APPENDIX J:
WATER SUPPLY ASSESSMENT

MARINA COAST WATER DISTRICT

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July 20, 2004

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Mr. Ian Gillis
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Subject: East Garrison Water Supply Assessment

Gentlemen:

On July 14, 2004 the Marina Coast Water District Board of Directors adopted Resolution no. 2004-33 approving the Water Supply Assessment for the Proposed East Garrison Development. As discussed, attached is a copy of the subject document for your use and distribution.

Please contact me if you have any questions.

Sincerely,

Marc A. Lucca, P.E.
District Engineer

Enc. *Water Supply Assessment and Written Verification of Supply -- Proposed East Garrison Specific Plan Development*, dated June 3, 2004

c: M. Armstrong -- MCWD
B. Buck – Byron Buck & Associates

Water Supply Assessment and Written Verification of Supply

Proposed
East Garrison Specific Plan Development

Prepared for the Marina Coast Water District

by

Byron Buck & Associates
Water Resources and Environmental Consulting

June 3, 2004

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1.0 Introduction and Purpose of Report

1.1 Project Description

Monterey County is proposing to adopt a Specific Plan for the East Garrison Project on approximately 244 acres of the East Garrison area of Fort Ord (Assessors Parcel Numbers 031-011-030; 031-011-031) and as shown on **Figure 1-1.** Reservation Road borders this area on the north and east, Watkins Gate Road on the south, and West Camp Road on the west. Based on information provided by the East Garrison Partners, their representatives Carlson, Barbee and Gibson, and the County of Monterey, the project consists of approximately 1470 housing units, 780 of which are medium-density attached housing units and 690 medium to high density attached units. In addition, there will be approximately 75,000 square feet of commercial development in a Town Center consisting of office, retail and restaurant space; 11,000 square feet of public facilities such as library and other government services; and an arts complex of about 102,000 square feet predominantly composed art studios, theatres, galleries along with small amounts of retail and office space. The project also includes 15.4 irrigated acres of parks and open space and 22.37 acres of native landscape, which will be irrigated for a maximum of three years to establish the rooting of plants that will then subsist on naturally available moisture. The residential land uses will consist of smaller parcels than those normally seen in the unincorporated area of the county, with the largest parcel being 5,000 square feet.

1.2 Purpose of Water Supply Assessment.

The County of Monterey is required to produce this water supply assessment (Water Code section 10910 et. seq.) and written verification of supply (Government Code section 66473.7 (b)(1)) as part of the development approval consideration process. The County requested the Marina Coast Water District

