

## **4.15 UTILITIES AND SERVICE SYSTEMS**

This chapter describes the existing wastewater, water supply, stormwater, and solid waste services the Ravenswood/4 Corners Transit-Oriented Development Specific Plan area and evaluates the potential impacts of the Plan on wastewater, water supply, stormwater, and solid waste services. A summary of the relevant regulatory setting and existing conditions is followed by a discussion of Plan-specific and cumulative impacts.

### **A. Wastewater**

#### **1. Regulatory Framework**

This section describes the regulatory setting as it relates to wastewater in the Ravenswood/4 Corners Transit-Oriented Development Specific Plan area.

##### **a. Biosolids Disposal Requirements**

The Code of Federal Regulations, Title 40, Part 503 regulates the treatment, reuse and disposal of solid residues from wastewater treatment, known as biosolids. After treatment, these can be made into fertilizer, incinerated or buried in a Dedicated Land Disposal (DLD) site. Some of the biosolids produced in East Palo Alto are sent to a DLD.

##### **b. California Regional Water Quality Control Board**

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the California State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs). Each are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems.

The RWQCBs regulatory role involves the formation and implementation of basic policies for water protection. These are reflected in the RWQCBs Basin Plan in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The SWRCB has historically provided overall policy direction, organizational and technical assistance, and a communications link to the State legislature.

Information on the role of the RWQCBs and permits for wastewater discharge is contained in Section 4.9, Hydrology and Water Quality.

## 2. Existing Conditions

There is a topographic divide in the natural drainage system along a line running approximately east-west at the southern margin of the 391 Demeter Street property.<sup>1</sup> South of this topographic divide, gravity-driven flows in the sanitary sewer and storm water system are southwards. North of this divide, gravity-driven flows are northwards. Because of this divide, the Plan Area is served by two different Sanitary Districts. Wastewater conveyance and treatment services to the northern half of the Plan Area are provided by the West Bay Sanitary District (WBSD). The East Palo Alto Sanitary District (EPASD) serves the southern half of the Plan Area, which is where most of the development activity would occur.

### a. East Palo Alto Sanitary District

The EPASD, established in 1939, serves the majority of East Palo Alto and a portion of Menlo Park. In the east of the Plan Area, it serves the industrial areas south of 391 Demeter Street, and in the west, it serves the residential areas south of Michigan Avenue.

#### i. Existing Wastewater Flows

The average dry weather flow for the EPASD is 1.8 million gallons per day (MGD). Currently, the EPASD is operating below its system dry weather flow capacity of 3.06 MGD. The average wet weather flow for the EPASD is 5 MGD.<sup>2</sup> Wastewater is treated at the Palo Alto Regional Water Quality Control Plant (PARWQCP), which is described below.

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<sup>1</sup> The 391 Demeter Street property has a triangular shaped portion which would be designated as Industrial/Office Flex under the Plan and an area with wetlands that would be designated as Resource Management. The triangular shaped portion has also been referred to as the “Stanford Fill” area.

<sup>2</sup> Laureta, Rich. President, Freyer & Laureta, Inc. Personal e-mail communication with Carey Stone, DC&E, October 29, 2009.

*ii. Projected Wastewater Flows*

The EPASD population was expected to grow by 27 to 49 percent within the district's area in East Palo Alto and by 15 percent within the district's area in Menlo Park by 2030.<sup>3,4</sup> The EPASD estimated that by 2025 the average dry weather flow would be 2.9 MGD, and that average peak wet weather flows would be 8 MGD.<sup>5</sup>

*iii. Collection System*

There are approximately 3,300 single-family residential connections, 23,500 multi-family connections, and 300 commercial, industrial, and institutional connections within the district.<sup>6</sup> EPASD infrastructure includes approximately 30 miles of sewer pipeline and 560 manholes.<sup>7</sup>

**b. Palo Alto Regional Water Quality Control Plant**

Sewage collected by the EPASD is treated at the PARWQCP. The PARWQCP treats wastewater from the EPASD, Los Altos, Los Altos Hills, Mountain View, Palo Alto, and Stanford University. Discharge from the PARWQCP is required to meet stringent standards to protect the health of the South Bay, where the water is discharged.<sup>8</sup> The PARWQCP operates under the conditions of a RWQCB discharge permit that regulates the dis-

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<sup>3</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the East Palo Alto Sanitary District*, page 5.

<sup>4</sup> These population growth estimates came from the 2006 Urban Water Management Plan. However growth as estimated in the 2011 Water Supply Assessment (which included growth under the Specific Plan) was 47 percent for East Palo Alto. This is within the range given.

<sup>5</sup> Laureta, Rich. President, Freyer & Laureta, Inc. Personal e-mail communication with Carey Stone, DC&E, October 29, 2009.

<sup>6</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the East Palo Alto Sanitary District*, page 2.

<sup>7</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the East Palo Alto Sanitary District*, page 4.

<sup>8</sup> City of Palo Alto, 2007. *Utilities Newsletter*, pages 33 and 34.

charge limits. The discharge permit (NPDES Permit No. CA0037834), adopted on April 8, 2009, is in effect until May 31, 2014.<sup>9</sup>

The City of Palo Alto owns, maintains and upgrades the PARWQCP, based on the RWQCB permit, and the contributing jurisdictions purchase capacity rights. The City of Palo Alto bills each contributing agency for its share of facility construction, maintenance and upgrade costs. Costs to each contributing agency are allocated proportionately based on each agency's purchased capacity. When an agency's flow reaches 80 percent of its capacity rights, the agency is required to perform an engineering study to redefine future needs.<sup>10</sup>

The City of Palo Alto owns meters that measure and record flows into the plant. The meters at the plant track average flows from each agency for the purposes of determining the proportionate cost of maintaining the plant. As of September 2011, all of the contributing agencies were operating under their capacity right.<sup>11</sup>

*i. Wastewater Treatment Capacity*

The PARWQCP has a dry weather capacity of 39 MGD and a wet weather capacity of 80 MGD. Of this total, the EPASD is allocated a total treatment capacity of 3.06 MGD for dry weather flow. The PARWQCP does not limit the treatment of wet weather flow for its contributing agencies. Peak wet weather flows into the plant typically do not exceed 70 MGD. Peak dry weather flows are typically 35 MGD.<sup>12</sup>

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<sup>9</sup> City of Palo Alto website, NPDES Permit For Discharge to San Francisco Bay, <http://www.cityofpaloalto.org/depts/pwd/rwqcp.asp>, accessed on December 6, 2011.

<sup>10</sup> Sanitary Sewer Management Plan, [http://cc.mcanet.com/cwea/webuploads/37\\_City%20of%20Los%20Altos%20SSMP.pdf](http://cc.mcanet.com/cwea/webuploads/37_City%20of%20Los%20Altos%20SSMP.pdf), accessed on January 6, 2008.

<sup>11</sup> Allen, Jamie. Acting Plant Manager, Regional Water Quality Control Plant. Personal communication with Nicola Swinburne, DC&E, September 12, 2011.

<sup>12</sup> Allen, Jamie. Acting Plant Manager, Regional Water Quality Control Plant. Personal communication with Nicola Swinburne, DC&E, September 12, 2011.

