

Appendix H  
LAX SPECIFIC PLAN AMENDMENT STUDY

**Hydrology and Water Quality**

July 2012

*Prepared for:*

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# 1. INTRODUCTION

This appendix includes land use figures and tables that present detailed calculation results for total and impervious area by land use, average storm water annual runoff, and estimated pollutant load generated under baseline (2010) conditions and for Alternatives 1 through 7.

- ◆ Baseline - Tables 1 to 3
- ◆ Alternative 1 - Tables 4 to 6
- ◆ Alternative 2 - Tables 7 to 9
- ◆ Alternative 3 - Tables 10 to 12
- ◆ Alternative 4 - Tables 13 to 15
- ◆ Alternative 5 - Tables 16 to 18
- ◆ Alternative 6 - Tables 19 to 21
- ◆ Alternative 7 - Tables 22 to 24

**Figure 1** shows the regional drainage infrastructure for baseline conditions, while **Figures 2** through **9** show the land uses within the hydrology and water quality study area for baseline conditions and Alternatives 1 through 7.

## ***Appendix H - Hydrology/Water Quality***

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Table 1

Total and Impervious Area by Land Use - Baseline

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,641	327	2	0	0	358	82	2,410
Impervious Area	1,641	147	2	0	0	125	66	1,981
<b>Dominguez Channel Watershed</b>								
Total Area	894	29	66	4	36	116	60	1,205
Impervious Area	894	13	66	4	36	41	48	1,101
<b>Study Area</b>								
Total Area	2,534	357	68	4	36	474	142	3,615
Impervious Area	2,534	160	68	4	36	166	114	3,082

Source: CDM Smith, February 2012.

Table 2

Average Annual Storm Water Runoff - Baseline

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
<b>Santa Monica Bay Watershed</b>	59,216,669	6,128,749	83,022	0	0	5,569,769	2,441,943	73,440,153
<b>Dominguez Channel Watershed</b>	32,266,858	548,648	2,371,555	126,339	1,292,263	1,807,295	1,798,700	40,211,656
<b>Runoff Totals</b>	91,483,527	6,677,397	2,454,577	126,339	1,292,263	7,377,064	4,240,643	113,651,809

Source: CDM Smith, February 2012.

**Table 3**  
**Annual Pollutant Load Generated - Baseline**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	70,275.4	7,273.3	1,243.9	0.0	0.0	64,673.6	11,890.7	155,356.9
Total P	887.2	91.8	2.1	0.0	0.0	55.6	67.1	1,103.9
Total N	3,955.5	409.4	15.5	0.0	0.0	274.7	289.6	4,944.8
Total Cu	207.0	21.4	0.2	0.0	0.0	5.2	8.5	242.4
Total Pb	37.0	3.8	0.1	0.0	0.0	0.0	1.5	42.4
Total Zn	1,075.8	111.3	3.3	0.0	0.0	16.0	44.4	1,250.8
O&G	8,465.6	876.2	8.8	0.0	0.0	0.0	472.6	9,823.1
BOD <sub>5</sub>	24,324.7	2,517.5	103.7	0.0	0.0	4,172.5	3,201.3	34,319.7
COD	168,941.8	17,485.0	414.6	0.0	0.0	5,911.0	7,622.2	2.00E+05
Ammonia	1,072.1	111.0	3.1	0.0	0.0	45.2	44.2	1.28E+03
Total Coliform	1.4E+11	1.5E+10	1.3E+08	0.0	0.0	1.8E+08	6.0E+09	1.66E+11
Fecal Coliform	6.9E+10	7.1E+09	9.9E+07	0.0	0.0	2.7E+07	2.8E+09	7.88E+10
Fecal Enterococcus	6.7E+09	6.9E+08	2.9E+07	0.0	0.0	1.3E+07	2.8E+08	7.70E+09
Dominguez Channel Watershed								
TSS	38,292.7	651.1	35,532.1	520.5	7,663.9	20,985.5	8,758.5	112,404.4
Total P	483.4	8.2	60.7	3.1	31.5	18.1	49.4	654.4
Total N	2,155.3	36.6	444.2	26.8	234.0	89.1	213.3	3,199.4
Total Cu	112.8	1.9	4.7	0.3	1.2	1.7	6.3	129.0
Total Pb	20.1	0.3	2.5	0.1	0.8	0.0	1.1	25.1
Total Zn	586.2	10.0	94.8	1.9	6.4	5.2	32.7	737.0
O&G	4,612.8	78.4	251.7	26.0	104.9	0.0	348.1	5,422.0
BOD <sub>5</sub>	13,254.4	225.4	2,961.0	212.9	1,290.8	1,353.9	2,358.1	21,656.4
COD	92,055.5	1,565.3	11,844.0	772.9	7,179.9	1,918.0	5,614.4	120,950.1
Ammonia	584.2	9.9	87.3	9.9	33.1	14.7	32.6	771.7
Total Coliform	7.9E+10	1.3E+09	3.8E+09	5.1E+08	6.2E+09	5.9E+07	4.4E+09	95.3E+9
Fecal Coliform	3.7E+10	6.4E+08	2.8E+09	2.4E+08	4.3E+09	8.9E+06	2.1E+09	47.5E+9
Fecal Enterococcus	3.6E+09	6.2E+07	8.2E+08	3.8E+07	2.8E+09	4.3E+06	2.0E+08	7.6E+9

Table 3

Annual Pollutant Load Generated - Baseline

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
<b>Totals</b>								
TSS	108,568.1	7,924.4	36,776.0	520.5	7,663.9	85,659.1	20,649.2	267,761.3
Total P	1,370.7	100.0	62.8	3.1	31.5	73.7	116.5	1,758.2
Total N	6,110.9	446.0	459.7	26.8	234.0	363.8	503.0	8,144.2
Total Cu	319.8	23.3	4.9	0.3	1.2	6.9	14.8	371.3
Total Pb	57.1	4.2	2.6	0.1	0.8	0.0	2.6	67.5
Total Zn	1,661.9	121.3	98.1	1.9	6.4	21.2	77.0	1,987.8
O&G	13,078.4	954.6	260.5	26.0	104.9	0.0	820.7	15,245.1
BOD <sub>5</sub>	37,579.1	2,742.9	3,064.7	212.9	1,290.8	5,526.4	5,559.4	55,976.1
COD	260,997.4	19,050.2	12,258.7	772.9	7,179.9	7,829.1	13,236.7	321,324.8
Ammonia	1,656.2	120.9	90.4	9.9	33.1	59.9	76.8	2,047.2
Total Coliform	2.2E+11	1.6E+10	3.9E+09	5.1E+08	6.2E+09	2.4E+08	1.0E+10	2.6E+11
Fecal Coliform	1.1E+11	7.8E+09	2.9E+09	2.4E+08	4.3E+09	3.6E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.0E+10	7.5E+08	8.5E+08	3.8E+07	2.8E+09	1.8E+07	4.8E+08	1.5E+10

Source: CDM Smith, February 2012.

Table 4

Total and Impervious Area by Land Use - Alternative 1

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,693	298	2	0	0	334	83	2,410
Impervious Area	1,693	134	2	0	0	117	66	2,013
<b>Dominguez Channel Watershed</b>								
Total Area	1,035	29	42	1	15	23	60	1,205
Impervious Area	1,035	13	42	1	15	8	48	1,162
<b>Study Area</b>								
Total Area	2,728	327	44	1	15	357	143	3,615
Impervious Area	2,728	147	44	1	15	125	114	3,174

Source: CDM Smith, February 2012.

Table 5

Average Annual Storm Water Runoff - Alternative 1

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
<b>Santa Monica Bay Watershed</b>	61,122,576	5,581,974	83,022	0	0	5,193,055	2,462,789	74,443,416
<b>Dominguez Channel Watershed</b>	37,363,715	548,648	1,501,624	18,048	541,451	356,478	1,798,700	42,128,662
<b>Runoff Totals</b>	98,486,291	6,130,622	1,584,646	18,048	541,451	5,549,532	4,261,489	116,572,079

Source: CDM Smith, February 2012.

**Table 6**  
**Annual Pollutant Load Generated - Alternative 1**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	72,537.2	6,624.4	1,243.9	0.0	0.0	60,299.4	11,992.2	152,697.1
Total P	915.8	83.6	2.1	0.0	0.0	51.9	67.6	1,121.1
Total N	4,082.8	372.9	15.5	0.0	0.0	256.1	292.1	5,019.5
Total Cu	213.7	19.5	0.2	0.0	0.0	4.9	8.6	246.8
Total Pb	38.2	3.5	0.1	0.0	0.0	0.0	1.5	43.3
Total Zn	1,110.4	101.4	3.3	0.0	0.0	14.9	44.7	1,274.8
O&G	8,738.0	798.0	8.8	0.0	0.0	0.0	476.6	10,021.5
BOD <sub>5</sub>	25,107.6	2,292.9	103.7	0.0	0.0	3,890.3	3,228.7	34,623.1
COD	174,379.3	15,925.1	414.6	0.0	0.0	5,511.2	7,687.3	2.04E+05
Ammonia	1,106.6	101.1	3.1	0.0	0.0	42.1	44.6	1.30E+03
Total Coliform	1.5E+11	1.4E+10	1.3E+08	0.0E+00	0.0E+00	1.7E+08	6.0E+09	1.7E+11
Fecal Coliform	7.1E+10	6.5E+09	9.9E+07	0.0E+00	0.0E+00	2.6E+07	2.9E+09	8.0E+10
Fecal Enterococcus	6.9E+09	6.3E+08	2.9E+07	0.0E+00	0.0E+00	1.2E+07	2.8E+08	7.9E+09
Dominguez Channel Watershed								
TSS	44,341.4	651.1	22,498.3	74.4	3,211.1	4,139.3	8,758.5	83,674.0
Total P	559.8	8.2	38.4	0.4	13.2	3.6	49.4	673.1
Total N	2,495.8	36.6	281.2	3.8	98.0	17.6	213.3	3,146.5
Total Cu	130.6	1.9	3.0	0.0	0.5	0.3	6.3	142.7
Total Pb	23.3	0.3	1.6	0.0	0.3	0.0	1.1	26.7
Total Zn	678.8	10.0	60.0	0.3	2.7	1.0	32.7	785.4
O&G	5,341.5	78.4	159.4	3.7	43.9	0.0	348.1	5,975.0
BOD <sub>5</sub>	15,348.0	225.4	1,874.9	30.4	540.8	267.0	2,358.1	20,644.6
COD	106,596.6	1,565.3	7,499.4	110.4	3,008.3	378.3	5,614.4	124,772.8
Ammonia	676.4	9.9	55.3	1.4	13.9	2.9	32.6	792.4
Total Coliform	9.1E+10	1.3E+09	2.4E+09	7.3E+07	2.6E+09	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.3E+10	6.4E+08	1.8E+09	3.4E+07	1.8E+09	1.8E+06	2.1E+09	5.0E+10
Fecal Enterococcus	4.2E+09	6.2E+07	5.2E+08	5.5E+06	1.2E+09	8.5E+05	2.0E+08	6.2E+09
Totals								
TSS	116,878.6	7,275.5	23,742.2	74.4	3,211.1	64,438.6	20,750.7	236,371.1
Total P	1,475.6	91.9	40.6	0.4	13.2	55.4	117.1	1,794.1
Total N	6,578.6	409.5	296.8	3.8	98.0	273.7	505.5	8,165.9
Total Cu	344.3	21.4	3.2	0.0	0.5	5.2	14.9	389.5

