

The Community Services Background Report is intended to describe the existing level of services relative to current and projected population in the City of Palo Alto's neighborhoods and to identify possible gaps in community services that could arise between now and 2020.

A. Public Schools

The following section examines the current and projected level of service for all public schools in Palo Alto.

1. Palo Alto Unified School District (PAUSD)

a. Existing Facilities and Enrollment

Approximately 10,000 students in the City of Palo Alto, portions of Los Altos Hills and Portola Valley as well as the Stanford University campus attend the Palo Alto Unified School District (PAUSD). These students are served by twelve elementary schools (grades K-5), three middle schools (grades 6-8) and two high schools (grades 9-12). These schools are listed in Table 1. Additionally, PAUSD serves special populations through a pre-school, Young Fives program, Adult School and the Hospital School at Stanford's Lucille Packard Children's Hospital.

b. Planned Facilities and Future Enrollment

There have usually been more students moving into the community than moving out, at least since 1981, when data became available to measure migration. This trend is due to the high quality of schools; it becomes even more pronounced when new housing is built. Since 2000, the number of elementary students coming into the district has been even greater than in the past. In general, enrollment is mostly driven by families with young children moving into existing housing. New housing also increases the numbers of students, sometimes more so than anticipated due to housing units being larger

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TABLE I **PAUSD SCHOOLS IN PALO ALTO**

Schools	Estimated Capacity ^a	Fall 2008 Enrollment ^b	Remaining Capacity
Elementary Schools			
Addison	372	443	-71
Barron Park	372	343	29
Duveneck	496	493	3
Escondido	496	535	-39
El Carmelo	372	370	2
Hoover	372	372	0
Fairmeadow	372	374	-2
Juana Briones	372	344	28
Lucille Nixon	372	430	-58
Ohlone ^c	434	473	-39
Palo Verde	372	374	-2
Walter Hays	496	510	-14
Middle Schools			
David Starr Jordan	950	813	137
Jane Lathrop Stanford	950	872	78
Terman	675	661	14
High Schools			
Gunn	1,950	1,849	101
Palo Alto	1,950	1,690	260

^a Source: Recommended capacities from *PAUSD School Capacity* presented to the Board of Education on November 15, 2005.

^b Source: Lapkoff, Shelley, Ph.D and Jeanne Gobalet, Ph.D, December 15, 2008, *Palo Alto Unified School District Demographic Trends and Forecast*, page 11.

^c Includes language immersion students.

or more attractive to families than expected.¹ District growth projections indicate that PAUSD could grow by as much as 1,300 additional students between 2008 and 2013. Garland Elementary School will be reopening to relieve elementary schools that are overcrowded or are expected to be overcrowded in the future. Kindergarten enrollment starting in 2012 is expected to be higher than in recent years due to an increase in births to Palo Alto residents in 2007. Greater capacity will also be needed at the middle and high school levels to accommodate expected growth in the upper grades.²

2. Higher Education

Although private Stanford University is the primary higher education institution in the Palo Alto area, this summary focuses on public institutions. Foothill College's Middlefield Campus is the only community college in the City; however, Cañada College in Redwood City, De Anza College in Cupertino and Foothill College in Los Altos Hills all serve Palo Alto residents.

a. Foothill Community College

i. Existing Facilities

The main Foothill College Campus is located in Los Altos Hills and offers Associates Degrees and professional certificate programs. Located at the Cubberley Community Center in Palo Alto, the Middlefield Campus is Foothill College's main satellite campus. It offers day, evening and online classes with open enrollment. Students can obtain Associate Degrees, transfer to four-year colleges and participate in career programs. The Middlefield Campus offers a variety of specialized courses, including Emergency Medical Technician (EMT), Paramedic, Pharmacy Technician, Travel Careers and

¹ Lapkoff and Gobalet Demographic Research, Inc., January 26, 2009, *District-Wide Enrollment Forecasts, Executive Summary*.

² Lapkoff, Shelley. Demographer, Lapkoff and Gobalet Demographic Research Inc. Personal communication with DC&E staff. August 20, 2008 and March 3, 2009.

Child Development.³ Total enrollment is 18,000 for the main campus and Middlefield Campus combined.

ii. Planned Facilities

Measure E, a 10-year plan to renovate existing facilities as well as construct new facilities, will help meet future enrollment needs at Foothill and DeAnza Colleges. The Foothill College 2007 Facilities Master Plan identifies major projects, including building projects and site improvements, planned for the college's main Los Altos Hills campus in the next 5 to 10 years. The following briefly describes the major projects featured in the Master Plan:

- ◆ **North Slope Complex.** The newly constructed North Slope Complex will provide instructional and support space and state-of-the-art facilities for chemistry, physics and nanotechnology programs.
- ◆ **Scene Shop.** The newly constructed building will accommodate a stand-alone theater scene shop, located adjacent to parking Lot 6, for easy vehicular access and delivery of scenes to and from Smithwick and Lohman theaters.
- ◆ **Soccer, Baseball and Softball Complex.** The existing ball fields will be renovated to include new turf and additional supporting facilities such as dugouts, restrooms, bleachers and a concession stand.

No major improvements are proposed for the Middlefield Campus.

b. Cañada College

i. Existing Facilities

Cañada College, located in Redwood City, is one of the smallest colleges in the Bay Area with approximately 6,000 students. In addition to high school completion, Associate Degree and professional certificates, Cañada College offers bachelors and masters degrees. Students can earn bachelors degrees in nursing, business administration, liberal studies and child and adolescent de-

³ Foothill College. <http://www.foothill.edu/mid/index.php>, accessed on July 28, 2008.

velopment in addition to teaching credentials for elementary and secondary schools. The college provides an accelerated executive master's degree in business administration. Associate and professional course work includes medical assisting, radiologic technology, multimedia, early childhood education, fashion design, interior design, human services, accounting and business technology.

ii. Planned Facilities

The Cañada College 2006 Facilities Master Plan calls for new facilities including a Health Center, new rooms for student clubs and meeting rooms. The Plan also describes renovations to the existing Facilities Maintenance Center, which will be relocated to make room for a Wellness Center, a new campus amenity.

c. De Anza College

i. Existing Facilities

De Anza College, located in Cupertino, enrolls an average of 25,000 students. De Anza is associated with Foothill Community College in the Foothill-De Anza Community College District. It offers 60 Associate Degree programs and 25 certificate programs. Popular majors include Accounting, Animation, Automotive Technology, Business, Child Development, Computer Applications and Office Systems, Environmental Studies, Film/Television, Graphic Design, Intercultural Studies, Manufacturing and Design Technology, Nursing, Paralegal Studies and Technical Communications.

ii. Planned Facilities

The De Anza College 2007 Facilities Master Plan identifies major projects planned for the campus in the next 5 to 10 years. The following briefly describes the two major facilities features of the Master Plan:

- ◆ **Mediated Learning Center.** This newly constructed facility, proposed to the west of the California History Center, will include instructional space as well as the co-location of the Technology Resources Group and Distance Learning.
- ◆ **Public Transit Center and Parking.** The addition of the Stelling Parking Structure provides the campus with a total of 5,660 parking spaces

and will promote alternative forms of transportation with a bus transit center on the east side of campus. This transit center will provide access to the five bus routes that service the campus.

