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County of Monterey

WATER SUPPLY ASSESSMENT PROVISIONS OF SB 610

MONTEREY-SALINAS TRANSIT – WHISPERING OAKS BUSINESS PARK PROJECT

FINAL

November 2010

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County of Monterey

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WATER SUPPLY ASSESSMENT - PROVISIONS OF SB 610 MONTEREY-SALINAS TRANSIT – WHISPERING OAKS BUSINESS PARK PROJECT

1.0 PURPOSE

This Water Supply Assessment (WSA) was prepared to assist the County of Monterey (County) and the Marina Coast Water District (District) in satisfying the requirements of Senate Bill 610 (SB 610). This WSA is specific to the Monterey-Salinas Transit – Whispering Oaks Business Park Project (Project) and addresses the potential impact of the Project's water demands on the District-wide water supply conditions. This WSA includes the following:

- Information on the District's water supplies consistent with Water Code Sections 10620 et. seq. (the Urban Water Management Planning Act) and 10910 et. seq. (Water Supply Planning to Support Existing and Planned Future Users).
- Information on current water demands and projected water demands, based on the District's adopted Urban Water Management Plan and specific project proposals currently under review by the District.
- Comparison of water supplies and water demands for normal, single dry, and multiple dry years.
- Information to make the sufficiency findings required by the California Environment Quality Act (CEQA).

2.0 ASSOCIATED AGENCIES

The County has commissioned the preparation of this WSA in its role as the lead agency under CEQA for the Project. The project site is owned by the Redevelopment Agency of the County of Monterey, who is the proponent of this project. Other key agencies associated with this WSA are listed below:

- Marina Coast Water District (District)
- Fort Ord Reuse Authority (FORA)
- City of Marina
- Monterey County Water Resources Agency (MCWRA)
- Monterey Peninsula Water Management District (MPWMD)

3.0 APPROVAL PROCESS

The County and District Board may approve the WSA, after hearing testimony and evidence presented at a hearing. Upon conclusion of the hearing, the County and District Board may determine whether the projected water supplies will be sufficient to satisfy the proposed project demands. The County Board must include the WSA findings in the environmental documents prepared for the designated project pursuant to CEQA requirements.

4.0 SENATE BILL 610

Senate Bill 610 (SB 610) became effective January 1, 2002. SB 610 amended the California Public Resources Code to incorporate Water Code findings within the CEQA process for certain types of projects. SB 610 amended the Water Code to broaden the types of information included in Urban Water Management Plans (Water Code Section 10620 et. seq.) and to add Water Code part 2.10 Water Supply Planning to Support Existing and Planned Future Uses (Section 10910 et. seq.).

Water Code part 2.10 clarifies the roles and responsibilities of the Lead Agency under CEQA and the "water supplier" with respect to describing current and future supplies compared to current and future demands.

Part 2.10 also defines the "Projects" that are subject to a WSA and the Lead Agency's responsibilities related to the WSA. A WSA is required for the following:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 people or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 people or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 people, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use development that includes one or more of the uses described above.
- A development that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project.
- For Lead Agencies with fewer than 5,000 water service connections, any new development that will increase the number of water service connections in the service area by ten percent or more.

Under Part 2.10, the Lead Agency must identify the affected water supplier and research whether the new demands are included in the supplier's Urban Water Management Plan (UWMP). If the UWMP includes the demands then it may be incorporated by reference. If not the Lead Agency must prepare the WSA (Water Code Section 10912(c)).

5.0 SENATE BILL 221

SB 221 is intended as a "fail safe" mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should – before construction begins. Not every project that is subject to the requirements of SB 610 would also require the mandatory water verification of SB 221 (e.g. if there is no subdivision map approval).

Government Code section 65867.5 states that SB 221 is required for projects that contain a development agreement that includes a subdivision, as defined in section 66473.7. A Subdivision is defined as proposed residential development of more than 500 dwelling units, except that for a public water system that has fewer than 5,000 service connections, "subdivision" means any proposed residential development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections.

6.0 URBAN WATER MANAGEMENT PLANNING ACT

The Urban Water Management Planning Act (Act) requires the supplier to document water supplies available during normal, single dry, and multiple dry water years during a 20-year projection. The Act requires that the projected supplies and demands be presented in 5-year increments for the 20-year projection.

7.0 2005 URBAN WATER MANAGEMENT PLAN

The 2005 UWMP, which was prepared by the District after the adoption of SB 610, includes information required by SB 610, including the District's groundwater, recycled water, and desalination supplies. The 2005 UWMP was adopted by the District on December 14th, 2005.

The 2005 UWMP includes the following elements: existing and future water demand projections, existing and future water supply facilities, existing and future demand versus supply comparison, groundwater basin conditions, water supply reliability, water demand management measures, water recycling, and water shortage contingency plan.

In order to comply with SB 610 requirements, the 2005 UWMP includes the following:

- A description of the water service area including climate, current and projected population, and other demographic factors that affect water management planning. Demographic data is presented in 5-year increments for 20 years.
- A description and quantification of the existing and planned water sources.
- A description of the reliability and vulnerability of the water supply to seasonable or climatic shortages in the average water year, single dry water year, and multiple dry water year. Contingency plans including demand management and conjunctive use potential are discussed.
- A description of current and projected water demands among all user classes in 5-year increments.
- A description of all water supply projects and water supply programs that may be undertaken by the District, the County, and the Regional Water Reclamation Project to meet the total projected water demands.
- A description of demand management measures employed and scheduled to be employed.
- A description of any groundwater basin (or basins) from which the District pumps groundwater.
- Information that characterizes the condition of the groundwater basin and a description of the measures currently being taken by the District to minimize any potential for overdraft conditions.
- A detailed description and analysis of the amount and location of groundwater pumped by the District for the past five years from any groundwater basin from which the proposed project will be supplied.
- An analysis of the location, amount, and sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed projects.

A copy of the District's 2005 UWMP can be obtained by contacting District staff or by viewing the document on the District's web site at www.mcwd.org.

8.0 WATER SYSTEM MASTER PLAN

The District's Water System Master Plan (WSMP), which was completed in November 2006, presents existing water demands, summarizes the criteria developed in the City's 2005 UWMP for projecting water demands through the year 2025, identifies existing and future water system capacity deficiencies, recommends projects to correct these deficiencies, and identifies major water facilities for servicing future developments. The WSMP also addresses the supply facilities, water augmentation projects, and includes a

capital improvement program. This WSA extracts relevant information presented in the District's WSMP.

9.0 PROJECT DESCRIPTION

The 115.54-acre Project is located on the former Fort Ord, north of Inter-Garrison Road, east of 7th Avenue and east of the city limits of Marina in unincorporated Monterey County (Figure 1). The project site is composed of two Assessor's parcels, APN 031-101-056 and 031-031-101. The Project site is undeveloped, and relatively undisturbed. Existing surrounding land uses include the inactive Fort Ord landfill to the North; coast live oak woodland and vacant former Fort Ord buildings to the south; a residential neighborhood to the east; and vacant land, the 8th Street Cutoff, and the Golden Gate University satellite campus to the west.

Three agencies have developed land use designations for the Project site. For example, development within the former Fort Ord is subject to the Fort Ord Reuse Plan, which is administered by the Fort Ord Reuse Authority (FORA). FORA is the public agency created to manage the conversion of the former Fort Ord Army Base to civilian use. The Fort Ord Reuse Plan land use designation for the Project site is "Planned Development Mixed Use District" and "Habitat Management" (Figure 2). The Monterey County zoning designation for the project site (and surrounding areas within the unincorporated County) is Public and Quasi –Public. The Project site is also within the City of Marina sphere of influence. The City of Marina General Plan designates the Project site as Parks and Recreation. The Project site is not within the Marina city limits; therefore, it does not have a City of Marina land use designation.

The Whispering Oaks Business Park Draft General Development Plan (GDP), modified September 21, 2010, summarizes the allowable uses for development occurring within the Project site (Appendix A). The allowable uses include sales, service and limited manufacturing of "green" products and related materials, professional offices, research and development, office condominiums, shops for tradesman and artisans, a caretaker unit for the purpose of providing on-site security, photography/art studios, retail businesses of light commercial/industrial character, convenience retail, restaurants, and vocational training facilities. Therefore, the Project site can be described as "mixed use," and could consist of any number of land use designations, such as Retail, Restaurant, Office/R&D, Other Commercial, Light Industrial, Government, or Institutional (Figure 3). It is expected that the majority of the development will consist of Office/R&D.

