Water Supply Assessment for Tuscany Meadows EIR

Final Report

Prepared for

City of Pittsburg

September 2013

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Consulting Engineers

704-00-12-10

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CHAPTER 1
Introduction

West Coast Home Builders proposes the Tuscany Meadows Subdivision Project (Project) on its 170-acre property south of Buchanan Road, southeast of, and to be annexed into, the City of Pittsburg (City).

The legal requirement for a water supply assessment (WSA) and the project background are discussed below.

1.1 LEGAL REQUIREMENT FOR A WATER SUPPLY ASSESSMENT

California Senate Bill 610 (SB 610) was approved by Governor Davis on October 9, 2001, and made effective on January 1, 2002. SB 610 amended California state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. Specifically, certain sections of the California Water Code were amended to require coordination between land use lead agencies, and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

The amended Water Code sections 10910 through 10915 (inclusive) require land use lead agencies to: (1) identify any public water purveyor that may supply water for a proposed development project; and (2) request from the identified purveyor a WSA. The purpose of a WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in a WSA.

The purpose of this WSA is to perform the evaluation required by Water Code sections 10910 through 10915 in connection with the City Project. It is not to reserve water, or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable City policies and procedures and consistent with existing law.

1.2 BACKGROUND

The Project site was historically used as an above-ground crude oil tank farm owned by Chevron USA, Inc. The tanks and associated piping were removed from the site in 1981. Currently, the proposed Project site is undeveloped vacant land undergoing soil remediation. Remediation would be completed and certified by the State prior to any development on the Project site.

On November 8, 2011, City voters approved Measure I, bringing the proposed Project site (also known as Chevron East) into the City of Pittsburg Urban Limit Line with General Plan designations and pre-zoning to allow development of low and high density residential uses, and a continuation of the existing industrial use (Chevron) at the northern part of the site.

On May 10, 2012, West Coast Home Builders submitted Subdivision Application No. 12-843 requesting approval of a vesting tentative map to subdivide the 169.7-acre site into 998 single family residential lots, one 14.6-acre high density residential lot, three park/detention basin lots, and two overland release/easement lots. On June 5, 2012, West Coast Home Builders submitted a deposit for the proposed annexation application.

A Vesting Tentative Map, dated November 12, 2012, was prepared and is included herein as Appendix A. The City is currently preparing the Tuscany Meadows Environmental Impact Report (Project EIR) based on the submitted Vesting Tentative Map.

The proposed project includes the following discretionary actions by the City:

- Certification of the EIR;
- Approval of an amendment to the City's Sphere of Influence;
- Approval of annexation to the City of Pittsburg;
- Approval of annexation to the Contra Costa Water District (CCWD) and the Delta Diablo Sanitation District (and inclusion in the Central Valley Project);
- Approval of the Vesting Tentative Map,
- Approval of a Development Agreement; and
- Design Review.

A Notice of Preparation of the Project EIR including a project description and initial study was prepared in November 2012. As a part of the processing of the applications and the preparation of the Project EIR, the Project Applicant commissioned the preparation of a WSA.

1.3 WATER SUPPLY ASSESSMENT PREPARATION, FORMAT AND ORGANIZATION

This WSA for the Project has been prepared by West Yost Associates (West Yost), as requested by Raney Planning and Management (Raney), the lead preparer of the EIR for the Project.

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. The WSA includes the following sections:

- Chapter 1: Introduction
- Chapter 2: Description of Project
- Chapter 3: Required Determinations
- Chapter 4: Description of City of Pittsburg Water Service Area
- Chapter 5: Description of City of Pittsburg Water Demands
- Chapter 6: Description of City of Pittsburg Water Supplies
- Chapter 7: Determination of Water Supply Sufficiency
- Chapter 8: Water Supply Assessment Approval Process

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

1.4 ACRONYMS AND ABBREVIATIONS USED IN THIS WATER SUPPLY ASSESSMENT

The following acronyms and abbreviations have been used throughout this WSA.

af	acre-feet
af/ac/yr	acre-feet per acre per year
AFY	acre-feet per year
bgs	below ground surface
CCWD	Contra Costa Water District
CEQA	California Environmental Quality Act
City	City of Pittsburg
DPH	California Department of Public Health
DWR	California Department of Water Resources
EIR	Environmental Impact Report
GMP	Groundwater Management Plan
gpm	gallons per minute
Mgd	million gallons per day
mg/L	milligrams per liter
MSL	mean sea level
NEPA	National Environmental Policy Act
Project	Tuscany Meadows Development Project
Raney	Raney Planning and Management
RWQCB	Regional Water Quality Control Board
SB 610	California State Senate Bill 610 of 2001
sf	square feet
SOI	Sphere of Influence
TBD	To be determined
TDS	Total Dissolved Solids
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
West Yost	West Yost Associates
WWTP	Wastewater Treatment Plant

CHAPTER 2
Description of Project

A description of the Project, including Project Location, Proposed Land Usages and Acreages, Projected Water Demand, and Projected Water Supply are described below.

2.1 PROJECT LOCATION

The proposed Project site is located in an unincorporated area of Contra Costa County, California and consists of two parcels located within the City of Pittsburg Urban Limit Line. The Project site is bounded on the north by Buchanan Road, to the east by the Contra Costa Canal and Somersville Road, to the south by the Black Diamond Estates residential development, and the west by the Highlands Ranch residential development. The surrounding areas to the northwest and west of the site are within the City limits. Surrounding areas to the northeast, east, and south of the site are within the City of Antioch limits. Thus, the Project site is currently an unincorporated island between the two cities. The existing land uses surrounding the Project consist primarily of residential; however, a closed landfill exists to the southeast across Somersville Road. The Project site is identified by Contra Costa County Assessor's Parcel Numbers (APNs) 089-150-013 and 089-150-015. It should be noted that APN 089-150-015 is an existing Chevron facility that is included in this Project description for annexation purposes only, and is not included as part of the proposed Project improvements.

The Project location is presented in Figure 2-1.

