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## 10. INFRASTRUCTURE AND PUBLIC SERVICES

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This EIR chapter describes existing water, sewer, police, fire protection/emergency medical, school, parks and recreation, solid waste, and child care service conditions in the project vicinity, identifies project-related environmental impacts associated with these services, and recommends mitigation measures for identified potentially significant environmental impacts.

### 10.1 WATER SERVICE

The water service impacts evaluation in this section relies upon two technical documents prepared specifically for the proposed Marina Shores Village project: (1) the Water Supply Assessment for the Proposed Marina Shores Village Project (Water Supply Assessment), prepared by the City of Redwood City Public Works Services Department and approved by the City Council on August 26, 2002, pursuant to State Senate Bill 610 (SB 610--Costa), SB 221 (Kuehl),<sup>1</sup> and the California Environmental Quality Act (CEQA); and (2) the *Marina Shores Village Water Report* (Water Report), prepared for the applicant by BKF Engineers and approved by the City of Redwood City Engineering and Construction Department on December 4, 2002. This section also includes information from the City of Redwood City Urban Water Management Plan (Urban Water Management Plan), prepared by the City's Public Works Services Department and last amended on July 15, 2002. The full text of the City-prepared Water Supply Assessment for the Marina Shores Village project is included as an appendix to this EIR (appendix 21.2). The full text of the Water Report and Urban Water Management Plan are available for review at the City of Redwood City Community Development Services Department, City Hall, 1017 Middlefield Road.

#### 10.1.1 Setting

(a) Existing Water Supply. Redwood City obtains all of its water supply from the Hetch Hetchy water system, which is operated by the San Francisco Public Utilities Commission (SFPUC).

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<sup>1</sup>SB 610 (Costa) and SB 221 (Kuehl) are two laws, enacted by the California Legislature in 2001, designed to achieve greater coordination during the land use planning and CEQA processes between water suppliers and local land use agencies when considering certain large-scale development projects. See a further description of SB 610 on page 10-2 and a further description of SB 221 on page 10-8, herein.

The Marina Shores Village project site is located approximately two miles east of the Hetch Hetchy's Peninsula water main.

Actual water use by the City is currently exceeding the City's contracted allocation of water from the SFPUC by approximately 1,000 acre-feet annually. During a drought season, the City would expect the SFPUC to cut back water supply to the City. By the year 2009, even without a drought, Redwood City is predicted to exceed its current contracted annual SFPUC water allocation by approximately 2,700 acre-feet, enough to supply 10,000 homes.<sup>2</sup>

*Urban Water Management Plan.* The City has adopted a City of Redwood City Urban Water Management Plan, which was last amended and forwarded to the State of California Department of Water Resources on July 15, 2002. The plan describes: (1) the City's water service area, (2) existing and planned sources of water, (3) water supply reliability, (4) opportunities for water transfers, (5) past and current water use, (6) water demand management measures (e.g., conservation, retrofits, rebate and informational programs) in place or scheduled for implementation, and (7) the anticipated effectiveness of each identified water demand management measure.

*Water Supply Assessment.*<sup>3</sup> During 2001, the California Legislature enacted two laws, Senate Bill 610 (SB 610--Costa) and SB 221 (Kuehl), each designed to achieve greater coordination between water suppliers and local land use agencies when considering certain large-scale development proposals. SB 610 requires preparation of a Water Supply Assessment for any development whose approval is subject to CEQA and which meets the definition of "project" under Water Code section 10913--i.e., a residential development project of more than 500 dwelling units or other types of development (e.g., commercial buildings, industrial parks, hotels) expected to use a comparable amount of water. The Marina Shores Village project is subject to CEQA (as evidenced by this EIR) and meets the Water Code criteria for requiring such a Water Supply Assessment.

Under SB 610, the Water Supply Assessment must describe the proposed project's water demand over a 20-year period, identify the sources of water available to meet that demand, and include an assessment of whether those water supplies are or will be sufficient to meet the demand for water associated with the proposed project, in addition to the demand of existing customers and other planned future development. If the assessment concludes that water

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<sup>2</sup>*Our Water Supply: Special Edition*, City of Redwood City Water Utility Services, Summer 2002.

<sup>3</sup>The information in this subsection is taken from the Water Supply Assessment for the Proposed Marina Shores Village Project, prepared by the City of Redwood City Public Works Services Department and approved by the City Council on August 26, 2002 (included as appendix 21.2 of this EIR).

supplies are or will be insufficient, then the assessment must describe plans (if any) for acquiring additional water supplies, and the measures that are being undertaken to acquire and develop those supplies.

Accordingly, a Water Supply Assessment has been prepared by the City for the Marina Shores Village project. The Water Supply Assessment findings are summarized in subsection 10.1.4 (water-related impacts and mitigations) which follows.

*Redwood City Recycled Water Project.* The City of Redwood City Public Works Services Department is currently implementing a recycled water pilot program in furtherance of the City's water conservation goals; the pilot program is part of a long-term recycled water project that is in the preliminary planning phase, pending further review by the City Council.<sup>4</sup> Phase One of the project is operational and has been delivering recycled water to parkways, medians, greenbelts, and two private developments in eastern Redwood Shores. A proposed project expansion (Phase Two) is planned to begin operation in 2004, also serving Redwood Shores. A proposed Phase Three, extending the recycled water system southward, is planned to begin operation when the planned Caltrans highway auxiliary lane/bike path extension project from Redwood Shores south to Whipple Avenue is implemented. This approximately five-mile pipeline would supply recycled water to the Bayfront Area extending from the foot of Whipple Avenue to the Port of Redwood City; the water would be allocated to landscape irrigation needs and industrial uses, such as cement plants. Construction of Phase Three would be coordinated with actual approved development projects in the Bayfront Area.<sup>5</sup> Implementation of the recycled water project beyond the current pilot program would require approval by the City Council.

*Redwood City Water Conservation Program.* The Redwood City Public Works Services Department is also developing additional water conservation measures (i.e., "best management practices"/BMPs), for application throughout the City, which will be presented to the City Council as proposed future amendments to the Urban Water Management Plan. Mandatory water conservation measures already in effect include landscape and irrigation guidelines.

(b) Existing Water Delivery System. The City of Redwood City Public Works Services Department is responsible for operating the existing local water distribution system in Redwood City. The municipal water system serving the project vicinity includes an 8-inch concrete line in Ucelli Boulevard (the northwest edge of the project site) and a 10-inch concrete line in Bair

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<sup>4</sup>Phong Du, Senior Civil Engineer, City of Redwood City Engineering and Construction Department, personal and written communications, January 23, 2003.

<sup>5</sup>*Our Water Supply: Special Edition.*

Island Road (the southwest edge of the project site). These two water lines connect to the City's main water system via a 12-inch concrete line crossing under U.S. 101 at the intersection of Bair Island Road and East Bayshore Boulevard.<sup>6</sup>

The existing water system in the project vicinity serves the two existing residential developments and a variety of existing commercial buildings, storage facilities, and marinas; these existing land uses in the vicinity are further described in chapter 4 (Land Use) of this EIR.

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<sup>6</sup>*Marina Shores Village Water Report*, BKF Engineers, November 19, 2002, p. 2.

(c) Existing Water Use. Based on the most recent information available from the City (including specific building information and 1999 meter readings), the existing average water demand in the project vicinity (i.e., in the area served by the local water system described above, including the project site) is approximately 193,500 gallons per day (gpd).<sup>7</sup> Average water demand on the project site itself is currently approximately 81,750 gpd.<sup>8</sup>

### **10.1.2 Pertinent Plans and Policies**

The adopted Redwood City Strategic General Plan does not contain objectives or policies pertaining directly to water service. However, Section 64562 of the California Health and Safety Code requires all public water systems to have sufficient water available from their water sources and distribution reservoirs to supply adequately, dependably, and safely the total requirements of all users under maximum demand conditions before agreement is made to permit additional service connections to a system.

### **10.1.3 Significance Criteria**

Based on the CEQA Guidelines, the project would be described in this EIR as having a significant environmental impact related to water service if it would:<sup>9</sup>

- (1) Result in the provision of, or the need for, new, expanded or physically altered facilities to maintain acceptable service ratios or other performance objectives for water service, the construction of which could cause significant environmental effects;
- (2) Result in the need for new or expanded water supply entitlements; or
- (3) Result in a public service condition that is inconsistent with any applicable land use plan, policy, or regulation of an agency that has jurisdiction over the project, including California Health and Safety Code provisions and Redwood City Strategic General Plan provisions.

### **10.1.4 Impacts and Mitigation Measures**

Potential water service impacts are associated with water supply, delivery (transmission), and storage, as described in this subsection. Based on project design refinements undertaken by

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<sup>7</sup>Ibid., p. 2.

<sup>8</sup>Ibid., Appendix A.

<sup>9</sup>CEQA Guidelines, Appendix G, items XIII(a), XVI(b), XVI(d), and IX(b).

the project applicant's engineers as requested, reviewed, and approved by the City of Redwood City Engineering and Construction Department, potential water *delivery and storage* impacts are considered less-than-significant, as discussed under "Water Delivery System and Storage Impacts." Water *supply* impacts remain potentially significant, as discussed under *Impact 10-1*.

**Impact 10-1: Project-Related and Cumulative Municipal Water Service**

**Demand.** The project would increase the demand for municipal water service in the project vicinity. Preliminary estimates indicate that the project could generate a demand for approximately 3,250 to 3,400 gallons per minute of emergency fire flow, up to 744,000 gallons of total fire flow volume, 1,536,000 gallons of emergency water storage on- or off-site, and a net increase of 430,000 gallons of domestic water demand (approximately 1.3 acre-feet) per average day, or 482 acre-feet per year. Redwood City already exceeds its contracted allocation of water from the San Francisco Public Utilities Commission (SFPUC) by approximately 1,000 acre-feet annually, and is predicted to exceed its allocation by approximately 2,700 acre-feet annually by 2009. As required by California SB 610, the Redwood City City Council approved the Water Supply Assessment (WSA) for the Marina Shores Village project on August 26, 2002. That assessment approval pertained to the adequacy and reliability of the Assessment itself and was not intended as an approval or disapproval of the Marina Shores Village project itself. The WSA for the proposed project has determined that the City of Redwood City does not currently have sufficient water supply to meet the projected water demands of the proposed project together with those of its existing customers and the demands of other planned development. Therefore, the anticipated project-related and cumulative demands for water service would represent a ***potentially significant project and cumulative impact*** (see criterion 3 in subsection 10.1.3, "Significance Criteria," above).