As shown on Figure 4, The proposed Project includes the creation of 20 parcels, including a 24.37 acre lot (Lot 1) for the Monterey-Salinas Transit (MST) Administrative and Maintenance Facility, 15 additional lots (Lots 2-16) for the Whispering Oaks Business Park (24.44 acres total), two open space Parcels (57.62 acres total), one parcel for a detention

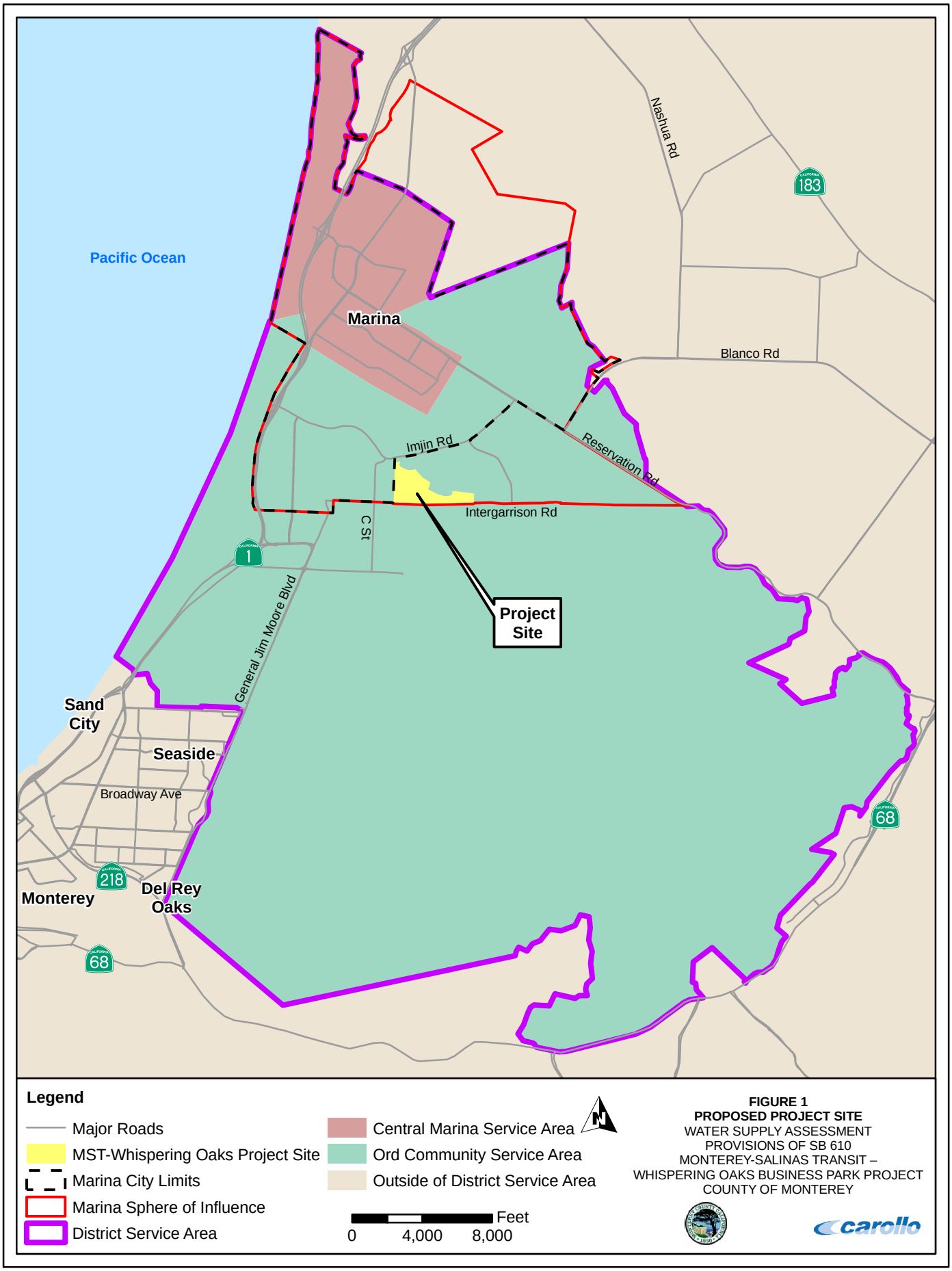

FIGURE 1
PROPOSED PROJECT SITE
WATER SUPPLY ASSESSMENT
PROVISIONS OF SB 610
MONTEREY-SALINAS TRANSIT –
WHISPERING OAKS BUSINESS PARK PROJECT
COUNTY OF MONTEREY

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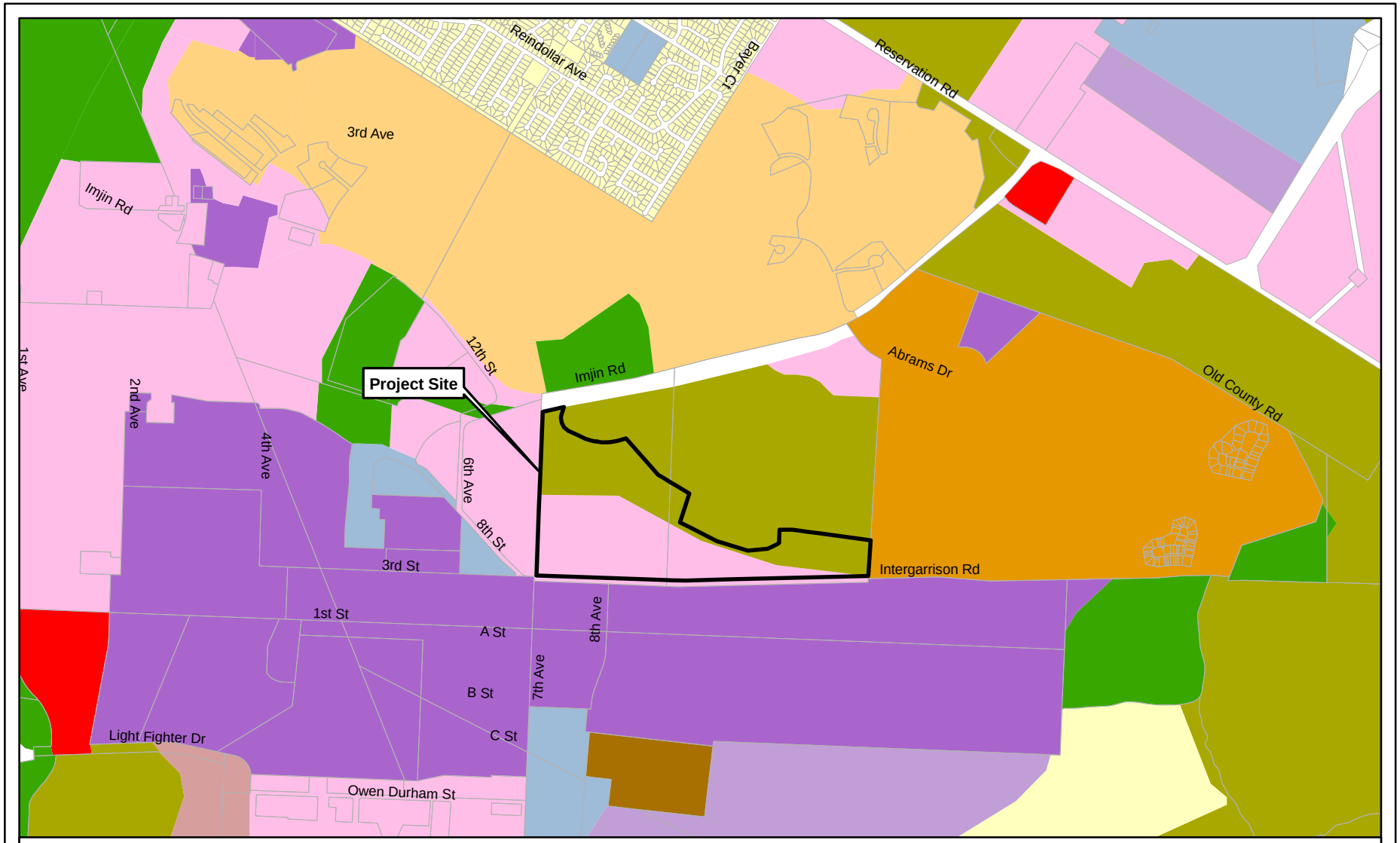

FIGURE 2
FORT ORD REUSE PLAN
LAND USE DESIGNATION
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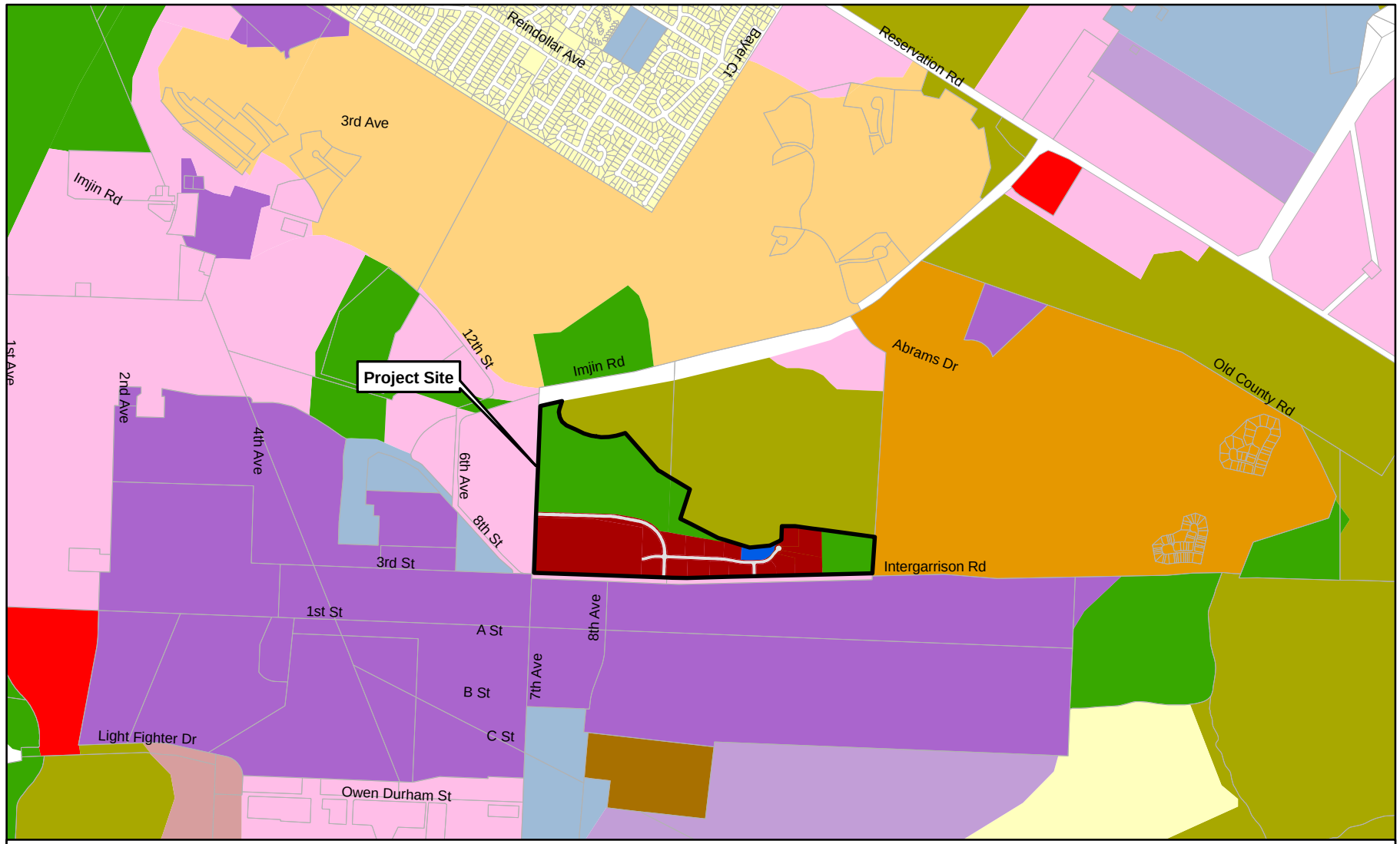