The City of East Palo Alto Redevelopment Agency estimates that it will need an additional 1.4 MGD of wastewater capacity within the jurisdiction of the EPASD, which is approximately a 33 percent increase to the District's allotted 2.9 MGD treatment capacity. To acquire additional capacity, East Palo Alto would have to purchase treatment rights from the City of Los Altos, the City of Mountain View, and/or the City of Palo Alto.<sup>13</sup>

*ii. Planned Facilities*

The PARWQCP is currently in good condition and will be subject to regular maintenance. The plant converted to ultraviolet disinfection, from chlorine disinfection, in 2010. In general, the PARWQCP is considered to have sufficient capacity to serve the community for 30 years without the need for expansion. There will be an ongoing need to repair and/or replace aging facilities.<sup>14</sup>

*c. West Bay Sanitary District*

The West Bay Sanitary District (WBSD), established in 1902, serves the City of Menlo Park and parts of Atherton, East Palo Alto, Portola Valley, Woodside and unincorporated areas in San Mateo and Santa Clara Counties. In the east of the Plan Area, it serves 391 Demeter Street, and in the west, it serves residential neighborhoods from Michigan Avenue northwards.

*i. Existing Wastewater Flows*

Average dry weather flow for the WBSD is 4.5 MGD. Currently, the WBSD is operating below its system dry weather flow capacity of 7.9 MGD. Average wet weather flow for the WBSD is 14.4 MGD, which is also the system capacity for wet weather flow.<sup>15</sup> Wastewater is treated at the South Bayside System Authority (SBSA) treatment plant, which is discussed below.

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<sup>13</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the East Palo Alto Sanitary District*, pages 4 and 5.

<sup>14</sup> Allen, Jamie. Acting Plant Manager, Regional Water Quality Control Plant. Personal communication with Nicola Swinburne, DC&E, September 12, 2011.

<sup>15</sup> Laureta, Rich. President, Freyer & Laureta, Inc. Personal e-mail communication with Carey Stone, DC&E, November 9, 2009.

*ii. Projected Wastewater Flows*

The WBSD population was expected to grow by 16 percent, or approximately 8,460 people, by 2035.<sup>16,17</sup> The WBSD estimates that by 2030 the average dry weather flow will be 5.5 MGD, and that average peak wet weather flows will be 16.4 MGD.<sup>18</sup>

*iii. Collection System*

There are approximately 18,380 single-family residential connections and 635 commercial connections within the district.<sup>19</sup> System infrastructure consists of approximately 207 miles of sewer mains and 12 pump stations.<sup>20</sup> Wastewater from the WBSD is delivered to a pump station and is then pumped to the SBSA treatment plant located in Redwood Shores.

*d. South Bayside System Authority Regional Treatment Plant*

Wastewater collected within the West Bay Sanitary District is treated by the SBSA, a Joint Powers Authority managed by one elected official each from Belmont, Redwood City, San Carlos, and the West Bay Sanitary District. The SBSA serves about 200,000 people and businesses in an area that covers about 45 square miles.<sup>21</sup> The SBSA operates under the conditions of a RWQCB discharge permit that regulates the discharge limits. The discharge

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<sup>16</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the West Bay Sanitary District*, page 6.

<sup>17</sup> These figures are based on growth as projected by ABAG in 2006 which was estimated as 49 percent by 2035 for the City of East Palo Alto. This is comparable to the growth figure of 47 percent estimated in the 2011 Water Supply Assessment (which included growth under the Specific Plan) for East Palo Alto.

<sup>18</sup> Laureta, Rich. President, Freyer & Laureta, Inc. Personal e-mail communication with Carey Stone, DC&E, November 9, 2009.

<sup>19</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the West Bay Sanitary District*, page 3.

<sup>20</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the West Bay Sanitary District*, page 5.

<sup>21</sup> South Bayside System Authority, [http://www.sbsa.org/SBSA/html/WastewaterTreatment, htm](http://www.sbsa.org/SBSA/html/WastewaterTreatment.htm), accessed on October 29, 2009.

permit (NPDES Permit No. CA0038369), adopted on January 23, 2007, is in effect until March 31, 2012.<sup>22</sup>

*i. Wastewater Treatment Capacity*

The capacity of the SBSA plant is 29 MGD. Of this total, the WBSD is allocated a total treatment capacity of 6.6 MGD for dry weather flow and 14.4 MGD of peak wet weather flow at the SBSA plant.<sup>23</sup> The average dry weather flow in 2009 was 4.5 MGD or 68 percent of its capacity rights. When the capacity is temporarily exceeded, as might occur during wet weather, wastewater is stored in WBSD's Flow Stabilization Facility which can hold 9.2 million gallons. As discussed above, WBSD is projected to have an average dry weather flow of 5.5 MGD by 2030. Therefore, it is likely that the SBSA plant will have sufficient capacity to treat wastewater flows from the WBSD in the future.

*ii. Planned Facilities*

The SBSA plant is now over 25 years old. To maintain capacity, the SBSA has launched a \$339 million, 10-year Capital Improvement Program to upgrade its facilities, including improving the sewer main. In addition, the Capital Improvement Program will assure compliance with new environmental standards.<sup>24</sup>

*iii. Recycled Water*

In 2000, the SBSA produced a small quantity of recycled water for landscaped irrigation at several sites in Redwood Shores. There is currently no supply of recycled water for the City of East Palo Alto. However, Redwood City is close to completing a recycled water distribution facility that is designed for

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<sup>22</sup> California Regional Water Quality Control Board, ORDER NO. R2-2007-0006, [http://www.waterboards.ca.gov/sanfranciscobay/board\\_decisions/adopted\\_orders/2007/R2-2007-0006.pdf](http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2007/R2-2007-0006.pdf), accessed on December 6, 2011.

<sup>23</sup> San Mateo LAFCO, 2009, *Municipal Service Review and Sphere of Influence Update for the West Bay Sanitary District*, page 5.

<sup>24</sup> South Bayside System Authority, 2008, "Press Advisory: SBSA Announces \$339 Million, 10-Year Capital Improvement Program."

the distribution of recycled water to Redwood City and neighboring agencies. East Palo Alto would have to store and distribute any recycled water that it wishes to receive from Redwood City.<sup>25</sup>

### 3. Standards of Significance

Wastewater impacts associated with the Plan would be considered significant if the Plan would:

- a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- b. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

### 4. Impact Discussion

This section describes the environmental impacts to wastewater services that would result from implementation of the Ravenswood/4 Corners TOD Specific Plan.

A new system of sanitary sewer main pipes would be installed as part of the Specific Plan along Demeter Street, Pulgas Avenue (south of the new connector road), Tara Street (to the end of the existing street), Bay Road and Weeks Street. These pipes connect to an existing pipe in the levee south of Weeks Street which runs to the PARWQCP south of the Palo Alto Airport. The existing 18-inch pipe in the levee at Weeks Street would be replaced with a 21-inch pipe. This may not be necessary for several decades until sufficient de-

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<sup>25</sup> Ezell, Justin. Public Works Superintendent, City of Redwood City. Personal email communication with Carey Stone, DC&E, April 16, 2009.

velopment has occurred to warrant it. The timing of this replacement would be determined by the EPASD.

The 391 Demeter Street property and the northernmost part of the industrial area are currently not served by a sanitary sewer. This portion of the Plan Area is served by the WBSD. No upgrades were included in the City of East Palo Alto's 2008 Draft Engineering Plan (DEPLAN), and therefore, no upgrades were included in the Specific Plan, for 391 Demeter Street.

a. Exceed Wastewater Treatment Requirements (*LTS*)

With construction of additional pipes, the sanitary sewer system of the Plan Area would be upgraded so that it could convey additional wastewater to the PARWQCP in Palo Alto (for the southern part of the Plan Area in the EPASD). The PARWQCP discharges to surface water after meeting all current regulatory criteria for wastewater discharge and there would be a *less-than-significant* impact to exceeding the wastewater treatment requirements from this part of the Plan Area.