(a) Project Water Demand. The proposed project site is comprised of two noncontiguous properties: the Peninsula Marina property on the south and the Pete's Harbor property on the north. The water demand associated with the proposed project land uses has been calculated for each property in the project Water Report. Table 10.1 summarizes the calculation results, including fire flow demand (both per minute and total), net additional domestic (i.e., residential, office, retail, and irrigation) demand, and required emergency storage. All of the Water Report calculations have been made according to City of Redwood City Engineering and Construction Department standard factors and criteria. The factors and criteria are intended to ensure an adequate and efficient water system design (e.g., water supply amount, pipe diameters, water pressure, fire suppression needs) for the project at its full use during its entire lifespan.<sup>10</sup> The standard factors used in the project engineer-

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<sup>10</sup>Du.

prepared Water Report<sup>11</sup> to calculate project on-site water demand are higher than the factors used in the City-prepared Water Supply Assessment (WSA), which pre-dated the Engineering and Construction Department approved Water Report for the project. The WSA incorporated the project applicant's initial estimates, which used less conservative water demand factors, thereby resulting in an overall smaller water demand projection for the project. As the planning and design for the project progress, water demands will be revised, refined, and recalculated accordingly to adhere to City Engineering Standards and Guidelines.

*Fire Flow Demand.* Estimated project fire flow demand rates are shown in Table 10.1. Fire flow demand is the summation of required fire hydrant flow, sprinkler flow, and inside hose flow. Fire flow demand is calculated for each building, and the maximum demand is retained as the required fire flow. For the proposed project, two fire flow demand rates have been established: (1) one for the office component located in the southwest portion of the Peninsula Marina property, and (2) the other for the residential and retail components combined. The required fire flow rates shown in Table 10.1 are based on criteria from the Uniform Building Code (UBC), Uniform Fire Code (UFC), National Fire Protection Agency Code (NFPA), and Redwood City Fire Department.

*Domestic Water Demand.* The estimated net increase in domestic water demand associated with the project is also shown in Table 10.1. The estimated domestic water demand total is the summation of project residential, office, retail, and irrigation water demands. Under adopted Redwood City standards (e.g., Redwood City Engineering Standard Design Criteria, Section VI and Attachment L), a project's average domestic water demand is typically computed by increasing the projected average wastewater generation by 40 percent (see following section 10.2--Sewer Service). The 40 percent factor is typically applied to account for water used for irrigation, drinking water, and other water not returned to the sewer system. For the proposed project, a lower 20 percent factor was used because: (1) projected demands for irrigation have been calculated separately from other domestic water demands, and (2) the project's comparatively high density will result in water service efficiencies.<sup>12</sup>

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<sup>11</sup>The entire *Marina Shores Village Water Report*, prepared by the project civil engineer and approved by the City's Engineering and Construction Department, and describing anticipated project water demand characteristics in detail, is available for review at the City of Redwood City Community Development Services Department public counter, City Hall, 1017 Middlefield Road. The City-prepared Water Supply Assessment is included as appendix 21.2 of this EIR.

<sup>12</sup>*Marina Shores Village Water Report*, p. 4.

Following common practice, the State of California Department of Water Resources recommended *California Irrigation Management Information System* (CIMIS) rate



Table 10.1  
**MARINA SHORES VILLAGE PROJECTED WATER DEMAND**

	Fire Flow (gpm) <sup>1</sup>	Total Fire Volume (gallons)	Domestic Water Demand (gpd) <sup>2</sup>
<i>Existing On-Site Water Demand (from 1999 Meter Readings)</i>			
Peninsula Marina Property	--	--	70,085
Pete's Harbor Property	--	--	<u>11,664</u>
TOTAL	--	--	81,749
<i>Projected On-Site Water Demand</i>			
Peninsula Marina Property (Office Area) <sup>3</sup>	3,250 (3,400)	744,000	364,762
Pete's Harbor Property	3,250	727,500	<u>147,130</u>
TOTAL	<b>3,400</b>	<b>744,000</b>	511,892
NET INCREASE			<b>430,143</b>
		Emergency Storage Volume (gallons)	
<i>Required Emergency Water Storage(On- c</i>		<b>1,535,677</b>	

SOURCE: *Marina Shores Village Water Report*, BKF Engineers; November 19, 2002.

<sup>1</sup> gpm = gallons per minute

<sup>2</sup> gpd = gallons per day

<sup>3</sup> Office area fire flow is computed separately based on the office buildings' location and proximity to each other.

<sup>4</sup> The required emergency tank volume is computed based on a multiple of 3X projected average daily demand. A precise location for the tank has not yet been identified.

computation procedure has been applied to compute project-related demand for irrigation water. The project-related demand has been projected at four acre-feet per acre per year, based on the proposed net landscaped area.

*Emergency Water.* According to Redwood City Engineering and Construction Department standards, in addition to fire flow and domestic water demands, the proposed project would require a stored volume of emergency water equal to three days of average demand to protect against an unforeseen breakdown of the Hetch Hetchy water main or local water lines crossing U.S. 101. The emergency water supply would require a storage tank of approximately 1.54 million gallons, an associated pump station, and an additional water line to connect the supply to the project water delivery system. In addition to the fire flow rates to be provided via the municipal water system, the project would be required to provide its own on- or off-site, secondary water supply automatically available to the high-rise buildings' sprinkler systems if the Hetch Hetchy or local public water supply were interrupted (per UBC Section 403.2.1).

(b) Water Supply. The Water Supply Assessment for the Proposed Marina Shores Village Project (Water Supply Assessment), prepared pursuant to State SB 610, has determined that: (1) the City of Redwood City does not currently have sufficient water supply to meet the projected water demands of the proposed Marina Shores Village project together with those of its existing customers and other planned development; and (2) if the City implements tentative plans for additional supplies (e.g., water conservation and recycling) in the near future, including the pending recycled water project (currently in the preliminary planning phase), there should be sufficient water supply to meet projected future demands.

The Redwood City City Council approved the Water Supply Assessment (WSA) for the Marina Shores Village project on August 26, 2002. That assessment approval pertained to the adequacy and reliability of the Assessment itself and was not intended as an approval or disapproval of the Marina Shores Village project itself. At a subsequent stage of the project approval process, the City "*shall determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project, in addition to existing and planned future uses*" (SB 610). Under state law, if the City determines at that point that water supplies will not be sufficient, the City must include that determination in its findings for the project.

The second water planning bill adopted by the State in 2001, SB 221, prohibits a city or county from approving a tentative subdivision map or parcel map, or a development agreement including land subdivision, of more than 500 units, unless there is written verification that a sufficient and reliable water supply will be available prior to completion of the project.

A subsequent, more detailed water supply analysis must therefore be completed in connection with the City's approval of any tentative map or development agreement for the Marina Shores Village project, when the project details have been more definitively

established, as required by SB 221. This subsequent analysis would include an updated description of the citywide water supply situation at that future time, reflecting any progress on City plans for expanding its recycled water program and implementing additional “best management practices” (BMPs) for water conservation.

**Mitigation 10-1.** As required by State SB 221, prior to City approval of any tentative map or development agreement for the proposed project, the City of Redwood City Public Works Services Department shall undertake a *subsequent water supply analysis*, which shall describe the citywide water supply situation at that future time, reflecting progress on current City studies and plans for finding opportunities for water transfers, expanding its recycled water program, and implementing additional “best management practices” (BMPs) for water conservation. As required by SB 221, no tentative map or development agreement shall be approved until a *water supply analysis* concludes that sufficient water will be available to serve the proposed project needs.

The project applicant shall also be required to comply with all applicable current and future City of Redwood City water demand performance standards, including standards included in the City of Redwood City Urban Water Management Plan, the City’s recycled water project, and the City’s water conservation program.

Minus substantial evidence that these measures would mitigate this impact--i.e., would lead to the identification and realization of an adequate additional water source--the effectiveness of this mitigation measure is unknown at this time. Therefore, until an achievable water supply source is identified, this impact is considered to be a ***significant unavoidable impact*** (i.e., would require City adoption of a Statement of Overriding Considerations).

**Water Delivery System and Storage Impacts.** Provision of water service to the project site would require modifications to the water delivery system in the project vicinity.

The project will be required to: (1) pay all applicable City of Redwood City development and connection fees, (2) construct all necessary water system facilities as identified in the *Marina Shores Village Water Report*, and (3) submit all final project water system design specifications and construction modifications for approval by the City of Redwood City Engineering and Construction Department. Project implementation of these measures and their approval by the City would reduce the project impact on the existing water delivery system to a ***less-than-significant level***.

The project proposes several local water system modifications to achieve project compliance with the Redwood City Hydraulic Design Criteria. The design of the proposed water system

modifications would be based on City Hydraulic Design Criteria for two *peak-flow situations*, the peak-hour flow and the maximum-day plus fire flow, and two *operating conditions*, the normal service condition and the emergency service condition. The normal service condition simulates service from the existing Hetch Hetchy Peninsula main without a project-provided on- or off-site storage tank (or when the storage tank is offline for maintenance); the emergency service condition simulates operation during a breakdown of the Hetch Hetchy Peninsula main or a break in the existing line under U.S. 101, when the project would be supplied solely by the storage tank (assumed for three days).

The proposed project-related water system modifications are detailed in the previously noted *Marina Shores Village Water Report* and summarized below:

- A second connection between the water system east of U.S. 101 and the main system west of U.S. 101 would be created via a 20-inch line. The existing 12-inch line crossing under U.S. 101 would remain.
- The conjunction of three 12-inch water lines west of U.S. 101, which currently connect to the existing 12-inch Bair Island Road/Bayshore Boulevard line after it crosses under U.S. 101, would be upgraded.
- The existing 8-inch concrete line in Uccelli Boulevard and 10-inch concrete line in Bair Island Road would be replaced with a 16-inch polyvinyl chloride (PVC) line.
- The project site would connect to the new 16-inch line with 12-inch PVC loops.
- A water storage tank of approximately 1,540,000 gallons would be constructed on or near the project site (a precise location has not yet been identified). An additional water line would be provided to connect the tank to the project water delivery system. A water pump station adjacent to the water tank would provide peak flow to the project from the tank at the residual pressure prescribed by the City's Hydraulic Design Criteria.

The above local water system modifications have been formulated based on the projected water demands for the currently proposed project development program. If the water demands change as a result of revisions in the project development program or new Redwood City standards or design criteria, the proposed local water system modifications would be revised accordingly.

*Construction Period Impacts.* Project-related local water system modification construction activities would be temporary and would occur within existing public rights of way. Construction period traffic interruption, noise, and air emissions (dust) effects typically associated with such infrastructure construction would be mitigated through normal City construction period mitigation procedures. No unusual, significant environmental impact would be anticipated with this construction activity. The environmental impacts associated with construction of project water delivery system alterations would therefore be **less-than-significant** (see criterion 1 in

subsection 10.1.3, "Significance Criteria," above).

**Mitigation.** No significant environmental impact associated with project-related water delivery system alterations has been identified; no mitigation is required.

## 10.2 SEWER SERVICE

The sewer service impacts evaluation in this section relies upon a technical document prepared specifically for the proposed Marina Shores Village project, the *Marina Shores Village Sewer Report*, prepared for the applicant by BKF Engineers and approved by the City of Redwood City Engineering and Construction Department on December 4, 2002. The full text of this report is available for review at the City of Redwood City Community Development Services Department, City Hall, 1017 Middlefield Road.