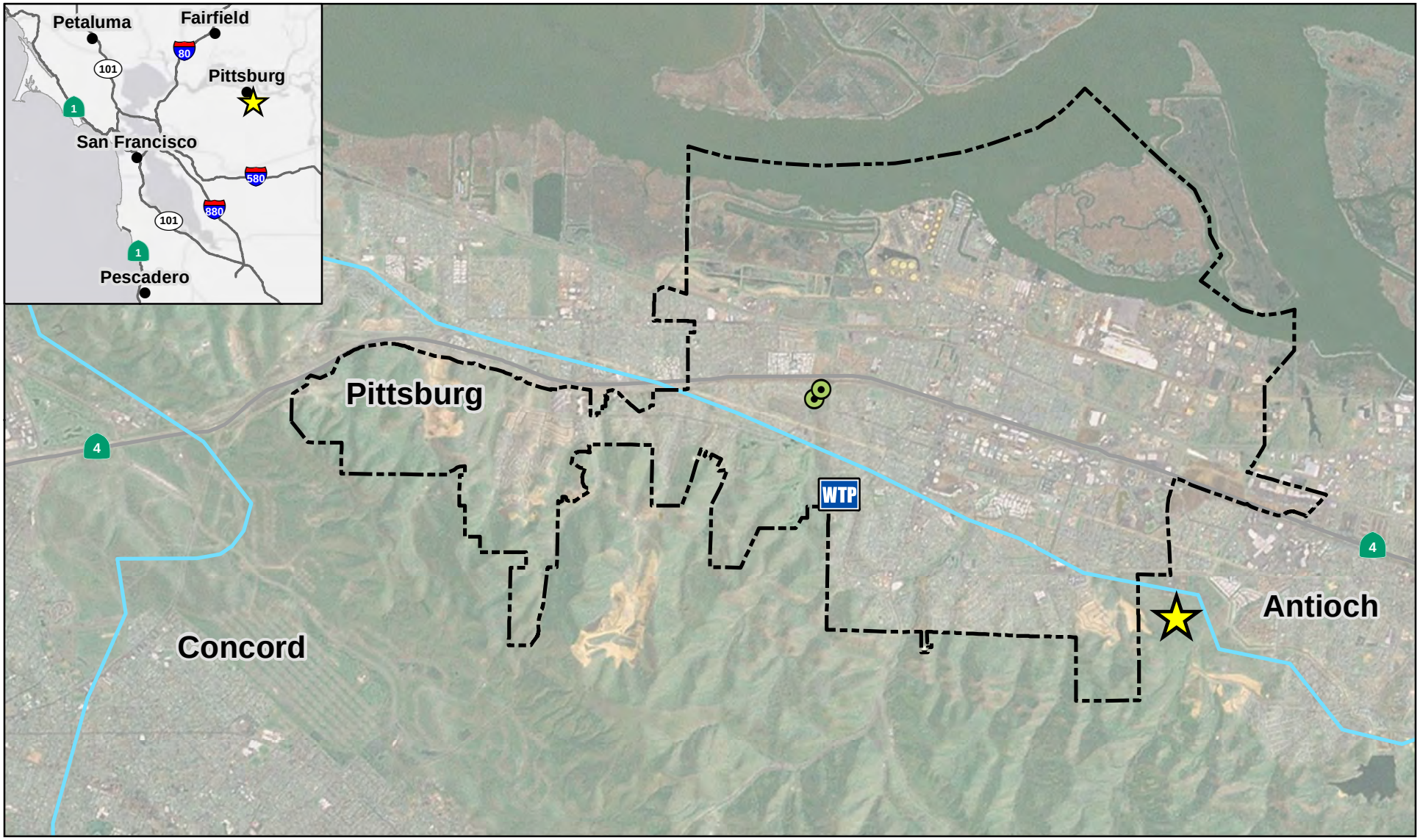
2.2 PROPOSED LAND USES AND ACREAGES

The proposed Project includes subdividing the approximately 170-acre property into 917 single-family units with a high density portion that could support development of up to 365 multi-family units, as well as parks and detention basins, as described below. The Vesting Tentative Map, dated November 12, 2012, is provided as Attachment A.

2.2.1 Residential

The proposed Project includes 917 low density single-family lots on approximately 135 acres. The single-family lots would average 4,442 square feet and range from 4,000 square feet to 10,787 square feet in size, which would result in a Project that would be similar in nature to the surrounding residential developments. The high density parcel (Parcel A on the Vesting Tentative Map) is located in the northeastern corner of the Project site where Buchanan Road crosses the Contra Costa Canal. With a maximum allowable density of 25 dwelling units/acre, the 14.6-acre high density parcel would result in up to 365 multi-family units.

According to the 2010 Census, the City averages 3.29 persons per household. At maximum build-out, the Project could provide housing for up to approximately 4,218 people (3.29 persons per household x 1,282 total dwelling units = 4,218 people).



LEGEND

- Project Location
- Well Locations (approximate)
- Contra Costa Canal
- WTP Water Treatment Plant
- Pittsburg City Limits

N

0 3,000 6,000

Scale in Feet

FIGURE 2-1

City of Pittsburg
Water Supply Assessment
for Tuscany Meadows

TUSCANY MEADOWS PROJECT LOCATION

WEST YOST ASSOCIATES
Consulting Engineers

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2.2.2 Parks/Detention Basins

The proposed Project includes approximately 13.2 acres of parks/detention basins divided among two on-site 6.6-acre locations (Parcel B and Parcel C) at the northern part of the site along Buchanan Road. A 5.0-acre park, identified in the Vesting Tentative Map as Parcel M, would be located at the center of the site, just east of Tuscany Meadows Drive (the major north-south roadway through the site) and south of the Chevron site. All of the parks are unprogrammed at this time, but the two northern parks would include areas for stormwater detention/treatment. A small 0.19-acre parcel at the intersection of Tuscany Meadows Drive and Buchana Road (Parcel D) would include landscaping and the entry sign for the subdivision. Combined parks/detention basins are generally not accepted by the City pursuant to Pittsburg Municipal Code section 17.32.020 (H)(2) which specifies that proposed park sites located within subdivisions and proposed for dedication as parkland must be available for year-round use. The City may offer partial credits for combined park/detention basins depending on the park programming, topography and other site specific attributes that make the park usable by the public on a year-round basis. .

Development of the Project is anticipated to occur in phases over the next several years, depending on market conditions.

It should be noted that this WSA evaluates the availability and reliability of the City's water supplies to serve buildout of the Project.

2.3 PROJECTED WATER DEMAND

The projected water demand for the Project and the City are discussed below.

2.3.1 Project Projected Water Demand

The projected water demand for the Project is based on the City's standard water demand factors, which were presented in the City's Water System Master Plan (AKEL Engineering Group, October 2010). These factors will assist the City in complying with the provisions of Senate Bill x7-7 (SBx 7-7), which establishes target per capita water demands to be met by the year 2020.

The projected water demand is shown in Table 2-1.

The City's 2010 Urban Water Management Plan (UWMP) indicated a 2020 city-wide per capita water demand target of 136 gallons per capita per day (gpcd). As indicated in Table 2-1, the total projected annual water demand for the proposed Project is 731.9 acre-feet per year (AFY), which would be just less than 155 gpcd at average city occupancy. This value includes 12 percent unaccounted for water. Because the Project intends to use low water use fixtures, drip irrigation, and other water efficient features, the actual water demand will likely be less than the City standard water demand factors.

Table 2-1. Projected Water Demand for Tuscany Meadows Subdivision

Land Use Type	Units	Quantity	Water Demand Factor[a]	Average Day Demand, gpd	Annual Water Demand, AFY[b]
Single- Family Residential	Dwelling Units	917	440 gpd/du[d]	403,480	452.3
Multi-Family Residential	Dwelling Units	365[c]	340 gpd/du[d]	124,100	139.1
Parks and Irrigated Landscape	Acres	18.8[g]	2,500 gpd/AC[e]	47,000	52.7
			Sub-Total Water Demand	**574,580**	**644.1**
			Unaccounted-for Water[f]	**78,352**	**87.8**
			Total Water Demand	**652,932**	**731.9**

(a) From Table 4.2 from the City of Pittsburg Water System Master Plan, October 2010.
(b) AFY = Acre-Feet per Year.
(c) Assumes maximum density of 25 dwelling units per acre.
(d) gpd/du = gallons per day per dwelling unit.
(e) gpd/AC = gallons per day per acre.
(f) Based on 12 percent of total water production (see 2010 UWMP Table 3-8).
(g) Two 6.6 acre parks/detention basins, one 5.0 acre park, and one 0.19 acre entry parcel.