There are no upgrades planned to the sanitary sewer system that feeds the SBSA treatment plant in Redwood Shores (for the northern part of the Plan Area in the WBSD). The 391 Demeter Street property is the only part of the Area that would be developed under the Plan, in the WBSD. Development under the Specific Plan includes **Specific Plan Policy UTIL-1.1**, which ensures that development of this area includes sanitary and stormwater infrastructure for all parts of the Plan Area to prevent discharge of untreated wastewater to the San Francisco Bay. With adherence to this policy, there would be a *less-than-significant* impact.

b. Require or Result in the Construction of New Wastewater Treatment Facilities or Expansion of Existing Facilities (*LTS*)

The PARWCP is in good condition and, according to the plant manager, is considered to have sufficient capacity to serve the community for 30 years without the need for expansion.<sup>26</sup>

The SBSA has begun a Capital Improvement Program to upgrade its facilities including improving the sewer main. This will ensure that it can comply with current RWQCB discharge limits. The SBSA is seeking loans to cover the expenditure and these will be paid back through increased wastewater fees from existing and new development.<sup>27</sup>

Environmental analysis of the trenching required for extension and upgrades of the piping system serving the Plan Area is addressed in this EIR. With these programs in place to ensure adequate treatment capacity, there would be a *less-than-significant* impact from construction of new wastewater treatment facilities.

c. Result in a Determination by the Wastewater Treatment Provider that it has Adequate Capacity to Serve the Project's Projected Demand (*LTS*)

An additional capacity of 1.4 MGD would be needed from the EPASD to treat wastewater above the amount it has agreed to treat during dry weather; The EPASD treatment plant in Palo Alto (PARWQCP) does not limit the treatment of wet weather flows. The increase in dry weather flows represents a 33 percent increase in the District's allotted 2.9 MGD treatment capacity. To acquire this additional capacity, East Palo Alto would have to purchase treatment rights from either the City of Los Altos, Mountain View, or Palo Alto. For development that would cause wastewater to be generated in excess of the East Palo Alto current treatment capacity with the EPASD, **Specific**

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<sup>26</sup> Allen, Jamie. Acting Plant Manager, Regional Water Quality Control Plant. Personal communication with Nicola Swinburne, The Planning Center | DC&E, September 12, 2011.

<sup>27</sup> South Bayside System Authority, 2008, "Press Advisory: SBSA Announces \$339 Million, 10-Year Capital Improvement Program."

**Plan Policy UTIL-1.2** requires this additional treatment capacity to be in place before development proceeds.

With **Specific Plan Policy UTIL-1.2** in place, there would be a *less-than-significant* impact from resulting in a determination by the EPASD that it has insufficient treatment capacity as a consequence of development under the Specific Plan.

The WBSD has estimated that wastewater flows in dry weather into its treatment plant would increase from 4.5 MGD to 5.5 MGD by 2035 when development under the Specific Plan is included in addition to other foreseeable development in its service area. WBSD is allocated a total treatment capacity of 6.6 MGD for dry weather at the SBSA plant in Redwood Shores. WBSD has therefore adequate capacity to treat dry weather flows from projected growth under the Specific Plan.

Average wet weather flow for the WBSD is 14.4 MGD and this is the plant's current capacity. When the capacity is temporarily exceeded, as in wet weather, it is stored at WBSD's Flow Stabilization Facility which can hold 9.2 million gallons. **Specific Plan Policy UTIL-1.3** requires the City to ensure that peak wet weather flows do not increase to the degree that the capacity of the Flow Stabilization Facility is exceeded. This would be accomplished through increased maintenance of the sanitary sewer system so that there are fewer points of entry for rainwater.

With **Specific Plan Policy UTIL-1.3** in place, there would be a *less-than-significant* impact from resulting in a determination by the WBSD that it has insufficient treatment capacity as a consequence of development under the Specific Plan.

## 5. Cumulative Impacts

As described above, long-term planning by the WBSD and EPASD have taken into account development under the Specific Plan, together with anticipated development from neighboring jurisdictions. There would therefore

be *no cumulative impacts* to wastewater from implementation of the Specific Plan.

## ***B. Water***

### **1. Regulatory Framework**

This section describes the regulatory setting as it relates to water supply in the Ravenswood/4 Corners Transit Oriented Development Specific Plan area.

A number of federal and State agencies manage and regulate water resources for the City of East Palo Alto with the intention of safeguarding these resources for domestic and agricultural use, environmental conservation, and power generation. As discussed in detail below, these regulations mandate local assessment of, and planning for, a long-term water supply.

#### **a. State and Federal Water Quality Regulations**

##### ***i. California State Water Resources Control Board***

The SWRCB and the nine RWQCBs have the authority in California to protect and enhance water quality.

The RWQCB Region 2 office in Oakland regulates water quality for all waters that flow into the San Francisco Bay, which includes all rivers, streams, and tributaries within the nine-county San Francisco Bay region. The RWQCB establishes water quality objectives, administers the National Pollutant Discharge Elimination System (NPDES) permit program for stormwater and construction site runoff, and regulates infill of jurisdictional wetlands or waters of the United States under Section 404 of the Clean Water Act.

##### ***ii. Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act or Water Code Section 13000 et seq.) requires the State to adopt water quality policies, plans and objectives to protect the State's waters for the use and enjoyment of the people. The Act states that the SWRCB and RWQCBs must adopt and periodically update water quality control plans, as required by the Clean Water Act and the Porter-Cologne Act, to establish water qual-

ity objectives and implementation programs for each of the nine regions in California. East Palo Alto falls under the Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin.<sup>28</sup> The Act also requires waste dischargers to notify the RWQCBs of their activities via Reports of Waste Discharge. It authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, and other approvals.<sup>29</sup>

*iii. Water Quality Control Plan for the San Francisco Bay Basin*

The RWQCB Region 2 office regulates water quality in the San Francisco Bay Basin in accordance with the Basin Plan.<sup>30</sup> The Basin Plan presents the beneficial uses that the Regional Board has identified for surface water, groundwater, marshes, and mudflats, as well as the water-quality objectives and criteria that must be met to protect these uses. A number of existing beneficial uses have been designated for San Francisquito Creek, part of which runs through East Palo Alto, and are considered reasonably applicable to their tributaries. The existing beneficial uses for San Francisquito Creek include cold and warm freshwater habitat, fish migration, and fish spawning.

*iv. Safe Drinking Water Act*

The Safe Drinking Water Act (SDWA), passed in 1974, is the initial federal legislation passed to ensure the quality of drinking water. The law was amended in 1986 and 1996, and requires many actions to protect drinking water and its sources, such as rivers, lakes, reservoirs, springs, and ground water wells.<sup>31</sup> Under SDWA, the US Environmental Protection Agency (US EPA) sets standards for drinking water quality and oversees the water suppli-

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<sup>28</sup> California Regional Water Quality Control Board (RWQCB), 2007, *SF Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*, Figure 1-1.

<sup>29</sup> State Water Resources Control Board, [www.swrcb.ca.gov/](http://www.swrcb.ca.gov/), accessed on October 16, 2009.

<sup>30</sup> California Regional Water Quality Control Board (RWQCB), 2007, *SF Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*.

<sup>31</sup> United States Environmental Protection Agency, <http://water.epa.gov/lawsregs/rulesregs/sdwa/>, accessed on November 16, 2011.

ers that implement those standards. Regulatory standards established by the SDWA include maximum allowable levels of chemicals and other substances in drinking water, protocols for monitoring drinking water quality and methods for treating drinking water.

