Appendix H Updated Sewer and Water Master Plan Study

Appendices
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# **Sewer and Water Master Plan Study**

Heritage Fields Project 2012

General Plan Amendment and Zone Change

Prepared For:

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# 1 Background/Purpose

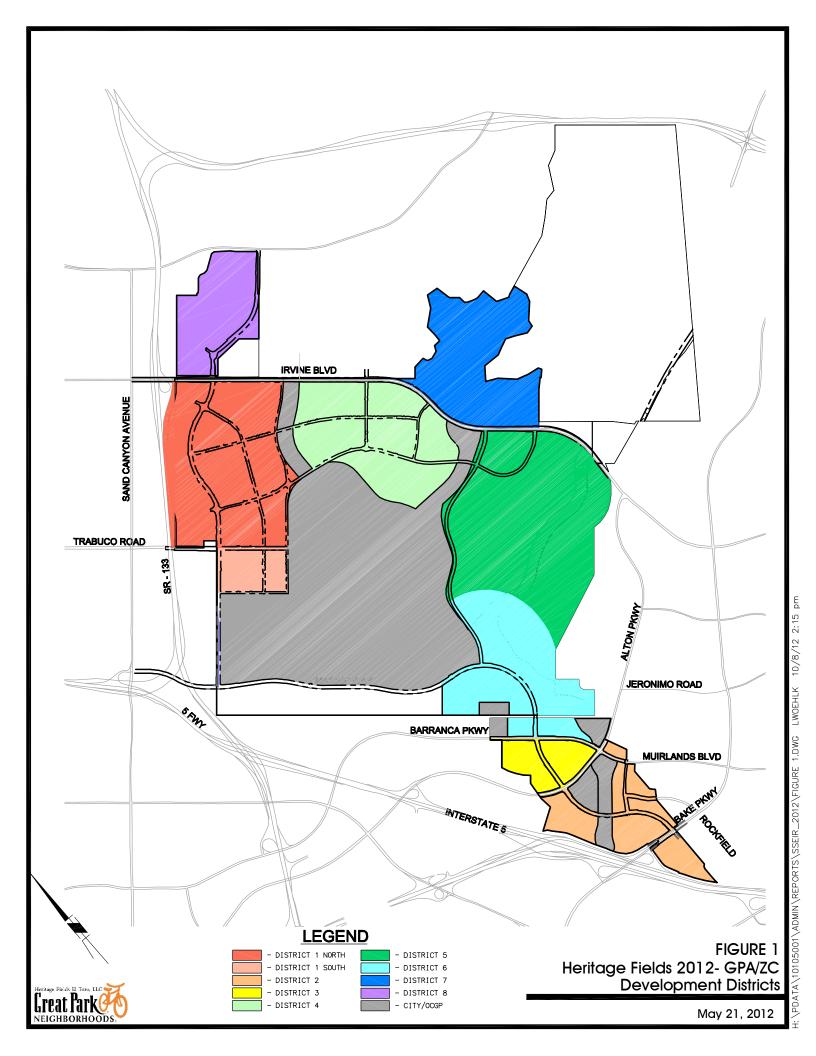
This study analyzes the Heritage Fields Project 2012 - General Plan Amendment and Zone Change's ("the 2012 Modified Project") "Sewer and Water Master Plan" ("2012 Master Plan") and compares it to the 2011 Approved Project, more specifically the "PA 30 and PA 51 Great Park/Great Park Neighborhoods Sub Area Master Plan Update", dated September 2011 (the "SAMP").

In September 2011, Heritage Fields El Toro, LLC ("Heritage Fields") and the Orange County Great Park/ City of Irvine (OCGP) completed the SAMP that was subsequently approved by the Irvine Ranch Water District ("IRWD"). Heritage Fields will be developing the Great Park Neighborhoods, which consists of several districts surrounding the Orange County Great Park, specifically District 1 North, District 1 South, District 2, District 3, District 4, District 5, District 6, District 7, and District 8. The 2012 Modified Project includes residential, commercial, and mixed land uses and includes a 2,600 student High School. The OCGP, City of Irvine (the "City") and Orange County are the owners of the property covered by the SAMP. Figure 1 shows the approximate locations of the different development areas.