2.3.2 City Projected Water Demand

The City's 2010 UWMP describes the projected City water demand through 2035, which is summarized below.

Although the City has shown steady population growth over the last 20 years, its future growth will be limited as the availability of open, developable land declines. In 1979, the City had 29,100 residents; by 1986 the population had increased to 41,600, and the City's 2010 population was 64,967.

The City's General Plan projects an average annual population growth rate of 1.7 percent. That annual growth rate and the population in 2010 were used to estimate City service area population through 2035, as shown in Table 2-2.

Table 2-2. City of Pittsburg Current and Projected Population[a]

	2010	2015	2020	2025	2030	2035
Service area population[b]	64,967	70,680	76,896	83,658	91,015	99,019

[a] From City of Pittsburg 2010 UWMP Table 2-2.
[b] Department of Finance for 2010 population. 2015-2030 populations estimated assume 1.7 percent annual growth rate consistent with City of Pittsburg General Plan.

The City's water use for 2010 was 7,784 AFY, which was a 13 percent reduction from the 2005 water use of 8,969 AFY. As part of the 2005 UWMP, the City projected that the water use in 2010 would be 13,669 AFY. The actual 2010 demand was more than 40 percent less than the projected 2010 demand. The recent economic downturn was the biggest factor in the decrease in water demand. As the economy improves, the water demand is expected to increase. The City's future demand projections assume a near-term increase of 5 to 6 percent over the next three years (2011-2013), then a long-term increase of 1.5 percent annually. This is slightly less than the projected annual population increase of 1.7 percent because new growth is expected to be more water efficient.

Total projected water use between 2005 and 2035 is summarized in Table 2-3.

Table 2-3. City of Pittsburg Current and Projected Total Water Use[a]

Water Use	2005	2010	2015	2020	2025	2030	2035
Total water deliveries[b](AFY)	8,969	7,784	9,461	10,192	10,980	11,828	12,743
Sales to Other Water Agencies	0	0	0	0	0	0	0
Recycled Water – Within the City[c]	125	459	465	465	479	479	498
Unaccounted-for Water[d]	2,033	1,092	1,327	1,430	1,540	1,659	1,788
Total (AFY)[e]	**11,061**	**9,335**	**11,213**	**12,043**	**12,952**	**13,916**	**14,974**

[a] From City of Pittsburg 2010 UWMP Table 3-9.
[b] Total water deliveries for 2005 and 2010 are based on City and Delta Diablo Sanitation District metered customer data. Estimated total water use for 2015-2035 assumes water use increases more rapidly in 2011-2013 (6%, 6%, 5%) as economy recovers in near-term, and then slightly less than population growth in long-term (1.5%) as future growth is expected to be more water efficient.
[c] Additional water uses includes recycled water use within City limits (see 2010 UWMP Table 3-8).
[d] Projected future system losses are estimated to be approximately 12% of overall water production, based on losses in 2010, see 2010 UWMP Table 3-8.
[e] Values in this table came from the City of Pittsburg UWMP Tables 3-8 and 3-9. Except for 2010, the values in the columns do not sum properly, suggesting either a computational error, or water use not documented in those tables.

Although the Project is not specifically called out in the City's 2010 UWMP, the growth projections (an additional 34,000 people from 2010 to 2035) and water demand projections (an additional 3,900 AFY from 2010 to 2035) easily accommodate the Project's potential population of 4,218 people and water demand of 731.9 AFY.

Additionally, the City of Antioch's 2010 UWMP does specifically account for development of the Project parcel. The City of Antioch General Plan land use map indicates a business park and residential land use types on the parcel. Therefore, development of the parcel with a variety of land uses has been accounted for in the local area water supply planning.

2.4 PROJECTED WATER SUPPLY

It is anticipated that the Project would be served from the City's existing and future portfolio of water supplies as described in *Section 6.0 City of Pittsburg Water Supplies*.

CHAPTER 3
Required Determinations

This Chapter describes some of the required determinations for a Water Supply Assessment.

3.1 DOES SB 610 APPLY TO THE PROJECT?

10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912 (a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Based on the following facts, SB 610 does apply to the Project.

- The City has determined that the Project is subject to the CEQA and that an EIR is required.
- The Project, with 917 low density residential dwelling units and up to 365 high density residential dwelling units, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (1) as defined for proposed residential developments.

Therefore, according to Water Code section 10910(a), a WSA is required for the Project.

3.2 WHO IS THE IDENTIFIED PUBLIC WATER SYSTEM?

10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project

10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections…

As shown on Figure 2-1, the Project is currently located outside the existing City limits, but will be annexed into the City limits as part of this Project.

The City's water system service area includes all areas within the City limits. The City is the identified public water system for the Project.

3.3 DOES THE CITY HAVE AN ADOPTED URBAN WATER MANAGEMENT PLAN (UWMP) AND DOES THE UWMP INCLUDE THE PROJECTED WATER DEMAND FOR THE PROJECT?

10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

The City's most recently adopted UWMP (the City's 2010 UWMP) was adopted by the City Council in August 15, 2011[1]. The City's 2010 UWMP included existing and projected water demands for existing and projected future land uses to be developed within the City's General Plan SOI through 2035. The water demand projections in the City's 2010 UWMP included existing City water demands, future water demands for developments within the existing City limit, and future water demands for future service areas outside the existing City limit.

The City's 2010 UWMP potable water demand projections do not specifically state that potable water demands for the Project were included in water demand projections. The water demand projections were based on achieving and maintaining the Senate Bill x7-7 per capita water demand of 136 gallons per capita per day (gpcd) multiplied by the projected population. The population was projected to grow by approximately 1.7 percent per year between 2010 and 2035, without regard for the location of the added population.

Total water use throughout the City service area is projected in the 2010 UWMP to increase from 9,335 AFY in 2010 to 14,974 AFY in 2035, an increase of 5,639 AFY. The Project's projected water demand of 731.9 AFY is approximately 13 percent of the City's projected growth in water demand through 2035. Both water demand projections include unaccounted-for water losses.

The City's 2010 UWMP also indicated that the total water supply would grow as needed to serve growth through the year 2035. Therefore, it not only appears that the Project water demands are included in the City's 2010 UWMP demand projection, but that sufficient water supply exists, or will exist, to serve the project.

[1] *City of Pittsburg 2010 Urban Water Management Plan*, prepared by RMC Water and Environment, Inc., August 2011.

CHAPTER 4
City of Pittsburg Water Service Area

4.1 WATER SERVICE AREA

As indicated in the City's 2010 UWMP, the City was established along the Suisun Bay/Delta shoreline as a 10,000-acre land grant from the government of Mexico in 1839 and grew into a settlement. Originally named New York of the Pacific, the name was changed to New York Landing during the Gold Rush, and then to Pittsburg in 1911.

