
4.0 MASTER RESPONSE 2- WATER SUPPLY AND RELATED ISSUES

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This master response addresses several issues related to water supply, County requirements for hydrogeologic investigations, water demand, the Salinas Valley Water Project, and project relationship to Zone 2C. Specifically, several comments expressed concerns regarding drought conditions; impacts on the adjacent Toro Area that is in B-8 zoning; loss of recharge to the Toro Area; acceleration of seawater intrusion and overdraft of the Salinas Valley Groundwater Basin; viability of the SVWP; conservation requirements; annexation of the project site into California Water Service Company's service area; and arsenic levels.

PROJECT WATER SOURCE

As described in page 3.6-10 of the DEIR, the Ferrini Ranch project would be provided service by California Water Service Company (CWSC or Cal Water). Potable water for the proposed project would be provided by wells in the 180/400-Foot Aquifer Subbasin (also referred to as Monterey County Water Resources Agency's (MCWRA) "Pressure Subarea") of the Salinas Valley Groundwater Basin. As noted on page 3.6-2 of the DEIR, the project site overlies the northeast portion of the Corral de Tierra Area Subbasin (DWR 2010) of the Salinas Valley Groundwater Basin.

The water will be provided by Cal Water which has prepared an Urban Water Management Plan (UWMP.) Cal Water does not anticipate ever having the demand for the amount of water that they have the capacity to provide. The projected water use identified in the UWMP has been anticipated in the projections for the Salinas Valley Water Project (SVWP) and so impacts associated with seawater intrusion and declining ground water levels have been addressed on a cumulative basis through the set of projects associated with the SVWP.

The Cal Water Urban Water Management Plan (UWMP, 2010) notes that existing supply to this municipal system is considered the amount that Cal Water can pump. Cal Water currently has the design capacity to pump 50,000 acre feet per year; however, projections of customer use through year 2040 are 25,572 acre feet per year. (See discussion of Urban Water Management Plan below.)

CALIFORNIA WATER SERVICE AREA

The proposed project would have potable water provided by California Water Service Company (CWSC). According to Figure 2.1-3 and Appendix B of the 2010 Urban Water Management Plan (UWMP), the eastern parcel of the project site is located within the Indian Springs/Salinas Hills/Buena Vista service area of the Salinas District. The proposed project's potable water demand would be met by water procured from existing wells in CWSC's Salinas Hills system as noted on 3.10-21 of the DEIR.

CWSC provided a will serve letter in 2004, pending PUC's approval of the expansion of the District. As of June 2011 this annexation had not occurred. The PUC approval process would require CWSC to document their ability to serve the annexed service area with existing resources while remaining consistent with statewide urban water demand reduction policies. If the annexation were not approved by the PUC, there would be no water to serve development proposed on the western parcel, and no building permits would be issued for those lots. A condition would be added to the Tentative Map requiring that no final map creating lots within the California Water Service Area can be recorded until the lots outside of the service area is annexed into the CSWC Service Area.

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LITIGATION RELATED TO 2010 GENERAL PLAN AND FEIR

Comments on the Ferrini Ranch DEIR suggest that the Ferrini Ranch DEIR should have disclosed the existence of existing litigation against the County challenging the 2010 Monterey County General Plan FEIR due to its reliance on the Salinas Valley Water Project (SVWP) and the SVWP EIR. The County acknowledges that two lawsuits are pending which challenge the 2010 General Plan and a 2013 amendment to the 2010 General Plan. (*The Open Monterey Project v. Monterey County Board of Supervisors* (Monterey County Superior Court Case No. M109441) and *Landwatch Monterey County v. County of Monterey* (Monterey County Superior Court Case No. M109434).) A hearing on these cases has not yet been held (the hearing is currently scheduled for May 2015), and no decision has been reached by the court. The comments on the Ferrini Ranch DEIR from the petitioners in the General Plan lawsuits about the adequacy of the General Plan EIR are allegations which have not been found valid by a court. Moreover, the General Plan litigation is of questionable relevance because the Ferrini Ranch EIR does not rely on the General Plan EIR. The Ferrini Ranch project is not subject to the 2010 General Plan, as the project application was deemed complete in 2005. Hence, this project is subject to the 1982 General Plan, which was the General Plan in effect as of that completeness date. The Ferrini Ranch project EIR does not rely on the 2010 General Plan or General Plan EIR.