FIGURE 3
PROPOSED PROJECT LAND USE
WATER SUPPLY ASSESSMENT
PROVISIONS OF SB 610
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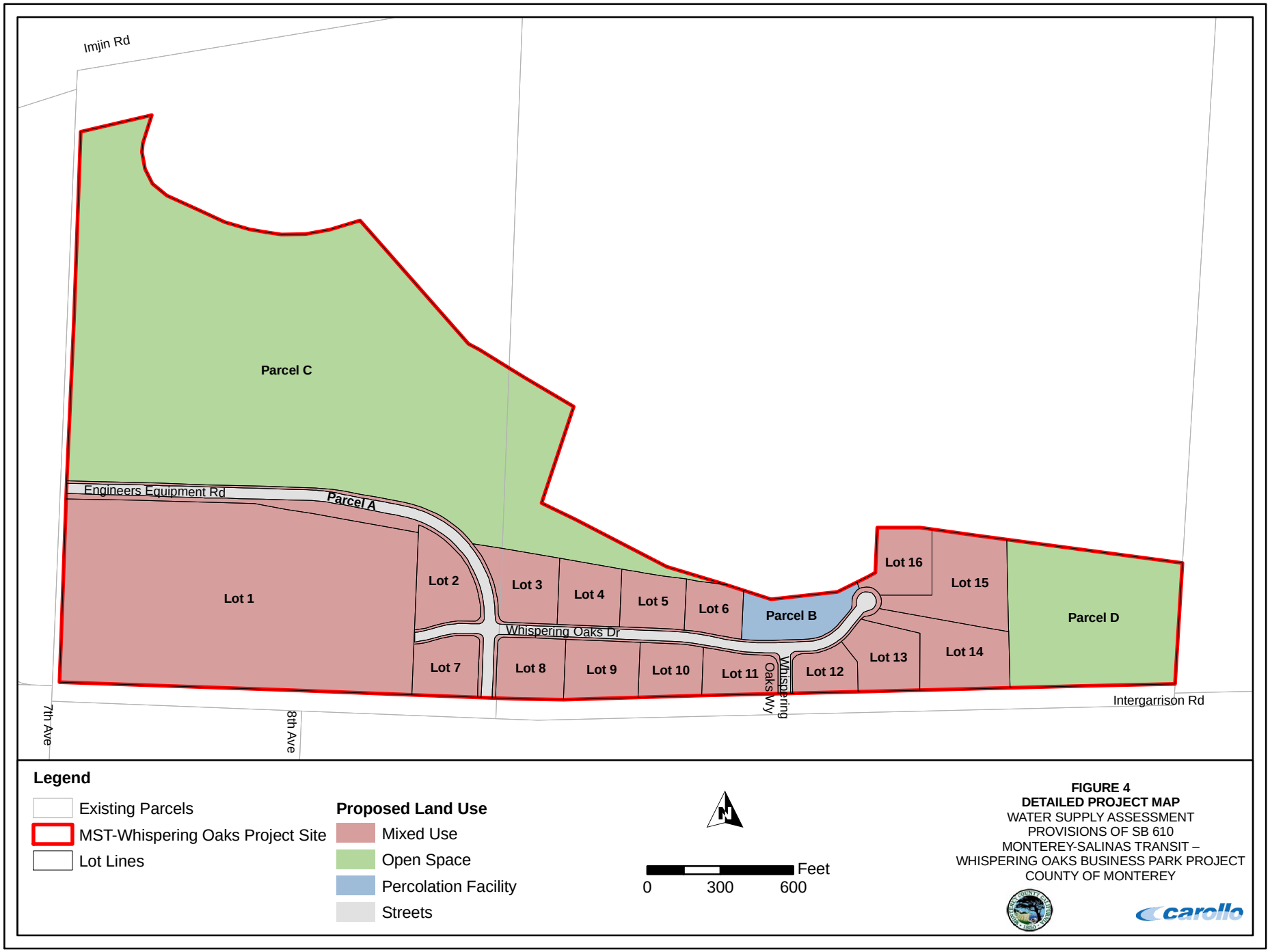

FIGURE 4
DETAILED PROJECT MAP
WATER SUPPLY ASSESSMENT
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basin (1.71 acres), and one parcel for private streets (7.39 acres) for a total of 115.53 acres.

10.0 PROJECT WATER REQUIREMENTS

Under Water Code Part 2.10, the Lead Agency must identify the affected water supplier and research whether the new demands are included in the supplier's UWMP. If the UWMP includes the demands, then it may be incorporated by reference.

The Project site is located within the District's service area as identified in the 2005 UWMP. The projected water demands in the 2005 UWMP were based on assumptions documented within the report. The water demands presented in the UWMP were calculated by multiplying water demand coefficients, expressed in acre-feet per year (AFY), and land-use area expressed in acres. The UWMP water demand coefficients for different land uses are shown in Table 1. The Project site can best be described as "mixed use," and would utilize demand coefficients ranging from 0.000135 to 0.00021 AFY per building square foot (sf), based on the water demand coefficients presented in the UWMP.

Table 1 Water Demand Coefficients Applied in the UWMP
Water Supply Assessment - Provisions of SB 610
Monterey-Salinas Transit – Whispering Oaks Business Park Project
County of Monterey

Land Use	Demand Coefficient (AFY)
Residential	
Single Family Residential - <5 du/acre	0.5
Single Family Residential – 5-8 du/acre	0.33
Residential – 8-15 du/acre	0.25
Multi Family >15 du/acre	0.25
Commercial and Industrial	
Hotel/Motel and Timeshare Units	0.17
Retail	0.00021/sf
Restaurant (at 9 sf/seat * .7 gsf)	0.029/seat
Office/R&D	0.000135/sf
Other Commercial	0.0003/sf
Light Industrial	0.00015/sf
Public/Quasi-Public	
Governmental (corporation yard 0.25 af/acre)	0.0003/sf
Institutional	0.0003/sf
Schools (K-12)	0.0003/sf

Table 1	**Water Demand Coefficients Applied in the UWMP** ***Water Supply Assessment - Provisions of SB 610*** ***Monterey-Salinas Transit – Whispering Oaks Business Park Project*** **County of Monterey**

Land Use	Demand Coefficient (AFY)
Higher Education	0.0003/sf
Irrigation	
Improved Landscaping	2.1/acre
Turf	2.5/acre

Notes:
(1) Source: Marina Coast Water District 2005 Urban Water Management Plan, Byron Buck & Associates, December 2005.

An average water demand coefficient was developed for the proposed Project assuming that the Project would consist of roughly 20-percent Retail uses, 50-percent Office/R&D uses, and 30% Light Industrial uses, as detailed in Table 2. Table 3 provides a breakdown of land area by parcel for the Project.

Table 2	**Project Water Demand Coefficient** ***Water Supply Assessment - Provisions of SB 610*** ***Monterey-Salinas Transit – Whispering Oaks Business Park Project*** **County of Monterey**

Land Use	Demand Coefficient (AFY per SF)	Assumed Land Use (%)	Weighted Demand Coefficient (AFY per SF)
Retail	0.00021	20%	0.000042
Office/R&D	0.000135	50%	0.0000675
Light Industrial	0.00015	30%	0.000045
Total	**-**	**100%**	**0.0001545**

In addition, it was assumed that each parcel would consist of roughly 10-percent landscaped areas. The demand coefficient for landscaped areas was assumed to be 2.1 AFY per acre, consistent with the UWMP demand coefficient for improved landscaping. The demand coefficients for the open space and other land use designations are 0 AFY. Table 4 provides a detailed estimate of the Project water demands. Water demand estimates for the MST area (Lot 1) are based on water demand estimates calculated in Appendix B.

As shown in Table 4, the calculated demand for the proposed project is 92.72 AFY.

Table 3 **Project Breakdown by Proposed Land Use Designation**
Water Supply Assessment - Provisions of SB 610
Monterey-Salinas Transit – Whispering Oaks Business Park Project
County of Monterey

Land Use	Total Lot Area (Square Feet)	Total Building Area (Square Feet)
Lot 1	1,061,557	162,425
Lot 2	80,586	33,040
Lot 3	80,150	32,862
Lot 4	65,340	26,789
Lot 5	59,242	24,289
Lot 6	48,787	20,003
Lot 7	62,291	25,539
Lot 8	68,825	28,218
Lot 9	71,874	29,468
Lot 10	55,757	22,860
Lot 11	51,836	21,253
Lot 12	44,431	18,217
Lot 13	72,310	29,647
Lot 14	109,771	45,006
Lot 15	130,244	53,400
Lot 16	63,598	26,075
Subtotal	**2,126,599**	**599,092**
Open Space		
Parcel C	2,130,520	-
Parcel D	379,408	-
Subtotal	**2,509,928**	**-**
Other		
Roads (Parcel A)	321,908	-
Percolation Facility (Parcel B)	74,488	-
Subtotal	**396,396**	**-**
Total	**5,032,923**	**599,092**

Notes:
(1) Source: Vesting Tentative Map Whispering Oaks, Whitson Engineers, November 24, 2009.
(2) Total Building Area is estimated based on an average FAR of 0.33 to 0.50, with 0.41 being considered representative.

