8 COMMUNITY SERVICES AND FACILITIES

8.1 INTRODUCTION

Citrus Heights is developed with a complicated network of public facilities and services. Each type of service has a unique set of constraints and must adapt to growth and change differently. This chapter describes the provision of public services in Citrus Heights provided by the City and several special districts for the following public services: safety, parks and recreation, schools, water, wastewater collection and treatment, solid waste and recycling, and storm drainage.

8.2 GOVERNMENT

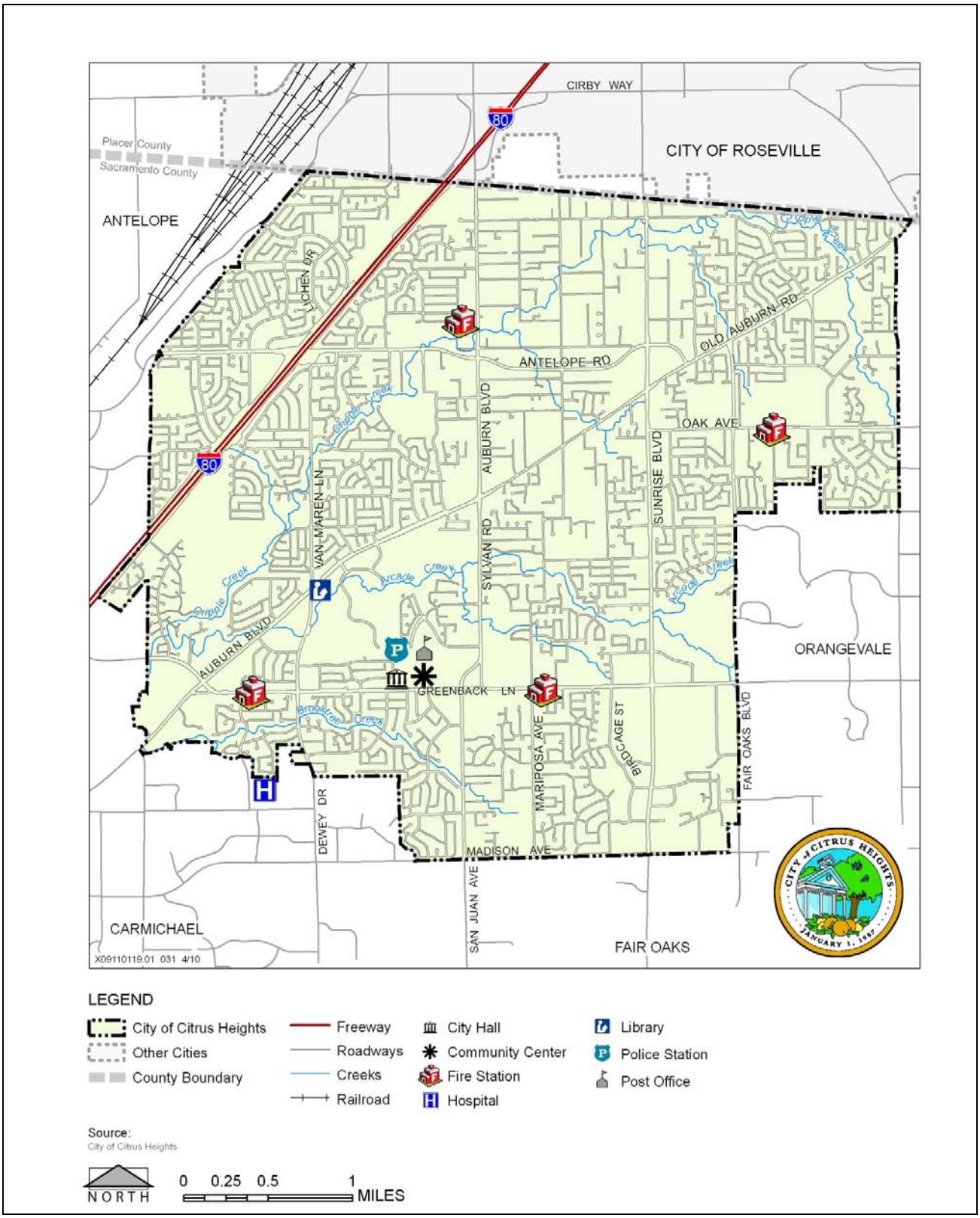
Governmental services in the City of Citrus Heights consist of the City Manager's Office and five major departments: Human Resources/City Information, General Services Department, Community and Economic Development, Finance and Police. Within any department, the City may either hire employees, or contract out for the necessary services. Presently all employees within the five departments are City employees. In November 2009, the City had 198 full-time equivalent employees including sworn officers.

CITRUS HEIGHTS COMMUNITY FACILITIES

Governmental services take place at the Fountain Square Civic Center campus located at 6237 Fountain Square Drive. Initially built as a commercial facility in the late 1970s, the campus is undergoing improvements to preserve its integrity and aesthetics, as well as to accommodate growth of governmental services and department and staff needs. The campus consists of the City Council Chambers, City Hall, Police Center, General Services Building, Kroeger Hall and the most recent addition, the Community Center, a 29,000 square foot facility. Figure 8-1 shows the community facilities in the City such as the post office, library and City Hall.

NEIGHBORHOOD ASSOCIATIONS AND RESIDENTS' EMPOWERMENT ASSOCIATION OF CITRUS HEIGHTS

The Residents' Empowerment Association of Citrus Heights (REACH) is an umbrella organization that consists of a board of directors and 11 member neighborhood associations. Its mission is to represent the interests of the Citrus Heights community and its residents and encourages participation in neighborhood associations to enhance the quality of life in the community. Each REACH member association appoints one representative from their group to serve on the board. The REACH board then acts as a coordinating body for the 11 neighborhood groups. The following areas represent the eleven neighborhood associations within the City:



Citrus Heights Community Facilities Map **Figure 8-1**

- Area 1 Northwest Neighborhood Association
- Area 2 Rusch Park Neighborhood
- Area 3 Citrus Heights Association Number Three (CHANT)
- Area 4 Arcade Creek Neighborhood
- Area 5 Park Oaks Neighborhood
- Area 6 Sunrise Ranch Neighborhood
- Area 7 & 8 Citrus Heights Area Seven and Eight (CHASE)
- Area 9 Sunrise Oaks Neighborhood
- Area 10 Sylvan Old Auburn Road (SOAR)
- Area 11 Birdcage Heights Neighborhood

Figure 8-2 illustrates the neighborhood association boundaries.

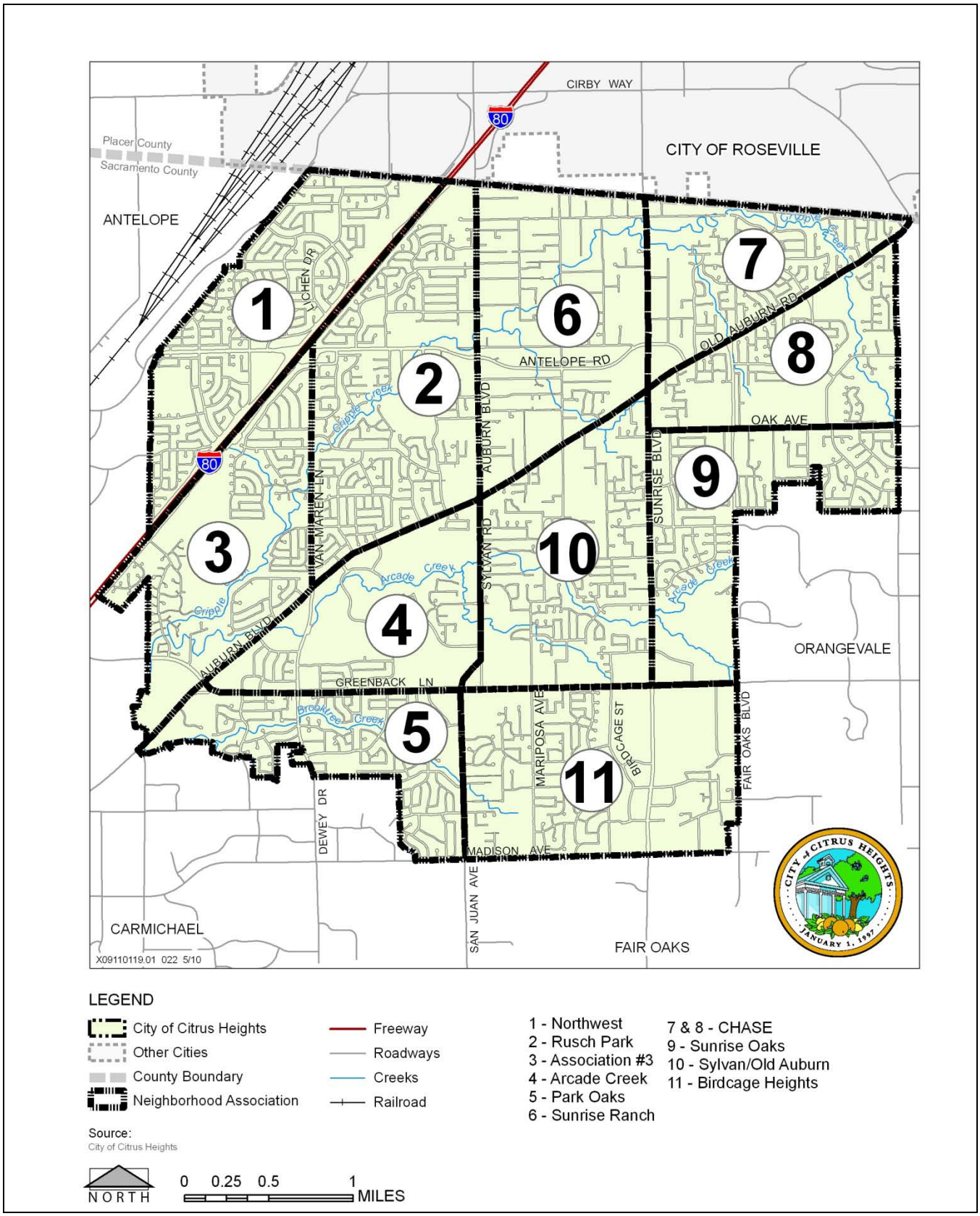
8.3 PUBLIC SAFETY

POLICE AND FIRE REGULATORY SETTING

FEDERAL

Occupational Safety and Health Administration Staffing Policies

The Federal Occupational Safety and Health Administration (OSHA) applies the confined space safety regulations for work inside tanks and underground spaces to America's firefighters. This requires in atmospheres that are Immediately Dangerous to Life and Health (IDLH) that there be teams of two inside and two outside in constant communication, with the outside pair equipped and ready to rescue the inside pair. This situation occurs in building fires where the fire and smoke conditions are serious enough to require the wearing of self-contained breathing apparatus (SCBA). This is commonly called the "2-in/2-out" policy. This policy requires that firefighters enter serious building fires in teams of two, while two more firefighters are outside and immediately ready to rescue them should trouble arise. While under OSHA policy one of the outside "two-out" personnel can also be the incident commander (typically a chief officer) or fire apparatus operator, this person must be fully suited-up in protective clothing, have a breathing apparatus donned except for the face piece, meet all physical requirements to enter IDLH atmospheres and thus be ready to immediately help with the rescue of interior firefighters in trouble.



Neighborhood Associations **Figure 8-2**

National Fire Protection Agency Staffing Guidelines

The National Fire Protection Association (NFPA) Standard on Career Fire Service Deployment was issued in 2001. While advisory to local governments, as it starts to become locally adopted and used, it develops momentum, forcing adoption by neighboring communities. NFPA 1710 calls for four-person fire crew staffing, arriving on one or two apparatus as a "company." The initial attack crew should arrive at the emergency within four minutes travel time, 90 percent of the time, and the total effective response force (first alarm assignment) shall arrive within eight minutes travel time, 90 percent of the time.

STATE

California Occupational Safety and Health Administration Standards

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (CalOSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance and use of all fire fighting and emergency medical equipment.

Uniform Fire Code

The Uniform Fire Code (UFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The UFC contains specialized technical regulations related to fire and life safety.

California Building Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building, childcare facility standards, and fire suppression training.

REGIONAL/LOCAL

Sacramento Metropolitan Fire District Master Plan

The Sacramento Metropolitan Fire District (SMFD) Master Plan provides policy guidance, objectives, and activities in an effort to improve emergency response to the district's residents, use existing resources more efficiently, and improve district facilities. As part of the master plan, a Fire Station Replacement Program was recommended to actively address deficiencies with existing fire stations, including age and condition issues; noncompliance with building codes, such as the ability to respond to emergencies following an earthquake; and lack of apparatus rooms of sufficient size to store present-day emergency-response equipment. In addition, the program would improve emergency response to the district's residents while using existing SMFD resources more efficiently.

EXISTING CONDITIONS

POLICE PROTECTION

Upon incorporation, the City partnered with the Sacramento County Sheriff's Department (SCSD) to provide law enforcement services by contract. However, costs for the contracted police service rose dramatically. In response, the City Council, after an extensive public process, established in-house police services to be staffed by City employees. After eight years of contracting out police services with the SCSD, the City established its own Police Department in June 2006. The Citrus Heights Police Department (CHPD) includes a full service police station located at the Fountain Square Civic Center campus.

Staffing and Services

The CHPD employs 86 sworn police officers and organizes its peace officers into two divisions, the Patrol Division (65 officers) and the Investigative Services Division (21 officers). In addition, the CHPD consists of the Support Services Division (20 staff) and an Administrative Unit (17 staff).

Patrol Services

The Patrol Services Division is led by one commander. The commander is supported by four lieutenants and nine sergeants. The Patrol Services Division is responsible for community-oriented policing that promotes neighborhood-based problem solving, at-risk youth intervention, and partnerships with businesses, community programs, and customer service. In addition, the Patrol Services Division is responsible for traffic enforcement, accident investigation, criminal investigation, service calls, the K-9 Unit and Bicycle Patrol.

Investigative Services

The Investigative Services Division is led by one commander who is supported by a division lieutenant and three sergeants. The responsibility of the Investigative Services Division is to conduct follow-up investigations of all reported felony offenses and certain misdemeanor offenses that occur in the City. The Division's detectives investigate crimes that have possible suspects or leads. The objectives of such investigations are the identification and prosecution of those individuals responsible for the crime. In addition, Investigative Services is responsible for the Administrative Training Unit, Court Ordered Registrants, Crime Scene Investigations (CSI) and Property Unit, General Investigations, Special Investigations and Special Weapons and Tactics (SWAT).

Support Services

Support Services, consisting of the Communications Center and the Records Unit and the Volunteer-Intern Program is led by one manager. The Communication Center is equipped with state-of-the-art communication equipment that operates on the county-wide communications system designed and maintained by the Sacramento Regional Radio Communications System, which enables staff to easily communicate with surrounding agencies. On a normal 24-hour day, the center will handle approximately 400 calls. Typically, calls coming into the center include requests for information, medical emergencies, reports of illegal or suspicious activity, requests for an officer to respond, and neighborhood quality of life concerns.

The Communication Center is staffed with eleven dispatchers and two call-takers who monitor five computer screens, answer incoming 911, emergency, and non-emergency calls, provide information and advice to residents, and enter calls for service. The dispatchers are responsible for prioritizing calls and workload, sending officers to calls, maintaining an accurate status on each on-duty officer, entering wanted or stolen vehicles, missing persons and guns into the nationwide database to provide information to other agencies, as well as documenting every call, every status, and every request or entry. In addition, five senior dispatchers lead the activities of the dispatchers. In addition to working side-by-side with the dispatchers in handling calls, dispatching officers and managing officer requests, they are also responsible for the operations, maintenance, and training in the Center. The dispatchers and senior dispatchers are overseen by two communications supervisors who are responsible for the overall operation of the Communications Center.

The Records Unit is supervised by one records services supervisor and staffed by eight records assistants. The Records Unit provides the following services:

- file crime reports with the District Attorney's Office
- process parking and traffic citations
- fingerprint with ink and Live Scan
- process criminal and collision reports

- release stored and impounded vehicles
- manage arrest warrants
- bill false alarms
- release police reports

The Volunteer-Intern Program provides a value-added level of support to state, county, and local law enforcement agencies. While all agencies are designed and staffed to provide appropriate policing and law enforcement services to the community, volunteers/interns allow law enforcement agencies and officers to focus on policing and enforcement by taking on these additional duties, for example:

- participating in community meetings to learn about citizen concerns;
- assisting with special events;
- following up with victims of certain types of crime and provide them with referrals to other agencies;
- participating in citizen patrol programs;
- providing an array of clerical, data, and document support to department staff; and
- supporting law use of technology, particularly law enforcement-relevant software applications.