### 10.2.1 Setting

(a) Current Sewage Treatment Provider and Service Area Boundary. Sanitary sewer service in Redwood City is provided by the South Bayside System Authority (SBSA), a joint powers authority comprised of four member agencies: the cities of Redwood City, Belmont, and San Carlos, and the West Bay Sanitary District (which serves Menlo Park, portions of Atherton and Portola Valley, and a few residences in several other cities). The SBSA operates a sewage treatment plant located on Radio Road in Redwood City.

The sewage capacity available for any particular project is not determined exclusively by the physical capacity of the SBSA treatment plant. Available capacity is also based on the *capacity rights* allocated to each member of the Joint Powers Agreement; each member is allocated a portion of the design capacity of the SBSA system. The allocation is made in terms of the following parameters: peak wet weather flow (PWWF), average daily dry weather flow (ADDWF), biochemical oxygen demand (BOD), and suspended solids. SBSA capacity allocations to its members are made for two basic sewer service elements: *treatment* capacity and *transmission* capacity.

The average daily dry weather flow (ADDWF) represents the actual volume of sewage generated by a city or development from domestic and industrial uses. The peak wet weather flow (PWWF) represents the ADDWF multiplied by a peaking factor plus inflow and infiltration (I/I) during the winter season. "Infiltration" generally occurs during the winter when precipitation raises the ground water table to a level where the water infiltrates defective sewer lines (i.e., infiltration). "Inflow" represents discharges into the sewer system such as surface runoff into manholes, illicit roof connections, and other drainage connections. Both infiltration and inflow contribute to peak wet weather flow (PWWF) and result in an increase in total sewer flow that reduces the overall available capacity of the sewer system.

Redwood City has ADDWF capacity rights for 11.4 million gallons per day (mgd) of the available treatment capacity of the original SBSA treatment plant, known as the Stage 1 project.

Redwood City currently uses all of this available (allocated) capacity, but possesses an option to purchase an additional 2.1 mgd of ADDWF capacity from a planned Stage 2 treatment system expansion program, for which the SBSA has received all permits and approvals.<sup>13</sup>

Redwood City has PWWF capacity rights for 30.5 mgd (4.6 mgd for Redwood Shores and 25.9 mgd for the remainder of the city). Since 1994-95, the City has exceeded its allocated PWWF capacity nine times during the winter, due primarily to I/I factors.<sup>14</sup>

(b) Existing Sewage Collection System. The local sewage collection system serving Redwood City is owned and operated by the City. The municipal collection system in the project vicinity consists of an 8-inch vitrified clay pipe (VCP) line in Uccelli Boulevard (the northwest edge of the project site) and a 10-inch VCP line in Bair Island Road (the southwest edge of the project site), which also serve East Bayshore Boulevard. These two lines connect to a 15-inch municipal line that begins at the intersection of Bair Island Road and East Bayshore Boulevard, then crosses under U.S. 101 in a steel sleeve. The sewage from the 15-inch line is conveyed through increasingly larger municipal lines (27-inch and 48-inch) until it reaches a 66-inch welded steel pipe that leads to the SBSA pump station located on Maple Street.

Of the 4,600 lineal feet of existing gravity sewer pipe between the intersection of East Bayshore Boulevard/Bair Island Road (adjacent to the project site) and the SBSA pump station, the last 2,000 feet before the pump station currently surcharges (i.e., operates under pressure flow conditions with levels above the pipe crowns) under certain loading conditions.

The existing sewer system in the project vicinity serves two residential developments, a variety of commercial buildings, storage facilities, and marinas; these existing land uses in the vicinity are further described in chapter 4 (Land Use) of this EIR.

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<sup>13</sup>Jim Bewley, Manager, South Bayside System Authority, written and personal communications, March 2002.

<sup>14</sup>*Marina Shores Village Sewer Report*, BKF Engineers, November 27, 2002, p. 10 and Appendix C.

(c) Existing Sewage Generation. Based on the most recent information available from the City (including specific building information, 1999 water meter readings, and an average sewage generation per person of 80 gallons per day), the existing average daily dry weather sewage generation (ADDWF) in the project vicinity (i.e., in the area north of U.S. 101 served by the local sewer system described above, including the project site) is approximately 171,845 gallons per day (gpd), with a peak business-hour flow of approximately 512 gallons per minute (gpm). Average sewage generation on the project site itself is approximately 81,749 gpd, with a peak business-hour flow of approximately 284 gpm.<sup>15</sup>

### **10.2.2 Pertinent Plans and Policies**

The adopted Redwood City Strategic General Plan contains no objectives or policies pertaining directly to sewer service.

### **10.2.3 Significance Criteria**

Based on the CEQA Guidelines, the project would be described in this EIR as having a significant environmental impact related to sewer service if it would:<sup>16</sup>

- (1) Result in the provision of, or the need for, new, expanded or physically altered facilities to maintain acceptable service ratios or other performance objectives for sewer service, the construction of which could cause significant environmental effects;
- (2) Result in a determination by the wastewater treatment provider that serves the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments; or
- (3) Result in a public service condition that is inconsistent with any applicable land use plan, policy or regulation of an agency that has jurisdiction over the project, including California Health and Safety Code provisions and Redwood City Strategic General Plan provisions.

### **10.2.4 Impacts and Mitigation Measures**

Potential sewer service impacts are associated with sewage treatment capacity, collection (at the project site), and transmission (to the treatment plant), as described in this subsection.

**Impact 10-2: Project-Related and Cumulative Impacts on Sewage Treatment and Transmission Capacity.** The project would increase sewage generation in the project vicinity. Preliminary estimates indicate that the project could generate a

<sup>15</sup>Ibid., p. 3 and Appendix A.

<sup>16</sup>CEQA Guidelines, Appendix G, items XIII(a), XVI(b), XVI(e), and IX(b).

total of approximately 399,000 gallons of sewage per day, for a net increase of approximately 317,000 gallons per day. Redwood City already uses all of its allocated capacity from the South Bayside System Authority (SBSA) treatment plant, but possesses an option to purchase an additional 2.1 million gallons per day (mgd)

**(continued)**

**Impact 10-2 (continued):**

of dry weather treatment capacity. Because the SBSA treatment capacity allocation to Redwood City is already being exceeded, the current allocation is inadequate to serve the project's projected demand in addition to existing SBSA commitments.

In recent years, sewage flow into the SBSA sewage collection system from Redwood City has occasionally exceeded the current peak wet weather flow capacity right (exclusive of Redwood Shores) of 25.9 mgd. Since 1994-95, the City has exceeded its allocated capacity nine times during the winter. Provision of sewer service to the project site would require modifications to the existing sewer system from the project site to the SBSA treatment plant in order to avoid any further contribution to this existing condition.

As identified by the City of Redwood City Engineering and Construction Department, *"The main issue of concern is the limited delivering capacity of [the] regional transmission system itself (i.e., pump stations and large force mains delivering member agencies' sewer flows to the treatment plant)....According to the SBSA, the City has reached its 25.9 mgd peak wet weather flow (PWWF) capacity rights for the main area of Redwood City. The problem is how to accommodate the additional PWWF from this development, which is estimated as the project net peak off-hour [i.e., residential] flow of 1.7 mgd...."*<sup>17</sup>

Because the SBSA treatment capacity allocation to Redwood City is already being exceeded, and because the limited capacity of the sewage transmission system to the SBSA treatment plant would require modifications to the existing sewer system, the project-related and cumulative impacts on sewage treatment and transmission capacity are considered a ***potentially significant project and cumulative impact*** (see criterion 2 in subsection 10.2.3, "Significance Criteria," above).

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<sup>17</sup>Phong Du, Senior Civil Engineer, City of Redwood City Engineering and Construction Department, written correspondence to Charles J. Humpal, Project Manager, BKF Engineers, October 4, 2002.



(a) Project Sewage Generation. The proposed project site is comprised of two noncontiguous properties: the Peninsula Marina property on the south and the Pete's Harbor property on the north. The sewage generation associated with the proposed project has been calculated for each property. Table 10.2 summarizes the sewage generation computation for the project, including residential peak hourly flow and business peak hourly flow, all calculated according to City of Redwood City Engineering and Construction Department factors and criteria. The calculations are based on factors intended to ensure an adequate and efficient sewer system design for the project at its full use during its entire lifespan; therefore, the assumed average number of occupants per unit assumed by the City

Table 10.2  
**MARINA SHORES VILLAGE PROJECTED SEWAGE GENERATION**

	Average Sewage Generation (gpd) <sup>1</sup>	Peak Hourly Flow (gpm) <sup>2</sup>	
		Residential	Business
<i>Existing On-Site Sewage Generation:</i>			
Peninsula Marina Property	70,085	67	243
Pete's Harbor Property	<u>11,664</u>	<u>16</u>	<u>41</u>
TOTAL	81,749	113	284
 <i>Projected On-Site Sewage Generation:</i>			
Peninsula Marina Property	282,500	883	490
Pete's Harbor Property	<u>116,380</u>	<u>403</u>	<u>162</u>
TOTAL	398,880	1,286	652
 NET INCREASE	 <b>317,131</b> <b>(0.32 mgd)<sup>3</sup></b>	 <b>1,173</b> <b>(1.7 mgd)</b>	 <b>368</b> <b>(0.53 mgd)</b>

SOURCE: *Marina Shores Village Sewer Report*, BKF Engineers; November 27, 2002.

<sup>1</sup> gpd = gallons per day

<sup>2</sup> gpm = gallons per minute

<sup>3</sup> mgd = million gallons per day

for sewage generation computation purposes (2.75 persons per townhouse, 2.25 persons per other units) is slightly higher than the projected population figures in chapter 6 (Population, Housing, and Employment).

The entire *Marina Shores Village Sewer Report*, which describes projected wastewater generation in detail, is available for review at the City of Redwood City Community Development Services Department, City Hall, 1017 Middlefield Road.

*Domestic Sewage Generation.* The projected project domestic sewage generation total is the summation of residential, office, and retail sewage generation. The total average daily generation has been computed by applying Redwood City standards (e.g., Redwood City Engineering Standard Design Criteria, Section VI and Attachment L), as follows:

- Residential sewage generation has been obtained by multiplying the average number of occupants per unit by the number of units by 80 gallons of sewage per day.
- Office and retail sewage generation has been calculated by multiplying 15 gallons of sewage per each 100 square feet of building floor area.
- Infiltration flow has been calculated by multiplying sewer pipe length by pipe diameter by 100 gpd. For the proposed project, the assumed sewer lines included in the infiltration calculation were those for the internal project site and along Uccelli Boulevard, Bair Island Road, and Redwood Creek from U.S. 101 to Veterans Boulevard.
- The peak hourly flow represents the daily maximum sewer flow produced by a project. For the proposed project, two peak flows have been calculated: office hours and residential (i.e., off-office) hours. Both situations are assumed to have an effective 12-hour day and occur at different times.
- The residential peak hourly flow has been calculated as the summation of the residential average daily sewage generation divided by 12 hours and the infiltration rate divided by 24 hours, all multiplied by a peak hourly design ratio of 2.5, plus the office average daily sewage generation divided by 12 hours.
- The business peak hourly flow has been calculated as the summation of the office average daily sewage generation divided by 12 hours and the infiltration rate divided by a peak hourly design ratio of 2.5, plus the residential average daily sewage generation divided by 12 hours.
- The required design parameters for the proposed sewer system modifications have been determined based on the greater of the peak hourly flows (i.e., residential—see Table 10.2), plus applicable contributing flows from existing, nearby developments.