Secondly, to the extent the comments attack the General Plan EIR's analysis of water supply, the comments are misplaced because the General Plan EIR analyzes the impacts of a project of a different nature and scale than the proposed Ferrini Ranch project. The General Plan is a policy document that addresses development of the entire inland unincorporated area of the County. The General Plan EIR is a program-level analysis which analyzes the impact of development under the General Plan through the General Plan planning horizon, designated as the year 2030, and through full build out, projected as the year 2092 and defined as the point when all existing undeveloped residential lots of record would likely be built up to the maximum density allowed by the Plan at the projected rate of growth. The General Plan EIR concluded overall water demand in Zone 2C through 2030 would not result in groundwater drawdown or seawater intrusion in Zone 2C. The analysis of impacts of growth through 2030 and 2092 is far broader and different than the impacts of a single 212 lot subdivision. CEQA does not require a project level analysis to reanalyze the contested environmental analysis for a General Plan.

One comment purports to incorporate by reference the administrative record of the 2010 General Plan as it relates to these issues including comments submitted by or on behalf of Landwatch, The Open Monterey Project, FANS, and Julie Engell (see comment 36-57). The administrative record of the 2010 General Plan is not relevant for the reasons explained above. However, to the extent commenter incorporates the administrative record of the 2010 General Plan, the County incorporates by reference County's responses to comments on the water supply impacts of the General Plan and water supply analysis in the administrative record of the 2010 General Plan and 2013 General Plan amendment of General Plan water policies.

COMPREHENSIVE HYDROGEOLOGIC INVESTIGATION REQUIREMENT

A comment was made that a comprehensive hydrogeologic report was not submitted with the application and contends this omission violates Monterey County Code section 19.05.040.L.3 (requirements for comprehensive hydrogeologic investigation). The comment fails to take into account Monterey County Code section 19.05.040.L.1.B which allows the Environmental Health Department to determine if existing hydrogeologic investigations cover all or some of the pertinent issues. In this particular case, it was determined that a project-specific hydrological investigation was not needed because the project would receive water from a large publicly

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regulated utility, Cal Water. Cal Water must prepare an Urban Water Management Plan addressing its ability to provide water.

The Kleinfelder Report (2008) was prepared as part of the background material for the DEIR. This report was intended to provide technical information on the hydrologic, geotechnical, erosion, drainage and environmental phase I assessment for the project site. This report was incorrect because it incorrectly identified the source of the water as the El Toro Water Basin. This is the reason that the 2012 Hydrological update was provided from Kleinfelder, which correctly identified that water would come from the Salinas Valley Groundwater Basin. The DEIR correctly identifies the location of the Cal Water wells as being in the Salinas Valley Groundwater Basin.

EXISTING CONDITIONS FOR WATER ANALYSIS

Comments are correct that the Notice of Preparation for the project was issued in 2005. Existing conditions for the water analysis were the conditions of the Salinas Valley Groundwater Basin as known in 2005 based on various previously prepared reports, including 2004 aquifer storage data from DWR (DEIR page 3.6-9). Section 3.6 of the DEIR is the resulting synthesis of several sources of information available over time, including reports by Kleinfelder, Fugro, Geosyntec, CWSC (Cal Water) and information provided by the Monterey County Water Resources Agency (WRA). The County WRA assisted with the review and organization of all data sources to present a current and accurate section of the EIR. Several references to the “baseline year” used for the SVWP EIR are noted.

RELATIONSHIP TO THE SVWP

The water analysis for the proposed project does not rely solely on the SVWP and SVWP EIR for the adequacy of water supply. The DEIR uses a combination of factors when evaluating the impacts to water associated with this project. First as noted above, the proposed project will receive water from Cal Water (CWSC) for which a UWMP has been prepared. The UWMP for CWSC identifies that CWSC has more than sufficient water supply capacity to serve the proposed project. The CWSC’s UWMP identifies the source of this water as the Salinas Valley Ground Water Basin. The impacts associated with the CWSC’ UWMP is included within the pumping demand assumed by SWVP on the basin.

The subject property was included within the original Zone 2a. Zone 2 was the benefit zone originally defined for the Nacimiento Reservoir, which was built in 1957. Zone 2A was the benefit zone defined for the San Antonio Reservoir, which was built in 1967. Zone 2/2A was expanded to include Fort Ord and Marina in the 1990s. Zone 2B is the benefit area for the Castroville Seawater Intrusion Project (CSIP) project near Castroville. Zone 2C is the benefit zone defined for the Salinas Valley Water Project and new reservoir operations. These regional improvements were developed to better manage groundwater resources within the Salinas Valley Groundwater Basin. The project site is within Zone 2C, and the property owner pays Zone 2C assessments. Accordingly the owner is making a fair share contribution toward these groundwater management projects, which include the two reservoirs, CSIP, and the SVWP. As previously mentioned, the proposed project would not directly rely on water produced through the SVWP or other projects, but relies on the overall benefits provided from the suite of projects mentioned previously.