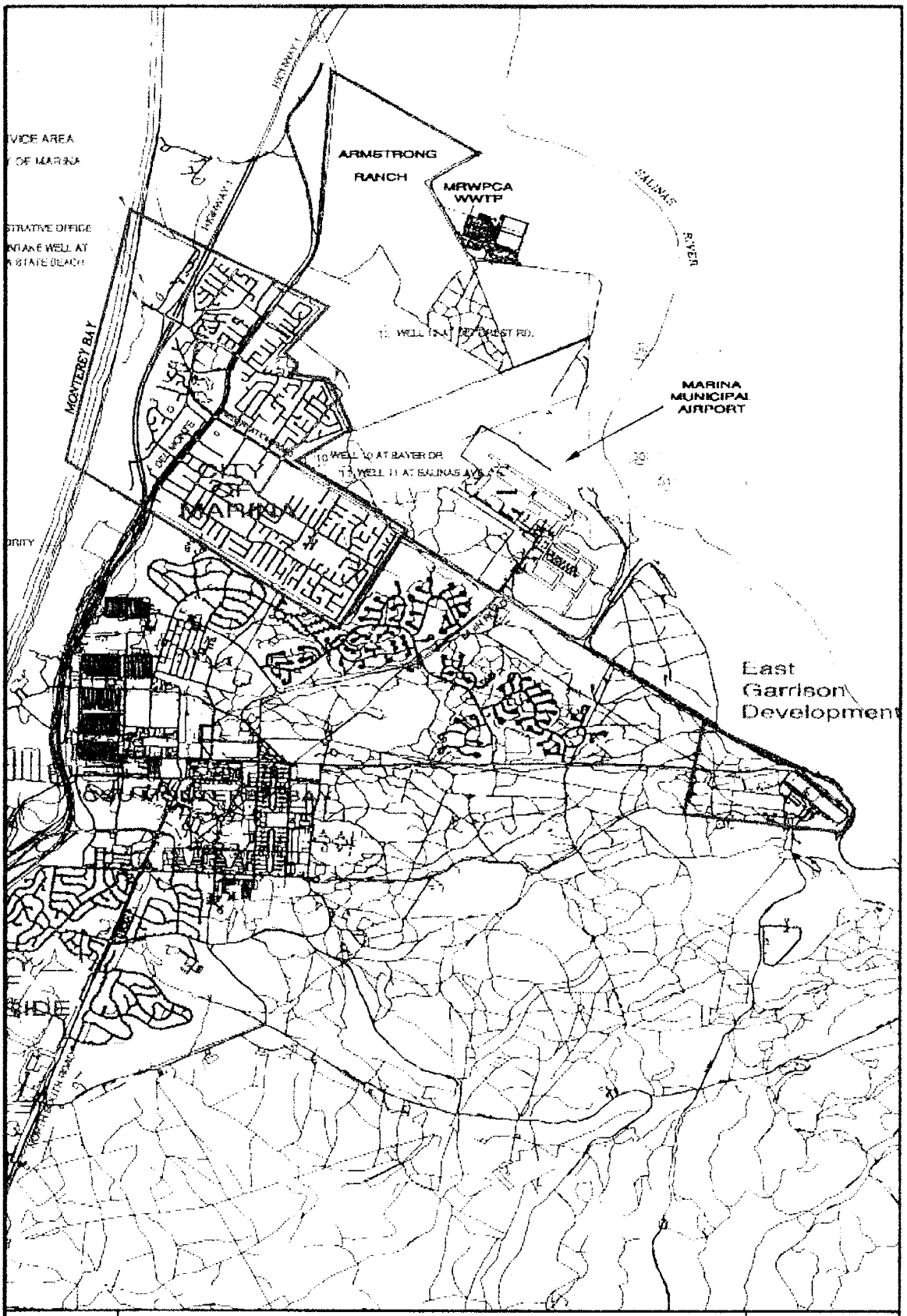


Figure 1-1
Marina Coast Water District
And Vicinity

(MCWD), the public water supplier for the area of the development, to analyze the available supplies and produce this report.

1.3 Requirements for Water Supply Assessments

On October 9, 2001 former Governor Gray Davis signed into law Senate Bills 610 (Costa) and 221 (Kuehl) (Chapters 643 and 642, respectively, Statutes of 2001) that require a water supply assessment in conjunction with project review under the California Environmental Quality Act (CEQA), and a written verification of water supply where a tentative tract map is proposed for approval. The general intent of SB 221 and 610 was to create additional assurance that certain new developments could be provided with a reliable supply of water and that the effect of certain new developments upon existing water users both within the service area of the public water provider and those dependent on common sources of water were informed regarding the proposed water use, its impacts and plans to maintain reliable supplies. The legislation also serves to better inform decision makers regarding the water supply implications of development addressed by the measures.

SB 221 created a specific requirement for a written verification that a sufficient supply of water exists for any residential developments of 500 or greater units as a condition of approval of a tentative tract or parcel map. Local land use approval authorities may not approve such maps if a sufficient supply cannot be demonstrated. Under the statute, a sufficient supply is defined as the total water supply available during normal, single dry and multiple dry years within a 20-year projection that will meet the water supplier's existing and planned future uses (Government Code 66473.7(a)(2).) This does not mean that 100% of the development's unrestricted water demand must be met 100% of the time, nor does it mean the new development may not have any impact on the service level of existing customers of the water provider. A "sufficient water supply" may be found to exist for a proposed subdivision as well as for existing customers, even where a drought-induced shortage will be known to occur, as long as a minimum

water supply can be estimated and planned for during a record drought (ACWA, 2002).

SB 610 created a requirement that a water supply assessment be prepared for certain developments, including residential developments in excess of 500 units, where an environmental impact report or negative declaration is being prepared under CEQA. The requirement adds a specific water supply assessment protocol for land use jurisdictions to follow and consider in evaluating the environmental impacts for a proposed project. The Water Supply Assessment must be included in any CEQA document prepared for the project. The County of Monterey must determine, based on the entire record, whether water supplies projected in the water supply assessment will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses.

Development on the former Fort Ord is currently limited by water supply as determined to be available under the Fort Ord Reuse Plan, with each land use jurisdiction being given an allotment of supply for allocation to new development. The County has an allotment of 560 acre-feet per year.

1.4 Relationship of This Document to the Marina Coast Water District Urban Water Management Plan

The Urban Water Management Planning Act requires municipal water providers serving over 3,000 acre-feet of water (1 acre-foot = 325,900 gallons) or having 3,000 service connections to prepare plans (urban water management plans) on a five-year, ongoing basis demonstrating their continued ability to provide water supplies for current and future expected development under normal, single dry and multiple dry year scenarios. These plans also require the assessment of urban water conservation measures, and wastewater recycling. They also require, pursuant to Section 10632 of the California Water Code, a water shortage contingency plan, outlining how water providers will manage water shortages of up to 50% of their normal supplies in a given year. Like SB 610 and 221, specific levels of supply reliability are not mandated (i.e., whether a

specific level of demand can be met over a designated frequency); rather, the law provides that a specific level of reliability is a local policy decision of the water provider.