(b) Sewage Treatment Capacity. The sewage treatment capacity required to accommodate

the proposed project would be the computed average daily dry weather flow (ADDWF) adjusted for biochemical oxygen demand (BOD) and suspended solids (SS). The projected project ADDWF total of 398,880 gpd and net increase of 317,131 gpd, as listed in Table 10.2, has not been adjusted for BOD and SS. The proposed project's ultimate treatment capacity requirement would be calculated later in the development permitting stage, when the ultimate project development program has been finalized, but is expected to be in the same general magnitude or less than the totals shown in Table 10.2.<sup>18</sup>

As indicated previously, Redwood City currently uses all of its available (allocated) capacity, but possesses an option to purchase an additional 2.1 mgd of average dry weather capacity at the SBSA treatment plant from a planned Stage 2 expansion program, for which the SBSA has received all permits and approvals.<sup>19</sup>

**Mitigation 10-2.** Prior to City approval of any tentative map or development agreement for the proposed project, the City of Redwood City shall purchase from the SBSA the dry weather treatment capacity necessary to accommodate the projected net increase in sewage generated by the proposed project. The project's ultimate treatment capacity requirement shall be calculated in the final permitting stage. The project applicant shall reimburse the City for all costs associated with the purchase of this treatment capacity (e.g., the capacity option itself, and associated administrative costs), the procedural details of which shall be included in a development agreement for the project.

In order to mitigate the limited transmission capacity from the project site to the SBSA treatment plant, the project applicant will be required to upgrade the influent lifting station (ILS) at the treatment plant and upgrade the treatment plant itself as necessary, *as well as* implement one of the following design solutions, subject to approval by the City of Redwood City Engineering and Construction Department:

(1) *Pump Directly to the SBSA Treatment Plant:* (a) install a new gravity sewer line from the project site to a new pump station at Bair Island Road, and (b) install new sewer lines from the new pump station to the SBSA treatment plant;

**or**

**(continued)**

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<sup>18</sup>Ibid.

<sup>19</sup>Bewley.

**Mitigation 10-2 (continued):**

(2) *Pump to the SBSA 48-Inch Sewer System Force Main (SSFM):* (a) install a new gravity sewer line from the project site to a new pump station at Bair Island Road, (b) install new sewer lines from the new pump station to the existing 48-inch SSFM, and (c) complete minor modifications, if necessary, to the existing SBSA pump station at Maple Street;

**or**

(3) *Pump to the SBSA Pump Station at Maple Street:* (a) install a new gravity sewer line from the project site to a new pump station at Bair Island Road, (b) install new sewer lines from the new pump station to the existing SBSA pump station at Maple Street, and (c) upgrade the pump station at Maple Street.

A detailed discussion of the design alternatives and potential design solutions is included in the *Marina Shores Village Sewer Report*, available for review at the City of Redwood City Community Development Services Department, City Hall, 1017 Middlefield Road. Prior to the final design for construction documents, performance of flow monitoring will be required during wet weather conditions and completion of modifications to the sewer line will be required as necessary, subject to approval by the City of Redwood City Engineering and Construction Department.

Implementation of these measures, including any one of options (1), (2), or (3) above, would reduce the project and cumulative impact on sewage treatment and transmission capacity to a ***less-than-significant level***.

In conjunction with the mitigation option ultimately selected, the project proposes to upgrade the existing local sewage collection system to accommodate the projected sewer demand. The proposed sewage collection system modifications currently proposed by the applicant and detailed in the previously noted *Marina Shores Village Sewer Report* are summarized below:

- A new 10-inch polyvinyl chloride (PVC) sewer line would be placed in Uccelli Boulevard/Bair Island Road to replace the existing 8-inch vitrified clay pipe (VCP) line up to the connection point with the California Marina residential development on Bair Island Road.
- The existing 10-inch concrete pipe line from California Marina to Peninsula Marina would be upgraded to a 12-inch PVC line.
- From the Peninsula Marina connection point with California Marina to the intersection of Bair Island Road and East Bayshore Boulevard, the existing 10-inch VCP would be

upgraded to a 15-inch PVC line.

The above sewage collection system modifications have been proposed in the applicant-prepared, City-approved *Marina Shores Village Sewer Report*, based on the currently projected sewage generation of the proposed project. If the planned project sewage generation characteristics change as a result of project revisions or new Redwood City standards or design criteria, City-imposed project sewer system improvement requirements would be modified accordingly.

*Construction Period Impacts.* The construction of these project-related sewer system modifications would be temporary and would occur within existing public rights of way. Construction period traffic interruption, noise, and air emissions (dust) effects typically associated with such infrastructure construction would be mitigated through normal City construction period mitigation procedures. No unusual, significant environmental impact would be anticipated with this construction activity. The environmental impacts associated with project sewage collection system improvement needs would therefore be **less-than-significant** (see criterion 1 in subsection 10.2.3, "Significance Criteria," above).

**Mitigation.** No significant environmental impact associated with project-related sewer system alterations has been identified; no mitigation is required.

### 10.3 POLICE SERVICE

#### 10.3.1 Setting

(a) Existing Police Service in Project Vicinity. The Redwood City Police Department (RCPD) provides police services to the 19-square-mile area within the Redwood City limits, including the project site. The RCPD provides service from one central police station located across Redwood Creek from the project site, at 1301 Maple Street.<sup>20</sup> The RCPD has divided the city into eight permanently staffed police beats. The project site is located near the center of an area designated as Beat 2.<sup>21</sup>

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<sup>20</sup>Redwood City website [www.ci.redwood-city.ca.us/police], 2001.

<sup>21</sup>Ed Hernandez, Administrative Sergeant, Redwood City Police Department, written and personal communications, January 2002.

(b) Existing Response Times in Project Vicinity. The RCPD responded to over 139,604 calls for service in Fiscal Year 2000/2001. Information about specific beat response times and non-emergency call response times is not available. While response times vary according to the priority of the call and officer availability, the department's overall average response time to emergencies (i.e., Priority I calls) is approximately 2 minutes, 45 seconds.<sup>22</sup>

(c) Existing Police Department Staff. The RCPD is staffed by over 150 persons, including 100 sworn officers. The RCPD has a maximum staffing limit of 100 sworn officers, as outlined in a 1997 staffing survey, and has attained this staffing goal (and limit).<sup>23</sup>

### **10.3.2 Pertinent Plans and Policies**

The adopted Redwood City Strategic General Plan Land Use Element (adopted in 1990) contains the following policy related to police service, pertinent to consideration of the environmental impacts of the proposed project:

- *Residential development should be located only where services and facilities can be provided.* (Policy L-1, page 6-5)

### **10.3.3 Significance Criteria**

Based on the CEQA Guidelines, the project would be expected to have a significant impact on police services if it would:<sup>24</sup>

- (1) Result in a need for new or physically altered facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services;
- (2) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- (3) Result in a public service condition that is inconsistent with pertinent adopted local plans and policies, including the Redwood City Strategic General Plan.

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<sup>22</sup>Ibid.

<sup>23</sup>Ibid.

<sup>24</sup>CEQA Guidelines, Appendix G, items XIII(a), VII(g), and IX(b).

#### **10.3.4 Impacts and Mitigation Measures**

**Impact 10-3: Project-Related Increase in Police Service Demands.** Buildout of the proposed project would increase demands for Redwood City Police Department services in the project vicinity. Project residents, businesses, and employees would generate additional calls for police assistance and the need for expanded police patrols in the area. It is estimated that up to approximately four (4) additional sworn officers and requisite training, support staff, facilities, and equipment would be necessary at project buildout to adequately serve the project. Without corresponding incremental increases in City police service provisions, police service levels and response times could deteriorate, representing a ***potentially significant impact*** (see criteria 1 and 3 in subsection 10.3.3, "Significance Criteria," above).

The RCPD does not utilize a staff-to-population ratio goal. As stated in subsection 10.3.1(c) above, based on a 1997 staffing survey, the RCPD has attained a currently adopted staffing cap of 100 sworn officers. The 1997 survey did not assume residential development of the proposed project site, and therefore the proposed project would be expected to create additional demand for police services. For purposes of this EIR and as requested by RCPD staff,<sup>25</sup> an appropriate staff-to-population target has been determined by the EIR authors using an average of staff-to-population goals and staffing ratios from nearby cities. Based on an average sworn officer-to-population ratio of 1.15 staff per 1,000 population for four comparable Bay Area suburban cities (Palo Alto, Petaluma, Fremont, and Pittsburg),<sup>26</sup> up to approximately four (4) additional sworn officers and approximately two (2) additional non-sworn staff would be needed in response to the estimated 3,910 total net new residents on the project site (from chapter 6, Population, Housing, and Employment, of this EIR).

**Mitigation 10-3.** The Redwood City Police Department shall review the 1997 staffing survey and associated staffing cap policy in light of the proposed Marina

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<sup>25</sup>Hernandez.

<sup>26</sup>Staff-to-population goals were averaged from the following cities: City of Palo Alto (goal of 1 sworn officer per 1,000 residents); City of Petaluma (existing ratio of 1.28 sworn officers per 1,000 residents; no staffing goal stated); City of Fremont (existing ratio of 1.28 sworn officers per 1,000 residents; no staffing goal stated); and City of Pittsburg (existing ratio of 1.04 sworn officers per 1,000 residents; no staffing goal stated).



Shores Village project and other potential nearby development types and levels (e.g., Syufy site) not fully anticipated in 1997. If necessary, the staffing cap of 100 sworn officers shall be raised. If the staffing cap is raised, the City shall use property tax revenue flow increases from the project to the City's general fund to annually fund and employ a minimum of four (4) additional sworn officers and requisite training, support staff, facilities, and equipment, adequately phased over the project buildout period (currently estimated at ten to 15 years). For each City-approved project development phase, the City shall withhold approval of the project Certificates of Occupancy if it is determined that adequate police protection cannot be provided and normal City service standards cannot be met by the time of occupancy. In addition, project site development plans shall be subject to review by the Redwood City Police Department to identify specific design measures (e.g., street and parking area lighting, placement of open space areas, etc.) that may be warranted to reduce the potential for criminal activity. Implementation of these measures would reduce the impact of project-related increases in police service demands to a ***less-than-significant level***.

**Impact 10-4: Emergency Response and Evacuation Impacts.** Project-related traffic would create additional traffic congestion on Bair Island Road, East Bayshore Road, and other local roadways, possibly delaying emergency response and limiting the Police Department's ability to evacuate the project vicinity safely during an emergency or major disaster. These possible project effects on emergency response and evacuation in the project vicinity would represent a ***potentially significant impact*** (see criterion 2 in subsection 10.3.3, "Significance Criteria," above).

The project would provide for emergency vehicle access to the project site via Bair Island Road and emergency vehicle access extending onto the project site from Bair Island Road.