3. Opportunities and Challenges

a. Opportunities

- ◆ The city contains quality public schools, which have planned for expected growth through 2010.
- ◆ The city is home to high-quality higher education institutions, including Stanford University.
- ◆ Measure E will help meet future enrollment needs at Foothill and DeAnza Colleges.
- ◆ Measure A, approved in June 2008, will allow the district to begin implementation of the Long Range Facilities Master Plan to accommodate enrollment growth and expanded programs.

b. Challenges

- ◆ As shown in Table 1, several public schools, and elementary schools in particular, are operating near or over capacity.
- ◆ Enrollment is projected to increase in the future due to the high birthrate in recent years and in-migration. The school district and the City need to continue to work together to provide adequate school facilities for a growing population.

B. Public Parks and Recreation Facilities

The following section describes park and recreational facilities within the City of Palo Alto, identifying needs for expanded facilities.

1. Existing Facilities

a. Parks and Recreation Facilities

The City owns and operates 34 parks and preserves. Both parks and recreation facilities are mapped in Figure 1 and are summarized in Table 2. “Mini-parks” range in size from ½-acre to 2 acres, and generally include play equipment or green areas for active and passive recreation. Most of the other parks are larger “neighborhood” parks and provide a mix of active and passive recreational areas. There are also open space preserves that serve larger areas and contain a wider range of facilities, including picnic grounds, hiking and biking trails, wildlife watching and camping.⁴

In addition, the City of Palo Alto Recreation Division offers numerous programs, including youth and adult sports, teen and middle school activities, after school programs, a variety of classes for all ages and a wide range of special events. Recreation facilities include the Cubberley, Lucie Stern and Mitchell Park Community Centers; the Children’s Theater and Community Theater; Rinconada Pool; Junior Museum and Zoo; Golf Course; Art Center; Baylands Interpretive Center; and Skateboard Park at Greer Park.

b. Park Standards

The City of Palo Alto has used the following park standards since establishing its Comprehensive Plan in 1998.⁵

- ◆ A park should be provided within walking distance of all residential neighborhoods and employment areas. The National Recreation and Park Association defines walking distance as ½-mile.

⁴ City of Palo Alto Parks and Recreation Department.
<http://www.cityofpaloalto.org/recreation/news/details.asp?NewsID=627&TargetID=69>, accessed July 28, 2008.

⁵ City of Palo Alto, 1998, *Comprehensive Plan, Community Services*, page C-17.

TABLE 2 **PALO ALTO PARKS AND RECREATION FACILITIES**

Park or Facility	Acres	Amenities
Cultural		
Children's Theater	N/A	Classes and programs including theater, radio, television, film and video
Cubberley Community Theater	N/A	317 seat venue with modern technical facilities, suitable for dance performances, orchestra or music concerts, corporate or cultural presentations, film screenings and lectures
Cubberley Community Center	N/A	Space for community meetings, social events, dances, theater performances, music rehearsals and athletic events
Art Center	N/A	Regional visual art center offers art classes and has exhibition program that focuses on recognizing the art of the San Francisco Bay Area
Junior Museum and Zoo	N/A	Children's science education center with year-round after-school science programs, interactive science exhibits and zoo featuring 50 exotic and native animals
Avenidas Senior Center of Palo Alto	N/A	Classes, lectures, trips, tours and special events
Recreation		
Golf Course	N/A	18-hole championship length course, lighted driving range, restaurant and practice putting green area
Gunn H.S. Pool	N/A	Lap swim
Lucie Stern Community Center	N/A	Rooms are available for rent for meetings, weddings, receptions and parties
Mitchell Park Community Center	N/A	Meeting rooms for retreats, meetings and classes
Rinconada Pool	N/A	Aquatics programs including lap swim, recreational swim and swim lessons for every age and interest; lifeguard, lanes, dressing rooms and showers
Skateboard Park at Greer Park	N/A	Concrete Bowl
Stanford-Palo Alto Playing Fields	N/A	Two regulation-size soccer/rugby fields, restrooms, snack facility, benches and small picnic tables

TABLE 2 **PALO ALTO PARKS AND RECREATION FACILITIES (CONTINUED)**

Park or Facility	Acres	Amenities
Mini Parks		
Bowden Park	2.1	Toddler playground, two climbing structures
Bowling Green Park	4.1	Lawn bowling area, clubhouse, open turf area
Boulevard Park	1.3	Basketball court, shaded picnic area with barbecue facilities, toddler playground with swings and slides
Cameron Park	1.2	Wooden climbing structure with a triple slide, swings and picnic tables
Cogswell Plaza	1.4	During the summer months there are free concerts held at noon on Thursdays
El Palo Alto Park	0.5	Path used for walking and biking
Mayfield Park	1.1	Benches
Monroe Park	0.6	Toddler play area with swings and benches
Scott Park	0.3	Basketball court, toddler play equipment, benches
Weisshaar Park	1.2	Two tennis courts and an open grassy area with benches
Werry Park	1.1	Toddler play area, climbing structure, large open grass area
Wallis Park	0.3	Benches
Neighborhood Parks		
Baylands Athletic Center	6	1 softball diamond, 1 baseball field
Bol Park	13.8	Jogging path, a large climbing structure and a one-mile bicycle path running from Gunn High School to Arastradero Road
Briones Park	4.6	Picnic areas, toddler play equipment with a "train station", swings and a climbing structure
Byxbee Park	N/A	Trails
Eleanor Pardee Park	9.5	Toddler playground area with barbecues and a multi-purpose concrete bowl
El Camino Park	10	Soccer field and softball field with bleachers and lights

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TABLE 2 **PALO ALTO PARKS AND RECREATION FACILITIES (CONTINUED)**

Park or Facility	Acres	Amenities
Greer Park	21.2	Five soccer fields, three softball fields, one little league diamond, two basketball courts, small dog run, skateboard bowl, toddler playground
Heritage Park	2.4	Playground, swings, picnic area, climbing rock, sand area, great lawn, pathways
Hoover Park	7	Two tennis courts, two handball courts, tennis backboard, softball field, a dog run
Hopkins Creekside	18	Three open grassy areas with benches and tables
Johnson Park	2	Toddler playground, climbing structures, basketball hoops, picnic area, sand volleyball pit, community garden plots
Mitchell Park	20.8	Shuffleboard courts, checkerboard/chess tables, seven tennis courts, two paddle tennis courts, four handball courts, jogging trails, picnic areas with barbecues, playground
Peers Park	4.8	Two tennis courts, picnic tables, playground, climbing structures, basketball court
Ramos Park	4.3	Playground, picnic area, basketball court
Rinconada Park	11.3	Community swimming pool, picnic areas, 9 tennis courts with lights, 2 shuffleboard courts, playground, large open space, jogging paths
Robles Park	4.7	Picnic facilities with barbecues, playground with sand, climbing structure
Seale Park	4.3	Toddler play area, large open space area for volleyball and soccer
Terman Park	7.3	Four tennis courts, one basketball court, two soccer fields, one softball field and a walk/ bike path
Open Space		
Baylands Preserve	1,940	Baylands Nature Interpretive Center, Wildlife observation platforms and benches
Esther Clark Nature Preserve	21.7	Undeveloped nature reserve of grasslands and oaks
Foothills Park	1,400	Hiking trails, fishing and boating lake, camping facilities, Nature Interpretive Center, picnic area
Pearson-Arastradero Preserve	622	Trails, fishing

Source: City of Palo Alto Community Services Department, http://www.city.palo-alto.ca.us/recreation/parks_outdoors.asp, accessed on July 17, 2008. N/A = acreage unavailable.

