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**MEMORANDUM**

**646-382**

**TO:** Curt Smith, Home Fed Village 8, LLC

**FROM:** <sup>SAW</sup> Stephen M. Nielsen, P.E., Dexter Wilson Engineering, Inc.

**DATE:** October 18, 2019

**SUBJECT:** Otay Ranch 8 West TM/SPA Amendment Water Conservation Plan Evaluation

**Background**

HomeFed Village 8, LLC proposes revisions to the Village 8 West land use plan in order to adjust for current market demands. The land use changes involve transferring residential units from Village 8 East to Village 8 West and eliminating a previously planned middle school from Village 8 West. Amendments to the Village 8 West Sectional Planning Area (SPA), and Village 8 West Tentative Map (TM) are necessary to implement the proposed changes.

The November 2010 Water Conservation Plan for Otay Ranch Village 8 West was prepared as a supporting document to the EIR. The purpose of this memorandum is to evaluate the impact of the proposed land use changes for Village 8 West on the findings from this previous study.

### **SPA Amendment Summary**

A summary of proposed changes to the Village 8 West land use plan is provided as follows:

- Transfer 284 units from the adjacent Village 8 East SPA Plan and TM to Village 8 West, increasing the total authorized units within Village 8 West to 2,334 and correspondingly reducing the total authorized units within Village 8 East to 3,276 units.
- Eliminate the previously planned middle school designation from Parcel D and change the land use designation from T-4: TC (Town Center) to T-32:NC (Medium High Residential)
- Show Parcel E as a water quality/hydromodification basin.
- Change the land use designation of Parcel W from SD:Basin to T-4:TC (Town Center)
- Modify the limits of Parcels A and E to reflect the preservation of designated jurisdictional waters.
- Modify the limits of adjacent parcels T and U to adjust the size of the neighborhood park (Parcel T) to 5.5 acres and correspondingly adjust the size of residential Parcel U to 15.6 acres.
- Redistribute the residential units and office retail SF allocations within Village 8 West.

### **Proposed Land Use Plan**

The proposed site utilization plan and land use summary table is provided as Attachment 1 to this memorandum. The project does not propose changes to the backbone street alignments for the project, but does involve adjustments to the acreages and residential unit count of various planning areas.

**Water Demand Projections – Approved Plan**

Table 1 summarizes the projected average water demands for Village 8 West based on the approved land use plan as presented in the November 2010 Overview of Water Study. Table 2 summarizes the projected average day water demands from the October 2018 Subarea Master Plan (SAMP) for Village 8 West. The decrease in water demand compared to the November 2010 study is based on current water demand factors adopted by the Otay Water District (OWD) as a result of water conservation efforts in recent years.

<b>TABLE 1            VILLAGE 8 WEST APPROVED LAND USE PLAN            PROJECTED WATER DEMANDS (NOVEMBER 2010 STUDY)</b>			
<b>Land Use</b>	<b>Quantity</b>	<b>Demand Factor</b>	<b>Average Demand, gpd</b>
SF Residential	621 units	500 gpd/unit	310,500
MF Residential	1,429 units	255 gpd/unit	364,395
Commercial	300,000 SF	0.14 gpd/SF	42,000
School	32.4 ac	1,428 gpd/ac	46,270
Park	28.0 ac	0 gpd/ac <sup>1</sup>	19,270
CPF	5.8 ac	714 gpd/ac	4,141
<b>TOTAL</b>			<b>786,575</b>

<sup>1</sup>Parks will be irrigated with recycled water, but a nominal amount of potable use has been estimated.

<b>TABLE 2 VILLAGE 8 WEST PROJECTED WATER DEMAND (OCTOBER 2018 SAMP)</b>			
<b>Land Use</b>	<b>Quantity</b>	<b>Demand Factor</b>	<b>Average Demand, gpd</b>
Residential (<8 DU/ac)	364 units	435 gpd/unit	158,340
MF Residential (>8 DU/ac)	1,686 units	170 gpd/unit	286,620
Commercial	40 ac	1,607 gpd/ac	64,320
School	31.6 ac	1,428 gpd/ac	45,125
Park <sup>1</sup>	27.9 ac	0 <sup>1</sup>	17,270
CPF	5.8 ac	714 gpd/ac	4,140
<b>TOTAL</b>			<b>575,815</b>

<sup>1</sup> Parks to be irrigated with recycled water, but nominal potable water use was estimated in the SAMP.