The SAMP addresses the required onsite and offsite sewer and water facilities needed for the specified land uses and was based upon a "Sensitivity Analysis" for land use. The "Sensitivity Analysis" considered the potential impact of higher densities throughout Existing PAs 30 and 51 to project sewer and water services and was used as the basis for facility sizing for the approved SAMP.

This study compares the Average Day demands of the 2012 Modified Project to the SAMP (based upon the "Sensitivity Analysis"). There are portions of the proposed Project that do not impact Sewer and Water Master Plans. The consolidation of Existing PA 30 and Existing PA 51 into Combined PA 51 and the revisions to the County Master Plan of Arterial Highways do not alter required infrastructure or project demand and therefore do not impact the Sewer and Water Master Plan. The addition of 11 acres of property owned by TCA located between the edge of Existing PA 51 and SR-133, between Irvine Boulevard and Trabuco Road, to Combined PA 51 does not affect the SAMP since this area does not generate sewer and domestic water demand. Recycled water demand for this 11 acre site is minimal. The water and sewer demand of the relocated Wildlife Corridor are consistent with the 2011 Approved Project because the acreage and intended use are still consistent with the SAMP. Lastly, the implementation of recreational facilities within the approved OCGP is consistent with the demand for the OCGP that were included as part of the approved SAMP.

Therefore, this study will focus primarily on the changes to the land uses within Districts 1,2, 3, 5 and 6 for the 2012 Modified Project that would allow the development of an initial 4894 dwelling units and a conversion of some currently entitled non-residential square feet to an additional 4,606 dwelling units, including 1,194 density bonus units, plus development of remaining entitled 3,364,000 square feet of Medical and Science, 1,318,200 square feet of Multi-Use and 220,000 square feet of Community Commercial (the "9,500 Unit Option"). The 2012 Modified Project also includes an option to convert an additional currently entitled 535,000 square feet of the proposed Multi-Use development to an additional 889 dwelling units within District 6 and Lot 48 of 2<sup>nd</sup> Amended VTTM 17008, plus an additional 311 density bonus units (the "10,700 Unit Option").



# 2. 2011 Approved Project -

Using values from the SAMP, the following tables summarize the sewer and water demands, by district, for the 2011 Approved Project and the Sensitivity Analysis.

Table A-1 2011 Approved Project - Sewer Demand Summary (Average Dry Weather Flow)

(**************************************	1
	2011 SAMP (4894 DU-
Location	6.5 M sqft Non Res)
District 1	283 gpm
District 2	68 gpm
District 3	37 gpm
District 4	146 gpm
District 5	87 gpm
District 6	11 gpm
District 7	130 gpm
District 8	124 gpm
District 9	0 gpm
OCGP -Public Ownership	49 gpm
HF/OCGP -Public Ownership Total	935 gpm

Table A-2 2011 Approved Project (Sensitivity Analysis) - Sewer Demand Summary (Average Dry Weather Flow)

	2011 SAMP (9500 DU-
Location	6.5 M sqft Non Res)
District 1	299 gpm
District 2	68 gpm
District 3	37 gpm
District 4	190 gpm
District 5	400 gpm
District 6	143 gpm
District 7	130 gpm
District 8	124 gpm
District 9	0 gpm
OCGP -Public Ownership	49 gpm
HF/OCGP -Public Ownership Total	1440 gpm

Table A-3 2011 Approved Project - Water Demand Summary (Average Day)

(110.00000)	
Location	2011 SAMP (4894 DU-6.5 M sqft Non Res)
District 1	382 gpm
District 2	80 gpm
District 3	44 gpm
District 4	205 gpm
District 5	108 gpm
District 6	16 gpm
District 7	212 gpm
District 8	184 gpm
District 9	0 gpm
OCGP -Public Ownership	67 gpm
HF/OCGP -Public Ownership Total	1298 gpm

Table A-4 2011 Approved Project (Sensitivity Analysis) - Water Demand Summary (Average Day)