- ◆ Neighborhood parks should be at least 2 acres in size, although sites as small as ½-acre may be needed as supplementary facilities. The maximum service area radius should be ½-mile.
- ◆ District parks should be at least 5 acres in size. The maximum service area radius should be 1 mile. Two acres of district park land should be provided for each 1,000 people.
- ◆ The City has established a standard within the Subdivision section of the Municipal Code of 5 acres of parkland per 1,000 residents. This standard is currently used to establish the amount of parkland or fees paid in-lieu associated with land subdivisions for residential use in Palo Alto.

Palo Alto provides more parkland than most other communities in the Bay Area. There are currently approximately 4,150 acres of parkland and open space within city limits. With a total population of 63,752 persons in 2007, there are approximately 62 acres of parkland and open space per 1,000 residents.⁶ This ratio is well above the standard of 2 acres per 1,000 residents that the City set in the 1998 Comprehensive Plan for its district and neighborhood parks and above the current standard found in the Municipal Code. However, if the same calculation is completed excluding open space areas, there are 2.6 acres per person.

Although parkland acreage is high, the City is not meeting the proximity standards set in the Comprehensive Plan in 1998. Many small parks are within a half-mile walking distance of homes, but they are not of sufficient size to qualify as neighborhood parks under the Comprehensive Plan standards. In addition, some large parks, such as Foothills Park and the Baylands, are not within one mile of residential areas in the city.

⁶ American Community Survey, 2005-2007, 3-Year Estimate for Palo Alto, California.

2. Planned Facilities

Rather than buying new open space for park and recreation facilities for millions of dollars per acre, the City is looking at redeveloping existing facilities to better serve residents. For example, the City is replacing many of the shuffle board courts because of their outdated nature. In addition, the City is working to provide universal access at all Parks and Recreation Facilities to properly accommodate handicapped individuals.⁷

There are also major renovations and new developments underway that will expand recreational services in the city. The City is planning to renovate the Art Center with support from the Palo Alto Art Foundation. A new Mitchell Park Library and Community Center facility are planned to meet the future library and recreation needs in South Palo Alto. The Oshman Family Jewish Community Center, set to open in its new location in South Palo Alto in 2009, will also provide the City with exclusive use of some rooms and gym space to help meet gaps in recreation service.

The City is considering creating a Parks and Recreation Master Plan to address the diverse demographics in Palo Alto. For example, aging Baby Boomers will require different services than youths.

An interdepartmental team has been working to prepare a master plan that addresses the management and expansion of Palo Alto's urban forest. The goal of the Urban Forest Plan is to identify and set forth a comprehensive strategy for management and expansion of both the private and public urban forest, including a preliminary inventory of the publicly-owned urban forest and its carbon sequestration capacity.

a. Opportunities

- ◆ The City offers varied resources and programs to serve the diverse recreational needs for Palo Alto residents and visitors.

⁷ Betts, Greg. Parks Manager, City Parks and Recreation, City of Palo Alto. Personal communication with Blake Hudelson, DC&E. August 18, 2008.

- ◆ The City is working with surrounding communities to recognize opportunities for shared park and recreation facilities and avoid duplication of facilities.
- ◆ The City can work with the school district to develop additional joint use facilities as the school district expands facilities to meet the growing student population.
- ◆ Through its programs and services relating to human health and environmental stewardship, the Palo Alto Community Services Department is well positioned to encourage and foster a shift towards greater sustainability in the community.
- ◆ The Community Services Department plays an important role in addressing the national obesity epidemic by providing a range of programs to support an active lifestyle.
- ◆ The programs of the Community Services Department provide a safety net for vulnerable populations, particularly at-risk youth and teens.
- ◆ The Community Services Department partners with many private groups and agencies, whose support is instrumental in providing recreational services and programs to the community. The Community Services Department may need to leverage additional public-private partnerships in the future to ensure the continued provision of these services and programs.

b. Challenges

- ◆ It remains a challenge to provide sufficient park space to meet the demands of the City's population and visitors.
- ◆ Many of the parks are used beyond their planned capacity and are understaffed.
- ◆ Year-round pedestrian and bicycle access to the Baylands is needed.
- ◆ Some of the cultural and recreational facilities in the city, such as the Junior Museum and Zoo and the Rinconada Pool, need to be renovated and upgraded.

- ◆ The Cubberley Community Center is largely owned by the PAUSD and is therefore dependent on PAUSD needs.
- ◆ The Parks and Recreation Department has identified a lack of sufficient playing fields. The need for playing fields is highest on weekdays between 3pm and 6pm, and on weekends.
- ◆ Gym space and daycare center capacity are inadequate to meet existing demand.
- ◆ The Community Services Department needs to develop improved cost-recovery strategies to reduce the draw on the general fund for programs and services.
- ◆ The City will need to respond to the unique recreation needs of the aging Baby Boomer Generation.

C. Open Space and Trails

Nearly 4,000 acres in Palo Alto, representing over one-third of the city's area, is protected as open space.⁸ Most of this land is in the foothills, to the west of the city's developed area. The City of Palo Alto offers a variety of nature programs, hikes, bike rides, walks, workshops and other activities in the open space preserves. The following section examines the existing and planned open spaces in Palo Alto.

1. Existing Facilities

Open spaces near the City of Palo Alto are regional facilities owned and operated by a various jurisdictions including the City of Palo Alto and the Mid-Peninsula Regional Open Space District. The facilities provided by these jurisdictions are briefly described below.

⁸ City of Palo Alto, 2008, *Info Palo Alto*, page 11.

a. City of Palo Alto

i. *Foothills Park*

The 1,400-acre park is located approximately 3 miles west of Highway 280 on Page Mill Road. Hiking trails in Foothills Park access widespread chaparral cover, woodland and fields, streams, a lake and views of the San Francisco Bay.

ii. *Pearson-Arastradero Preserve*

The 610-acre preserve is a mixture of rolling savannah grassland and broadleaf evergreen forest, varying in elevation from 275 feet in the northeast to 775 feet in the southwest. Visitors to the Pearson-Arastradero Preserve have access to expansive views of the bay, hikes through the grasslands or picnics by the Arastradero Lake.

iii. *Esther Clark Nature Preserve*

Ester Clark Nature Preserve is a small, undeveloped nature preserve of grassland and oaks located at the end of Old Trace Road off of Arastradero Road. The preserve is undeveloped and has no picnic tables, restrooms, or other amenities.

iv. *Baylands Nature Preserve*

Along the San Francisco Bay shoreline, open space is protected in what is generally referred to as the Palo Alto Baylands. The Baylands is approximately 1,940 acres protecting some of the last remaining salt marsh and mud flat habitats on the west coast. In the spring and fall, the Baylands is a prime stopover or destination for birds traveling on the Pacific route of their migration flyway. In addition to birdwatching, the Baylands provide a number of low-impact recreational facilities, including the following:

- ◆ Lucy Evans Baylands Nature Interpretive Center
- ◆ Byxbee Park Hills (Art Park)
- ◆ Baylands Athletic Center
- ◆ Emily Renzel Wetlands
- ◆ Wildlife observation platforms and benches
- ◆ Picnic facilities and barbeques

b. Mid-Peninsula Regional Open Space District.

i. *Monte Bello Open Space Preserve*

The 3,133-acre Monte Bello Open Space Preserve includes the upper Stevens Creek watershed from Monte Bello Ridge to Skyline Ridge. Approximately fifteen miles of trails are available for hiking, biking and horseback. The preserve is wheelchair accessible and offers camping, restrooms and parking.

ii. *Los Trancos Open Space Preserve*

The 274-acre Los Trancos Open Space Preserve provides opportunities for hiking, biking, fishing, picnicking, camping, nature study and non-motorized boating. The park offers 5.2 miles of trails within an area of significant ecological and aesthetic value, providing important habitat for wildlife.