Table 4 Project Water Demand Estimates
Water Supply Assessment - Provisions of SB 610
Monterey-Salinas Transit – Whispering Oaks Business Park Project
County of Monterey

	Proposed Land Use Breakdown			Project Water Demand		
Land Use	**Total Lot Area[1] (Sq. Ft.)**	**Total Building Area[2] (Sq. Ft.)**	**Landscaped Area[3] (acres)**	**Building Demand[4] (AFY)**	**Landscape Demand[5] (AFY)**	**Total Demand (AFY)**
Mixed Use						
Lot 1[6]	1,061,557	162,425	2.78	14.28	5.84	20.12
Lot 2	80,586	33,040	0.19	5.10	0.39	5.49
Lot 3	80,150	32,862	0.18	5.08	0.39	5.46
Lot 4	65,340	26,789	0.15	4.14	0.32	4.45
Lot 5	59,242	24,289	0.14	3.75	0.29	4.04
Lot 6	48,787	20,003	0.11	3.09	0.24	3.33
Lot 7	62,291	25,539	0.14	3.95	0.30	4.25
Lot 8	68,825	28,218	0.16	4.36	0.33	4.69
Lot 9	71,874	29,468	0.17	4.55	0.35	4.90
Lot 10	55,757	22,860	0.13	3.53	0.27	3.80
Lot 11	51,836	21,253	0.12	3.28	0.25	3.53
Lot 12	44,431	18,217	0.10	2.81	0.21	3.03
Lot 13	72,310	29,647	0.17	4.58	0.35	4.93
Lot 14	109,771	45,006	0.25	6.95	0.53	7.48
Lot 15	130,244	53,400	0.30	8.25	0.63	8.88
Lot 16	63,598	26,075	0.15	4.03	0.31	4.34
Subtotal	**2,126,599**	**599,092**	**5.23**	**81.75**	**10.97**	**92.72**
Open Space						
Parcel C	2,130,520	-	-	-	-	-
Parcel D	379,408	-	-	-	-	-
Subtotal	**2,509,928**	**-**	**-**	**-**	**-**	**-**
Other						
Roads (Parcel A)	321,908	-	-	-	-	-
Percolation Facility (Parcel B)	74,488	-	-	-	-	-
Subtotal	**396,396**	**-**	**-**	**-**	**-**	**-**
Total	**5,032,923**	**599,092**	**5.23**	**81.75**	**10.97**	**92.72**

Notes:

(1) Source: Vesting Tentative Map Whispering Oaks, Whitson Engineers, November 24, 2009.

(2) Total Building Area is estimated based on an average FAR of 0.33 to 0.50, with 0.41 being considered representative.

(3) Landscaped areas were assumed to account for roughly 10-percent of the total lot area.

(4) Assumes an average WDF of 0.0001545 AFY/sf for Building Areas (see Table 4 for derivation).

(5) Assumes a WDF of 2.1 AFY/acre for Landscaped Areas for landscape (non-turf) uses per the MCWD UWMP.

(6) Water demand estimates the MST parcel are based on the water demand estimates provided in Appendix B.

The 2005 UWMP provides water demand projections to the year 2025. However, the Project demands were not accounted for in the 2005 UWMP. Table 5 adjusts the 2005 UWMP demands to include the recommended average water demand for the Project.

Table 5 2005 UWMP Demand Projections
Water Supply Assessment - Provisions of SB 610
Monterey-Salinas Transit – Whispering Oaks Business Park Project
County of Monterey

Jurisdiction	2010 (AFY)	2015 (AFY)	2020 (AFY)	2025 (AFY)
Former Fort Ord [2]	7,810	9,602	11,286	11,591
Marina Sphere[3]	0	0	0	0
Marina Area[4]	3,046	3,214	3,797	3,812
UWMP Total	**10,856**	**12,816**	**15,083**	**15,403**
Additional Demands for Project				
Marina Sphere[3]	93	93	93	93
New Demand Total	**10,949**	**12,909**	**15,176**	**15,496**

Notes:
(1) Source: Marina Coast Water District Urban Water Management Plan, Byron Buck & Associates, December 2005.
(2) Former Fort Ord includes the following areas: California State University Monterey Bay (CSUMB); Del Rey Oak; City of Monterey; County of Monterey; Monterey Bay Education, Science, and Technology Center of the University of California, Santa Cruz (UCMBEST); City of Seaside; U.S. Army; California State Parks and Recreation; Marina Ord Community; Fort Ord Reuse Authority (FORA) Strategic Reserve; and an assumed line loss.
(3) Marina Sphere includes the Project area and is located in Monterey County, within the City of Marina Sphere of Influence.
(4) Marina Area consists of Armstrong Ranch, RMC Lonestar, and Marina – Central.

11.0 DISTRIBUTION SYSTEM

According to the District's WSMP, the District provides potable water service to its residential, commercial, industrial, and institutional customers within its service area. The service area includes the City of Marina and the former Fort Ord (Ord Community), as shown in Figure 1. Water service in the Ord Community is provided under agreement with the FORA.

The District's municipal water system extracts water from the underground aquifers via a series of groundwater wells distributed along the valley floor and supplies five major pressure zones. Water is then pumped up to service the higher pressure zones via booster stations. The District's water system facilities include six groundwater wells, eight potable water storage tanks, five booster stations, and over 280 miles of pressured pipes ranging

from 2 to 24-inches in diameter. Gates and pressure reducing valves are used to isolate or regulate flow between pressure zones.

Historically, the District has operated their distribution and supply facilities as two independent systems. One system served users in Central Marina. The second system served the Ord Community. In 2005, the District completed a project that connected the two systems, maintaining the ability to preserve a zero net balance of flows between the two systems through Supervisory Control and Automated Data Acquisition (SCADA) controls.

12.0 GROUNDWATER SUPPLY

This section and its subsections contain excerpts and summaries from the Districts 2005 UWMP and WSMP.

The District draws water from the Salinas Valley groundwater basin (managed by the Monterey County Water Resources Agency (MCWRA) through wells to supply water to its customers. While the District is also located above the Seaside groundwater basin, managed by the Monterey Peninsula Water Management District (MPWMD), it currently has no operational wells or plans for withdrawing from this basin. The water from the wells is pumped directly into the District's distribution system with no treatment except for disinfection by chlorination. Three of the wells, Well Nos. 10, 11, and 12, are deep aquifer (900-foot) wells located in the Marina water system and the other three wells, Well Nos. 29, 30, and 31, are located in the shallow (180-foot) and middle (400-foot) aquifers and serve the Ord water system. Table 6 presents a summary of District's wells.

Some wells are experiencing deteriorating water quality due to seawater intrusion, the presence of trichloroethylene (TCE), manganese, and elevated water temperatures. Seawater intrusion is due to the overdraft condition that currently exists in the Salinas Valley groundwater basin and has been steadily increasing inland. As of 2005, the plume of seawater intrusion (>500 mg/L of chloride) has extended east of Blanco Road in the 180-foot aquifer and east of Salinas Avenue in the 400-foot aquifer. The Central Marina wells (Wells 10, 11, and 12) are already within the seawater intrusion plume.

A TCE plume exists north of Reservation Road between the Marina Airport and the Central Marina boundary on Tallmon Street. TCE contamination is due to past Army activities on the former Fort Ord. TCE concentrations near Tallmon Street have measured 20 parts per billion (ppb) based on sampling completed in September 2005. The State of California drinking water standard is 5.0 ppb. The TCE contamination is located in the shallow 180-foot groundwater aquifer and so far has not spread to the 900-foot aquifer where the District's Central Marina wells are located. The well most likely to see TCE contamination first would be Well 12 but it is unlikely due to the clay layers separating the aquifers.

Table 6	Well Summary *Water Supply Assessment - Provisions of SB 610* *Monterey-Salinas Transit – Whispering Oaks Business Park Project* County of Monterey			
Well Number	**Water System**	**Aquifer**	**Estimated Capacity[(1)] (AFY)[(2)]**	**Estimated Capacity[(1)] (gpm)[(3)]**
10	Central Marina	180-foot	3,230	2,000
11	Central Marina	180-foot	2,180	1,350
12	Central Marina	180-foot	3,060	1,900
29	Ord Community	400-foot	2,420	1,500
30	Ord Community	400-foot	3,870	2,400
31	Ord Community	400-foot	3,870	2,400

Notes:
(1) Estimated well capacity based on well pump curve.
(2) AFY = Acre Feet per Year
(3) gpm = Gallons per Minute
(4) Source = District's Water System Master Plan, November 2006

The District performs wellhead sampling to detect the presence of potential contaminants in the groundwater. In addition, monitoring wells are maintained at strategic locations and sampling is performed to provide early warning of water quality issues that could jeopardize the District's wells. In order to prepare for the possible loss of one or more of the wells, the District is studying the feasibility of installing new wells. Possible options for new wells include establishing a new well field located east of the District's current service area and constructing new wells that would reach the deep aquifer. A detailed discussion of the water quality issues facing the District can be found in the 2005 Urban Water Management Plan. Individual systems for on-site generation of sodium hypochlorite are provided for each of the Central Marina wells to disinfect the groundwater. Disinfection facilities for the Ord Community wells are located near the Intermediate Reservoir.

12.1 GROUNDWATER BASIN

Potable water for the District's Marina and Ord Community service areas comes primarily from wells developed in the Salinas Valley groundwater basin. This groundwater basin underlies the Salinas Valley from San Ardo to the coast of Monterey Bay and is divided into five hydrologically linked subareas: Pressure, East Side, Forebay, Arroyo Seco and Upper Valley. The basin is further divided in the Pressure subarea by distinct aquifers, commonly referred to as the 180-foot, 400-foot and deep aquifer. Historically, the deep aquifer was thought to be geologically confined in the Marina area, meaning that groundwater did not move between the deep aquifer and the 400-foot and 180-foot aquifers. However, recent stratigraphic analyses have indicated that these aquifers are connected hydraulically, with

water from the 180-foot and 400-foot aquifers recharging the deep aquifer[1]. Additionally, the deep, or 900-foot, aquifer is in reality a series of aquifers, not all of which are hydraulically connected.