**Water Demand Projection – Proposed Plan**

Table 3 summarizes the projected average water demands for Village 8 West based on the currently proposed SPA Amendment. Current water demand factors from OWD were utilized in the estimate, consistent with the factors used in the October 2018 SAMP.

<b>TABLE 3 VILLAGE 8 WEST PROPOSED LAND USE PLAN PROJECTED WATER DEMANDS (SPA AMENDMENT)</b>			
<b>Land Use</b>	<b>Quantity</b>	<b>Demand Factor</b>	<b>Average Demand, gpd</b>
Residential (3-10 DU/Ac)	561 units	435 gpd/unit	244,035
Residential (>10 DU/Ac)	1,773 units	170 gpd/unit	301,410
Commercial <sup>1</sup>	37.8 ac	1,607 gpd/ac	60,745
School – Elementary	11.1 ac	1,428 gpd/ac	15,851
Park	23.4 ac	0 gpd/ac <sup>2</sup>	17,270
CPF	5.5 ac	714 gpd/ac	3,927
<b>TOTAL</b>			<b>643,238</b>

<sup>1</sup> Commercial acreage is based on 90 percent of gross acreage for MU sites.

<sup>2</sup> Parks will be irrigated with recycled water, but a nominal amount of potable use has been estimated.

In comparing the projections from Tables 1 and 2, and 3 the proposed SPA Amendment will reduce previous water demand projections by approximately 18 percent compared to the 2010 Study, but will increase demands by approximately 12 percent compared to the October 2018 SAMP.

### Water Conservation Savings

A water conservation plan was prepared for Village 8 West in 2010 as part of the project approval. In addition to standard water conservation measures, multi-family units within Village 8 West have committed to installing the following two additional measures:

- Dual flush toilets
- Water effluent landscaping

The proposed additional residential units for Village 8 West will be required to incorporate the above measures.

The November 2010 Water Conservation Plan estimates water conservation savings from the use of recycled water and from the implementation of water conservation measures at single family and multi-family residences. Table 4 summarizes the total projected water conservation savings from the 2010 Water Conservation Plan.

<b>Description</b>	<b>Units</b>	<b>Water Savings, gpd/unit</b>	<b>Total Water Savings, gpd</b>
Recycled Water	---	---	137,270
Single Family Residential	621	49.25	30,585
Multi-Family Residential	1,429	24.25	34,650
<b>TOTAL</b>			<b>202,505</b>

Based on the current proposed SPA Amendment, Table 5 provides the estimated recycled water savings and Table 6 summarizes the total estimated water conservation savings.

<b>TABLE 5 OTAY RANCH VILLAGE 8 WEST PROJECTED RECYCLED WATER DEMANDS</b>				
<b>Land Use</b>	<b>Area (ac)</b>	<b>% Irrigated</b>	<b>Irrigated Area (ac)</b>	<b>AAD, gpd</b>
Irrigated Open Space	28.7	100	28.7	54,530
Parks	23.4	100	23.4	44,460
Mixed Use	42.7	10	4.3	8,170
Community Purpose Facility	5.5	20	1.1	2,090
Multi-Family	47.6	15	7.1	13,490
School	11.1	20	2.2	4,180
<b>TOTAL</b>				<b>126,920</b>

<b>TABLE 6 OTAY RANCH VILLAGE 8 WEST CURRENT SPA AMENDMENT ESTIMATED WATER CONSERVATION SAVINGS</b>			
<b>Description</b>	<b>Units</b>	<b>Water Savings, gpd/unit</b>	<b>Total Water Savings, gpd</b>
Recycled Water	---	---	126,920
Single Family Residential	561	49.25	27,629
Multi-Family Residential	1,773	24.25	42,995
<b>TOTAL</b>			<b>197,544</b>