**Mitigation 10-4.** Implement mitigation measures identified in chapter 7 (Transportation and Circulation) of this EIR to reduce project-related traffic impacts on Bair Island Road, East Bayshore Road, and other local roads to less-than-significant levels. In addition, require City review and approval of project-proposed emergency access provisions prior to tentative subdivision map approval. Implementation of these measures would reduce project impacts on emergency response and evacuation to a ***less-than-significant level***.

**Impact 10-5: Cumulative Demands for Police Services.** Buildout of the project

in combination with other anticipated cumulative (pending, recently approved, or recently constructed) residential development in the city by the year 2015, would increase the demand for police services, including an estimated need for 20 additional sworn officers, and requisite training, support staff, facilities, and equipment. Without corresponding incremental increases in police service provisions, this effect would represent a ***potentially significant cumulative impact*** (see criteria 1 and 3 in subsection 10.3.3, "Significance Criteria," above).

The approximately 8,370 residential units (including the 1,930 proposed project units) pending, recently approved, or recently constructed in the city (see Table 4.1 herein) would result in a projected 17,472 new residents to Redwood City (by approximately 2015), and associated substantive cumulative increases in the demand for police services, including an estimated need for 20 additional sworn police officers<sup>27</sup> and requisite training, support staff, facilities, and equipment.

**Mitigation 10-5.** Implement *Mitigation 10-3*. This measure would reduce the project contribution to this cumulative impact to a ***less-than-significant level***.

## 10.4 FIRE PROTECTION/EMERGENCY MEDICAL SERVICES

### 10.4.1 Setting

(a) Existing Fire Protection Service in Project Vicinity. The Redwood City Fire Department (RCFD) provides fire protection and suppression, and emergency medical services in the project vicinity. The RCFD is currently staffed by 60 emergency personnel (including 18 fire captains, 18 fire fighter/paramedics, and 24 fire fighters) and 12 administrative staff located at

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<sup>27</sup>Based on Table 4.1, assuming 64 single-family units @ 3.0 persons/average household and 6,375 multifamily units @ 2.08 persons/average households (the project average) = 192 + 13,260 = 13,452 persons plus 4,020 project residents = 17,472 total residents, which translates into a demand for approximately 20 additional sworn officers in order to meet an assumed ratio of 1.15 sworn officers per 1,000 people (see discussion under *Impact 10-3*).

five stations.<sup>28</sup> Station locations and equipment are listed below in order of station proximity to the proposed project site.<sup>29</sup>

- *Station 9, Headquarters, 755 Marshall Street.* Equipment includes one engine, one tiller, one reserve truck, one battalion, and one AMR ambulance.
- *Station 10, 2190 Jefferson Avenue.* Equipment includes one regular and one reserve engine and one Office of Emergency Services (OES) support unit.
- *Station 11, 901 2nd Avenue.* Equipment includes one regular and one antique engine and one rescue boat.
- *Station 12, 3700 Jefferson Avenue.* Equipment includes one engine and one patrol vehicle.
- *Station 20, 680 Redwood Shores Parkway.* Equipment includes one regular and one reserve engine.

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<sup>28</sup>Louis Vella, Fire Marshal, Redwood City Fire Department, personal communication, February 6, 2002.

<sup>29</sup>Redwood City website [[www.ci.redwood-city.ca.us/fire](http://www.ci.redwood-city.ca.us/fire)], 2001.

The closest station to the project site is Station 9, which is also the RCFD headquarters. Average response time for emergency calls anywhere in the district's service area is four-to-five minutes.<sup>30</sup>

(b) Response Time Goals. In 2001, the RCFD received approximately 6,800 calls for emergency service. The current RCFD response time goal is four minutes or less 90 percent of the time.<sup>31</sup>

(c) Access Road Standards. The RCFD requires that access roads meet the following design standards :<sup>32</sup>

- (1) Access roads shall provide not less than 20 feet in unobstructed width (parked cars are considered an obstruction); and
- (2) The minimum outside turning radius on courts or dead end streets shall be 45 feet, and the inside radius shall be 22 feet.

#### **10.4.2 Pertinent Plans and Policies**

The Redwood City Strategic General Plan Safety Element contains the following relevant policies regarding fire services:

- *Alternative water resources for fire fighting purposes should be identified for use during a disaster.* (Policy S-6, page 12-3)
- *New development should provide adequate access for emergency vehicles, particularly fire fighting equipment, as well as provide secure evacuation routes for the inhabitants of the area.* (Policy S-7, page 12-3)

#### **10.4.3 Significance Criteria**

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<sup>30</sup>Vella.

<sup>31</sup>ibid.

<sup>32</sup>ibid.

Based on the CEQA Guidelines, the project would be expected to have a significant impact on fire protection and emergency medical services if it would:<sup>33</sup>

- (1) Result in a need for new or physically altered facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection or emergency medical services;
- (2) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- (3) Result in a public service condition that is inconsistent with pertinent adopted local plans and policies, including the Redwood City Strategic General Plan.

#### **10.4.4 Impacts and Mitigation Measures**

**Impact 10-6: Project-Related and Cumulative Increases in Fire Protection and Emergency Medical Service Demands.** Buildout of the proposed project, in combination with other anticipated cumulative (pending, recently approved, or recently constructed) residential development in the city by the year 2015, would increase demands for fire protection and emergency medical services provided by the Redwood City Fire Department (RCFD). The estimated 4,020 project residents (3,910 total net new residents) on the project site would require up to an estimated three (3) additional RCFD emergency personnel (captains, fire fighter/paramedics, and fire fighters), plus requisite training, support staff, facilities, and equipment. The estimated 17,472 net new residents associated with anticipated cumulative residential development in the city by 2015, including the proposed project would require up to an estimated 14 additional RCFD emergency personnel and requisite training, support staff, facilities, and equipment. Without corresponding incremental increases in RCFD provisions, response times and other service could deteriorate, representing a ***potentially significant project and cumulative impact*** (see criteria 1 and 3 in subsection 10.4.3, "Significance Criteria," above).

As development increases in Redwood City, the RCFD will require additional personnel, facilities and equipment, especially for emergency medical purposes, in order to maintain and continue delivery of an acceptable level of service, including adequate response times. The RCFD emergency personnel ratio to population is approximately 1:1,275 (60 personnel ÷ 76,500 population). Buildout of the project in combination with other anticipated cumulative (pending, recently approved, or recently constructed) residential development in the city by the year 2015 would increase the demand for fire protection and emergency medical services

<sup>33</sup>CEQA Guidelines, Appendix G, items XIII(a), VII(g), and IX(b).

provided by the RCFD. The estimated 3,910 total net new residents on the project site (from chapter 6, Population, Housing and Employment) would therefore require up to approximately three (3) additional emergency personnel, plus requisite training, support staff, facilities, and equipment. The estimated approximately 17,472 net new residents associated with anticipated cumulative residential development in the city by 2015, including the project, would require up to approximately 14 additional RCFD emergency personnel, plus requisite training, support staff, facilities, and equipment.

**Mitigation 10-6.** The City shall use property tax revenue flow increases from the project to the City's general fund to annually fund ongoing fire and emergency medical service needs generated by the project. In addition, to the extent necessary, the City should require individual development projects, including the Marina Shores Village project, to provide a fair share contribution toward provision of new staff facilities and equipment costs which exceed general fund capacity. The

**(continued)**

**Mitigation 10-6 (continued):**

City shall withhold approval of the project Certificate of Occupancy if it is determined that adequate fire protection and emergency medical service cannot be provided and service standards cannot be met by the time of project occupancy. In addition, the project shall comply with RCFD standards applied to the project after City review of project plans. At this preliminary point, the RCFD has identified the following minimum requirements for design of the proposed project:

- All buildings more than 75 feet above the lowest level of RCFD vehicle access (classified "high-rise" buildings) shall have approved combination automatic fire sprinklers installed; a secondary on-site water supply, in addition to an approved primary water supply capable of supplying the required fire flow; a standby power-generator set; and two remotely located Fire Department connections.
- Fire hydrants shall be provided along required fire apparatus roads and adjacent public streets in conformance with the Uniform Building Code.
- On-site fire hydrants and mains capable of supplying the required fire flow (3,400 gallons per minute)<sup>34</sup> shall be provided when any portion of a building or facility is in excess of 150 feet from a water supply on a public street.

<sup>34</sup>See Table 10.1 in section 10.1 (Water Service) herein.

- Fire apparatus access roads shall be provided when any portion of a building or facility is located more than 150 feet from fire apparatus access as measured by an approved route around the exterior of the building or facility. No point in a structure shall be more than 150 feet away from an access point (such that fire hoses do not have to extend over 150 feet).
- Piers, wharves, or floats more than 250 feet from fire apparatus access shall be provided with an approved wet standpipe system.

The City may consider other alternatives to these requirements if it determines that such alternatives are feasible and such access will not jeopardize emergency response.

Implementation of these measures would reduce this impact to a ***less-than-significant level***.

**Impact 10-7: Emergency Access Impacts.** The project has the potential to conflict with RCFD standards for road design (e.g., 20 feet of unobstructed width and 45-foot/22-foot minimum outside and inside turning radii, respectively). Any potential conflicts with RCFD road design standards could cause emergency access deficiencies, representing a ***potentially significant impact*** (see criterion 2 in subsection 10.4.3, "Significance Criteria," above).

**Mitigation 10-7.** As a condition of tentative subdivision map approval, require (a) City review and approval of the proposed tentative subdivision map, and (b) demonstration by the applicant that the project complies with all applicable City of Redwood City and RCFD road design and emergency access standards. The City may consider other alternatives to these requirements if it determines that such alternatives are feasible and such access will not jeopardize emergency response. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

## 10.5 SCHOOLS

### 10.5.1 Setting

(a) Schools Serving the Project Vicinity. The Redwood City School District (RCSD) oversees the elementary and middle (K-8) public school system in Redwood City (excluding Redwood Shores), which is comprised of 16 schools serving various grades (e.g., K-5, K-8, 6-8). All RCSD schools are “Magnet Schools of Choice”; each school specializes in a particular curriculum (e.g., Spanish immersion, marine science/technology, literacy/technology, communication/performing arts).<sup>35</sup> Ten of the schools have attendance boundaries, and six of the schools are open to any Redwood City residents who wish to attend. Based on the availability of six schools not restricted by attendance boundaries, the RCSD has not identified any existing or projected school capacity shortages.<sup>36</sup>

No RCSD school or school site is located on the Bay (northeast) side of U.S. 101, where the proposed project site is located.

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<sup>35</sup>Redwood City School District website [www.rcsd.k12.ca.us], July 2, 2002.

<sup>36</sup>Krishna Kirpilani, Chief Business Official, Redwood City School District, written communication, June 27, 2002.