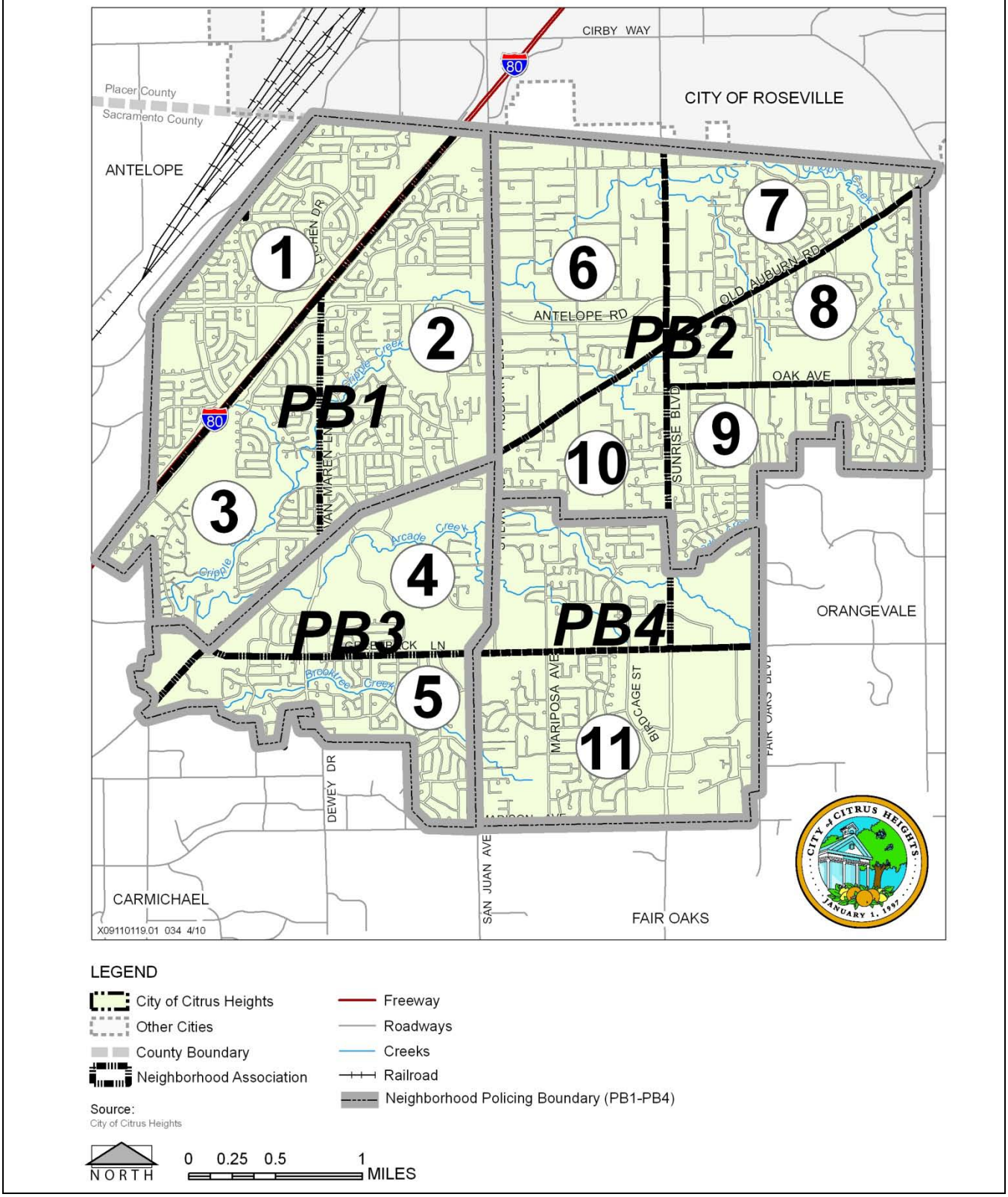
Figure 8-3 identifies neighborhood policing and planning area boundaries.

The CHPD also draws on the resources of the larger Sacramento County Sheriff's Department. Should the CHPD need additional officers or equipment (e.g., helicopters), the Sheriff's Department responds and is reimbursed accordingly.

Calls for Service Analysis

One indicator of police performance commonly used by communities is the average time it takes a department to respond to calls for service. The CHPD has opted to use a "differential" response system. Each call for service is prioritized according to the amount of damage that can occur. For example, calls involving weapons and bodily harm are responded to immediately, while calls involving barking dogs and other such nuisances are delayed until all emergency calls have been handled. The CHPD also emphasizes the importance of effectively solving the problem once the officer has responded.

An analysis of 2008 CHPD response times concluded that approximately 94 percent of emergency calls were responded to within 10 minutes, from the time the call was dispatched to the moment the officers arrived on location. Ninety-nine percent of emergency calls and 93 percent of non-emergency calls were addressed within 15 minutes. Industry standards indicate average response to calls for service between five and ten minutes from the time an officer is dispatched.



Neighborhood Policing and Planning Area Boundaries **Figure 8-3**

Crime Reports

In both 2007 and 2008, the CHPD totaled approximately 8,328 Part 1 crimes (indexed crimes). The distribution of such crimes was similar in 2007 and 2008. Over 50 percent of the City's Part 1 crimes occurred in Larceny-Theft for both years. The Homicide category remains relatively low. Robbery, Aggravated Assault, Rape, Motor Vehicle Theft and Arson decreased during the reported period. Table 8-1 illustrates the distribution of such crimes.

Table 8-1
Citrus Heights Police Department Part 1 Crimes for 2007 and 2008

Part 1 Crimes	2007	2008
Homicide	2	1
Forcible Rape	33	20
Robbery	161	140
Aggravated Assault	270	258
Burglary	774	668
Larceny-Theft	2,207	2,377
Motor Vehicle Theft	737	649
Arson	19	12
	4,203	**4,125**

Source: Citrus Heights Police Department, Statistical Report, Year 2007 and 2008.

During 2007 and 2008, the CHPD received approximately 235,000 emergency and non emergency calls. The CHPD received twice as many computer assisted calls (CAD) in 2008 than in 2007, as the first half of 2007 did not include wireless calls. Officers within the department prepared approximately 1,000 police reports monthly for community incidents, resulting in approximately 200 bookings per month. Table 8-2 shows the Department's Statistical Report.

Table 8-2
Statistical Report Year 2007 and 2008 Citrus Heights Police Department

	2007	2008
Police Reports	12,368	12,791
Warrants	965	878
Arrests/Bookings	2,412	2,355
Arrests/Cite and Release	1,159	947
Adult Arrests	3,015	2,825
Juvenile Arrests	586	488
D.U.I Arrests	323	387
Canine Detail	--	241
Incoming Calls (Dispatched)	116,123	118,578
911 Calls (includes wireless calls)	16,239	32,303
Computer Assisted Calls	8,286 (1/2 year 911 wireless)	17,491 (first full year)
Outgoing Calls	44,649	46,260

Source: Citrus Heights Police Department, Statistical Report, Year 2007 and 2008.

FIRE AND EMERGENCY SERVICES

Sacramento Metropolitan Fire District

On December 1, 2000, the Sacramento County Fire District and the American River Fire District formed the SMFD. The SMFD serves nearly 640,000 residents over a 417-square-mile area of Sacramento and Placer counties including the City of Citrus Heights, as shown in Figure 8-4. Historically, the SMFD represents 16 former fire agencies, some of which were founded more than six decades ago. Today, Metro Fire is the seventh-largest fire district in California with 42 strategically located fire stations.

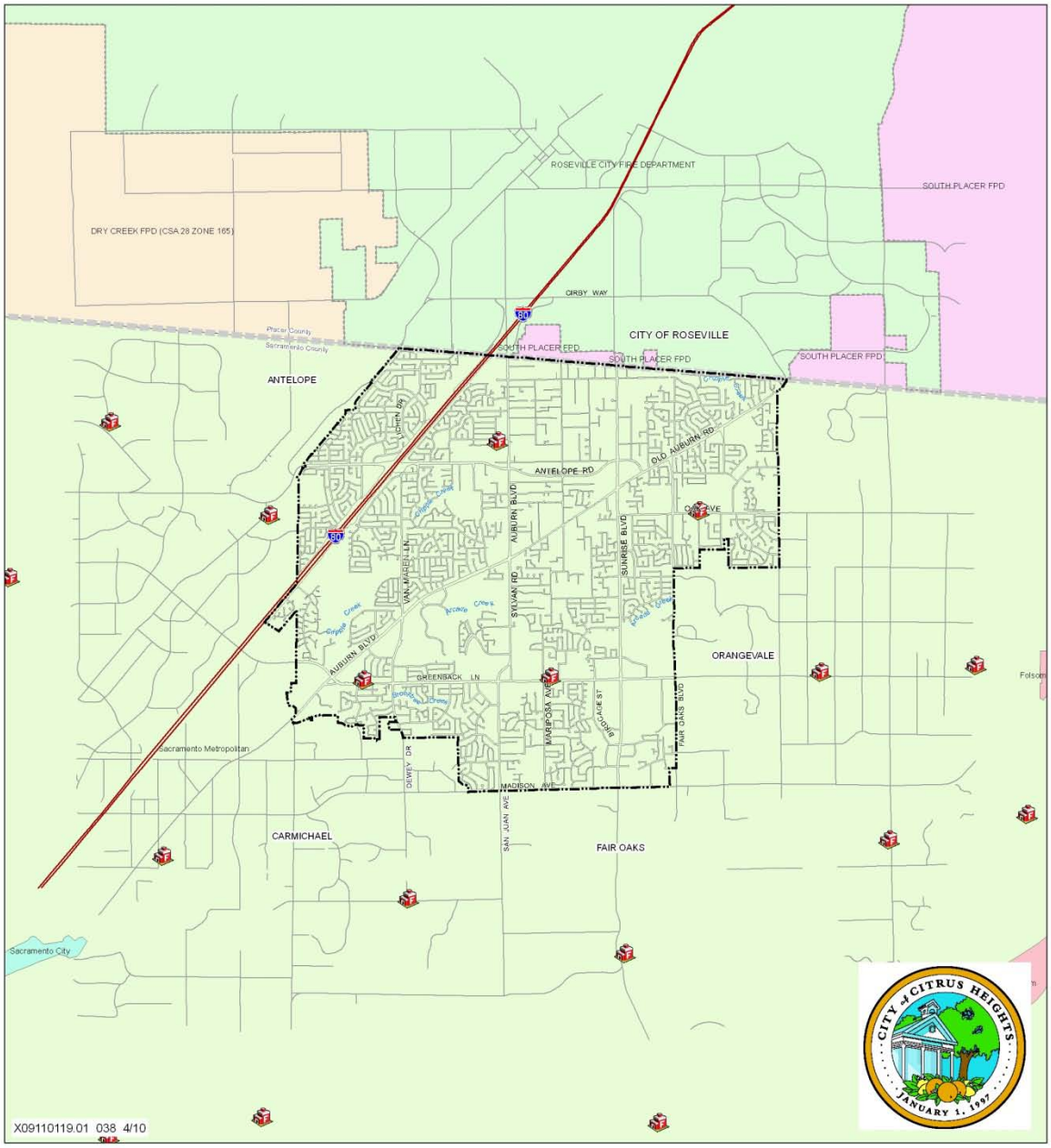
The City of Citrus Heights, at approximately 14 square miles, constitutes nearly 3 percent of the District's land area. As noted above, the estimated 2009 service population for the SMFD was approximately 640,000 people, of which, the City's 2009 population which is estimated at 87,017, constituting approximately 13.5 percent. The density of urban development in Citrus Heights, as opposed to more rural County areas, results in a larger percent of population residing in a smaller proportion of the SMFD service area.

Operations

Approximately 750 uniformed and support personnel work out of 41 fire stations, two (2) of which are volunteer staffed stations, to provide fire, rescue, and medical services to the District's population. SMFD personnel provide emergency services, including structure, grassland, and fuel fire suppression, paramedic/medical services, ambulance transport, heavy rescue/vehicle extrication, water rescue (both land- and water-based) and cliff-side/vertical rescue. Minimum staffing levels necessary to provide these emergency services include: 3-person Engine crews, 4-person Ladder Truck crews, and 2-person Medic units.

The SMFD maintains an extensive collection of fire protection apparatus. The District's fire protection apparatus consists of 37 Engines which maintain Advanced Life Support (ALS) capabilities as well as Medic Units that are staffed 24-hours a day. Equipment is frequently moved among the various fire stations within the District to best protect the population. The SMFD also maintains Automatic Coverage Agreements (mutual aid) with the other fire agencies in Sacramento County, so that in case of a major disaster, the District can draw on resources from all 90 stations within the County.

OSHA mandates that all fire crews maintain a "two-in, two-out" standard. This means that if two fire fighters are entering a burning structure for rescue or suppression purposes, two fire fighters must also be outside of the structure prepared to perform rescue operations. The SMFD staffs a 3-person Engine crews, but will meet the OSHA requirement by immediately dispatching an additional company on appropriate calls.



LEGEND

- City of Citrus Heights
- Other Cities
- County Boundary
- Railroad
- Freeway
- Roadways
- Creeks
- Sac Metro Fire Station

Source:
City of Citrus Heights

NORTH 0 0.25 0.5 1 MILES

Sacramento Metropolitan Fire District Facilities **Figure 8-4**

Dispatching services are provided to the District by the Sacramento Regional Fire/Emergency Medical Services Communications Center. Formed through a joint-powers agreement by the majority of fire agencies in Sacramento County, this computerized center provides state-of-the-art dispatch for fire, rescue, and medical emergencies throughout the County The center also handles dispatch for the Statewide mutual aid system (through the Office of Emergency Services) for this region.

Divisions

The SMFD's Training Division provides on-going education and recruit training using a fixed, four-story drill tower, two large drill grounds, four classrooms, a tractor-drawn portable drill tower, and a state-of-the-art satellite receiving station and audio-visual studio. Because over 50 percent of the District's responses are for medical emergencies, SMFD personnel also receive extensive Emergency Medical Services (EMS) training. All SMFD fire crews are trained and equipped as first responders to provide basic life support services prior to the arrival of an ambulance.

SMFD's Fire Prevention Division coordinates fire investigations, public education, and fire prevention activities throughout the various communities served. The Division's fire prevention activities include enforcing arson laws and the City-adopted Uniform Fire Code, identifying and eliminating fire hazards, reviewing land and building uses for fire protection needs, and inspecting plans and buildings under construction. Public education activities focus on educating the public concerning the installation and maintenance of smoke detectors, identifying and correcting fire hazards, designing home escape plans, reporting emergencies, and preventing injuries.

The Fleet Maintenance Division maintains the District's large fleet of over 100 vehicles, with various mechanics and technicians. They operate out of a central maintenance facility, which includes automotive, and apparatus service and repair facilities, a fabrication and body shop, a parts storage facility, and a machine shop.

Citrus Heights Fire Stations

The SMFD maintains 41 fire stations and one air operations station throughout its 417-square-mile area, four of which are located within the planning area – Stations 21, 23, 27, and 28 - as shown in Figure 8-4. In addition, Station 25 lies on the western boundary of the City, and also provides fire, rescue, and medical aid to Citrus Heights residents. The District's policy to maintain seamless coverage occasionally results in emergency crew response to the City from other available stations within the County. Conversely, crews stationed within Citrus Heights may also be dispatched to respond to emergencies in outlying communities.

Fire stations located within the planning area maintain high levels of emergency service. All urban and suburban areas within the District, including Citrus Heights, have a Fire Insurance (ISO) rating of three (3). All of the

engine teams stationed within the City are equipped with ALS capabilities, and staffed by a firefighter-paramedic. Table 6-3 illustrates the equipment and staffing levels in the four Citrus Heights stations, as of May 2009.