## Appendix H - Hydrology/Water Quality

**Table 6**

**Annual Pollutant Load Generated - Alternative 1**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Total Pb	61.5	3.8	1.7	0.0	0.3	0.0	2.7	70.0
Total Zn	1,789.1	111.4	63.3	0.3	2.7	15.9	77.4	2,060.1
O&G	14,079.5	876.4	168.2	3.7	43.9	0.0	824.7	15,996.5
BOD <sub>5</sub>	40,455.6	2,518.3	1,978.5	30.4	540.8	4,157.3	5,586.7	55,267.7
COD	280,975.9	17,490.3	7,914.1	110.4	3,008.3	5,889.6	13,301.7	328,690.3
Ammonia	1,783.0	111.0	58.4	1.4	13.9	45.0	77.2	2,089.8
Total Coliform	2.4E+11	1.5E+10	2.5E+09	7.3E+07	2.6E+09	1.8E+08	1.0E+10	2.7E+11
Fecal Coliform	1.1E+11	7.1E+09	1.9E+09	3.4E+07	1.8E+09	2.7E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	6.9E+08	5.5E+08	5.5E+06	1.2E+09	1.3E+07	4.8E+08	1.4E+10

Source: CDM Smith, February 2012.

**Table 7**

**Total and Impervious Area by Land Use - Alternative 2**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,641	327	2	0	0	358	82	2,410
Impervious Area	1,641	147	2	0	0	125	66	1,981
<b>Dominguez Channel Watershed</b>								
Total Area	1,035	29	42	1	15	23	60	1,205
Impervious Area	1,035	13	42	1	15	8	48	1,162
<b>Study Area</b>								
Total Area	2,676	357	44	1	15	381	142	3,615
Impervious Area	2,676	160	44	1	15	133	114	3,143

Source: CDM Smith, February 2012.



Table 8

Average Annual Storm Water Runoff - Alternative 2

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
Santa Monica Bay Watershed	59,216,669	6,128,749	83,022	0	0	5,569,769	2,441,943	73,440,153
Dominguez Channel Watershed	37,363,715	548,648	1,501,624	18,048	541,451	356,478	1,798,700	42,128,662
Runoff Totals	96,580,384	6,677,397	1,584,646	18,048	541,451	5,926,247	4,240,643	115,568,815

Source: CDM Smith, February 2012.

Table 9

Annual Pollutant Load Generated - Alternative 2

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	70,275.4	7,273.3	1,243.9	0.0	0.0	64,673.6	11,890.7	155,356.9
Total P	887.2	91.8	2.1	0.0	0.0	55.6	67.1	1,103.9
Total N	3,955.5	409.4	15.5	0.0	0.0	274.7	289.6	4,944.8
Total Cu	207.0	21.4	0.2	0.0	0.0	5.2	8.5	242.4
Total Pb	37.0	3.8	0.1	0.0	0.0	0.0	1.5	42.4
Total Zn	1,075.8	111.3	3.3	0.0	0.0	16.0	44.4	1,250.8
O&G	8,465.6	876.2	8.8	0.0	0.0	0.0	472.6	9,823.1
BOD <sub>5</sub>	24,324.7	2,517.5	103.7	0.0	0.0	4,172.5	3,201.3	34,319.7
COD	168,941.8	17,485.0	414.6	0.0	0.0	5,911.0	7,622.2	2.00E+05
Ammonia	1,072.1	111.0	3.1	0.0	0.0	45.2	44.2	1.28E+03
Total Coliform	1.4E+11	1.5E+10	1.3E+08	0.0	0.0	1.8E+08	6.0E+09	1.7E+11
Fecal Coliform	6.9E+10	7.1E+09	9.9E+07	0.0	0.0	2.7E+07	2.8E+09	7.9E+10
Fecal Enterococcus	6.7E+09	6.9E+08	2.9E+07	0.0	0.0	1.3E+07	2.8E+08	7.7E+09

## Appendix H - Hydrology/Water Quality

Table 9

### Annual Pollutant Load Generated - Alternative 2

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
<b>Dominguez Channel Watershed</b>								
TSS	44,341.4	651.1	22,498.3	74.4	3,211.1	4,139.3	8,758.5	83,674.0
Total P	559.8	8.2	38.4	0.4	13.2	3.6	49.4	673.1
Total N	2,495.8	36.6	281.2	3.8	98.0	17.6	213.3	3,146.5
Total Cu	130.6	1.9	3.0	0.0	0.5	0.3	6.3	142.7
Total Pb	23.3	0.3	1.6	0.0	0.3	0.0	1.1	26.7
Total Zn	678.8	10.0	60.0	0.3	2.7	1.0	32.7	785.4
O&G	5,341.5	78.4	159.4	3.7	43.9	0.0	348.1	5,975.0
BOD <sub>5</sub>	15,348.0	225.4	1,874.9	30.4	540.8	267.0	2,358.1	20,644.6
COD	106,596.6	1,565.3	7,499.4	110.4	3,008.3	378.3	5,614.4	124,772.8
Ammonia	676.4	9.9	55.3	1.4	13.9	2.9	32.6	792.4
Total Coliform	9.1E+10	1.3E+09	2.4E+09	7.3E+07	2.6E+09	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.3E+10	6.4E+08	1.8E+09	3.4E+07	1.8E+09	1.8E+06	2.1E+09	5.0E+10
Fecal Enterococcus	4.2E+09	6.2E+07	5.2E+08	5.5E+06	1.2E+09	8.5E+05	2.0E+08	6.2E+09
<b>Totals</b>								
TSS	114,616.7	7,924.4	23,742.2	74.4	3,211.1	68,812.9	20,649.2	239,030.9
Total P	1,447.0	100.0	40.6	0.4	13.2	59.2	116.5	1,776.9
Total N	6,451.3	446.0	296.8	3.8	98.0	292.3	503.0	8,091.3
Total Cu	337.6	23.3	3.2	0.0	0.5	5.5	14.8	385.1
Total Pb	60.3	4.2	1.7	0.0	0.3	0.0	2.6	69.1
Total Zn	1,754.5	121.3	63.3	0.3	2.7	17.0	77.0	2,036.1
O&G	13,807.1	954.6	168.2	3.7	43.9	0.0	820.7	15,798.2
BOD <sub>5</sub>	39,672.7	2,742.9	1,978.5	30.4	540.8	4,439.5	5,559.4	54,964.3
COD	275,538.4	19,050.2	7,914.1	110.4	3,008.3	6,289.3	13,236.7	325,147.5
Ammonia	1,748.5	120.9	58.4	1.4	13.9	48.1	76.8	2,067.9
Total Coliform	2.4E+11	1.6E+10	2.5E+09	7.3E+07	2.6E+09	1.9E+08	1.0E+10	2.7E+11
Fecal Coliform	1.1E+11	7.8E+09	1.9E+09	3.4E+07	1.8E+09	2.9E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	7.5E+08	5.5E+08	5.5E+06	1.2E+09	1.4E+07	4.8E+08	1.4E+10

Source: CDM Smith, February 2012.

Table 10

Total and Impervious Area by Land Use - Alternative 3

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,691	277	2	0	0	358	82	2,410
Impervious Area	1,691	125	2	0	0	125	66	2,009
<b>Dominguez Channel Watershed</b>								
Total Area	1,103	0	13	1	5	23	60	1,205
Impervious Area	1,103	0	13	1	5	8	48	1,178
<b>Study Area</b>								
Total Area	2,794	277	15	1	5	381	142	3,615
Impervious Area	2,794	125	15	1	5	133	114	3,187

Source: CDM Smith, February 2012.

Table 11

Average Annual Storm Water Runoff - Alternative 3

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
<b>Santa Monica Bay Watershed</b>	61,039,554	5,186,873	83,022	0	0	5,569,769	2,441,943	74,321,161
<b>Dominguez Channel Watershed</b>	39,825,511	0	472,867	18,048	169,655	356,478	1,798,700	42,641,258
<b>Runoff Totals</b>	100,865,065	5,186,873	555,889	18,048	169,655	5,926,247	4,240,643	116,962,420

Source: CDM Smith, February 2012.

Table 12  
Annual Pollutant Load Generated - Alternative 3

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	72,438.7	6,155.5	1,243.9	0.0	0.0	64,673.6	11,890.7	156,402.4
Total P	914.5	77.7	2.1	0.0	0.0	55.6	67.1	1,117.1
Total N	4,077.3	346.5	15.5	0.0	0.0	274.7	289.6	5,003.6
Total Cu	213.4	18.1	0.2	0.0	0.0	5.2	8.5	245.4
Total Pb	38.1	3.2	0.1	0.0	0.0	0.0	1.5	43.0
Total Zn	1,108.9	94.2	3.3	0.0	0.0	16.0	44.4	1,266.8
O&G	8,726.2	741.5	8.8	0.0	0.0	0.0	472.6	9,949.1
BOD <sub>5</sub>	25,073.5	2,130.6	103.7	0.0	0.0	4,172.5	3,201.3	34,681.6
COD	174,142.4	14,797.9	414.6	0.0	0.0	5,911.0	7,622.2	2.03E+05
Ammonia	1,105.1	93.9	3.1	0.0	0.0	45.2	44.2	1.29E+03
Total Coliform	1.5E+11	1.3E+10	1.3E+08	0.0	0.0	1.8E+08	6.0E+09	1.7E+11
Fecal Coliform	7.1E+10	6.0E+09	9.9E+07	0.0	0.0	2.7E+07	2.8E+09	8.0E+10
Fecal Enterococcus	6.9E+09	5.9E+08	2.9E+07	0.0	0.0	1.3E+07	2.8E+08	7.8E+09
Dominguez Channel Watershed								
TSS	47,262.9	0.0	7,084.8	74.4	1,006.2	4,139.3	8,758.5	68,326.0
Total P	596.7	0.0	12.1	0.4	4.1	3.6	49.4	666.3
Total N	2,660.2	0.0	88.6	3.8	30.7	17.6	213.3	3,014.3
Total Cu	139.2	0.0	0.9	0.0	0.2	0.3	6.3	147.0
Total Pb	24.9	0.0	0.5	0.0	0.1	0.0	1.1	26.6
Total Zn	723.5	0.0	18.9	0.3	0.8	1.0	32.7	777.2
O&G	5,693.4	0.0	50.2	3.7	13.8	0.0	348.1	6,109.2
BOD <sub>5</sub>	16,359.3	0.0	590.4	30.4	169.5	267.0	2,358.1	19,774.7
COD	113,620.0	0.0	2,361.6	110.4	942.6	378.3	5,614.4	123,027.3
Ammonia	721.0	0.0	17.4	1.4	4.3	2.9	32.6	779.6
Total Coliform	9.7E+10	0.0	7.6E+08	7.3E+07	8.2E+08	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.6E+10	0.0	5.6E+08	3.4E+07	5.6E+08	1.8E+06	2.1E+09	4.9E+10
Fecal Enterococcus	4.5E+09	0.0	1.6E+08	5.5E+06	3.7E+08	8.5E+05	2.0E+08	5.2E+09
Totals								
TSS	119,701.6	6,155.5	8,328.7	74.4	1,006.2	68,812.9	20,649.2	224,728.4
Total P	1,511.2	77.7	14.2	0.4	4.1	59.2	116.5	1,783.4
Total N	6,737.5	346.5	104.1	3.8	30.7	292.3	503.0	8,017.9
Total Cu	352.6	18.1	1.1	0.0	0.2	5.5	14.8	392.4