The Sequoia Union High School District (SUHSD) serves grades 9-12 in Redwood City (except Redwood Shores) at Sequoia High School, located at 1201 Brewster Avenue in Redwood City. Currently, approximately 7,400 students attend the high school, which has a capacity of approximately 8,000.<sup>37</sup>

(b) School Impact Fees. The school districts' primary means of funding for the construction and maintenance of school facilities is through imposition of a state-authorized impact fee for new commercial and residential projects. The current established impact fee is \$2.14 per square foot of net new residential development and \$0.34 per square foot of net new commercial development. The fee proceeds are shared between the RCSD and the SUHSD.<sup>38</sup>

### **10.5.2 Pertinent Plans and Policies**

The adopted Redwood City Strategic General Plan Land Use Element (adopted in 1990) contains the following policy related to school services, pertinent to consideration of the environmental impacts of the proposed project:

- *Residential development should be located only where services and facilities can be provided.* (Policy L-1, page 6-5)

### **10.5.3 Significance Criteria**

Based on the CEQA Guidelines, the proposed project would create a significant impact on school services if it would:<sup>39</sup>

- (1) Result in a public school service condition that is inconsistent with pertinent adopted policies and programs, including the Redwood City Strategic General Plan; or
- (2) Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, or the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives of the school

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<sup>37</sup>David Stuart, Liaison, Redwood City School District and Sequoia Union High School District, personal communication, March 19, 2002.

<sup>38</sup>Kirpilani, personal communication, June 28, 2002.

<sup>39</sup>CEQA Guidelines, Appendix G, items IX(b) and XIII(a).

districts.

#### **10.5.4 Impacts and Mitigation Measures**

**Project Impacts on Public School Services.** The project would result in an increased demand for local public school services. Based on calculations performed by the RCSD,<sup>40</sup> the residential component (1,930 units) of the proposed project would generate approximately 200 to 285 K-8 students at full occupancy (i.e., in approximately 15 years). In addition, based on a student yield factor supplied by the SUHSD of 0.3 high school students per unit, the project's residential component would generate approximately 580 9-12 students at full occupancy. Therefore, the total number of K-12 public school students expected to be generated by the proposed project would be approximately 780 to 865.<sup>41</sup>

The project would be developed over an approximately 10-year period (see section 3.5 herein). As noted above (subsection 10.5.1), based on the current availability of six schools not restricted by attendance boundaries, the RCSD has not identified any existing or projected school capacity shortages. Based on the existing excess capacity at Sequoia High School (for approximately 600 more students), the high school could accommodate the approximately 580 new students expected to be generated by the proposed project alone.

The RCSD has noted, "The State of California does not provide funding for student

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<sup>40</sup>Kirpilani, June 27, 2002.

<sup>41</sup>The student yield factors supplied by the Redwood City School District (RCSD) and Sequoia Union High School District (SUHSD) would result in an average household population larger than that projected for the proposed project (see chapter 6—Population, Housing, and Employment). However, since the yield factors used by the school districts are adopted standards for school facilities planning and budgeting purposes, they have been presented unaltered in this EIR as supplied by the school districts. Regardless of the projected number of students generated by the proposed project, state-mandated school impact fees are calculated based on the *net square footage* increase of residential and commercial development on the project site, as discussed in the followings paragraphs above.

transportation by school bus."<sup>42</sup> Therefore, with the nearest school (Orion School) over a mile away along heavily traveled streets (East Bayshore Road, Whipple Avenue), students most likely would be transported (i.e., by bus or car) to school. Based on these circumstances (no school in the project vicinity), the RCSD concludes, "[T]he concept of community will be diminished."<sup>43</sup>

The school impact fees are collected when building permits are issued. Building permits for the proposed project are expected to be issued incrementally over the anticipated approximately 10-year project buildout period. The state-mandated school fee maximums may permit increases in local school impact fees over this buildout period.

Under the current school impact fee rates, the project would ultimately be required to pay incrementally the following approximate school fee totals:

▪	2,890,210 square feet of net new residential development x \$2.14 =	\$6,185,
▪	222,000-square-foot net increase of commercial space x \$0.34 =	<u>\$75,</u>
<i>Estimated Total:</i>		<i>\$6,260,530</i>

The courts have held that increased classroom enrollment resulting in school overcrowding is considered a "social" rather than a physical "environmental" impact and is not, in itself, a significant environmental impact requiring mitigation under CEQA (Goleta Union School District vs. Regents of University of California [2d Dist. 1995]). Instead, increased school enrollment may only lead to such an impact if the increased enrollment will ultimately require physical changes in the environment. Also, new state government code sections established in 1998 (sections 65995 and 65996) have pre-empted and limited the ability of cities to exercise their police power to mitigate school impacts. A city government may not impose development requirements regarding school facilities in a manner inconsistent with state statutes on the subject. The duty of a lead agency to mitigate school impacts beyond the state-mandated fees arises only where there is a physical environmental impact involved beyond the mere addition of students to a school. Without definitive, detailed information on specific future school district facility expansion plans, identification of such secondary physical environmental impacts at this time would be highly speculative. As a result, it must be determined that the project would have a **less-than-significant impact** on schools.

The permitted mitigation for school enrollment increase impacts is limited to the state-authorized statutory authority of school districts to impose school impact fees. Specifically,

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<sup>42</sup>Kirpilani, June 27, 2002.

<sup>43</sup>Ibid.

Government Code section 65996 limits methods of mitigating impacts on school facilities to state-authorized development impact fees and interim school facility provisions.

**Mitigation.** State law prohibits a local agency from requiring mitigation measures beyond designated impact fees to offset a project's impact on local school facilities (Government Code section 65595). Therefore, under current statutes and case law, payment of the required school impact fees would mitigate the project's impact on school services to the furthest extent possible.

**Cumulative Impacts on School Services.** Residential projects recently completed, anticipated, approved, or pending approval citywide, including the proposed project, include approximately 64 single-family units and up to 8,305 multifamily units (see Table 4.1 herein). Based on projections for the proposed project and the overall average student yield factors supplied by the school districts<sup>44</sup> of 0.80 students for single-family units and 0.45 students for multifamily units, this currently anticipated cumulative development total would result in an estimated additional student yield of approximately 3,790 students. Without definitive, detailed information on specific future school district facility expansion plans, identification of secondary physical environmental impacts (i.e., the need for new school facilities) at this time would be highly speculative. Nevertheless, such a cumulative enrollment increase would be expected to exceed the current and anticipated capacity of existing RCSD and SUHSD facilities. School impact fees collected from this cumulative residential development (roughly \$20 million under the current fee structure) would be available to construct additional school facilities.

**Mitigation.** Payment of the required school impact fees would mitigate the project's cumulative impact on school services to the furthest extent permitted by law. State law prohibits a local agency from requiring mitigation measures beyond designated impact fees to offset a project's impact on local school facilities.

## 10.6 PARKS AND RECREATION

### 10.6.1 Setting

(a) City Park System. Parks and recreation services in Redwood City are provided by the City's Parks, Recreation and Community Services Department, which currently maintains approximately 146 acres of City-owned parks (131.4 acres) and two school play fields (14.6 acres). The department also operates three public community centers and one senior center. All existing City parks and recreation facilities are located southwest of U.S. 101.

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<sup>44</sup>Kirpilani and Stuart.

City parks and recreation facilities located in the project vicinity (i.e., within approximately two miles of the project site) include the following:

*Hoover Park (Woodside Road and Spring Street):* a 10.18-acre park that includes a swimming pool (summer only), ball fields, play apparatus, a multi-purpose play area, a picnic area, barbecue pits, basketball courts, and restrooms;

*Mezes Park (Warren and Standish Streets):* a 1.65-acre park that includes play apparatus, a multi-purpose play area, a picnic area, lighted tennis courts, basketball courts, and restrooms;

*Stafford Park (King Street and Hopkins Avenue):* a 1.62-acre park that includes play apparatus, a multi-purpose play area, a picnic area, and restrooms;

*Andrew Spinas Park (2<sup>nd</sup> Avenue and Bay Road):* a 1.46-acre park that includes play apparatus, a multi-purpose play area, a picnic area, barbecue pits, lighted tennis courts, basketball courts, and restrooms;

*Dove Beeger Park (Whipple Avenue and Circle Road):* a 1.00-acre park that includes play apparatus, a multi-purpose play area, and a picnic area;

*Wellesley Crescent Park (Edgewood and Arlington Roads):* a 0.75-acre park that includes a picnic area;

*Jardin de Ninos (Middlefield Road and Chestnut Street):* a 0.31-acre park that includes play apparatus; and

*Fair Oaks Community Center (2600 Middlefield Road):* an indoor facility that includes senior activities and a day care center, with facility rentals available.

The largest park in Redwood City is *Red Morton Community Park*, a 31.74-acre park with a swimming pool (summer only), ball fields, play apparatus, a multi-purpose play area, a picnic area, barbecue pits, lighted tennis courts, basketball courts, restrooms, the Red Morton Community Center (gym, teen center, fitness center, child care, and facility rentals), and the Veterans Memorial Senior Center (senior activities, information and referral services, theater, and facility rentals). Red Morton Community Park is located approximately three miles from the project site.

(b) Park Standards. Redwood City has not adopted park standards, dedication requirements, or a parks and recreation master plan. The Parks, Recreation and Community Services Department is in the process of formulating a *Department Strategic Plan*, which would eventually result in a master plan.<sup>45</sup>

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<sup>45</sup>Corinne Centeno, Parks, Recreation and Community Services Director, written communication, May 31, 2002; and Gary Hover, Parks, Recreation and Community Services Department, written and personal

In the past, the National Park and Recreation Association (NPRA) had set a standard of 10 acres of parkland for each 1,000 residents; however, the NPRA now suggests that each community determine its own ratio. With a year 2000 population of approximately 75,400 and a total of 129 acres of parkland (excluding regional open space within the City limits), Redwood City currently provides approximately 1.7 acres of parkland per 1,000 residents, a ratio which the City considers low.<sup>46</sup> In response, the City Council has set the creation of new playing fields as a priority in its last two budget processes.<sup>47</sup>

### **10.6.2 Pertinent Plans and Policies**

The adopted Redwood City Strategic General Plan Land Use, Open Space, and Conservation Elements (all adopted in 1990) contain the following objective and policies related to parks and recreation, pertinent to the proposed project:

- *Parkland should be provided in quantity and locations so as to be available for the use of all Redwood City residents equally.* (Land Use Policy L-11, page 6-5)
- *Provide a network of trails and pathways through Redwood City in order to enhance the City's recreational opportunities.* (Open Space Objective 3, page 9-3)
- *Major recreational areas and significant open space resources should be linked together through the use of pedestrian ways, bicycle paths, and the Hetch-Hetchy right-of-way.* (Open Space Policy O-6, page 9-3)
- *The City shall cooperate with County, regional, state, federal, and other public agencies on open space issues. (A partial listing of such agencies includes the San Mateo County Parks and Recreation Commission, the Mid-Peninsula Regional Open Space District, Golden Gate National Recreation Area, the California Fish and Game Department, the United States Army Corps of Engineers, the San Francisco Bay Conservation and Development Commission, and the San Francisco Water Department.)* (Open Space Policy O-9, page 9-4)
- *Environmentally unique open spaces such as San Francisco Bay, its tributaries, sloughs, and marshlands should be protected and enhanced for conservation and recreation*

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communications, September 25, 2002.