Table 8-3
Citrus Heights Fire Protection Staffing Levels (2009)

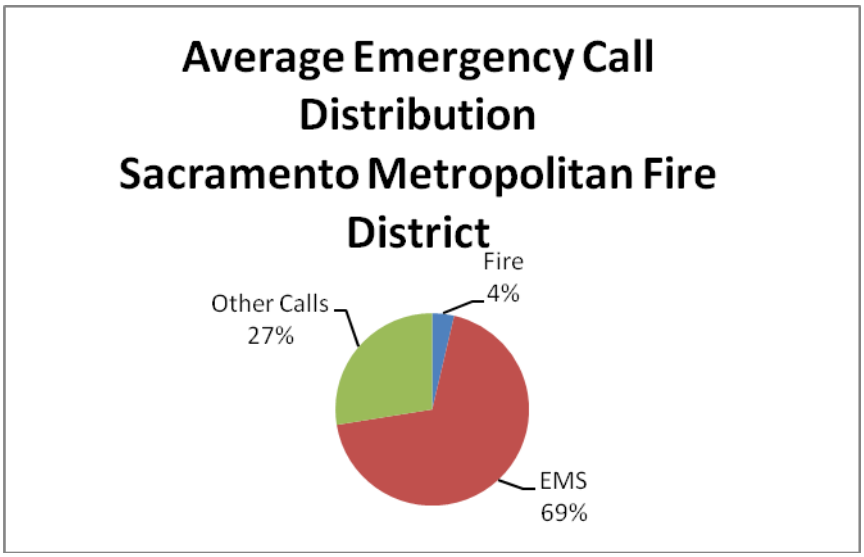
Station	Address	Engine Teams	Truck Teams	Medic Teams	Other
21	7641 Greenback Lane	Engine 21 - ALS 1 Captain 1 Engineer 1 Firefighter-Paramedic	Truck 21 1 Captain 1 Engineer 2 Firefighters	Medic 21 - ALS 1 Firefighter-Paramedic 1 Firefighter	1 Battalion Chief
23	6421 Greenback Lane	Engine 23 - ALS 1 Captain 1 Engineer 1 Firefighter-Paramedic	Truck 23 1 Captain 1 Engineer 2 Firefighters		
27	7474 Grand Oaks	Engine 27 - ALS 1 Captain 1 Engineer 1 Firefighter-Paramedic			1 Grass Unit 1 Reserve Medic
28	8189 Oak Avenue	Engine 28 - ALS 1 Captain 1 Engineer 1 Firefighter-Paramedic			1 Grass Unit

Source: Sacramento County Fire Protection District, Citrus Heights Fire Protection, May 2009.

Emergency Calls Analysis

In Fiscal Year (FY) 2007–2008 the Sacramento Metropolitan Fire District responded to 74,025 incidents throughout the service area. An average of 203 incidents were reported per day: 3.7 percent of incident responses were to fire, 68.8 percent to EMS and 27.5 percent to other types of incidents.

The remaining calls were made up of animal rescue, unauthorized burning,



Source: Sacramento Metropolitan Fire District Standards of Coverage Study, May 2009

public assistance, water evacuations, and other miscellaneous calls. The figure above illustrates the average annual distribution of emergency calls, while Table 8-4 shows the average distribution of calls across each category from Fiscal Year 2006/2007 to Fiscal Year 2007/2008. The number of incidents between FY 2006/2007 to FY 2007/2008 rose from 70,106 to 74,025, an increase of 3,919 or 5.3 percent.

Table 8-4
Emergency Call Distribution FY 2006/2007 to FY 2007/2008

Fiscal Year	Medical Aid	Fires	Other Calls	TOTAL
2006/2007	47,873	3,145	19,088	70,106
2007/2008	50,913	2,729	20,383	74,025
Percent of Total	68.5%	4.1%	27.4%	100.0%

Source: Sacramento Metropolitan Fire District, Emergency Calls 2009.

As with police services, one commonly used measure of emergency service performance is the time it takes crews to respond to a call. NFPA 1710 recommends that an effective response force (First Alarm) arrive within 8 minutes travel time. When this is added to 1 minute for dispatch and 2 minutes for crew turnout time, the performance measure becomes 11 minutes from the time of fire dispatch receiving the call to the *third* unit being on-scene. The SMFD maintains a standard of emergency call response within 6 minutes for 90 percent of emergency calls. An analysis of District-wide response times for fire and EMS incidents conducted in FY 2007/2008 revealed an average response time of approximately five minutes for first apparatus on scene 51.4 percent of the time and seven minutes and 45 seconds for first apparatus on scene 90.7 percent of the time.

The emergency calls that Engine crews from Citrus Heights stations are dispatched to constituted approximately 17,769 responses in 2008. Approximately 70 percent of Citrus Heights responses were for medical aid, while approximately 13 percent were for fire response.

Regional Mutual Aid Plan

The California Office of Emergency Services' mutual aid plan for Region IV consists of the following counties: Nevada, Placer, Yolo, Sacramento, El Dorado, Alpine, Amador, San Joaquin, Calaveras, Tuolumne, and Stanislaus. The *Region IV Multi-Casualty Incident Plan* develops standard multiple casualty procedures so that jurisdictions can work together effectively in the case of a fire, explosion, chemical spill, or natural disaster that becomes a multiple casualty incident.

The purpose of the *Region IV Multi-Casualty Incident Plan* is to standardize emergency response procedures through the use of consistent response organization responsibilities, mobilization of resources, communications and documentation, patient dispersal and tracking, and regional hospital capabilities. The plan is designed to

allow each agency to utilize the multiple casualty procedures both to enhance day-to-day medical response operations, and as a method to ensure that agencies efficiently share resources and communicate rapidly during multi-casualty incidents.

8.4 PARKS AND RECREATION

PARKS AND RECREATION REGULATORY SETTING

STATE

Public Park Preservation Act

The primary state authority for protecting and preserving parkland is the State Public Park Preservation Act. Under the Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Quimby Act

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map". It should be noted that the Quimby Act only applies to the acquisition of new parkland and does not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act effectively preserves open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

REGIONAL/LOCAL

Sacramento County General Plan

The existing Sacramento County General Plan was adopted in December of 1993. The General Plan contains park and recreation related policies, discussed in the Open Space Element, applicable to the unincorporated portions of the Planning Area. Policy OS-9 states that the County shall seek a standard for regional parks of 20 acres per 1,000 persons. While there are a variety of policies relating to open space (i.e., wetlands, riparian corridors, woodland, and floodlands), other than Policy OS-9, there are no other policies relating to parkland/population ratios in the General Plan.

Sunrise Recreation and Park District Master Plan

The Sunrise Recreation and Park District (SRPD) has prepared the Sunrise Recreation and Park District Master Plan, which outlines the District's projected needs for a period of ten years and strategies for fulfilling those needs. The current Master Plan's planning horizon is through 2010. The primary focus of the Master Plan is to guide the planning and management of park facilities and recreation programs throughout the communities served by the District for the next ten years.

EXISTING CONDITIONS

SUNRISE RECREATION AND PARK DISTRICT

In June of 1950, in response to a 15-acre park site donation by Fred and Julia Rusch, the Citrus Heights Recreation and Park District was created as a dependent district, with the County Board of Supervisors serving as the District Board. In 1971, the District consolidated with other local park districts, expanded its boundaries to serve the residents of Citrus Heights, Foothill Farms and Orangevale, and changed its name to the Sunrise Recreation and Park District. The District then deleted the Orangevale portion in 1983, and annexed the Antelope community in 1986. SRPD currently serves approximately 142,000 residents within an estimated 27 square mile area in Citrus Heights, Carmichael, Foothill Farms, and Antelope. The entire planning area is within the SPRD boundaries, and constitutes approximately 60 percent of the District's service population.

Park Sites and Facilities

The SRPD is responsible for providing recreation and park resources to the residents of Citrus Heights, Antelope and Foothill Farms. The SRPD provides a wide variety of park facilities and recreation programs that complement other community resources and programs to provide a diverse and accessible selection of recreational opportunities for District residents.

The SRPD currently administers 38 parks and open space (undeveloped) sites in the planning area, including one nine-hole golf course and an historic home, totaling approximately 406 acres. SRPD parks range in size from 0.22 of an acre to 48.6 acres. Figure 8-5 illustrates the location of each park facility in the City including open space (located on Greenback Lane) owned and maintained by the City, while Table 8-6 contains a more detailed description of the park sites and facilities located within Citrus Heights.

Approximately 268 acres of SRPD parkland exist within the city limits, 207 acres of which are developed. State law mandates park improvement and acquisition dedications from new developers based on standards of three to five acres per 1,000 residents. The City's 2009 population was estimated to be 87,321, which results in an existing park standard of 2.35 acres per 1,000 residents. However, if the SRPD were to make park facility improvements

on the 61 acres of undeveloped parkland in the City, Citrus Height's existing park standard would rise to about three acres per 1,000 residents.

Table 8-5
Sunrise Recreation and Park District Parks within Citrus Heights

Park	Address	Acres	Development Status
Arcade Creek Park	Sunrise Boulevard	9.1	undeveloped
Brooktree Park	6800 Dunmore Street	15.1	recreation facilities
C-Bar-C Park	8275 Oak Avenue	22.1	recreation facilities
Cherry Creek Manor	6011 Brooktree Drive	8.1	undeveloped
Crosswoods Community Park	6742 Auburn Boulevard	15.7	community center and recreation facilities
Edgecliff/Cripple Creek Park	8233 Newbridge	9.3	undeveloped
Foothill Golf Center	7000 Verner Avenue	15.3	nine-hole golf course and facilities
Greenback Woods Park	6855 Flaming Arrow Drive	5.8	recreation facilities
Indian River Drive Park	6430 Indian River Drive	9.1	undeveloped
Madera Park	8046 Wonder Street	15.7	recreation facilities
Mathany Park	Matheny Way	1.9	undeveloped
McDonald Field Park	8001 Old Auburn	2.9	recreation facilities
Northwoods Park	8236 Old Ranch Road	8.9	recreation facilities/ undeveloped SMUD power line corridor
Rusch Community Park	7801 Auburn Boulevard	48.6	community center and recreation facilities
San Juan Park	5509 Mariposa Avenue	14.6	recreation facilities
Shadowcreek Park	6252 Woodcreek Drive	6.1	natural area with trails
Sunrise Oaks Park	7180 Sunrise Boulevard	5.4	undeveloped
Tempo Community Park	13125 Fair Oaks	23.9	recreation facilities
Twin Creeks Park	7201 Starflower Drive	7.1	undeveloped
Van Maren Park	6601 Thalia Way	8.1	recreation facilities
Westwood Park	8100 Butternut Drive	10.7	recreation facilities
Woodside Oaks/Olivine Park	8041 Olivine Road	4.9	undeveloped
Total SRPD Parks in Citrus Heights		**268.4**	

Source: Sunrise Recreation and Park District, 2000 – 2010 Master Plan
City of Citrus Heights

Citrus Heights Parks and Recreation Map **Figure 8-5**

Table 8-6
Citrus Heights Park Sites and Facilities – Sunrise Recreation and Park District

District Parks in Citrus Heights	Development Status	Acres	Community Center (sq ft)	Ball Diamonds (1)	Barbecues	Basketball Courts	Benches	Playground	Concession Buildings	Multipurpose Field	Nature/Garden Area	Parking Lot	Patio Area	Picnic Table (2)	Restrooms	Soccer Fields	Swimming Pool	Tennis Courts (1)	Volleyball Courts	Walkways
Arcade Creek Park	U	9.1																		
Brooktree Park	D	15.1		3			X	X	X	X		X			X			2		X
C-Bar-C Park	D	22.1		3L	X		X	X	X	X	X	X		R	X	1				X
Cherry Creek Manor	U	8.1																		
Crosswoods Community Park	D	15.7	2,078				X	X			X	X	X		X			2L		
Edgecliff/Cripple Creek Park	U	9.3																		
Foothill Golf Center	D	15.3			X		X		X			X		X	X					
Greenback Woods Park	D	5.8			X	X	X	X						X						X
Indian River	U	9.1																		
Madera Park	D	15.7		2	X	1	X	X	X	X		X		R	X			2L		X
Mathany park	U	1.9																		
McDonald Field	D	2.9		1			X		X			X			X					X
Northwoods Park	D	8.9				1	X	X						X				2		X
Rusch Community Park	D	48.6	20,850	3: 2L	X	1	X	X	X	X	X	X	X	R	X		1	4L	1	X
San Juan Park	D	14.6					X	X		X		X		X	X	3		2L		X
Shadowcreek Park	U	6.1																		
Sunrise Oaks Park	U	5.4																		
Tempo Community Park	D	23.9			X			X		X	X	X		R	X	1	1	2L		X
Twin Creeks Park	U	7.1																		
Van Maren Park	D	8.1			X		X	X		X			X							X
Westwood Park	D	10.7		1	X			X	X	X		X		X	X					X
Woodside Oaks/Olivine	U	4.9																		
Total Citrus Heights Parks		**268.4**																		
Developed Citrus Heights Parks		207.4																		

(1) L refers to lighted facilities.
(2) R indicates those parks with reservable picnic areas.
Source: Sunrise Recreation and Park District ,2000 – 2010 Master Plan
City of Citrus Heights

School sites also play an important role in providing neighborhood recreation opportunities. Although the primary goal of school sites is to provide for the educational and recreational needs of the students, after-school use of the facilities can be considered a supplemental resource to the District parks. Table 8-7 includes a list of recreational facilities available at each school site within Citrus Heights. Approximately 40 to 50 percent of typical school site acreage provides recreation space. Consequently, the 20 elementary schools in the SRPD provide an average of four acres of open space each, the three middle schools provide approximately seven acres each, and the two high schools almost 16 acres each. The SRPD and local school districts have historically enjoyed good working relationships and have cooperated on a number of joint-use, mutually beneficial projects in the past.

In addition to "providing clean, safe, well-designed parks and facilities," the SRPD's mission statement includes "offering a variety of affordable leisure and learning opportunities to individuals of all ages and abilities." The SRPD provides programs in art, crafts, dance, gymnastics, karate, tennis, basketball, swim, lifeguard training, aerobics, dog obedience, cooking, self-defense, CPR, preschool, and senior adult social programs.

Table 8-7
Citrus Heights School Site Recreational Facilities - Sunrise Recreation and Park District

Schools	Acres	Football Fields	Soccer Fields	Ball Diamonds	Basketball Courts	Volleyball Courts	Ball Walls	Tracks	Tennis Courts	Swimming Pools	Playground	Tot Lot	M.P. Room
Elementary Schools													
Arlington Heights	10.0		3	2	5	3	2				1		1
Cambridge Heights	8.2		1	1	2	2	2						
Carriage Drive	44.5[1]			1	2		1				1		1
Citrus Heights	15.0	2	1	4	2	2	1				1	1	1
Grand Oaks	11.2		1	1	4	2	1						1
Kingswood	10.0		1	2	2	1					1		1
Lichen	9.8	2	2	2	4	3							1
Mariposa	10.6		2	5			2						1
Skycrest	12.9	1	1	2	2	2	3				1		1
Sunrise	10.0		2		4		3				1		1
Woodside	10.9	1	1	2	2		2						1
Middle School													
Sylvan	13.0	3	3	8	7	5							1
High Schools													
Mesa Verde	44.5[1]	1	1	4	16	5	8	1	6				1
San Juan	39.6	1	1	4	10			1	4	1			
Total Citrus Heights	**205.7**	11	20	38	62	25	25	2	10	1	6	1	12

Source: Sunrise Recreation and Park District Master Plan 2000 – 2010

[1]Carriage Drive Elementary School and Mesa Verde High School are located on the same parcel. As such 44.5 acres is counted once.

OTHER OPEN SPACE RESOURCES

Along with many park facilities and recreation programs, the District also oversees a system of County-designated natural streams, trails, and other open space resources. The District contains a portion of the County bikeway system that connects with the American River Parkway, and the SRPD Master Plan supports the expansion of these bikeways to link District park sites. The SRPD Master Plan also identifies environmental mitigation measures regarding native oak tree preservation and management, and protection of natural streams, tributaries and associated riparian wetlands. County-designated streams within SRPD that are to be preserved and enhanced include Arcade Creek, San Juan Creek, Brooktree Creek, Coyle Creek and Cripple Creek. However, past encroachment by development has threatened the future possibility of an integrated creekside trail network.

PARK DEVELOPMENT STANDARDS

The SRPD Master Plan recommends park planning standards for neighborhood and community parks, based on National Recreation and Park Association (NRPA) standards and the 1993 Sacramento County General Plan policies and principles for park development:

Neighborhood parks should be at least seven to eight acres in size, and should be located adjacent to elementary school sites where possible. In general, there should be two to 2.5 acres of parkland per 1,000 persons devoted to neighborhood park facilities. Each should be near the center of the neighborhood and within ½ to one mile walking distance of the population it is to serve. Each neighborhood park should ultimately serve 2,000 to 3,500 persons.

Community parks ideally should be 40 to 60 acres in size. As with neighborhood parks, community parks should be located adjacent to middle or high schools whenever possible. As a standard, one to two acres of parkland per 1,000 persons should be devoted to community park use. In addition to being located near an arterial or collector street, a community park should be accessible by public transportation. In general, the park should serve 20,000 to 30,000 persons, and be located within a distance of one to two miles of the population it serves.

A majority of the developed parks in Citrus Heights fall within the 8 to 16-acre range, and are located within or adjacent to residential neighborhoods. With approximately 88 acres of neighborhood parks in this range, the City offers only one acre of neighborhood park space per 1,000 residents. Two additional neighborhood parks, at approximately 3.5-acres each, do not fulfill the District's neighborhood park standards. The City's three community parks, C-Bar-C, Crosswoods and Rusch, total approximately 101-acres. These park facilities fulfill SRPD park planning standards by providing Citrus Heights residents with 1.2 acres of community park space per 1,000 population.

8.5 SCHOOLS

SCHOOL REGULATORY SETTING

While there are no specific Federal regulations related to school facilities, there are a number of Federal, State, and local regulations that govern all aspects of education. Specifically, the Federal No Child Left Behind Act (2001) requires states to implement statewide accountability systems for public schools. In addition, Title 5 Education Code of the California Code of Regulations regulates the education system in California. The California Department of Education also publishes standards for school facilities.