The Salinas Valley groundwater basin remains in an overdraft condition with seawater intrusion of about 9,000 AFY at its coastal margins. The District's groundwater withdrawals, including the Ord Community lands, are about 4,670 AFY, or less than 1.0 percent of total annual basin withdrawals of about 500,000 AFY. Other than the District, only a small number of wells tap the deep aquifer, some of which also draw from the middle aquifer. Prior to receiving recycled water for crop irrigation, there were agricultural lands in the Castroville area that pumped water from the deep aquifer. These agricultural wells are currently used to meet supplemental needs during peak summer demand periods and also part of the monitoring network overseen by the MCWRA. Delivery of recycled water to the Castroville area has contributed to a recent recovery in groundwater levels in this area (MCWRA, 2005).

As a result of basin-wide pumping, levels in some basin subareas (Pressure and East Side) have declined over time. The other three basin subareas – the Forebay, Arroyo Seco and Upper Valley – tend to recharge rapidly and recover historic groundwater levels each year.

In a healthy condition, Salinas Valley basin groundwater would move through the basin and into the Monterey Bay through subsurface freshwater outcrops. However, over time, the cumulative reductions of groundwater basin storage have contributed to a decrease in the amount of groundwater moving toward and into Monterey Bay. This imbalance is generally part of a definition of groundwater overdraft. The result has been a reversal of the seaward gradient. In its place the basin experiences a landward gradient of seawater (intrusion), where the seawater has contaminated coastal aquifers and wells. While historic groundwater pumping throughout the basin created the overdraft, only the basin's coastal areas adjacent or near to the Bay suffer from seawater intrusion.

12.1.1 Groundwater Basin Management

Two regional water management agencies have jurisdiction over groundwater production in the vicinity of the District. The MCWRA is responsible for regulation and supply of water from the Salinas Valley groundwater basin. The MPWMD is responsible for regulation and supply of water from the Seaside groundwater basin. These two basins are adjacent to each other under Ord Community lands. The District recognizes the jurisdiction of the two regional groundwater management entities, and so has not independently developed a groundwater management plan pursuant to Water Code § 10750.

Where groundwater basins are in or are projected to be in overdraft, the Water Code requires UWMPs to provide detailed descriptions of efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. In the Salinas Valley

1 Deep Aquifer Investigation Study. WRIME, 2003

groundwater basin, an urban water supplier like the District that accounts for less than 1 percent of total basin pumping, cannot by itself eliminate or remedy a condition that results from basin-wide activities. The District works cooperatively with MCWRA and is taking actions to protect and preserve its ability and right to access groundwater, and to augment groundwater supplies with new sources of supply.

MCWRA is implementing a program to eliminate overdraft and intrusion known as the Salinas Valley Water Project (SVWP). The current program builds upon action taken in the 1940's when MCWRA's predecessor agency, the Monterey County Flood Control and Water Conservation District initiated development of the Nacimiento and San Antonio dams and reservoirs, which augmented water resources within the County. Since the formation of the District, it has cooperated with the MCWRA in further water resources development within the Salinas Valley.

In 1991 and 1992, MCWRA developed and approved the Monterey County Water Recycling Projects (MCWRP) to deliver recycled wastewater for irrigation use in the Castroville area, so that groundwater pumping could be reduced in that area. Recycled water is produced and used along the coast in lieu of pumping groundwater for agricultural irrigation. The projects have operated successfully for eight years, reducing basin overdraft and seawater intrusion.

MCWRA's Salinas Valley Water Project has been developed to address basin overdraft and seawater intrusion. The SVWP will increase reservoir releases to the Salinas River. Some of that water will recharge basin aquifers. Some of that water will be impounded and diverted by a new, in-stream rubber dam near the City of Marina, and be pumped out and added to the MCWRP water supply. In return for increasing the amount of water delivered through the MCWRP distribution system, the SVWP will require recipients of the additional water to reduce their coastal groundwater pumping. MCWRA modeling concludes that this component will eliminate basin overdraft and intrusion. A second phase of the SVWP, examined at a program level in the SVWP EIR, calls for an amount of that surface water to be made available to coastal urban water agencies in the future. MCWRA has recently secured new federal grants to begin analyzing this second phase.

The District is within MCWRA Zones 2/2A, and continues to pay for the first two components, and will help pay for the third (SVWP) component. The District has also agreed to limit its pumping from the Salinas Valley groundwater basin for land in the City of Marina area and outside the former Fort Ord Military Reservation until implementation of a mitigation plan is in place. This action should contribute to the elimination of basin overdraft and seawater intrusion in the most effective way possible.

As noted above, the potable water supply at the Ord Community is from the Pressure subarea of the Salinas groundwater basin. The southwestern portion of the Salinas basin underlies the northern and southeastern segments of the Ord Community. However, parts of the Ord Community area's hydrogeologic relationship to the main groundwater basin

have not yet been determined. Additional water for irrigation at the Bayonet and Black Horse golf courses on the Ord Community is drawn from the Seaside Groundwater Basin, which is not known to be hydraulically connected to the Salinas Valley groundwater basin.

12.2 Groundwater Supply Available to the District

Both the Army and the District have agreements with MCWRA, which allows the District to participate in and benefit from MCWRA's regional basin management planning process. Under the terms of the agreements, Ord Community lands and the District's service area were annexed into MCWRA Zones 2 and 2A. The Army's agreement allows for a combined annual withdrawal of up to 5,200 AFY from the 180-foot and 400-foot aquifers, with an additional annual withdrawal of up to 1,400 AF from the deep aquifer, totaling 6,600 AFY, or about equal to the historical demand from Army uses at Fort Ord. This groundwater supply is allocated by FORA among the land use or land owning jurisdictions on the Ord Community as shown in Table 7. This table also indicates available groundwater supply to the District via its own agreement with MCWRA, which provides for a maximum withdrawal of 3,020 AFY, currently limited to uses in the City of Marina, outside the Ord Community. Additionally, two adjacent major private properties within the District's LAFCO sphere of influence, the Armstrong Ranch and the Lonestar property, have groundwater available for use on those properties as noted in Table 7.

Table 7 Groundwater Supplies Available to the District
Water Supply Assessment - Provisions of SB 610
Monterey-Salinas Transit – Whispering Oaks Business Park Project
County of Monterey

FORA Allocation – Groundwater Available to Ord Community	Annual Acre-feet Allotment or Supply
City of Marina[1]	1,325
City of Seaside[1]	1,012
CSU Monterey Bay	1,035
University of California MBEST	230
City of Del Rey Oaks[1]	242.5
City of Monterey[1]	65
Monterey County[1]	710
US Army	1,577
County/State Parks	45
City of Marina (Sphere)	10
FORA Strategic Reserve[2]	348.5
Rounded Subtotal	**6,600**

Table 7	Groundwater Supplies Available to the District *Water Supply Assessment - Provisions of SB 610* *Monterey-Salinas Transit – Whispering Oaks Business Park Project* County of Monterey
FORA Allocation – Groundwater Available to Ord Community	**Annual Acre-feet Allotment or Supply**
City of Marina – Groundwater Available within the City of Marina Outside of Ord Community	
Marina Coast Water District by Agreement with MCWRA (groundwater)	3,020
Armstrong Ranch (groundwater)	920
Lonestar Property (groundwater)	500
Total	**11,040**

Notes:
(1) Includes 150 AFY loan that was changed to allocation January 12, 2007.
(2) To be allocated to strategic reserve to cover project line loss.
(3) Source: FORA Board Report, January 12, 2007 and the District's 2005 UWMP.

13.0 ALLOCATION OF RECYCLED WATER

Recycled water is a component of the FORA 1997 Base Reuse Plan assumptions and is essential to completing planned developments on the former installation. Allocations determined through a series of working group meeting are shown on Table 8. These allocations were prioritized to accommodate individual jurisdiction needs under resource restraints, which were capped at 1,427 AFY of recycled water.

14.0 OTHER WATER SUPPLIES

According to the Districts web site, the District's desalination treatment plant supplements and diversifies the District's water supply sources. The plant was constructed in 1996 and placed in operation in January 1997. At full capacity it can produce 300,000 gallons per day of potable water.

In 1997-1998, the District completed a one-year study comparing water quality of the ocean water and intake well groundwater, seasonal groundwater flow and time of travel for microbial contaminants. The California Department of Public Health evaluated the results and concluded the desalination plant seawater intake well located at Marina State Beach is groundwater not under the direct influence of surface water.

Table 8	Allocation of Recycled Water *Water Supply Assessment - Provisions of SB 610* *Monterey-Salinas Transit – Whispering Oaks Business Park Project* County of Monterey
Jurisdiction	**Allocation of Recycled Water (AFY)**
CSU Monterey Bay	87
University of California MBEST	60
Monterey County	134
City of Del Rey Oaks	280
City of Seaside	453
City of Marina	345
Subtotal (Amount allocated to Fort Ord jurisdictions)	**1,359**
Line Loss	68
Former Fort Ord Total	**1,427**

Notes:
(1) Source: FORA Board Report, May 11, 2007.

With the recent rise in energy costs and the fact that the additional water supply is currently not needed, the desalination plant is not being operated. However, the District maintains state and federal water quality monitoring requirements for the seawater intake well.

The following is a list of other water supplies available to the District:

- MCWD Desalination Plant (Temporarily idle) - 336 AFY

15.0 WATER SUPPLY RELIABILITY

There are two aspects of supply reliability that can be considered. The first relates to immediate service needs and is primarily a function of the availability and adequacy of the supply facilities. The second aspect is climate-related, and involves the availability of water during mild or severe drought periods. This section considers the District's water supply reliability during three water scenarios: normal water year, single dry water year, and multiple dry water years. These scenarios are defined as follows:

- Normal Year: The normal year is a year in the historical sequence that most closely represents median runoff levels and patterns. The supply quantities for this condition are derived from historical average yields.
- Single Dry Year: This is defined as the year with the minimum useable supply. The supply quantities for this condition are derived from the minimum historical annual yield.