2. Planned Facilities

There are currently no known plans to develop additional open space areas or trails.

3. Opportunities and Challenges

a. Opportunities

- ◆ The city contains extensive open space resources and a variety of landscapes.
- ◆ Proximity to the San Francisco Bay allows for shoreline recreational opportunities.

b. Challenges

- ◆ The City has to find sufficient funds in order to continue to maintain the large open space areas and trails under its jurisdiction.
- ◆ Bicyclists, pedestrians, and people with special needs must be provided with access to open space.

D. Public Libraries

The following section examines the existing and planned public library facilities in Palo Alto. Twenty-four library items per Palo Alto resident circulate every year and the number of library card holders exceeds 53,000.⁹ Palo Alto City Library customers checked out over 1.5 million items in 2007-08, a 9 percent increase from 2006-2007. Children's book circulation rose by 16 percent, due in part to the reopening of the fully renovated Children's Library in September. The increased circulation workload has been handled by the successful introduction of self-service checkout technology. System-wide, 89 percent of all first-time checkouts are completed by customers at self-service machines. Library revenues are supplemented through a variety of fund-raising activities conducted by the Palo Alto Library Foundation and Friends of the Palo Alto Public Library.

1. Existing Facilities

The Palo Alto City Library has five branches – Main, Mitchell Park, Children's, College Terrace and Downtown. These five libraries are shown in Table 3 and are described below.

a. Main Library

The Main Library opened in 1958 following a voter-approved \$700,000 bond measure that also funded the construction of the Mitchell Park Library. The library is located on Newell Road across from the Palo Alto Art Center. This branch has the largest collection in the system, including the primary reference collection and the archives of the Palo Alto Historical Association, and provides wireless Internet access, public Internet terminals and loaner laptops. The Main Library primarily serves adults and teens and has a small children's collection. The Main Library is the center for local history, reference and research. It is open 62 hours per week.¹⁰

⁹ City of Palo Alto. *City of Palo Alto Service Efforts & Accomplishments Report FY 2007-08*, pages 47-48.

¹⁰ City of Palo Alto. <http://www.cityofpaloalto.org/depts/lib/news/details.asp?NewsID=408&TargetID=170>, accessed July 19, 2008.

b. Children's Library

The Children's Library is the county's oldest separate children's library. The library is located in the Lucie Stern Community Center complex on Harriet Street. It serves children through fifth grade with a collection that includes picture books, beginning readers, classic and contemporary children's fiction and a broad non-fiction collection for general interest and homework help or research assistance.

The library also provides Internet stations, media collections, children's magazines, a preschool computer and wireless access. The library provides programs for infants, toddlers, preschoolers and school-age children. The library building was recently renovated and expanded, adding more space for programming and for the collections.¹¹

¹¹ City of Palo Alto. <http://www.cityofpaloalto.org/depts/lib/news/details.asp?NewsID=410&TargetID=170>, accessed July 19, 2008.

TABLE 3 **PALO ALTO LIBRARIES**

Library Name	Location	Square Footage	Facilities
Main Library	1213 Newell Rd	26,313	Wireless access, laptops for loan, public Internet terminals
Children's Library	1276 Harriet St	6,043	Internet stations, media collections, children's magazines, a preschool computer and wireless access
College Terrace Library	2300 Wellesley Ave	2,392	CD and DVD collection, story-times for young children, wireless access, laptops for loan
Downtown Library	270 Forest Ave	8,774	Two large meeting rooms, collection of CDs, DVDs, magazines, newspapers
Mitchell Park Library	3700 Middlefield Rd	9,478	Broad selection of reference materials, magazines and newspapers, DVDs and CDs, Books-on-CD

Source: City of Palo Alto. http://www.cityofpaloalto.org/knowzone/city_projects/city_facilities/library_projects.asp, accessed July 20, 2008.

c. College Terrace Library

Open since 1936, the College Terrace Library offers a limited collection of books and media for adults and children. Services include free wireless access, public Internet computers, laptops for loan and occasional programs for children.¹²

d. Downtown Library

Built in 1971, the Downtown Library is located on Forest Avenue across from City Hall. This branch houses a collection of books and media materials for both adults and children. However, it is used primarily by adults who make heavy use of the Internet, computers and laptops for loan. The Downtown Library has the only public meeting room in the library system, a small

¹² City of Palo Alto. <http://www.cityofpaloalto.org/depts/lib/news/details.asp?NewsID=406&TargetID=170>, accessed July 19, 2008.

room with capacity for four people. The Library is open 35 hours per week.¹³

e. Mitchell Park Library

The Mitchell Park Library opened in 1958 following a voter approved \$700,000 bond measure that also funded the construction of the Main Library. The library is located on Middlefield Road, next to Mitchell Park Community Center. The library is the busiest branch in the library system; its 80,000-volume collection includes materials for adults, teens and children. Located in a neighborhood with several schools, Mitchell Park Library is used heavily by students after school. The library provides programs for children and teens, wireless access, Internet computers and laptops for loan. The library is open 58 hours per week.

2. Planned Facilities

Planning for library facilities has been on the City Council's list of top priorities for the past three years. The Library Advisory Commission calls for the library to acquire 70,000 new items, 90 more seats, 35 more computers and dedicated space for group study and programs.¹⁴ Library facilities, except for the recently-upgraded children's branch, need to be upgraded to improve efficiency, appeal and accessibility. Current and anticipated demographics that guide library improvements include an aging population and Palo Alto's continued status as a destination location for families.¹⁵

A community survey by the Library Commission regarding priorities for library facilities showed that having a strong and comprehensive collection of books and other materials is of critical importance. Residents also value:

- ◆ Convenience and access, including more convenient hours of operation.

¹³ City of Palo Alto. <http://www.cityofpaloalto.org/depts/lib/news/details.asp?NewsID=407&TargetID=170>, accessed July 19, 2008.

¹⁴ City of Palo Alto. *Library Service Model Analysis and Recommendations*, 2006, page 6.

¹⁵ Bodenlos, Susan, Management Assistant, City Library, City of Palo Alto. Personal communication with Blake Hudelson, DC&E. July 18, 2008.

- ◆ More services and programs for children and teens.
- ◆ Comfortable facilities and maintaining the branch library system.

The Library Advisory Commission suggests that efforts should continue to build the website as a virtual branch. This would offer online reference materials, online registration for library cards and e-commerce, podcast story times and other downloadable data, online workshops and training, reference assistance by Instant Messaging and a library blog. The Commission recommends that the Library undertake a technology planning process to consider innovations that would accommodate the future and put processes in place that would insure that the Library continues to adapt to new technologies as they become available. An advisory committee of citizen volunteers is working with staff and the Commission to complete a multi-year technology plan in 2009.

