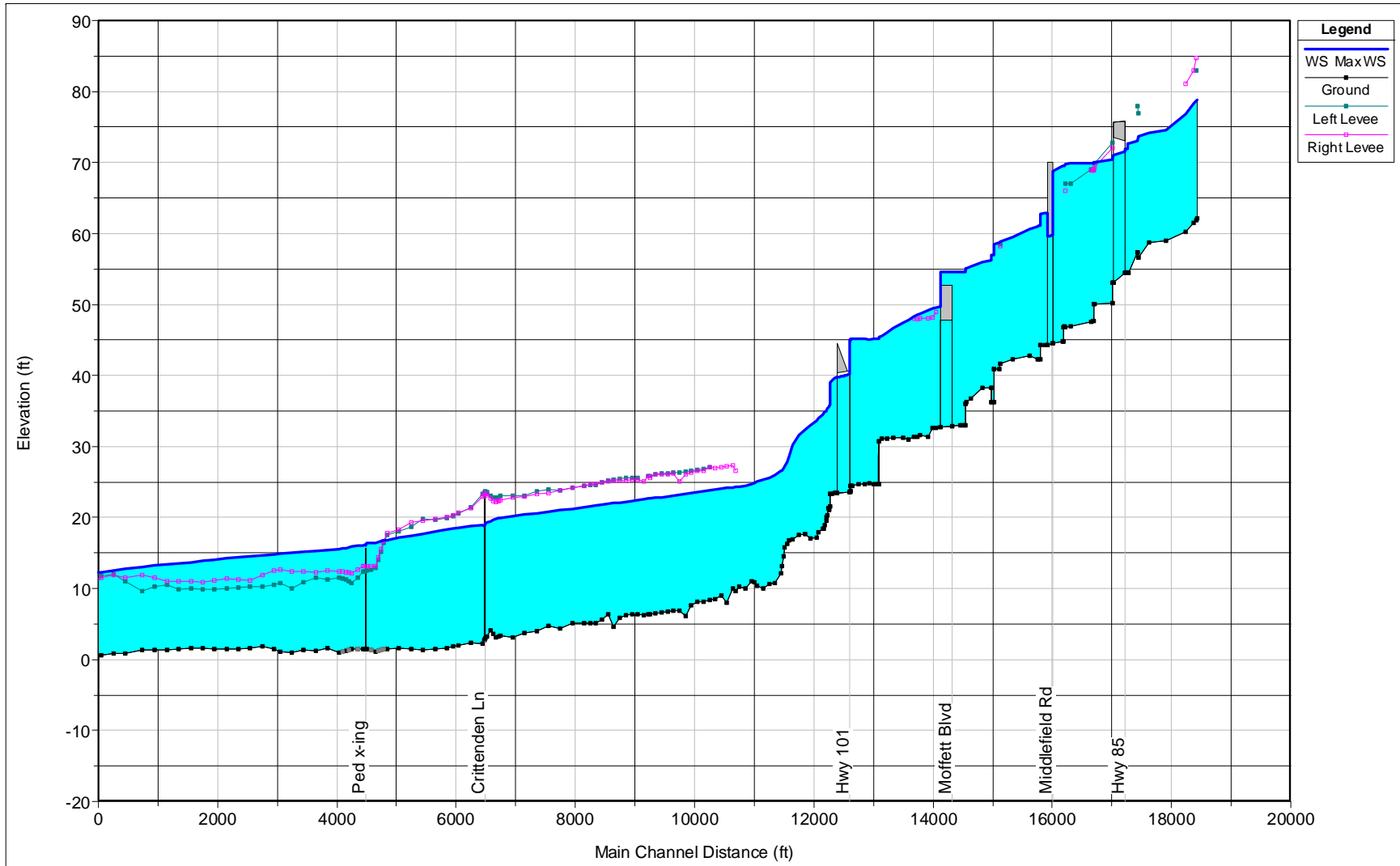


Figure 28. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Stevens Creek (Year 0)

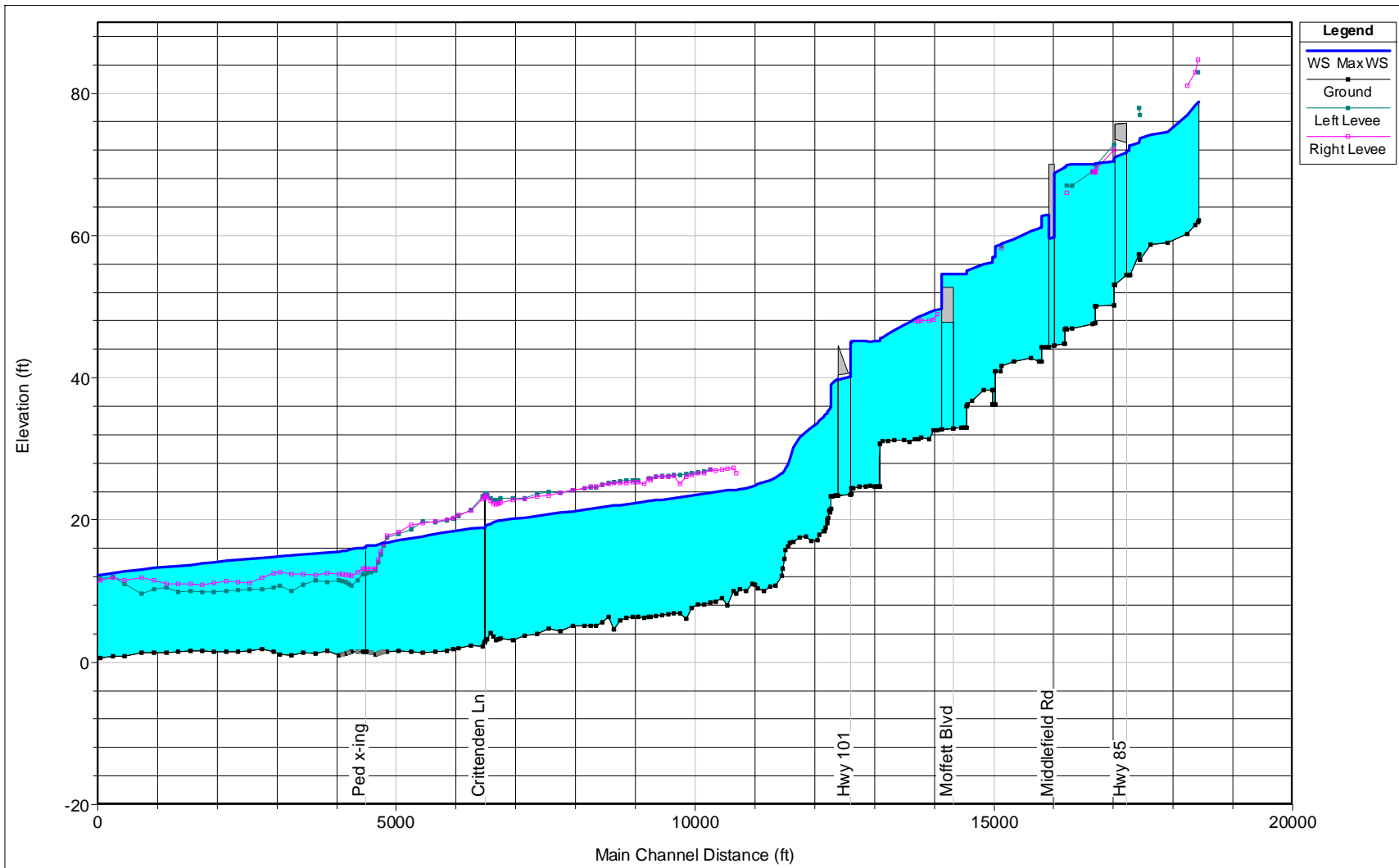


Figure 29. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Stevens Creek (Year 50 with SLR 1)

