

## 4.14 UTILITIES

This section provides a discussion of the existing conditions and potential impacts relating to water supply, wastewater services, and solid waste from the East Washington Place project.

### A. *Water Supply*

This section describes existing water supply conditions for the proposed project site and its surroundings, as well as a discussion of the potential impacts the project may have on domestic water supplies. A preliminary fire-flow study was conducted by CSW/Stuber-Stroeh (August 19, 2004) and was submitted to the City as part of the project application. A copy of the study is available for review at City Hall. The conclusions of this study were used for the following discussion on water distribution infrastructure.

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

The following section lists and explains local, regional and State regulations addressing water supply planning.

##### a. *Petaluma General Plan*

Policies and programs in the Petaluma General Plan determine the City's approach to enhancing and managing its water supply. Relevant policies and programs are included in Table 4.14-1, including policies from the Water Resources Element of the General Plan.

##### b. *Water Master Plans*

As part of the 2025 General Plan process, a Water Demand and Supply Analysis Report,<sup>1</sup> Water Distribution System Master Plan, and Groundwater Feasibility Study were prepared to address the growth anticipated during the 2025 General Plan cycle. The plans will work to identify how various water sources will be utilized to meet anticipated water demand in the future. A Recycled Water Distribution System Master Plan was developed for the 2025 General Plan.

The City of Petaluma has also prepared a 2005 Urban Water Management Plan, which was published in May 2007. The Urban Water Management Plan projects water use, water supply, and the use of recycled water. The Urban Water Management Plan also describes water conservation

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<sup>1</sup> Dodson Engineers, 2006. *Water Demand and Supply Analysis Report*. Prepared for City of Petaluma. Technical Appendix C to the General Plan 2025, Vol. 2.

TABLE 4.14-1 **PETALUMA GENERAL PLAN 2025 POLICIES AND PROGRAMS—WATER SERVICES**

Policy/Program Number	Policies and Programs
<i>Water Resources Element</i>	
Policy 8-P-1	Optimize the use of imported water from the SCWA to provide adequate water for present and future uses.
Policy 8-P-2	Continue to work to maintain water supply agreements with SCWA to ensure adequate potable water.
Policy 8-P-4(A)	The City shall continue to monitor the demand for water for projected growth against actual use, and ensure that adequate water supply is in place prior to, or in conjunction with, project entitlements.
Policy 8-P-5	Develop alternative sources of water to supplement imported supply.
Policy 8-P-6	The City shall utilize the Water Demand and Supply Analysis Report, June 2006 and any amendments thereto, for monitoring, assessing and improving the City’s municipal water supply.
Goal 8-G-3	Maximize the use of recycled water as a potable water offset to manage water demands, and meet regulatory requirements for wastewater discharge.
Goal 8-G-5	Maximize water conservation measures to improve water use efficiency and reduce overall water demand.

Source: City of Petaluma General Plan 2025, May 2008.

methods to implement water demand management measures. The Urban Water Management Plan projected that total demand would be close to, but would not exceed, water supply in 2025.<sup>2</sup> The Urban Water Management Plan projects that in 2010, water demand would not exceed water supply under a multiple-dry year period.<sup>3</sup>

c. Sonoma County Water Agency’s Urban Water Management Plan

California Water Code, Section 10610 et seq, requires the Sonoma County Water Agency (SCWA) to prepare a regional Urban Water Management Plan.<sup>4</sup> The UWMP 2005 serves as the Urban Water Management Plan for the Agency and its eight primary water contractors, and describes the availability of water, water use, reclamation, and water conservation activities. This plan concludes that based on the water supplies available to the Agency’s water transmission system and its eight

<sup>2</sup> City of Petaluma, May 2007, *2005 Urban Water Management Plan*, page 38.

<sup>3</sup> City of Petaluma, May 2007, *2005 Urban Water Management Plan*, page 39.

<sup>4</sup> Sonoma County Water Agency, *2005 Urban Water Management Plan*.

water contractors that the Agency has adequate water supply through the 2030 planning horizon of this UWMP, except for single-dry years, starting in 2020.<sup>5</sup>

d. Senate Bill 610 (SB 610)

As a result of the passage of SB 610 in 2001, CEQA and the Water Code require that a Water Supply Assessment (WSA) be prepared by the local water agency for certain enumerated projects (Pub. Res. Code §21151.9; Water Code §10912). This includes a proposed shopping center employing more than 1,000 persons or having more than 500,000 square feet of floor space. The proposed project would develop 364,000 square foot of retail space and the City has determined that no WSA is required.<sup>6</sup>

## 2. Existing Conditions

This section summarizes the existing water system in the City of Petaluma and conditions that apply specifically to the proposed project site.