FEDERAL

No Child Left Behind Act

In 2001, Congress passed the No Child Left Behind Act (NCLB Act). This act, under direction of the U.S. Department of Education, reauthorizes the Elementary and Secondary Education Act of 1965 with increased accountability for states, school districts, and schools; provides flexibility for states and local educational agencies in the use of Federal education dollars; and places emphasis on reading skills. The NCLB Act requires states to implement statewide accountability systems covering all public schools and students. These systems must be based on challenging state standards in reading and mathematics, annual testing for all students in grades 3–8, and annual statewide progress objectives ensuring that all groups of students reach proficiency within 12 years. Assessment results and state progress objectives must be broken out by poverty, race, ethnicity, disability, and limited English proficiency to ensure that no group is left behind. School districts and schools that fail to make adequate yearly progress (AYP) toward statewide proficiency goals will be subject to improvement, corrective action, and restructuring measures. Schools that meet or exceed AYP objectives or close achievement gaps will be eligible for State Academic Achievement Awards.

STATE

California Department of Education

The California Department of Education (CDE) oversees the state's diverse and dynamic public school system that is responsible for the education of more than seven million children and young adults in more than 9,000 schools. The CDE and the State Superintendent of Public Instruction are responsible for enforcing education law and regulations; and for continuing to reform and improve public elementary school programs, secondary school programs, adult education, some preschool programs, and child care programs.

EXISTING CONDITIONS

SERVICING SCHOOL DISTRICTS

Citrus Heights is mainly served by the San Juan Unified School District. Twin Rivers Unified School District serves a small subdivision of approximately of approximately 71 homes located off Verner Avenue as well as approximately 80 mobile home sites within the Imperial Manor Mobile Home Park near Auburn Boulevard and Manzanita Avenue. Since Twin Rivers School District serves such a small portion of the city, only data from San Juan Unified School District was included in this report. Figure 8-6 depicts the school district boundaries.

San Juan Unified School District

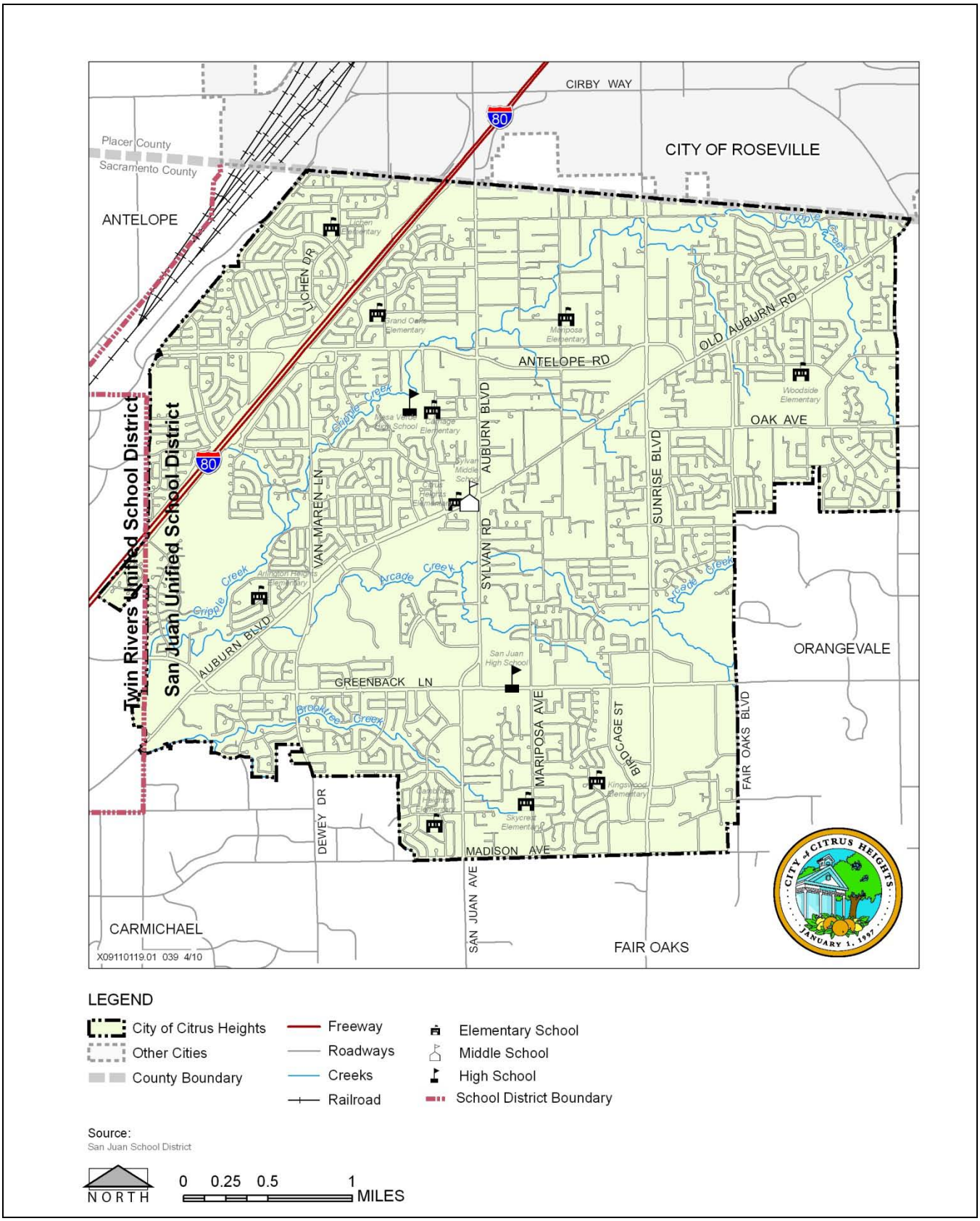
In 1862, Citrus Heights constructed its first permanent school, the Sylvan School. This one-room schoolhouse was the educational, civic, social, and religious center of the small farming community. In 1913, the San Juan High School District was formed when the residents of the Citrus Heights community decided to construct a new high school. Previously, those wishing a secondary school education had to board out in Sacramento, or after 1912, attend classes at the newly organized Roseville High School, sited in an old hotel building. By the 1950's, the Sylvan Elementary School District maintained eight schools - Sylvan, Mariposa, Oak Avenue, Leighton Littlejohn, Grand Oaks, Citrus Heights, Arlington Heights, and Skycrest – with 132 teachers and 3,975 students. The San Juan Unified School District (SJUSD) was created through a consolidation of the two local school districts in 1959 to cover a total of 75 square miles in Sacramento County. The SJUSD currently maintains 43 elementary school sites, nine middle school sites, and nine high school sites. Additionally, the district maintains four special high schools, three special education centers, and three adult education facilities.

School Facilities and Enrollment

SJUSD elementary school enrollment figures for the 2009 school year included 20,423 students attending 43 elementary schools throughout the District. The SJUSD also enrolled 7,890 students in nine middle schools, and 12,952 students in nine high schools. School enrollment figures have declined over the five years, as shown in Table 8-8. The District's projected decline in enrollment figures through 2016 has left San Juan Unified with extra facility capacity and no new facilities are planned.

The SJUSD maintains an Open Enrollment policy to offer choice and to help equalize site capacities and enrollment figures throughout the District. If a school in a particular neighborhood is at or over capacity, the District may provide bussing to accommodate students at nearby schools not experiencing capacity restrictions.

Ten elementary school sites, one middle school, and two traditional high schools are located within the planning area (Table 8-9 and Figure 8-7). In addition to the traditional high schools, SJUSD also operates El Sereno Independent Study High School located on the campus of San Juan High School. SJUSD also maintains the



Citrus Heights Public Schools Map **Figure 8-6**

Table 8-8
Actual and Projected Enrollment Figures for San Juan Unified School District: 2009–2016

	Actual Enrollment (5th Week)					Projected Enrollment						
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Elementary (K–6)	21,848	20,784	20,638	20,605	20,423	19,897	19,596	19,400	19,166	19,054	18,969	18,923
Middle (6–8)	8,267	8,185	8,226	8,283	7,890	7,959	7,810	7,708	7,554	7,373	7,234	7,076
High School (9–12)	13,750	13,534	13,212	13,014	12,952	12,809	12,784	12,825	12524	12,483	12,462	12,458
Visions/Choices*	3,613	3,198	3,213	3,189	3,562	4093	5,012	5,749	6,122	6,549	7,011	7,458
Other**	892	877	939	938	853	853	853	853	853	853	853	853
GRAND TOTAL	48,370	46,578	46,228	46,029	45,680	45,611	46,056	46,535	46,219	46,312	46,528	46,767

Source: San Juan Unified School District Planning Department.
*San Juan Charter Schools
**Other = El Serreno, Home and Hospital, La Entrada, La Vista, Laurel Ruff, Palos Verde, RR/SAS Arcade and Pasteur, Sierra Nueva, and Via Del Campo, portion SDC
Note: Assumes approval of consolidation and pending grade configuration (would be effective 2010.2011). Additional grade reconfiguration and consolidation may occur. Note: Approved boundary changes included (effective 2010.2011)

Table 8-9
Citrus Heights School Facilities within the San Juan Unified School District

School	Address	Existing Level	Last Year Modernized**
Elementary Schools			
Arlington Heights	6401 Trenton Way	K–6	1999–2000
Cambridge Heights	5555 Fleetwood Drive	K–6	2005–2006
Carriage	7519 Carriage Drive	K–6	**
Citrus Heights	7085 Auburn Boulevard	K–6	1997–1998
Grand Oaks	7901 Rosswood Drive	K–6	1997–1998
Kingswood	5700 Primrose Drive	K–6	2000–2001
Lichen	8319 Lichen Drive	K–8	1999–2000
Mariposa	7940 Mariposa Avenue	K–6	1997–1998
Skycrest	5641 Mariposa Avenue	K–6	1999–2001
Woodside	8248 Villa Oak Drive	K–8	2006–2007
Middle School			
Sylvan	7137 Auburn Boulevard	7–8	2004–2005
High Schools			
Mesa Verde	7600 Lauppe Lane	9–12	2009–2010
San Juan	7551 Greenback Lane	9–12	2009–2013

*Modernization may new construction (replacement of portables or other facilities), upgrade of lighting, restrooms, etc. **Currently under design for Modernization but on-hold due to State Funding issues.

Sunrise Tech Center adult education facility in Citrus Heights, located at the former campus of Sunrise Elementary School that was closed in 2004.

Citrus Heights School Capacities

Throughout the entire SJUSD, enrollment is declining and only one of the public school facilities within Citrus Heights (elementary, middle and high schools) is currently at 100% capacity. The average capacity level of the 10 elementary school facilities within the planning area is approximately 88 percent, enrolling an average of 526 students per school. Two elementary schools within the planning area were recently converted to K–8 schools, therefore the sole middle school is under capacity (66%), and the two high schools are far below capacity. Table 8-10 summarizes the enrollment and capacity figures for SJUSD schools within Citrus Heights. Cambridge Heights Elementary School is one of six alternative schools in the SJUSD. Students from throughout the District may enroll at Cambridge Heights Elementary.

Table 8-10
Citrus Heights School Facility Capacities

School	Address	Level	Total Classrooms	Fall 2009 Enrollment	School Capacity	% Capacity as of Fall 2009
Elementary Schools						
Arlington Heights	6401 Trenton Way	K-6	25	454	567	80
Cambridge Heights	5555 Fleetwood Drive	K-6	19	413	503	82
Carriage Drive	7519 Carriage Drive	K-6	27	536	681	79
Citrus Heights	7085 Auburn Boulevard	K-6	22	449	548	82
Grand Oaks	7901 Rosswood Drive	K-6	22	427	427	100
Kingswood	5700 Primrose Drive	K-6	28	451	495	91
Lichen	8319 Lichen Drive	K-8	31	665	768	87
Mariposa Avenue	7940 Mariposa Avenue	K-6	29	560	624	90
Skycrest	5641 Mariposa Avenue	K-6	33	713	746	96
Woodside	8248 Villa Oak Drive	K-8	26	588	646	91
Elementary School Averages			26		601	
Middle Schools						
Sylvan	7137 Auburn Boulevard	7-8	32	539	812	66
Middle School Averages			32		812	
High Schools						
Mesa Verde	7600 Lauppe Lane	9-12	50	1185	1,542	77
San Juan*	7551 Greenback Lane	9-12	64	662	1,698	39
High School Averages			57		1,620	
Total Citrus Heights Schools			408		10,057	

Source: San Juan Unified School District Planning Department, School Capacity and Room Utilization Report 2009/2010.
*San Juan High School is currently completing a major rehabilitation of the campus and school structure. This major construction project is considered a factor in the school's low enrollment and enrollment is expected to increase at the conclusion of the project in 2013.

School Closures and Reconfigurations

Over the past five years the SJUSD has closed and consolidated school campuses and programs in response to declining enrollments. Since 2004, 10 school sites have closed. Most of the school sites have been reused to house additional District programs and five sites have been leased to charter schools. Within Citrus Heights, one elementary school was closed. In 2004, Sunrise Elementary closed and reopened as the Sunrise Tech Center which houses Adult education, Regional Occupational Programs, and Early Childhood Education programs. Currently the District expects to close and consolidate other schools outside of Citrus Heights.

SJUSD currently offers three configurations for sixth grade: K-6 schools, K-8 schools, and 6-8 middle schools. With the wide variety of options, sixth grade classes at some schools are negatively affected as enrollments decline and State budget deficits continue to drain school resources. Currently the SJUSD is in the process of analyzing school configurations to help preserve school resources. The following Citrus Heights Elementary Schools are expected to be reconfigured (Table 8-11):

Table 8-11
Elementary School Facilities Projected Grade Configuration

Current and Future K-5's
Cambridge Heights*
Skycrest*
Current and Future K-8's
Kingswood
Lichen
Woodside
Remaining K-6's as of Fiscal Year 2010/2011
Arlington Heights
Citrus Heights
Grand Oaks
Mariposa Avenue

*6th grade students will be assigned to Will Rogers Middle School (located outside the City limits)
Source: San Juan Unified School District, Planning Department

Charter Schools

SJUSD has authorized two dependent charter schools:

- Visions in Education, K-12 Home School and Independent Study
- Choices Charter School, 7-12 Alternative Education

Private and Parochial Schools

For the 2007–2008 school year, 18 private schools operated within Citrus Heights, offering grades ranging from pre-kindergarten to 12th grade. As shown in Table 8-12, enrollment at these schools ranged from less than ten students to over 500, depending on grades offered and school type. Education was provided in both religious and non-religious settings.

Table 8-12
Private Schools within Citrus Heights

School	Lowest Grade Offered	Highest Grade Offered	Total Students
Angels in Action	PK	KG	N/A
Arrow Christian Academy	1	12	6
Carden Christian Academy	PK	8	112
Children's Choice Learning Center	PK	KG	30
Countryside Montessori School	PK	1	30
Creative Frontiers Elementary	PK	6	179
Faith Christian Academy	PK	8	114
Gillette Home School	KG	12	6
Holy Family Elementary School	PK	8	521
Kindercare Learning Center	PK	KG	8
Kindercare Learning Center	PK	KG	36
Lane Education–Olivine	7	12	6
Lane Education–Rosa Vista	KG	12	6
La Petite Academy	PK	6	60
Martin's Achievement School	7	12	47
St. Mark's Lutheran School	KG	8	101
Valley Oak Academy–Antelope	5	9	10
Valley Oak Academy–Mariposa	8	12	11
Valley Oak Academy–Madison	8	12	11
Wings Learning Resources	3	12	11
Whispering Oak Montessori Academy	PK	KG	60

PK= Pre-kindergarten KG=Kindergarten. Source: Private School Universe Survey data for the 2007-2008 School Year (www.nces.ed.gov); www.localschooldirectory.com; www.yellowpages.com; California Department of Education; greatschools.net;webschoolpro.com

8.6 WATER SUPPLY

Citrus Heights is supplied with potable water by three separate water purveyors. The service area boundaries of the Citrus Heights Water District, California American Water Company, and Sacramento Suburban Water District are shown in Figure 8-7.

WATER SUPPLY REGULATORY SETTING

FEDERAL

Clean Water Act

The U.S. Environmental Protection Agency established primary drinking water standards in the Clean Water Act (CWA) Section 304 and states are required to ensure that potable water for the public meets these standards. Standards for 81 individual constituents have been established under the Safe Drinking Water Act, as amended in 1986. The U.S. EPA may add additional constituents in the future.