Location	2011 SAMP (9500 DU-6.5 M sqft Non Res)
District 1	406 gpm
District 2	80 gpm
District 3	44 gpm
District 4	261 gpm
District 5	609 gpm
District 6	158 gpm
District 7	212 gpm
District 8	184 gpm
District 9	0 gpm
OCGP -Public Ownership	67 gpm
HF/OCGP -Public Ownership Total	2021 gpm

Table A-5 2011 Approved Project - Recycled Water Demand Summary (Average Day)

(	
Location	2011 SAMP (4894 DU- 6.5 M sqft Non Res)
District 1	132 gpm
District 2	69 gpm
District 3	47 gpm
District 4	38 gpm
District 5	1245 gpm
District 6	46 gpm
District 7	36 gpm
District 8	34 gpm
District 9	27 gpm
OCGP -Public Ownership	1128 gpm
HF/OCGP -Public Ownership Total	2802 gpm

Table A-6 2011 Approved Project (Sensitivity Analysis) – Recycled Water Demand Summary (Average Day)

Location	2011 SAMP (9500 DU- 6.5 M sqft Non Res)
District 1	132 gpm
District 2	69 gpm
District 3	47 gpm
District 4	38 gpm
District 5	166 gpm
District 6	43 gpm
District 7	36 gpm
District 8	34 gpm
District 9	27 gpm
OCGP -Public Ownership	1128 gpm
HF/OCGP -Public Ownership Total	1720 gpm

# 3. 2012 Modified Project Sewer Demands

Sewer generation values were calculated for the 2012 Modified Project, including optional conversion, and then compared to the values in the SAMP (for the 2011 Approved Project). These values were derived using the IRWD Generation Factors and Peak Flow Factors that were used as part of the SAMP (See demand calculations included as part of the appendix of this document). The following tables summarize these demands by district.

Table B-1 2012 Modified Project - Sewer Demand Summary (Average Dry Weather Flow)

Location	2012 Project (9500 DU- 6.1 M sqft Non Res)
District 1	299 gpm
District 2	71 gpm
District 3	43 gpm
District 4	146 gpm
District 5	420 gpm
District 6	106 gpm
District 7	130 gpm
District 8	124 gpm
OCGP -Public Ownership	49 gpm
HF/OCGP -Public Ownership Total	1396 gpm

Table B-2 2012 Modified Project (Optional Conversion) - Sewer Demand Summary (Average Dry Weather Flow)

	2012 Project (10,700
	DU- 5.6 M sqft Non
Location	Res)
District 1	317 gpm
District 2	71 gpm
District 3	38 gpm
District 4	190 gpm
District 5	361 gpm
District 6	202 gpm
District 7	130 gpm
District 8	124 gpm
OCGP -Public Ownership	49 gpm
HF/OCGP -Public Ownership Total	1482 gpm

# 4. 2012 Modified Project Domestic Water Demands

Domestic Water generation values were calculated for both of options for the 2012 Modified Project and then compared to the values in the SAMP. These values were derived using the IRWD Generation Factors and Peak Flow Factors that were used as part of the SAMP (See demand calculations included as part of the appendix of this document). The following tables summarize these demands by district.

Table C-1 2012 Modified Project - Domestic Water Demand Summary (Average Day)

Location	2012 Project (9500 DU- 6.1 M sqft Non Res)
District 1	398 gpm
District 2	81 gpm
District 3	50 gpm
District 4	205 gpm
District 5	600 gpm
District 6	99 gpm
District 7	212 gpm
District 8	184 gpm
OCGP -Public Ownership	67 gpm
HF/OCGP -Public Ownership Total	1896 gpm

Table C-2 2012 Modified Project (Optional Conversion) - Domestic Water Demand Summary (Average Day)

Location	2012 Project (10,700 DU- 5.6 M sqft Non Res)
District 1	419 gpm
District 2	81 gpm
District 3	44 gpm
District 4	206 gpm
District 5	498 gpm
District 6	225 gpm
District 7	212 gpm
District 8	184 gpm
OCGP -Public Ownership	122 gpm
HF/OCGP -Public Ownership Total	1991 gpm

# 5. 2012 Modified Project Recycled Water Demands

Recycled Water generation values were calculated for both of options for the 2012 Modified Project and then compared to the values in the SAMP. These values were derived using the IRWD Generation Factors and Peak Flow Factors that were used as part of the SAMP (See demand calculations included as part of the appendix of this document). The following tables summarize these demands by district.