a. Existing Water System<sup>7</sup>

The City of Petaluma receives the majority of its water supply from the SCWA. This water originates from watershed areas tributary to the Russian River. The SCWA water flows into the City via the Petaluma Aqueduct, which is a 16.5-mile-long, 24-inch and 33-inch diameter pipeline located between Santa Rosa and Petaluma. Under the City's current contract with SCWA, the 11<sup>th</sup> Amended Agreement for Water Supply, Petaluma has access to an average day maximum month (ADMM) delivery rate of 21.8 million gallons per day (mgd) and an annual supply limit of 13,400 acre-feet/year (afy). The city was limited to an ADMM rate of 17.1 mgd (19,154 afy) under a Temporary Impairment Memorandum of Understanding (MOU) with SCWA.<sup>8</sup> The MOU expired in September, 2008 and The SCWA and water contractors are currently negotiating a new MOU.<sup>9</sup>

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<sup>5</sup> Sonoma County Water Agency, *2005 Urban Water Management Plan*, page 7-1, SCWA website, [http://www.scwa.ca.gov/\\_pdf/2005\\_uwmp\\_report.pdf](http://www.scwa.ca.gov/_pdf/2005_uwmp_report.pdf). Accessed on December 11, 2008.

<sup>6</sup> Michael Ban, Department of Water Resources and Conservation, City of Petaluma. Email correspondence with Leslie Wilson, DC&E, December 9, 2008.

<sup>7</sup> The information provided about the City's existing water system is based on a memorandum prepared by Michael Ban, Director Water Resources & Conservation; Michael Moore, Community Development Director; and Pamela Tuft, Director of General Plan Administration for Michael Bierman, City Manager, dated March 31, 2006 and discussed by the Petaluma City Council on its June 6, 2006 agenda. Information from the Dodson, 2006, *Water Demand & Supply Analysis Report* was also used.

<sup>8</sup> The Temporary Impairment Memorandum of Understanding was created by the Sonoma County Water Agency and issued to the Agency's contractors.

<sup>9</sup> Michael Ban, Department of Water Resources and Conservation, City of Petaluma. Email correspondence with Leslie Wilson, DC&E, December 9, 2008.

In 2002, the City delivered more than 3,600 million gallons (11,000 afy) of potable water to Petaluma's residents and businesses. The City's water conservation program, which began in 1998, saves approximately 66 million gallons of potable water per year (mgy). The City completed an analysis of future water demands based on its General Plan land use map. Based on this analysis, Petaluma's total water demand by 2025 was anticipated to be approximately 5,139 million gallons per year (15,771 afy), which is more than the City's current entitlement from SCWA of 4,366 mgy (13,400 afy).

Capacity shortfalls were anticipated to occur throughout the SCWA service area as communities within Sonoma County were expected to grow. To meet this increasing demand, the SCWA designed a Water Supply and Transmission System Project in the 1990's to increase its permitted water rights from 75,000 afy to 101,000 afy and the transmission system capacity from 92 million gallons a day (mgd) to 149 mgd. However, SCWA's EIR for the Water Supply and Transmission System Project was challenged in litigation in 2003 and SCWA elected to begin a new EIR process on the renamed project, the Water Supply, Transmission and Reliability Project ("Water Project"). This EIR has not yet been released for public review.<sup>10</sup> As a result, Petaluma's water planning contained in the 2025 General Plan does not assume or rely on an increase in SCWA water supply. Rather, the City's General Plan identifies a mix of water supply sources to meet projected and annual maximum month water demands through 2025. Water reduction measures identified in the 2025 General Plan include the expanded use of recycled water, water conservation, and emergency groundwater use.<sup>11</sup> Subsequent to adoption of the General Plan, the City adopted a Recycled Water Plan, Water System Master Plan and Groundwater Master Plan.<sup>12</sup> These plans are being implemented through the City's Capital Improvement Program.

Regarding long-term demand, Table 4.14-2 depicts the anticipated demand for water resulting from the buildout of 2025 General Plan and the sources of water that the City plans to use to meet this demand. The Water Demand & Supply Analysis Report<sup>13</sup> provides an overview of the specifics of each of the water off-set programs, including cost estimates. The General Plan also includes policies that would implement these programs. As shown in Table 4.14-2, projected annual demand in the SCWA service area would be 5,139 mgy in 2025 and new water sources in addition to SCWA entitlements would provide an excess of approximately 18 mgy.

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<sup>10</sup> Kevin Booker, SCWA, personal communication with Lisa Katz, DC&E, on June 13, 2008.

<sup>11</sup> City of Petaluma, May 2008, *City of Petaluma: General Plan 2025*, page 8-5.

<sup>12</sup> City of Petaluma, June 2006, *Water Demand & Supply Analysis Report*, page 1-1.