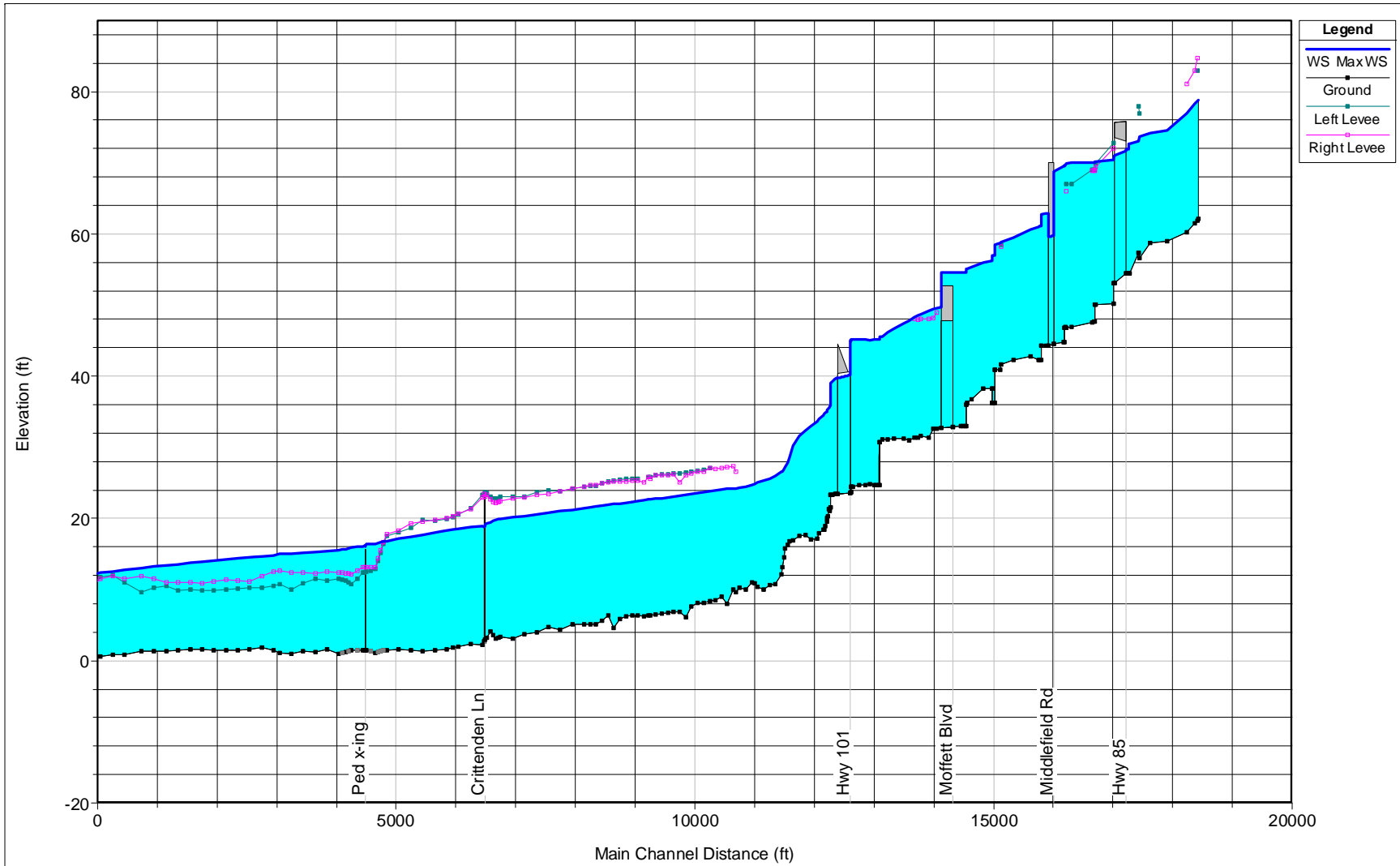
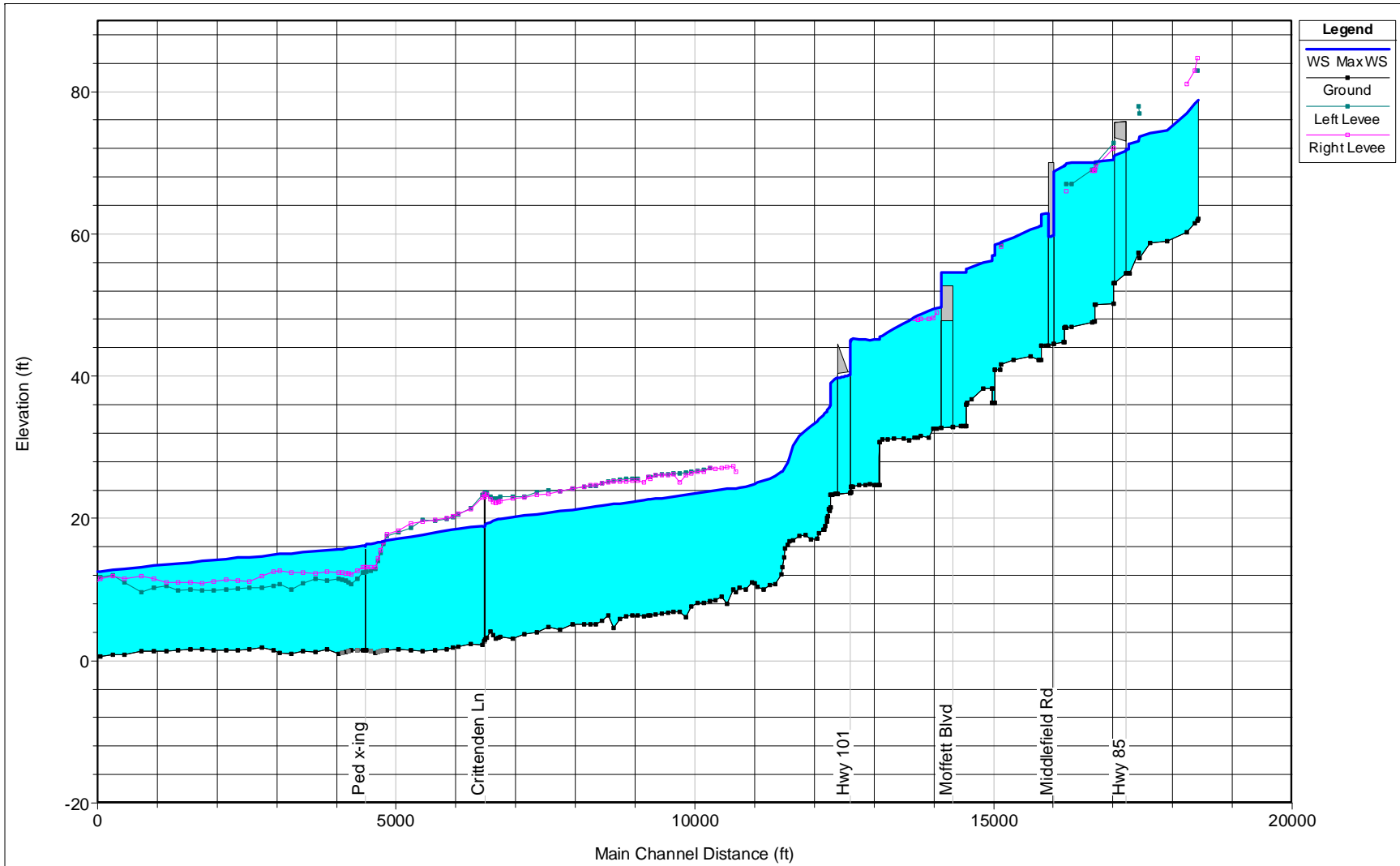


Figure 30. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Stevens Creek (Year 50 with SLR 2)



**Figure 31. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Stevens Creek
(Year 50 with SLR 3)**

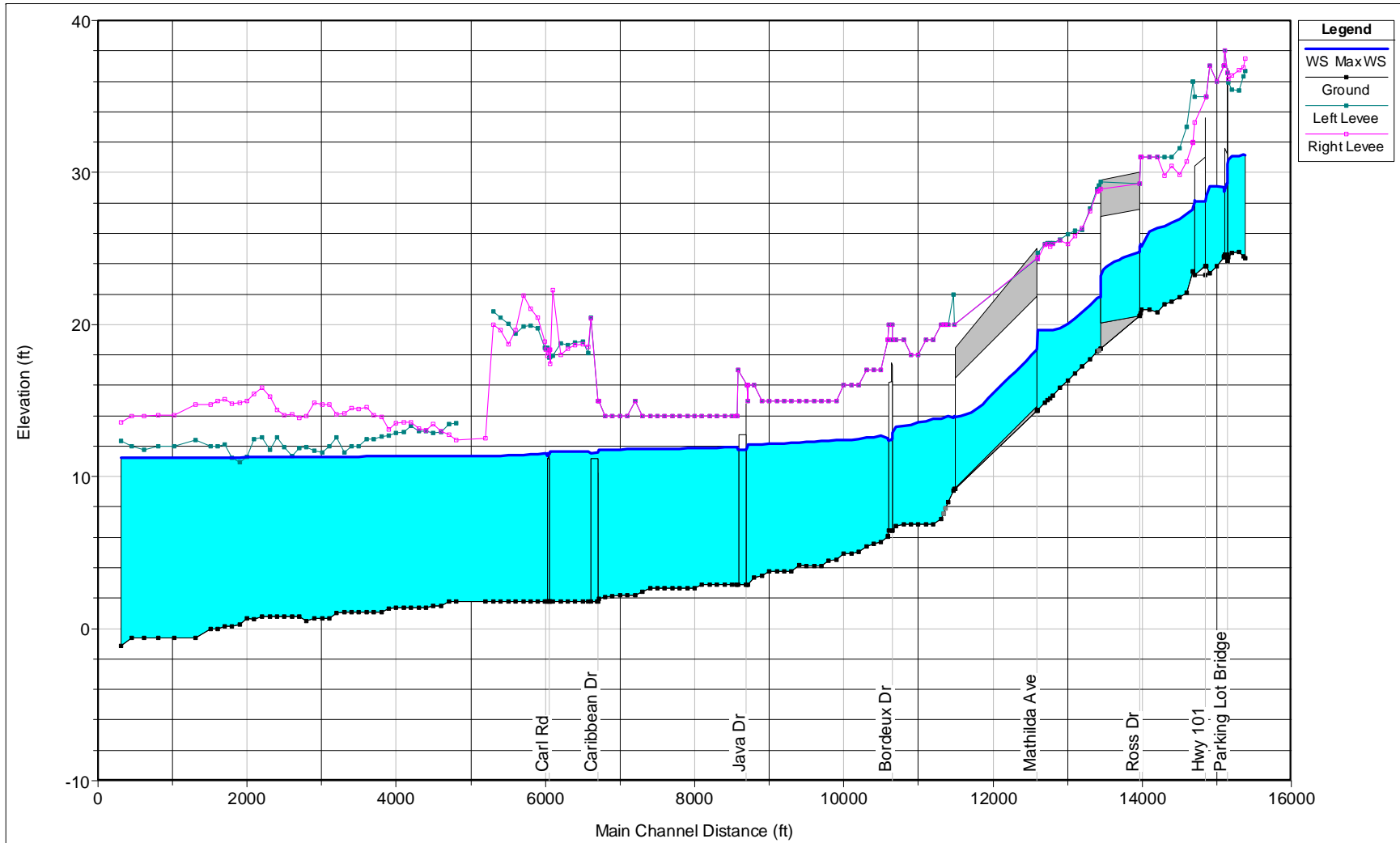


Figure 32. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale West Channel (Year 0)