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### **Conclusion**

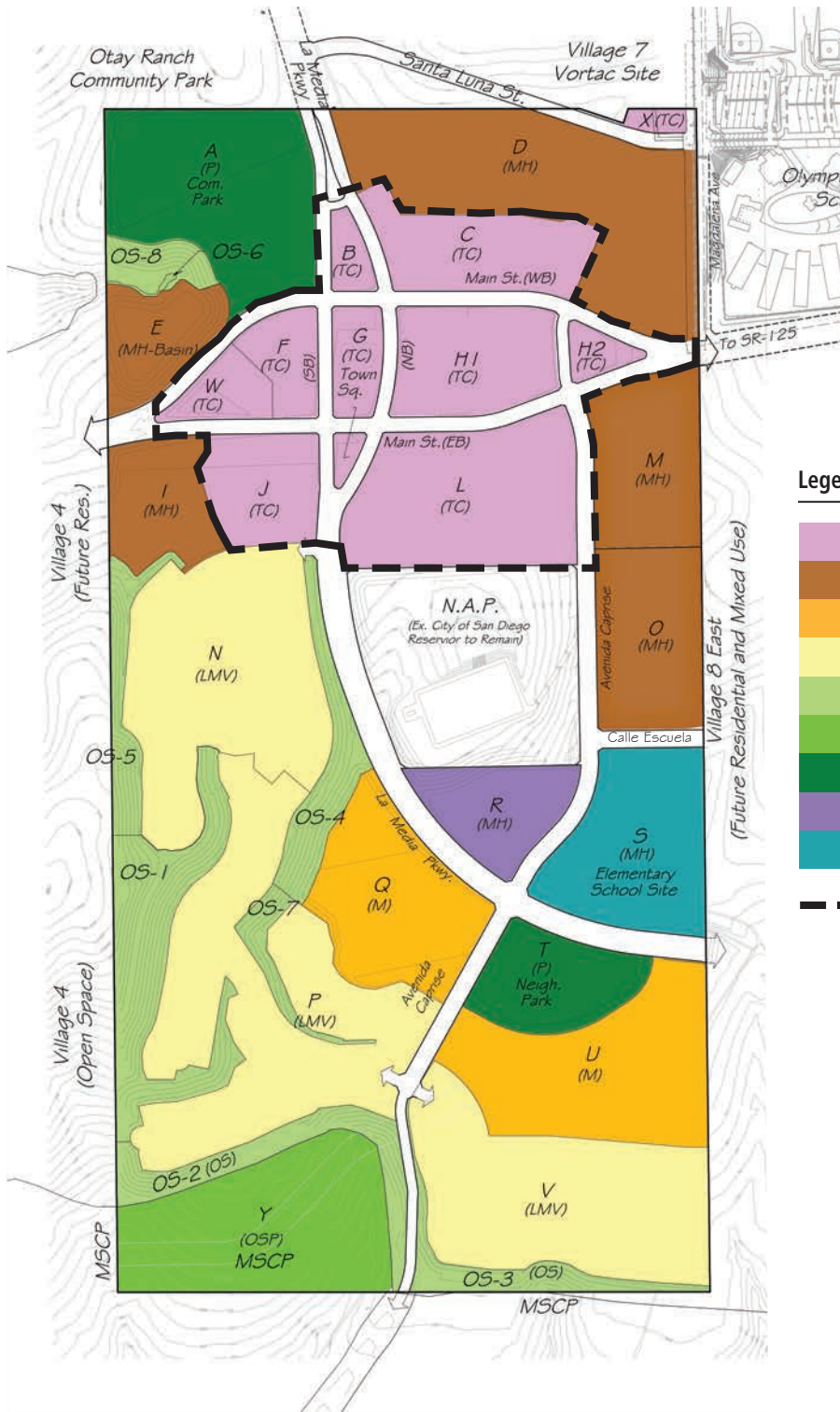
The proposed SPA Amendment for Village 8 West will result in a negligible difference in total water conservation savings. The estimated recycled water use is reduced slightly from the 2010 report due to a lower irrigation demand factor currently used by OWD. Residential water conservation savings are increased slightly due to the increase in the number of residential units. The net effect is that projected total water conservation savings are reduced from 202,505 gpd to 197,544 gpd, or 2.4 percent.

SMN:ps

**ATTACHMENT 1**

**SITE UTILIZATION PLAN  
LAND USE SUMMARY**





**Legend - Land Use**

- Town Center (TC)
- Medium-High Density Residential (MH)
- Medium Density Residential (M)
- Low-Medium Density Residential Village (LMV)
- Open Space (OS)
- Open Space (Preserve - OSP)
- Park (P)
- Community Purpose Facility (CPF)
- School
- Boundary of Town Center (Master Precise Plan Required - See Section 9.3.7)