<sup>13</sup> Dodson Engineers, 2006, *Water Demand and Supply Analysis Report*. Prepared for City of Petaluma.

TABLE 4.14-2 **PROJECTED WATER SOURCES AND DEMAND FOR THE 2025 GENERAL PLAN**

<b>Annual Water Source/Demand</b>	<b>Annual Amount</b>
Projected 2025 Demand	5,139 million gallons
Existing Source - SCWA Entitlement	4,366 million gallons
<i>Anticipated Shortfall Without New Sources</i>	<i>-773 million gallons</i>
New Source - Increased Water Recycling	464 million gallons
New Source - Increased Conservation	266 million gallons
New Source - Utilizing of Standing Wells	61 million gallons
Resulting Total Sources (Existing + New)	5,157 million gallons
<i>Anticipated Excess With New Sources</i>	<i>18 million gallons</i>
<b>Average Daily Maximum Month Water Source/Demand</b>	<b>ADMM Amount</b>
Projected 2025 Demand	22.1 mgd
Existing Source - SCWA Impairment MOU Limit	17.1 mgd
<i>Anticipated Shortfall Without New Sources</i>	<i>-5.0 mgd</i>
New Source - Increased Water Recycling	3.57 mgd
New Source - Increased Conservation	1.39 mgd
New Source - Utilization of Standing Wells	0.5 mgd
Resulting Total Sources (Existing + New)	22.56 mgd
<i>Anticipated Excess With New Sources</i>	<i>0.46 mgd</i>

Source: Dodson Engineers, 2006, *Water Demand and Supply Analysis Report*. Prepared for City of Petaluma.

Since the General Plan was adopted in May 2008, water conservation programs outlined in the Plan have started to produce results and have resulted in considerable water savings. In addition, the recession in 2008-9 has resulted in far fewer anticipated development projects coming to fruition. These factors, together with the improvements to supply outlined above have ameliorated the situation and the City now does not now anticipate a shortfall in 2011<sup>14</sup>.

The City has been actively developing additional water supplies since the issue of a potential short-fall was reported in the General Plan. In June 19, 2006, the City adopted Resolution No. 2006-120, a resolution of intent to amend the City's water capacity charges for new development in the

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<sup>14</sup> Email from Pamela Tuft, Petaluma Water Department, to Steve Simmons, Michael Ban, and Rem-leh Scherzinger, April 8, 2009.

City.<sup>15</sup> The final program was adopted by the City Council in May, 2008, which provides a mechanism to obtain additional water supply for the City including a water capacity fee to pay the fair share costs towards development of additional water supplies. The new fees became effective in August, 2008.<sup>16</sup>

b. Distribution to the Project Site

Petaluma's water distribution system is divided into five topographically defined pressure zones. The project site is within the Zone I pressure zone for water service and fire flow. An existing 10-inch diameter water line runs along East Washington Street, which provides the existing water service to the project site.<sup>17</sup> There is also an existing connection to the 8-inch diameter water line that runs along Lindberg Lane.<sup>18</sup>

Historical water use at the former Kenilworth Junior High property has averaged 8,949 CCF (894,900 cubic feet) per year. Use ran as high as 10,159 CCF per year in 2001-2002. With the demolition of the Junior High School, water use has been reduced to 8,018 CCF, or 20.54 afy. Most of the water use is for irrigation of the fields, such as the Little League field, used by local youth sports under agreement with the applicant as owners of the private property. This volume of 8,018 CCF is the current baseline water use for the property.<sup>19</sup>

### 3. Standards of Significance

The proposed project would have a significant impact related to water supply if it would:

1. Have insufficient water supplies available to serve the project from existing and identified entitlements and resources.
2. Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

### 4. Impact Discussion

The following provides an assessment of the proposed project on water, both with regards to water supply and distribution.

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<sup>15</sup> The June 19, 2006 resolution and the supporting Water Capacity Charge Update Report, Bartle Wells Associates (May 2006) are available for review at the City Clerk's Office, 11 English St., Petaluma.

<sup>16</sup> Mike Ban, City of Petaluma Water Resources Director. Email correspondence with Lisa Katz, DC&E, June 17, 2008.

<sup>17</sup> Sheet G007, Petaluma Water System. Revision Date September 23, 2004.

<sup>18</sup> CSW/Stuber-Stroeh, 2004, *Preliminary Fire Flow Study*, August 19, Attachment 1. Available for review at City Hall, Community Development Department, 11 English St., Petaluma.

<sup>19</sup> Bruce Qualls, Regency Development Corporation. Personal email communication, November 14, 2006.

a. Project Impacts

1. Have insufficient water supplies available to serve the project from existing and identified entitlements and resources.