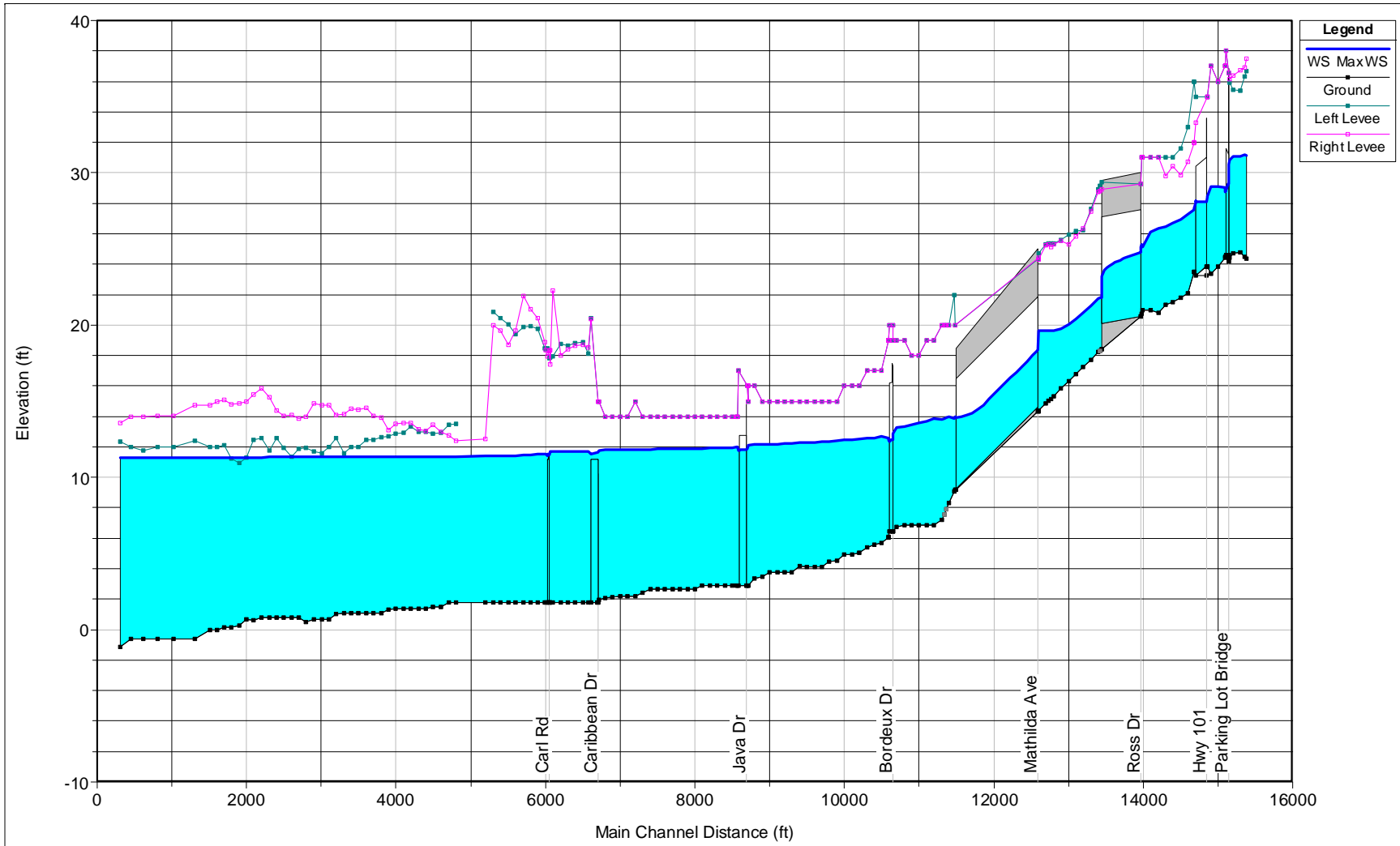


Figure 33. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale West Channel (Year 50 with SLR 1)

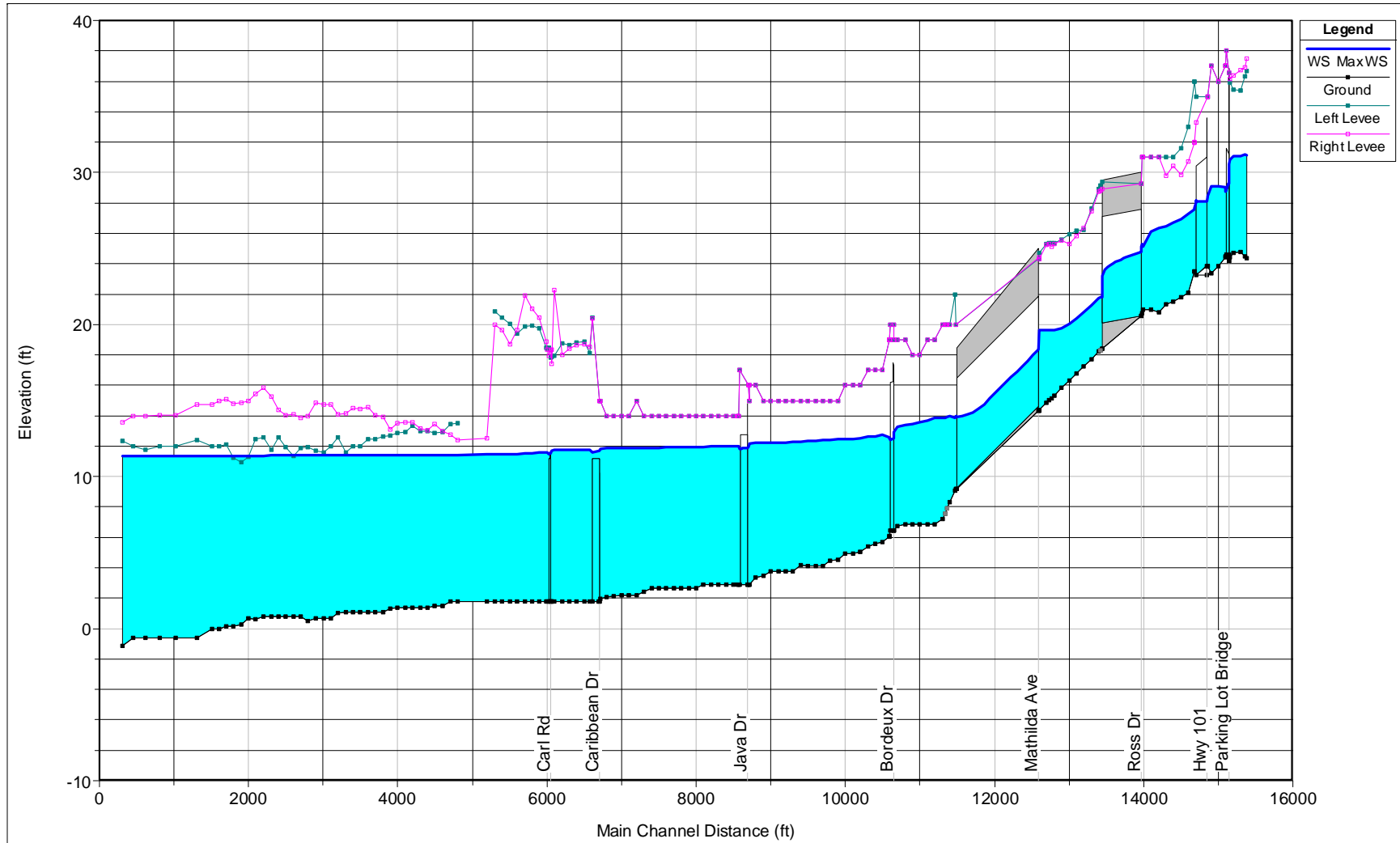


Figure 34. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale West Channel (Year 50 with SLR 2)

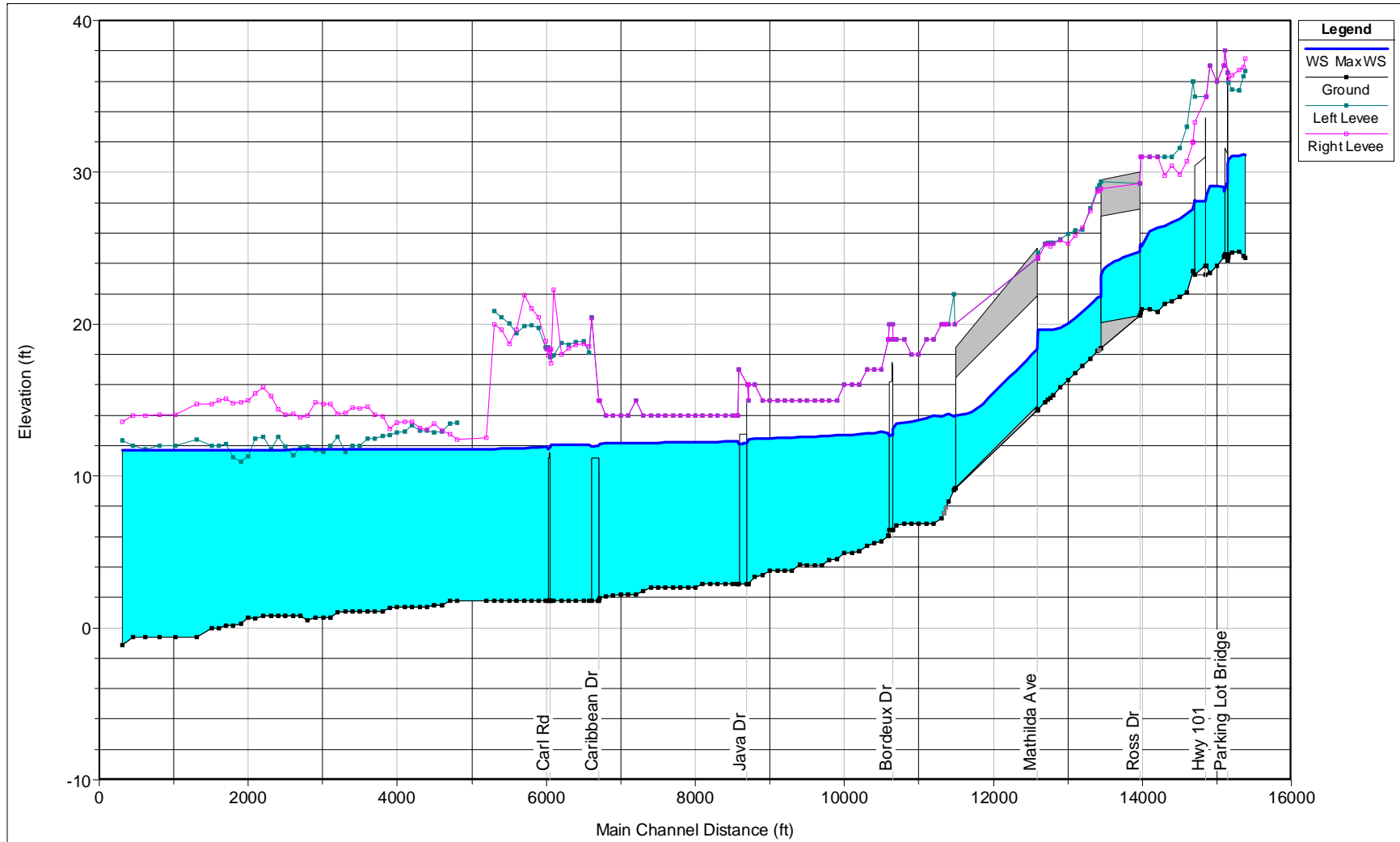


Figure 35. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale West Channel (Year 50 with SLR 3)