- Multiple Dry Years: This is defined as the three consecutive years with the minimum useable supply. Water systems are more vulnerable to these droughts of long duration, because they deplete water storage reserves in local and state reservoirs and in groundwater basins. The supply quantities for this condition are derived from the minimum of historical three-year running average yields.

Such analysis is most clearly relevant to water systems that are supplied by surface water. Since the bulk of the District's supply is groundwater and the remainder is from desalinated supply and recycled water, short and medium-term hydrologic events over a period of less than five years usually have little bearing on water availability. Groundwater systems tend to have large recharge areas.

The Salinas Valley groundwater basin is aided by two large storage reservoirs, Nacimiento and San Antonio, providing about 700,000 acre-feet of storage. These reservoirs regulate surface water inflow to the basin by shifting winter flows into spring and summer releases for consumptive use, which also allows for increased basin recharge.

The Salinas Valley Water Project is expected to increase the average level of groundwater storage, moving the basin from declining storage to a net increase in storage of about 6,000 AF annually. Provided groundwater is protected from contamination and long-term safe yields in the basin are respected, water is available annually even accounting for short-term droughts. This is due to the large storage volume of the basin that can be utilized to offset annual variations in surface runoff. Therefore, the District's groundwater supply is fully available in annual average, single dry year and multiple dry years.

16.0 SUPPLY AND DEMAND COMPARISON

As shown on Table 9, Monterey County currently has a FORA allocation of 720 AFY and a recycled water allocation of 134 AFY for a combined allocation of 854 AFY. The January 12, 2007 FORA Board Report lists existing Monterey County uses and assignments at 527.5 AFY. This leaves an allocation availability of 326.5 AFY. As state in Section 8 of this report, the total Project demands are estimated at 92.7 AFY. Based on this comparison, the District should be able to provide adequate supply to meet the demands associated with the Project under existing condition and existing FORA water allocations.

The District's current groundwater wells have sufficient capacity to accommodate the increase in demand associated with the Project. To meet full build-out of the District as described in the UWMP, the District is currently investigating additional water supply sources. Such facilities are described in the District's WMP. The Project's demands are consistent as a component of the County and Marina Sphere/County FORA demands within an overall water balance prescribed for the Salinas Basin, and FORA jurisdiction allocation criteria can be met for this Project. However, the 2005 UWMP states that there are longstanding concerns that localized groundwater withdrawals could, over the long term, exceed the localized capacity of the groundwater basin and lead to further sea water

intrusion and loss of potable supply at the District's wells. The District and all jurisdictions represented under the FORA have recognized the need to invest in the District's water supply system and the need to respond to seawater intrusion. Accordingly, the District's Capital Improvement Program includes development of new water supply wells located away from the seawater intrusion front.

Table 9	**FORA Water Allocation and Project Demands Summary** ***Water Supply Assessment - Provisions of SB 610*** ***Monterey-Salinas Transit – Whispering Oaks Business Park Project*** **County of Monterey**
Monterey County FORA Allocation	710 AFY
Recycled Water Allocation	134 AFY
County/Marina Sphere Allocation	10 AFY
Total Allocations	**854 AFY**
Existing Monterey County Projects	
East Garrison I	470 AFY
Monterey Peninsula College	52.5 AFY
Ord Market Lease	5 AFY
MST – Whispering Oaks Business Park	93 AFY
Total Existing Demands	**620.5 AFY**
Remaining County Availability	**233.5 AFY**

17.0 SUMMARY AND CONCLUSIONS

The Urban Water Management Planning Act (Water Code § 10631) requires the supplier to document water supplies available during normal, single dry, and multiple dry water years during a 20-year projection and the existing and projected future water demand during a 20-year projection. The Act requires that the projected supplies and demands be presented in 5-year increments for the 20-year projection.

If the water demand for the proposed project was NOT accounted for in the most recently adopted UWMP, the water supplier must prepare a WSA that includes a discussion of whether the total projected water supplies determined to be available for the project during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the water supplier's existing and planned future uses, including agricultural and manufacturing uses. Water Code § 10910 subdivisions (b) and (c)(3) and (4).

Supplies from all sources, including wholesaler supplies, require documentation. This documentation includes identifying and quantifying water rights, contracts, and/or entitlements to the supply; associated capital outlay programs; federal, state, and local

permits for constructing infrastructure for conveying the supply; and any necessary regulatory approvals required for conveyance.

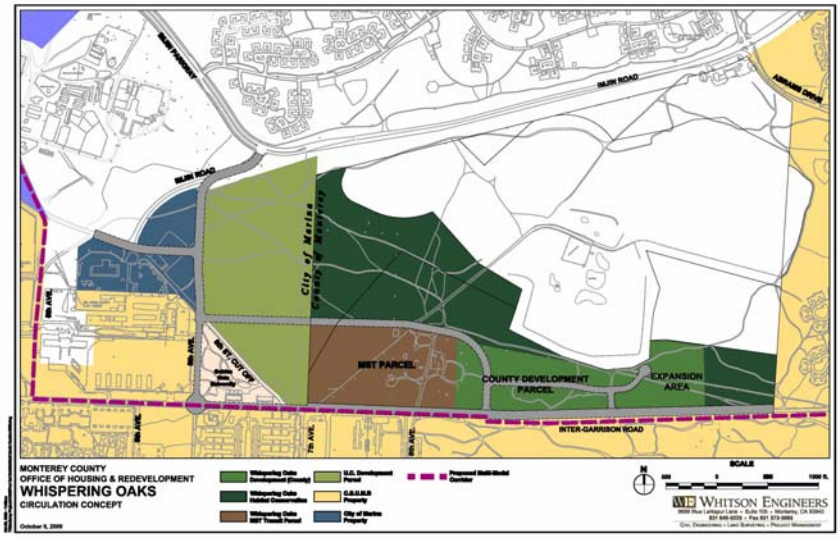
This WSA was prepared to assist the County and District in satisfying the requirements of SB 610. The WSA included a review of the District's 2005 Urban Water Management Plan, Water System Master Plan, and the Project's water requirements.

Based on information presented in these reports and analysis completed for this WSA, the findings show that the water demands associated with this Project were not accounted for in the 2005 UWMP. The District's water supplies are sufficient to meet the District's current water demands and the demands associated with this Project, during normal, single dry, and multiple dry years. It should be noted that this WSA assumes that the Project will be a mixed use development with an average floor area ratio (FAR) of 0.33 to 0.50. If development of the Project site varies significantly from the assumptions presented in this Water Supply Assessment, then further environmental review should be conducted.

Future projects and their water demands will require the District to develop new supply sources. Through continued investment in water production and distribution facilities, the District should be able to maintain supply reliability for new developments, provided that they are consistent with the FORA reuse plans and allocations.

APPENDIX A – WHISPERING OAKS BUSINESS PARK DRAFT GENERAL DEVELOPMENT PLAN

Whispering Oaks Business Park
Draft General Development Plan



Source: Monterey County and Whitson Engineers

November 19, 2009
Resubmitted: March 16, 2010
Modified September 21, 2010

County of Monterey Resource Management Agency
Housing and Redevelopment Office

1.0 Purpose and Intent

This document has been prepared to fulfill the Zoning Ordinance (Section 21.20.030) requirement for a General Development Plan (GDP) and to provide a framework for future physical development within the Whispering Oaks Business Park.

The County of Monterey Redevelopment Agency (Agency) is planning and processing a mixed use business park on approximately 57.9 acres within the larger 308 acre "Landfill Planning Area" within the former Fort Ord. The site will ultimately be developed by a master developer. The intent of the business park is to encourage sustainable development and green building techniques, both in building construction and by attracting businesses and industries associated with environmental sustainability and the green building trade.

The Agency' overall objective for all Fort Ord development opportunities is to ensure that all development is well designed and will create an attractive and pleasing environment as a place to live, work and visit. Within that framework, the Agency's primary goal for the Whispering Oaks Business Park is to promote a development project that will create local jobs.

Another primary goal of the business park and mix of uses is to provide a "self contained" work place, where places of business and industry are supported by a reasonable mix of support services and businesses. A self-supporting development will help minimize off-site vehicle trips during the business day by employees of the project.

The site contains a significant number of native Coast live oak trees, and oaks will be showcased as a design theme. The property is very visible from Inter-Garrison Road, mandating a high level of urban design aesthetic appeal. It is the intent of this plan to continue the oak design theme through retention and preservation of the existing oaks to the extent possible and through the planting or replanting of oaks in the development areas. Site planning and design shall ultimately be environmentally sensitive, consistent with the ultimate business attraction strategy.

Monterey Salinas Transit (MST) is also developing a 24 acre site within the Whispering Oaks Business Park project area. MST will be responsible for developing a project-specific GDP for their site. This plan addresses the uses

allowed within the remaining business park development and also identifies design criteria to be implemented within the business park.

2.0 End Users and Business Attraction

2.1 Allowable Uses

The following uses are allowed under the GDP. The list of uses is intended as a guideline to identify the types and range of businesses envisioned within the Business Park. Other uses not specifically listed within this GDP may be allowable if consistent with the primary goals and vision for the property.

A. Change of commercial uses within a structure, provided the new use will not change the nature or intensity of the current use of the structure;

B. Sales, service, and limited manufacturing of products that promote environmental sustainability ("green" products and related businesses) that do not produce undue odors, dust, smoke, noise, or other environmental hazards, including but not limited to alternative energy manufacturing (e.g. solar panels); recycled furniture manufacturing, recycled building materials manufacturing, green cleaning services, and home energy efficiency consulting services.