Table D-1 2012 Modified Project - Recycled Water Demand Summary (Average Day)

Location	2012 Project (9500 DU- 6.1 M sqft Non Res)
District 1	128 gpm
District 2	69 gpm
District 3	42 gpm
District 4	42 gpm
District 5	166 gpm
District 6	57 gpm
District 7	36 gpm
District 8	42 gpm
OCGP -Public Ownership	1140 gpm
HF/OCGP -Public Ownership Total	1722 gpm

Table D-2 2012 Modified Project (Optional Conversion) - Recycled Water Demand Summary (Average Day)

Location	2012 Project (10,700 DU- 5.6 M sqft Non Res)
District 1	128 gpm
District 2	69 gpm
District 3	42 gpm
District 4	42 gpm
District 5	188 gpm
District 6	57 gpm
District 7	36 gpm
District 8	42 gpm
OCGP -Public Ownership	1140 gpm
HF/OCGP -Public Ownership Total	1744 gpm

## 6. Results and Conclusions

## **Sewer Results**

When comparing the sewer demands for the 2012 Modified Project to the SAMP (Sensitivity Analysis), the sewer demands for the 10,700 Unit Option are 3% more than the 2011 Approved Project (See Summary Table Below and calculation included as part of this document). Neither is a noteworthy change in comparison to the 2012 Modified Project.

Sewer Demand Comparison Summary (Average dry weather Demand)

		, ,		•
	2011 SAMP		2012 Project	
	(4894 DU-	2011 SAMP	(9500 DU-	
	6.5 M sqft	(9500 DU-6.5 M	6.1 M sqft	2012 Project (10,700 DU-
Description	Non Res)	sqft Non Res)	Non Res)	5.6 M sqft Non Res)
HF/OCGP -				
Public	935 gpm	1442 gpm	1396 gpm	1481 gpm
Ownership				

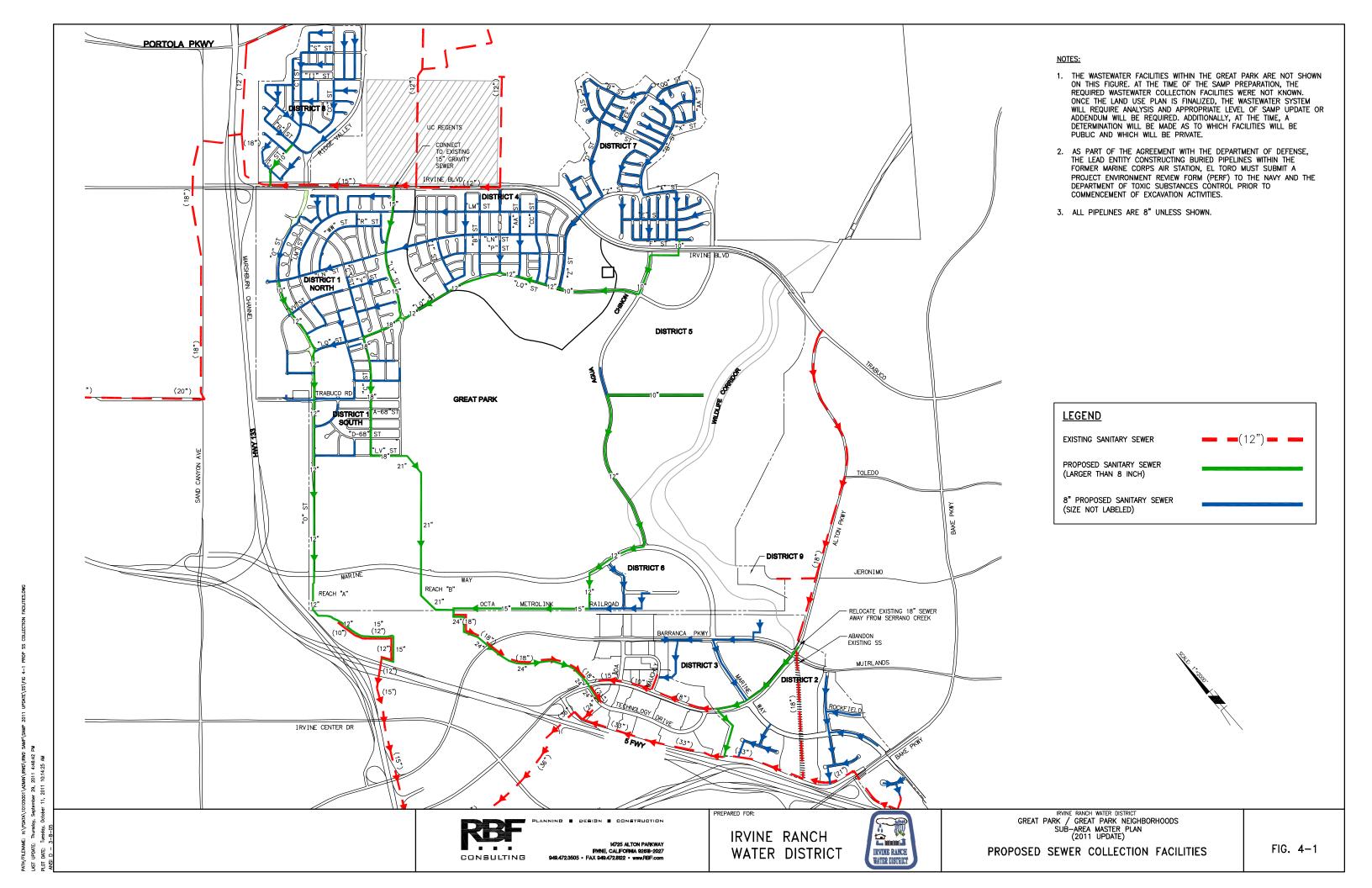
The projected sewer demands are conveyed through a series of connection points (See Figure 4-1 from the 2011 Amended PA 30/51 SAMP).