The proposed project would result in a need for potable water to serve the retail and office components. As noted above, annual water demand for the site, following demolition of the middle school, is 6.8 mgd (or 20.54 afy). The proposed project would result in a demand of 13.065 mgd, which would be an increase of 6.26 mgd over existing demand.<sup>20</sup> The General Plan had projected the water demand of 13.065 mgd for the project site, as well as an additional 5.94 mgd for irrigational water use.<sup>21</sup> However, the proposed project would include the provision of an irrigation system that would be connected to the City's recycled water system. Therefore, water demand for the proposed project would not exceed the water supply planned for the site under the City's General Plan and impacts to water supply would be *less than significant*.

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

i. Water Distribution

Using the minimum flow requirements per the Petaluma fire code, as provided by the Petaluma Fire Department, the preliminary fire flow study prepared by CSW/Stuber-Stroeh utilized the City's KYPIPE Zone 1 model to design an on-site water system that would:

- ◆ Provide commercial fire flow of 2,500 gallons per minute (gpm) at 30 pounds per square inch (psi) in the retail portion of the project.
- ◆ Maintain pipe velocity at below 10 feet per second (fps) in new pipes.

The on-site system would be a loop system with two connections to the existing 10-inch East Washington Street line and one connection to the 8-inch Lindberg Lane line. The new lines under the site would be 8 or 12 inches.

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<sup>20</sup> Dodson Engineers, 2006, *Water Demand and Supply Analysis Report*. Prepared for City of Petaluma. Demand factors identified on page 2-5 in the *2006 Water Supply and Demand Analysis Report* were used to quantify the project-specific water demand. Demand calculated using rate of 76 gpd per 1,000 sq ft of office uses and a rate of 95 gpd per 1,000 sq ft for 364,000 sq ft of commercial uses. The totals were then added and multiplied by 365 to indicate an annual water demand.

<sup>21</sup> City of Petaluma, May 2008, *City of Petaluma: General Plan 2025*, page 2-9. The General Plan designates the project site as Mixed Use, which has a water use factor of 493.2 gallons per day per acre. For the 33-acre site, these use factors would result in a projected demand of 5.94 mgd (493.2 gpd/acre x 33 acres = 16,275.6 gpd, 16,275.6 gpd x 365 days = 5,940,594 mgd, or 5.94 mgd).

*ii. Water Main Replacement*

The proposed project will contribute financially towards the replacement of a water main that will help supply water to the project. Under the City's fee procedure adopted in August 2008, the project would be subject to pay a fair share fee toward the replacement of the existing 10-inch water main with an 18-inch water main.

The City had already identified the need to replace the existing 10-inch main due to its age and condition as part of its Water Capital Improvement Program<sup>22</sup>. Due to the main's importance in the City's distribution system, it would need to be replaced regardless of the proposed project.<sup>23</sup> Since the water main is an existing pipeline within an existing roadway, an upsizing of the facility would not result in significant physical impacts to the environment. Construction and operation of the new facility would take place within the existing right-of-way for East Washington Street, which has already been disturbed with roadway infrastructure and related utility (e.g. street lighting). Aside from necessary improvements to this main, the project would not require the construction of new water supply facilities or the expansion of existing facilities off-site.

Because of this, impacts associated with the replacement of the water main would be *less-than-significant*.

*iii. Recycled Water Supply*

Irrigation water for the site will be supplied from the City's "purple pipe" (recycled water) system through a connection on Lindberg Lane. The City will be extending this system to Lindberg Lane, in accordance with the City's 2008 Recycled Water Master Plan and 2006 Dodson Report.<sup>24</sup> As of June, 2009, there was no time framework for the work or detailed project description and this aspect of the project cannot be analyzed further at this point.

We anticipate that the extension of the water supply system would have a *less-than-significant* impact related to water distribution.

b. Cumulative Impacts

As discussed in Section 2(a) of this chapter, according to the General Plan (2008), if development occurred as anticipated in the General Plan, there was anticipated to be a shortage of water in 2011.

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<sup>22</sup> City of Petaluma, *Fiscal Year 2009 Budget: Water Utility Projects*, page CIP-101, available at <http://cityofpetaluma.net/finance/pdf/2009budget/cip/water-utility-cip.pdf>, accessed April 1, 2009.

<sup>23</sup> Dean Eckerson, City of Petaluma, Water Resources and Conservation Department. Email correspondence, January 16, 2007.

<sup>24</sup> The Recycled Water Master Plan has not yet been formally adopted. The authoritative policy document remains the 2006 Dodson Report that was part of the technical appendices for the certified General Plan 2025 EIR.

However, due to effective water conservation measures, and improvements to the water supply (including measures that are part of the proposed project), this is now no longer expected to be the case. Although the proposed project would add to growth and increase demand for potable water in Petaluma, the project in addition to the other anticipated growth, is anticipated to result in a *less-than-significant* cumulative impact.