The City is located in the eastern portion of Contra Costa County, about 40 miles northeast of San Francisco. Originally a coal shipping port, the City was founded in 1849, and incorporated in 1903 as a general law city. In the 1940s and early 1950s, the City was a major commercial and industrial center for the County and the eastern ports of the greater San Francisco Bay Area. Pittsburg experienced rapid population growth during the 1970s and 1980s, evolving into a bedroom community for employment centers in west and central Contra Costa County. Today the City is part of the second largest industrial center in the County and has a population of approximately 65,000.

The Pittsburg Water Service Area comprises all of the area within the City limits, around 10,000 gross acres (15.6 square miles). The service area is a subset of the larger Pittsburg Planning Area, which comprises a total of 26,960 gross acres (42.1 square miles). Of this area, approximately 37 percent lies within the City's Service Area. The area outside the City of Pittsburg's Service Area is served by Golden State Water Company. The community of Bay Point lies in the Sphere of Influence and encompasses 2,300 gross acres. Bay Point, west of Pittsburg, and other unincorporated northwest areas constitute approximately 10,900 acres (33 percent of the Planning Area). Wetlands and Suisun Bay/Sacramento River environs account for 6,760 additional acres.

4.2 POPULATION

According to the City's 2010 UWMP, although the City has shown steady population growth over the last 20 years, its future growth will be limited as the availability of open, developable land declines. In 1979, the City had 29,100 residents; by 1986 the population had increased to 41,600 and the City's 2010 population was 64,967.

The City's General Plan projects an average annual population growth rate of 1.7 percent. That annual growth rate and the population in 2010 were used to estimate City service area population through 2035. Current and projected future population in five-year increments to the year 2035 were shown in Table 2-2.

4.3 CLIMATE

As documented in the City's 2010 UWMP, Pittsburg has a dry Mediterranean climate with hot summers and mild winters. Average summer temperatures range from highs in the upper 90s to lows in the 50s (degrees Fahrenheit). Winter temperatures range from the 60s to the low 30s. Average precipitation is 13 inches a year, occurring predominantly from November through April. The hot, dry season of May through October creates a high demand for landscape water, as seen in Table 4-1.

Table 4-1. Service Area – Climate[a]

Month	Average Rainfall, inches	Average Temperature, oF	Standard Monthly Average Evapotranspiration, ETo
January	2.78	45.4	0.95
February	2.43	50.6	1.75
March	2.00	54.4	3.48
April	0.90	58.9	5.37
May	0.36	65.0	6.88
June	0.09	71.1	7.79
July	0.02	74.4	8.29
August	0.04	73.4	7.24
September	0.18	70.8	5.33
October	0.65	63.8	3.63
November	1.58	53.7	1.76
December	2.20	46.0	1.01
Annual Average	**13.23**	**60.7**	**53.48**

[a] From City of Pittsburg 2010 UWMP Table 3-9. Sources of climate date include: the Antioch Pumping Plant #3 weather station (#040232) from 1955-2010, and average evapotranspiration (ETo) data for 1985-2010, for the Brentwood, California station (#47) of the California Irrigation Management Information System.

CHAPTER 5
City of Pittsburg Water Demands

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

As described previously, the water demands for the Project are included in the City's 2010 UWMP. Therefore, the descriptions provided below for the City's water demands have been taken, for the most part, from the City's 2010 UWMP, which was adopted by City Council in August 2011.

5.1 CURRENT AND HISTORICAL WATER DEMAND

The City's water demand increased and then decreased over the past 15 years as population has increased and water conservation practices have been implemented. In 1996, the City's water demand was 10,189 AFY (2010 UWMP Table 3-2, population of 51,544 multiplied by per capita water demand of 176 gpcd and converted to acre-feet) and, in 2010, the City's water demand was 9,335 AFY (2010 UWMP Table 3-9). Table 5-1 shows the City's water demand (based on water production) for 2005 through 2010.

Table 5-1. Historical Potable Water Demand, AFY[(a)]

	2005	2006	2007	2008	2009	2010
Total UWMP Water Demand	11,061[(b)]	10,937[(c)]	11,585[(c)]	11,603[(d)]	—[(e)]	9,335[(b)]

(a) From City of Pittsburg 2010 UWMP. Table 3-1, Table 3-2, Table 3-3, and Table 3-9.
(b) From Table 3-9.
(c) From Table 3-3, AFY obtained by multiplying population by per capita water demand and converting to acre-feet.
(d) From Table 3-2, AFY obtained by converting million gallons per year to acre-feet.
(e) No data were provided in the 2010 UWMP for 2009 water deliveries.

As shown in Table 5-1, the City's 2010 potable water demands (based on water production) were about 2,250 AFY lower than 2007 demands. This reduction in potable water demand is partially due to additional water conservation measures which were implemented during the recent drought, relatively wet conditions in 2010, and a declining economy. This trend has generally been experienced by water utilities throughout California for these years.

5.2 FUTURE WATER DEMAND

The City's future water demand is anticipated to continue to increase as approved projects build out and new developments are approved and constructed within the City's water service area. However, the rate of growth within the City service area has slowed as a result of the current economic downturn. Hence, water demands are not anticipated to increase as rapidly as they have in past years. The 2010 UWMP documented water demand projections as based on the Senate Bill x7-7 per capita water demand Regional Target of 136 gallons per capita per day by 2020. Using that per capita water demand, and assuming the population would grow by 1.7 percent per year between 2010 and 2035, the City developed its water demand projection. Based on the 2010 UWMP, the City is planning for a potential population increase of 34,000 persons (equivalent to over 10,000 dwelling units based on the current occupancy of

3.29 persons per dwelling unit) from 2010 to 2035. The Project's 1,282 dwelling units and potential population of 4,218 persons is well within the planned-for population growth.

The projected water demand through 2035, calculated as described above and presented in the City's 2010 UWMP, is shown in Table 5-2. The projected water demand includes the existing and projected future water demand by existing users and future development projects (including the Project).

Table 5-2. City of Pittsburg Current and Projected Total Water Use[a]

Water Use	2005	2010	2015	2020	2025	2030	2035
Total water deliveries[b](AFY)	8,969	7,784	9,461	10,192	10,980	11,828	12,743
Sales to Other Water Agencies	0	0	0	0	0	0	0
Recycled Water – Within the City[c]	125	459	465	465	479	479	498
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[c] Additional water uses includes recycled water use within City limits (see 2010 UWMP Table 3-8).
[d] Projected future system losses are estimated to be approximately 12% of overall water production, based on losses in 2010, see 2010 UWMP Table 3-8.
[e] Values in this table came from the City of Pittsburg UWMP Tables 3-8 and 3-9. Except for 2010, the values in the columns in Table 3-8 do not sum properly.

Based on a projected 2035 population of 99,019 (Table 2-2) and the projected total City water demand of 14,531 AFY (Table 5-2, not including recycled water demand), the City is projecting an average per capita water demand of 131 gpcd by 2035.