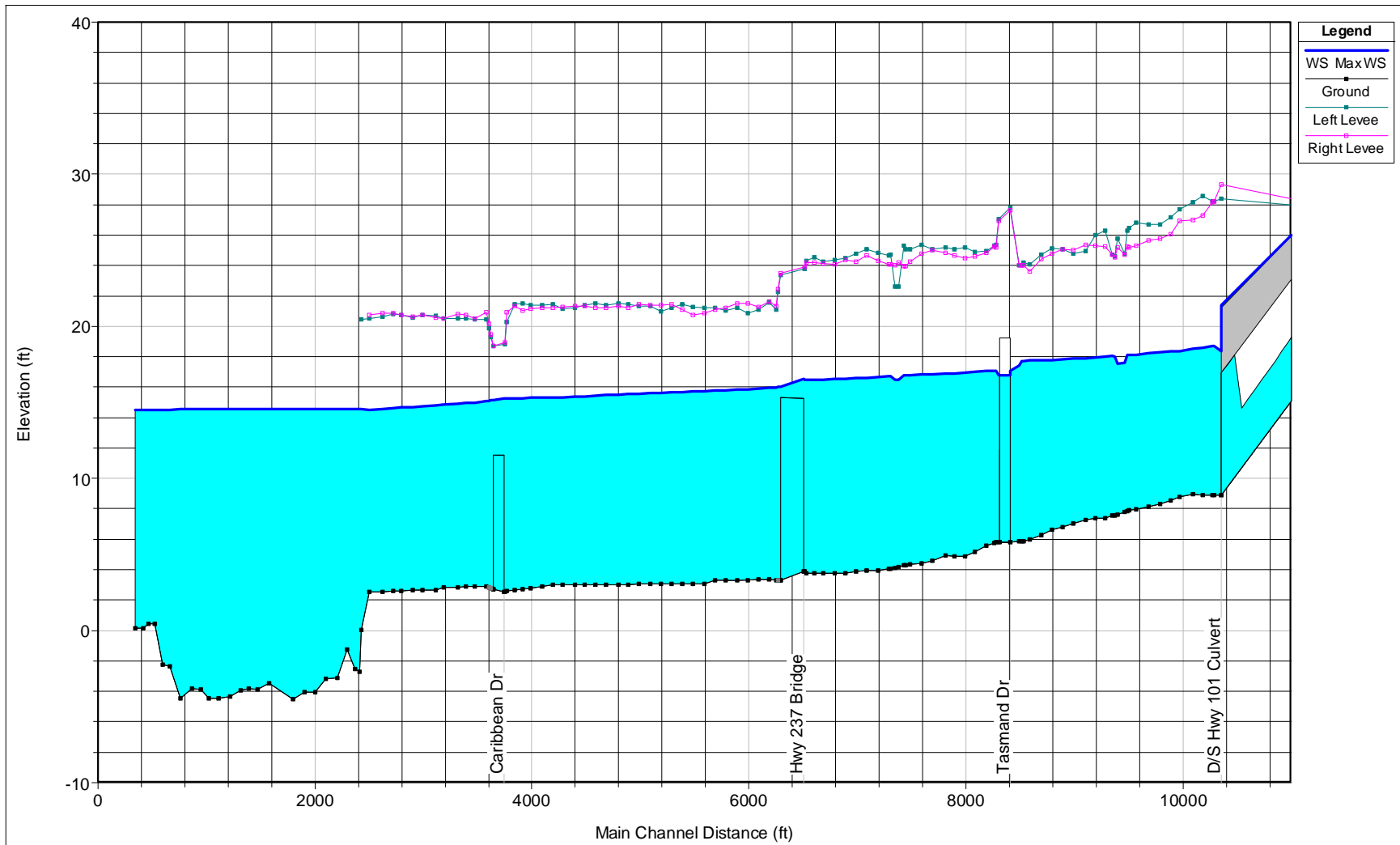


Figure 36. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale East Channel (Year 0)

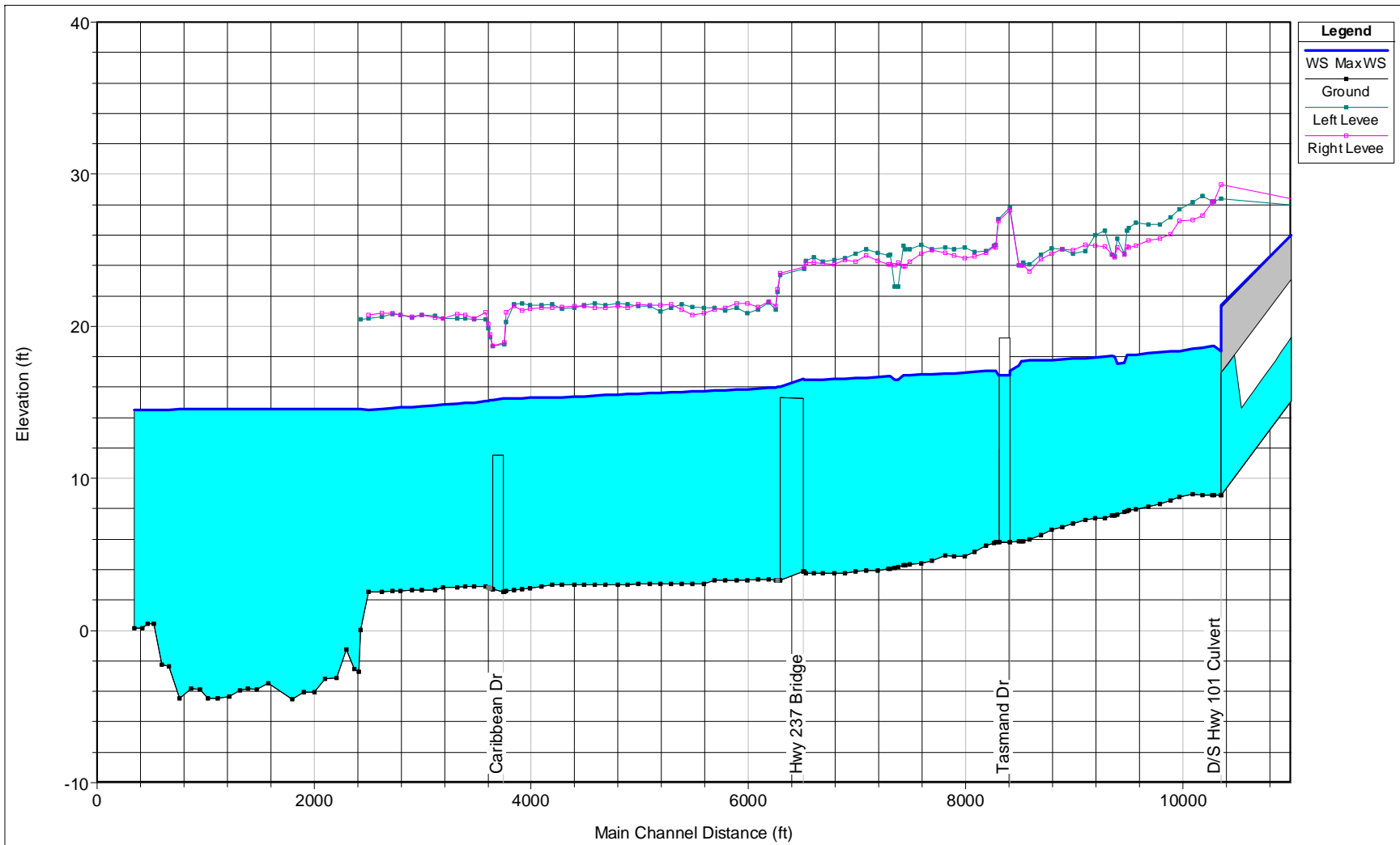


Figure 37. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale East Channel (Year 50 with SLR 1)