Planned infrastructure improvements at the College Terrace, Mitchell Park, Main and Downtown locations between 2009 and 2013 will include seismic retrofitting and upgrades to public use spaces, building accessibility and mechanical and electrical systems. Sustainability strategies will be incorporated into these facility enhancements.¹⁶

In 2006, the City Council approved an infrastructure capital project that will provide \$4 million to renovate and upgrade the historic building that houses the College Terrace Library and daycare center. Scheduled to begin in the summer of 2009, the construction project will be completed by the fall of 2010.

Designs and preliminary project costs for a new Mitchell Park Library/Community Center, expanded Main and renovated Downtown Libraries were presented to the City Council on February 4, 2008. In November

¹⁶ City of Palo Alto. *Library Service Model Analysis and Recommendations*, 2006, page 9.

2008, Palo Alto voters approved the City Council's \$76 million general obligation bond measure to fund the needed improvements.

a. Opportunities

- ◆ The city contains several libraries that serve a range of users.
- ◆ In November 2008, voters approved the City Council's \$76 million general obligation bond measure. The bond will fund needed improvements for a new Mitchell Park Library/Community Center, expanded Main and renovated Downtown libraries.
- ◆ Use of the library's resources increased from 2007-2008 when compared to 2006-2007, with a 9 percent increase in the number of items checked out by library users.

b. Challenges

- ◆ The library needs to maintain and upgrade library facilities, particularly virtual resources available through the website.
- ◆ The City will need to secure sufficient funds for the additional operating costs of the expanded library facilities.
- ◆ Under-staffed and aging facilities require staff to focus on basic operation and facility problems, leaving less time for the span of services the libraries should deliver.¹⁷

E. Solid Waste Collection Services

The following section examines the current and projected solid waste collection level of service in Palo Alto.

¹⁷City of Palo Alto. *Library Service Model Analysis and Recommendations*, 2006, page 5.

The California Integrated Waste Management Board (CIWMB) estimates that the City of Palo Alto generates approximately 115,000 tons of waste annually.¹⁸ In addition, Palo Alto Sanitation Company (PASCO) collects and processes 17,000 tons of green waste and 15,305 tons of reusable and recyclable materials.

Assembly Bill 939 requires municipalities to divert at least 50 percent of waste from landfills. The City of Palo Alto already exceeds this goal, with a 62 percent diversion rate in 2004. In 2005, the City determined that it would continue to exceed the State mandate. It has a goal of 73 percent diversion by 2011 and zero waste to landfills by 2021. To meet this goal, the Palo Alto Zero Waste Task Force (a committee of residents, businesses and City staff), along with a consultant team, developed a Zero Waste Strategic Plan and Waste Composition Study. The City then prepared a Zero Waste Operational Plan.

The Zero Waste Operational Plan carries forward key objectives of the Zero Waste Strategic Plan. The key objectives of the Plan are to encourage all sectors of the local economy and municipal government to implement the Zero Waste Plan, to develop infrastructure beyond recycling and advocate zero waste.¹⁹ The Plan identifies several policies, which fall under the following categories:²⁰

- ◆ Make waste prevention the number one priority.
- ◆ Provide incentives for source reduction and recycling.
- ◆ Develop and support extended producer responsibility.
- ◆ Advocate zero waste.
- ◆ Improve recycling opportunities in public areas.
- ◆ Maintain an open market competition for recyclables.
- ◆ Implement an environmentally preferable purchasing policy.

¹⁸ City of Palo Alto, 2007, *Utilities Newsletter*, page 12.

¹⁹ City of Palo Alto, 2007, *Zero Waste Operational Plan*, page 2.

²⁰ City of Palo Alto, 2007, *Zero Waste Operational Plan*, pages 44 to 50.

- ◆ Assist new reuse organizations and businesses in becoming established in the community.
- ◆ Reduce greenhouse gas emissions.
- ◆ Reduce the amount of toxicity of consumer product waste.

1. Existing Facilities

City businesses and residents currently use an array of facilities to handle, divert and dispose of materials generated in Palo Alto.

a. City Landfill Operation

The City's Landfill and Composting Facility, located at 2380 Embarcadero Road, is currently accepting waste but is nearing capacity. The facility is scheduled to close in 2010, at which point closing and capping procedures will begin. The landfill is expected to be capped and ready for State inspection in 2013.

b. City Composting Facility

The City's composting operation is currently located at the City's landfill at 2380 Embarcadero Road. It accepts yard trimmings from the residential yard trimmings collection program, the commercial yard trimmings debris box service, City crews and other yard trimming sources. The City sells compost, mulch and wood chips derived from these materials.

c. Sunnyvale Materials Recovery and Transfer (SMaRT) Station

The City also sends waste to the Sunnyvale Materials Recovery and Transfer (SMaRT) Station, which is operated in partnership with the cities of Mountain View and Sunnyvale. The purpose of the SMaRT Station is to process and divert waste before sending the waste to the landfill. Currently the station diverts 18 percent of the waste delivered by PASCO. The City's partnership with the cities of Mountain View and Sunnyvale to operate the SMaRT Station expires on October 14, 2021.

d. Recycling

i. Recyclables Collection and Processing

PASCO provides curbside collection of residential and commercial recyclables. However, PASCO will no longer provide recycling collection services as of July 1, 2009. The City has arranged for another company, Green Waste, to begin service at that time to replace PASCO. Green Waste will process recyclables and commercial organics at its facility in San Jose, and will deliver refuse loads and collected yard trimmings to SMaRT if no local composting option is identified after landfill closure.

ii. Recycling Drop-Off Center

PASCO operates the City's Recycling Drop-Off Center, located on the landfill. The Drop-Off Center accepts a wide range of materials and collaborates with Goodwill to encourage donation of reusable items.²¹ The southern portion of the Drop-Off Center closed on January 12, 2009 and is to be used by the landfill to finalize its filling operations. The Drop-Off Center remains at its current location but no longer accepts certain items due to cost and space constraints.²²

iii. Palo Alto Zero Waste Program

The program helps residents, schools and businesses reduce waste by encouraging source reduction, reuse and purchase of recycled content products. Programs include junk mail reduction kits, compost workshops, a recycling drop-off center, online "Recyclopedia" and free technical assistance.

iv. Construction and Demolition Debris Reuse and Recycling

The City requires all demolition projects and all construction projects valued at \$75,000 or more to divert 90 percent of all debris and 50 percent of all remaining construction and demolition debris as a condition of the building

²¹ City of Palo Alto website, http://www.pafd.org/depts/pwd/recycle/recycling_drop_off_center.asp, accessed January 5, 2009.

²² City of Palo Alto, *New Year Brings Changes to the Palo Alto Recycling Center*, <http://www.city.palo-alto.ca.us/civica/filebank/blobdload.asp?BlobID=14330>, accessed January 5, 2009.

permit. These projects must also make salvageable materials available for reuse.

e. Outreach Programs

The City runs many outreach programs related to solid waste, including: green business certification, residential green building workshops, school assembly program (reduce, reuse, recycle, buy-recycled education) for grades K-8, tours of the Recycling Center and Compost Facility, presentations at open space and Science Day Camps, a Chamber of Commerce newsletter insert, recycling program website, community and business recycler newsletters, utility bill inserts and announcements, biennial garage sale events and junk mail reduction program.