## 5. Impacts and Mitigation Measures

No impacts or mitigation measures are recognized as a consequence of water demand or distribution.

### B. Wastewater Services

This section describes existing wastewater services conditions for the proposed project site and its surroundings, as well as an assessment of the potential impacts related to wastewater services associated with the project. A Preliminary Sewer Capacity Study was prepared by CSW/Stuber-Stroeh Engineering Group in September 2004 as part of the project application. The following incorporates the conclusions of this study. The full report is available for review at City Hall.

#### 1. Regulatory Framework

The following section lists local regulations on wastewater services for the City of Petaluma.

##### a. Petaluma General Plan

Policies and programs in Water Resources Element of the General Plan inform the City's approach to enhancing and managing its wastewater services. Relevant policies and programs are shown in Table 4.14-3.

##### b. Petaluma Sewer Master Plan

The City adopted a Sewer Master Plan in 1985 which is now out of date due to the growth that has occurred since 1985. The Sewer Master Plan was not updated with the General Plan. However, the City is currently preparing a Sewer Master Plan Update.<sup>25</sup>

#### 2. Existing Conditions

Petaluma's sanitary wastewater facilities provide collection, treatment, disposal and reuse of domestic, industrial and commercial wastewater generated in Petaluma and the unincorporated community of Penngrove.

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<sup>25</sup> Curt Bates, February 18, 2009, Memorandum to Betsi Lewitter regarding East Washington Place Administrative Draft EIR dated 12/22/2008.

TABLE 4.14-3 **PETALUMA GENERAL PLAN POLICIES AND PROGRAMS**

<b>Policy/Program Numbers</b>	<b>Policies and Programs</b>
<i>Water Resources</i>	
Policy8-P-16	Comply with the current Statewide General Waste Discharge Requirements concerning the operation and maintenance of the City’s sanitary sewer collection system.
Policy8-P-16(A)	Perform condition assessment of existing facilities.
Policy8-P-16(C)	Perform regular cleaning and inspection to help eliminate sanitary sewer overflows.
Policy8-P-16(D)	Fund collection system infrastructure replacement on a 100-year life cycle.
Policy8-P-16(E)	Regularly update the sanitary sewer flow model and make improvements necessary to support development.

Source: City of Petaluma General Plan 2025.

a. Wastewater Collection

The City of Petaluma’s wastewater collection system consists of over 200 miles of sewer collection lines. These lines are continuously inspected using remote cameras inserted into the pipelines mains. pipes with problems are either repaired or cleaned with high pressure vacuum trucks.

The closest sewer mains to the project site are located on Lindberg Lane and East Washington Street. The former Kenilworth Junior High School connected to the sewer system with a 6-inch sewer line that increases to 8 inches before reaching the 21-inch sewer main on Lindberg Lane.<sup>26</sup> There are approximately 15.9 acres of residential uses of Highway 101 that connect to the Lindberg Lane 8-inch sewer line through the project site. This service area was included in the Preliminary Sewer Capacity Study when determining the sewer capacity of the sewer trunk line in Lindberg Lane.

There is also an existing 8-inch sewer connection at the Petaluma Swim Center and Skate Park that increases to a 10-inch line along Ellis Street, then to a 15-inch line on Madison Street, until it reaches the 33-inch trunk sewer near Payran Street.<sup>27</sup> Exhibit D of the Preliminary Sewer Capacity Study depicts the area that is assumed to contribute to the sewer demand for the 33-inch trunk sewer line on Madison Street near Payran Street. This area generally includes the area between Highway 101 and Noriel Lane, between East Washington Street or Washington Creek and Lynch

<sup>26</sup> CSW/Stuber-Stroeh, 2004, *Preliminary Sewer Capacity Study*, page 2. Available for review at City Hall, Community Development Department, 11 English St., Petaluma.

<sup>27</sup> CSW/Stuber-Stroeh, 2004, *Preliminary Sewer Capacity Study*, page 2.

Creek. On the other side of Highway 101, the contribution area includes much of the land between East Washington Street and Lynch Creek.

b. Wastewater Treatment

The City of Petaluma operates a wastewater treatment plant at 950 Hopper Street and oxidation ponds at 4400 Lakeville Highway. The City contracts with Veolia Water North America to operate these secondary treatment<sup>28</sup> facilities.

The wastewater treatment facility is staffed with seven State-certified operators and two maintenance personnel. It has a dry weather design capacity of 5.2 mgd and treats an average dry weather flow of 4.5 mgd.<sup>29</sup> The City recycles approximately 50 percent of its annual average dry weather flow of wastewater through irrigation.<sup>30</sup> Water recycled through irrigation would not be available for project use. Average daily flows to the plant have been decreasing in recent years, from 5.1 mgd in 1996 to 4.8 mgd in 2002, most likely as a result of local water conservation efforts. This facility has been in operation since 1938 and no longer can support the City's growing populace.