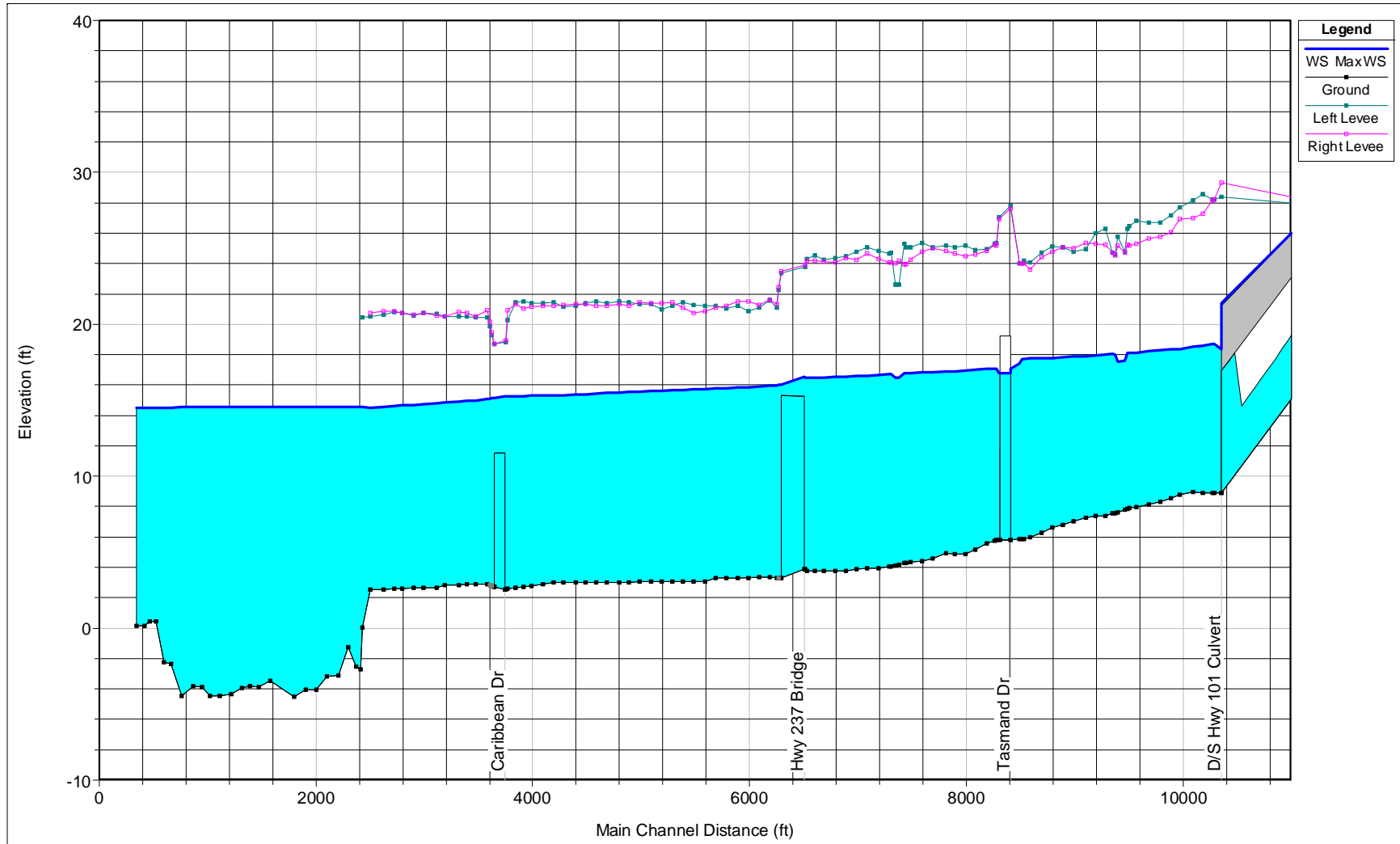


Figure 38. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale East Channel (Year 50 with SLR 2)

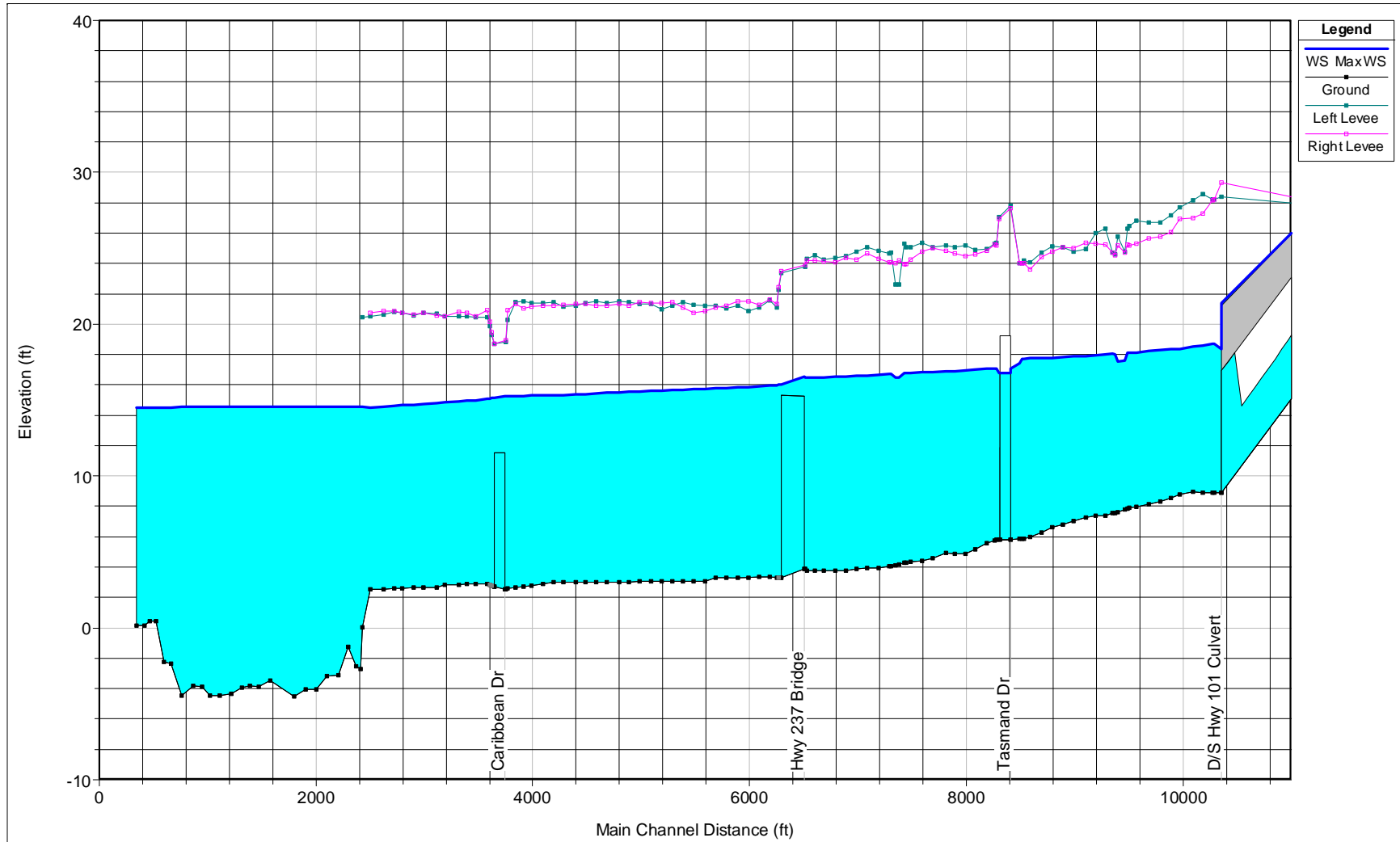


Figure 39. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Sunnyvale East Channel (Year 50 with SLR 3)

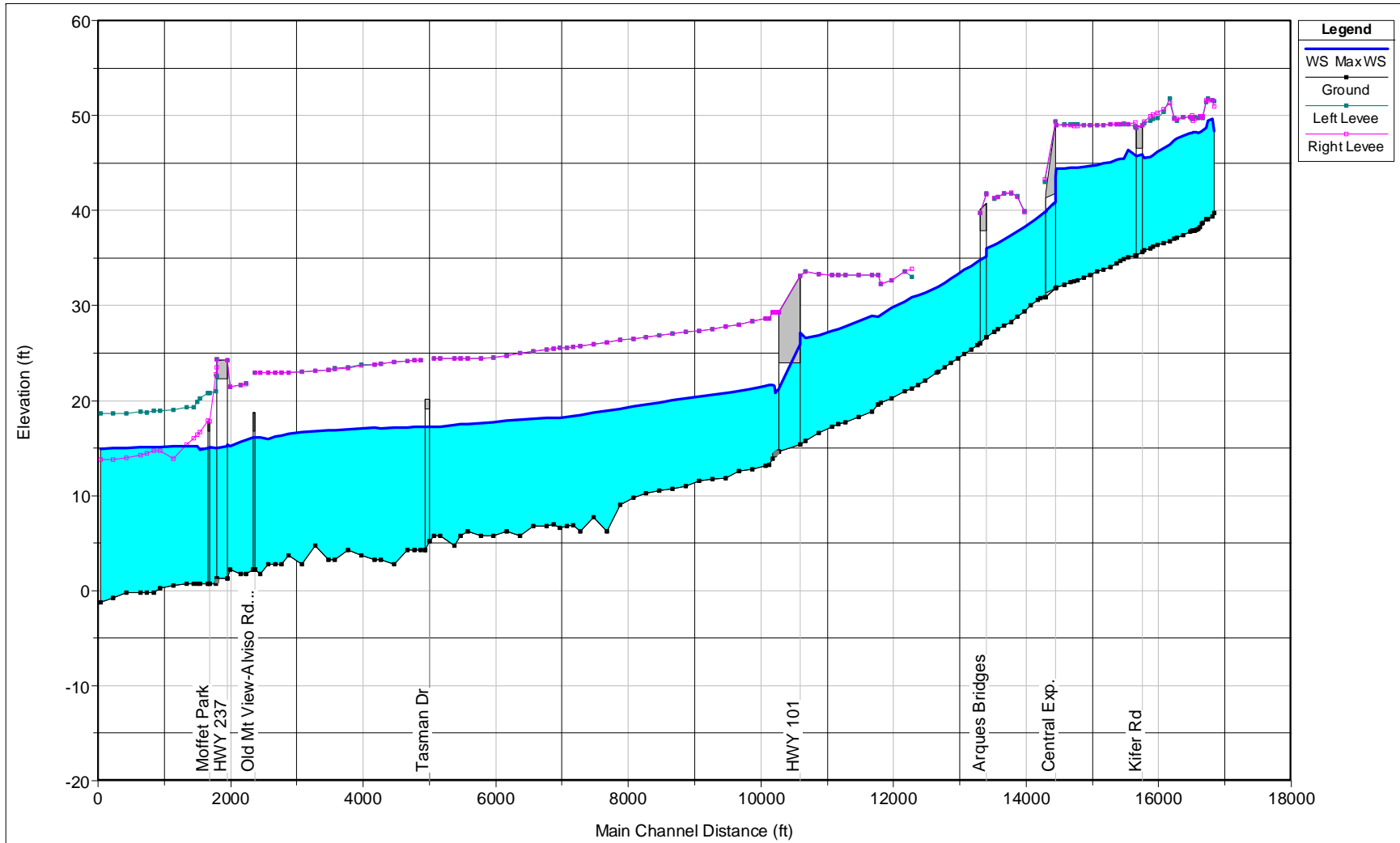


Figure 40. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Calabazas Creek (Year 0)