Table 12

Annual Pollutant Load Generated - Alternative 3

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Total Pb	63.0	3.2	0.6	0.0	0.1	0.0	2.6	69.6
Total Zn	1,832.4	94.2	22.2	0.3	0.8	17.0	77.0	2,044.0
O&G	14,419.6	741.5	59.0	3.7	13.8	0.0	820.7	16,058.3
BOD <sub>5</sub>	41,432.7	2,130.6	694.1	30.4	169.5	4,439.5	5,559.4	54,456.3
COD	287,762.4	14,797.9	2,776.2	110.4	942.6	6,289.3	13,236.7	325,915.5
Ammonia	1,826.1	93.9	20.5	1.4	4.3	48.1	76.8	2,071.1
Total Coliform	2.5E+11	1.3E+10	8.9E+08	7.3E+07	8.2E+08	1.9E+08	1.0E+10	2.7E+11
Fecal Coliform	1.2E+11	6.0E+09	6.6E+08	3.4E+07	5.6E+08	2.9E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	5.9E+08	1.9E+08	5.5E+06	3.7E+08	1.4E+07	4.8E+08	1.3E+10

Source: CDM Smith, February 2012.

Table 13

Total and Impervious Area by Land Use - Alternative 4

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,641	327	2	0	0	358	82	2,410
Impervious Area	1,641	147	2	0	0	125	66	1,981
<b>Dominguez Channel Watershed</b>								
Total Area	958	0	31	4	36	116	60	1,205
Impervious Area	958	0	31	4	36	41	48	1,117
<b>Study Area</b>								
Total Area	2,598	327	33	4	36	474	142	3,615
Impervious Area	2,598	147	33	4	36	166	114	3,098

Source: CDM Smith, February 2012.

Table 14

Average Annual Storm Water Runoff - Alternative 4

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
Santa Monica Bay Watershed	59,216,669	6,128,749	83,022	0	0	5,569,769	2,441,943	73,440,153
Dominguez Channel Watershed	34,577,048	0	1,122,608	126,339	1,292,263	1,807,295	1,798,700	40,724,252
Runoff Totals	93,793,717	6,128,749	1,205,630	126,339	1,292,263	7,377,064	4,240,643	114,164,405

Source: CDM Smith, February 2012.

Table 15

Annual Pollutant Load Generated - Alternative 4

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	70,275.4	7,273.3	1,243.9	0.0	0.0	64,673.6	11,890.7	155,356.9
Total P	887.2	91.8	2.1	0.0	0.0	55.6	67.1	1,103.9
Total N	3,955.5	409.4	15.5	0.0	0.0	274.7	289.6	4,944.8
Total Cu	207.0	21.4	0.2	0.0	0.0	5.2	8.5	242.4
Total Pb	37.0	3.8	0.1	0.0	0.0	0.0	1.5	42.4
Total Zn	1,075.8	111.3	3.3	0.0	0.0	16.0	44.4	1,250.8
O&G	8,465.6	876.2	8.8	0.0	0.0	0.0	472.6	9,823.1
BOD <sub>5</sub>	24,324.7	2,517.5	103.7	0.0	0.0	4,172.5	3,201.3	34,319.7
COD	168,941.8	17,485.0	414.6	0.0	0.0	5,911.0	7,622.2	2.00E+05
Ammonia	1,072.1	111.0	3.1	0.0	0.0	45.2	44.2	1.28E+03
Total Coliform	1.4E+11	1.5E+10	1.3E+08	0.0	0.0	1.8E+08	6.0E+09	1.7E+11
Fecal Coliform	6.9E+10	7.1E+09	9.9E+07	0.0	0.0	2.7E+07	2.8E+09	7.9E+10
Fecal Enterococcus	6.7E+09	6.9E+08	2.9E+07	0.0	0.0	1.3E+07	2.8E+08	7.7E+09

**Table 15**  
**Annual Pollutant Load Generated - Alternative 4**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
<b>Dominguez Channel Watershed</b>								
TSS	41,034.3	0.0	16,819.6	520.5	7,663.9	20,985.5	8,758.5	95,782.4
Total P	518.1	0.0	28.7	3.1	31.5	18.1	49.4	648.8
Total N	2,309.7	0.0	210.2	26.8	234.0	89.1	213.3	3,083.2
Total Cu	120.9	0.0	2.2	0.3	1.2	1.7	6.3	132.6
Total Pb	21.6	0.0	1.2	0.1	0.8	0.0	1.1	24.8
Total Zn	628.1	0.0	44.9	1.9	6.4	5.2	32.7	719.1
O&G	4,943.1	0.0	119.1	26.0	104.9	0.0	348.1	5,541.2
BOD <sub>5</sub>	14,203.4	0.0	1,401.6	212.9	1,290.8	1,353.9	2,358.1	20,820.7
COD	98,646.4	0.0	5,606.5	772.9	7,179.9	1,918.0	5,614.4	119,738.2
Ammonia	626.0	0.0	41.3	9.9	33.1	14.7	32.6	757.6
Total Coliform	8.5E+10	0.0	1.8E+09	5.1E+08	6.2E+09	5.9E+07	4.4E+09	9.8E+10
Fecal Coliform	4.0E+10	0.0	1.3E+09	2.4E+08	4.3E+09	8.9E+06	2.1E+09	4.8E+10
Fecal Enterococcus	3.9E+09	0.0	3.9E+08	3.8E+07	2.8E+09	4.3E+06	2.0E+08	7.3E+09
<b>Totals</b>								
TSS	111,309.7	7,273.3	18,063.5	520.5	7,663.9	85,659.1	20,649.2	251,139.3
Total P	1,405.3	91.8	30.9	3.1	31.5	73.7	116.5	1,752.7
Total N	6,265.2	409.4	225.8	26.8	234.0	363.8	503.0	8,028.0
Total Cu	327.9	21.4	2.4	0.3	1.2	6.9	14.8	375.0
Total Pb	58.6	3.8	1.3	0.1	0.8	0.0	2.6	67.3
Total Zn	1,703.9	111.3	48.2	1.9	6.4	21.2	77.0	1,969.9
O&G	13,408.7	876.2	127.9	26.0	104.9	0.0	820.7	15,364.4
BOD <sub>5</sub>	38,528.0	2,517.5	1,505.3	212.9	1,290.8	5,526.4	5,559.4	55,140.4
COD	267,588.2	17,485.0	6,021.2	772.9	7,179.9	7,829.1	13,236.7	320,112.9
Ammonia	1,698.0	111.0	44.4	9.9	33.1	59.9	76.8	2,033.1
Total Coliform	2.3E+11	1.5E+10	1.9E+09	5.1E+08	6.2E+09	2.4E+08	1.0E+10	2.6E+11
Fecal Coliform	1.1E+11	7.1E+09	1.4E+09	2.4E+08	4.3E+09	3.6E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	6.9E+08	4.2E+08	3.8E+07	2.8E+09	1.8E+07	4.8E+08	1.5E+10

Source: CDM Smith, February 2012.

Table 16

Total and Impervious Area by Land Use - Alternative 5

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,713	278	2	0	0	334	83	2,410
Impervious Area	1,713	125	2	0	0	117	66	2,024
<b>Dominguez Channel Watershed</b>								
Total Area	1,035	29	42	1	15	23	60	1,205
Impervious Area	1,035	13	42	1	15	8	48	1,162
<b>Study Area</b>								
Total Area	2,748	308	44	1	15	357	143	3,615
Impervious Area	2,748	138	44	1	15	125	114	3,185

Source: CDM Smith, February 2012.

Table 17

Average Annual Storm Water Runoff - Alternative 5

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
<b>Santa Monica Bay Watershed</b>	61,833,681	5,213,088	83,022	0	0	5,193,055	2,462,789	74,785,636
<b>Dominguez Channel Watershed</b>	37,363,715	548,648	1,501,624	18,048	541,451	356,478	1,798,700	42,128,662
<b>Runoff Totals</b>	99,197,396	5,761,736	1,584,646	18,048	541,451	5,549,532	4,261,489	116,914,298

Source: CDM Smith, February 2012.