In 1976, California enacted its own Safe Drinking Water Act (Health and Safety Code Section 116270 et seq.), granting the California Department of Health Services (CDHS) primary enforcement responsibility. In 1989, the California Legislature passed Assembly Bill 21 (Sher, Chapter 823, Statutes of 1989), which amended California's Safe Drinking Water Act.<sup>32</sup> The law requires the California Department of Public Health (CDPH) to regulate drinking water by:

- ◆ Setting and enforcing federal and State drinking water standards;
- ◆ Administering water quality testing programs; and
- ◆ Administering permits for public water system operations.

The standards established by CDPH are found in the California Code of Regulations, Title 22.

*v. Senate Bill 610, Senate Bill 221, and Assembly Bill 901*

Senate Bills (SB) 610 and 221 and Assembly Bill (AB) 901, Water Supply Planning, amend the Public Resources and Water Codes as they pertain to consultation with water supply agencies, urban water management plans, and State funding restrictions for agencies who do not prepare urban management plans and water supply assessments. SB 610 requires water supply assessments (WSAs) for "projects" (as defined by Water Code § 10912 and of which the Specific Plan is one such "project"), that are subject to the California Environmental Quality Act (CEQA). SB 221 establishes consultation and analysis

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<sup>32</sup> California Senate Office of Research, <http://www.sor.govoffice3.com/vertical/Sites/%7B3BDD1595-792B-4D20-8D44-626EF05648C7%7D/uploads/%7BEBDEB6F2-DBD7-4728-B2D3-C627BE99185A%7D.PDF>, accessed on November 16, 2011.

requirements related to water supply planning for residential subdivisions including more than 500 dwelling units.<sup>33</sup>

The basic requirement of WSAs is that they include a discussion of whether projected water supplies available during normal, single dry and multiple dry water years during a 20-year projection will meet the projected demand of existing and planned future uses, plus the demand of the proposed project. If water demand is accounted for in an adopted Urban Water Management Plan (UWMP), the WSA may incorporate UWMP information. If the UWMP does not account for the project's projected demand, the WSA must be based on the available evidentiary record. If a project's water supply includes groundwater, the WSA must include a review of UWMP information, a description of the relevant groundwater basin(s), a detailed description and analysis of the amount and location of groundwater pumped by the public water system, a detailed description and analysis of the amount and location of groundwater projected to be pumped by the public water system and an analysis of whether groundwater is sufficient to supply projected water demand.

*vi. Urban Water Management Planning Act*

Through the Urban Water Management Act of 1983 (California Water Code Section 10610 *et seq.*), the California Water Code requires all urban water suppliers within California to prepare and adopt an UWMP and update it every five years. The Act is intended to support conservation and efficient use of urban water supplies at the local level. The Act requires that total projected water use be compared to water supply sources over the next 20 years in five-year increments; that planning occur for single and multiple dry water years; and that plans include a water recycling analysis that incorporates a

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<sup>33</sup> SB 610 (2001), SB 221 (2001), AB 901 (2001) <http://www.sen.ca.gov/>, accessed on November 16, 2009.

description of the wastewater collection and treatment system within the agency's service area, along with current and potential recycled water uses.<sup>34</sup>

*vii. Groundwater Management Act*

The Groundwater Management Act (California Water Code Section 10753 *et seq.*, originally AB 3030) provides guidance for applicable local agencies to develop a voluntary Groundwater Management Plan (GMP) in State-designated groundwater basins. GMPs can allow agencies to raise revenue to pay for measures influencing the management of the basin, including extraction, recharge, conveyance, facility maintenance, and water quality.<sup>35</sup>

*viii. Regulations for Water Use Efficiency*

The California Constitution prohibits the waste, unreasonable use, unreasonable method of use, and unreasonable method of diversion of water. It also declares that the conservation and use of water "shall be exercised with a view to the reasonable and beneficial use thereof in the public interest and for the public welfare." Water Code Section 275 directs the California Department of Water Resources and SWRCB to "take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste or unreasonable use of water."<sup>36</sup>

*ix. Area of Origin Protections*

Area of origin protections were added to the California Water Code to protect local water supplies in Northern California from being depleted by water projects. County of origin statutes reserve water supplies for counties from which the water originates when, in the judgment of the SWRCB, transporting water out of a county would deprive that county of water necessary for its present and future development.

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<sup>34</sup> Department of Water Resources, Urban Water Management Planning Program, <http://www.owue.water.ca.gov/urbanplan/index.cfm>, accessed October 16, 2009.

<sup>35</sup> California Department of Water Resources, [http://www.water.ca.gov/groundwater/gwmanagement/ab\\_3030.cfm](http://www.water.ca.gov/groundwater/gwmanagement/ab_3030.cfm), accessed on October 16, 2009.

<sup>36</sup> California Law, <http://www.leginfo.ca.gov>, accessed November 16, 2009.

x. *Statewide Bond Measures*

In recent years, a number of statewide bond measures has been approved by California voters, establishing funding for a wide range of water-related programs and improvements aimed at protecting the State's critical water resources.

These measures include the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Bond Act, passed in 2000. This bond authorized \$1.97 billion for water-related projects throughout the State. The SWRCB was authorized to allocate \$763.9 million of these funds to local projects, such as pollution control programs for coastal and inland waters, watershed protection programs and pesticide source and mitigation programs, mostly through competitive grants.<sup>37</sup>

Passed in March 2002, Proposition 40, the California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act, authorizes over one billion dollars for a broad range of water conservation programs, including land acquisition. Later in 2002, an additional \$3 billion in bonds was authorized by the voters as part of the Water Quality, Supply and Safe Drinking Water Projects bond measure. The bond funds are to be directed to a wide variety of water resource programs including the CALFED Bay-Delta Program, safe drinking water programs, and integrated regional water management programs, among others.<sup>38</sup>

In November 2006, voters approved Proposition 84, allowing the State to sell \$5.4 billion in bonds for projects related to safe drinking water, water quality and supply, flood control, natural resource protection and park improvements.<sup>39</sup>

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<sup>37</sup>California State Water Resources Board, <http://www.waterboards.ca.gov>, accessed on November 16, 2009.

<sup>38</sup> California State Water Resources Board, <http://www.waterboards.ca.gov>, accessed on November 16, 2009.

<sup>39</sup> California State Water Resources Board, <http://www.waterboards.ca.gov>, accessed on November 16, 2009.

b. Local Regulations and Plans

Water and other public utilities in San Mateo County are under the jurisdiction of the San Mateo County Local Agency Formation Commission (LAFCO). San Mateo LAFCO develops and updates the sphere of influence (SOI) for local jurisdictions within the county, and therefore is involved in drawing service area boundaries. As part of the SOI determination report, called a Municipal Service Review (MSR), LAFCOs must also examine the adequacy of public services and capacity of public facilities within the SOI. San Mateo LAFCO produced a Draft East Palo Alto MSR on June 10, 2009.

i. *Urban Water Management Plan*

The 2010 UWMP prepared by the City of East Palo Alto describes water supply sources, historical and projected water use, and existing water supply and demand within the city boundary.<sup>40</sup> It fulfills the requirements of the California Urban Water Management Planning Act.

ii. *Water Supply Assessment*

A 2011 Water Supply Assessment (WSA) was performed for the Plan Area, as required under SB 610.<sup>41</sup> It presents similar conclusions to the 2010 Water System Management Plan. Water demand from the Plan Area was incorporated into the Water Supply Assessment using the proposed Specific Plan land uses. These uses were also incorporated into the 2010 UWMP.<sup>42</sup> The contents of the UWMP and WSA two planning documents are described below under Existing Conditions.