5.3 DRY YEAR WATER DEMAND

The City currently has an extensive water conservation program in place, as described in Chapter 6 of the City's 2010 UWMP. The projected future water demand presented in Table 5-2 includes continued implementation of the City's existing water conservation program, and is based on future normal hydrologic conditions. In single dry or multiple dry years, the projected future water demand presented in Table 5-2 is also applicable (does not include any additional water conservation beyond that assumed in normal years). Table 5-3 presents the projected future dry year water demand.

Table 5-3. Projected Future Dry Year Water Demand, AFY[a]

Hydrologic Condition	Demand Reduction	2015	2020	2025	2030	2035
Normal Year	0%	11,213	12,043	12,952	13,916	14,974
Single Dry Year	0%	11,213	12,043	12,952	13,916	14,974
Multiple Dry Years[b]	0%	11,213	12,043	12,952	13,916	14,974

[a] See Section 5 System Reliability of the City's 2010 UWMP.
[b] Represents demands for each year of a 3-year multiple dry year period.

CHAPTER 6
City of Pittsburg Water Supplies

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts

10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments..

The Project, if approved by the City, is capable of being served by the City from the City's existing and future portfolio of water supplies. The water supply for the Project will have the same water supply reliability and water quality as the water supply available to each of the City's other existing and future water customers.

The water demands for the Project (together with existing water demands and planned future uses) are included in the City's 2010 UWMP. Therefore, the descriptions provided below for the City's water supplies have been taken, for the most part, from the City's 2010 UWMP, which was adopted in August 2011.

Chapter 6
City of Pittsburg Water Supplies

6.1 EXISTING POTABLE WATER SUPPLIES

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

10910(f)(1) *A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*

10910(f)(2) *A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.*

10910(f)(3) *A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.*

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) *An analysis of the 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 project.*

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

The City's 2010 UWMP describes the available water supplies. The City's water supplies include local groundwater, recycled water, and purchased surface water from CCWD. Groundwater is pumped from two wells in the central part of the City. Surface water and groundwater are conveyed to the City's water treatment plant, treated, and then conveyed via the City's potable distribution system. The City's current and projected water supplies are shown in Table 6-1, which is based on Table 4-1 of the City's 2010 UWMP.

Table 6-1. City of Pittsburg Normal Year Water Supplies – Current and Projected[a]

Water Supply Sources	2010, AFY[b]	2015, AFY	2020, AFY	2025, AFY	2030, AFY	2035, AFY
CCWD Surface Water[c]	7,815	9,248	10,078	10,973	11,937	12,976
Supplier-produced Groundwater	1,061	1,500	1,500	1,500	1,500	1,500
Supplier-produced Surface Water	0	0	0	0	0	0
Transfers In	0	0	0	0	0	0
Exchanges In	0	0	0	0	0	0
Recycled Water	459	465	465	479	479	498
Desalinated Water	0	0	0	0	0	0
Other	0	0	0	0	0	0
Total	**9,335**	**11,213**	**12,043**	**12,952**	**13,916**	**14,974**

[a] Table 4-1 from City of Pittsburg 2010 Urban Water Management Plan.
[b] AFY = Acre-Feet per Year
[c] CCWD = Contra Costa Water District

6.2 SURFACE WATER

From the City's 2010 UWMP: The City is within the CCWD service area and purchases Central Valley Project (CVP) water pumped from the Sacramento-San Joaquin Delta by CCWD, its wholesale supplier. CCWD has a contract with the USBR for 195,000 AFY of CVP water. In March 2005, CCWD renewed their water service contract with the USBR for a period of 40 years through February 2045.

The City obtains 85 percent to 95 percent of its water supply from CCWD pursuant to a contractual arrangement allowing the City to obtain such quantity of water as is necessary to meet its needs, subject to rationing restrictions in the event of drought or other extraordinary circumstances. CCWD's future supply projections indicate adequate availability of surface water sources delivered through its contract with the USBR along with other available sources and short-term purchases under normal conditions.

6.3 GROUNDWATER

The local groundwater basin and City groundwater use are described in the City's 2010 UWMP and summarized below.

6.3.1 Groundwater Basin

The City overlies the Pittsburg Plain Groundwater Basin (Groundwater Basin Number 2-4 as presented in DWR's Bulletin 118). This groundwater basin is not adjudicated and currently is not under a groundwater management plan, although one is under development. The basin is bounded by Suisun Bay on the north, by the Tracy Sub-basin of the San Joaquin Valley Groundwater Basin on the east, and by the Clayton Valley Groundwater Basin on the west. The

southern boundary of the basin extends inland from Suisun Bay by approximately one to three miles. The basin lies within the two major surface drainage basins of Kirker Creek and Willow Creek, both of which discharge into Suisun Bay.

The water-bearing units in the basin are Pleistocene to recent age alluvium deposits. The Pleistocene deposits consist of consolidated and unconsolidated sediments characterized by expansive clays. The modern alluvial sediments are characterized by soft, water saturated muds, peat and loose sands. The maximum thickness of these deposits is 400 feet. The aquifers in the basin area are hydrologically connected to the Sacramento River. There are limited data regarding the occurrence and movement of groundwater in the basin (DWR Bulletin 118).

Hydrographs created from DWR well data in the Pittsburg Plain Groundwater Basin indicate that groundwater levels have remained fairly stable over the period of record, with the exception of static water level drops and subsequent recovery associated with the 1976-1977, and 1987–1992 drought periods. DWR has not identified that overdraft conditions will occur if present groundwater conditions continue.

The East County Water Management Association is developing a Pittsburg Plain Groundwater Management Program (GWMP) as part of its Integrated Regional Water Management Plan update. Funding for this project will come from a Proposition 84 Planning Grant. The GWMP will establish a groundwater monitoring network and coordinate data collection, providing a framework for basin management to protect the groundwater resources.

6.3.2 Groundwater Use

The City has two municipal wells, Rossmoor and Bodega, which together are currently producing about 1,500 acre-feet of groundwater per year. In 2010, the City completed the Bodega Well Pump Station Project. The Bodega well was installed to replace the Ballpark well, which experienced frequent shut downs and performed inconsistently.

These relatively shallow wells (approximately 200 feet deep) deliver approximately 600 (Rossmoor) and 1,200 (Bodega) gallons per minute respectively. The total amount of groundwater pumped from the Pittsburg Plain Groundwater Basin in 2010 was 1,061 AFY. Groundwater use was less in 2009 and 2010 because of the removal of one well (Ballpark) from service in October 2008. The replacement well (Bodega) was placed into service in January 2010.

The projected groundwater use by the City from 2015 to 2035 is anticipated to remain approximately 1,500 AFY.

6.3.3 Future Water Supply Projects

As described in the City's 2010 UWMP, future water supply projects for the City are developed by CCWD, which provides the majority of water to the City. To evaluate alternative ways of meeting future demand in the context of an overall water supply plan, CCWD completed a Future Water Supply Study (FWSS), updated most recently in 2002. In the FWSS, future supply projects were identified that included:

- A renewal of CCWD's water service contract for CVP water (which was completed in 2005);
- Implementation of an expanded conservation program; and
- Water transfers to cover supply deficits.