A comment asked whether the baseline for the SVWP EIR included the Ferrini property. The growth projections from AMBAG that were used for the SVWP EIR are conservative and did contemplate development at a level which would have included this property. Thus the SVWP EIR assumed development of this property in its analysis.

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The WRA continues to monitor groundwater levels within the basin in order to assess the long term effect of current management efforts and projects over wet and dry years, including the SVWP. The most recent WRA groundwater data (2013) demonstrates near-term benefits of these management efforts, with an understanding that monitoring will be ongoing.

Although the proposed project will cause an increase the demand on the Salinas Valley Groundwater Basin, it would not be to a level that wasn't already analyzed and disclosed through preparation of the UWMP or the SVWP EIR.

GROUNDWATER SOURCE AND PROJECT IMPACTS

As identified on page 3.6-9 of the DEIR, the project water source, the 180/400-Foot Aquifer, a subbasin of the SVGB has an estimated total storage capacity of approximately 7,240,000 acre-feet of groundwater. As identified in the DEIR (page 3.6-1) and its supporting reference documents, the Salinas Valley Groundwater Basin as an entire unit is in an overdraft condition; however, some subbasins have better groundwater yields than others. The 180/400 Foot Aquifer Subbasin is recognized as a subbasin that has historically experienced overdraft conditions and, as a result, saltwater intrusion has progressed (DEIR 3.6-15).

The project is estimated to have a total demand on this subbasin of 95 acre feet per year. The DEIR found this demand on the subbasin was less than significant due to a combination of factors. First is the insignificant demand (95 acre feet per year) versus the total storage capacity of the subbasin (7.24 million acre feet per year). Second is the small demand of this project (95 AFY) in relation to the overall annual demand for the subbasin in 2005 of 118,372 AFY (Agricultural Pumping: 97,028 and Urban Pumping 21,344 (Monterey County Water Resources Agency 2007).) It should be noted that the total pumping from the SVGB is 500,000 AFY with a 90/10 split between agriculture and urban uses. Third is the consistency with the CWSC Urban Water Management Plan, and fourth is the positive influence of the suite of projects implemented to combat seawater intrusion; the Salinas Valley Water Project, CSIP, Lake Nacimiento and Lake San Antonio. DEIR page 3.6-17 provides graphs demonstrating that the rate seawater intrusion has been slowing since 2005. The most recent data from the MCWRA shows a continued slowing of the seawater intrusion. These maps are attached on the following pages.

PROJECT LOCATION AND RELATIONSHIP TO ZONE 2C

A commenter questioned whether the Project Site should be included in Zone 2C. The Toro/Fort Ord area was added to Zone 2a in the 1990's. Figure 3.6-6 of the DEIR shows the subject site is clearly within the boundaries of Zone 2c. In addition, the attached figure taken from the Monterey County Water Resources Agency shows the site was in Zone 2A prior to its expansion to include Zone 2C. The entire project site is within the Zone 2C boundary. An additional exhibit is attached.

Comments are correct that Geosyntec (2007) identified the Zone 2C boundary and described it relative to the "El Toro Planning Area" boundary. Comments on DEIR page 3.6-2 regarding basin boundaries simply describe that Geosyntec used a different method (watershed boundaries) to describe the study area of that report.

With respect to the 1998 Historic Benefits Analysis document cited in the comments, the hydrologic benefits of the Nacimiento and San Antonio reservoirs were analyzed and portrayed. The analysis did not model the Fort Ord/Toro area because at the time it was believed that the Fort Ord and Toro areas were not part of the main ground water basin. It is now a common

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understanding that the subject site is overlying the Corral de Tierra Subbasin of the Salinas Valley Ground Water Basin as shown in Bulletin 118 prepared by the California Department of Water Resources. Both the Seaside Area subbasin and Corral de Tierra subbasin are listed as subbasins of the Salinas Valley Groundwater Basin, on page 3.6-2 of the DEIR.