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<sup>40</sup> City of East Palo Alto, 2011. *2010 Urban Water Management Plan*. Prepared by Integrating Resource Management, Inc. Adopted June 21, 2011.

<sup>41</sup> Integrated Resource Management, Inc, 2011. *Water Supply Assessment. Ravenswood/4 Corners Transit Oriented Development Specific Plan*. For the City of East Palo Alto. Final Draft. August 30, 2011.

<sup>42</sup> Integrated Resource Management, Inc, 2011. *Water Supply Assessment. Ravenswood/4 Corners Transit Oriented Development Specific Plan*. For the City of East Palo Alto. Final Draft. August 30, 2011. Page 19.

*iii. East Palo Alto Municipal Code*

Chapter 13.24, Article VI of the East Palo Alto Municipal Code outlines the City's water conservation plan. The code identifies three phases of conservation pending a 20, 40, or 60 percent shortage of the City's water supply.

**2. Existing Conditions**

East Palo Alto's municipal water system is managed by American Water Enterprises under contract with the City's Department of Public Works. Additionally, the Palo Alto Park Mutual Water Company and the O'Connor Tract Co-Operative Water Company serve small areas that are outside the municipal water system, but within the city limits. Since the Plan Area is completely served by the municipal water system, only American Water Enterprises is discussed below.

**a. Existing Water Supply**

All water supplied to the City of East Palo Alto by American Water Enterprises comes from the San Francisco Public Utilities Commission (SFPUC) supply.<sup>43</sup> The main source of the SFPUC's water, approximately 85 percent, is from the upper Tuolumne River watershed in the Sierra Nevada, and is stored in three major reservoirs: Hetch Hetchy Reservoir, Lake Lloyd, and Lake Eleanor. It is delivered to the Bay Area via a system of aqueducts. The remaining 15 percent of the water supply comes from Bay Area reservoirs in the Alameda and Peninsula watersheds. Crystal Springs and San

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<sup>43</sup> Approximately 10 percent of the City's water comes from the Palo Alto Park Mutual Water Company (PAPMWC) and the O'Connor Tract Co-Operative Water Company (OTCWC). PAPMWC obtains its water from groundwater wells located on its property, 0.6 miles south west of Bay Road and University Avenue: <http://www.paloaltoparkmutualwatercompany.com/>. OTCWC also obtains water from groundwater wells. It is located south of I-101 and close to San Francisquito Creek. The Urban Water Management Plan, 2010, page 11 includes a map of the service areas.

Andreas Reservoirs in San Mateo County capture the runoff for the City of East Palo Alto.<sup>44</sup>

The Hetch Hetchy Reservoir water is a relatively pure supply and requires only pH adjustment to control pipeline corrosion and disinfection to kill bacteria. Water from all other sources is treated at treatment plants. The Harry Tracy Water Treatment Plant (HTWTP), near San Bruno and Millbrae, treats water from the Peninsula System reservoirs. It has a peak capacity of 140 mgd and a sustainable capacity of 120 mgd. A new ultraviolet treatment facility is planned for the Hetch Hetchy System to further enhance water quality. Other upgrades for the HTWTP are also in progress and expected to be finished in June 2012.<sup>45</sup>

There is currently one groundwater supply well in East Palo Alto at Gloria Way and Bay Road, which is approximately 700 feet west of the southwestern corner of the Plan Area.<sup>46</sup> The well had the capacity to produce 350 gallons per minute. Installed in 1981, the well was used for potable water until it was taken out of service in 1989 due to odor complaints (although samples passed the California Department of Public Health State drinking water standards at the time). The water from this well has since only been used for non-potable purposes such as street cleaning, dust-control, and sewer-line flushing.

There is currently no storage within the City of East Palo Alto's managed water system. The City is reliant upon the SFPUC supply system for the necessary storage for equalization, fire flows, and emergency use.<sup>47</sup>

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<sup>44</sup> San Francisco Public Utilities Commission, 2005, *2005 Urban Water Management Plan for the City and County of San Francisco*, page 11.

<sup>45</sup> San Francisco Public Utilities Commission, 2005, *2005 Urban Water Management Plan for the City and County of San Francisco*, page 11.

<sup>46</sup> City of East Palo Alto, 2010. *Water System Master Plan*.

<sup>47</sup> City of East Palo Alto, 2010. *Water System Master Plan*, page 6.

b. Existing Water Demand

American Water Enterprises serves 4,183 accounts in the City of East Palo Alto, of which 3,923 are residential accounts. Between July 2009 and June 2010, residential, commercial, and municipal accounts used 1,906 AFY of water as shown in Table 4.15-1.

c. Estimate of Future Water Supply Needs

The City and Specific Plan's water use in 2011 and at buildout was described in both the 2010 UWMP and a separate 2011 WSA for the Plan Area.<sup>48,49</sup> These point to an existing shortfall and are therefore described in this section.

In 2010, the total water demand was 1,906 acre feet per year (AFY), or 1.7 MGD. The total water use was 2,033 AFY (1.81 MGD), which includes the approximately 8 percent of unaccounted water lost in the system due to leaks. The City has purchased more water from SFPUC than its guaranteed allocation in several years since 2002. This has been possible only because other users have not purchased their entire allocation.

As part of the adoption of its Water System Improvement Program in October 2008, SFPUC is limiting its sales of water to each customer until 2018. It has established an Interim Supply Allocation of 2,199 AFY (1.96 MGD) for East Palo Alto. In times of drought, this would be less.

The UWMP and WSA projected future water demand until 2035. Included in these figures was buildout under the Specific Plan. Table 4.15-2 shows water demand per sector for the whole of East Palo Alto at five year increments and

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<sup>48</sup> City of East Palo Alto, 2011. *2010 Urban Water Management Plan*. Prepared by Integrating Resource Management, Inc. Adopted June 21, 2011.

<sup>49</sup> Integrated Resource Management, Inc, 2011. *Water Supply Assessment. Ravenswood/4 Corners Transit Oriented Development Specific Plan*. For the City of East Palo Alto. Final Draft. August 30, 2011. Note: This used essentially the same estimates for buildout as the Urban Water Management Plan

CITY OF EAST PALO ALTO  
RAVENSWOODS/4 CORNERS TOD PECIFIC PLAN  
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UTILITIES AND SERVICE SYSTEMS

TABLE 4.15-1 *EXISTING WATER DEMAND IN EAST PALO ALTO (JULY 2009 – JUNE 2010)*

	Number of Accounts	Amount of Water Sold (AFY)
Single-Family Residential	3,703	910
Multi-Family Residential	220	607
Commercial	100	202
Industrial	112	108
Municipal	47	62
Portable/Other	1	17
<b>Total</b>	<b>4,183</b>	<b>1,906</b>

Source: City of East Palo Alto, 2010 Urban Water Management Plan.

TABLE 4.15-2 *WATER SUPPLY AND DEMAND FOR EAST PALO ALTO IN ACRE FEET PER YEAR*

	2015	2020	2025	2030	2035
Normal Water Year					
Supply totals	2,199	2,199	2,199	2,199	2,199
Demand totals	2,658	2,780	2,960	3,161	3,400
Surplus or (Shortfall)	(459)	(581)	(761)	(962)	(1,201)
Single or Multiple Dry Years*					
Supply totals	2,033	2,033	2,033	2,033	2,033
Demand totals	2,658	2,780	2,960	3,161	3,400
Surplus or (Shortfall)	(625)	(747)	(927)	(1,128)	(1,367)

\* Figures are the same for a single dry year or for the first, second and third dry year under the multiple dry year scenario.