The City also provides technical assistance programs, including: backyard and worm composting classes, soil workshops, commercial waste audits and technical assistance, City department technical assistance and low waste or zero waste public and employee events.

f. Household Hazardous Waste

Palo Alto residents and small businesses can drop off hazardous waste on scheduled days at the Regional Water Quality Control Plant (RWQPC), located at 2501 Embarcadero Way.

2. Planned Facilities

Per the direction of City Council, possible locations for a recycling drop-off center and a composting facility will need to be studied to find long-term solutions.

a. Landfill

The Palo Alto Landfill and Composting Facility is scheduled to close in 2011. After this facility closes, all of Palo Alto's solid waste will go to the SMaRT Station.

b. Recycling

The City of Palo Alto will continue its efforts to expand recycling and other diversion activities to meet the objectives of the Zero Waste Operational Plan and will continue to offer curbside recycling pickup. Once the City's landfill closes in 2011, the Recycling Drop-off Center will either be closed or relocated elsewhere in the city. It will also need to accept household hazardous wastes. As of 2009, a new recycling center was planned for either the RWQCP or the former Los Altos Treatment Plant (LATP) site.

c. Composting

The composting facility will be closed when the landfill closes (beginning in 2011). The Council is exploring alternatives for composting the City's organics including developing a new facility within the city limits utilizing new enhanced technologies or exporting all of the city's organics to a regional composting facility.

3. Opportunities and Challenges

a. Opportunities

- ◆ City residents and businesses have access to an array of facilities to handle, divert and dispose of materials generated in Palo Alto, including landfill, composting, materials recover and recycling facilities.
- ◆ The City can make progress toward its Zero Waste goal by increasing the diversion of those materials identified as priorities in the Waste Composition Study: paper, organics and construction and demolition debris.

b. Challenges

- ◆ The City needs to improve and expand the system for processing organics within the city, and will need to develop or identify a new composting facility when the existing facility closes in 2011.
- ◆ The City will need to find a long-term solution for relocating a drop-off recycling center within the city.

F. Utilities

The following section examines the current and projected level of service for utilities in Palo Alto. The City of Palo Alto Utilities (CPAU) is the only municipal utility in California that operates City-owned utility services, including electric, fiber optic, natural gas, water and wastewater services. The Palo Alto Utilities Engineering Department is responsible for implementing the capital improvement plans for the city's electric, water, gas and wastewater distribution systems and provides assistance to the operating departments.

1. Electric

a. Supply Sources

All electric services are operated by the City. CPAU purchases electric power from the Western Area Power Administration (WAPA), the Northern California Power Agency (NCPA) and other energy suppliers and marketers. Palo Alto committed to achieving a 20 percent renewable portfolio by 2008 and a 33 percent renewable portfolio by 2015. CPAU achieved a 17 percent renewable portfolio in 2008, while Palo Alto Green achieved a 100 percent renewable portfolio in 2008 with 5 percent of total use.²³ Palo Alto's current renewable energy sources include electricity from landfill gas in Santa Cruz County and wind power from Solano County.

b. Demand-Side Management Programs

Palo Alto provides several programs to assist customers in using renewable energy and conserving energy. These include:

- ◆ Residential and commercial rebates for heating, cooling, appliance, building shell and other improvements.
- ◆ Efficiency analysis for home (online) or office (consultant-provided).
- ◆ Public school energy education curriculum grants.
- ◆ PV Partners photovoltaic rebate program.
- ◆ Palo Alto Green voluntary renewable energy purchase program.

²³ City of Palo Alto Utilities, 2008, Power Content Label 4th Quarter 2008.

c. Existing Facilities

Palo Alto Utilities operates 10 substations, 17 miles of 60kV electric sub-transmission lines and 400 miles of overhead and underground electric distribution lines. One substation, Colorado Substation, receives electric power from PG&E at 115kV and steps it down to 60kV subtransmission which is used to supply 9 distribution substations in Palo Alto. The distribution substations step the 60kV subtransmission voltage down to 4kV and 12kV distribution lines, which serve 28,000 electric customers throughout Palo Alto.

d. Planned Facilities

The City has an ongoing effort to replace older overhead cables and poles. The City is working to replace all overhead electric utilities with underground electric utilities in conjunction with the telephone and cable TV companies. Currently, approximately one-third of the city is served with underground lines.²⁴

2. Fiber Optic

Since 1996, the City of Palo Alto has worked to provide fiber optic services, enabling the fastest possible data transfer to date.

a. Existing Facilities

CPAU maintains an extensive fiber optic infrastructure. In 1996, the City Council approved the construction of a backbone fiber optic network for electric substation communication. City Council also approved additional fiber optic capacity for commercial dark fiber optic service and for general government communication needs. The fiber optic backbone was completed in 1997 and is used on a fee basis by commercial, industrial and institutional customers.

With the fiber backbone, customers can gain direct high bandwidth fiber access to numerous Internet service providers. Customers can also interconnect their internal communications systems or computer networks across multiple

²⁴ City of Palo Alto, 2007, *Utilities Newsletter*, page 7-13.

Palo Alto locations. A key benefit of CPAU's fiber backbone is that customers have easy shopping access to a variety of service providers (data, telephone and video) rather than having to rely upon a single telecommunications provider.

An Internet exchange site, PAIX.Net, based in Downtown Palo Alto, allows open access for multiple Internet service providers to exchange data between their networks. The CPAU dark fiber optic backbone terminates within the Internet exchange site, allowing customers to gain direct access to all of the Internet service providers located there.

b. Planned Facilities

CPAU expands the dark fiber backbone into new geographic areas based upon customer demand or the need to enhance system reliability.²⁵

3. Natural Gas

a. Supply Sources

Natural gas service is operated by CPAU. CPAU purchases natural gas from a variety of credit-worthy suppliers. It benefits from lower transport costs on an interstate natural gas pipeline that accesses lower-cost gas at the California-Oregon border.

b. Existing Facilities

The Gas Operations division maintains and operates the 207 miles of gas mains and 23,000 gas mains in the city.

c. Planned Facilities

The City of Palo Alto Gas Engineering Department is responsible for planning, designing, budgeting and construction of major capital improvements to the city's gas distribution system. Approximately 30,000 lineal feet of gas mains and 500 service lines are replaced each year.²⁶

²⁶ City of Palo Alto. http://www.cityofpaloalto.org/depts/utl/utilities_engineering/gas.asp, accessed on August 7, 2008.

4. Water Supply

a. Supply

Palo Alto's water quality is among the nation's highest, meeting or exceeding all State and federal standards for drinking water. Palo Alto's water comes from regional supplies, 85 percent of which are snowmelt from the Hetch Hetchy Reservoir in Yosemite National Park. Since 1962, all of the city's potable water has come from the San Francisco Public Utilities Commission (SFPUC).²⁷ The city also uses recycled water treated at the Palo Alto Regional Water Quality Control Plant (RWQCP). Recycled water is primarily used for irrigation, cleaning and landscaping purposes.²⁸ Table 4 shows the projected forecast of water needs for Palo Alto as of 2004 when the 2005 Urban Water Management Plan was developed. In 2004, water supply purchases from the SFPUC totaled 13,294 acre-feet per year (AFY). In 2008, the total water usage in Palo Alto was 13,820 AFY. New projections of water supply need are being undertaken and are expected to be completed by mid-2009 and will be used in the 2010 Urban Water Management Plan.