Further, the analysis by Geosyntec (2007 including update in 2010) documents the hydraulic connectivity between the project area and the larger SVGB. Figure 3.6-4 of the DEIR shows a cross section of the geologic formations across the subject site and into the Salinas Valley Groundwater Basin. This cross section shows the Plio-Pleistocene Continental Deposits maintain a hydraulic gradient under El Toro Creek and Highway 68 corridor in a northeasterly declination and contiguous to the Salinas Valley Groundwater Basin. Connectivity between the groundwater underlying the subject site and the Salinas Valley Groundwater Basin is thus affirmed by both DWR Basin Maps and the hydrogeologic

study prepared by Geosyntec (2007 and 2010.) A comment was made that the DEIR equivocates as to whether there is hydrologic connectivity between the project site and the SVGB. The DEIR is very clear on Page 3.6-2 that the Corral de Tierra subbasin is a subbasin to the SVGB by referencing Bulletin 118 of DWR and the discussion of the Geosyntec Report Supplement which demonstrates hydrologic connectivity between the project site and the SVGB.

GROUNDWATER BASIN, SERVICE AREA, WATERSHED, EL TORO GROUNDWATER STUDY AREA

A question was asked as to whether the project site overlies the El Toro Groundwater Basin. The project site is completely within the Corral de Tierra Subbasin of the Salinas Valley Ground Water Basin as discussed above. The Salinas Valley Groundwater Basin (SVGB) and its subbasins are defined and recognized by the County of Monterey and Department of Water Resources. The "El Toro Groundwater Basin" defined and studied by Geosyntec Consultants in the *El Toro Groundwater Study* in July 2007 and 2010 defined basins specific to the El Toro Planning Area, for a specific purpose. This study did not use Bulletin 118 from DWR to define the basin and thus defined a study area that is not a defined groundwater basin. The DEIR cites the Geosyntec Study, to demonstrate the hydrologic connectivity between the subject site and SVGB. Because the different studies define basins differently, the DEIR also explained these relationships in DEIR Section 3.6. Additional information is provided below.

GROUNDWATER BASIN

The Salinas Valley Groundwater Basin, including the 180/400-Foot Aquifer subbasin, is in overdraft and has experienced seawater intrusion. The MCWRA and the Monterey Regional Water Pollution Control Agency (MRWPCA) operate two major capital projects, Salinas Valley Water Project (SVWP) and the Salinas Valley Reclamation Project (SVRP), which are described in detail starting on page 3.6-17 of the DEIR, to provide better management of groundwater quality and halt the long-term trend of seawater intrusion and groundwater overdraft.

The Salinas Valley Integrated Ground and Surface Water Model (SVIGSM) is a tool that was used for planning the development of the Salinas Valley Water Project (SVWP) and analyzing potential hydrologic impacts.

A question was raised about whether the SVIGSM included the Ferrini property since the Toro/Fort Ord area was left out of the Historical Benefit Analysis in 1998 because at the time the area was believed to be not part of the main Salinas Valley Groundwater Basin. As asked and answered above it is now understood that the Corral de Tierra Area Subbasin is clearly

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hydrologically connected to and part of the Salinas Valley Groundwater Basin. In addition when the SVWP was modeled in 2002 the SVIGSM was updated using Association of Monterey Bay Area Governments (AMBAG) growth assumptions. This includes the water connections anticipated as part of Cal Water Services UWMP.