Source: City of East Palo Alto, 2011. *Urban Water Management Plan*.

total water use for a normal water year, single dry year, and for multiple dry years.

Water demand from the development under the Specific Plan was included in these calculations as per the totals in Table 4.15-3. For detailed information on the phasing that was assumed, the reader is referred to the UWMP.

Buildout of the Specific Plan would require 820 acre feet per year of water. Compared to the current water demand, this is an increase in 41 percent and represents a 60 percent of the total demand increase in 2035. The UWMP evaluated various options to increase the supply and proposed augmenting it by pumping and treating from the existing Gloria Bay well, installing new groundwater wells, and using recycled water. An increase in the supply by these or other methods would have to undergo separate CEQA review to ensure feasibility.

d. Water Quality

As of 2010, potable water delivered to the City of East Palo Alto by the SFPUC through the Hetch Hetchy Aqueduct met all federal and State standards for watershed protection, treatment, and operational standards.<sup>50</sup>

e. Existing Water Transmission and Distribution System

Water is distributed from SFPUC to East Palo Alto via three turnouts located at O'Brien Drive. These turnouts connect with the Hetch Hetchy Aqueduct, which runs through the northern portion of the city and through the Plan Area. Water flows under pressure from the turnouts and is distributed throughout the city. The distribution network consists of a mix of 12-, 10-, 8-, and 6-inch pipes and smaller cast iron and PVC pipes.<sup>51</sup> The 6-inch pipes do not meet the Menlo Fire Protection District requirement of a minimum

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<sup>50</sup> San Francisco Public Utilities Commission, 2011, *2010 Urban Water Management Plan for the City and County of San Francisco*, page 31.

<sup>51</sup> Nathan, Gopi, Superintendent, American Water Enterprises. Personal communication with Sean Charpentier, City of East Palo Alto, November 24, 2009.

TABLE 4.15-3 *SPECIFIC PLAN WATER DEMANDS*

<b>Land Use</b>	<b>Acres</b>	<b>Acre Feet Per Acre</b>	<b>Water Demand in Acre Feet</b>
Residential (single family)	0.75	9.33	7.00
Residential (mixed use)	20.12	16.02	322.28
Industrial	23.78	10.19	242.35
Commercial	26.78	7.99	214.19
Municipal (including parks)	31.2	1.11	34.49
<b>Total</b>	<b>102.63</b>	<b>7.99</b>	<b>820.31</b>

Source: Integrated Resource Management, Inc, 2011. *Water Supply Assessment. Ravenswood/4 Corners Transit Oriented Development Specific Plan*. For the City of East Palo Alto.

8-inch pipe diameter.<sup>52</sup> There is a groundwater well at Bay Road and Gloria Way, but it is not used due to poor water quality.<sup>53</sup> A groundwater well at Cooley Landing is not potable but would be used for irrigation in the redevelopment of Cooley Landing as a community park.<sup>54</sup>

### 3. Standards of Significance

Water supply impacts associated with the Plan would be considered significant if the Plan would:

- a. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

<sup>52</sup> City of East Palo Alto, 2009, *City Staff Report on Draft Engineering Plan for the Ravenswood Business District (RBD)*, page 1.

<sup>53</sup> City of East Palo Alto, 2011. *2010 Urban Water Management Plan*. Prepared by Integrating Resource Management, Inc. Adopted June 21, 2011.

<sup>54</sup> City of East Palo Alto, 2010. *Initial Study Cooley Landing*.

- b. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

#### 4. Impact Discussion

This section describes the environmental impacts to water supply that would result from implementation of the Ravenswood/4 Corners TOD Specific Plan.

A new system of 12-inch pipes would be required for the Plan Area. This additional system would also provide more security in the event of damage to the existing system. Water would be supplied under pressure from a new connection to the SFPUC aqueduct at Purdue Avenue. Water would be used for fire suppression in addition to consumption. As recommended by the Fire Department, a new 1.8-million-gallon water tank would provide emergency storage for the City-managed water system, and provide a fire flow of 3,000 gallons per minute.

- a. Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. *(LTS)*

A WSA for the Plan Area has calculated the water demands from the Plan development and a new piping system has been included in the Specific Plan to convey the quantity of water required.

To supplement its existing supply from the SFPUC, the WSA recommended pumping more groundwater from the existing Gloria Bay well, and pumping from one or two new groundwater wells. This water would need to be treated before being blended with the SFPUC supply. The WSA also recommended that recycled water produced in Palo Alto and Redwood City could be conveyed to the Plan Area for non-potable uses.

The environmental effects of obtaining an increased water supply from groundwater wells would need to undergo environmental review in a separate document. Potential impacts from the increased groundwater pumping in-

clude land subsidence and exacerbation of existing flood risks, salt-water infiltration of the aquifer, and entrainment of contamination, as well as cumulative effects from drawdown of the aquifer. The environmental analysis would also need to cover discussion of impacts from construction of a new treatment facility, including storage reservoirs, and installation of additional piping. Analysis of use of recycled water would need to include verification that the water quality is adequate and that there would be no adverse health effects from its use. This is covered in **Specific Plan Policy UTIL-2.1**.

With this policy in place, there would be a *less-than-significant* impact from the construction of new water treatment facilities.

- b. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.  
*(LTS)*

A WSA prepared for the Plan concluded that water demand would increase by 820 acre feet annually, which represents a 41 percent increase from the current demand and 60 percent of the total demand increase through 2035.<sup>55</sup> The WSA further concluded that the City's existing water supplies are not sufficient to meet the demands of the project in normal years, and the deficiency would be worst in times of drought. The City already uses more water from the SFPUC supply – which is its only supply – than its entitlement and this is only possible because other jurisdictions are not using their entire allocation. **Specific Plan Policy UTIL-2.2** prevents development under the Specific Plan from occurring until new water supplies have been obtained. **Specific Plan Policy UTIL-2.1** ensures that the environmental impacts of the expansion of the water supply by increased groundwater pumping, installation of new groundwater wells, construction of facilities for groundwater treatment, and distribution of recycled water, and other means, are analyzed in a separate CEQA document.

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<sup>55</sup> Integrated Resource Management, Inc, 2011. *Water Supply Assessment. Ravenswood/4 Corners Transit Oriented Development Specific Plan*. For the City of East Palo Alto. Final Draft. August 30, 2011.

With these policies in place, there would be a *less-than-significant* impact from having an insufficient water supply.

## 5. Cumulative Impacts

The SFPUC has analyzed its future capacity to supply water to its peninsula cities until 2035, taking into account projected growth. The UWMP and WSA also include a cumulative assessment of the Specific Plan's water supply needs until 2035 in conjunction with growth in East Palo Alto and the region in general. By 2035, water demand would exceed supply in the Water Service Area. However, because of **Specific Plan Policy UTIL-2.2**, the Plan Area would not contribute towards this as new development would have to secure additional water supplies. There would therefore be *no cumulative impacts*. New water treatment facilities might be required for the Plan Area. **Specific Plan Policy UTIL-2.1** requires environmental analysis of any necessary expansion of treatment facilities. With this policy in place, there would be no project contribution to inadequate water treatment facilities. There are therefore *no cumulative impacts*.

### C. Stormwater

The following describes regulations and existing conditions with regard to stormwater management service in East Palo Alto.

#### 1. Regulatory Framework

This section describes the regulatory setting as it relates to stormwater in the Ravenswood/4 Corners Transit Oriented Development Specific Plan area.