The Marina Coast Water District's most recent Urban Water Management Plan (UWMP) was adopted in December of 2001 and is currently being updated. As provided for in the law, this report incorporates by reference and relies upon many of the planning assumptions and projections of that UWMP in assessing the water demand of the proposed project relative to the overall increase in demands expected by the MCWD.

2.0 Project Water Demands

Table 2-1 depicts average annual water demands based on water use factors that are based upon local climate and geography for land uses proposed in the East Garrison Specific Plan. The sources for water use factors are noted in the table. The factors recognize that plumbing fixtures in new development will be compliant with current plumbing code standards, requiring low flow plumbing devices and incorporating lower use water using appliances. Actual water demands will vary according to water use behavior of the residents and the ultimate landscape development and maintenance practices. These estimates are expected to vary year-to-year by as much as seven percent depending on weather and precipitation in a given year, with the greater use in drier years. No consumption is charged to the native landscaping area of 22.37 acres proposed in this project as this irrigation will be removed prior to full project build-out, resulting in a long-term demand estimated 470 acre-feet.[1]

The MCWD will track actual usage of new development and may adjust water use factors as necessary to reflect actual use history and to maintain account balances for land use jurisdictions' share of water allocated to the redevelopment of Fort Ord, as discussed in section 3.3, Groundwater Management.

[1] Letter to MCWD from Carlson, Barbee and Gibson, June 2, 2004

Table 2-1 Projected Demands for East Garrison Development

Unit Type	No. Units	Use Factor af/yr/unit	MCWD Estimated Use in AF/YR	Factor Source/Notes
Apartments	280	0.23	64.4	MCWD Consumption records 2001-2003
Carriage Units	70	0.2	14.0	BBA Estimate – no landscaped area
Towncenter Lofts	40	0.2	8.0	BBA Estimate – no landscaped area
Live-Work Unit (22'x70')	49	0.23	11.3	BBA Estimate +- 100 sq.ft. landscaping
Art Habitat Unit	65	0.23	15.0	BBA Estimate +- 100 sq.ft. landscaping
Townhouse (22'X70')	186	0.25	46.5	UWMP and MCWD Consumption records
Grove Lot (30'x70')	192	0.3	57.6	Byron Buck & Assoc. estimate –weighted average of lot sizes = 3374 sq.ft. vs. UWMP factor of 0.33 at 5000-6000 sq.ft.[2]
Garden Lot (35'x70')	201	0.3	60.3	"
Bungalow Lot (40'x100")	176	0.3	52.8	"
Courtyard Lot (70'x65)	50	0.3	15.0	"
Village Lot (50'x100')	140	0.3	42.0	"
Bluff Lot (50'x100')	21	0.3	6.3	"
Total Residential	**1470**		**393.1**	
Commercial				
Office (sf)	35000	0.0002	7.0	UWMP
Retail (sf)	20000	0.00004	0.8	2004 MCWD Consumption Data Review
Deli (sf)	4000	0.00027	1.1	MCWD Procedures and Guidelines and Design Req.
Restaurant (410 seats)	16000	.029 per seat	11.9	MCWD Procedures and Guidelines and Design Req.
Arts Complex				
Art Studios	65026	0.00013	8.9	BBA based on occupancy of 159 persons @ 50 g/day
Performing Art Theatre	15400	0.0001	1.5	UWMP - Academic institution
Community Art Center	11900	0.0001	1.2	UWMP - Academic institution
Coffee Shop (35 seats)	1500	.029 per seat	1.0	MCWD Procedures and Guidelines and Design Req.
Commercial Gallery	2000	0.00004	0.1	UWMP - retail
Non-profit office	2200	0.0002	0.4	UWMP - office
Music store	1400	0.00004	0.1	UWMP - retail
Food cooperative	3,000	0.00039	1.2	MCWD Procedures and Guidelines and Design Req.
Public Facilities/Civic (sf)	11,000	0.0003	3.3	UWMP
Active Parks (acres)	10.44	2.5 af/ac	26.1	BBA estimate
Landscape Parkways	4.94	2.5 af/ac	12.4	BBA estimate
(Acres)				
Native Landscape	22.37	2.5 af/ac	0.0**	**Three-year temporary irrigation only; 55.9 af/yr
Space (acres)				
Total Non-Residential			**76.9**	
Total Development			**470.0**	

[2] The MCWD Board of Directors has an expressed desire that this analysis not be precedent setting.