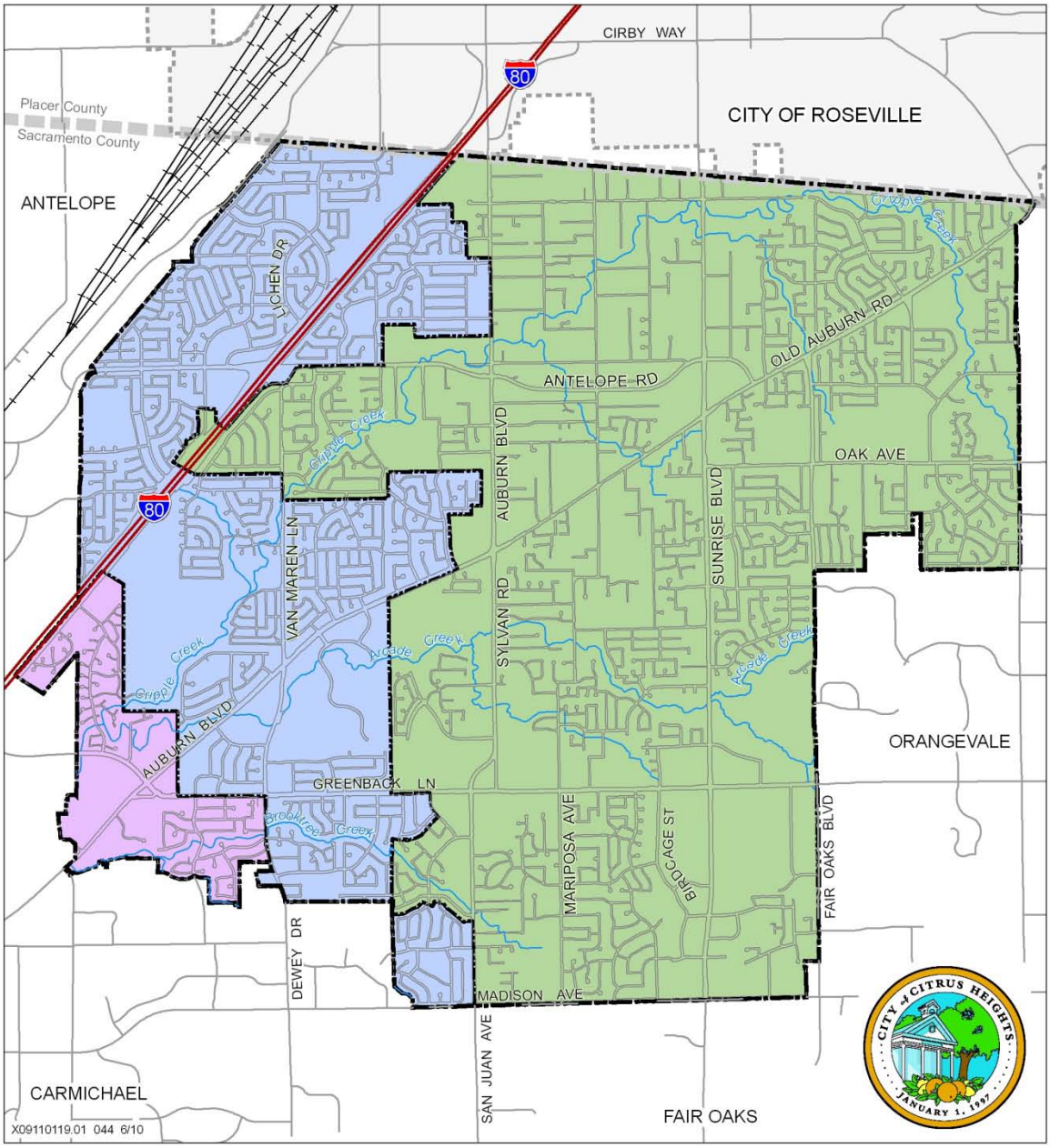
STATE

California Water Code Section 10610 (et seq.)

California Water Code Section 10610 (et seq.) requires that all public water systems providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AFA, must prepare an Urban Water Management Plan (UWMP). The Department of Water Resources provides guidance to urban water suppliers in the preparation and implementation of UWMPs. UWMPs must be updated at least every five years on or before December 31, in years ending in five and zero.

Senate Bill 610 and Assembly Bill 901

Senate Bill (SB) 610 and Assembly Bill (AB) 901 – Water Supply Planning were signed and became effective January 1, 2002. SB 610 amends Public Resources Code section 21151.9, requiring any EIR, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies. SB 610 also amends the following: Water Code 10656 and 10657 to restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources; and Water Code section 10910 to describe the water supply assessment that must be undertaken for projects referred under Public Resource Code Section 21151.9, including an analysis of groundwater supplies. Water agencies are given 90 days from the start of consultation in which to provide a water supply assessment to the CEQA lead agency; Water Code section 10910 would also specify the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment. AB 910 amends Water Code section 10631, expanding the contents of the UWMPs to include further information on future water supply projects and programs and groundwater supplies.



LEGEND

- City of Citrus Heights
- Other Cities
- County Boundary
- Freeway
- Roadways
- Creeks
- Railroad
- California American Water District
- Citrus Heights Water District
- Sacramento Suburban Water District

Source:
X005

NORTH 0 0.25 0.5 1 MILES

Water Districts in Citrus Heights **Figure 8-7**

Senate Bill 221

SB 221 adds Government Code section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within 5 days of the subdivision application being accepted as complete for processing by the city or county. It adds Government Code section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring a sufficient water supply to be available. Proof of availability must be requested of and provided by the applicable public water system. If there is no public water system, the city or county must undertake the analysis described in section 66473.7.

REGIONAL/LOCAL

Water Forum

Initiated in 1993, the Water Forum process brought together a diverse group of stakeholders that included business and agricultural leaders, citizens' groups, environmentalists, water managers, and local governments to evaluate available water resources and the future water needs of the Sacramento metropolitan area. These stakeholders identified two coequal objectives to guide the development of the Water Forum Agreement (WFA):

- Provide a reliable and safe water supply for the region's economic health and planned development through the year 2030.
- Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

After a 6-year consensus-based stakeholder process, the WFA was completed. The WFA prescribes a regional conjunctive-use water program for the lower American River and the connected groundwater basin. The Water Forum also completed an EIR for the Water Forum Proposal. This document was certified by the two lead agencies (the City of Sacramento and the County) in December 1999. At the time that the City and County of Sacramento adopted the project and they and other stakeholders adopted their purveyor specific agreements (PSAs), the name was changed to the WFA because it was an agreed-to proposal by all stakeholders.

The WFA includes PSAs that define the benefits each water purveyor will receive as a stakeholder and the actions each must take to receive these benefits. PSAs for the Sacramento County Water Agency (SCWA), the City of Sacramento, and Sacramento Municipal Utility District (SMUD) also describe commitments by these entities to address issues related to wheeling and wholesaling of surface water, Central Valley Project (CVP) water transfers, and dry-year water supply in SCWA Zone 40.

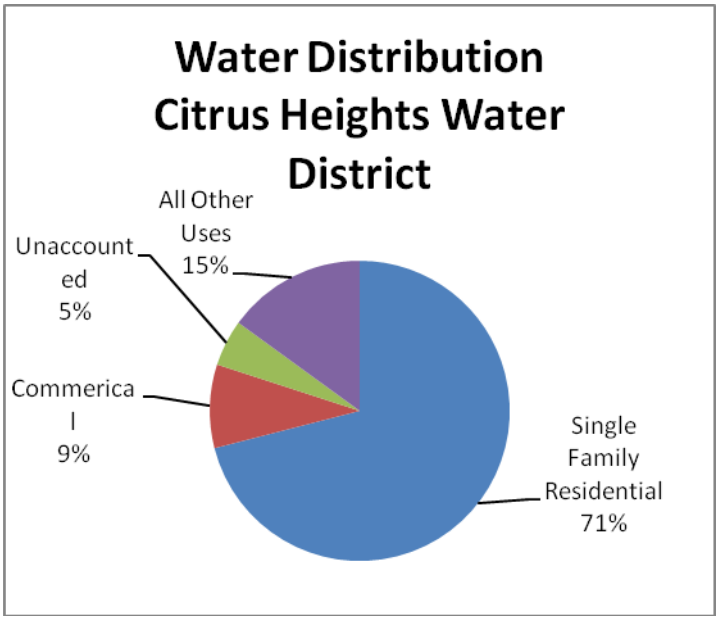
The Water Forum process initiated a coordinated effort for regional water supply planning within the Sacramento region. Because of limited water supplies, the sensitive ecological values of the lower American River, and existing groundwater contamination within the Sacramento groundwater basins, purveyors and stakeholders came together and agreed to resolve longstanding conflicts through an interest-based negotiation process that led to formulation of the seven elements of the WFA and individual PSAs for each purveyor. In addition, all signatories to the WFA became members of the Water Forum successor effort, which is responsible for overseeing, monitoring, and reporting on the implementation of the WFA.

The WFA is a long-term water supply plan that addresses water supplies and demands to 2030 for existing (as of January 2000) purveyors and agencies. The WFA did not address water supplies beyond 2030 and did not account for newly incorporated cities (Elk Grove and Rancho Cordova). Rather, the WFA analysis was based on existing land use plans that were available at the time it was prepared (i.e., the *County of Sacramento General Plan* [1994] and other relevant agency general plans). Since the WFA was adopted in 2000, the cities of Elk Grove and Rancho Cordova have incorporated and pursued development and implementation of long-term land use plans.

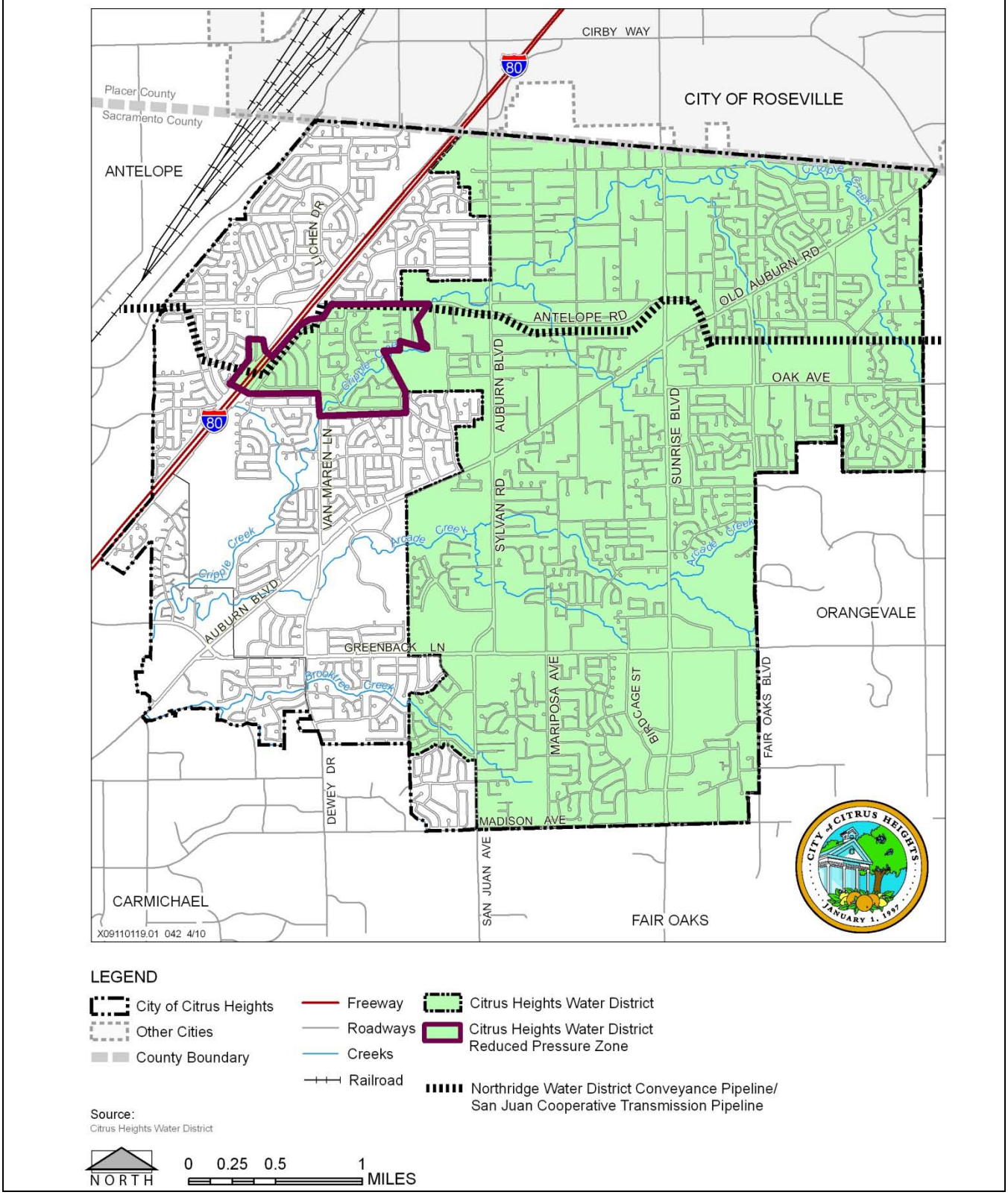
EXISTING CONDITIONS

CITRUS HEIGHTS WATER DISTRICT

The Citrus Heights Water District (CHWD) was formed on October 25, 1920, and is one of the oldest public agencies in the City. The CHWD encompasses the eastern two-thirds of the City as illustrated in Figure 8-8. CHWD's service population is approximately 66,000. The estimated distribution of water in the CHWD includes 71 percent to single-family residential consumers and 9 percent to commercial and business users. Unaccounted-for water, which constitutes an estimated 5 percent of water use, is that amount which is not metered resulting from leaks, meter inaccuracies, fire protection, system flushing, and some construction uses, while all other uses include public facilities and institutional users.



Source: Citrus Heights Water District, Water System Master Plan, April 1998.



Citrus Heights Water District **Figure 8-8**

CHWD is currently at 85–90 percent of projected build-out. CHWD build-out, as estimated by the Sacramento City-County Office of Metropolitan Water Planning (CCOMWP), will be in 2024, supporting a population of 70,148 residents and 28,034 dwelling units. The projected CHWD build-out average annual water demand without additional conservation is 18,744 acre-feet, or an average of 239-gallons per person per day (gpcpd). With anticipated water conservation savings, projected normal year water demand at build-out is 17,800 acre-feet (227 gpcpd).

Water Supply and Distribution

The CHWD is one of five water distribution agencies in the northeast region of Sacramento County and south Placer County that are supplied surface water by the San Juan Water District (SJWD). Overall, the CHWD has been supplied by SJWD with between 17,000 to 20,500 acre-feet of surface water annually between 1998 and 2008. This comprises approximately 35 percent of SJWD's surface water delivery. The SJWD supplies the distribution districts with surface water from Folsom Lake, after processing it through the SJWD Peterson Water Treatment Plant (WTP) facility in Granite Bay. The surface water supplied by SJWD is delivered through gravity flow from the Peterson WTP to CHWD. Because CHWD is planning for groundwater production facilities to help meet various combined-use, water shortage, emergency and peak demand projections, the need for additional surface water supplies beyond what has been historically provided by SJWD should not be required. Typically, as pressure decreases in the distribution pipeline system during peak demand conditions, CHWD wells are automatically started.

The CHWD is participatory to a Joint Powers Agreement with the cities of Citrus Heights, Folsom, and Sacramento, and Sacramento County, which grants them the authority to regulate groundwater. The Sacramento Groundwater Authority (SGA), governed by a Board of Directors made up of an appointed member of each water agency, has the ability to levy assessments. During drought years, water supply demands will need to be met by a combination of both surface water and ground water supplies. SGA is attempting to formalize combined-use agreements between surface and ground water users and suppliers. The District is also a participant in the Sacramento Area Water Forum and the Regional Water Authority (RWA).

The CHWD maintains five active wells used for peak demand, water shortages and emergency supplies. Table 8-13 lists the District's active wells. Four active groundwater wells are located within the planning area, with a fifth just south of the city limits. The CHWD groundwater system provides total well capacity of 6,750 gallons per minute (gpm). The firm capacity of the groundwater well system (i.e., with the largest producing well [#15] off-line) is 4,750 gpm.

Table 8-13 Citrus Heights Water District Well Capacity	
Well Reference No.	Capacity, gpm
Well No. 1A	1,500
Well No. 8	1,550
Well No. 10	900
Well No. 11	800
Well No. 15	2,000
Total CHWD Capacity	6,750
Source: Bob Church, General Manager, Citrus Heights Water District, 2009	

However, emergency water needs (in the case that CHWD's surface water supply was interrupted) are higher than existing pumping facilities can provide. The *CHWD Water System Master Plan* states that to supply the CHWD solely with ground water during water shortages and emergency demands, seven new wells would be needed, with an average well capacity of 1,000 gpm. The CHWD Capital Improvement Plan anticipates construction of these seven new wells over the next 20 years.