C. Other uses of a similar character, density and intensity to those listed in this Section;

D. Professional offices;

E. Research and development uses (that do not produce undue odors, dust, smoke, noise, or other environmental hazards);

F. Office condominiums;

G. Shops for tradesmen and artisans (e.g. craft shops for the manufacture of art, jewelry, silverware, ceramics, leather goods, toys, bookbinding, editorial and designing, printing, lithography) provided that in all cases all equipment and materials, except vehicles, are maintained within a structure;

H Caretaker unit for the purpose of providing on-site security;

I. Photography/art studio;

J. Retail businesses of light commercial/light industrial character that do not produce excessive noise, odors, or environmental hazards such as: interior decorating businesses; picture framing businesses; manufacturing of clothing; carpentry (e.g. wood working or furniture or uses of a similar nature provided that in all cases that the equipment and materials are enclosed within a structure); printing or publishing, repair and maintenance (general), call centers, and warehouse and distribution centers;

K. Convenience retail to service light commercial tenants;

L. Restaurant and food service limited to food manufacturing and packaging that does not produce undue odors, dust, smoke, noise, or other environmental hazards;

M. Vocational training/education facility;

O. Additions to existing, approved wireless communications facilities, pursuant to Section 21.64.310 of the Zoning Ordinance.

2.1 Uses Allowed Subject to Use Permit Approval

Several uses may be allowable within the Business Park, but may require additional review and discretionary permitting due to specific size, environmental, safety, infrastructure, storage and other concerns. Examples of such uses are listed below:

A. Public and quasi-public uses (such as public safety facilities and rehabilitation facilities) and, public utility facilities
B. Any lot or establishment where alcoholic beverages are served, commercial place of amusement or recreation, or any place where live entertainment is provided within 200 feet of the boundary of a residential district (ZA);
C. Research laboratories, provided such use does not produce undue odor, noise, smoke, or other objectionable effects;
D. Wireless communications facilities, pursuant to Section 21.64.310 of the Zoning Ordinance.

3.0 Development Standards and Design Guidance

Any use proposed under the GDP shall comply with the following development standards.

3.1 Lot Size

There is no maximum or minimum lot size in this business park; however, lot sizes of 1.0 acre to 3.0 acres in size are anticipated. Lots may be combined and reconfigured to accomplish the intended development scheme, provided the correct entitlements are obtained to modify the lot configuration.

3.2 Site Design

The general design principles for Whispering Oaks are to reinforce the natural landscape setting consistent with the character of the Monterey Peninsula; respect the topography by minimizing grading and tree removal; and to create a distinctive and visually pleasing streetscape, particularly along Inter-Garrison Road. More specific guidance is provided in the sections below:

3.2.1 Setbacks. In order to allow a variety of uses and maximize the opportunity for creative design no setbacks are established except along Inter-Garrison Road. A minimum twenty foot landscape and grading buffer shall be maintained from the property line along Inter-Garrison Road. Existing native oak trees within this buffer shall be maintained to provide a visual screen between the Whispering Oaks site and Inter-Garrison Road and to maintain the existing forest cover. A minimum of ten feet of landscaping shall be provided along all interior streets.

3.2.2 Access/Circulation. Site design shall incorporate controlled access. Project entrance points, but no individual driveways, shall be placed along Inter-Garrison Road. All parcel access shall be from the interior roadways. Where possible joint driveways and reciprocal access shall be provided to minimize the number of driveways and provide efficient circulation. Each lot shall contain convenient visitor parking. Each project will be responsible for frontage improvements.

Site access should focus on safety and efficiency. Circulation should be designed to reduce conflicts between vehicles and pedestrians.

3.2.3 Landscaping. In addition to the landscaping provided along the street frontages, additional landscaping may be required to provide screening and shading within the site. The landscaping palette shall be comprised of preferably native species (or species native to the central coast) maintaining an oak woodland theme, which shall include but not be limited to Manzanita and Coast live oaks.

Landscape plans for future development of the site shall include provisions for transplanting and replanting of Coast live oak trees on a case-by-case basis, which shall be marked and removed prior to beginning of grading operations under the supervision of a landscape Arborist/Forester. Approximately 10 to 15 individual stem trees in the 12 to 23 inch size class located in the open areas adjacent to Inter-Garrison Road would be the most appropriate trees for transplanting. Replanting of Coast live oak trees that are either transplanted or removed within the site shall be located within the landscaped areas, specifically within the cut and fill slopes along Inter-Garrison Road and along the perimeter of the detention basins to provide additional screening, to maintain existing habitat, and to re-inforce the oak woodland theme. A landscape plan shall identify the appropriate number of replacement seedlings that can be located within the site based on available planting space within these areas. In accordance with the Forest Resource Evaluation, approximately 80 percent of the replacement trees shall be selected from known local seed sources and shall be small, less than one gallon in size as they establish quickly and are easier to maintain. Approximately 20 percent of the replacement trees shall be comprised of a five-gallon container size or larger in areas where a more immediate visual effect is desired (e.g. along Inter-Garrison Road).

Landscape strips shall also be provided between parking areas and any portion of structures. Landscaping and pervious land area shall total no less than 30 percent of the total site area. Project entrances shall be emphasized with formal landscaping and monumentation signage. Where feasible, and consistent with the evaluation of the health of the tree species identified in the Forest Resource Evaluation Report (August 2009), tree islands and their canopy's shall be maintained at project entrances and/or key visual site line locations.

3.2.4 Screening. Outdoor yards, trash enclosures, storage areas and delivery bays shall be screened from public viewing areas, particularly

Inter-Garrison Road and Imjin Parkway, by a combination of decorative screening material, site design and landscaping. Service areas will be located at the sides and rear of buildings.

3.2.5 Building Placement. A variety of building and parking setbacks shall be included to create interest and diversity. Structures should be placed to create opportunities for plazas, courts, gardens or other common, informal gathering places.

3.2.6 Oak Preservation. During subdivision development, the only trees to be removed shall be related to street and infrastructure improvements. The existing native oak trees shall be maintained within the 20-foot landscape buffer along Inter-Garrison Road in order to provide a visual screen between the Whispering Oaks site and Inter-Garrison Road and to maintain the existing forest cover, in coordination with a landscape Arborist/Forester. Particular attention shall be given to the trees that are greater than six inches in diameter and the clusters of small trees located within Lots #7-14, as these lots maintain varying degrees of tree-lined frontage along Inter-Garrison Road.

Removal of trees may be allowed to accommodate site development and would be required to provide relocation or on-site tree replacement within the proposed landscape areas, within the cut and fill slopes along Inter Garrison Road, and along the perimeter of proposed detention basins in accordance with the recommendations in Section 3.2.3, Landscaping and Section 21.64.260 of the Monterey County Zoning Ordinance In addition, specific landmark trees identified for protection in the Forest Resource Evaluation (August 2009) shall be retained as feasible. Emphasis shall also be placed on preserving the younger and healthier trees within the site, as well as trees located along the edges of the lot and/or property lines.

Project applicants would be required to implement best management practices as identified in the Forest Resource Evaluation and monitoring in order to ensure successful establishment in accordance with Section 21.64.260 of the Monterey County Zoning Ordinance.

As an overview, a substantial amount of resident oak trees may be preserved using the following strategies:

- Matching lot locations to elevations (see current Tentative Map)

- The 20-foot landscape buffer may be expanded where appropriate to preserve existing groupings of or individually significant trees;
- Preserving existing islands of resident oaks (as described in the Forest Resource Evaluation);
- Using open space areas between lots to preserve existing healthy oaks;
- Using a Forester/Arborist to assist in final lot layout of internal lots, roadways and parking areas;
- Preserving screen trees long Inter-Garrison Road within the established landscape buffer;
- Preserving healthy, visually significant landmark trees;
- Tree transplants onsite;
- Requiring preparation of a Forest Management Plan to address specific impacts of future construction proposals (per Title 21 of the Monterey County Zoning Ordinance).

3.2.7 Oak Replacement and In-Lieu Fees. While trying to minimize loss, removal of some trees (vis a vis a Use Permit) may be allowed to accommodate limited site development and would be required to provide relocation or on-site tree replacement within the proposed landscape areas, within cut and fill slopes along Inter-Garrison Road, and along the perimeter of proposed detention basins in accordance with the recommendations in Section 3.2.3, Landscaping and Section 21.64.260 of the Monterey County Zoning Ordinance.

An off-site location (Youth Camp) may be utilized to replant those trees lost to development on the Project Site that cannot otherwise be replaced onsite (pursuant to requirements of the Forest Management and/or Resource Evaluation Plans) without compromising the integrity or health of the resident oaks. The Project Applicant shall identify areas within the 145-acre Youth Camp that could benefit from tree planting. Approximately 93 acres of Youth Camp parcel are proposed for management as oak woodland habitat while the remaining portion is slated for camp development. Alternatively, the Project Applicant shall contribute funding to support Youth Camp oak woodland restoration planning at an appropriate level to offset any remaining losses to oak trees on the Whispering Oaks site.

3.2.8 Grading. Each lot will be individually graded to allow maximum opportunity to preserve trees.

3.3 Building Design

3.3.1 Exterior Materials. Exterior building materials and textures should be designed to compliment the oak-prominent landscape. The range of potential materials is somewhat flexible and dependent upon the ideal architectural scheme developed for the entire plan area; however, the plan envisions subdued earth-tones and textures to complement the existing landscape and surrounding environment. Regardless of design theme, materials should be durable and of high quality. Examples include stone, tile, terra cotta, steel, brick, and sculpted concrete. Highly reflective glass and similarly inconsistent materials should be avoided.

3.3.2 LEED Certification and Sustainable Design. All new construction shall conform to LEED Silver certification standards. Site design and building orientation should maximize solar exposure and natural heating/cooling. Specific measures to be explored could include green roofs, recycled, renewable and/or locally-sourced materials; reductions in impervious surface and/or pervious paving, and use of energy-wise technology and equipment.

3.3.3 Building Heights. The maximum building height in Whispering Oaks is 35 feet. This may be modified by the action of the Approving Authority to accommodate either unique design elements, or structures or facilities which are used to achieve LEED certification.