Several federal, State, and local regulations pertain to stormwater management service in East Palo Alto.

a. Federal Clean Water Act and National Pollutant Discharge Elimination System

The 1987 amendments to the Federal Clean Water Act (Section 402(p)) provided for US EPA regulation of several new categories of nonpoint pollution

sources within the existing NPDES Program. The SWRCB is responsible for issuing NPDES permits to cities and counties through the RWQCBs. Phase 2 implementation of NPDES permitting, effective March 10, 2003, extended urban runoff discharge permitting to cities of 50,000 to 100,000 people, and to construction sites that disturb between 1 and 5 acres. Under Phase 2, federal regulations allow two permitting options for stormwater discharges: individual permits and general permits. The California SWRCB elected to adopt a Statewide general permit (Water Quality Order No. 2003-0005-DWQ) for Small Municipal Separate Storm Sewer System (MS4s) operators to efficiently regulate stormwater discharges under a single permit. Permittees must develop and implement a Stormwater Management Plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable.

b. NPDES Municipal Regional Stormwater Permit

The Plan Area is covered under the regulations of the new Municipal Regional Stormwater NPDES Permit issued by the RWQCB. This Permit falls under Order R2-2009-0074, adopted on October 14, 2009. Above and beyond post-construction stormwater management practices, the permit also requires municipalities to adopt trash and street sweeping programs to regulate discharges into storm drain systems or directly into Waters of the United States. The permit's stormwater management provisions supersede those in the San Mateo Countywide Pollution Prevention Program's 2004 Stormwater Management Plan.

## 2. Existing Conditions

Stormwater in East Palo Alto drains into two major drainage systems: the Runnymede Storm Drain System and the O'Connor Storm Drain System. The Plan Area is closest to the Runnymede Storm Drain System.<sup>56</sup> Stormwater infrastructure within the Plan Area is inadequate. Many of the streets do

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<sup>56</sup> Wilsey Ham Engineers, 2008, *Draft Ravenswood Business District Construction Cost Estimates for Infrastructure*, page 7.

not have storm drains, and those that do are unable to handle stormwater during peak events.<sup>57</sup>

a. Runnymede Storm Drain System

Approximately one-third of the city's stormwater drains into the Runnymede Storm Drain System outfall.<sup>58</sup> Stormwater for the Runnymede Storm Drain System is carried through a 72-inch reinforced concrete pipe (RCP) and ultimately flows into the San Francisco Bay.<sup>59</sup> Average stormwater discharge for the Runnymede Storm Drain System is 229 cubic feet per second (cfs) for a 10-year storm, 277 cfs for a 25-year storm, and 342 cfs for a 100-year storm. During peak stormwater events, the existing stormwater pipes are unable to handle stormwater flow.<sup>60</sup>

Stormwater is discharged through two TideFlex gates, located at the eastern terminus of Runnymede Street. The TideFlex gates discharge stormwater while preventing tidal inundation. During extremely high tides (at or above elevation 7.6 feet), the gates cease to function, which causes stormwater backup and local flooding. The TideFlex gates also operate at a reduced capacity, between 50 to 100 percent, during high tides greater than elevation 4.6 feet.

b. O'Connor Storm Drain System

The O'Connor Storm Drain System collects stormwater from multiple areas of the city and drains to the O'Connor detention pond and the O'Connor Pump Station.

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<sup>57</sup> Charpentier, Sean. Project Coordinator II, City of East Palo Alto. Personal e-mail communication with Carey Stone, DC&E, November 9, 2009.

<sup>58</sup> City of East Palo Alto, 2009, *City Staff Report on Draft Engineering Plan for the Ravenswood Business District (RBD)*, page 4.

<sup>59</sup> Wilsey Ham Engineers, 2009, *Runnymede Street Storm Drain Deficiencies Letter*, page 1.

<sup>60</sup> Wilsey Ham Engineers, 2008, *Draft Ravenswood Business District Construction Cost Estimates for Infrastructure*, page 7.

The O'Connor Pump Station receives stormwater from throughout the city and an at-grade canal, which runs along the eastern city limit.<sup>61</sup> The O'Connor Pump Station distributes stormwater outfall into San Francisquito Creek. The pump station has a capacity of 234 cfs.<sup>62</sup>

c. Planned Storm Sewer Infrastructure Improvements for the Specific Plan Area

Over most of the Plan Area, south of the topographic divide that is approximately at the southern boundary of 391 Demeter Street, stormwater flows southwards into the Runnymede Storm Drain System. As it drains northwards and cannot be connected to the gravity-driven system of the rest of the plan area, development of 391 Demeter Street would require a separate storm drain system.

The DEPLAN reviewed the capacity of the existing storm water system of the south of the Plan Area and proposed construction of a new, additional, Ravenswood Storm Water System. The Ravenswood Storm Water System would join the Runnymede system at the point of discharge into the existing surface channel at the end of Runnymede Street. The channel runs parallel to the levee to the O'Connor pumping station where the water is pumped over the levee back to the San Francisco Bay.

In addition, the stormwater channel from the end of Runnymede Street to the detention basin on O'Connor Street would be dredged, graded, and culverted next to the levee to accommodate 100-year flows. A berm would be built along the west side of the length of the detention channel to restrict the main channel overflows and allow water to back up from the pumping station and be held in the channel. In addition, the detention basin would be dredged and enlarged to provide additional storage capacity. The City is already moving forward with the offsite improvements associated with the

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<sup>61</sup> Charpentier, Sean. Project Coordinator II, City of East Palo Alto. Personal e-mail communication with Carey Stone, DC&E, November 9, 2009.

<sup>62</sup> Wilsey Ham Engineers, 2008, *RBD Storm Drainage Study: Re-routed to the Channel and the O'Conner Pump Station Memorandum*, page1.

Runnymede Storm Drain Phase II Project, which include the channel and pond improvements.<sup>63</sup>

The new system would be designed to protect most of the Plan Area for which redevelopment is proposed, from flooding as a consequence of storm drain back-up. The system would be designed to cope with largest storm that could realistically be expected once every 25 years (the 25-year storm).

### 3. Standards of Significance

Stormwater impacts associated with the Plan would be considered significant if the Plan would:

- a. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

### 4. Impact Discussion

This section describes the environmental impacts to stormwater that would result from implementation of the Ravenswood/4 Corners TOD Specific Plan.

- a. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*LTS*)

Infrastructure upgrades are included in the Specific Plan to ensure that the southern part of the Plan Area, where most of the development would occur, would have an adequate storm drainage system. Development in the northern part of the Plan Area is restricted to the 391 Demeter Street Property.

Development under the Specific Plan includes Policy UTIL-1.1 that ensures development of this area includes adequate infrastructure for all parts of the Plan Area.

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<sup>63</sup> City of East Palo Alto website. <http://www.ci.east-palo-alto.ca.us/planningdiv/runnymede.html>, accessed September 1, 2011.

Installation of the new stormwater drainage system for the southern part of the Plan Area, as included in the Specific Plan, and for any development in the northern part, which is not included in the Plan, could cause environmental impacts that would be analyzed in separate CEQA reviews.

With these policies in place, there would be a *less-than-significant* impact from provision of adequate stormwater facilities.

## 5. Cumulative Impacts

Development of the Plan Area in conjunction with other planned development that would affect the inflows to the Runnymede storm drainage system has been taken into account in the calculations in the DEPLAN.

Planned upgrades to the storm water system due to development in the northern part of the Plan Area, if upgrades are connected to the existing system, would need to assess the cumulative load from existing and planned development. This would be part of the CEQA review of any infrastructure extension. There would therefore be *no cumulative impacts*.