**Commercial and Residential**

Town Center - 18-45 du/ac					
Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target Res. Units <sup>(2)</sup>	Com'l Min. <sup>(2)(3)</sup>	Com'l Max <sup>(2)(3)</sup>
B	1.2	T-4:TC	-	0	4
C	7.5	T-4:TC	180	0	36
F	2.8	T-4:TC	175 <sup>(7)</sup>	10	10
W	2.3	T-4:TC	See <sup>(7)</sup>	0	0
H-1A-1D	7.5	T-4:TC	225	20	75
H-2	1.2	T-4:TC	0	0	12
J	5.5	T-4:TC	199	0	18
L-A-L-D	14.0	T-4:TC	431	87	145
X	0.7	T-4:TC	0	0	0
<b>Subtotal</b>	<b>42.7</b>		<b>1,210</b>	<b>117</b>	<b>300</b>

**Medium-High Density Residential - 9-18 du/ac**

Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target Res. Units <sup>(2)</sup>	Com'l Min. <sup>(2)(3)</sup>	Com'l Max <sup>(2)(3)</sup>
D	19.4	T-3:NC	234		
E	5.1	T-3:NC	0	Basin	
I	6.1	T-3:NC	84		
M	8.3	T-3:NC	125		
O	8.7	T-3:NC	120		
<b>Subtotal</b>	<b>47.6</b>		<b>563</b>		

**Medium Density Residential Attached/Detached - 4-11 du/ac**

Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target Res. Units <sup>(2)</sup>	Com'l Min. <sup>(2)(3)</sup>	Com'l Max <sup>(2)(3)</sup>
Q	11.1	T-2:NG	106		
U	15.6	T-2:NG	127		
<b>Subtotal</b>	<b>26.7</b>		<b>233</b>		

**Low-Medium Density Residential Village - 3-6 du/ac**

Planning Area	Gross Acres	Transect <sup>(1)</sup>	Target Res. Units <sup>(2)</sup>	Com'l Min. <sup>(2)(3)</sup>	Com'l Max <sup>(2)(3)</sup>
N	20.1	T-2:NE	117		
P	25.4	T-2:NE	115		
V	19.1	T-2:NE	96		
<b>Subtotal</b>	<b>64.6</b>		<b>328</b>		

**TOTAL 181.6 2,334 300K <sup>(3)</sup>**

**Public, Quasi Public, and Other**

Community Purpose Facility (CPF) <sup>(4)</sup>				
Planning Area	GDP Land Use	Gross Acres	Transect <sup>(1)</sup>	Description
R-A-R-C	MH	5.5	SD: CPF	CPF
<b>Subtotal</b>		<b>5.5</b>		

**Potential School (S) Sites<sup>(5)</sup>**

Planning Area	GDP Land Use	Gross Acres (Ac.)	Transect <sup>(1)</sup>	Description
S	MH	11.1	T-3: NC	Elementary
<b>Subtotal</b>		<b>11.1</b>		

**Parks (P)**

Planning Area	GDP Land Use	Gross Acres (Ac.)	Transect <sup>(1)</sup>	Classification
A	P	15.1	SD: P	Community
G-1-2	TC	2.8	SD: P	Town Square
T	P	5.5	SD: P	Neighborhood
<b>Subtotal</b>		<b>23.4</b>		

**Open Space (OS)**

Planning Area	GDP Land Use	Gross Acres (Ac.)	Transect <sup>(1)</sup>	Classification
Y	OSP	15.6	T-1: OSP	Preserve (MSCP)
OS-1-8	OS	28.7	T-1: OS	Open Space
<b>Subtotal</b>		<b>44.3</b>		

**Other**

Planning Area	GDP Land Use	Gross Acres (Ac.)	Transect <sup>(1)</sup>	Description
Right-of-Way	NA	34.8	N/A	Arterials
<b>Subtotal</b>		<b>34.8</b>		

**TOTAL 119.1**

**SPA Total Area: 300.7 Gross Acres<sup>(6)</sup>**

Notes:

1. Transects are defined in Chapter 3.
2. See Chapter 9 regarding Intensity Transfers and minimum commercial square footage requirements.
3. 17,000 sf of office and 100,000 sf of retail for the low range; 50,000 sf of office and 250,000 sf of retail for the high range (excludes Live/Work)
4. As Defined by CVMC 19.48.
5. The Elementary School site will revert to the underlying Medium-High Residential land use if site is not accepted by the school district.
6. Acreage does not include 19.2-acre San Diego Reservoir.
7. 185 DUs are authorized on Parcels F and W combined. Final unit allocation to be determined at Design Review.
8. Parcels I and J are being planned together. The final unit allocation shall be determined at Design Review.
9. The unit allocation and boundaries between Parcels C and D may be adjusted and will be finalized during Design Review so long as the total number of combined units does not exceed a total of 414 units between C and D.