3.0 Available Water Supply

3.1 Overall Supplies

The MCWD, a county water district and public agency, is the purveyor of water for the former Fort Ord, also known as the Ord Community Service Area. The MCWD's water supply is currently from groundwater sources and a small desalination plant, which is temporarily idled. As discussed in the MCWD's Urban Water Management Plan, the MCWD has ongoing conservation programs and is pursuing plans and regulatory approvals to augment the MCWD's supplies for the former Fort Ord. (through recycled water and or additional desalination supplies)

3.2 Groundwater Supplies

Almost all of potable water for the Marina Coast Water District (MCWD) comes 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 four hydrologically linked subareas. These areas are the Pressure, East Side, Forebay and Upper Valley areas **(Figure 3-1)**. The basin consists of what has been historically thought of as three main aquifers: an upper aquifer known as the upper or 180-Foot aquifer, a middle or 400-Foot aquifer and a deeper aquifer, known as the deep or 900-Foot aquifer. While originally thought to be geologically confined in the Marina area, meaning there was no physical connection between the aquifers allowing flow between them, recent stratigraphic analyses have indicated that these aquifers are connected hydraulically, with water from the upper layers recharging the lower layers. Additionally, the deep or 900-foot aquifer is in reality a series of aquifers, not all of which are hydraulically connected.

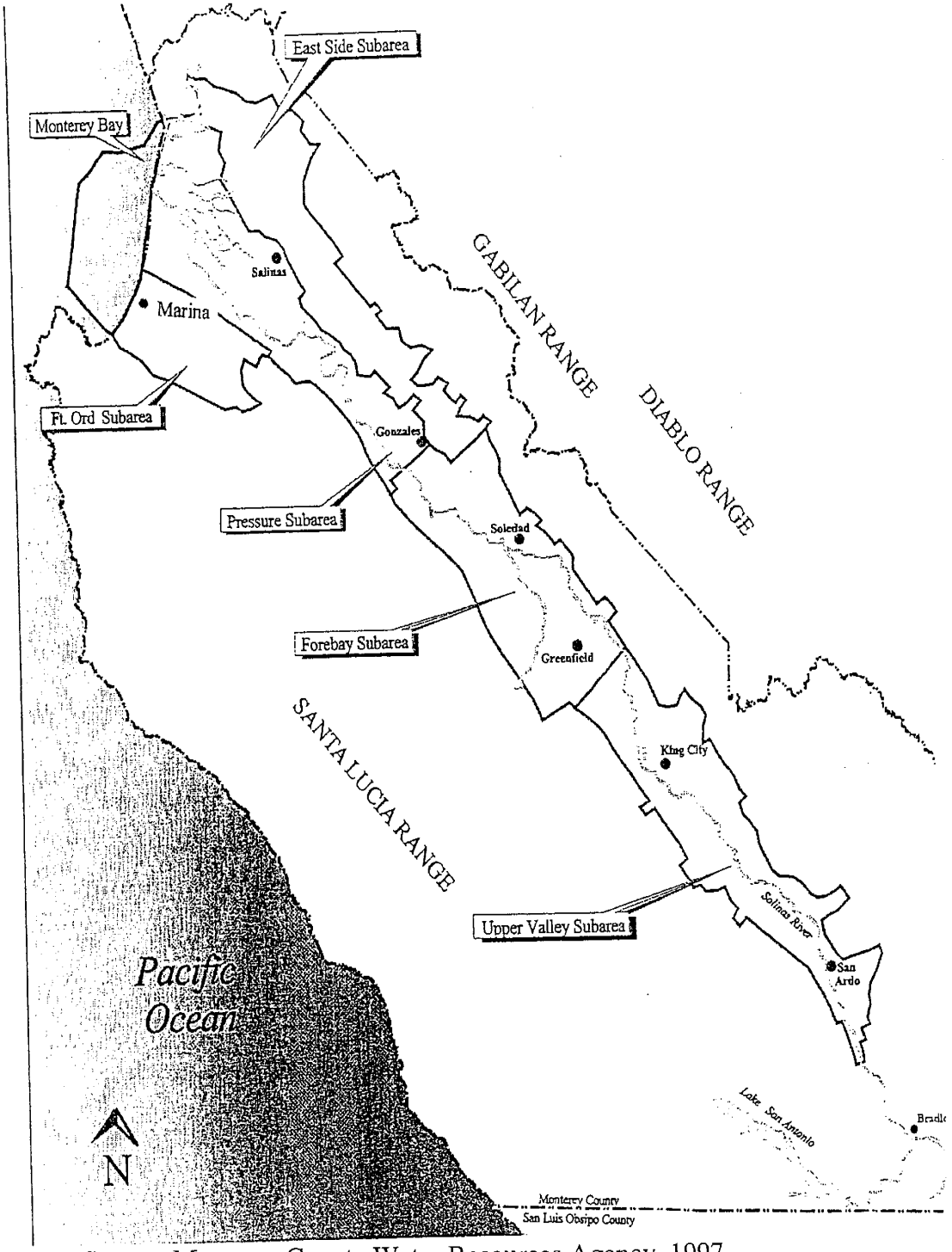
Seawater intrusion into the upper and middle aquifers of the Coastal Pressure sub-area has been documented since the 1940's and is continuing (see also