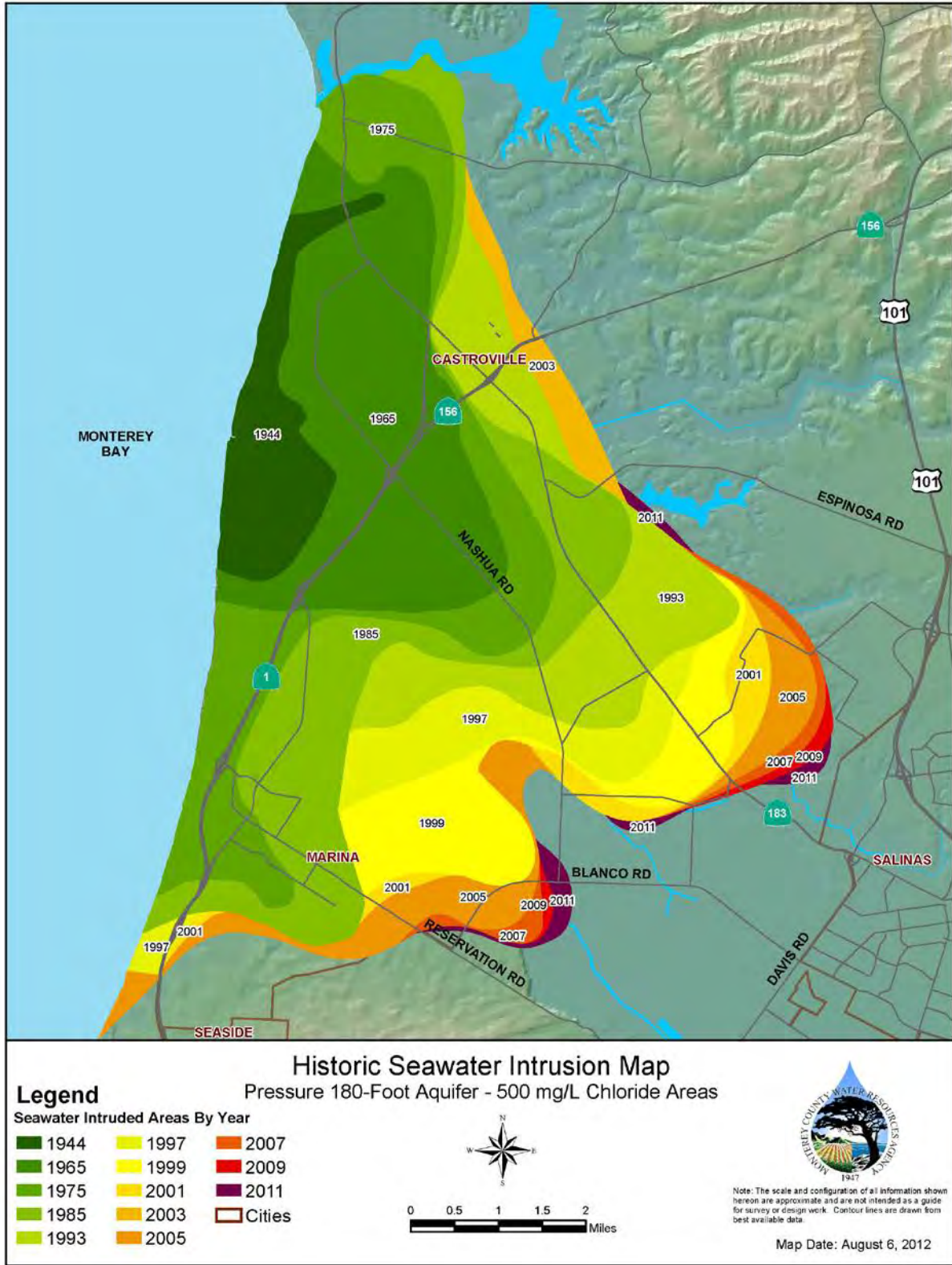
The SVWP provides additional releases of water to the Salinas River upstream, which provides recharge to the groundwater aquifers, increasing the amount of subsurface water. The CSIP/SVRP supplies irrigation water to farmlands in the northern Salinas Valley, allowing the farmers to reduce pumping a like amount, which counteracts the seawater attempting to intrude the aquifers thus reducing the advance of seawater intrusion.

As stated previously, the Ferrini Ranch project site would be served by wells that are located within the 180-/400-Foot Aquifer Subarea (also referred to as MCWRA's Pressure Subarea) of the Salinas Valley Groundwater Basin and the project site is located within Zone 2C, which means the wells and water source that would serve the proposed project are served by the projects managed by MCWRA to address seawater intrusion, and the property owner is assessed fees to fund these projects. Through payment of the Zone 2C fees, the property owner funds its proportionate fair share towards regional improvements to help better manage the basin as a whole. This would be similar to paying toward Regional Development Impact Fees for roadway network improvements mitigating for cumulative traffic impacts.