**Table 18**  
**Annual Pollutant Load Generated - Alternative 5**

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	73,381.1	6,186.6	1,243.9	0.0	0.0	60,299.4	11,992.2	153,103.2
Total P	926.4	78.1	2.1	0.0	0.0	51.9	67.6	1,126.2
Total N	4,130.3	348.2	15.5	0.0	0.0	256.1	292.1	5,042.3
Total Cu	216.2	18.2	0.2	0.0	0.0	4.9	8.6	248.0
Total Pb	38.6	3.3	0.1	0.0	0.0	0.0	1.5	43.5
Total Zn	1,123.3	94.7	3.3	0.0	0.0	14.9	44.7	1,281.0
O&G	8,839.7	745.3	8.8	0.0	0.0	0.0	476.6	10,070.4
BOD <sub>5</sub>	25,399.7	2,141.4	103.7	0.0	0.0	3,890.3	3,228.7	34,763.7
COD	176,408.0	14,872.6	414.6	0.0	0.0	5,511.2	7,687.3	2.05E+05
Ammonia	1,119.4	94.4	3.1	0.0	0.0	42.1	44.6	1.30E+03
Total Coliform	1.5E+11	1.3E+10	1.3E+08	0.0	0.0	1.7E+08	6.0E+09	1.7E+11
Fecal Coliform	7.2E+10	6.1E+09	9.9E+07	0.0	0.0	2.6E+07	2.9E+09	8.1E+10
Fecal Enterococcus	7.0E+09	5.9E+08	2.9E+07	0.0	0.0	1.2E+07	2.8E+08	7.9E+09
Dominguez Channel Watershed								
TSS	44,341.4	651.1	22,498.3	74.4	3,211.1	4,139.3	8,758.5	83,674.0
Total P	559.8	8.2	38.4	0.4	13.2	3.6	49.4	673.1
Total N	2,495.8	36.6	281.2	3.8	98.0	17.6	213.3	3,146.5
Total Cu	130.6	1.9	3.0	0.0	0.5	0.3	6.3	142.7
Total Pb	23.3	0.3	1.6	0.0	0.3	0.0	1.1	26.7
Total Zn	678.8	10.0	60.0	0.3	2.7	1.0	32.7	785.4
O&G	5,341.5	78.4	159.4	3.7	43.9	0.0	348.1	5,975.0
BOD <sub>5</sub>	15,348.0	225.4	1,874.9	30.4	540.8	267.0	2,358.1	20,644.6
COD	106,596.6	1,565.3	7,499.4	110.4	3,008.3	378.3	5,614.4	124,772.8
Ammonia	676.4	9.9	55.3	1.4	13.9	2.9	32.6	792.4
Total Coliform	9.1E+10	1.3E+09	2.4E+09	7.3E+07	2.6E+09	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.3E+10	6.4E+08	1.8E+09	3.4E+07	1.8E+09	1.8E+06	2.1E+09	5.0E+10
Fecal Enterococcus	4.2E+09	6.2E+07	5.2E+08	5.5E+06	1.2E+09	8.5E+05	2.0E+08	6.2E+09
Totals								
TSS	117,722.5	6,837.7	23,742.2	74.4	3,211.1	64,438.6	20,750.7	236,777.3
Total P	1,486.2	86.3	40.6	0.4	13.2	55.4	117.1	1,799.2
Total N	6,626.1	384.9	296.8	3.8	98.0	273.7	505.5	8,188.8
Total Cu	346.8	20.1	3.2	0.0	0.5	5.2	14.9	390.7
Total Pb	61.9	3.6	1.7	0.0	0.3	0.0	2.7	70.2

Table 18

Annual Pollutant Load Generated - Alternative 5

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Total Zn	1,802.1	104.7	63.3	0.3	2.7	15.9	77.4	2,066.3
O&G	14,181.2	823.7	168.2	3.7	43.9	0.0	824.7	16,045.4
BOD <sub>5</sub>	40,747.7	2,366.8	1,978.5	30.4	540.8	4,157.3	5,586.7	55,408.3
COD	283,004.6	16,437.9	7,914.1	110.4	3,008.3	5,889.6	13,301.7	329,666.6
Ammonia	1,795.9	104.3	58.4	1.4	13.9	45.0	77.2	2,096.0
Total Coliform	2.4E+11	1.4E+10	2.5E+09	7.3E+07	2.6E+09	1.8E+08	1.0E+10	2.7E+11
Fecal Coliform	1.2E+11	6.7E+09	1.9E+09	3.4E+07	1.8E+09	2.7E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	6.5E+08	5.5E+08	5.5E+06	1.2E+09	1.3E+07	4.8E+08	1.4E+10

Source: CDM Smith, February 2012.

Table 19

Total and Impervious Area by Land Use - Alternative 6

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,658	333	2	0	0	334	83	2,410
Impervious Area	1,658	150	2	0	0	117	66	1,993
<b>Dominguez Channel Watershed</b>								
Total Area	1,035	29	42	1	15	23	60	1,205
Impervious Area	1,035	13	42	1	15	8	48	1,162
<b>Study Area</b>								
Total Area	2,693	362	44	1	15	357	143	3,615
Impervious Area	2,693	163	44	1	15	125	114	3,155

Source: CDM Smith, February 2012.

Table 20

Average Annual Storm Water Runoff - Alternative 6

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
Santa Monica Bay Watershed	59,859,191	6,237,355	83,022	0	0	5,193,055	2,462,789	73,835,412
Dominguez Channel Watershed	37,363,715	548,648	1,501,624	18,048	541,451	356,478	1,798,700	42,128,662
Runoff Totals	97,222,906	6,786,003	1,584,646	18,048	541,451	5,549,532	4,261,489	115,964,075

Source: CDM Smith, February 2012.

Table 21

Annual Pollutant Load Generated - Alternative 6

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotal (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
<b>Santa Monica Bay Watershed</b>								
TSS	71,037.9	7,402.2	1,243.9	0.0	0.0	60,299.4	11,992.2	151,975.5
Total P	896.8	93.5	2.1	0.0	0.0	51.9	67.6	1,111.9
Total N	3,998.4	416.6	15.5	0.0	0.0	256.1	292.1	4,978.9
Total Cu	209.3	21.8	0.2	0.0	0.0	4.9	8.6	244.7
Total Pb	37.4	3.9	0.1	0.0	0.0	0.0	1.5	42.9
Total Zn	1,087.4	113.3	3.3	0.0	0.0	14.9	44.7	1,263.7
O&G	8,557.4	891.7	8.8	0.0	0.0	0.0	476.6	9,934.5
BOD <sub>5</sub>	24,588.6	2,562.1	103.7	0.0	0.0	3,890.3	3,228.7	34,373.4
COD	170,774.9	17,794.8	414.6	0.0	0.0	5,511.2	7,687.3	2.02E+05
Ammonia	1,083.7	112.9	3.1	0.0	0.0	42.1	44.6	1.29E+03
Total Coliform	1.5E+11	1.5E+10	1.3E+08	0.0	0.0	1.7E+08	6.0E+09	1.7E+11
Fecal Coliform	6.9E+10	7.2E+09	9.9E+07	0.0	0.0	2.6E+07	2.9E+09	8.0E+10
Fecal Enterococcus	6.8E+09	7.0E+08	2.9E+07	0.0	0.0	1.2E+07	2.8E+08	7.8E+09
<b>Dominguez Channel Watershed</b>								
TSS	44,341.4	651.1	22,498.3	74.4	3,211.1	4,139.3	8,758.5	83,674.0

Table 21

Annual Pollutant Load Generated - Alternative 6

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotal (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Total P	559.8	8.2	38.4	0.4	13.2	3.6	49.4	673.1
Total N	2,495.8	36.6	281.2	3.8	98.0	17.6	213.3	3,146.5
Total Cu	130.6	1.9	3.0	0.0	0.5	0.3	6.3	142.7
Total Pb	23.3	0.3	1.6	0.0	0.3	0.0	1.1	26.7
Total Zn	678.8	10.0	60.0	0.3	2.7	1.0	32.7	785.4
O&G	5,341.5	78.4	159.4	3.7	43.9	0.0	348.1	5,975.0
BOD <sub>5</sub>	15,348.0	225.4	1,874.9	30.4	540.8	267.0	2,358.1	20,644.6
COD	106,596.6	1,565.3	7,499.4	110.4	3,008.3	378.3	5,614.4	124,772.8
Ammonia	676.4	9.9	55.3	1.4	13.9	2.9	32.6	792.4
Total Coliform	9.1E+10	1.3E+09	2.4E+09	7.3E+07	2.6E+09	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.3E+10	6.4E+08	1.8E+09	3.4E+07	1.8E+09	1.8E+06	2.1E+09	5.0E+10
Fecal Enterococcus	4.2E+09	6.2E+07	5.2E+08	5.5E+06	1.2E+09	8.5E+05	2.0E+08	6.2E+09
<b>Totals</b>								
TSS	115,379.3	8,053.3	23,742.2	74.4	3,211.1	64,438.6	20,750.7	235,649.6
Total P	1,456.7	101.7	40.6	0.4	13.2	55.4	117.1	1,785.0
Total N	6,494.3	453.3	296.8	3.8	98.0	273.7	505.5	8,125.3
Total Cu	339.9	23.7	3.2	0.0	0.5	5.2	14.9	387.4
Total Pb	60.7	4.2	1.7	0.0	0.3	0.0	2.7	69.6
Total Zn	1,766.2	123.3	63.3	0.3	2.7	15.9	77.4	2,049.1
O&G	13,898.9	970.1	168.2	3.7	43.9	0.0	824.7	15,909.6
BOD <sub>5</sub>	39,936.6	2,787.5	1,978.5	30.4	540.8	4,157.3	5,586.7	55,018.0
COD	277,371.5	19,360.1	7,914.1	110.4	3,008.3	5,889.6	13,301.7	326,955.7
Ammonia	1,760.1	122.9	58.4	1.4	13.9	45.0	77.2	2,078.8
Total Coliform	2.4E+11	1.7E+10	2.5E+09	7.3E+07	2.6E+09	1.8E+08	1.0E+10	2.7E+11
Fecal Coliform	1.1E+11	7.9E+09	1.9E+09	3.4E+07	1.8E+09	2.7E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	7.7E+08	5.5E+08	5.5E+06	1.2E+09	1.3E+07	4.8E+08	1.4E+10

Source: CDM Smith, February 2012.

Table 22

Total and Impervious Area by Land Use - Alternative 7

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Area Subtotals (acres)
	Airport Operations (acres)	Airport Open Space (acres)	Industrial (acres)	Commercial (acres)	Residential (acres)	Open Space (acres)	Roads (acres)	
<b>Santa Monica Bay Watershed</b>								
Total Area	1,641	327	2	0	0	358	82	2,410
Impervious Area	1,641	147	2	0	0	125	66	1,981
<b>Dominguez Channel Watershed</b>								
Total Area	1,035	29	42	1	15	23	60	1,205
Impervious Area	1,035	13	42	1	15	8	48	1,162
<b>Study Area</b>								
Total Area	2,676	357	44	1	15	381	142	3615
Impervious Area	2,676	160	44	1	15	133	114	3143

Source: CDM Smith, February 2012.

Table 23

Average Annual Storm Water Runoff - Alternative 7

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Runoff Subtotals (ft <sup>3</sup> )
	Airport Operations (ft <sup>3</sup> )	Airport Open Space (ft <sup>3</sup> )	Industrial (ft <sup>3</sup> )	Commercial (ft <sup>3</sup> )	Residential (ft <sup>3</sup> )	Open Space (ft <sup>3</sup> )	Roads (ft <sup>3</sup> )	
<b>Santa Monica Bay Watershed</b>	59,216,669	6,128,749	83,022	0	0	5,569,769	2,441,943	73,440,153
<b>Dominguez Channel Watershed</b>	37,360,105	548,648	1,501,624	18,048	541,451	356,478	1,798,700	42,125,053
<b>Runoff Totals</b>	96,576,774	6,677,397	1,584,646	18,048	541,451	5,926,247	4,240,643	115,565,206

Source: CDM Smith, February 2012.