- 1) District 8 will convey flows under the existing Sewer Main under SR 133 (North of Irvine Blvd)
- 2) A portion of District 1, PA 40 (East of SR 133) and City/OCGP Public Ownership convey flows to Reach "A" offsite.
- 3) District 4, 5, 6, 7 along with City/OCGP Public Ownership will convey flows to Reach "B" offsite.
- 4) District 2, 3 along with the City Public Ownership will convey flows to the existing main along the I-5 Freeway.

The 2012 Modified project does not propose any changes to District 8. Therefore this analysis will focus primarily on the Districts tributary to Reach "A" and Reach "B" that are changing landuses, primarily Districts 1, 5 and 6. In addition to Reach "A" and Reach "B", this analysis will also include modifications to landuses in Districts 2 and 3 that will convey flows to the existing main along the I-5 Freeway. The following table summarizes these changes to each of the connection points.

Connection Point - Sewer Demand Comparison Summary (Average dry weather Demand)

The second of th							
Point of Connection		2011 SAMP	2012 Project				
	Districts	(9500 DU-6.5 M	(10,700 DU- 5.6	Change			
Connection		sqft Non Res)	M sqft Non Res)				
Reach "B"	District 5	400 gpm	361 gpm	-39 gpm			
	District 6	143 gpm	202 gpm	+ 59 gpm			



I-5 Freeway (existing Main)	District 2	68 gpm	71 gpm	+3 gpm
	District 3	37 gpm	38 gpm	+1 gpm
Reach "A"	District 1	299 gpm	317 gpm	+18 gpm

From this comparison, the increase to Reach "A" is 6%, Reach "B" is 4% and the increase to the I-5 Freeway Line is 4%. These increases are not significant. As more site planning is available a SAMP Update will be completed.

# **Domestic Water Results**

When comparing the domestic water demands for the 2012 Modified Project to the SAMP (Sensitivity Analysis), the domestic water demand for the 10,700 Unit Option is less than the 2011 Approved Project. (See table below) As more site planning is available, a SAMP Update will be completed.