### D. Solid Waste and Recycling

#### 1. Regulatory Framework

This section describes the regulatory setting as it relates to solid waste and recycling in the Ravenswood/4 Corners Transit Oriented Development Specific Plan area.

##### a. State Regulation

##### i. California Integrated Waste Management Act

California Integrated Waste Management Act of 1989 (AB 939 or Public Resources Code Section 40050 et seq.)<sup>64</sup> set a requirement for cities and counties

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<sup>64</sup> Public Resources Code Section 40050-40063, <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=prc&group=40001-41000&file=40050-40063>, accessed on November 16, 2011.

throughout the State to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. To help achieve this, the Act requires that each city and county prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of on-going landfill capacity. As part of the California Integrated Waste Management Board's (CIWMB) Zero Waste Campaign, regulations affect what common household items can be placed in the trash. As of February 2006, household materials including fluorescent lamps and tubes, batteries, electronic devices and thermostats that contain mercury are no longer permitted in the trash.<sup>65</sup>

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on two factors: a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CIWMB sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CIWMB with an update of its progress in implementing diversion programs and its current per capital disposal rate.<sup>66</sup>

*ii. California Solid Waste Reuse and Recycling Access Act of 1991*

The California Solid Waste Reuse and Recycling Access Act (Public Resources Code Sections 42900 et seq.)<sup>67</sup> requires areas to be set aside for collecting and loading recyclable materials in development projects. The Act required the CIWMB to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt

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<sup>65</sup> California Integrated Waste Management Board's Zero Waste Campaign's website, <http://www.zerowaste.ca.gov>, accessed on August 20, 2007.

<sup>66</sup> California Integrated Waste Management Board, <http://www.calrecycle.ca.gov/LGCentral/Basics/PerCapitaDsp.htm#Jurisdiction>, accessed on July 30, 2010.

<sup>67</sup> Public Resources Code Section 42900-42901, <http://www.leginfo.ca.gov/cgi-bin/waisgate?WAIISdocID=47078826743+0+0+0&WAIISaction=retrieve>, accessed on November 16, 2011.

the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

b. Local Regulation

i. *East Palo Alto General Plan*

Solid waste is addressed in the Conservation and open Space Element of the General Plan. Goal 3.0 calls for the City to reduce per capital volume of solid waste. Policy 3.1 calls for the City to work in concert with San Mateo County source reduction and recycling plans to reduce the per capita production of solid waste.

**2. Existing Conditions**

East Palo Alto is a member of the South Bay Waste Management Authority (SBWMA), a joint powers agency whose other members include Atherton, Belmont, Burlingame, Foster City, Hillsborough, Menlo Park, Redwood City, San Carlos, San Mateo, West Bay Sanitary District, and San Mateo County. The Shoreway Environmental Center (SEC) serves as a regional solid waste and recycling facility for the receipt, handling, and transfer of solid waste and recyclables collected from the SBWMA service area (southern and central San Mateo County). The SEC receives solid waste and recyclables and consolidates them into large transfer trailers for shipment offsite to the Ox Mountain Landfill and to recycling facilities for construction and demolition waste, and organics materials.<sup>68</sup>

a. Transfer Station

Solid waste and recyclable materials collected in East Palo Alto are initially taken to the SEC, the former Shoreway Recycling and Disposal Center, located in San Carlos. The SEC is operated by SBWMA and is a solid waste transfer station and material recovery facility with a permitted operating ca-

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<sup>68</sup> RethinkWaste website, <http://www.rethinkwaste.org/>, accessed on December 5, 2011.

capacity of 3,000 tons per day (TPD).<sup>69</sup> On average, the SEC receives 772 TPD, of which 494 TPD are diverted from the landfill.

The City of East Palo Alto contributes a daily average of 40 TPD to the SEC. Of the 40 TPD of solid waste, 13 TPD are diverted from the landfill. In 2008, East Palo Alto sent 1,327 tons of recyclable material and 2,087 tons of yard trimming/compostable materials to the SRDC.<sup>70</sup>

There are plans to reconfigure the transfer station and build a new recycling facility capable of handling a single stream recycling program for the 12 partner agencies that use this facility.<sup>71</sup> This reconfiguration will increase the level of recycling in East Palo Alto and help the City meet its 50 percent recycling goal under AB 939.

b. Landfills

The majority of the solid waste generated in East Palo Alto is transported to the Ox Mountain Landfill near Half Moon Bay. The landfill, owned and operated by Allied Waste, is expected to reach capacity in 2028.<sup>72</sup> In 2008, the landfill received 643,870 tons of solid waste, of which 2.3 percent was from East Palo Alto.<sup>73</sup>

In 2004, East Palo Alto exceeded the 50 percent diversion goal required by the IWMA, diverting 84 percent of the solid waste collected in the city. According to the most recent data available from the San Mateo Recycle Works pro-

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<sup>69</sup> Gans, Hilary. Facility Operations Contract Manager, SBWMA. Personal email communication with Alejandro Huerta, DC&E, March 3, 2009.

<sup>70</sup> Mennie, Carl. Assistant General Manager, Allied Waste. Personal email communication with Carey Stone, DC&E, November 12, 2009.

<sup>71</sup> Future Plans, <http://www.rethinkwaste.org/shoreway-facility-future-plans>, accessed on March 18, 2009.

<sup>72</sup> Boyd, Evan. General Manager, Allied Waste. Personal communication with Alejandro Huerta, DC&E, May 26, 2009.

<sup>73</sup> Mennie, Carl. Assistant General Manager, Allied Waste. Personal email communication with Carey Stone, DC&E, November 12, 2009.

gram, the diversion rate slightly decreased to 83 percent in 2005 and to 82 percent in 2006.<sup>74</sup>

### 3. Standards of Significance

Solid waste supply impacts associated with the Plan would be considered significant if the Plan would:

- a. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- b. Comply with federal, state, and local statutes and regulations related to solid waste.

### 4. Impact Discussion

This section describes the environmental impacts to solid waste services that would result from implementation of the Ravenswood/4 Corners TOD Specific Plan.

- a. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (*LTS*)

The Plan Area is served by the SBWMA. Long term planning indicates that the Ox Mountain Landfill that takes East Palo Alto's waste has capacity until 2028. Programs in all SBWMA member cities are working to divert waste from the Ox Mountain Landfill to prolong its life. East Palo Alto accounts for a relatively small percentage (2.3 percent in 2008) of the waste disposed at this landfill. The City of East Palo Alto has several General Plan policies that aim at reducing the per capita waste disposal volume. Development under the Specific Plan would have a *less-than-significant* impact on solid waste disposal and landfill capacity.

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<sup>74</sup> Diversion Rates of San Mateo County Jurisdictions, [http://www.recycleworks.org/div\\_rates/html](http://www.recycleworks.org/div_rates/html), accessed on November 12, 2009.

- b. Comply with federal, state, and local statutes and regulations related to solid waste. (*LTS*)

As part of the City of East Palo Alto, the Plan Area would be subject to existing Municipal Code and General Plan policies that govern compliance with existing federal, state, and local statutes and regulations pertaining to solid waste, and there would be a *less-than-significant* impact.

#### **5. Cumulative Impacts**

As part of the City of East Palo Alto, solid waste disposal from the Plan Area is provided by the SBWSA. Waste disposal needs for all member agencies are considered together in long-term planning by the SBWSA. The SBWSA has determined that, given current population projections, there is sufficient capacity at the Ox Mountain Landfill until 2028. There would therefore be *no cumulative impacts*.

*CITY OF EAST PALO ALTO*  
*RAVENSWOODS/4 CORNERS TOD PECIFIC PLAN*  
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