Table 24

Annual Pollutant Load Generated – Alternative 7

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Santa Monica Bay Watershed								
TSS	70,275.4	7,273.3	1,243.9	0.0	0.0	64,673.6	11,890.7	155,356.9
Total P	887.2	91.8	2.1	0.0	0.0	55.6	67.1	1,103.9
Total N	3,955.5	409.4	15.5	0.0	0.0	274.7	289.6	4,944.8
Total Cu	207.0	21.4	0.2	0.0	0.0	5.2	8.5	242.4
Total Pb	37.0	3.8	0.1	0.0	0.0	0.0	1.5	42.4
Total Zn	1,075.8	111.3	3.3	0.0	0.0	16.0	44.4	1,250.8
O&G	8,465.6	876.2	8.8	0.0	0.0	0.0	472.6	9,823.1
BOD <sub>5</sub>	24,324.7	2,517.5	103.7	0.0	0.0	4,172.5	3,201.3	34,319.7
COD	168,941.8	17,485.0	414.6	0.0	0.0	5,911.0	7,622.2	200,374.7
Ammonia	1,072.1	111.0	3.1	0.0	0.0	45.2	44.2	1,275.5
Total Coliform	1.4E+11	1.5E+10	1.3E+08	0.0	0.0	1.8E+08	6.0E+09	1.7E+11
Fecal Coliform	6.9E+10	7.1E+09	9.9E+07	0	0	2.7E+07	2.8E+09	7.9E+10
Fecal Enterococcus	6.7E+09	6.9E+08	2.9E+07	0	0	1.3E+07	2.8E+08	7.7E+09
Dominguez Channel Watershed								
TSS	44,337.1	651.1	22,498.3	74.4	3,211.1	4,139.3	8,758.5	83,669.8
Total P	559.8	8.2	38.4	0.4	13.2	3.6	49.4	673.0
Total N	2,495.6	36.6	281.2	3.8	98.0	17.6	213.3	3,146.2
Total Cu	130.6	1.9	3.0	0.0	0.5	0.3	6.3	142.7
Total Pb	23.3	0.3	1.6	0.0	0.3	0.0	1.1	26.7
Total Zn	678.7	0.0	60.0	0.3	2.7	1.0	32.7	775.3
O&G	5,341.0	0.0	159.4	3.7	43.9	0.0	348.1	5,896.1
BOD <sub>5</sub>	15,346.6	0.0	1,874.9	30.4	540.8	267.0	2,358.1	20,417.8
COD	106,586.3	0.0	7,499.4	110.4	3,008.3	378.3	5,614.4	123,197.2
Ammonia	676.4	0.0	55.3	1.4	13.9	2.9	32.6	782.4
Total Coliform	9.1E+10	1.3E+09	2.4E+09	7.3E+07	2.6E+09	1.2E+07	4.4E+09	1.0E+11
Fecal Coliform	4.3E+10	6.4E+08	1.8E+09	3.4E+07	1.8E+09	1.8E+06	2.1E+09	5.0E+10
Fecal Enterococcus	4.2E+09	6.2E+07	5.2E+08	5.5E+06	1.2E+09	8.5E+05	2.0E+08	6.2E+09
Totals								
TSS	114,612.5	7,924.4	23,742.2	74.4	3,211.1	68,812.9	20,649.2	239,026.6
Total P	1,447.0	100.0	40.6	0.4	13.2	59.2	116.5	1,776.9
Total N	6,451.1	446.0	296.8	3.8	98.0	292.3	503.0	8,091.0
Total Cu	337.6	23.3	3.2	0.0	0.5	5.5	14.8	385.1
Total Pb	60.3	4.2	1.7	0.0	0.3	0.0	2.6	69.1

Table 24

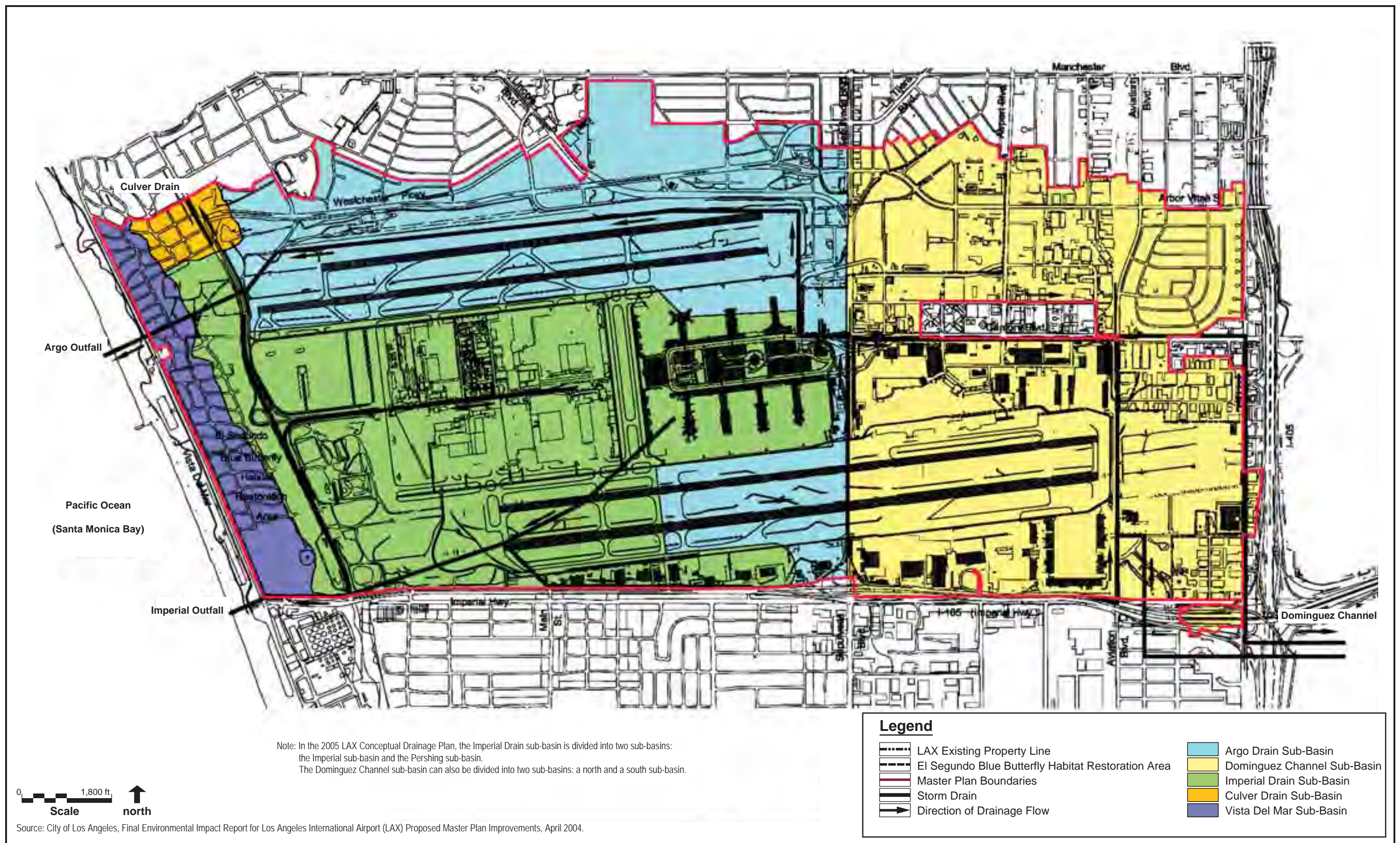
Annual Pollutant Load Generated – Alternative 7

Region within Hydrology and Water Quality Study Area	Land Use Classifications							Pollutant Load Subtotals (lbs/yr)
	Airport Operations (lbs/yr)	Airport Open Space (lbs/yr)	Industrial (lbs/yr)	Commercial (lbs/yr)	Residential (lbs/yr)	Open Space (lbs/yr)	Roads (lbs/yr)	
Total Zn	1,754.5	111.3	63.3	0.3	2.7	17.0	77.0	2,026.1
O&G	13,806.6	876.2	168.2	3.7	43.9	0.0	820.7	15,719.2
BOD <sub>5</sub>	39,671.2	2,517.5	1,978.5	30.4	540.8	4,439.5	5,559.4	54,737.5
COD	275,528.1	17,485.0	7,914.1	110.4	3,008.3	6,289.3	13,236.7	323,571.9
Ammonia	1,748.4	111.0	58.4	1.4	13.9	48.1	76.8	2,057.9
Total Coliform	2.4E+11	1.6E+10	2.5E+09	7.3E+07	2.6E+09	1.9E+08	1.0E+10	2.7E+11
Fecal Coliform	1.1E+11	7.8E+09	1.9E+09	3.4E+07	1.8E+09	2.9E+07	4.9E+09	1.3E+11
Fecal Enterococcus	1.1E+10	7.5E+08	5.5E+08	5.5E+06	1.2E+09	1.4E+07	4.8E+08	1.4E+10

Source: CDM Smith, February 2012.

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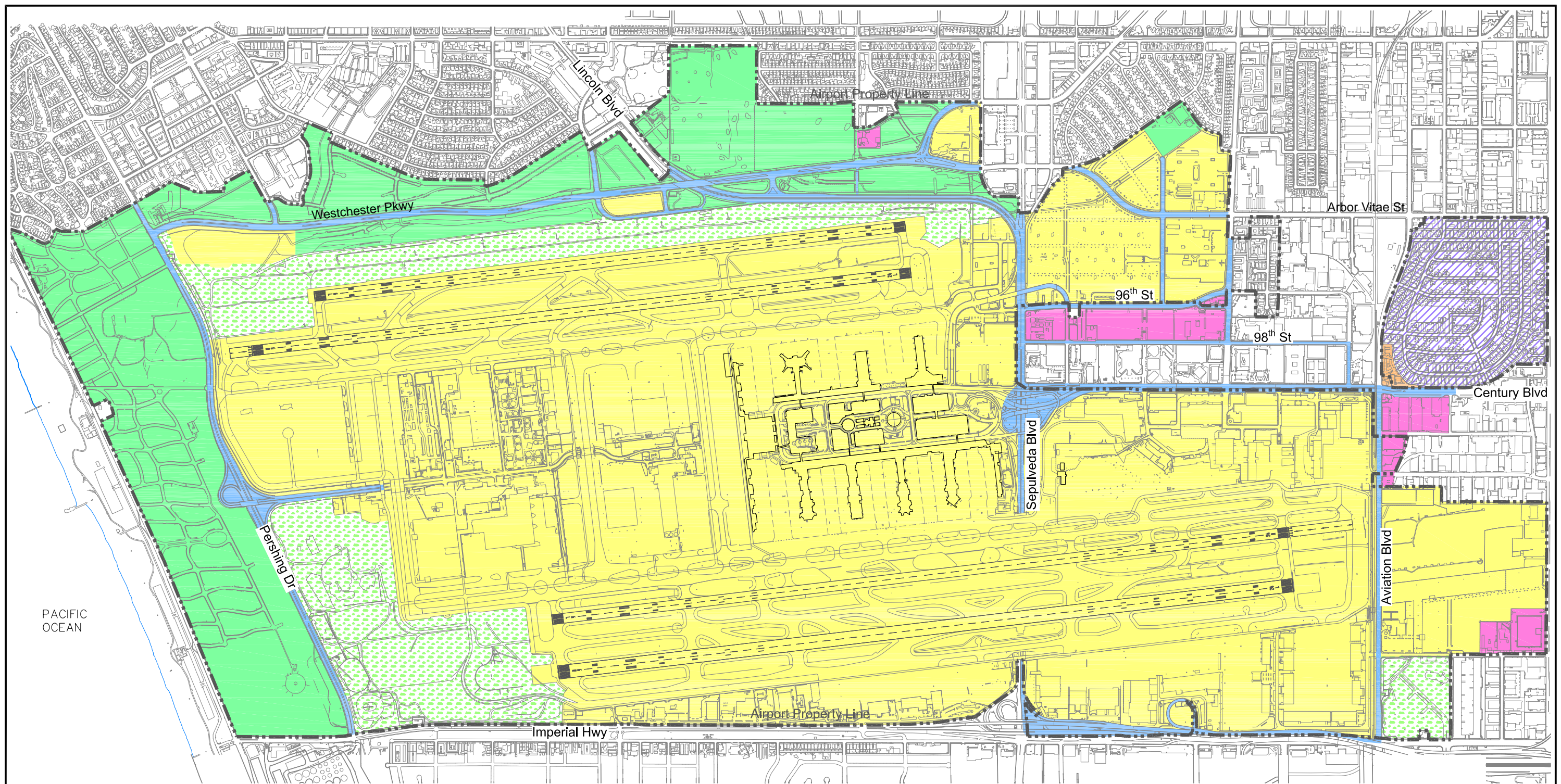