Domestic Water Demand Comparison Summary (Average day Demand)

Demestic Water Bernana Companson Sammary (Werage day Bernana)						
	2011 SAMP		2012 Project			
Description	(4894 DU-	2011 SAMP	(9500 DU-			
Description	6.5 M sqft	(9500 DU-6.5 M	6.1 M sqft Non	2012 Project (10700		
	Non Res)	sqft Non Res)	Res)	DU-5.6 M sqft Non Res)		
HF/OCGP -						
Public	1298 gpm	2021 gpm	1896 gpm	1991 gpm		
Ownership						

# **Recycled Water Results**

When comparing the Recycled Water demands for the 2012 Modified Project to the SAMP (Sensitivity Analysis), the Recycled Water demands for the 10,700 Unit Option are 2% more than the 2011 Approved Project (See Summary Table Below and calculation included as part of this document). Neither is a noteworthy change in comparison to the 2012 Modified Project.

Recycled Water Demand Comparison Summary (Average day Demand)

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Description	2011 SAMP		2012 Project	2012 Project
	(4894 DU- 6.5 M sqft Non Res)	2011 SAMP	(9500 DU-	(10700 DU-
		(9500 DU-6.5 M	6.1 M sqft	5.6 M sqft
		sqft Non Res)	Non Res)	Non Res)
HF/OCGP -				
Public	2802 gpm	1720 gpm	1722 gpm	1744 gpm
Ownership				

# APPENDIX SEWER AND WATER DEMAND CALCULATIONS

# 2012 Modified Project (10,700 Option) Sewer Demand Analysis

2011 SAMP (Sensitivity Analysis ) Results

	Average Dry V	Veather Flow			
District	gpd	cfs	Peak Dry Weather Flow <sup>a</sup> (cfs)	Average Day (gpd)	Average Day (gpm)
District 1	431,144	0.667	2.218	431,144	299
District 2	98,500	0.152	0.594	98,500	68
District 3	53,800	0.083	0.341	53,800	37
District 4	210,710	0.326	1.174	210,710	146
District 5	575,960	0.891	2.852	575,960	400
District 6	206,625	0.32	1.167	206,625	143
District 7	186,505	0.289	1.068	186,505	130
District 8	178,245	0.276	1.02	178,245	124
District 9					
Great Park/Public	134,913	0.209	0.835	134,913	94
TOTAL	2,076,402	3.213	8.514	2,076,402	1,442

# 2012 Modified Project Assumptions

	Land Use	IRWD Land Use	#	Units	Factor	Units	Avg Day	Avg Day
							(gpd)	(gpm)
District 1							455,045	31
	SFD	Residential - Low Density	262	du	22	25 gpd/du	58,950	
	MF	Residential - Medium Density	378	du		20 gpd/du	83,160	
	MF	Residential - Medium-High Density	1,009	du		50 gpd/du	151,350	
	MF	Residential - High Density	611	du		15 gpd/du	88,595	6
	Multi Use	Commercial - Community	150,000	sf		50 gpd/ksf	22,500	1
	R & D	Commercial - General Office	944,300	sf		52 gpd/ksf	49,104	3-
	Multi Use	Commercial - Institutional	15,000	sf	3	30 gpd/ksf	450	(
	K-8	Commercial - School	78000	sf	1	2 gpd/ksf	936	
District 2							101,608	7
	R&D	Commercial General Office	1,954,000	sf		52 gpd/ksf	101,608	7
District 3							54,600	3
	R&D	Commerical General Office	1,050,000	sf	:	52 gpd/ksf	54,600	3
District 4							210,710	14
	SFD	Residential - Low Density	66	du		25 gpd/du	14,850	10
	MF	Residential - Medium Density	428	du	22	20 gpd/du	94,160	6.
	MF	Residential - Medium-High Density	608	du	15	50 gpd/du	91,200	6
	Multi Use	Commercial - Community	70,000	sf	15	50 gpd/ksf	10,500	
District 5							519,636	36
	K-8	Comm - School	78,000	sf		12 gpd/ksf	936	
	High School	Comm - School	210,000	sf		12 gpd/ksf	2,520	:
	SFD	Med Density Residential	1,194	du	22	20 gpd/du	262,680	183
	MF	Medium-High Density Residential	1,690	du	1:	50 gpd/du	253,500	17
District 6							291,068	20:
	MF	High Density Residential	1,722	du	14	45 gpd/du	249,690	17:
	Multi-Use	Commercial-Community (20%)	115,580	sf	13	50 gpd/ksf	17,337	1:
	Multi-Use	Commercial-General Office (80%)	462,320	sf	4	52 gpd/ksf	24,041	1
District 7							186,505	129
	SFD	Residential - Low Density	341	du	22	25 gpd/du	76,725	5:
	MF	Residential - Medium Density	499	du	22	20 gpd/du	109,780	7
District 8							178,695	
	SFD	Residential - Low Density		du		25 gpd/du	27,675	
	MF	Residential - Medium Density		du		20 gpd/du	113,300	
	MF	Residential - Medium-High Density		du		50 gpd/du	13,200	
	MF	Residential - High Density		du		15 gpd/du	24,070	1
	Multi-Use	Commercial - Institutional	15,000	sf	3	30 gpd/ksf	450	
Great Park/	Public Ownersh	nip					134,913	9.