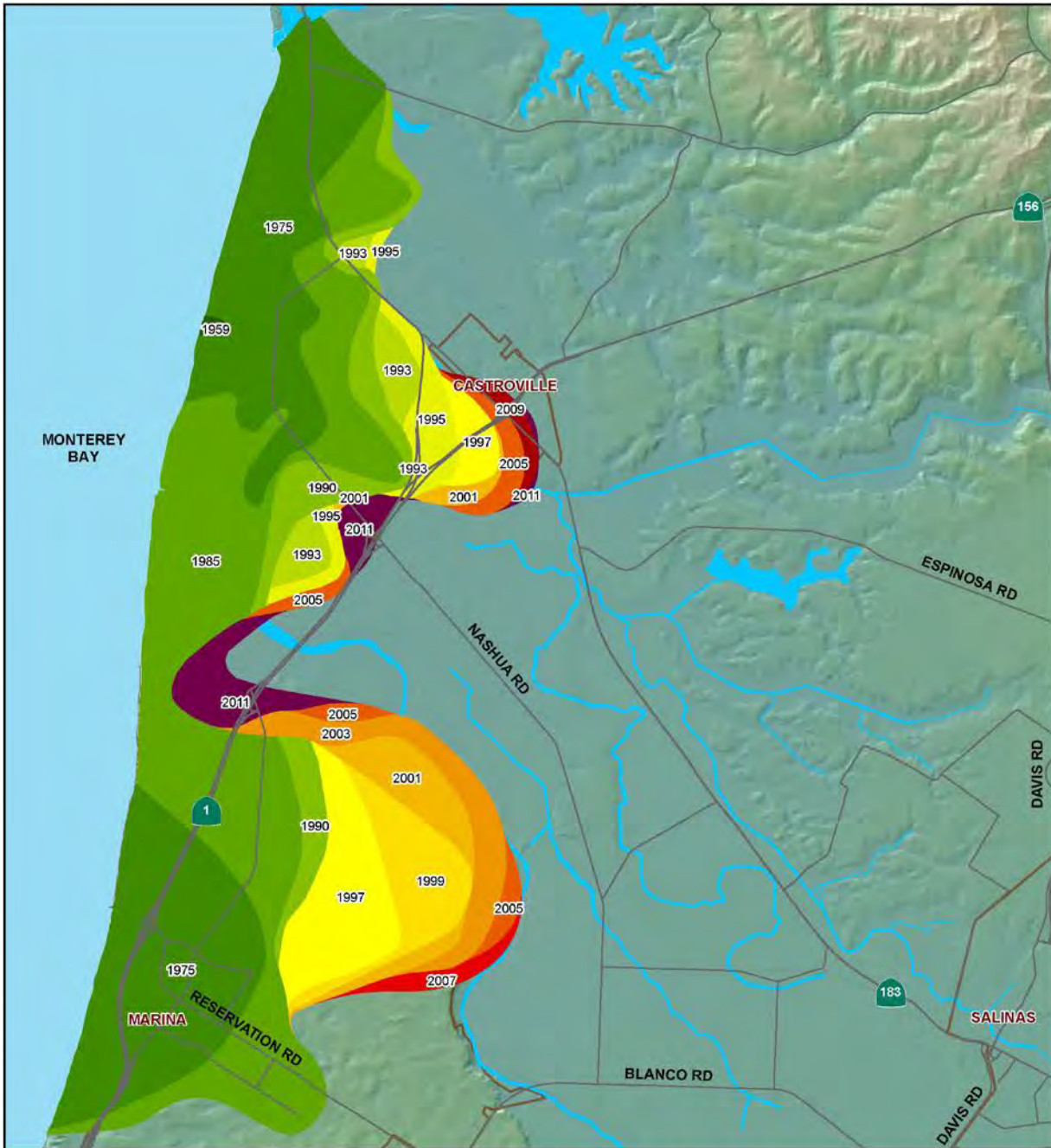
URBAN WATER MANAGEMENT PLAN

The proposed project would have potable water provided by California Water Service Company (CWSC). All urban water suppliers, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet annually are required to prepare an Urban Water Management Plan (UWMP). An UWMP is a foundation document and source of information for a Water Supply Assessment (WSA); a written verification of water supply; and serves as a long-range planning document for water supply, source data for development of a regional water plan, a source document for cities and counties as they prepare their General Plans, and a key component to Integrated Regional Water Management Plans. California Water Code §10644(a) requires CWSC to file a copy of its UWMP with the Department of Water Resources, the California State Library, and any city or county within which the supplier provides water supplies no later than 30 days after adoption.

The ability for CWSC to serve its service area is addressed in the UWMP for the Salinas District, which is updated at least every five years. The 2010 UWMP for the Salinas District was adopted in June 2011. The 2010 UWMP describes the service area, system supply and demand, water supply reliability and water shortage contingency planning, demand management measures and climate change.