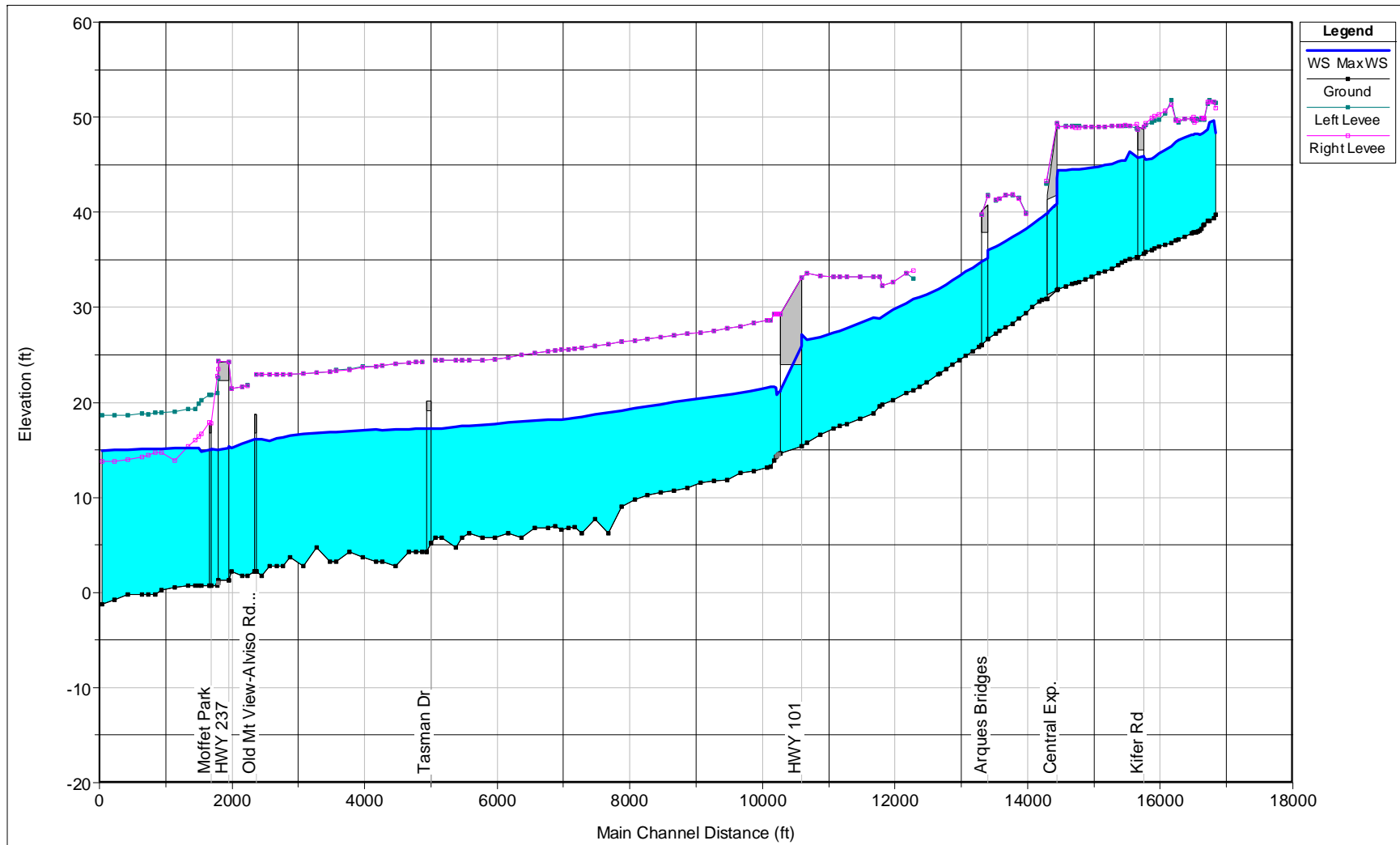


Figure 41. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Calabazas Creek (Year 50 with SLR 1)

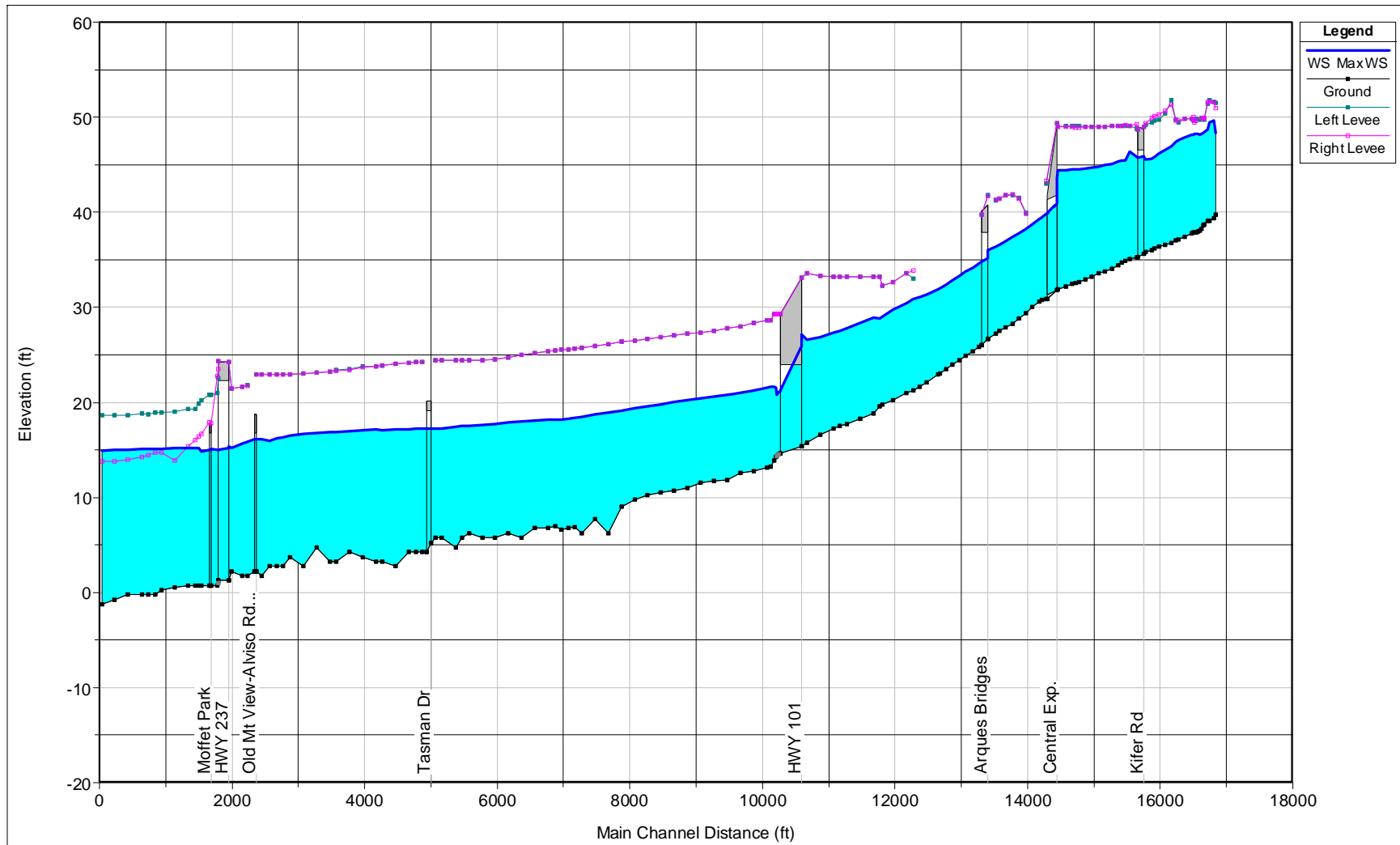


Figure 42. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Calabazas Creek (Year 50 with SLR 2)