## ***Appendix H - Hydrology/Water Quality***

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**LAND USE LEGEND**

- AIRPORT OPERATIONS
- INDUSTRIAL
- PRESERVE/RECREATION OPEN SPACE
- ROADS

- COMMERCIAL
- MANCHESTER SQUARE (25% RESIDENTIAL, 75% VACANT)
- AIRPORT OPEN SPACE

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Scale north

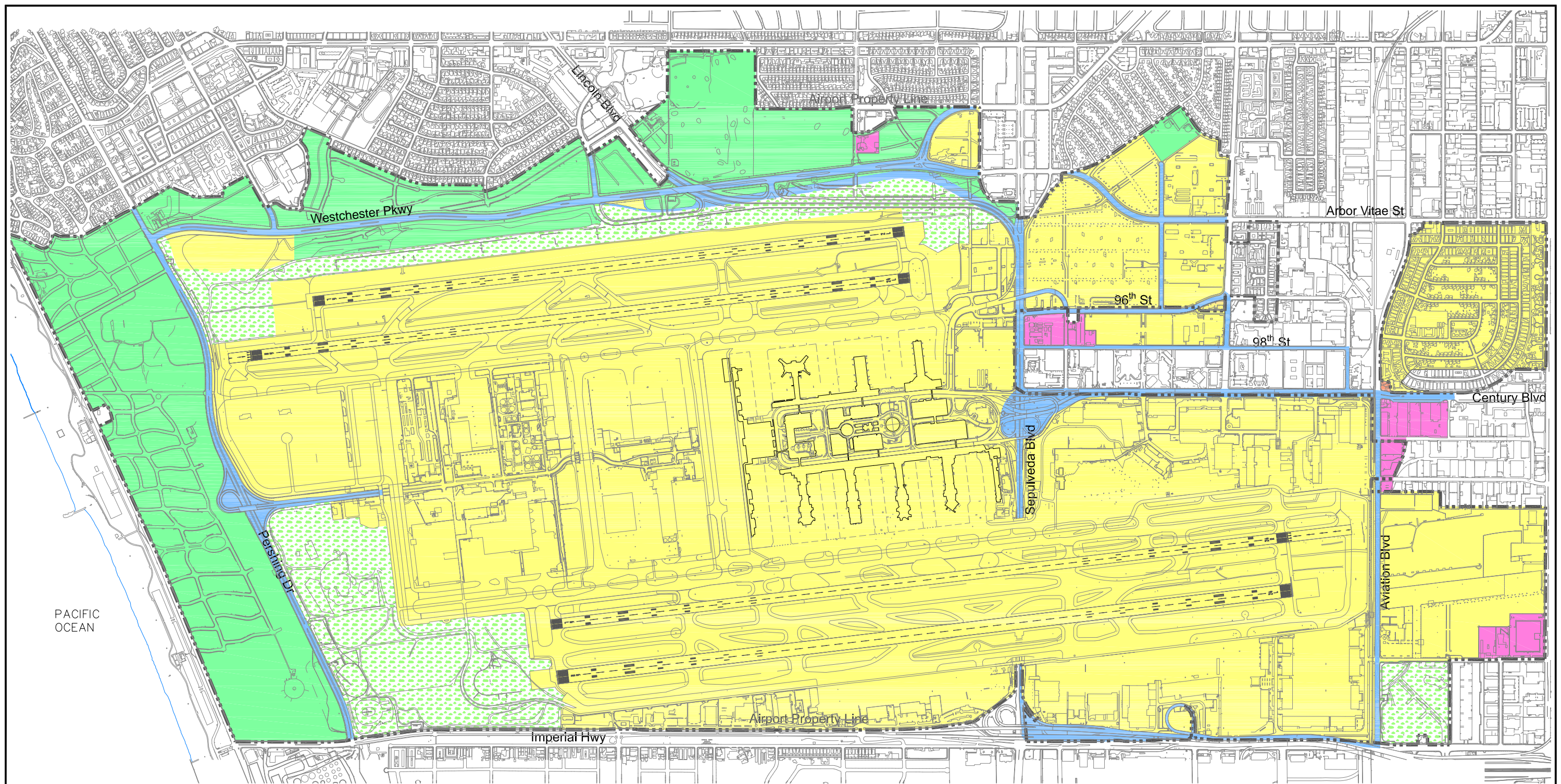
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Prepared by: CDM Smith, January 2012.

## ***Appendix H - Hydrology/Water Quality***

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**LAND USE LEGEND**

- AIRPORT OPERATIONS
- INDUSTRIAL
- PRESERVE/RECREATION OPEN SPACE
- ROADS

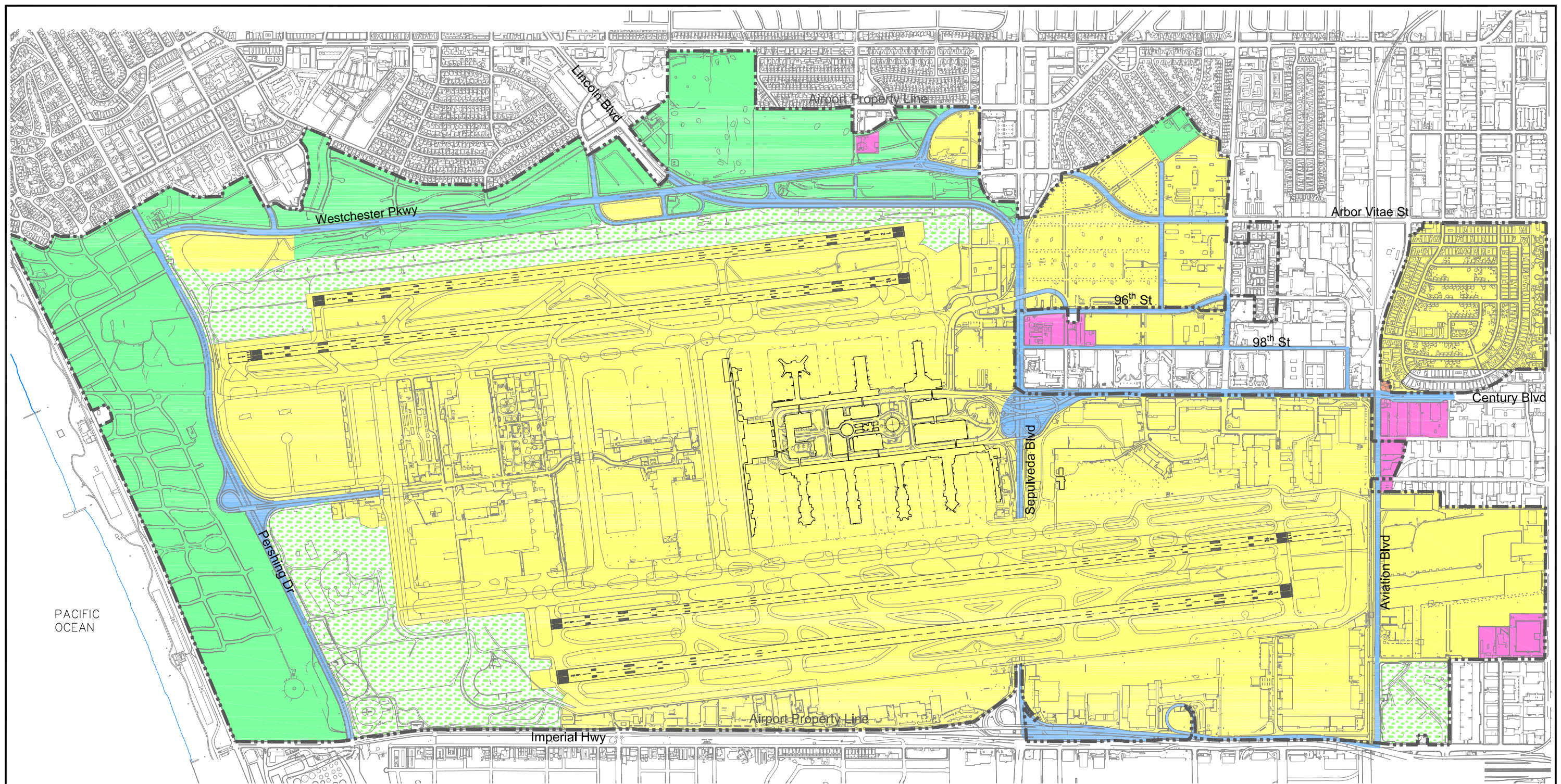
- COMMERCIAL
- AIRPORT OPEN SPACE

0 1,500 ft  
Scale north

Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

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**LAND USE LEGEND**

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| <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black;"></span> PRESERVE/RECREATION OPEN SPACE |  |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: blue; border: 1px solid black;"></span> ROADS                           | <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black; border-style: dotted;"></span> AIRPORT OPEN SPACE |