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Historic Seawater Intrusion Map
Pressure 400-Foot Aquifer - 500 mg/L Chloride Areas

Legend

Seawater Intruded Areas By Year

1959	1995	2005
1975	1997	2007
1985	1999	2009
1990	2001	2011
1993	2003	

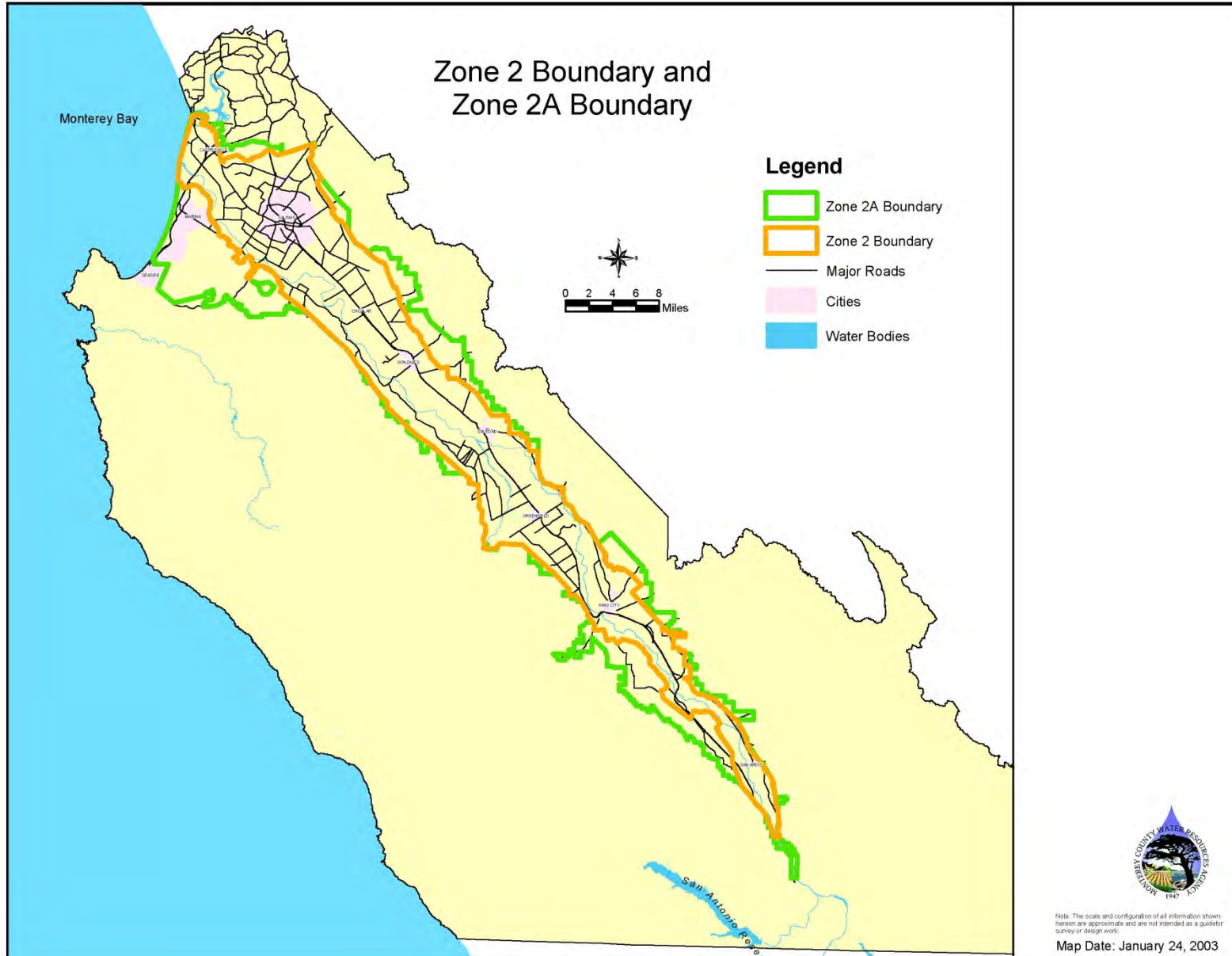
□ Cities

Note: The scale and configuration of all information shown hereon are approximate and are not intended as a guide for survey or design work. Contours lines are drawn from best available data.

Map Date: August 7, 2012



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INCREASED DEMAND ON THE WATER PURVEYOR

Although the eastern parcel is located within CWSC's service area, the proposed project would require the expansion of the CWSC service area to include the eastern parcel. The expansion of the service area is subject to PUC approval. The proposed project's potable water demand would be met by water procured from existing wells in CWSC's Salinas Hills system as noted on 3.10-21 of the DEIR. The total design capacity of the Salinas Hills System is 4,260 gallons per minute (GPM). Based on an estimated water demand of 95.17 AFY, the proposed project would increase the demand on the Salinas Hills System by approximately 58.8 GPM. According to CWSC, the Salinas Hills System currently has 2,216 service connections and the existing demand is approximately 1,464.72 AFY (or 907.41 GPM) (He 2007). The increased potable water demand would result in a total demand of 1,559.89 AFY (or 966.21 GPM). The Salinas Hills System has the design capacity to accommodate the service connections to serve the proposed project, provided the PUC approves annexation into the service area.