# 2012 Modified Project (10,700 Option) Water Demand Analysis

## 2011 SAMP (Sensitivity Analysis ) Results

	Demand, gpm				
District	Average Day	Max. Day	Peak Hour		
District 1	406	893	1,421		
District 2	80	175	279		
District 3	44	97	155		
District 4	205	452	718		
District 5	609	1,340	2,132		
District 6	158	348	554		
District 7	212	466	742		
District 8	184	405	645		
District 9					
Great Park/Public Ownership	122	269	428		
TOTAL	2,021	4,446	7,073		

## 2012 Modified Project Assumptions

	Land Use	IRWD Land Use	# (	Units	Factor	Units	Avg Day	Max Day
District 1							419	923
	SFD	Residential - Low Density	262	du	405	gpd/du	74	163
	MF	Residential - Medium Density	378	du	335	gpd/du	88	194
	MF	Residential - Medium-High Density	1,009	du	185	gpd/du	130	286
	MF	Residential - High Density	611	du	160	gpd/du	68	150
	Multi Use	Commercial - Community	150,000 s	sf	185	gpd/ksf	19	42
	R & D	Commercial - General Office	944,300 s	sf	60	gpd/ksf	39	86
	Multi Use	Commercial - Institutional	15,000 s	sf	45	gpd/ksf	0	0
	K-8	Commercial - School	78000 s	sf	13	gpd/ksf	1	2
District 2							81	178
	R&D	Commercial General Office	1,954,000 s	sf	60	gpd/ksf	81	178
District 3							44	97
	R&D	Commerical General Office	1,050,000 s	sf	60	gpd/ksf	44	97
District 4							206	454
	SFD	Residential - Low Density	66 0	du	405	gpd/du	19	42
	MF	Residential - Medium Density	428 0	du	335	gpd/du	100	220
	MF	Residential - Medium-High Density	608 0	du	185	gpd/du	78	172
	Multi Use	Commercial - Community	70,000 s	sf	185	gpd/ksf	9	20
District 5							498	1093
	K-8	Comm-School	78,000 s	sf	13	gpd/ksf	1	2
	High School	Comm - School	210,000 s	sf	13	gpd/ksf	2	4
	SFD	Medium Density Residential	1,194 (	du	335	gpd/du	278	612
	MF	Medium-High Density Residential	1,690 (	du	185	gpd/du	217	477
District 6							225	495
	MF	High Density Residential	1,722 0	du	160	gpd/du	191	420
	Multi-Use	Commercial-Community (10%)	115,580 s	sf	185	gpd/ksf	15	33
	Multi-Use	Commercial-General Office (90%)	462,320 s	sf	60	gpd/ksf	19	42
District 7							212	466
	SFD	Residential - Low Density	341 0	du	405	gpd/du	96	211
	MF	Residential - Medium Density	499 (	du		gpd/du	116	255
District 8		j					184	405
	SFD	Residential - Low Density	123	du	405	gpd/du	35	77
	MF	Residential - Medium Density	515	du	335	gpd/du	120	264
	MF	Residential - Medium-High Density	88 (	du	185	gpd/du	11	24
	MF	Residential - High Density	166	du		gpd/du	18	40
	Multi-Use	Commercial - Institutional	15,000 s	sf		gpd/ksf	0	0
Great Park/P	ublic Ownership	)	•				122	