Table 1, in Appendix E of the City's 2010 UWMP, presents CCWD's existing sources of supply and their expected availability under various supply conditions over the next 25 years.

CCWD's primary water supply project is expansion of the Los Vaqueros Reservoir. The project broke ground in 2011 and is expected to be completed in 2012. The project will expand the existing Los Vaqueros Reservoir capacity from 100,000 acre-feet to 160,000 acre-feet, providing 60,000 acre-feet of additional storage, water quality benefits, and an estimated 10,000 AFY of additional yield.

Table 6-2. Future Water Supply Projects[a]

Project Name	Projected Start Date	Projected Completion Date	Potential Project Constraints	Normal-Year Supply, AFY	Single- Dry Year Supply, AFY	Multiple- Dry Year First Year Supply, AFY	Multiple- Dry Year Second Year Supply, AFY	Multiple- Dry Year Third Year Supply, AFY
CCWD Expansion of Los Vaqueros Reservoir	2011	2012	Construction underway	10,000[b]	10,000[b]	10,000[b]	10,000[b]	10,000[b]

[a] Data from City of Pittsburg 2010 UWMP Table 4-10
[b] Based on water supply projections provided by CCWD. This reflects additional supply benefit for CCWD's overall service area, not specifically for the City of Pittsburg.

6.3.4 Supplemental Sources

Recycled water is delivered to the City from Delta Diablo Sanitation District. Recycled water use is not proposed for this Project.

As described in the City's 2010 UWMP, a seemingly apparent source of water for the City would be diversion directly from the Delta via a pump station and pipeline to the Pittsburg Water Treatment Plant. As documented in the City's 2010 UWMP, this option is not considered feasible by the City for several reasons:

- The City has not established water rights to the San Joaquin/Sacramento Rivers. Permits to withdraw water would be required from the State Water Resources Control Board as well as other state and federal agencies. Not only would the approval process be lengthy, but also there is no guarantee that the permit would be approved.
- Water taken from the Delta adjacent to the City is highly saline for at least part of the year, and could require extensive treatment (reverse osmosis). The City of Antioch, upstream of the City of Pittsburg, uses water from the Sacramento River only from December to July or August because of water salinity issues.

- The cost of the pump station and its associated force main was estimated to be $1.6 million in 1985. In 2000, the cost would be approximately $2.7 million (based on estimates cited in the City's 1995 Plan).

Other possible supplemental sources include a tie-in to another major supplier, such as the East Bay Municipal Utility District (EBMUD), or to other local water districts. EBMUD's major transmission line passes through the City. CCWD has recently completed an emergency intertie with EBMUD. Under the existing water regulations, EBMUD is precluded from providing water directly to the City.

Neighboring communities that provide water service, such as the City of Antioch (Antioch), are as dependent upon CCWD as is the City. The fact that Antioch can directly draw water from the Delta allows them to augment their CCWD source, but under a reduced supply scenario it would be unlikely that Antioch would be able to provide supplemental water to the City.

6.3.5 Potential Future Desalination

As described in the City's 2010 UWMP, desalination involves removing salts and impurities from non-potable water (*e.g.* seawater, brackish surface water or brackish groundwater) using treatment technologies such as reverse osmosis membranes or distillation methods. After treatment, the water is suitable for drinking water purposes.

Potential opportunities for desalination supply in east Contra Costa County are being explored on a regional level through the East County Water Management Association, of which the City is an active participant. To date, the cost of implementing desalination supply, including brine disposal, has not been cost-effective compared with other available sources. As advancements in technology make desalination a more cost-effective option in coming years, the East County water agencies, including the City, will consider desalination projects as potential supply sources.

6.3.6 Summary of Existing and Additional Water Supplies

As described above, CCWD, local groundwater, and recycled water will remain the City's major water supply components. A discussion of the future anticipated availability of these existing and additional water supplies during dry years is provided in the next section.

6.4 DRY YEAR WATER SUPPLY AVAILABILITY AND RELIABILITY

Water Code section 10910 (c)(4) requires that a WSA include a discussion with regard to *"whether total projected water supplies, determined to be available by the city or county 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 existing and planned future uses, including agricultural and manufacturing uses."* Accordingly, this WSA addresses these three hydrologic conditions through the year 2035.

A description of the City's surface water and groundwater supply reliability is presented in Chapter 5 of the City's UWMP and is summarized below.

6.4.1 Surface Water Reliability

In conformance with California Water Code Division 5, Part 2.6, Section 10635, CCWD prepared an assessment of its water supply reliability. This analysis was provided to all wholesale municipal customers of CCWD for use in the preparation of their Urban Water Management Plans and Water Supply Assessments.

The water supply reliability goal adopted by CCWD's Board of Directors is to meet at least 85 percent of demand during drought conditions and 100 percent of demand in normal years. The remaining 15 percent would be met by a combination of short-term water purchases and a voluntary short-term conservation program.

The projected water supplies from CCWD are not anticipated to incur supply deficits in normal years due to CCWD's long-term conservation program, existing CVP contract supply, and long-term water transfer agreement with East Contra Costa Irrigation District. CCWD's currently available and planned supplies are sufficient to meet their reliability goals and estimated water demands during normal, single dry and the first two years of a multi-year drought. In later years, several types of drought conditions may result in supply shortfalls. Supply reliability tables provided by CCWD are included in Appendix E of the City's 2010 UWMP. The maximum amount of short-term conservation expected to be required by CCWD is 15 percent of supply.

6.4.2 Groundwater Reliability

The Bodega well came online in 2010 to replace the Ballpark well, which was frequently shut down for repairs and poor water quality. The City's groundwater supply has proven to be very consistent through variable climatic conditions. There has been no change in the groundwater level reported by DWR in this area as a result of the City's use of the groundwater table. The City has implemented groundwater monitoring to enable evaluation of groundwater level trends over time to ensure that overdraft conditions (potentially resulting in seawater intrusion) do not occur.

CHAPTER 7
Determination of Water Supply Sufficiency

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county 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 existing and planned future uses, including agricultural and manufacturing uses.

10911 (a) If, as a result of its assessment, the public water system concludes that its water supplies are, or well be, insufficient, the public water system shall provide to the city or county its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. If the city or county, if either is required to comply with this part pursuant to subdivision (b), concludes as a result of its assessment, that water supplies are, or will be, insufficient, the city or county shall include in its water supply assessment its plans for acquiring additional water supplies, setting forth the measures that are being undertaken to acquire and develop those water supplies. Those plans may include, but are not limited to, information concerning all of the following:

(1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.

(2) All federal, state, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.

(3) Based on the consideration set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), expects to able to acquire additional water supplies.

7.1 FINDINGS

Based on the analysis described above, this WSA demonstrates that the City's existing and additional potable water supplies are sufficient to meet the City's existing and projected future potable water demands, including those future water demands associated with the Project, to the year 2035 under all hydrologic conditions as described below.

As described in the City's 2010 UWMP, the City continues to examine supply enhancement options, including additional water recycling, conjunctive use, water transfers, and additional imported water supplies through its participation in the East County Water Management Association and collaboration with CCWD.