A system of nine collection system pump stations pumps wastewater to the City's wastewater treatment facility. After receiving secondary treatment, treated effluent is discharged into the Petaluma River between October 20 and May 1 of each year. Wastewater is recycled during the summer for irrigation of 800 acres of agricultural land and a golf course.

The City recently built a new treatment plant with greater capacity and upgraded features. The City certified the EIR for the new facility in 2002. To treat the community's wastewater, the new facility includes extended aeration, secondary clarifiers, oxidation ponds, tertiary filters, UV disinfection, and treatment wetlands.<sup>31</sup> In the new facility (Ellis Creek Water Recycling Facility), wastewater passes through a series of settling marshes, where bacteria and algae will remove nutrients, heavy metals and pathogens.<sup>32</sup> Construction of the facility began in 2006 and the facility is currently in operation.

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<sup>28</sup> A secondary treatment facility treats the biological content such as that derived from human waste and soaps.

<sup>29</sup> Mike Ban, City of Petaluma Water Resources Director. Email correspondence with Lisa Katz, DC&E, June 17, 2008.

<sup>30</sup> City of Petaluma Department of Water Resources and Conservation website, <http://www.cityofpetaluma.net/wrcd/whatwedo.html>, accessed on May 28, 2008.

<sup>31</sup> City of Petaluma Department of Water Resources and Conservation website, <http://www.cityofpetaluma.net/wrcd/whatwevedone.html>, accessed on June 15, 2006.

<sup>32</sup> Glen Martin, San Francisco Chronicle Environment Writer, "Green technology to make sewage a less dirty word: \$110 million wetlands-based wastewater facility under construction," Tuesday, March 7, 2006.

To help protect the long-term water quality of the Petaluma River, the City plans to continue its summer storage operations and possibly expand reclamation once the new plant comes on-line. The wastewater effluent will receive a higher degree of treatment at the new plant, which will result in more options for effluent discharge. The new facility will have a average dry weather flow capacity of 6.7 mgd.<sup>33</sup>

### 3. Standards of Significance

The proposed project would have a significant impact related to wastewater services if it would:

1. 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.
2. Have insufficient wastewater treatment capacity available to serve the project's projected demand in addition to existing demand.
3. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

### 4. Impact Discussion

The following provides an assessment of the proposed project on the wastewater services.

#### a. Project Impacts

To analyze the potential impact of the proposed project on the City's wastewater collection system, CSW/Stuber-Stroeh completed a Preliminary Sewer Capacity Study in 2004. The 2004 Preliminary Sewer Capacity Study analysis included a review of the City of Petaluma General Plan, sewer system drawings maintained by the City of Petaluma, topography from the City of Petaluma (2000), the Sanitary Sewer Capacity Study (Brown & Caldwell, 1985) and Lindberg Lane Sanitary Sewer Improvement Plans (Coastland Civil Engineering, 2001). These plans and studies were incorporated into the assumptions and calculations used in the Preliminary Sewer Capacity Study analysis.<sup>34</sup>

The 2004 Preliminary Sewer Capacity Study was completed assuming a larger project,<sup>35</sup> including the replacement of the existing swim center and skate park with retail uses; however, the report's conclusions are still applicable to the proposed project, since the proposed project would generate less wastewater than was analyzed under the larger project scenario.

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<sup>33</sup> Mike Ban, City of Petaluma Water Resources Director. Email correspondence October 31, 2006.

<sup>34</sup> CSW/Stuber-Stroeh, 2004, *Preliminary Fire Flow Study*, August 19, page 1. Available for review at City Hall, Community Development Department, 11 English St., Petaluma.

<sup>35</sup> This project defined in 2005 NOP and subsequent EIR.

The Lindberg Lane and Madison Street trunk would serve the project. The majority of the project would be connected to the Lindberg Lane sewer line. The project would include a change in the sanitary sewer line. As illustrated in utility plans supplied by the applicant, a new 8-inch sanitary sewer will connect to the existing sanitary sewer line on the southeastern section of Kenilworth Drive. The contractor will verify the exact location and depth of the new 8-inch sanitary sewer line prior to construction. The remainder of the retail uses, including the anchor and its garden center, as well as the two pad retail buildings at the East Washington/Kenilworth Drive entrance, would be connected to the sewer line that extends through the swim center. It is possible the sewer line would be taken off-line for approximately two hours while the connection is established, however this would only be a potential short-term interruption in service. Full service would be restored immediately following the completion of the connection.

1. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities

For the sewer study, CSW/Stuber-Stroeh analyzed the sewer flows that would be anticipated from the proposed project, in addition to the sewer flows from the existing development within the area served by the sewer trunk lines in Lindberg Lane and Madison Street near Payran Street. In addition to the anticipated sewer generation, the study also assumed that there would be some infiltration of water through cracks in the pipes, which would use available capacity. Furthermore, the study adjusted the anticipated sewer generation to account for existing uses that would be replaced by the project (i.e. the former school uses) to determine the net increase of demand for sewer capacity resulting from the proposed project.

The conclusions of the 2004 sewer study show that the proposed project would not exceed the available capacity of the off-site wastewater collection infrastructure. In conclusion, no off-site improvements to wastewater treatment facilities would be needed as a consequence of the proposed project and the impacts would be *less than significant*.

2. Have insufficient wastewater treatment capacity available to serve the project's projected demand in addition to existing demand.

The proposed project would not require or result in the construction of a new wastewater facility. As noted earlier, the new Ellis Creek Water Recycling Facility was recently completed and the facility is in operation. This new facility was deemed necessary prior to the proposed project as the other wastewater treatment facility was unable to accommodate the needs of the City and was operating near capacity. According to the Draft EIR completed for the 2025 General Plan Update, the new facility was planned to accommodate projected city buildout to 2025 and beyond, which

would include the proposed project.<sup>36</sup> As the facility has now been completed, there would therefore be a *less-than-significant* impact as a consequence of the proposed project.

3. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

As the new wastewater facility has now been completed and is operational, the City is in compliance with RWQCB requirements. Construction of the project would involve an increase in the amount of sanitary wastewater generated on the site. However, the project would not require the expansion of existing wastewater facilities. As a result, the project would result in a *less-than-significant* impact.

b. Cumulative Impacts

A list-based approach has been used for this cumulative analysis. The analysis considers the development projects listed in Appendix E (Cumulative Projects) and whether this project would have significant cumulative impacts on Petaluma's wastewater service in combination with the cumulative projects.

As stated above, the sewer capacity study completed for the project confirmed that the proposed project, by itself, would not exceed the available capacity of the off-site wastewater collection infrastructure or require construction of a new wastewater facility. As explained above, the cumulative demand for wastewater services created by this project in combination with other projects has already been accounted for in long-term facility planning. As a result, while this project in combination with others would increase demand for wastewater capacity, the City's planned provision of adequate capacity reduces this impact to a *less-than-significant* level.

**5. Impacts and Mitigation Measures**

As no significant impact related to wastewater was identified, no mitigation measures are required.

*C. Solid Waste*

This section describes solid waste services in the proposed project area and its surroundings, and analyzes the potential impacts to such services that could result from the proposed project.

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<sup>36</sup> *Petaluma General Plan Update Draft Environmental Impact Report*, page 3.5-18. Technical Appendix G-1 to the Draft General Plan 2025, Vol. 2.

## 1. Regulatory Framework

The following section lists State and local regulations affecting solid waste services for the City of Petaluma.

### a. California Integrated Waste Management Act

The State of California is a national leader in establishing regulations for waste management. California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties 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 establishes the goal for all California counties to provide at least 15 years of on-going landfill capacity.

### b. Petaluma General Plan

Policies in the Natural Environment Element of the General Plan establish the City's approach to enhancing and managing its solid waste services. Relevant policies and programs are listed in Table 4.14-4

## 2. Existing Conditions

The City of Petaluma signed a 10-year waste hauling contract with Green Waste Recovery. Beginning on January 1, 2006, Green Waste Recovery started collecting solid waste from all Petaluma residential and non-residential generators.

Per day, Green Waste Recovery collects approximately 120 tons of refuse from Petaluma, 50 tons of recycling and about 30 tons of green waste.<sup>37</sup> Refuse is taken to the Redwood Landfill, located south of Petaluma in Marin County off of Highway 101. Recyclable materials are sent to the North Bay Corporation facility in Santa Rosa, and green waste is taken for composting at the Sonoma Compost Company facility at the Central Disposal Site at 550 Meacham Road in Petaluma.<sup>38</sup>

The Redwood Landfill is a fully permitted Class III disposal site<sup>39</sup> and, according to the landfill representative, is currently permitted to accept up to 1,300 tons of trash per day, or 404,000 tons per year. Of this, the landfill recycles about 400 tons of refuse daily. The maximum permitted

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<sup>37</sup> Frank Weigel, Green Waste Recovery. Personal conversation with Lisa Katz, DC&E, June 17, 2008.

<sup>38</sup> Frank Weigel, Green Waste Recovery. Personal conversation with Lisa Katz, DC&E, June 17, 2008.

<sup>39</sup> Marin County website, <http://www.marin.org/comres/recycling.cfm?TOrgID=5345>, accessed June 13, 2006.