Under its water supply contract with San Francisco, Palo Alto has a supply assurance of 19,124 AFY. Therefore, water supply is sufficient to serve existing and projected water demand in the City based on the 2005 forecast. However, there are insufficient supplies for existing and projected water demands in times of water shortage.

b. Demand

As water supply becomes more constrained over time, water conservation and reuse will become increasingly important. Palo Alto offers water customers several voluntary ways to reduce water consumption. These include residential and commercial rebates for efficiency measures, consumer information and water efficiency analysis for home and business. In addition, the

²⁷ City of Palo Alto Utilities, 2005, *Urban Water Management Plan*, page 10.

²⁸ City of Palo Alto Utilities, 2005, *Urban Water Management Plan*, pages 23 to 24.

TABLE 4 **CURRENT AND PLANNED WATER SUPPLIES (AFY)**

Water Supply Source	2005	2010	2015	2020	2025	2030
SFPUC	14,826	14,644	14,557	14,587	14,572	14,606
Local Groundwater	0	0	0	0	0	0
Local Surface Water	0	0	0	0	0	0
Recycled Water	850	850	850	850	850	850
Transfers in or out	0	0	0	0	0	0
Exchanges in or out	0	0	0	0	0	0
Desalination	0	0	0	0	0	0
Other Sources	0	0	0	0	0	0
Total	15,676	15,494	15,407	15,437	15,422	15,456

Source: City of Palo Alto Utilities, 2005, *Urban Water Management Plan*, page 14.

City requires new construction with large landscapes to meet strict water efficiency standards.

Water consumption in Palo Alto decreased from 2000 to 2004. This decrease in water usage can be largely attributed to permanent water conservation methods implemented in Palo Alto over the past 15 years. Table 5 shows water sales in Palo Alto in 2000 and 2004 and Table 6 shows projected water sales from 2005 to 2030. These projections will be updated when the 2010 Urban Water Management Plan is developed. Water usage varies by land use, with industrial users using the most water per water meter and single-family users using the least. With the exception of public facility users, all users are projected to become more water-efficient over the next 25 years.

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TABLE 5 PAST WATER SALES (AFY PER WATER METER)

User	2000	2004	Percent Change (2000 – 2004)
Single-Family	0.440	0.438	-0.5%
Multi-Family	1.173	1.076	-8.3%
Commercial	1.782	1.446	-18.9%
Industrial	6.121	4.388	-28.3%
City Facilities	4.305	2.342	-45.6%
Public Facilities	4.984	4.200	-15.7%
Total	0.752	0.690	-8.1%

Source: City of Palo Alto Utilities, 2005, *Urban Water Management Plan*, page 32.

TABLE 6 PROJECTED WATER SALES, 2005 TO 2030 (AFY PER WATER METER)

User	2005	2010	2015	2020	2025	2030	Projected Percent Change (2005-2030)
Single-Family	0.433	0.426	0.418	0.412	0.407	0.402	-7.2%
Multi-Family	1.136	1.107	1.076	1.052	1.033	1.016	-10.6%
Commercial	1.610	1.567	1.532	1.504	1.482	1.463	-9.2%
Industrial	5.552	5.543	5.521	5.529	5.506	5.504	-0.9%
City Facilities	2.218	2.118	2.125	2.121	2.123	2.118	-4.5%
Public Facilities	5.955	5.926	5.914	5.958	5.958	5.959	0.1%
Total	0.716	0.702	0.688	0.677	0.669	0.662	-7.5%

Source: City of Palo Alto Utilities, 2005, *Urban Water Management Plan*, page 32.

c. Existing Facilities

The city has 220 miles of water mains and 20,000 customer water meters.²⁹ The City maintains five wells for use in case of emergency.

d. Planned Facilities

CPAU has been working since 1993 to replace water mains to increase reliability, improve water quality and increase fire protection capacity. These improvements are expected to be completed by 2018. In addition, the City is planning for water supplies should the Hetch Hetchy system become unavailable in an emergency. This project, the Emergency Water Supply and Storage Project, will include the development of a new reservoir beneath El Camino Park.³⁰

5. Wastewater³¹

a. Wastewater Collection System

The City of Palo Alto Wastewater Engineering Department provides planning, designing, budgeting and construction of wastewater-related capital improvements. The Wastewater Collection Operations Department provides maintenance and operations of the City's collection system. The collection system serves residents and businesses within city limits, Stanford University and a portion of Los Altos Hills.

The town of Los Altos Hills has an agreement with the City of Palo Alto for a certain number of connections, rather than for a certain amount of flow.³² Los Altos Hills has approximately 753 connections discharging into the collection system. Flows from Los Altos Hills enter the collection system at two locations, one on Arastradero Road and one on Old Page Mill Road. Los

²⁹ City of Palo Alto, 2007, *Utilities Newsletter*, page 38.

³⁰ City of Palo Alto. http://www.cityofpaloalto.org/depts/utl/faqs/emergency_water_supply.asp, accessed August 8, 2008.

³¹ Unless otherwise noted, information is from LSA Associates, October 2007, *Service Review*, Chapter 10: City of Palo Alto.

³² Wu, Edward. Senior Engineer, City of Palo Alto. Personal communication with Alexis Lynch, January 5, 2009.

Altos Hills has also requested the construction of an additional sewer main connection, which would serve a maximum of 1,571 connections to the collection system. Most of these connections would serve septic conversions, rather than new growth. The Town of Los Altos Hills expects that few septic conversions will actually occur, and that the maximum allowable discharge will never be reached. The construction and maintenance of this new connection would be financed by the Town of Los Altos Hills.

i. Existing Facilities

The city services 200,000 linear feet of wastewater mains and 2,000 service laterals. The city's collection system is an approximately 207-mile system. The system is primarily comprised of gravity flow sewers that range in diameter from 4 to 42 inches. The collection system includes one lift station located in the foothills.

ii. Planned Facilities

In 2004, the City completed a new Wastewater Collection System Master Plan, which analyzed the capacity of the collection system. The City's Capital Improvements Plan addresses deficiencies in the system as they arise.³³

The City has been upgrading its sewer mains in recent years. This project was undertaken, in part, to reduce the amount of groundwater that was seeping into the mains, resulting in additional volume to be processed at the RWQCP. The program has been so successful that anticipated infrastructure improvements have been found not to be necessary. Therefore, maintenance and replacement efforts are currently focused on smaller-scale pipes.

b. Regional Water Quality Control Plant

Palo Alto has one wastewater treatment facility, the Regional Water Quality Control Plant (RWQCP) located at 2501 Embarcadero Way. The RWQCP treats wastewater from the East Palo Alto Sanitary District, Los Altos, Los Altos Hills, Mountain View, Palo Alto and Stanford. The RWQCP discharge

³³ Wu, Edward. Senior Engineer, City of Palo Alto. Personal communication with Alexis Lynch, January 5, 2009.

is required to meet stringent standards to protect the health of the South Bay, where the water is discharged. The plant has a 100 percent survival rate of fish from the fish toxicity test every month.³⁴