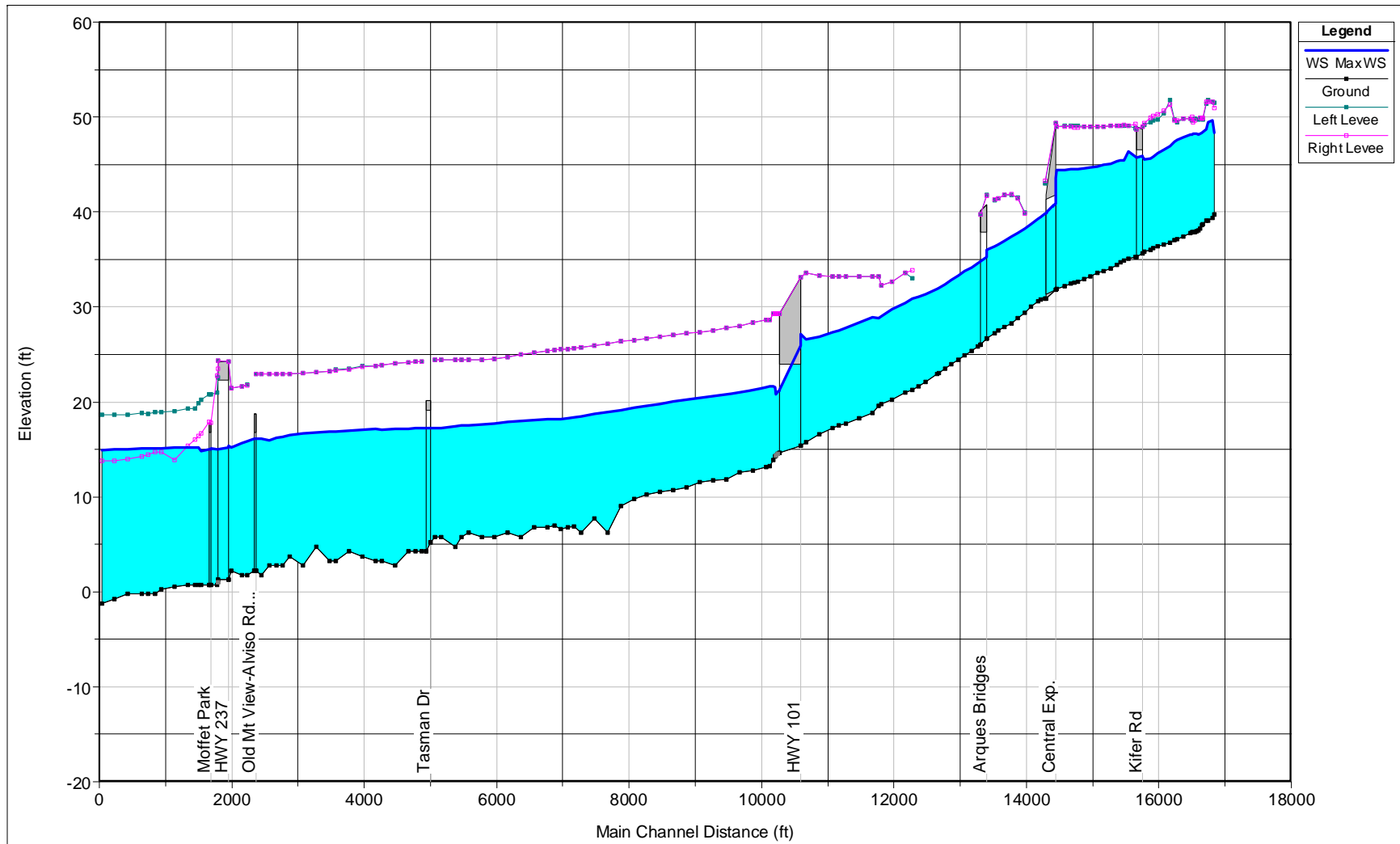


Figure 43. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for Calabazas Creek (Year 50 with SLR 3)

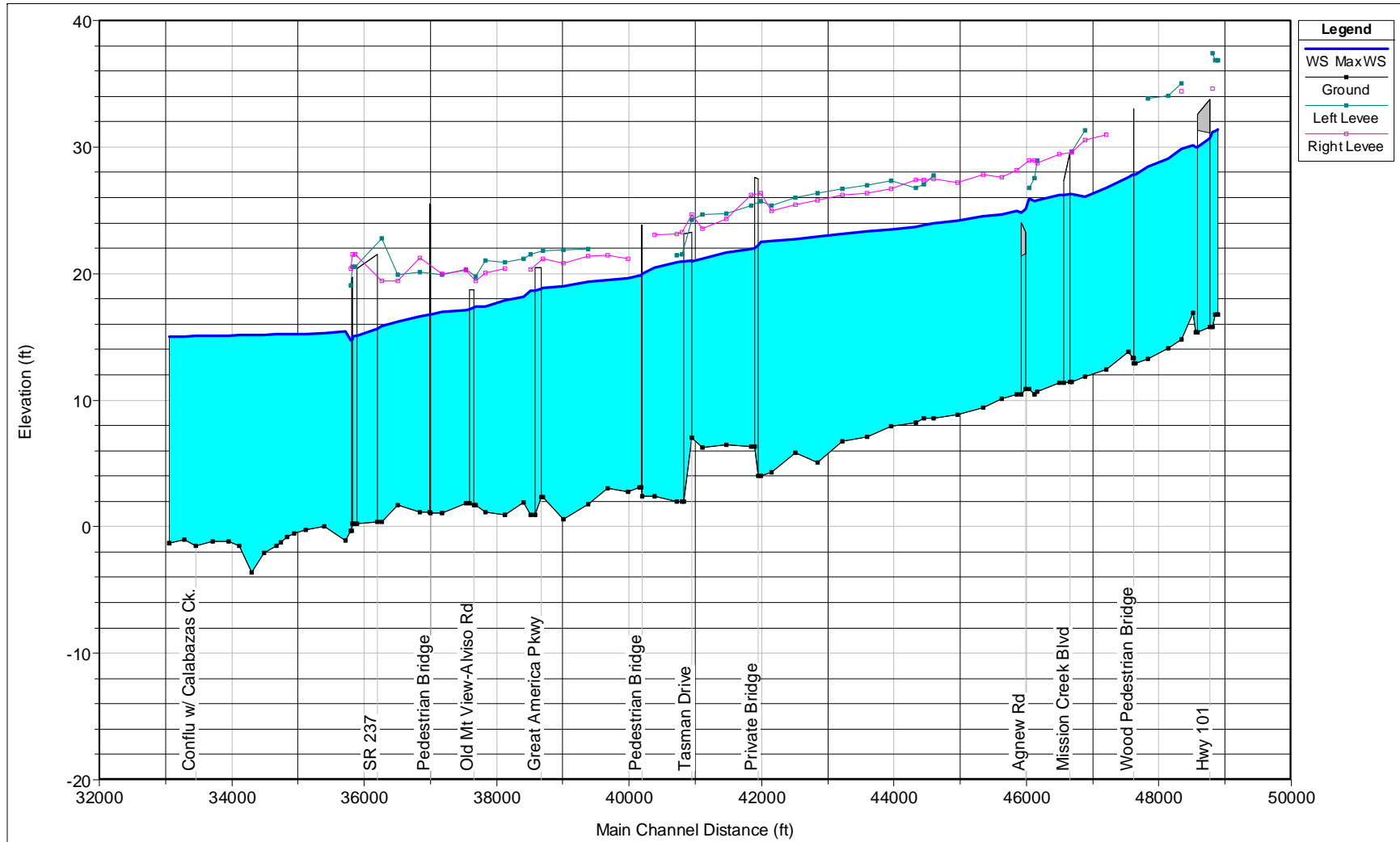


Figure 44. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for San Tomas Aquino Creek (Year 0)

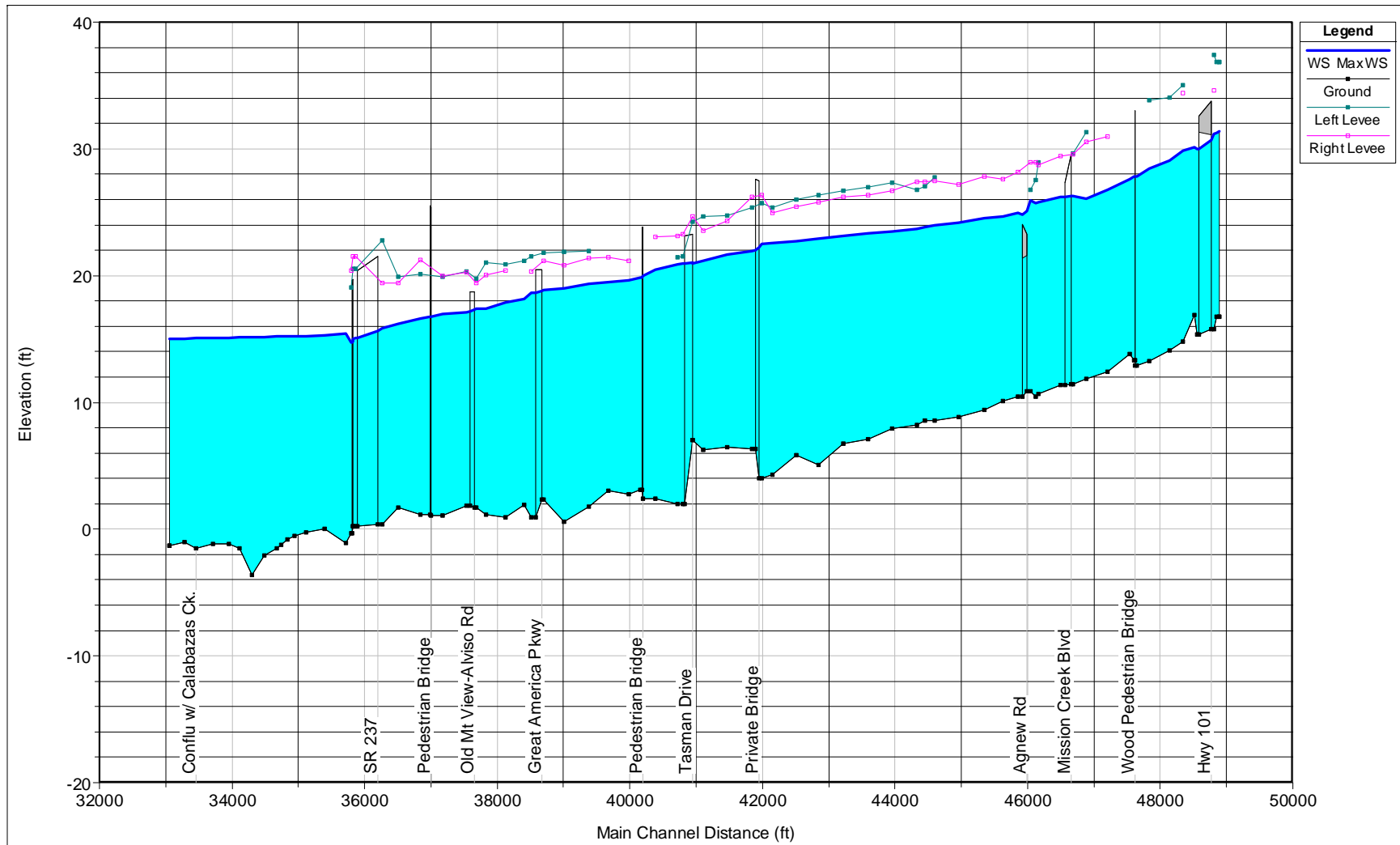


Figure 45. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for San Tomas Aquino Creek (Year 50 with SLR 1)