A comparison of the City's projected water supplies and demands is shown in Table 7-1 for Normal, Single Dry, and Multiple Dry Years. Table 7-1 is based on Table 5-1 from the City's 2010 UWMP. The surface water supply and demand projections are based on CCWD's projected drought supply conditions as described in Table 1 of Appendix E to the City's 2010 UWMP. The supply deficit in Table 7-1 indicates that, in average precipitation years, the City will have sufficient water to meet its customers' needs through 2035.

As shown in Table 7-1 and as discussed above, although the Project is not specifically called out in the City's 2010 UWMP, the City's growth projections (an additional 34,000 people from 2010 to 2035) and water demand projections (an additional 3,900 AFY from 2010 to 2035) easily accommodate the Projects potential population of 4,218 people and water demand of 731.9 AFY, including an unaccounted-for water factor of 12 percent.

Table 7-1. City of Pittsburg Water Supply and Demand Comparison[a]

Supply and Demand Comparison – Normal Year						
		2015	2020	2025	2030	2035
Supply Totals (from Table 4); AFY		11,213	12,043	12,952	13,916	14,974
Demand Totals (from Table 3) AFY		11,213	12,043	12,952	13,916	14,974
Difference, AFY		0	0	0	0	0
Difference as % of Supply		0.0%	0.0%	0.0%	0.0%	0.0%
Difference as % of Demand		0.0%	0.0%	0.0%	0.0%	0.0%
Supply and Demand Comparison – Single Dry Year(b)						
		2015	2020	2025	2030	2035
Supply Totals[b], AFY		11,213	12,043	12,842	13,439	14,325
Demand Totals, AFY		11,213	12,043	12,952	13,916	14,974
Difference, AFY		0	0	(110)	(477)	(649)
Difference as % of Supply		0.0%	0.0%	-0.9%	-3.6%	-4.5%
Difference as % of Demand		0.0%	0.0%	-0.8%	-3.4%	-4.3%
Supply and Demand Comparison – Multiple Dry-Year Events(c)						
		2015	2020	2025	2030	2035
Multiple-Dry Year First Year Supply	Supply Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	0	0	0	0	0
	Difference as % of Supply	0.0%	0.0%	0.0%	0.0%	0.0%
	Difference as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%
Multiple-Dry Year Second Year Supply	Supply Totals, AFY	11,213	12,043	12,842	13,439	14,325
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	0	0	(110)	(477)	(649)
	Difference as % of Supply	0.0%	0.0%	-0.9%	-3.6%	-4.5%
	Difference as % of Demand	0.0%	0.0%	-0.8%	-3.4%	-4.3%
Multiple-Dry Year Third Year Supply	Supply Totals, AFY	10,473	11,237	11,635	12,126	13,027
	Demand Totals, AFY	11,213	12,043	12,952	13,916	14,974
	Difference, AFY	(740)	(806)	(1,317)	(1,791)	(1,946)
	Difference as % of Supply	-7.1%	-7.2%	-11.3%	-14.8%	-14.9%
	Difference as % of Demand	-6.6%	-6.7%	-10.2%	-12.9%	-13.0%

(a) From City's 2010 UWMP Table 5-1.
(b) CCWD anticipates the following supply shortfalls in a single-year drought: 2015,(0%), 2020 (0%), 2025 (1%), 2030 (4%), 2035 (5%).
(c) CCWD anticipates the following supply shortfalls in a three-year drought scenario: 2015 (0%, 0%, 8%), 2020 (0%, 0%,8%), 2025 (0%,1%,12%), 2030 (0%,4%,15%), 2035 (0%,5%,15%).

CHAPTER 8
Water Supply Assessment Approval Process

10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

10911 (b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

The Pittsburg City Council must approve this WSA at a regular or special meeting. Furthermore, the City must include this WSA in the Draft EIR being prepared for the Project.

The Project, with its up to 1,282 proposed residential dwelling units, is also subject to the requirements of SB 221 (Government Code section 66473.7). SB 221 applies to residential development projects of more than 500 dwelling units and requires that the water supplier (the City) provide a written verification that the water supply for the project is sufficient. Such a written verification must be provided before a final subdivision map for the Project may be approved.