3.3.4 Architecture. The architectural design theme should provide a consistent character to the development, but also avoid repetitive features such as long expanses of flat surfaces and excessive uniformity. Architecture should respect the landscape and emphasize the quality of the project's visual appearance as seen from adjacent roadways.

3.4 Landscaping Plan

All landscaping shall incorporate drought tolerant plant materials and focus upon maintaining an oak woodland theme. In addition to Coast Live Oaks, preference is given to utilizing comparable shrubs and ground covers (e.g. Manzanita), emphasizing use of species native to oak woodland habitat.

All landscaped areas and fences shall be continuously maintained in a litter-free, weed-free, healthy, growing condition.

3.5 Street Lighting

All new street lights proposed for specific projects within the development area shall be reviewed and approved by the Director of the Planning Department. Street light plans shall be incorporated into and approved as part of the final building plans. Street lights shall be full cut-off fixtures that shield and direct the light to the intended on-site areas, but shall be directed such that light does not shine toward Highway 1 or wetland areas.

3.6 Exterior Lighting

All exterior lighting within individual developments shall be unobtrusive, down-lit, harmonious with the local area, and constructed or located so that only the intended area is illuminated and off-site glare is fully controlled. Exterior lights shall have recessed lighting elements. Exterior light sources that would be directly visible when viewed from a common public viewing area, as defined in Section 21.06.195, are prohibited unless required for safety. The applicant shall submit 3 copies of an exterior lighting plan for each proposed project which shall indicate the location, type, and wattage of all light fixtures and include catalog sheets for each fixture. The exterior lighting plan for each specific project shall be subject to approval by the Director of the Planning Department, prior to the issuance of building permits.

3.7 Sign Program

The project will require a Master Sign Program to be approved with final development plans. The Master Sign Program shall address common themes, hierarchy of signage types, and minimize illumination. The Master Sign Program may include exceptions to the Monterey County Zoning Ordinance Title 21, if approved by the Planning Director based on exceptional design, architectural style, relationship to building mass, or other attributes. All signage must be in harmony and in the style and character of the development, and viewed as an integral design component relative to architecture, materials, and landscaping.

To provide a cohesive and homogeneous signage for the Business Park, the hierarchy of the signage should be provided in the Business Park as follows. Consistent with Section 21.60.065C of the Monterey County Zoning Ordinance, the aggregate size limitations for the each parcel shall be limited by the restrictions in the ordinance.

- Wall Signs. Wall signs are vehicle and pedestrian orientated signs that are mounted flat on the façade of the building. These signs should be restricted to the name of the firm, company, corporation, or business only. The sign shall have an area not to exceed one square foot for each one foot of structure footage; provided that any business establishment shall be allowed a sign of 50 square feet and no more than 300 square feet; and further provided, that the area permitted may be divided into not more than six single or double-faced signs consistent with Section 21.60.090 of the Zoning Code. This formula shall apply to each street frontage.

- Business Park Entry/Monument Signs. Entry signs should be located at the entrance to the Business Park on Inter-Garrison Road and at Engineers Equipment Road and should include the name of the Business Park. The entry signs should be low profile in nature and not exceed six feet in height and 100 square feet in area.

- Freestanding Signs. Freestanding signs are for tenant identification and should include the addresses of the buildings. Freestanding signs should be installed within or adjacent to private entry driveways. These signs should be limited to 32 square feet and should not exceed six feet in height.

- Directory Signs. Freestanding signs that are located near the primary entry driveways along Inter-Garrison Road and Engineers Equipment Road. These signs should be limited to identifying the business address and tenants and should be visible from the intersection of the applicable private driveways. These signs should not exceed six feet in height.

- Directional Signage – Directional signage should be used to provide direction to on-site/off-site traffic or pedestrians and include directional arrows. The height should not exceed six feet in height and more than 100 square feet in area. Directional signs shall be placed at the intersections of Engineers Equipment Road and Whispering Oaks Drive and at Whispering Oaks Drive and Whispering Oaks Way.

- Sign Lighting. When allowed, lighting of signs attached to structures shall be arranged so as not to produce a glare on other properties in the vicinity of the sign, and the source of light shall not be visible from adjacent property or a public street.

3.8 Parking

Parking shall be provided consistent with the Monterey County Zoning Ordinance Title 21 based on the anticipated mix of uses within the development. Parking will be reviewed with individual site plan submittals.

4.0 Implementation

4.1 Operation

In order to minimize to the greatest extent feasible adverse noise impacts on neighboring areas, deliveries to the Business Park should be restricted during the least noise sensitive hours between the hours of 7:00 AM and 8:00 PM, Monday through Saturdays and restricted on Sundays. Light Industrial/Manufacturing uses that generate noise as part of their operation shall also be limited to operate during these hours.

4.2 Number of Employees

The number of employees will vary depending on actual uses of the buildings.

4.3 Transportation Management Plan

Property owners within the Business Park would be required to participate in a Transportation Management Plan (TMP). A reduction in required parking would be allowed commensurate with and corresponding directly to the degree to which future developments within the Business Park participate in the TMP. The Business Park should consider assigning a Transportation Coordinator to ensure that property owners and tenants are provided information and resource materials on the full range of transportation choices available to employees of the Business Park. If a Transportation Coordinator is not assigned, the property owners shall consider implementing these measures as part of their business practices. These measures shall include but not be limited to the following:

- Catalog of all incentives that encourage employees to utilize alternative transportation programs (e.g. discount transit passes or bicycle amenities);
- Provide up to date transit materials and information for the MST transit stop located within the Business Park;
- Provide information to bicyclists regarding designated bike routes within the Business Park and surrounding area, provide maps, and on-site support

facilities to support alternative transportation (e.g. bike racks, showers and lockers, etc.);
- Provide on-site sale of transit passes;
- Provide alternative transportation program informational packets to all tenants, occupants, developers, property managers, and employee transportation coordinators at the site;
- Provide preferential parking for carpool/vanpool/cleaner fuel vehicles that is located closer to the building entrances;
- Provide personalized ride-matching services;
- Provide local retail uses and convenience services within the Business Park in order to limit trips of employees during lunch hours and breaks, including day care facilities, restaurants/cafeterias, banks/ATMs, recreation facility;
- Encourage tenants to provide flexible and compressed work schedules;
- Provide amenities for bicycle and pedestrian modes of travel (e.g. bicycle lanes, sidewalks on both sides of streets where feasible, secure bicycle parking, and signals with sensors for bicyclists and pedestrians).

A major goal of the Transportation Management Plan is to reduce vehicle miles traveled by implementing the measures previously identified.

4.4 Greenhouse Gas Emissions Reduction Plan

Several measures will be in place to help reduce greenhouse gas emissions. Key measures are identified below.

- Encourage transit to reduce vehicle miles traveled (per Section 4.3 of this General Development Plan)
- Allowing local retail uses (per Section 2.1 of this General Development Plan)
- Provide amenities for pedestrians and bicyclists (per Section 4.3 of this General Development Plan)
- Utilize LEED standards to measure reduction in greenhouse gas emissions and meet a LEED Silver design level (per Section 3.3.2 of this General Development Plan)

-EXAMPLE BUSINESS PARK PROJECTS-

-EXAMPLE BUSINESS PARK PROJECTS-

APPENDIX B – MST WATER CONSUMPTION ESTIMATES

10/6/2010
Job No.: 1968.04

Analysis of Water Supply Assessment
Whispering Oaks
Monterey County, California

Land Use	Demand Coefficient (AFY per SF) (3)	Assumed Land Use (%)	Weighted Demand Coefficient	Est. Building Area (4)	Unit (..)	Water Demand (AFY)
Retail	0.00021	20.0%	0.000042	436,667	SF	18.34
Office/R&D	0.000135	50.0%	0.0000675	436,667	SF	29.48
Light Industrial	0.00015	30.0%	0.000045	436,667	SF	19.65
SubTotal		**100.0%**				**67.47**
WO Landscape Use (1)	2.1	10.0%	0.21	24.45	AC	5.13
Lot 1 MST Use (2)						20.12
Total						**92.72**

Notes:
1. Water demand assumes 10% of lot area for landscape (non-turf) uses per MCWD UWMP.
2. See MST Calculations Below
3. Demand Coefficients are per the MCWD UWMP
4. Estimate Total Building area is based on an average FAR range of 0.33 to 0.50

Assumptions

Average FAR (0.33-0.50)	0.41	
Total WO Lot Area (SF/AC)	1,065,042	24.45
Average Building SF	436,667	

MST	Total Area (SF)	Total Area Breakdown by Use (SF)	Decription	Demand Coeficient (AFY/SF)*	Water Demand (AFY)
Bldg 4 - Operations	39000	39000	Office	0.00012	4.68
Bldg 5 - Maintenance	94332	75830	Auto	0.00007	5.31
		13755	Storage	0.00001	0.14
		4747	Office	0.00012	0.57
Bldg 6 - Fuel/Brake/Tire	19742	6969	Auto	0.00007	0.49
		12773	Fueling	0	0.00
Bldg 7 - Wash †	6588	6588	Bus Wash	†	3.07
Bldg 9B - Storage	2763	2763		0.00001	0.03
Subtotal Buildings	**162425**				**14.28**
Landscaping	2.78	Acres		2.1 AF/AC	5.84
				Total	**20.12**

* Per MCWD Appendix C
† Per AECOM personal communication October 2010

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October 6, 2010

Mr. Richard Weber, PE, LS
Whitson Engineers
9699 Blue Larkspur Lane, Suite 105
Monterey, CA 93940

Dear Mr. Weber:

The water demand estimates presented in the *Analysis of Water Supply Assessment* document dated October 6, 2010 for "Lot 1 MST Use" are consistent with the estimates AECOM, the Engineer and Architect of Record, have developed as part of our design for the Monterey-Salinas Transit Bus Maintenance & Operations Center project.

Sincerely,

Henry W. Liang, PE
Senior Engineer