Under a 1968 Joint Sewer System Agreement, the City of Palo Alto owns, maintains and upgrades the RWQCP and the Cities of Los Altos and Mountain View purchase capacity rights. The City of Palo Alto bills each contributing agency for its share of facility construction, maintenance and upgrade costs. Costs to each contributing agency are allocated proportionately based on each agency's purchased capacity. When an agency's flow reaches 80 percent of its capacity rights, the agency is required to perform an engineering study to redefine future needs.³⁵

The City of Palo Alto owns meters that measure and record flows into the plant. The meters at the plant track average flows from each agency for the purposes of determining the proportionate cost of maintaining the plant. Average annual flows from each contributing agency for the 2008 fiscal year are shown in Table 7. The capacity rights of each contributing agency are shown in Table 8. Currently, none of the agencies is in danger of exceeding its capacity right.³⁶

In addition to infrastructure, the City undertakes outreach efforts and programs to reduce the flow of damaging substances into the system. A primary concern is fats, oils and greases, which can accumulate in the pipes and result in overflows. The City runs several programs intended to decrease the environmental impact of the wastewater system, including:

- ◆ Discontinuation of City purchase of antibacterial soaps.
- ◆ Safe medicine collection.

³⁴ City of Palo Alto, 2007, *Utilities Newsletter*, pages 33-34.

³⁵ City of Los Altos, *Sanitary Sewer Management Plan*, available at http://cc.mcanet.com/cwea/webuploads/37_City%20of%20Los%20Altos%20SSMP.pdf, accessed January 6, 2008, pages 5-5 to 5-6.

³⁶ Allen, Jamie, Acting Plant Manger, Regional Water Quality Control Plant. Personal communication with Alexis Lynch, January 6, 2009.

TABLE 7 **REGIONAL WATER QUALITY CONTROL PLANT AVERAGE FLOWS (2008)**

Agency	Average Daily Flow	Average Annual Flow
City of Los Altos	2.61 MGD	955 MG
City of Mountain View	8.54 MGD	3,124 MG
City of Palo Alto	8.9 MGD	3,259 MG
East Palo Alto Sanitary District	1.74 MGD	637 MG
Stanford University	1.20 MGD	438 MGD
Town of Los Altos Hills	0.27 MGD	98 MG
Total	23.3 MGD	8,510 MG

Source: Allen, Jamie, Acting Plant Manger, Regional Water Quality Control Plant. Personal communication with Alexis Lynch, January 6, 2009.

TABLE 8 **CAPACITY RIGHT OF EACH CONTRIBUTING AGENCY**

Agency	Capacity ^a	Percent of Total Capacity
City of Los Altos	3.8 MGD	9.47%
City of Mountain View	15.1 MGD	37.89%
City of Palo Alto	15.3 MGD	38.16%
East Palo Alto Sanitary District	3.06 MGD	7.64%
Stanford University	2.11 MGD	5.26%
Town of Los Altos Hills	0.63 MGD	1.58%
Total	40.0 MGD	100%

^a Capacity is expressed in annual average flow.

Source: Allen, Jamie, Acting Plant Manger, Regional Water Quality Control Plant. Personal communication with Alexis Lynch, January 6, 2009.

- ◆ RWQCP reduction of energy and emissions.
- ◆ RWQCP filtration of recycled water for reuse.

In addition, the City reaches out to customers with a variety of pollution prevention programs:

- ◆ Targeted source reduction.
- ◆ Plant tours.
- ◆ Educational programs.
- ◆ Wastewater laboratory for high school students.³⁷

i. Existing Facilities

The RWQCP provides tertiary treatment of domestic, commercial and industrial wastewater. The plant's treatment process consists of screening, primary sedimentation, fixed film roughing filters, activated sludge for nitrification, secondary clarification, filtration, disinfection and dechlorination.³⁸

The RWQCP has a dry weather capacity of 40 MGD and a wet weather capacity of 80 MGD. In February 1998, the plant experienced a peak wet weather event of 80 MGD, which was equal to the hydraulic design capacity of the plant. Peak wet weather flows into the plant typically do not exceed 60 MGD. Peak dry weather flows are typically 32 MGD.³⁹

ii. Planned Facilities

The RWQCP is currently in good condition and will be subject to regular maintenance. The plant is expected to convert to ultraviolet disinfection,

³⁷ City of Palo Alto, 2007, *Utilities Newsletter*, page 19.

³⁸ California Regional Water Quality Control Board, San Francisco Bay Region, August 20, 2008, *Waste Discharge Requirements for City of Palo Alto, Regional Water Quality Control Plant, Santa Clara County*, available at www.swrcb.ca.gov/rwqcb2/board_info/agendas/2003/september/09-17-03-12finalorder.doc, accessed January 6, 2009, pages 1 to 2.

³⁹ Allen, Jamie, Acting Plant Manger, Regional Water Quality Control Plant. Personal communication with Alexis Lynch, January 6, 2009.

from chlorine disinfection, over the coming years. However, the City is currently seeking funding for this project.

The RWQCP is also currently working to expand the use of recycled water from the plant, mentioned in subsection F.4.a, to include the Bayshore Business Park in Mountain View.⁴⁰

In general, the RWQCP is considered to have sufficient capacity to serve the community for 30 years without the need for expansion.⁴¹

6. Opportunities and Challenges

a. Opportunities

- ◆ The City's unique level of control over its utilities give it the opportunity to aggressively work towards more sustainable purchasing of electricity and other power sources. The City can also use this as an opportunity to encourage small-scale production by residents, which can contribute to the local power supply.

b. Challenges

- ◆ To date, the City is on its third major attempt to get fiber services to individual homes. The key to providing service to homes in Palo Alto may be to privatize the service.
- ◆ CPAU dark fiber optic service has been provided to commercial and industrial customers (with a few home-based businesses). Expanding fiber optic service to individual homes in Palo Alto would require expansion of the fiber backbone to residential areas, finding an appropriate financing mechanism to allow connection of each building to the fiber optic infrastructure in the streets and determining the best way to obtain a third-party telecommunications provider to "light" the CPAU dark fiber with customer-valued services such as data, video and telephony.

⁴⁰ City of Palo Alto, 2007, *Utilities Newsletter*, pages 36-37.

⁴¹ Allen, Jamie, Acting Plant Manger, Regional Water Quality Control Plant. Personal communication with Alexis Lynch, DC&E, January 6, 2009.

- ◆ Residential solar and other small-scale alternative energy projects have become more difficult to finance due to stricter requirements for obtaining credit. A challenge for the City is to provide the proper incentives to allow residential alternative energy projects to continue.
- ◆ The City is working to replace all overhead electric utilities with underground electric utilities in conjunction with the telephone and cable TV companies. Currently, two-thirds of the city is not yet served by underground lines.⁴² Existing California Public Utilities Commission (CPUC) rules governing telephone and cable TV companies strongly favor undergrounding programs in commercial developments. Since nearly all of the remaining overhead utilities in Palo Alto are in residential areas, a challenge for the City is to obtain a favorable ruling from the CPUC allowing undergrounding programs to continue in residential developments.
- ◆ Fiber optic utility deficiencies include lack of a full-time engineering crew and difficulty meeting rising demand.

⁴² City of Palo Alto, 2007, *Utilities Newsletter*, page 7-13.

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