0 1,500 ft  
Scale north

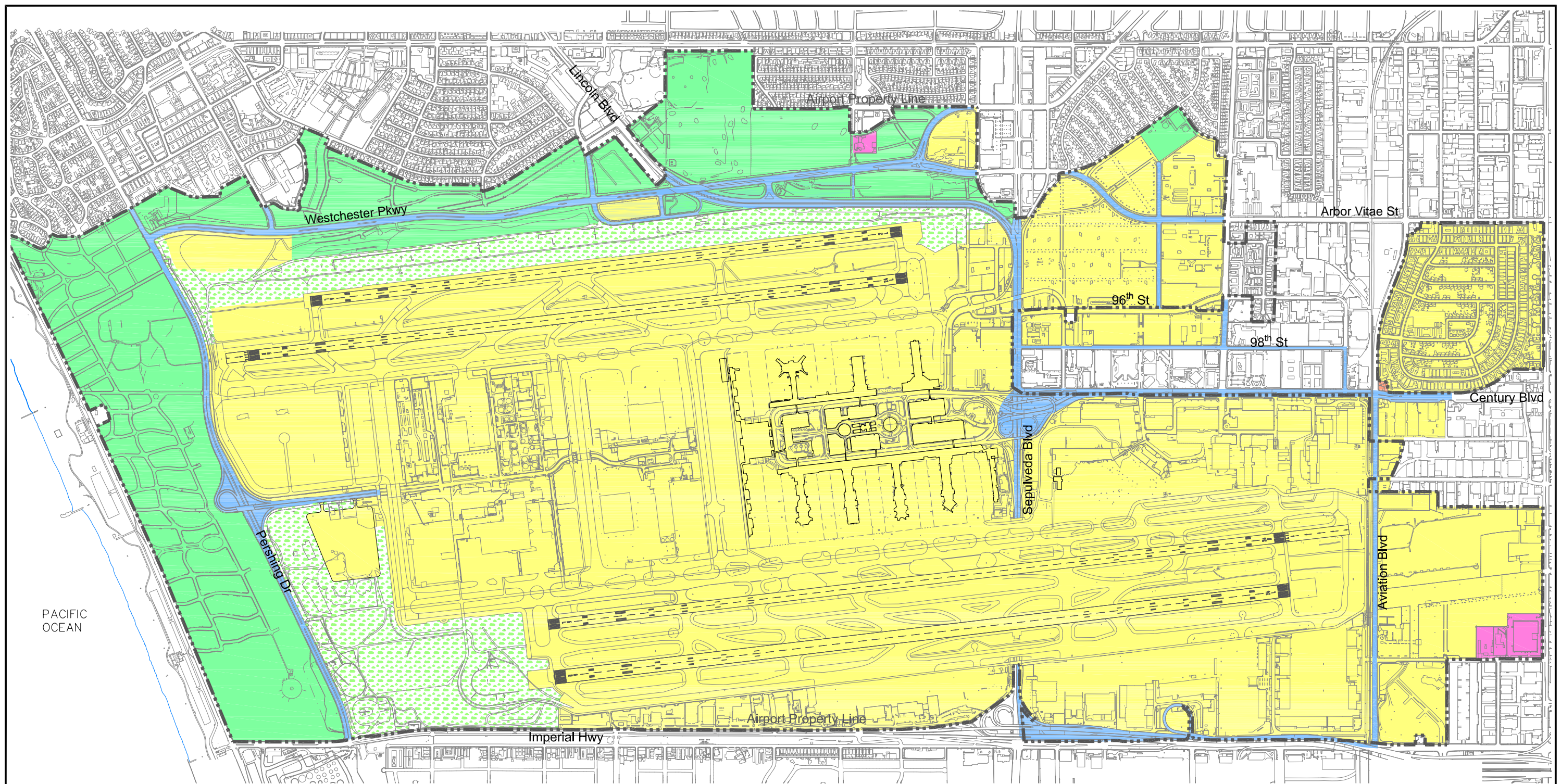
Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

## ***Appendix H - Hydrology/Water Quality***

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**LAND USE LEGEND**

	AIRPORT OPERATIONS		COMMERCIAL
	INDUSTRIAL		PRESERVE/RECREATION OPEN SPACE
	ROADS		AIRPORT OPEN SPACE

0 1,500 ft

Scale north

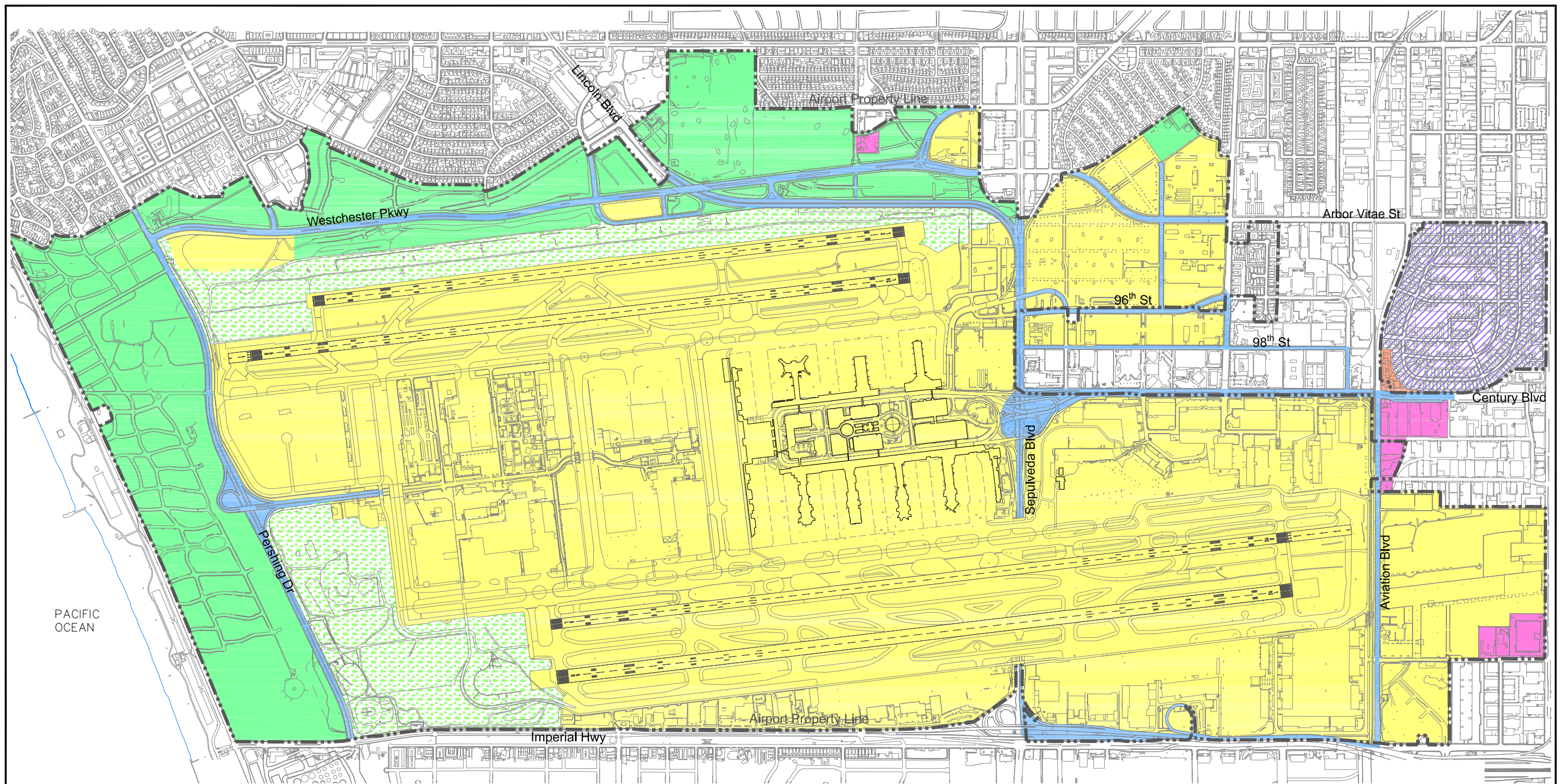
Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

## ***Appendix H - Hydrology/Water Quality***

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0 1,500 ft  
Scale north

Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

**LAND USE LEGEND**

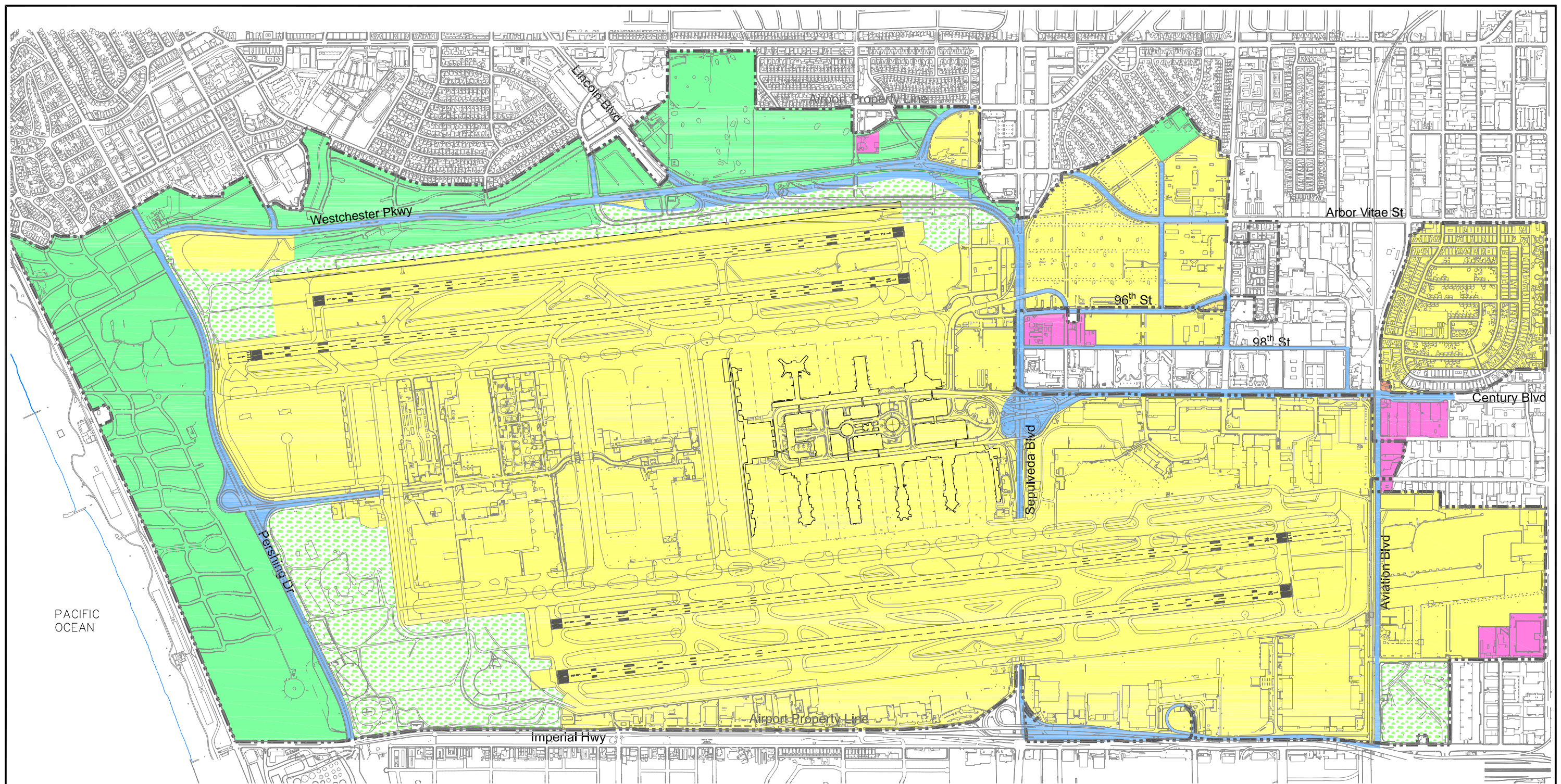
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| <span style="display: inline-block; width: 20px; height: 10px; background-color: pink; border: 1px solid black;"></span> INDUSTRIAL                      | <span style="display: inline-block; width: 20px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, blue 2px, blue 4px); border: 1px solid black;"></span> MANCHESTER SQUARE (25% RESIDENTIAL, 75% VACANT) |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black;"></span> PRESERVE/RECREATION OPEN SPACE | <span style="display: inline-block; width: 20px; height: 10px; background: radial-gradient(circle, green 1px, transparent 1px); background-size: 4px 4px; border: 1px solid black;"></span> AIRPORT OPEN SPACE                                   |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: blue; border: 1px solid black;"></span> ROADS                           |  |