ATTACHMENT A

Vesting Tentative Map

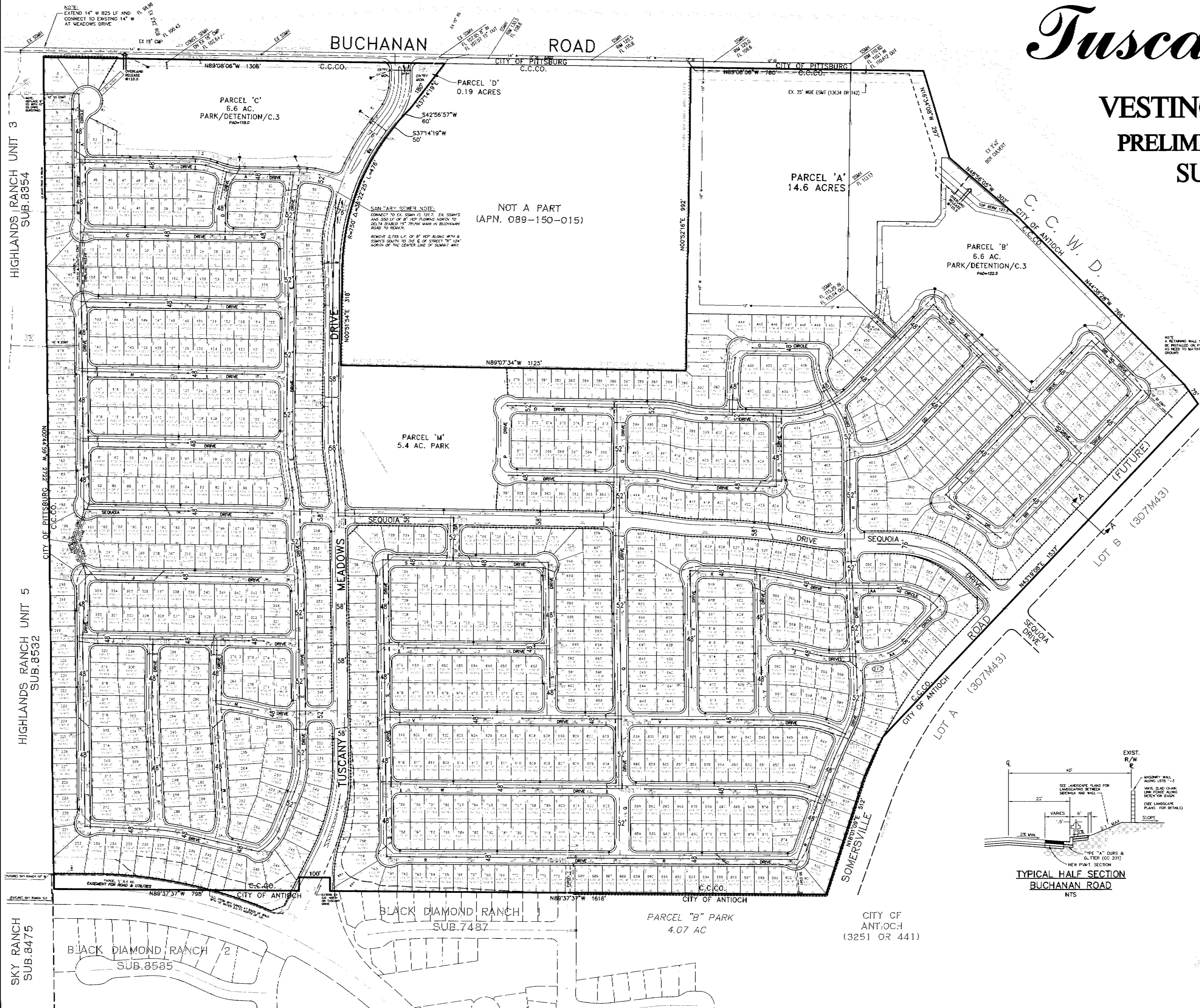
Tuscany Meadows

VESTING TENTATIVE MAP & PRELIMINARY GRADING PLAN

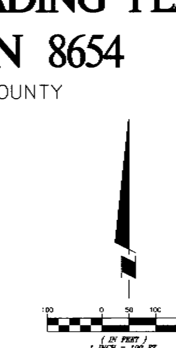
SUBDIVISION 8654

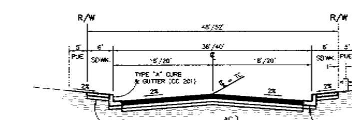
CONTRA COSTA COUNTY

JANUARY 2013

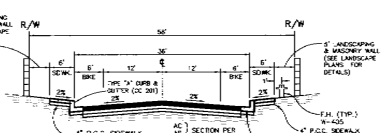


VICINITY MAP
NOT TO SCALE

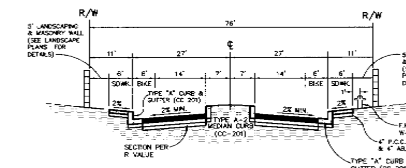




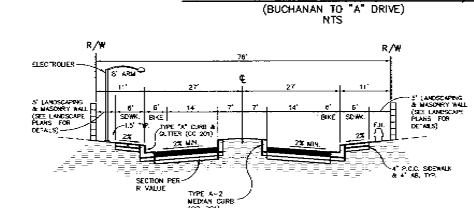
PUBLIC STREET-48' & 52' R/W
NTS



PUBLIC STREET-58' R/W
NTS



TUSCANY MEADOWS DRIVE-76' R/W
(BUCHANAN TO "A" DRIVE)
NTS



SEQUOIA DRIVE-76' R/W
(SOMERSVILLE ROAD TO 'R' DRIVE)
NTS

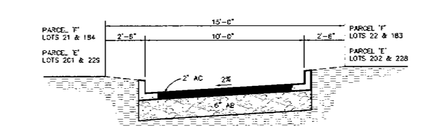
TYPICAL HALF SECTION
BUCHANAN ROAD
NTS

GENERAL NOTES:

1. OWNER: WEST COAST HOME BUILDERS, INC.
   4021 PORT CHICAGO HIGHWAY
   CONCORD, CA. 94524-4113
   (925) 671-7711
2. CIVIL ENGINEER: ISAKSON & ASSOCIATES
   2255 YGNACIO VALLEY RD SUITE "C"
   WALNUT CREEK, CA 94598
   (925) 937-9333
3. SOILS ENGINEER: WALLACE KUHL & ASSOC.
   3050 INDUSTRIAL BLVD.
   WEST SACRAMENTO, CA. 95691
   (916) 372-2565
4. EXISTING LAND USE: URBAN
5. EXISTING GENERAL PLAN:
   LOW DENSITY RESIDENTIAL (1-7 DU/AC.)
   HIGH DENSITY RESIDENTIAL (14-25 DU/AC.)
6. PRESENT ZONING: RS-4 & RH
7. WATER SUPPLY: CITY OF PITTSBURG / CONTRA COSTA WATER DISTRICT
   A PORTION IS WITHIN ZONE 2 ASSESSMENT DIST. 1974-1
8. SEWAGE: DELTA DIABLO SEWER DISTRICT / CITY OF PITTSBURG
9. CONTOURS: 5' INTERVALS
10. ASSESSORS PARCEL: 089-150-013
11. TOTAL PROJECT AREA=169.7 AC.
    LOW DENSITY RESIDENTIAL AREA=135.6 AC.
    PARCEL 'A' (HIGH DENSITY RESIDENTIAL)=14.6 AC.
    PARCEL 'B' (PARK/DETENTION/C.3)=6.6 AC.
    PARCEL 'C' (PARK/DETENTION/C.3)=6.6 AC.
    PARCEL 'D' (ENTRY SIGN/LANDSCAPING)=0.19 AC.
    PARCELS 'E' (@ LOTS 187 & 212); & PARCELS 'F' (@ LOTS 16 & 168) (PATH/OVERLAND RELEASE/UTILITIES)=0.1 AC.
    PARCEL 'I' (@ LOT 773) PED ACCESS/UTILITIES=0.1 AC.
    PARCEL 'L' (JAMES DONLON R/W)=0.4 AC.
    PARCEL 'M' (PARK)=5.4 AC.
12. TOTAL NO. OF LOTS 917
    MIN. LOT SIZE: 4000 SF
    LARGEST LOT: 10,787 SF (LOT 232)
    SMALLEST LOT: 4,000 SF (SEVERAL, EXAMPLE: LOT 203)
    AVERAGE LOT: 4,442± SF
13. GROSS DENSITY OF LOW DENSITY RESIDENTIAL: $\frac{917\ D.U.}{135.6\ AC.}$ =6.76 DU/AC.
14. PURSUANT TO SECTION 66456.1 OF THE SUBDIVISION MAP ACT, THE OWNER RESERVES THE RIGHT TO FILE MULTIPLE FINAL MAPS ON THE LANDS SHOWN ON THIS MAP.
15. THERE ARE NO TREES OR STRUCTURES ON THE PROPERTY

LEGEND:

(heavy line)	PROJECT BOUNDARY
(line)	RIGHT-OF-WAY LINES
(line)	PROPERTY LINES
691	LOT NUMBER
4,325 SF	LOT AREA
P=160.4	PAD GRADE
51.8'	LOT DIMENSION
(arrow)	CENTERLINE OF DITCH & DIRECTION
1%	STREET GRADE & DIRECTION
×221.2	STREET GRADE
(symbol)	MASONRY WALL



PARCELS 'E' & 'F' 15' PATH & UTILITY EASEMENTS AND OVERLAND RELEASE
NTS

Tuscany Meadows
SUBDIVISION 8654

Isakson & Assoc. Inc.
civil engineering & land surveying
2255 Ygnacio Valley Road, Suite C, Walnut Creek, CA. 94598 Phone:(925) 937-9333

DATE: 01-02-2013	DESIGNED BY: DOI	DRAWN BY: STAFF	CHECKED BY: DOI	JOB NO. 201002	SHEET 1 OF 1

201002 - VESTING TENTATIVE MAP & PRELIMINARY GRADING PLAN - TUSCANY MEADOWS - 01-02-2013