Marina Coast UWMP, 2001). A chloride concentration of 500 milligrams per liter (mg/L) is the short-term EPA Secondary Drinking Water Standard for chloride and is used as a measure of impairment of water. The line of chloride concentration of 500 mg/l water is therefore used as the basis for determining the seawater intrusion front. Seawater intrusion has forced the MCWD to close its wells in the upper and middle aquifers and resulted in drilling of new wells in the deep aquifer. The former Fort Ord's original shallower groundwater wells in the Salinas Basin were located closer to the coast. These wells progressively suffered from advancing seawater intrusion and new wells were constructed further inland in the Pressure sub-area of the Salinas Basin, and completed in the upper and middle aquifers.

In June 2002, a contaminant called trichloroethylene (TCE), a cleaning solvent, was detected in one of the three water supply wells at the former Fort Ord. TCE levels detected are below the Maximum Contaminant Levels above which water may not be served for potable uses. The contamination is coming from abandoned landfills near Imjin Road that were formerly used by the Army but are now closed. The Army has responded to the landfill contamination problem by installing extensive cleanup systems to remove the contamination and prevent its further migration. The Army has also been monitoring groundwater quality at the former Fort Ord for a number of years to understand the location and movement of groundwater contamination caused by the closed landfills.

Figure 3-1

Salinas Valley Groundwater Basin and Sub Basins



Source: Monterey County Water Resources Agency, 1997.

The amount of TCE in the one well was found at 0.53 to 0.81 parts per billion. State and federal safe drinking water standards allow a Maximum Contaminant Level (MCL) for TCE of 5.0 parts per billion, or approximately one full magnitude higher than detected. Detection of TCE, even at the low concentration levels, was reported by MCWD, as required by law, to the California Department of Health Services (DHS). No additional action was deemed necessary by the DHS because the concentration levels are well below the MCL of 5.0 parts per billion. Both the MCWD and the Army have been regularly monitoring the Fort Ord wells to see whether traces of TCE continue to exist. No TCE was detected in the monitoring done in July 2003.

The detected TCE level is already very low and is well within the mandated state and federal health standards. In addition, MCWD has voluntarily reduced pumping of water from the affected well.

The MCWD is continuing to monitor the affected well, and all other wells, for TCE and/or any other contaminants on a regular basis. Any changes due to increased pumping levels in other parts of the aquifers from which the MCWD draws its water will be monitored and appropriate actions taken.

In January 2002 MCWD detected total coliform in one of its wells. Since that time, MCWD has been in contact with the California Department of Health Services (CDHS) who has provided direction on MCWD's monitoring activities and well use. Currently, MCWD is performing additional monitoring and laboratory tests of this one well to assure that potable water entering the distribution system meets the standards regarding total coliform. To date, the system is in compliance with state and federal government standards. As such, this well remains a reliable source of water for MCWD and its customers.

MCWD's 2003 Annual Water Quality Report fully describes mandated test results at all of MCWD's wells.

The Salinas Basin is also suffering from nitrate contamination, a pollutant coming primarily from animal confinement activities (dairies, feedlots). However, other sources can include irrigated agriculture, sewage treatment plant effluent and septic tanks. This contamination is a concern, particularly in upper reaches of the 180-foot aquifer. Many contaminated wells exceed the State health standard of 45mg/l of Nitrate as NO_3. Nitrate levels in the 400-foot aquifer are low due to intervening clay layers between the 180 and 400 - foot aquifers. No nitrate problems are evident in any of the MCWD's wells.

Total basin groundwater demands are approximately 463,000 acre-feet per year, and the basin is overdrafted by an estimated 15,000 acre-feet annually (Salinas Valley Water Project EIR 1998). Withdrawals by the MCWD are shown in **Table 3-1**. Other than the MCWD, only a small number of wells, some of which also draw from the middle aquifer, tap the deep aquifers. Prior to receiving recycled water, there were agricultural lands in the Castroville area that received water supplies from the deep aquifers. These agricultural wells are currently idle but remain part of the monitoring network overseen by the Monterey County Water Resources Agency (MCWRA), manager of the Salinas Groundwater Basin.