TABLE 4.14-4 **PETALUMA GENERAL PLAN POLICIES AND PROGRAMS – SOLID WASTE**

<b>Policy/Program Number</b>	<b>Policies and Programs</b>
<i>Natural Environment Element</i>	
Policy 4-P-21	Reduce solid waste and increase reduction, reuse and/or recycling, in compliance with the Countywide Integrated Waste Management Plan (CoIWMP).
Policy 4-P-21(C)	Continue to encourage waste reduction and recycling at home and in businesses through public education programs, such as informational handouts on recycling, yard waste, wood waste, and hazardous waste collection.

<sup>a</sup> Compliance with this policy will be evaluated in the Staff report as part of the entitlement hearings.  
 Source: The City of Petaluma General Plan 2025.

capacity for Redwood Landfill is 19.1 million cubic yards, with a remaining capacity of 12.9 million cubic yards. The expected closure date of the landfill is 2024.<sup>40</sup>

### 3. Standards of Significance

The proposed project would have a significant impact related to solid waste collection and disposal if it would:

1. Not comply with federal, State and local statutes and regulations related to solid waste and recycling.
2. Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project’s solid waste disposal needs.

### 4. Impact Discussion

The following provides an assessment of the proposed project on water, both with regards to water supply and distribution.

#### a. Project Impacts

1. Not comply with federal, State and local statutes and regulations related to solid waste and recycling.

Much of the solid waste generated during the construction phase such as wood, metal scrap, and formed construction board (cement and dry wall board) would be recycled and salvaged. The recycling of construction debris would be enforced as part of the project Conditions of Approval and

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<sup>40</sup> Jones, Jessica. District Manager, Redwood Landfill. Personal communication with Leslie Wilson, DC&E, December 18, 2008.

contract requirements. Materials not recycled would be disposed of at local landfills. The Redwood Landfill in Marin County can accommodate the potential construction-waste generated by the proposed project at this time.<sup>41</sup>

2. Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs.

The East Washington Place project would result in an increase in generation of solid waste, resulting from the 380,000 square feet of retail and office uses.

Since the number of waste bins anticipated for the retail portion of the project is unknown, the Green Waste Recovery's generation rate for retail uses could not be used to estimate the amount of solid waste generated by the retail portion of the site. However, the California Integrated Waste Management Board has a list of generation rates for various land use types.<sup>42</sup> The generation rates for a office use is .006 pounds per square foot per day. For a commercial retail use, the generation rate is 2.5 pounds per 1,000 square foot per day. Using these rates, 16,000 square feet of office use would produce approximately 96 pounds of refuse per day. A 364,000 square foot retail project would produce 885 pounds of refuse per day. Annually, this would translate to about 323,025 pounds of commercial refuse and 35,040 pounds of office refuse generated per year. Combined, this is 358,065 pounds of trash or 162.415 metric tons of refuse annually. These generation rates do not account for recycling diversion rates. If a portion of the commercial solid waste is recycled, which is expected, the total amount entering the landfill would be reduced.

With a current daily volume of 1,290 tons, this project would have the potential to contribute 0.038 percent of the maximum daily permitted amount of the solid waste entering into the Redwood Landfill. As a result, the daily tonnage of waste generated by the project would not exceed daily capacity at the Redwood Landfill.

Furthermore, the project would comply with the City's recycling policies listed in Table 4-14-3. During the operation phase, the project would be served by the City's contracted solid waste collector, which would provide recycling and green waste pick up. As a result, the project would have a less-than-significant impact in relation to solid waste collection and disposal services. The project would be a new source of solid waste generation, however, it would not introduce additional waste at disposal or recycling facilities that are at or above capacity and it would comply with applicable regulations.

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<sup>41</sup> Jones, Jessica. District Manager, Redwood Landfill. Personal communication with Leslie Wilson, DC&E, December 18, 2008.

<sup>42</sup> California Integrated Waste Management Board's website. <http://www.ciwmb.ca.gov/wastechar/WasteGenRates/Commercial.htm>. Retrieved June 13, 2006. The actual rate could vary depending on the specific retail users.

b. Cumulative Impacts

A list-based approach has been used for this cumulative analysis. The analysis considers the development projects listed in Appendix E (Cumulative Projects) and whether this project would have significant cumulative impacts on Petaluma's wastewater service in combination with the cumulative projects.

As growth identified by the cumulative list continues to occur, the demand for solid waste services and landfill capacity will increase. The amount of solid waste generated by the project would be a small percentage (0.038 percent) in relation to the permitted receiving capacity at Redwood Landfill. This project, in concert with planned growth, is not expected to affect the anticipated 2024 closure date of the landfill. As a result, there would be a less-than-significant cumulative impact.

**5. Impacts and Mitigation Measures**

As no significant solid waste impacts associated with the project have been identified, no mitigation measures are required.