Until 1997, the CHWD's primary water transmission pipeline was a 42"/30" Transmission Main from the SJWD that was installed in 1958. In 1993, the CHWD teamed with the SJWD, Fair Oaks Water District, Orange Vale Water Company, and Northridge Water District (now Sacramento Suburban Water District) to construct a 78"/72" Cooperative Transmission Pipeline (CTP). This new transmission line, completed in 1997, creates redundancy within the water distribution system in the CHWD, and provides peak flow relief to the District's 42" Transmission Main.

The CHWD is supplied surface water from SJWD through a gravity flow transmission system. This system provides relatively high pressure throughout the District through approximately 255 miles of distribution pipelines. One reduced pressure zone has been developed in Citrus Heights and one reduced pressure zone has been developed outside of Citrus Heights. Based on static pressure available from SJWD's Hinkle Reservoir, pressure in the District varies between 60 pounds per square inch (psi) and 110 psi.

Water Conservation

In addition to pre-1914 water rights held by SJWD, the CHWD uses United States Bureau of Reclamation (USBR) water through a contract with the SJWD. The CHWD is therefore required to fully implement a Best Management Practices (BMPs) conservation plan for urban water use. The *CHWD Water System Master Plan* calculated that normal water demand at build-out would total 23,092 acre-feet per year. By utilizing the water conservation programs included within the BMPs, CHWD could save an estimated 5.1 percent conservation

savings (944 acre-feet per year) for a total build-out demand of 17,800 acre-feet per year. A majority of the estimated conservation would be attained through system leak reduction, installation of Ultra Low Flow toilets and showers, and landscape requirements for single-family homes.

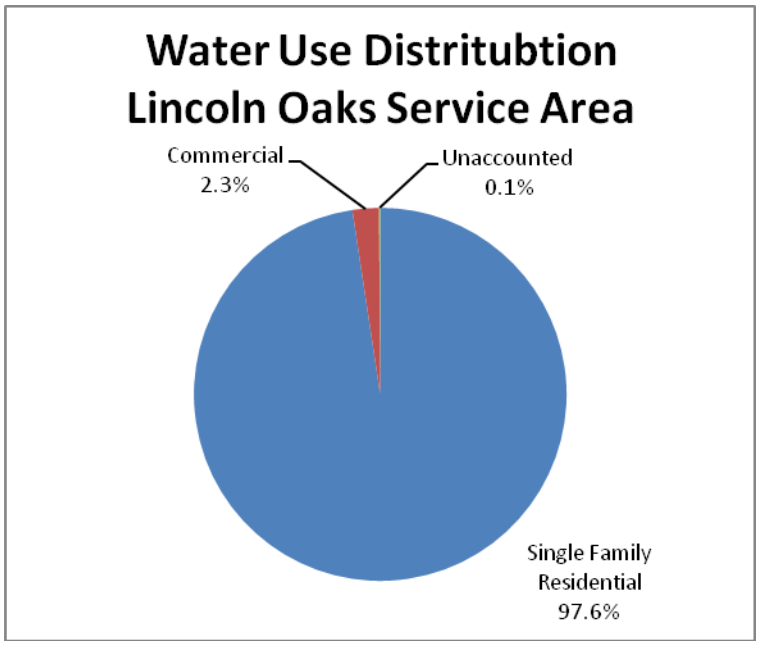
Many of the BMP programs (i.e., system audits, metering with commodity rates and conservation pricing) assume a fully metered system. By the end of 2007, all District accounts (19,541 total / 16,325 in the City) were retrofitted with water meters and billed based upon metered rates as of January 1, 2008.

Capital Improvement Program

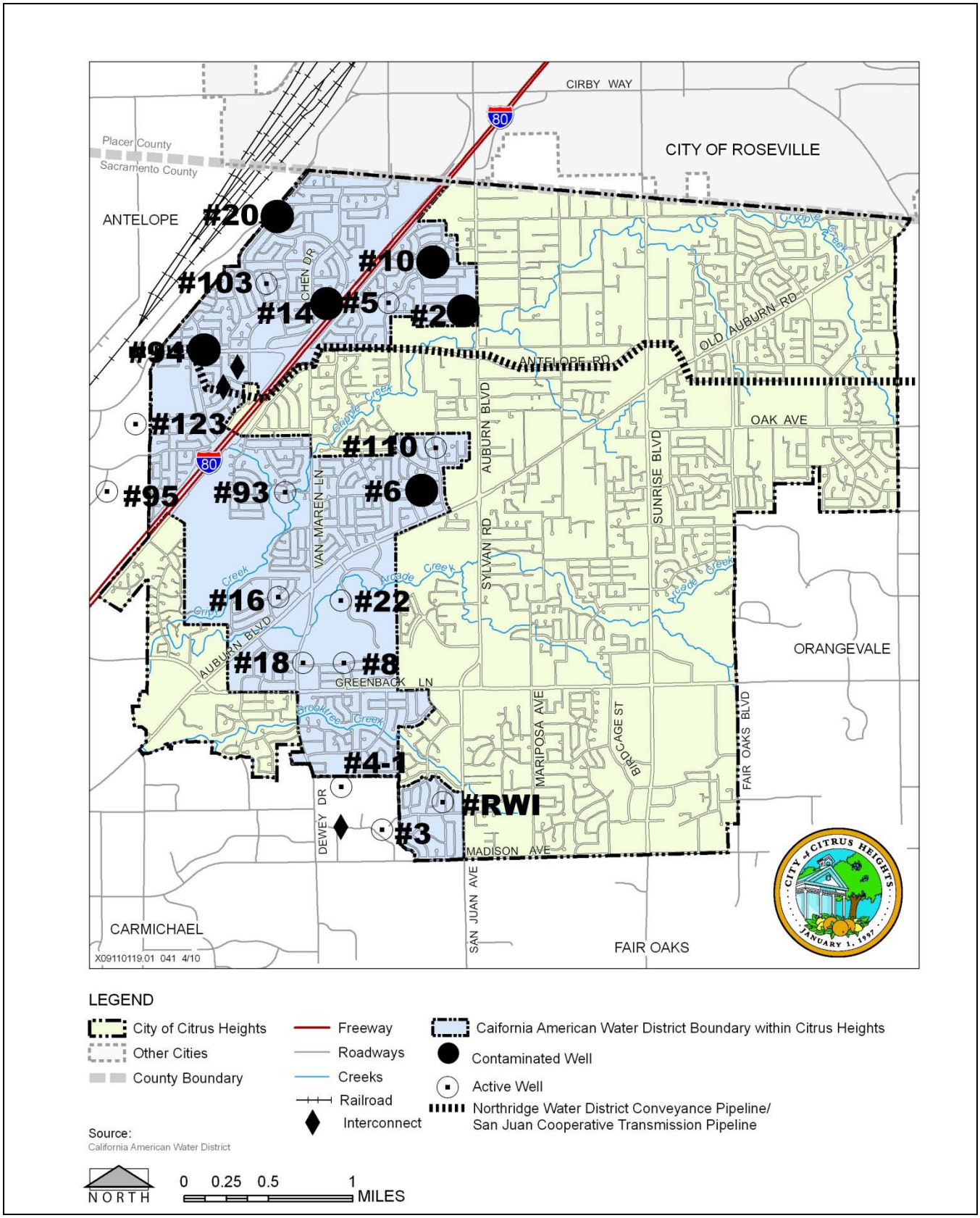
A major component of the CHWD's Capital Improvement Plan (CIP) for 2010 through 2018 entails replacing old pipelines in the transmission and distribution system. Leaks and maintenance problems with old tar-dipped and asphalt-wrapped steel pipelines, installed in the 1940s and 1950s, make them a primary target for replacement. The CIP also plans for the replacement of fire hydrants to improve fire suppression flows. Installation of three of the seven planned new ground water wells are anticipated to occur during the 2010-2018 CIP planning period.

CALIFORNIA AMERICAN WATER COMPANY

In 2001 the California American Water Company (CAW) acquired the Citizens Utilities Company of California (CUCC) and its assets, which include a number of small disjointed service areas throughout the Sacramento region. The overall service area consists of approximately 7.1 square miles. Citrus Heights is located within the Lincoln Oaks Service Area (LOSA), which consists primarily of groundwater wells and small distribution mains. The Lincoln Oaks Water Company first purchased water system properties in northeastern Sacramento County in 1957. A water supply permit was granted to the Lincoln Oaks Water Company in October of 1961 to supply domestic water to the community of Citrus Heights, and in June of 1965, the Lincoln Oaks Water Company merged with CUCC which was subsequently acquired by CAW. Figure 8-9 shows the CAW's Lincoln Oaks Service Area boundaries and well sites in relation to the city limits.



Source: CAW Lincoln Oaks System Comprehensive Planning Study 2006



California American Water Company Lincoln Oaks Service Area **Figure 8-9**

Total water production in 2005 was 32.8 million gallons per day (mgd), or approximately 37,000 acre-feet. The total annual demand averaged 9.21 mgd for the last 10 years. The highest maximum month demand from 2001 through 2006 is 17.05 mgd. The maximum day production is estimated at approximately 20.46 mgd. Unaccounted-for water (i.e., water use resulting from unauthorized connections and leaks, meter inaccuracies, fire protection and training, system and street flushing, and construction uses) is assumed to be 10 percent of water use in the LOSA. In 2006, approximately 14,200 customers were estimated in the LOSA, with an average residential daily demand of approximately 8.34 mgd to 10.07 mgd. The 2006 residential water use was estimated to be approximately 97.6 percent of total water use.

Water Supply and Distribution

CAW obtains all of its water supply from groundwater wells distributed throughout the service area. The Lincoln Oaks water system utilizes a total of 26 groundwater wells, 17 of which are in Citrus Heights, as illustrated in Figure 8-9. Three of the LOSA well sites are currently off-line due to suspected organic contaminants, although they meet existing drinking water standards. During the wet season, three wells can provide 85 percent of the water demand, but during the high demand periods in the summer, all of the LOSA's available wellheads are used.

The wells in the LOSA have an average capacity of 900 gpm, and range in depth from 235 to 510 feet. Standing groundwater depth is 139 to 200 feet. Table 8-14 describes capacities of the 23 well sites in the LOSA. The CAW's water supply sources should be adequate to deliver maximum day demand, which was 9.51 mgd during the summer of 2001. However, groundwater levels are continuing to decline in the Sacramento region, and are of concern to future provision of water services. Three of the Company's wells drilled in 1955 may have to be retired in the next few years due to water levels dropping below well pumps.

CAW maintains a gravity distribution system, using booster pumps at each wellhead. Small distribution pipelines (6" to 8") carry water to LOSA customers. This distribution system should be able to deliver the required fire flow plus maximum day demand, which was 9.51 in the summer of 2001. In 2006, a total of 14,200 water connections were identified for the Lincoln Oaks Service Area. The LOSA contained 1,841 metered connections, while the remaining 12,359 water connections were flat rate connections.

The Lincoln Oaks system consists of one pressure zone, with pressures typically ranging from 40 to 70 psi. However, Interstate 80 and the Southern Pacific Railroad tracks serve to separate the distribution system into several relatively isolated subareas. The distribution system has three pipelines which cross under Interstate 80, and one pipeline that crosses under the railroad right-of-way. CAW is currently preparing plans to construct a large booster station just outside of the Citrus Heights to improve water pressure.

The 2006 *Lincoln Oaks-System Comprehensive Planning Study* states that the CAW should attempt to secure an imported surface water supply of approximately 2,500 acre-feet per year to accommodate future build-out demand. The Lincoln Oaks system has several interconnections with neighboring water purveyors, for emergency and fire flow demands. The CAW may also consider constructing additional storage facilities in the LOSA to meet future peak hour and fire flow demands. The capacity of the groundwater well system is summarized in Table 8-14.

Table 8-14
Lincoln Oaks Service Area Well Capacity

Well No.	Well Name	Capacity (gpm)	Year Drilled
Active Wells			
81	Andrea No. 1	1,500	1974
95	Andrea No. 2	1,800	1977
101	Cherbourg	1,300	1977
RWI	Chipping	1,000	1960
22	Crosswoods	800	1974
123	Daly	1,400	1995
80	Diablo	700	1966
74	Fort Sutter	500	1955
16	Halifax (Auburn)	500	1964
75	Hemlock	400	1955
3	Laurel Oaks	500	1957
4-1	Linda Sue	500	1955
5	Oak Berry	1,100	1958
79	Roseville Road	600	1973
77	Rushmore	500	1959
76	Shenandoah	1,000	1955
93	Twin Park	1,600	1977
18	Van Maren	900	1973
2	Oak Forest	1,000	1957
10	Sandalwood	900	1961
94	Summerplace	1,000	1977
14	Treelark	700	1964
20	Villaview	1,000	1974
Total Active Well Capacity		**21,200**	
Off-line Wells			
6	Glass Slipper	400	1959
11	Carriage	400	1973
8	Le Mans	800	1959
Total LOSA Capacity		**22,800**	

Source: California American Water Company, Lincoln Oaks Water Comprehensive Planning Study, November 2006

Water Conservation

As part of regional efforts to conserve water, CAW participates in the Regional Water Authority Water Efficiency Program and is signatory on both the WFA and the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding (MOU). The comprehensive WFA allows the region to meet its needs in a balanced way through implementation of seven elements. These elements include detailed understandings among stakeholder organizations on how this region will deal with key issues such as groundwater management, water diversions, dry year water supplies, water conservation, and protection of the Lower American River.

Capital Improvement Program

Lincoln Oaks does not have enough water supply to meet peak hour demands in the event of a loss of one of the main groundwater wells. The 2006 Lincoln Oaks System Comprehensive Plan CIP recommends that two 1.5-million-gallon storage reservoirs be constructed in the LOSA.

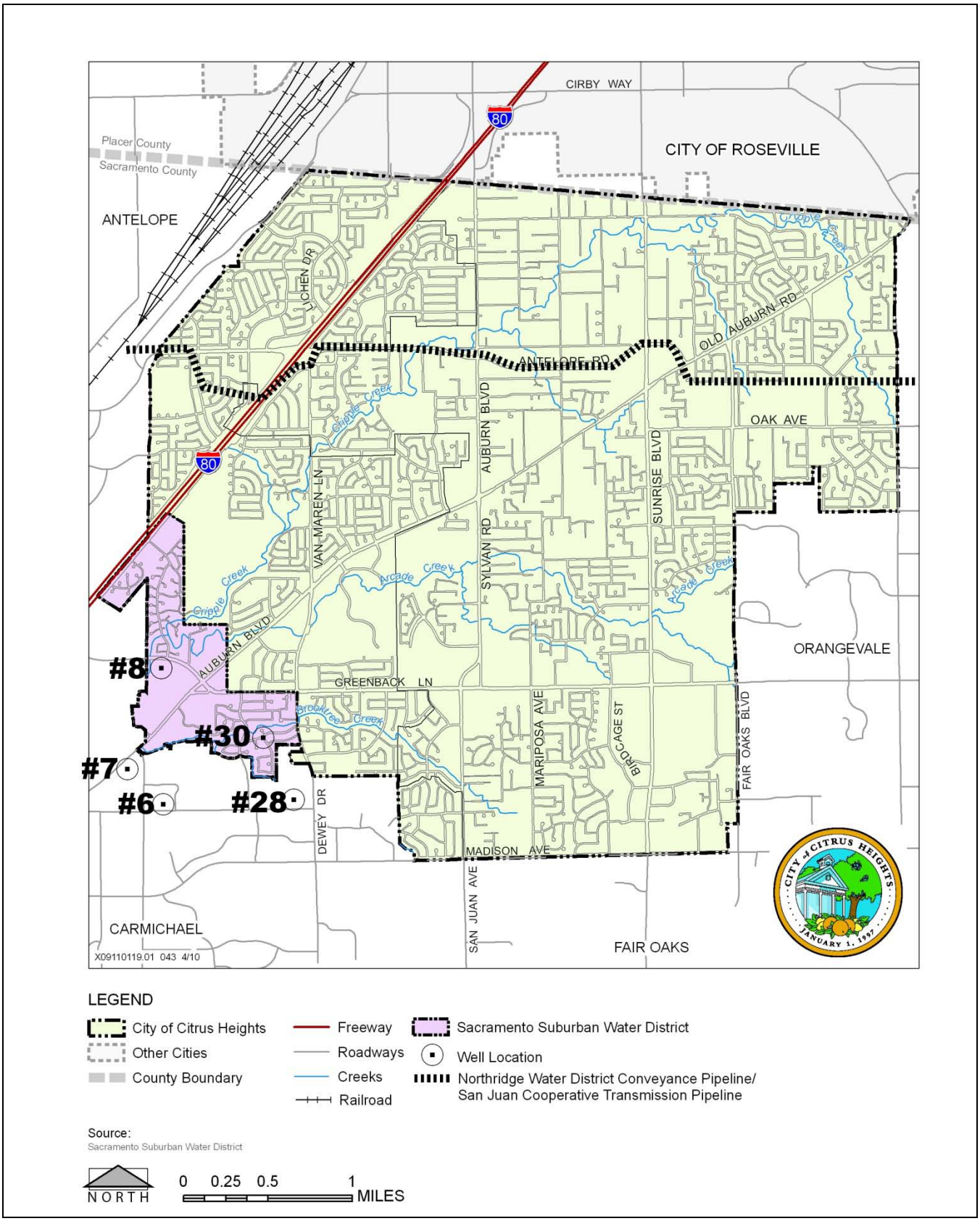
It must also be noted that many of the Lincoln Oaks wells are over 40 years old. The CIP recommends that a certain number of wells be inspected and rehabilitated per year, with wellhead treatment as necessary, focusing first on the oldest wells which have shallow pump settings based on groundwater levels. Some of the distribution pipelines that deliver water to LOSA customers from the wellheads are also over 40 years old and in need of replacement.