INCREASED DEMAND ON GROUNDWATER RESOURCES

Long-Term Water Supply (safe yield) (as defined in Monterey County Code Title 19, section 19.02.143) is the amount of water that can be extracted continuously from the basin or hydrologic sub-area without degrading water quality, or damaging the economical extraction of water, or producing unmitigatable adverse environmental impacts. The proposed project's long term impact on groundwater resources is addressed under Impact 3.6-2 starting on page 3.6-31 of the DEIR.

MCWRA requires a project to estimate pre- and post-project water demand. As shown in Table 3.6-3 on page 3.6-35 of the DEIR, the proposed project would result in an estimated gross water demand of 95.17 AFY, which is approximately 94.67 AFY greater than the pre-project water demand of 0.5 AFY. Although the project would increase CWSC's demand for groundwater resources, the demand is well within the forecast identified within CWSC's 2010 Urban Water Management Plan (UWMP). The 2010 UWMP estimates the target water demand (demand with conservation savings) based on SBx7-7 target gpcd values or 132 gpcd in year 2015 and 117 pgcd in year 2020 multiplied by the projected population. Based on this methodology, the estimated 668 person increase in population generated by the proposed project (as noted on page 3.9-23 of the DEIR), would result in a target water demand of 78,156 to 88,176 gpd (87.5 to 98.9 AFY), which is comparable to the gross water demand estimated in Table 3.6-3 of the DEIR.

The UWMP estimated the water demand through 2040 by applying a projected growth rate of 0.91, which projected an increase of 7,480 total services by 2040. Eighty-five percent of the total connections (or 6,392) would be residential connections. The proposed 212 residential units would each have one service connection, which would represent a total of 3.3 percent of the forecasted residential connections. The agricultural industrial use would have a maximum of three service connections (one fire service, one commercial service and one agricultural service) which would represent 0.8 percent of the forecasted non-residential connections. Combined, the residential and agricultural industrial uses would represent approximately 3 percent of CWSC's total forecasted service connections anticipated by 2040. The 2010 UWMP analyzed the ability to meet the forecasted water demand under normal year, single dry year and multiple dry year conditions. The UWMP concluded that Cal Water has more than sufficient capacity to provide water to the subject site.

WATER QUALITY – ARSENIC LEVELS

As noted on page 3.6-31 of the DEIR, arsenic, total dissolved solids (TDS), and nitrates are of particular concern for wells in the area. The concern with arsenic levels was heightened upon new maximum contaminant level (MCL) for arsenic that became enforceable in 2006, which lowered the MCL from 50 ppb to 10 ppb. This resulted in several area wells producing water now needing to meet new treatment standards, not due to increased arsenic levels. This is not a factor for the proposed project as it will obtain water from a regulated utility that is required to provide water that meets established limits for contaminants.

RUNOFF AND RECHARGE

The proposed project's long term impact on surface runoff is addressed under Impact 3.7-1 started on page 3.7-17 of the DEIR. As noted starting on page 3.7-17, a majority of the stormwater runoff generated on the project site during a storm event due to increased impervious surface area would be collected on-site via a stormwater drainage system installed within the right-of-way of proposed roadways, which will convey stormwater to detention basins located throughout the property and allowed to recharge the aquifers. The project is required to detain increases in surface runoff and design for the difference between a 10-year pre-development storm event and a 100-year post-development storm event. This would allow water to infiltrate back to the aquifers. Figure 3.7-3 of the DEIR shows the schematic drainage watersheds proposed on the project site. Runoff would remain within the El Toro Creek-Salinas River subarea of the Salinas watershed and recharge the Corral de Tierra subarea of the Salinas Valley Groundwater Basin; however, proposed drainage watershed A would also lie within the northeastern portion of the study area for the *El Toro Groundwater Study*.

The proposed project's impact on recharge is addressed under Impact 3.6-2 starting on page 3.6-36 of the DEIR. As noted on page 3.6-37 of the DEIR, all runoff would be detained onsite and allowed to infiltrate back to the aquifers. As noted on page 3.6-37 and according to Geosyntec, the inferred groundwater flow beneath the project site is to the northeast toward the Salinas Valley; therefore, the project has no effect on the existing B-8 zoning district within the Toro Area. It should also be noted that the project, or any alternative to the project, approved by the County, would be subject to recently adopted post-project drainage and water quality performance standards designed to retain stormwater on site.