Table 3-1 MCWD Groundwater Production (AFY) 1998-2003

Calendar Year	City of Marina	Ord Community
1998	2160	n/a
1999	2241	2396
2000	2300	2371
2001	2285	2228
2002	2306	2137
2003	2185	2146

Recent preliminary findings regarding the deep aquifers in the former Fort Ord area indicate that pumping from the deep aquifers can affect the rate of seawater intrusion in the middle and upper aquifers as the deep aquifers' sources of recharge include these overlying aquifers. In other words, while abandonment of wells in the upper and middle aquifers for wells in the deep aquifers can assure

potable supplies, they do not halt the landward progression of seawater intrusion. Additionally, increased pumping of the deep aquifers is expected to increase the rate of seawater intrusion in the middle and upper aquifers, according to the Deep Aquifer Investigative Study, WRIME, May 2003. Among other issues, this Study analyzed the increasing flow rate of landward movement of seawater into the freshwater aquifers (groundwater flow across the coast) or, seawater intrusion. It found that as pumping in the deep aquifers increased, the landward flow of groundwater increased. The report assessed these increases based upon multipliers of pumping from baseline conditions. Total baseline pumping for the analysis was set at 4,800 acre-feet per year and multipliers of two to fivefold the baseline pumping were modeled. Expected pumping increases as described in the UWMP from 2000 to the year 2020 is about 6,100 acre-feet per year or about 2.14 times baseline modeled pumping. Based on the outputs of the model, the landward flow of groundwater is estimated to increase by about 675 acre-feet annually at 2020 if expected UWMP demands are realized. Growth in demands as represented by the Proposed East Garrison project was anticipated in the 2001 UWMP under the County's expected use of its Fort Ord Reuse Authority (FORA) water allocation. These demands will proportionally increase the rate of seawater intrusion and the need for the MCWD to invest to protect its supply from this intrusion.

3.3 Groundwater Management

Two regional water management agencies have jurisdiction within the former Fort Ord. The Monterey County Water Resources Agency (MCWRA) is responsible for regulation and supply of water from the Salinas Groundwater Basin. The Monterey Peninsula Water Management District (MPWMD) is responsible for regulation and supply of water from the Seaside Groundwater Basin. The MCWD relies only on groundwater from the Salinas Groundwater Basin to supply water to Marina Area lands and the Ord Community.

As noted above, the potable water supply at the former Fort Ord is from the Pressure subarea of the Salinas Groundwater Basin. The southwestern portion of the Salinas Groundwater Basin underlies the northern and southeastern segments of the former Fort Ord.

Both the Army and the MCWD have agreements with the MCWRA, which allow the MCWD to participate in the MCWRA's basin management planning process. Under the terms of the agreements, former Fort Ord lands and the MCWD's service area were annexed into MCWRA Zone 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 AFY from the deep aquifers, totaling 6,600 acre-feet, or about the historic demand from Army uses at Fort Ord. The groundwater available to the Ord Community is allocated by the FORA among the land use or land owning jurisdictions as shown in **Table 3-2**. This table also indicates available groundwater supply to the MCWD via its agreement with the MCWRA for a maximum withdrawal of potable water of 3,020 acre-feet per year.

Additionally, two major private properties, the Armstrong Ranch and the Lonestar property have the contractual right to be annexed to the MCRWA and have groundwater allocations available for use on those properties as noted in **Table 3-2.** As of the date of this Assessment, neither of these two properties have annexed to the MCWD.

3.4 East Garrison Demands vs. FORA Allocations and County of Monterey Development Plans

The County of Monterey has an allocation of 560 acre-feet per year as shown in **Table 3-2**. The proposed East Garrison development is expected to consume approximately 470.0 acre-feet per year of this allotment. Following this development, a remainder of 90 acre-feet per year remains available for future allocation by the MCWRA. The County must allocate development in the Ord Community within the water use afforded it under its allocation of 560 acre-

feet per year. This is the maximum amount of water which the MCWD may presently serve to County uses on the former Fort Ord in compliance with its water resource agreements with the MCWRA and others relative to the former Fort Ord lands. For this reason, the MCWD will only approve connections in the Ord Community up to the point FORA allocations are projected to be exhausted, or until other water resources can be secured and allocated. Therefore, the amount of additional development anticipated by the MCWD within County land use jurisdiction beyond that contemplated in the East Garrison project is that amount that can be expected to remain within the 560 acre-foot allocation, or 90 acre-feet per year.