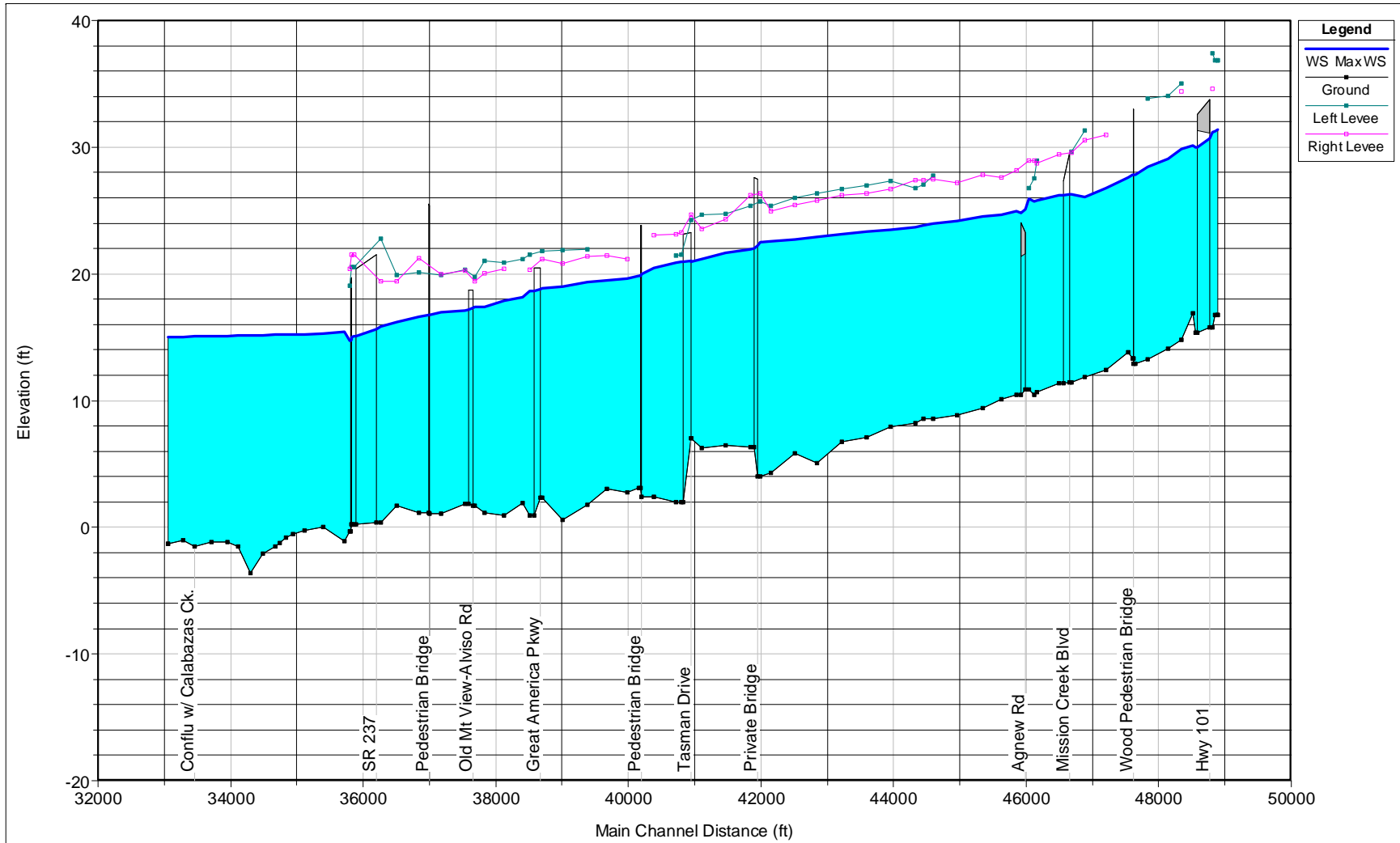


Figure 46. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for San Tomas Aquino Creek (Year 50 with SLR 2)

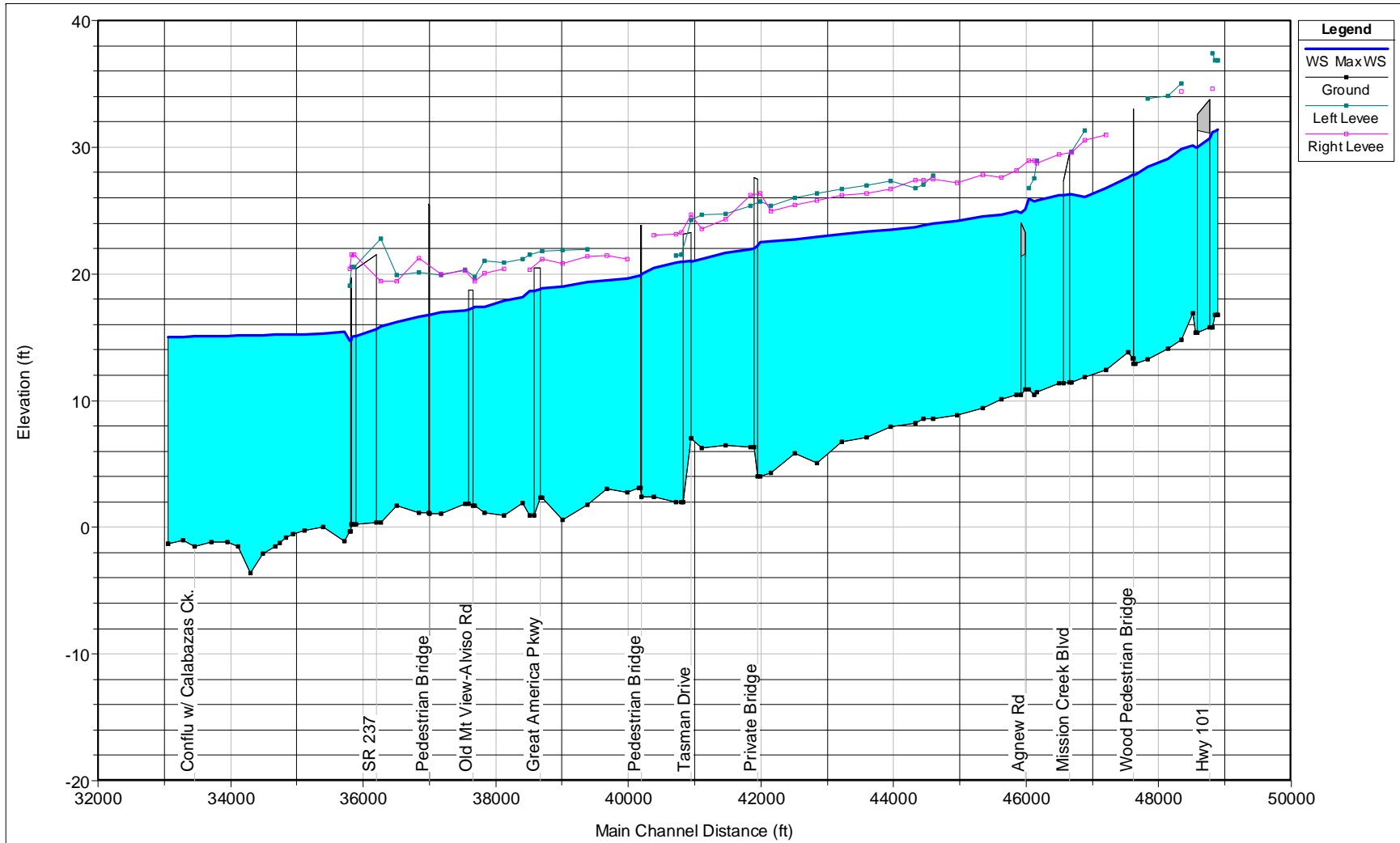


Figure 47. Computed 100-Year Water Surface Elevations Compared to Levee or Floodwall Elevations for San Tomas Aquino Creek (Year 50 with SLR 3)

5.0 SITE PHOTOS



Figure 48. Matadero Creek, Downstream of Alma Street



Figure 49. Matadero Creek, Downstream of Middlefield Rd



Figure 50. Matadero Creek, Downstream of Louis Rd



Figure 51. Matadero Creek, Downstream of Highway 101



Figure 52. Barron Creek, Downstream of Bryant St



Figure 53. Barron Creek, Downstream of Louis Rd



Figure 54. Adobe Creek, Downstream of Alma St



Figure 55. Adobe Creek, Downstream of Middlefield Rd



Figure 56. Adobe Creek, Downstream of Louis Rd



Figure 57. Adobe Creek, Downstream of E Meadow Dr



Figure 58. Permanente Creek, Downstream of Hackett Ave



Figure 59. Permanente Creek, Downstream of San Louis Ave



Figure 60. Permanente Creek, Downstream of Old Middlefield Way



Figure 61. Permanente Creek, Downstream of Charleston Rd



Figure 62. Stevens Creek, Downstream of La Avenida St Pedestrian Bridge



Figure 63. Stevens Creek, Downstream of Crittenden Ln Pedestrian Bridge



Figure 64. Sunnyvale West Channel, Downstream of Bordeaux Dr



Figure 65. Sunnyvale West Channel, Downstream of W Caribbean Dr



Figure 66. Sunnyvale East Channel, Downstream of Tasman Dr



Figure 67. Sunnyvale East Channel, Downstream of E Caribbean Dr



Figure 68. Calabazas Creek, Downstream of Cabrillo Ave



Figure 69. Calabazas Creek, Downstream of E Arques Ave



Figure 70. Calabazas Creek, Downstream of Tasman Dr



Figure 71. Calabazas Creek, Downstream of Old Mountain View-Alviso Rd



Figure 72. San Tomas Aquino Creek, Downstream of Agnew Rd



Figure 73. San Tomas Aquino Creek, Downstream of Tasman Dr



Figure 74. San Tomas Aquino Creek, Downstream of Great American Pkwy



Figure 75. San Tomas Aquino Creek, Downstream of Old Mountain View-Alviso Rd