<sup>46</sup>Hover.

<sup>47</sup>Centeno.

*purposes.* (Conservation Policy C-3, page 10-4)

### **10.6.3 Significance Criteria**

Based on the CEQA Guidelines, the proposed project would create a significant impact on parks and recreation services if it would:<sup>48</sup>

- (1) Result in a public service (parks and recreation) condition that is inconsistent with pertinent adopted policies and programs, including the Redwood City Strategic General Plan;
- (2) Result in substantial adverse physical impacts associated with the provision of new or physically altered parks and recreation facilities, or the need for new or physically altered parks and recreation facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks and recreation services;
- (3) Result in an increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- (4) Include recreational facilities, or require the construction or expansion of recreational facilities, that might have an adverse physical effect on the environment.

### **10.6.4 Impacts and Mitigation Measures**

**Impact 10-8: Project Impacts on Parks and Recreation Services.** The new residents resulting from the project's 1,930-unit residential component would increase the demand for local parks and recreational services. The City of Redwood City has not adopted a citywide parks *standard*; however, in order to maintain the City's current parks *ratio* of 1.7 acres of parkland per 1,000 residents, approximately 6.8 acres of additional improved parkland at a location or locations so as to be available for use by project residents would be required to serve the park needs of the projected 4,020 project residents (i.e., 3,910 net new residents); currently, no improved parkland exists within a convenient walking distance (e.g., less than ½ mile) of the project site. The proposed project includes approximately 15.8 acres of common landscape/hardscape open space to be shared between residents, visitors, and the general public. This open space would include public pedestrian and bicycle paths, public plazas and promenades, and a proposed link to the planned San Francisco Bay Trail extension (not yet designed). Also, the project's conceptual landscape plans include a proposed approximately two-acre community park, but this adjacent off-site land is owned by the U.S. Fish and

<sup>48</sup>CEQA Guidelines, Appendix G, items IX(b), XIII(a), XIV(a), and XIV(b).

Wildlife Service (USFWS); the project applicant currently does not have development rights to this property.

Project effects on City parks and recreation services would represent a **potentially significant impact** (see criteria 2 through 4 in subsection 10.6.3, "Significance Criteria," above).

(a) Common Open Space. The current project plans (see chapter 3, Project Description) identify approximately 15.8 acres of "landscape/hardscape" common open space to be shared between project residents, visitors, and the general public. This acreage would include public pedestrian and bicycle paths, public plazas and promenades, and a proposed link to the planned San Francisco Bay Trail extension (not yet designed, see item [c] below). However, the proposed common open space, as currently depicted on project plans, would not provide any of the typical neighborhood or community park amenities provided at other parks in the City--e.g., ball fields, play apparatus, multi-purpose play areas, picnic areas, barbecue pits, swimming pools, tennis courts, basketball courts, and restrooms.<sup>49</sup> Therefore, as part of the Precise Plan formulation for the proposed project, the City Community Development Services Department and Parks, Recreation and Community Services Department would determine what, if any, credit would be applied toward meeting the project's parks and recreation needs, based on a total projected need of approximately 6.8 acres of additional improved parkland.

(b) Possible Community Park. The project's conceptual landscape plans (see chapter 3, Project Description) include a proposed off-site, approximately two-acre community park, with picnic areas, playground equipment, and overlooks, situated along the adjacent PG&E electrical transmission tower line right-of-way, on land owned by the U.S. Fish and Wildlife Service (USFWS). The applicant wishes to acquire development rights for the right-of-way in order to implement this open space aspect of the project. (The USFWS recently acquired rights to this acreage from the Peninsula Open Space Trust.) The two-acre piece would fall short of the minimum project parkland need of approximately 6.8 acres, and its location beneath two parallel electrical transmission tower lines would detract from its parkland quality. In any event, since the applicant currently does not have development rights to this property, the property and associated applicant-proposed park amenities are not included as part of "the project" as evaluated in this EIR. Should the applicant obtain development rights to the USFWS property, the City Community Development Services Department and Parks, Recreation and Community Services Department would decide what, if any, credit would be applied toward meeting the project's parks and recreation needs, based on a total projected need of approximately 6.8 acres of additional improved parkland.

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<sup>49</sup>Redwood City Parks, Recreation and Community Services Department. *Parks and Facilities Information*, a departmental brochure provided to the EIR authors by Corinne Centeno, Director, May 31, 2002.



(c) Proposed Link to Planned Bay Trail Extension. The proposed alignment of an ABAG-planned extension of the San Francisco Bay Trail traverses the southern edge of the project site, as illustrated on Figure 4.4 in chapter 4 (Land Use) of this EIR. The proposed extension alignment starts north of the project site, at the terminus of the existing Bay Trail segment in San Carlos near Mariner Park, passes around San Carlos Airport along the levee adjacent to U.S. 101, skirting the edge of the Bair Island National Wildlife Refuge along the southwestern edge of the project site, and continues along East Bayshore Road to connect with the existing Bay Trail segment in the San Francisco Bay National Wildlife Refuge in Menlo Park.

The project applicant intends to accommodate this planned Bay Trail extension. Two alternative locations have been suggested by the applicant for the trail extension through the project site: "scenario 1" along the PG&E easement, adjacent to the Bair Island Wildlife Refuge and north of the Marina Pointe townhouses, or "scenario 2" along East Bayshore Road. As shown on Figure 4.4, the planned trail extension would then continue beyond the project site, south across Redwood Creek via the existing pedestrian-bicycle bridge, and along East Bayshore Road where it would join with the proposed Blomquist extension.

Under applicant-suggested "scenario 1," Bay Trail users would utilize either Bair Island Road or cross Bair Island Road and utilize a sidewalk on the project site, which would then extend approximately 1,500 feet south to East Bayshore Road and the Blomquist Extension. This sidewalk segment of the Bay Trail would include two curb cuts on Bair Island Road, both of which would be marked for pedestrians and provide vehicular access to the proposed project. Under applicant suggested "scenario 2," Bay Trail users would cross Bair Island Road and continue along East Bayshore Road and then the Blomquist Extension.

In addition, the proposed project pedestrian and bicycle access system would provide opportunities for Bay Trail users to exit the trail and access the grounds of the proposed project, including the project waterfront access points; however, the project grounds are not anticipated to be part of the Bay Trail.

**Mitigation 10-8.** Implement one of the following two alternative measures:

- (1) If the *Parks, Recreation and Community Services Department Strategic Plan* currently being formulated by the City is adopted prior to approval of the project-requested General Plan Amendment, Precise Plan, Design Review (Architectural) Permit, or subdivision map, requirements of the Strategic Plan shall apply to that approval as a condition of issuance; or
- (2) As part of Precise Plan formulation for the project, the City Community Development Services Department and Parks, Recreation and Community Services Department shall decide what, if any, credit would be applied toward meeting the project's parks and recreation needs, based on a total projected need of approximately 6.8 acres of additional improved parkland, through

provision of common open space, the proposed adjacent community park (should development rights be granted by the USFWS), and the proposed link to the planned San Francisco Bay Trail extension. If determined necessary by the City, the developer shall revise the project site plan to incorporate on-site parkland with amenities sufficient to serve the project residents.

Implementation of either one of these mitigation measures would reduce project impacts on park facilities and recreational programs to a ***less-than-significant level***.

As discussed above under subsection 10.6.1(b) (Park Standards), the City of Redwood City is currently formulating a *Parks, Recreation, and Community Services Department Strategic Plan*. If the plan is adopted prior to the issuance of one or more of the key City approvals requested by the project, the plan's requirements shall apply to that particular project approval as a condition of approval issuance. Otherwise, the project applicant would be required to implement *mitigation alternative (2)* above.

**Cumulative Impacts on Parks and Recreation Services.** The projected 17,472 new residents resulting from citywide residential projects that are pending (including the proposed project) or have been recently approved or constructed (see Table 4.1 in chapter 4, Land Use) would require approximately 29.7 acres of parkland in order to maintain the City's current park acreage per capita ratio. Implementation of the mitigation measures discussed above would reduce the project contribution to cumulative impacts on parks and recreation services to ***less-than-significant levels***.

**Mitigation.** No significant cumulative impact has been identified; no mitigation is required.

## 10.7 SOLID WASTE SERVICE

### 10.7.1 Setting

(a) Solid Waste Collection and Disposal Services. BFI Peninsula in San Carlos provides solid waste collection, recycling, transportation, and disposal services to Redwood City and other Peninsula cities. Residential and commercial solid waste from Redwood City is taken to the South Bayside Transfer Station, located on Shoreway Road in San Carlos.<sup>50</sup>

(b) Transfer Station and Landfill Capacity. The South Bayside Transfer Station in San Carlos accepts Class III wastes from Redwood City and a number of surrounding communities. The

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<sup>50</sup>BFI Peninsula website [www.bfipeninsula.com], December 2001.

current permitted through-put capacity of the South Bayside Transfer Station is 3,000 tons per day. There are currently no plans for expansion.<sup>51</sup> Total annual waste disposal for Redwood City is estimated at 125,129 tons (which takes into account the City's current estimated 47 percent diversion rate).<sup>52</sup>

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<sup>51</sup>Gloria del Rosario, Revenue Services Manager, Redwood City Public Works Department, written communication, January 2002.

<sup>52</sup>Redwood City. *Redwood City Disposal, Generation and Diversion Rate Summary*, updated January 10, 2002.

After leaving the South Bayside Transfer Station, materials are then transferred to Ox Mountain Landfill, a Class III landfill in Half Moon Bay which accepts a slightly broader range of materials than the transfer station. The Ox Mountain landfill has a permitted through-put capacity of 3,598 tons per day, and total capacity of 37,900,000 cubic yards of material. The expected closure date of this landfill is in the year 2018.<sup>53</sup>

(c) Recycling and Waste Diversion. The BFI Recyclery is also located on Shoreway Road, adjacent to the Transfer Station and BFI administrative offices in Redwood City. BFI operates a voluntary curbside recycling program in its service area, including Redwood City. Materials accepted include plastic, glass, aluminum, tin, paper, and newspaper. Recyclables are picked up once a week along with regular waste and then processed at the BFI Recyclery, which also operates an on-site Buy-Back Center open to the public.

In 1998, the California Integrated Waste Management Board (CIWMB) approved Redwood City's waste stream diversion estimates of 46 percent (103,089 tons disposed of a total 191,025 tons generated). In the City's year 2000 annual report, the City reported a 47 percent diversion rate (which has not yet been approved by the CIWMB).<sup>54</sup>

### **10.7.2 Pertinent Plans and Policies**

(a) Redwood City Strategic General Plan. The adopted Redwood City Strategic General Plan Land Use Element (adopted in 1990) contains the following general policy related to solid waste service, pertinent to consideration of the environmental impacts of the proposed project:

- *Residential development should be located only where services and facilities can be provided.* (Policy L-1, page 6-5)

(b) California Integrated Waste Management Act. The California Integrated Waste Management Act of 1989 required cities to divert 25 percent of their solid waste from landfills by 1995, and 50 percent by the year 2000. By 2000, Redwood City was diverting approximately 47 percent of its waste stream.<sup>55</sup> Municipalities face fines of up to \$10,000 per day for non-compliance. The State generally places the burden of responsibility for waste stream reduction on local municipalities (i.e., cities and counties).