The CAW CIP also seeks to address long-term system needs. Projects are identified as either Priority A or B. Priority A designates high priority projects recommended for construction due to projected near term supply, treatment, storage, pumping, and associated transmission reinforcements. Priority B projects are recommended to enhance fire flow capacity and to provide other various improvements, and serve as a place holder for potential future projects based upon actual system growth. Priority A projects are estimated at $12,070,000 and Priority B projects are estimated at $5,769,000.

SACRAMENTO SUBURBAN WATER DISTRICT

In February 2002, the Sacramento Suburban Water District (SSWD) was formed as a result of a consolidation between the former Arcade Water District (AWD) and Northridge Water District (NWD). All water service in the Citrus Heights which was provided by the former NWD is now being served by the SSWD.

The SSWD serves a population of approximately 160,000 and a service area of approximately 36 square miles in Sacramento County. Within the SSWD are four service areas: the North Service Area (NSA), the Arbors at Antelope, McClellan Business Park, and the South Service Area (SSA). Water supply for the District comes from active groundwater wells and surface water from Placer County Water Agency (PCWA) and the City of Sacramento. The SSWD's water system facilities and the service areas are shown on Figure 8-10.



Sacramento Suburban Water District **Figure 8-10**

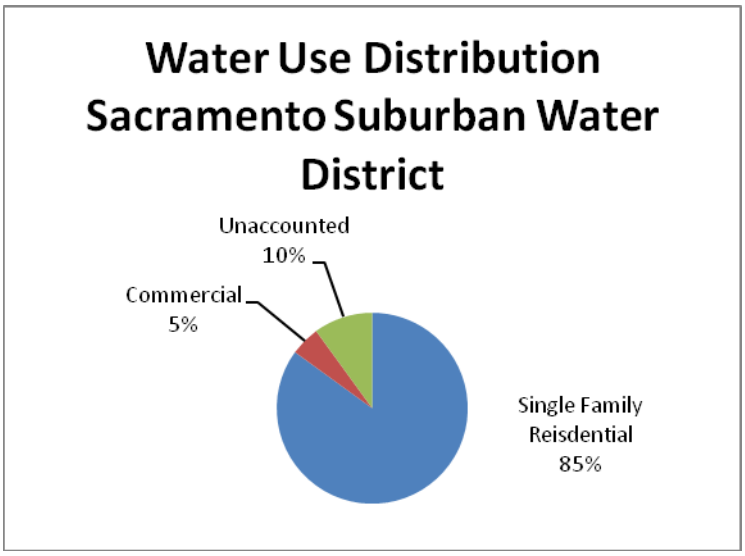
Total water production for SSWD in 2008 was 38,498 acre-feet, which consisted of 23,516 acre-feet (61 percent) of groundwater and 14,982 acre-feet (39 percent) of surface water. The SSWD had 43,998 customer connections in 2007, including 37,276 single-family connections (85 percent). Half of the District's customers are not currently metered. The SSWD anticipates completing its metering program by 2025, the California state-mandated deadline.

Unaccounted for water use is unmetered water use such as for fire protection and training, system and street flushing, sewer cleaning, construction, system leaks, meter inaccuracies, and unauthorized connections. Since about half of the District's customers are not metered, no data is available to determine the percentage of unaccounted for water usage. For the purposes of the SSWD 2009 Water System Master Plan unauthorized water use is assumed to be approximately 10 percent of total water production.

Water Supply and Distribution

The SSWD's existing system is characterized as a groundwater supply and distribution system, and surface water from PCWA via Folsom Reservoir and SJWD's Peterson WTP and from the American River via the City of Sacramento's Fairbairn WTP.

The District owns 89 active well sites throughout the region, three of which are located in Citrus Heights. Pumping capacities for SSWD's wells range from 350–3,500 gpm. Total well production capacity is 98,390 mgd. Table 8-15 shows well capacity data for SSWD's well sites, while each well's location is identified in Figure 8-10. The three well sites located in Citrus Heights are Verner #N36, Field #N8, and Park Oaks #30, which combined produce approximately 3,900 gpm.



Source: Sacramento Suburban Water District 2009 Master Plan

Table 8-15
Sacramento Suburban Water District Well Capacity

Well No.	Well Name	Capacity, gpm	Frequency of Use
15	San Martin / Bolivar	NA	Abandoned
16	Georgia / Canary	NA	Abandoned
27	Melrose / Channing	680	Active
31A	Watt / Elkhorn 1	600	Active
34	La Cienega / Melrose	410	Active
39	Thomas / Elkhorn	600	Active
44	Gilman / SMUD Station	NA	Abandoned
56A	Fairbairn / Karl	2,400	Active
57	Larchmont / Watt NA	NA	Abandoned
58	Thirty Second / Elkhorn	650	Active
59	Bainbridge/Holmes School	NA	Abandoned
59A	Bainbridge / Holmes School 2	2,950	Active
64	Galbrath / Antelope Woods	675	Active
MC10	McClellan Business Park	675	Active
MC-C1	Capehart	450	Active
MC-C2	Capehart	400	Active
MC-C3	Capehart	650	Active
N1	Evergreen	880	Active
N3	Engle	925	Active
N5	Hillsdale	850 VFD	Active
N6	Palm	1,040	Active
N7	Rosebud	1,300	Active
N8	Field	1,200	Active
N9	Cameron 1	1,300	Active
N10	Walnut	1,300	Active
N11	Diablo	NA	Abandoned
N12	St. Johns	1,350	Active
N13	Madison NA	NA	Abandoned
N14	Orange Grove	1,200	Active
N15	Cabana	1,000	Active
N17	Oakdale	1,100	Active
N18	McCloud	NA	Abandoned
N19	Larchmont	NA	Abandoned
N20	Cypress	1,300	Active
N21	Yucca	NA	Abandoned
N22	River College	1,000	Active
N23	Freeway	1,030	Active
N24	Don Julio	1,030	Active

Table 8-15
Sacramento Suburban Water District Well Capacity

Well No.	Well Name	Capacity, gpm	Frequency of Use
N25	Sutter	1,900	Active
N26	Monument	600	Active
N27	Jamestown	1,225	Active
N28	Oakbrook	NA	Abandoned
N29	Merrihill	1,285	Active
N30	Park Oaks	1,125	Active
N31	Barrett Meadows	750	Active
N32A	Poker 1	1,2000	Active
N32B	Poker 2	1,800	Active
N32C	Poker 3	790	Active
N33	Walerga	1,275	Active
N34	Cottage	2,000	Active
N35	Antelope	2,000	Active
N36	Verner	1,500 VFD	Active
2A	El Prado / Park Estates	995 Fluoridated	Active
3A	Kubel / Armstrong	370	Active
4B	Bell / Marconi	2,675	Active
5	Bell / El Camino	330 H	Active
7	Rubicon / Seely Park	180	Active
8	South Park / Wrendale	NA	Abandoned
9	Ravenwood / Eastern	625	Active
10	Potter / East Country Club	NA	Abandoned
12	Hernando / Santa Anita Park	540	Active
13	Calderwood / Marconi 820	820	Active
14	Marconi South / Fulton	570	Active
18	Riding Club / Ladino	840	Active
19	Balmoral / Yorktown	950	Active
20A	Watt / Arden	1,100,	Active
22	West / Becerra	650	Active
23	Marconi North / Fulton	550	Active
24	Becerra / Woodcrest	590	Active
25	Thor / Mercury	750	Active
26	Greenwood / Marconi	650	Active
28	Red Robin / Darwin	585	Active
30	Rockbridge / Keith	650	Active
32A	Eden / Root	1,905	Active
33A	Auburn / Norris	2,675	Active
35	Ulysses / Mercury	1,000	Active
37	Morse / Cottage Park	700	Active

Table 8-15
Sacramento Suburban Water District Well Capacity

Well No.	Well Name	Capacity, gpm	Frequency of Use
38	Watt / Auburn	500	Active
40	Auburn / Yard	675	Active
40A	Auburn/Yard	2,525	Active
41	Albatross / Iris	600	Active
42	Becerra / Marconi	NA	Abandoned
43	Edison / Traux	850	Active
45	Jamestown / Middleberry	750	Active
46	Jonas / Sierra Mills	800	Active
47	Copenhagen / Arden	885	Active
50	Columbia / Fair Oaks	500	Active
51	Sudbury / Elsdon	285 H	Active
54	North / Root	NA	Abandoned
55A	Stewart / Lynndale	2,000	Active
60	Whitney / Concetta	600	Active
63A	American River Well Field	NA	Abandoned
63B	American River Well Field	NA	Abandoned
63C	American River Well Field	NA	Abandoned
63D	American River Well Field	NA	Abandoned
63K	American River Well Field	NA	Abandoned
63L	American River Well Field	NA	Abandoned
65	Merrily / Annadale	1,250,	Active
66	Eastern / Woodside Church	1,350	Active
67	El Camino / Eastern	NA	Abandoned
68	Northrop / Dornajo	1,600	Active
69	Hillsdale / Cooper	450	Active
70	Sierra / Blackmer	350	Active
71	River Drive/Jacob	2,675	Active
72	River Walk / NETP	1,850	Active
73	River Walk / NETP East	3,500	Active
74	River Walk / NETP South	2,700	Active
75	Enterprise / Northrop	1,150	Active
76	Fulton / Fair Oaks	250	Active
77	Larch / Northrop	400	Active
Total Capacity		**98,390**	

Source: Sacramento Suburban Water District System Master Plan, September 2009.

The District's current surface water agreements are with PCWA, City of Sacramento, and the USBR (Section 215 CVP water). Surface water from PCWA and the USBR is diverted from Folsom Lake and treatment is provided by the Sydney N. Peterson WTP. The Peterson WTP is owned and operated by SJWD. SJWD also supplies treated surface water from Folsom Reservoir for a group of water entities (SJWD Retail Service Area, Orange Vale Water Company, CHWD, City of Folsom-Ashland Area, and Fair Oaks Water District).

The Peterson WTP has a nominal capacity of 120 mgd. Treated water is pumped to the Hinkle Reservoir, which has 62 million gallons (mg) of storage capacity. From the Hinkle Reservoir, the potable surface water supply for the District is delivered by gravity flow through the San Juan Cooperative Transmission Pipeline (CTP) followed by the Antelope Conveyance Pipeline (ACP) (formerly referred to as the Northridge Conveyance Pipeline).

The 48-inch diameter, gravity flow ACP is constructed from the terminus of the San Juan Cooperative Transmission Pipeline at C-Bar-C Park on Oak Avenue. The District owns the total pipeline capacity of 59.2 mgd in the ACP and that same quantity of flow in the larger capacity CTP.

The SSWD has a surface water supply from the American River through a contract with the City of Sacramento, dating to 1964. Historically, only a portion of this amount has been diverted through the American River Well Field located in the SSA. The American River Well Field is not currently being used because it does not meet the requirements of the Surface Water Treatment Rule. In 2006, SSWD began receiving surface water from the City of Sacramento. This water is treated at the City's Fairbairn WTP and delivered to the SSWD via the City's Howe Avenue transmission main to an existing interconnection located near Enterprise Drive and Northrop Avenue in the NSA.

The SSWD's distribution system consists of 682± miles of pipeline. The distribution system ranges in size from 48-inch mains down to four-inch laterals. Pipeline material consists predominantly of asbestos cement, polyvinyl chloride (PVC), ductile iron, mortar-lined coated steel, and cast iron pipe. SSWD standards include the requirement for gridding cross connecting mains at intervals of approximately 1,300 feet with a minimum size of 12 inches. Exceptions have been made where 10-inch mains and larger exist in the grid pattern.

In addition to the groundwater aquifer, SSWD has four active storage tanks in the NSA. A five million gallon storage tank and booster pumping station, located at the Antelope reservoir site, stores both groundwater from nearby wells and treated water from the Peterson WTP to meet peak hour demands and fire flows. The maximum pumping capacity from the Antelope reservoir is approximately 10,000 gpm. Another five million gallon capacity groundwater storage reservoir and 10,000 gpm booster pump station is located near the intersection of Watt Avenue and Elkhorn Boulevard in North Highlands. There is a 150,000 gallon elevated storage tank located in the Arbors at Antelope area, and a 125,000 gallon elevated storage tank located at the District's Walnut Corporation Yard. There are two active elevated storage tanks in the McClellan Business Park. The SSA has one active

storage tank which was recently constructed in 2006. It is a five million gallon storage tank and booster pumping station located at Enterprise Drive and Northrop Avenue.

Water Conservation

The SSWD has begun implementing the CUWCC water conservation BMPs. SSWD began implementing water conservation BMPs based on the WFA, and is moving towards implementing the CUWCC water conservation BMPs as part of their Water Forum renegotiations.

In the SSWD 2006 Water Conservation Master Plan, Phase 1 of the technical analysis was performed on the CUWCC water conservation BMPs (Brown and Caldwell, 2006). The WCMP is a technical analysis of quantifiable urban water conservation BMPs for six large purveyors in t he Sacramento region. The purpose of the technical analysis was to accurately define the benefits (water savings) and costs of the quantifiable BMPs. Quantifiable BMPs are those for which water savings estimates are available. These include water surveys, plumbing retrofits, metering, large landscape water audits, high-efficiency washing machines, and toilet rebates. Non-quantifiable BMPs are those for which water savings cannot be accurately estimated (i.e., public education and outreach). Although the Plan estimates water savings due to metering at 20 percent, it is assumed for this study that unmetered customers would reduce water use by 10 percent due to metering.

Water efficiencies gained from the natural replacement of water using fixtures will reduce unit water use in addition to the continued implementation of the BMPs. The projected demands in the District include reduced water use due to natural replacement of toilets, shower fixtures, and washing machines installed in single-family and multi-family housing units as well as commercial establishments. Natural replacement does not include water-efficient fixtures installed in new construction, or fixtures that are replaced under a rebate program. Decreased water use due to natural replacement was calculated in the Plan.

Capital Improvement Program

In March 2004, the SSWD Board adopted a 15-year CIP with a total of 30 projects and an estimated total cost of $106.6 million. This 15-year CIP includes surface water conjunctive use projects, groundwater projects, rehabilitation and/or replacement of existing distribution pipeline facilities, metering of unmetered service connections to comply with the WFA, various analytical studies, and other projects.

An analysis of the SSWD's capital needs for a 15-year period from 2010 through 2024 was prepared as part of the Water System Master Plan. The Plan identifies a list of capital improvement projects for supply, storage, distribution and special and potential capital needs, some of which include: additional water supply backup power, well rehabilitation/pump station improvements, installation and replacement of removed terminal units, telemetry and communication improvements, water quality/wellhead treatment, well replacement, installation of a

concrete ground storage tank with a booster pump station (3MG, 6,000 gpm [4,000 gpm reliable capacity plus 2,000 gpm redundant capacity]), corrosion control and reservoir/tank/hydrotank painting/coating, upgrades and improvements, installation of pressure sustaining valves, installation of a 3rd McClellan intertie at 34th Street, upgrade of the McClellan distribution system pipeline, water-related street improvements, and completion of the Meter Retrofit Program.

8.7 WASTEWATER COLLECTION AND TREATMENT

WASTEWATER REGULATORY SETTING

FEDERAL AND STATE

Clean Water Act and State Water Resources Control Board

With regard to wastewater, the Federal CWA and regulations set forth by the California Department of Health Services (DHS) and State Water Resources Control Board (SWRCB) are aimed primarily at discharges of effluent to surface waters. Title 40 of the Code of Federal Regulations (CFR) Part 503, Title 23 California Code of Regulations, and standards established by the Central Valley Regional Water Quality Control Board regulate the disposal of biosolids generated by wastewater treatment plants. Under the CWA, the Regional Water Quality Control Board administers programs related to wastewater treatment.