Table 3-2
Water Supply Currently Available to Marina Coast Water District

Fort Ord Reuse Authority Allocation (groundwater)	Annual Acre-feet Allotment or supply
City of Marina	1,175
City of Seaside	748
CSU Monterey Bay	1,035
University of California MBEST Center	230
City of Del Rey Oaks	75
City of Monterey	65
Monterey County	**560**
US Army	1,691
County/State Parks	45
City of Marina (Sphere)	10
Allowance for line losses (10%)	532
FORA Strategic Reserve	431
Rounded subtotal	**6,600**
Marina Coast Water District by Agreement with MCWRA (groundwater)	3,020
Armstrong Ranch (groundwater)	920
Lonestar Property (groundwater)	500
Subtotal groundwater	**11,040**
MCWD Desalination Plant (temporarily idle)	300
Recycled Water – MWPCA Plant	300
Total	**11,640**

3.5 Regional Groundwater Management Planning

The MCWRA has prepared a basin-wide plan, known as the Salinas Valley Water Project (SVWP) to address water supply issues of the Salinas Groundwater Basin. The Plan's objectives are:

- Stop seawater intrusion
- Manage nitrate contamination in groundwater
- Provide adequate water supplies to meet current and future (year 2030) needs, and
- Hydrologically balance the groundwater basin in the Salinas Valley

The Plan anticipates that current demands upon the basin will decline by about 20,000 acre feet annually by 2030 due to urban and agricultural conservation efforts, conversion of agricultural lands and some crop shifting. This overall decline is expected to occur despite a near doubling of the population served from the Salinas Groundwater Basin from 188,949 in 1995 to 355,829 in 2030, which will result in a growth in urban demands of about 40,000 acre feet annually. Additional water necessary to balance recharge with withdrawal in the Basin will be provided through additional capture of Salinas River flows otherwise lost to the ocean via a proposed in-stream diversion, additional recycled water from the proposed Monterey County Recycling Projects and modification of the spillway at Nacimiento reservoir, which will allow re-operation of this reservoir and San Antonio reservoir producing additional system yield. In total, by 2030 an additional yield of 37,000 acre-feet per year is expected.

While over the long term, the SVWP should achieve overall balance in the Salinas Groundwater Basin arresting seawater intrusion, localized seawater intrusion may remain where localized withdrawals are exceed localized recharge rates of the Basin at its coastal margins.

3.6 Groundwater Legal Entitlement

The MCWRA holds appropriative rights to waters impounded and released from the Nacimiento and San Antonio Reservoirs to recharge the Basin. These waters provide much of the recharge for the Basin. Under the agreements discussed in Section 3.3, MCWRA has legally committed 11,040 acre feet per year of MCWRA's appropriative rights to use within the MCWD service areas and sphere of influence. Annexation of the MCWD's service area within the zone of benefit for water from the Nacimiento and San Antonio Reservoirs owned by the Monterey County Water Resources Agency gives the MCWD the right to use such water for the benefit of the annexed lands.

In addition, the MCWD has an appropriative right common to public utilities and municipalities to use "surplus" water in excess of the needs of overlying landowners who pump from the basin, and to establish prescriptive rights (*See Los Angeles v. San Fernando (1975) 14 Cal 3rd. 199, 294).* (*See also California Water, p.51*). The MCWD's appropriative rights to water, together with the MCWD's contractual rights to water, should enable the MCWD to reliably supply water for the projected demand within the MCWD's service area over the next 20 years.

4.0 Water Augmentation

As described in the UWMP, the MCWD's water supply plans include utilizing recycled water, desalination or other new supplies to meet a portion of its future demands. MCWD currently has budgeted for FY03/04 through FY 07/08 a total of approximately $40 million to assure reliable and high quality water is delivered to its customers in Marina and Ord Communities. While this budget is subject to change from year-to-year, it illustrates forward thinking and planning to assure that a reliable water supply is available to all District customers. Part of that work included through FY07/08 is an evaluation of possible water augmentation alternatives that will satisfy FORA's estimated needs of 2,400 AFY for full

development of the former Fort Ord. If recycled water is planned for a development area, the MCWD will require the installation of recycled water delivery piping for all recreational and common irrigated open space areas within the development in accordance with its Administrative Code Section 4.28.030, Recycled Water Service Availability. No recycled water service is expected to be available for the proposed East Garrison development at this time. If recycled water becomes available, then it would be used for non-potable uses for the development.

5.0 Water Conservation

Water conservation and the MCWD's efforts to implement the Best Management Practices for Urban Water Conservation are discussed in the UWMP. Conservation effects on water demands are built into the demand forecasts for the MCWD and as such are not considered a separate component of supply.