1,991

# 2012 Modified Project (10,700 Option) Recycled Water Demand Analysis

## 2011 SAMP (Sensitivity Analysis ) Results

	Demand, gpm				
District	Average Day	Max. Day	Peak Hour		
District 1	132	355	724		
District 2	69	185	378		
District 3	47	126	257		
District 4	38	104	211		
District 5	166	448	913		
District 6	31	85	173		
District 7	36	97	198		
District 8	34	91	186		
District 9	27	72	147		
Great Park/Public Ownership	1140	3079	6273		
TOTAL	1,720	4,644	9,460		

## 2012 Modified Project Assumptions

	Land Use	IRWD Land Use	Area, acres Units	Factor Units	% irrigable	Avg Day	Avg Day
						gal/day	gal/min
District 1						183,948	128
	SFD	Residential - Low Density	45.8 ac	2500 gpd/ac	15	17,175	12
	MF	Residential - Medium Density	51.1 ac	2800 gpd/ac	15	21,462	15
	MF	Residential - Medium-High Density	55.1 ac	3000 gpd/ac	15	24,795	17
	MF	Residential - High Density	44.4 ac	2800 gpd/ac	15	18,648	13
	Multi Use	Commercial - Community	26.6 ac	3500 gpd/ac	20	18,620	13
	R & D	Commercial - General Office	9.6 ac	3000 gpd/ac	20	5,760	4
	Multi Use	Commercial - Institutional	61.5 ac	2750 gpd/ac	30	50,738	35
	K-8	Commercial - School	21.4 ac	2500 gpd/ac	50	26,750	19
District 2						98,960	69
i	R&D	Commercial General Office	127.6 ac	3000 gpd/ac	20	76,560	53
		Commercial - Community	32.0 ac	3500 gpd/ac	20	22,400	16
District 3		·				60,780	42
	R&D	Commerical General Office	101.3 ac	3000 gpd/ac	20	60,780	42
District 4						60,217	42
	SFD	Residential - Low Density	14.2 ac	2500 gpd/ac	15	5,325	4
	MF	Residential - Medium Density	69.1 ac	2800 gpd/ac	15	29,022	20
	MF	Residential - Medium-High Density	35.4 ac	3000 gpd/ac	15	15,930	11
	Multi Use	Commercial - Community	14.2 ac	3500 gpd/ac	20	9,940	7
District 5						297,680	188
	K-8	Comm-School	21.0 ac	2500 gpd/ac	50	26,250	18
	High School	Comm - School	40.0 ac	2500 gpd/ac	50	50,000	35
	SFD	Medium Density Residential	254.0 ac	2800 gpd/ac	15	106,680	74
	MF	Medium-High Density Residential	255.0 ac	3000 gpd/ac	15	114,750	80
District 6						82,400	57
	MF	High Density Residential	80.0 ac	2800 gpd/ac	15	33,600	23
	Multi-Use	Commercial-Community (10%)	8.0 ac	3500 gpd/ac	20	5,600	4
	Multi-Use	Commercial-General Office (90%)	72.0 ac	3000 gpd/ac	20	43,200	30
District 7						51,960	36
	SFD	Residential - Low Density	59.6 ac	2500 gpd/du	15	22,350	16
	MF	Residential - Medium Density	70.5 ac	2800 gpd/du	15	29,610	21
District 8		İ				59,967	42
	SFD	Residential - Low Density	27.8 ac	2500 gpd/du	15	10,425	7
	MF	Residential - Medium Density	72.1 ac	2800 gpd/du	15	30,282	21
	MF	Residential - Medium-High Density	8.3 ac	3000 gpd/du	15	3,735	3
	MF	Residential - High Density	7.5 ac	2800 gpd/du	15	3,150	2
	Multi-Use	Commercial - Institutional	15.0 ac	2750 gpd/ksf	30	12,375	g
Great Park/P	ublic Ownership					1,299,600	1,140
						2,195,512	1,744