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<sup>53</sup>California Integrated Waste Management Board Solid Waste Information System (SWIS) website [www.ciwmb.ca.gov/SWIS], 2002.

<sup>54</sup>del Rosario.

<sup>55</sup>[http://www.recycleworks.org/div\\_rates.htm](http://www.recycleworks.org/div_rates.htm).

### **10.7.3 Significance Criteria**

Based on the CEQA Guidelines, the project would be expected to have a significant impact on solid waste services if it would:<sup>56</sup>

- (1) Result in a need for new or physically altered facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for solid waste service;
- (2) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs;
- (3) Fail to comply with federal, state, and local statutes and regulations related to solid waste; or
- (4) Result in a public service condition that is inconsistent with pertinent adopted local plans and policies, including the Redwood City Strategic General Plan.

### **10.7.4 Impacts and Mitigation Measures**

**Project Impacts on Solid Waste Service.** The project would increase demands for solid waste collection and disposal services. Based on average solid waste generation rates for the proposed project land uses,<sup>57</sup> the project at full operation (buildout) would be expected to generate a total of approximately 21,372 pounds (10.69 tons) per day of solid waste. The total would consist of approximately 12,000 pounds per day from the 300,000 square feet of proposed office uses, 108 pounds per day from the 12,000 square feet of proposed retail uses, and 9,264 pounds per day from the proposed 1,930 housing units.

The project would not be expected to generate an inordinate amount of solid waste for its

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<sup>56</sup>CEQA Guidelines, Appendix G, items XIII(a), XVI(f-g), and IX(b).

<sup>57</sup>Average solid waste generation rates are estimated at 0.04 pound/square foot/day for office commercial uses, 0.009 pound/square foot/day for retail commercial uses, and 4.8 pounds/unit/day for multifamily housing units. These rate estimates were derived by Wagstaff and Associates from data provided by the California Integrated Waste Management Board (CIWMB) (June 21, 2000 e-mail from CIWMB "Waste Line" re. "Waste Generation Rates").

size--i.e., a rate inconsistent with adopted plans and policies--and would be served by landfills with sufficient capacities to accommodate the project's annual solid waste disposal needs at buildout.

**Mitigation.** No significant impact has been identified; no mitigation is required.

**Impact 10-9: Solid Waste Diversion Impacts.** Due to the tower design of a large portion of the project, the project has the potential to conflict with state-mandated requirements for 50 percent solid waste stream diversion if residents find the locations of recycling bins to be too distant or inconvenient. Site and project plans submitted at this time do not provide enough detail to determine if adequate provisions for recycling have been included in project design. If adequate recycling provisions are not ultimately included, the project could conflict with state-mandated waste stream reduction requirements, representing a ***potentially significant impact*** (see criterion 3 in subsection 10.7.3, "Significance Criteria," above).

**Mitigation 10-9.** The final project architectural design shall include chutes for recyclable materials immediately adjacent to the garbage chutes, or at another suitable location approved by the City, in the residential towers. Bins for storage of recyclables shall be provided for each residential tower unit. The City shall ensure that these provisions are included in project construction prior to issuance of a Certificate of Occupancy. Implementation of this measure would reduce the impact to a ***less-than-significant level***.

## 10.8 CHILD CARE

### 10.8.1 Setting

(a) Local Child Care Facilities, Enrollment, and Capacity. Redwood City has 60 center-based child care programs (including full- and part-day facilities) and 120 licensed family child care homes. The types of child care offered in the city include care for infants (up to 2 or 2.5 years); preschool age children (2.5 to 5 years); kindergarten children (after school only); and first through sixth grade children (after school only). The majority of this care is provided by a combination of not-for-profit and for-profit, private sources. The Redwood City School District operates some state-funded programs on school sites, but these programs are restricted by stringent income guidelines.<sup>58</sup>

<sup>58</sup> Kristen Anderson, Redwood City Child Care Coordinator, personal communication, January 11, 2002.

According to the most recent child care needs assessment survey, Redwood City child care programs have a total licensed capacity in centers and family child care homes of 3,525 children. Total estimated child care need in Redwood City (ages 0 to 13 years) is 11,085 spaces for children in all age groups.<sup>59</sup> Therefore, the current need for licensed child care space is estimated to exceed the amount of available space by more than three times.

The estimated need by income-eligible, working families for state-subsidized child care is 5,761 spaces; the actual estimated total of existing subsidized space (including all types of funding) is approximately 839 spaces.<sup>60</sup> Therefore, the current need for subsidized child care space in Redwood City is estimated to exceed the amount of available space by approximately seven times.

The following five child care centers are located within two miles of the proposed project site, as indicated on Figure 10.1:

- *Our Place/Marin Day Schools, 403 Winslow Street on San Mateo County government campus.* Capacity: 92 children. Primarily for County employees' children; open to the public at higher fees if an opening cannot be filled from employee list. Ages two months to five years. Consistently has a one- to two-year waiting list for infant and toddler spaces.
- *Sequoia Children's Center, 1234 Brewster Avenue.* Capacity: 88 children. Ages two months to five years.
- *Jasmine Montessori, 178 Clinton Street.* Capacity: 28 children. Ages three to five years.
- *Plaza Child Development Center/Family Service Agency, 950 Main Street (in City Center Plaza housing development).* Capacity: 24 children. Ages three to five years.
- *Peninsula Christian School, 1305 Middlefield Road.* Capacity: 36 children. Ages three to five years.<sup>61</sup>

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<sup>59</sup>San Mateo County, 2000. *Redwood City Child Care Need and Availability*, summary of data from Redwood City section of *Childcare Needs Assessment, San Mateo County, 1999-2000*.

<sup>60</sup>Ibid.

<sup>61</sup>Anderson.

### **10.8.2 Pertinent Plans and Policies**

The Redwood City Strategic General Plan Land Use Element and Human Services Element contain the following relevant policy and proposal regarding child care services:

- *Development of child care facilities should be encouraged in both residential and non-residential areas in ways that are compatible with existing uses, in order to promote availability and accessibility of services. (Policy L-12, page 6-5)*



Figure 10.1. Day Care Facilities within Two Miles of Project Site.

- *The Committee should encourage the provision of child care facilities to meet Redwood City residents' needs.* (Social Environment Proposal c, page 15-12)

Although the Redwood City *Draft Housing Element 1999-2006* has not yet been certified by the State or adopted by the City, it is currently under review by the State; therefore, *Draft Housing Element* policies cannot be considered City policy. However, the following policy from the *Draft Housing Element* is listed here to provide a framework for determining future City policy direction.

- *The City shall assess the potential demand for child care generated by proposed, large residential developments and facilitate the development and acquisition of space for child care centers and family child care homes.* (Draft Housing Element, Program C.9, Chapter 8, p. 12).

Redwood City does not provide child care services, does not impose any development fees on new development for the provision of child care, and does not offer density or other bonuses to developers as incentive to provide facilities for child care in new development.

### **10.8.3 Significance Criteria**

The CEQA Guidelines do not outline any significance criteria specific to provision of child care services. However, the project may be considered in this EIR to have a potentially significant impact on the provision of child care services if it would result in a child care services condition that is inconsistent with pertinent adopted policies and programs, including the Redwood City Strategic General Plan.

### **10.8.4 Impacts and Mitigation Measures**

**Child Care Impacts.** The proposed project could exacerbate the existing child care shortage in Redwood City. Because the City has no adopted policy *requiring* provisions for child care in new development, this impact is considered ***less-than-significant*** from a CEQA perspective.

*Explanation.* As depicted in Table 10.3, the project would be expected to include an approximate total of up to 593 children requiring child care.<sup>62</sup> This project-related need for

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<sup>62</sup>The child care yield factors derived from ABAG and San Mateo County projections would result in an average household population larger than that projected for the proposed project (see chapter 6-- Population, Housing, and Employment). However, since the yield factors are derived from adopted standards used by ABAG and San Mateo County, they have been retained unaltered in this EIR and used for calculating projected child care needs.

spaces would be expected to exacerbate the current child care space shortage in Redwood City.

Table 10.3  
CHILD CARE YIELD FROM PROPOSED PROJECT

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<u>Age</u>	<u>Number of Children<sup>1</sup></u>	<u>Number of Children Needing Child Care<sup>2</sup></u>
0 to 2	217	141
3 to 5	221	144
6 to 13	<u>434</u>	<u>308</u>
TOTAL	872 <sup>3</sup>	593 <sup>3</sup>

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SOURCE: ABAG, 2001, Projections 2002, Forecasts for the San Francisco Bay Area to the Year 2025; San Mateo County, Child Care Needs Assessment of San Mateo County, 1999-2000; Wagstaff and Associates, 2002.

<sup>1</sup> Based on the estimated project population of 4,020 persons and population distribution by age group for Redwood City as stated in the Child Care Needs Assessment of San Mateo County, 1999-2000: 0 to 2 = 0.054; 3 to 5 = 0.055; 6 to 13 = 0.108 of total population.

<sup>2</sup> Based on ratios of total estimated child care need in Redwood City to total number of children in that age group estimated to be generated by the proposed project (from Child Care Needs Assessment of San Mateo County, 1999-2000), based on percentage of children with working parents (65 percent through age 5, 71 percent ages 6-13 years).

<sup>3</sup> The child care yield factors derived from ABAG and San Mateo County projections would result in an average household population larger than that projected for the proposed project (see chapter 6-- Population, Housing, and Employment). However, since the yield factors are derived from adopted standards used by ABAG and San Mateo County, they have been retained unaltered in this EIR and used for calculating projected child care needs.

Due to the existing shortage of child care facilities in Redwood City, every substantial addition to the population of children in the City exacerbates existing unmet needs for such services. The primary variables that contribute to the existing shortage of locally available child care services include the shortage of affordable, available space for such facilities and the relatively low average wage for child care workers, which, when combined with the high cost of living in the Redwood City area, contribute to low recruitment and high turnover.

As noted in subsection 10.8.2, the City's General Plan *encourages*, but does not require, new development to provide for child care. According to the Redwood City Child Care Coordinator, in order for provision of child care to be feasible, facility costs need to be low enough to cover the costs of the child care operator. In large residential and commercial projects, this outcome can be achieved through developer provision of dedicated, rent-free, or low-rent physical space to house child care facilities. Therefore, any potential child care impacts from new development could be mitigated through the voluntary provision of on-site space where a private or non-profit operator could set up child care facilities, consistent with state space requirements.<sup>63</sup>

**Mitigation.** No mitigation is required under CEQA. Child care services are currently private or non-profit rather than public. The City of Redwood City has no General Plan policy or municipal regulation *requiring* provisions for child care with new development. However, the following measure is recommended: The City should consider giving a density or other development bonus to the project, based on applicant provision of adequate (i.e., consistent with state space requirements) child care space or facilities on the project site.

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<sup>63</sup>Anderson.