The proposed East Garrison project will be required to comply with current plumbing code requirements calling for low-flow plumbing fixtures reducing indoor water consumption. Reduced lots sizes will also tend to minimize outdoor water use compared to larger lots sizes.

6.0 Water Supply Sufficiency Analysis

The MCWD's current groundwater wells have sufficient production capacity to meet the needs of the East Garrison project. To meet the full build-out of the MCWD as described in the UWMP, the MCWD is currently planning additional water supply capacity. Such facilities will be described in the MCWD's master planning process. The project's demands are consistent as a component of FORA demands within an overall water balance prescribed for the Salinas Basin, and FORA allocation criteria can be met for this specific development. However, there are longstanding concerns that localized groundwater withdrawals will, over the long term, exceed the localized capacity of the groundwater basin and lead to

further seawater intrusion and loss of potable supply at the MCWD's wells (UWMP p.2-9). Due to recent studies and an enhanced understanding of the mechanisms at work in the groundwater basin, there is increased awareness that increased pumping in the Marina and Ord Community areas resulting from new development such as the proposed project will exacerbate the continued seawater intrusion and speed the rate of water quality degradation. The MCWD and all the jurisdictions represented under the FORA have recognized the need to invest in the MCWD's water supply system and the inevitable need to respond to seawater intrusion. Accordingly, the MCWD's current Capital Improvement Program includes development of new water supply wells away from the seawater intrusion front, with construction of well 33 in FY-04, and rehabilitation of wells 31 and 29 in FY 07-08. A new monitoring well in the deep aquifers is also being constructed. In addition, plans are also underway to develop a water augmentation supply for the Ord Community service area. In FY-03 $700,000 was budgeted in planning for this augmentation. A capital fund collected by the FORA as part of its fees is currently in the amount of $19 million and will be available to support the selected project. The MCWD also anticipates a $10 million capital project for additional supply development beyond 2015.

The MCWD will continue to monitor groundwater and develop better information on the rate of seawater intrusion. This information will support additional planning and capital programming in order to assure supply reliability is not outstripped by growing demands. This may require additional investment in the water system not already under development or planning. Provided this monitoring is continued and planning and investment proceeds to develop new supplies ahead of any potential loss of existing groundwater wells, a reliable supply can be maintained for the East Garrison development as well as the MCWD as a whole.

7.0 Availability of Water Treatment and Delivery System Capacity

The MCWD's current plans for upgrading the Ord Community wells and transmission network accommodate the water capacity and supply needs for the East Garrison development. On-site distribution systems will be designed to accommodate necessary demand and fire flows for the project in accordance with MCWD design standards. As the supply is groundwater, no treatment other than chlorination for maintenance of system disinfection is required.

8.0 Regulatory Permits Necessary for Supply Delivery

The MCWD's local supplies are maintained under a public water supply permit from the State Department of Health Services. The MCWD is exempt from local building codes with respect to construction of water treatment and delivery facilities. However, the MCWD does have to comply with State Fish and Game and U.S. Army Corps of Engineer requirements where construction will require stream bed alteration agreements or placement of fill materials in waters of the United States, respectively. No such permits are currently necessary but could become so depending upon projects necessary to assure reliable supplies as discussed in Section 6.0.

9.0 Effect on Agricultural and Industrial Users Not Supplied by the Marina Coast Water District but Reliant on the Same Sources

Agricultural users in the Salinas Valley generally rely on the same basin-wide supply from the Salinas Valley Groundwater Basin. These uses are taken into account in the basin planning of the Monterey County Water Resources Agency as part of developing a water balance for the Basin. As these uses are largely inland of the MCWD, additional demands in the Marina and Ord community area are not expected to affect them.

10.0 Summary Water Supply Sufficiency Determination

Pursuant to Section 10910 (h) of the California Water Code, and based on the foregoing analysis, the MCWD has determined that its water supplies are currently sufficient to meet the projected water demands associated with the proposed project, in addition to other planned demands expected by the MCWD throughout the build-out of developable land within its boundaries as described in the MCWD's Urban Water Management Plan. Through continued investment in water production and distribution facilities, the MCWD will be able to maintain supply reliability as additional developments are proposed consistent with Ft. Ord area reuse plans and water allocations.

Pursuant to California Government Code Section 66473.7, the MCWD has determined based on the foregoing analysis that it has a sufficient water supply available to serve the proposed development's needs, in addition to existing and planned future uses as anticipated in its Urban Water Management Plan during normal, single-dry and multiple dry years within a twenty-year projection.

Additional planning, financing and development of supplies secure from seawater intrusion will be developed as necessary to assure reliable supplies for the East Garrison project in conjunction with current users as may be dictated by changed conditions.

11.0 References

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