## ***Appendix H - Hydrology/Water Quality***

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**LAND USE LEGEND**

<span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; border: 1px solid black;"></span>	AIRPORT OPERATIONS	<span style="display: inline-block; width: 20px; height: 10px; background-color: orange; border: 1px solid black;"></span>	COMMERCIAL
<span style="display: inline-block; width: 20px; height: 10px; background-color: pink; border: 1px solid black;"></span>	INDUSTRIAL	<span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black;"></span>	PRESERVE/RECREATION OPEN SPACE
<span style="display: inline-block; width: 20px; height: 10px; background-color: blue; border: 1px solid black;"></span>	ROADS	<span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black; border-style: dotted;"></span>	AIRPORT OPEN SPACE

0 1,500 ft  
Scale north

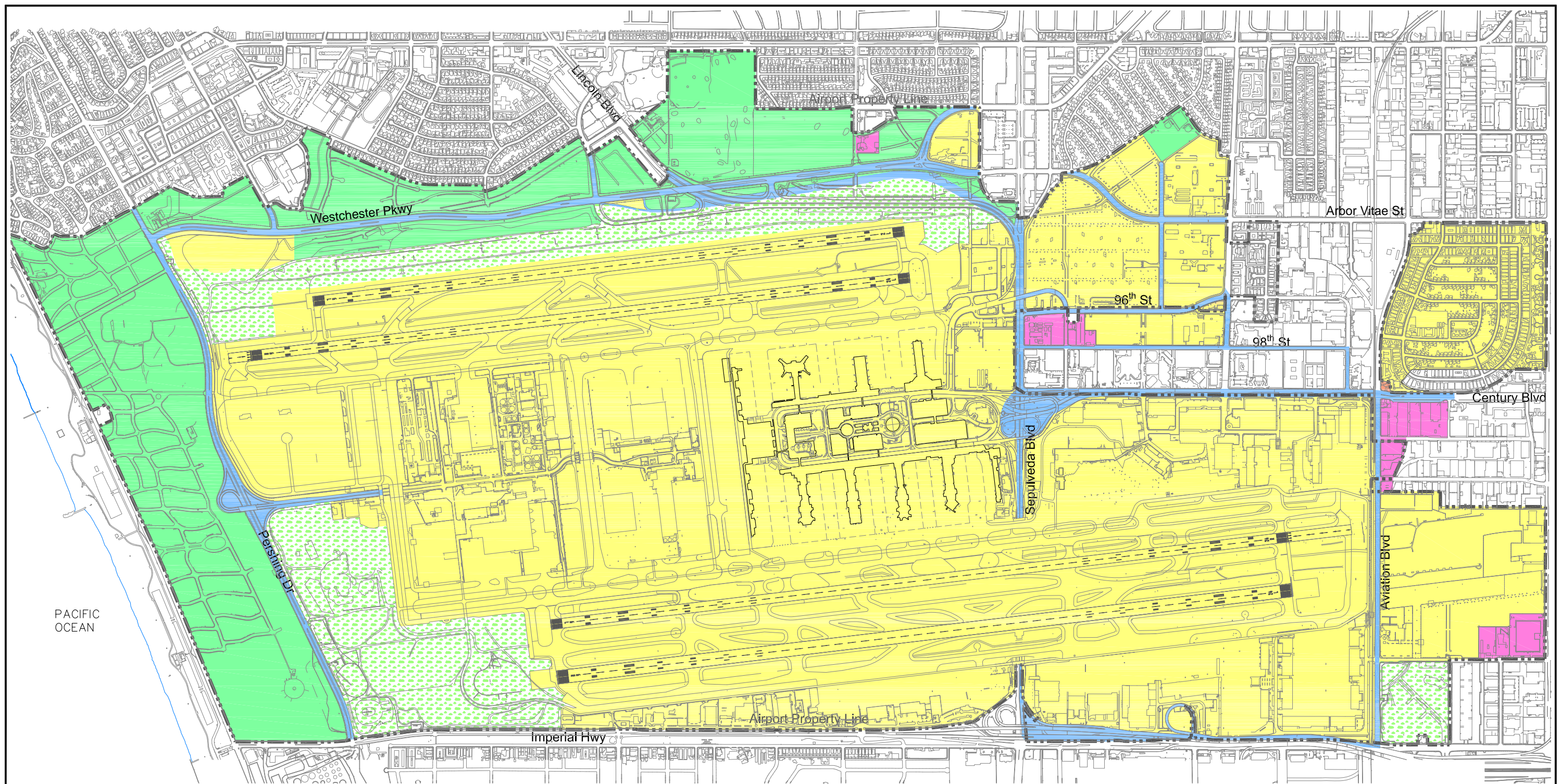
Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

## ***Appendix H - Hydrology/Water Quality***

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**LAND USE LEGEND**

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|--|--|
| <span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; border: 1px solid black;"></span> AIRPORT OPERATIONS            | <span style="display: inline-block; width: 20px; height: 10px; background-color: orange; border: 1px solid black;"></span> COMMERCIAL                              |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: pink; border: 1px solid black;"></span> INDUSTRIAL                      |  |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black;"></span> PRESERVE/RECREATION OPEN SPACE |  |
| <span style="display: inline-block; width: 20px; height: 10px; background-color: blue; border: 1px solid black;"></span> ROADS                           | <span style="display: inline-block; width: 20px; height: 10px; background-color: green; border: 1px solid black; border-style: dotted;"></span> AIRPORT OPEN SPACE |

0 1,500 ft  
Scale north

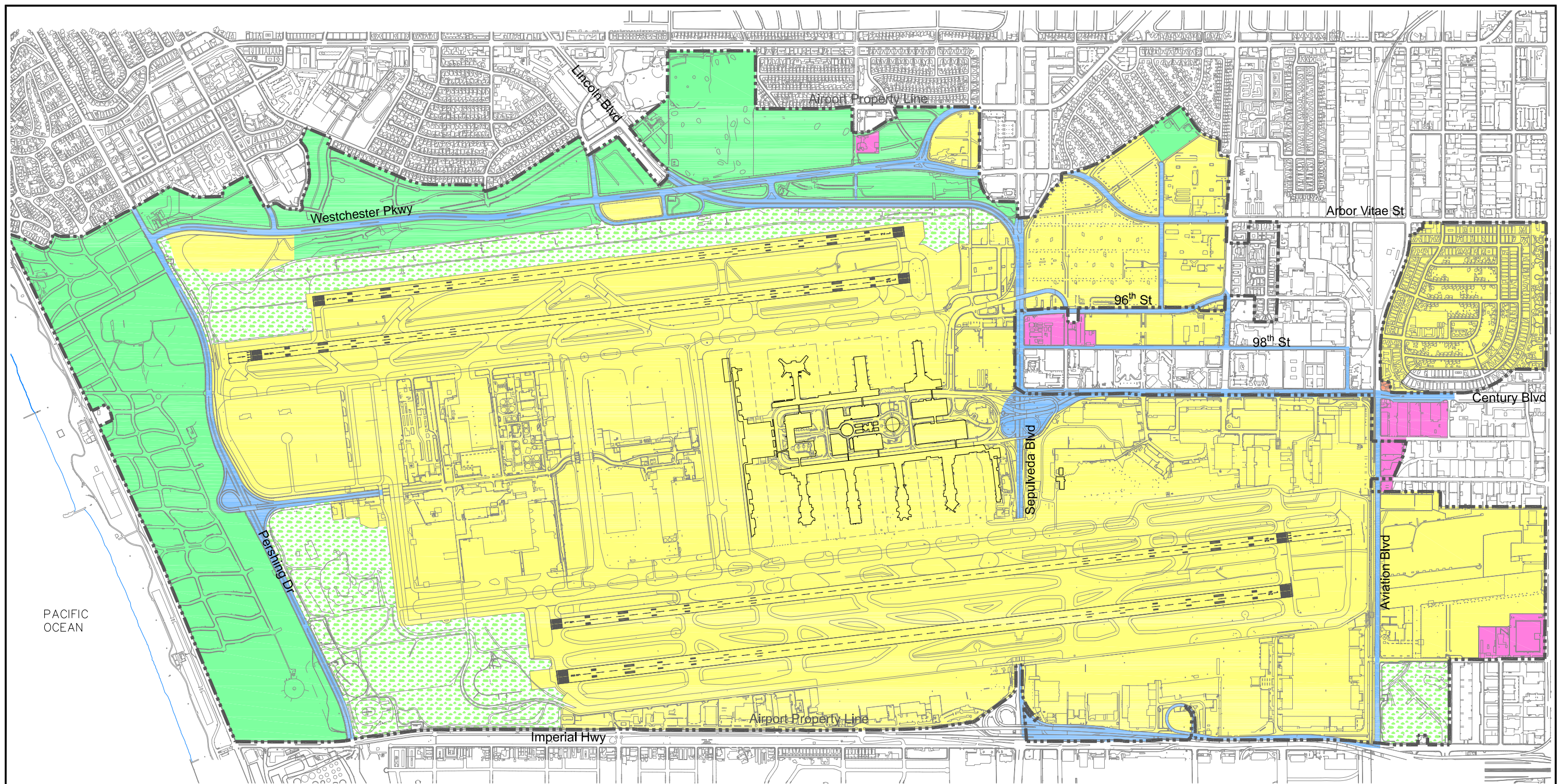
Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

## ***Appendix H - Hydrology/Water Quality***

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0 1,500 ft  
Scale north

Source: CDM, August 2011.  
Prepared by: CDM, August 2011.

**LAND USE LEGEND**

- |  |                                |   |                    |
|--|--------------------------------|---|--------------------|
|  | AIRPORT OPERATIONS             |  | COMMERCIAL         |
|  | INDUSTRIAL                     |  | AIRPORT OPEN SPACE |
|  | PRESERVE/RECREATION OPEN SPACE |   |                    |
|  | ROADS                          |   |                    |

## ***Appendix H - Hydrology/Water Quality***

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