REGIONAL/LOCAL

Sacramento Regional County Sanitation District and Sacramento Area Sewer District

The Sacramento Regional County Sanitation District (SRCSD) and the Sacramento Area Sewer District (SASD) are both separate political subdivisions of the State of California formed under the State of California Health and Safety Code. As such, these Districts' policies must conform to the statutes of the State Health and Safety Code. Additionally, the Districts are separately funded entities that do not depend upon Sacramento County for funding capital improvements, maintenance, or operations. User fees provide for the systems' operation and maintenance, while hookup fees provide most of the funding for new trunks and interceptors. The SRCSD requires a regional connection fee be paid to the District for any users connecting to or expanding sewer collection systems (SRCSD Ordinance No. SRCSD-0043).

EXISTING CONDITIONS

SACRAMENTO REGIONAL COUNTY SANITATION AND SACRAMENTO AREA SEWER DISTRICTS

The SRCSD provides public wastewater conveyance, treatment, and disposal in the urbanized portions of Sacramento County. SRCSD is a publicly owned wastewater agency serving over one million people in the major Sacramento Metropolitan Area through its three contributing agencies: the City of Folsom; the City of

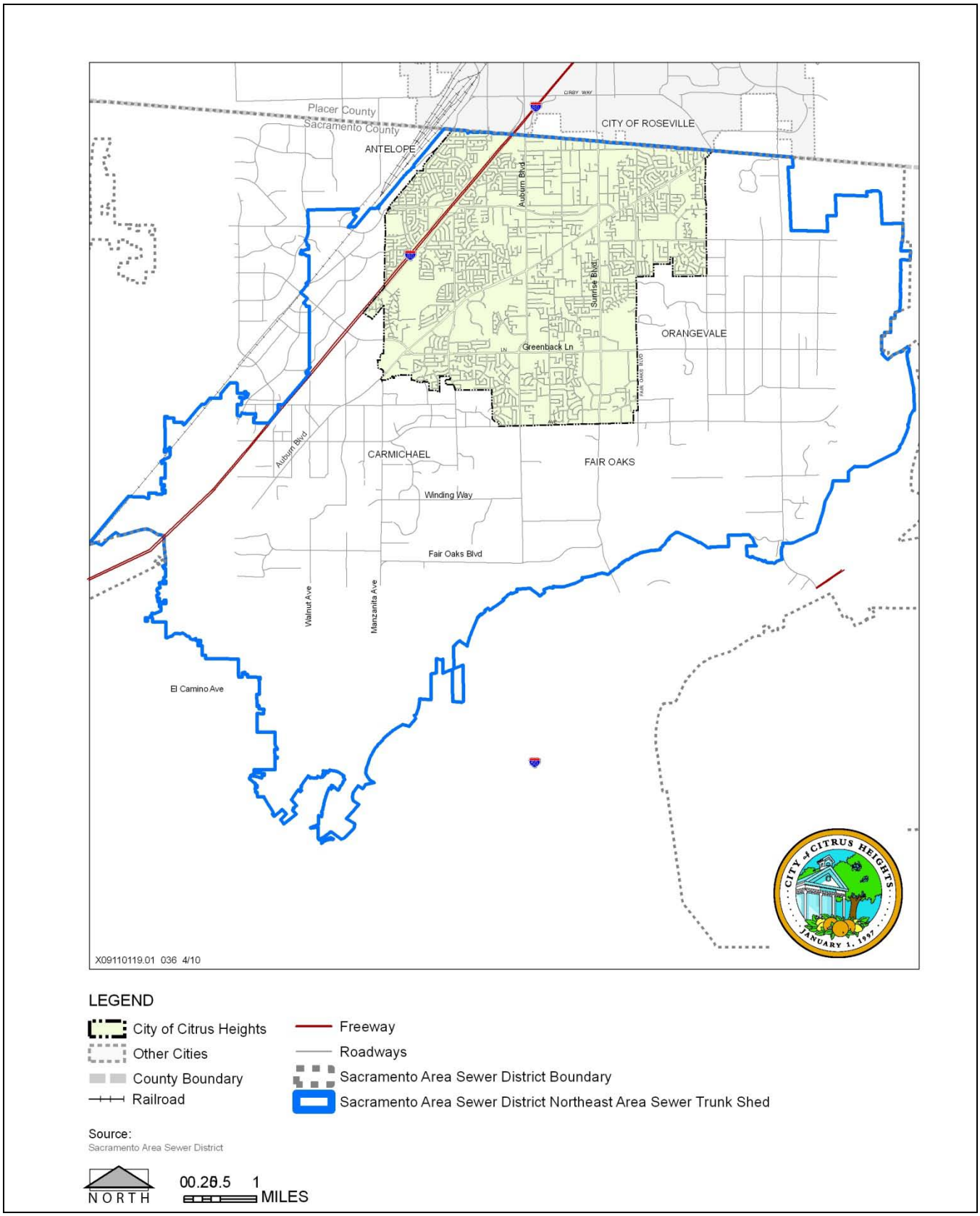
Sacramento; and SASD, formerly known as the County Sanitation District 1 (CSD-1). Under the Master Interagency Agreement (MIA) that defines the operational, financial, and administrative responsibilities of the SRCSD, the County of Sacramento and the Contributing Agencies, SRCSD is responsible for the planning and financing of any new sewer facilities.

Collection System

The main SASD collection system includes over 2,800 miles of sewer pipelines ranging in size from four to 75 inches in diameter. The collection system pipelines are categorized and based on size, function and hydraulic capacity. In general, sewer collectors are pipes that receive flows from homes and businesses and are 10-inches or smaller in diameter. In contrast, trunk sewers are pipes that function as conveyance facilities to transport the collected wastewater flows to the SRCSD interceptor system and are 12-inches in diameter or larger. Interceptors are a massive system of pipes (up to 10 feet in diameter) and pump stations, which carry wastewater directly to the Sacramento Regional Wastewater Treatment Plant (SRWTP). At times of peak use, the interceptor system carries as much as 400 million gallons of wastewater per day. The existing SRCSD interceptor system consists of the Cordova (COR) Interceptor, the Folsom Interceptor Trunks (FOI) and the Northeast Interceptor Trunks (NEI). The SRWTP receives and treats an average of 165 million gallons per day (mgd) (as of 2005). The SRWTP has a permitted dry weather flow design capacity of 181 mgd. Effluent discharges from the planning area are collected and conveyed through the SASD trunk and SRCSD interceptors to the SRWTP and ultimately discharged into the Sacramento River near the unincorporated town of Freeport.

The average dry weather flow (ADWF) is the basic measure of wastewater flows, made up of the sanitary flow contributed by residential, commercial, industrial, and institutional users of the system and the extraneous infiltration/inflow water that enters the system (i.e., groundwater infiltration and rainfall inflow). The peak dry weather flow (PDWF) and the peak hour wet weather flow (PHWWF) are those highest wastewater flows occurring during their respective weather seasons. The ADWF of wastewater to the treatment plant is 154 mgd, with the PWWF reaching 312 mgd. The total projected ADWF at buildout within the Sewerage Service Area is estimated to be 350 mgd. The total projected PHWWF for a two-year design storm is approximately 833 mgd.

Citrus Heights is located in the District's Northeast System, as shown in Figure 8-11. The Northeast System is the largest of the sewer trunk systems in the Sacramento Area Sewer District (SASD), totaling approximately 552,000 feet of pipeline ranging in size from 12" to 75" diameter sewers. The Mission Trunk Sewer extends north from the Northeast Siphons along Mission Avenue to Arcade Creek. There are also two major branches of the Mission Trunk Sewer, the first extending east from Whitney to Madison Avenue, and the second following Arcade Creek to Antelope Road and then extending east to Oak Avenues. Many smaller trunk sewers in the Northeast System follow alignments along creeks.



Sacramento Area Sewer District Map **Figure 8-11**

The SRCSD is responsible for financing new interceptor sewers, which are designed to carry 10 mgd of sanitary sewage or more. SASD is responsible for construction of new trunk sewer facilities within its current boundaries and unincorporated areas of the County that it could potentially annex (because of increased urbanization). Trunk sewer facilities are those that carry between one mgd and 10 mgd of flow. Because both special districts serve Citrus Heights, the City has one voting member on both the SRCSD and the Sacramento Area Sewer District Board of Directors.

SRCSD and SASD have completed two portions of the Upper Northwest Interceptor (UNWI) project, increasing capacity for future demands on the local wastewater collection system. The Upper Northwest Interceptor Section 9 (UNWI 9) and the Northeast Area (NEA) Relief Projects 1 and 2 are a joint effort between SRCSD and Sacramento Area Sewer District. UNWI 9 consists of a new interceptor pipeline which runs along Auburn Boulevard and Old Auburn Road, from approximately Van Maren Lane east to Fair Oaks Boulevard. NEA Relief Project 1consist of a new trunk sewer pipeline along Oak Avenue between Fair Oaks Boulevard and Hazel Avenue, and a section of pipeline along Fair Oaks Boulevard between Oak Avenue and Old Auburn Road. NEA Relief Project 2 is a new section of pipeline which runs along Old Auburn Road between Fair Oaks Boulevard and Robert Creek Court. Both UNWI 9 and NEA 2 are complete, and NEA is expected to be completed in late summer 2010.

Wastewater Treatment Plant

The SRWTP provides wastewater treatment for the district, including Citrus Heights. Design capacity for wastewater treatment at the SRWTP is currently at 196 mgd, with plans to expand the facility to accommodate future growth. The current SRWTP facilities serve over one million residents within approximately a 368-square mile area.

The SRWTP is a secondary treatment facility which conducts raw influent and effluent pumping, primary clarification, secondary treatment with the high-purity oxygen activated sludge process, cryogenic oxygen production, disinfection, dissolved air flotation sludge thickening, and anaerobic sludge digestion. Currently, treated wastewater flows are dechlorinated and discharged into the Sacramento River, while digested sludge is pumped to on-site solids storage basins (SSBs) and ultimately to on-site dedicated land disposal (DLD) facilities.

Table 8-16 below provides population-based flow projections through 2020. These figures were developed in 2008, for the *SRWTP 2020 Master Plan.* The SRWTP service area population grew from approximately 893,800 in 1985 to approximately 1,209,500 in 2000.

Table 8-16 Wastewater Flow Projections – Sacramento Regional Wastewater Treatment Plant (2000-2020)			
Year	Average Dry Weather Flow (ADWF)	Average Day Maximum Month (ADMMF)	Peak Hour 2-Year Storm (PHWWF)
2000	154	220	312
2005	174	247	334
2010	196	279	362
2015	210	299	392
2020	218	311	408
Build-out	350	450	833
Source: Sacramento Regional Wastewater Treatment Plant, 2020 Master Plan Update, May 2008			

The SRWTP is currently undergoing planning efforts to install a water reclamation program to provide "gray" water to agriculture and major landscaped areas. Once the program is fully developed and operational, the SRWTP hopes that water districts within the region will deliver reclaimed water supplies to parks, schools, golf courses, and cemeteries.

Capital Improvement Projects

SRCSD's 2000 Interceptor System Master Plan CIP contains 52 projects required to convey wastewater flows from existing and planned development to the SRWTP. The facilities are scheduled to be constructed by 2035, and when operational, will provide capacity for all planned development within the Urban Services Boundary and West Sacramento. The total capital cost of the master planned facilities is $962,910,000. This cost is in year 2000 dollars and does not include inflation or interest adjustments for any of the identified projects.

8.8 SOLID WASTE AND RECYCLING

SOLID WASTE AND RECYCLING REGULATORY SETTING

FEDERAL

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the enormous amount of municipal and industrial solid waste generated nationwide. After several amendments, the Act as it is currently written governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984.

RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency to regulate waste management activities. RCRA authorizes states to develop

and enforce their own waste management programs, in lieu of the federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the federal program.

STATE

Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) requires every city and county in the state to prepare a Source Reduction and Recycling Element (SSRE) in or as part of its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory State waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The purpose of the Act is to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse effects on human health and the environment. The Act has established a waste management hierarchy, as follows: source reduction, recycling, composting, transformation, and disposal.

REGIONAL/LOCAL

Source Reduction and Recycling Element

AB 939 mandates that all cities and counties prepare, adopt and submit planning documents to CalRecycle (formerly the California Integrated Waste Management Board), which demonstrate how cities and counties will meet the mandatory waste diversion goals of 25 percent by 1995 and 50 percent by 2000. The required planning documents include a SSRE, a Household Hazardous Waste Element (HHWE) and a Non-disposal Facility Element (NDFE) which is subject to CalRecycle approval.

EXISTING CONDITIONS

WASTE MANAGEMENT AND RECYCLING

The Sacramento County Waste Management and Recycling Division (SCWMRD) provides solid waste and recycling collection and disposal services to all unincorporated areas in Sacramento County. The SCWMRD provides residential services to the northern suburban portion of the County including source reduction, recycling, transformation, and land disposal. The SCWMRD also staffs the Sacramento Regional Solid Waste Authority (SWA), is a Joint Powers Authority, which consists of the City of Sacramento and the County of Sacramento and formerly the City of Citrus Heights and regulates the commercial solid waste collection and recycling operations in the City of Sacramento and the unincorporated areas of Sacramento County.

In 2008, the City separated from the SWA and now administers its own solid waste management system and provides disposal and diversion data in an annual report to the CIWMB, in accordance with AB 939 requirements.

Solid waste collection services in the City are generally provided by private haulers through either a contract or franchise. The City currently contracts residential solid waste collection and recycling services to Allied Waste Systems, a private waste disposal company. Residential waste collection and recycling services in the City have been provided by Allied Waste Systems since January 1, 2006. As for commercial solid waste collection and recycling services, eight commercial haulers are currently franchised to provide commercial solid waste collection and recycling service in the City.

WASTE DIVERSION PROGRAMS

The landfill diversion mandates of AB 939 require all cities and counties in California divert 50 percent of the total waste generated within the boundaries of the jurisdiction from landfill disposal on an annual basis beginning in the year 2000. Solid waste may be diverted from landfill disposal through source reduction, recycling, or composting.

Source Reduction

Source reduction is at the top of the waste management hierarchy as defined in AB 939. This is due to the fact that the practice of source reduction is the most environmentally beneficial and cost effective method of reducing disposal in landfills. The City's objectives for source reduction within its boundaries include the following:

- Achieve at least 1.6 percent of the 50 percent overall diversion goal from source reduction activities;
- Reduce the use of non-recyclable materials
- Reduce packaging products;
- Achieve a minimum of two percent diversion through source reduction programs;
- Encourage reuse and repair of materials;
- Increase public awareness of waste reduction and re-use concepts; and
- Encourage the use of products with recycled-content materials.

The targeted wastes for source materials are the following:

- Yard wastes
- Paper products
- Food wastes
- Office paper
- Pallets
- Film plastic

Currently the SRPD manages all parks and open space within the City's boundaries, and the turf areas are currently managed through grasscycling. The manicured parks encompass 181.36 acres within the City limits.

Several businesses have been identified that reduce paper generation through various practices. In addition there are ten thrift stores within City limits, including Goodwill Industries, St. Vincent DePaul and Eco Thrift. These facilities all accept or either distribute or sell various reusable items, including household goods, used clothing, furniture and appliances.

The SCWMRD has intermittently operated a Backyard Compost Program since 1991 that provides education materials and compost bins for residents. Because the City service area was part of unincorporated Sacramento County, many residents have participated in the program and manage their waste through backyard composting.

Table 8-17 provides a summary of the City's existing source reduction programs and the corresponding diversion tonnages for 2006.

Table 8-17
Non-Residential Source Reduction and Diversion Programs (2006)

Program Type	Material Type	2006 Tonnage	% of 2006 Diversion	% of 2006 Generation
Business Source reduction	Grass	210	0.32%	0.16%
Business Source reduction	Mixed materials	63	0.095%	0.05%
School Source Reduction	Grass	640	1.0&	0.49%
Government Source Reduction	Grass	1,206	1.8%	0.92%
Total		**2.118**	**3.2%**	**1.6%**

Source: Citrus Heights 2006 Waste Generation Study

Recycling

Both the residential and commercial franchisees provide recycling services within Citrus Heights. In addition, several buy-back centers and drop-off facilities are located either within or near the City that provide recycling opportunities. The City's recycling objectives include the following:

- Achieve at least 27 percent of the 50 percent overall diversion goal from recycling activities;
- Work with the residential collector to increase participation and material recycling achieved in the curbside recycling program;
- Work with the commercial franchisees to achieve a diversion rate of approximately 30 percent;
- Increase participation of commercial businesses and government agencies in recycling programs; and

- Work with local school districts to implement recycling opportunities at schools.

The targeted wastes for recycling are the following:

- Cardboard
- Newsprint
- Mixed paper
- California Redemption Value beverage containers
- Glass
- Plastics
- Construction and demolition materials

Government recycling activities consist of commingled material recycling at offices and construction and demolition debris recycled or reused for City road projects. Commingled recycling material is collected and processed by Allied Waste Services and document shredding is provided by a local company. In addition to the targeted materials, the City also promotes local special collection events for materials such as e-waste. In 2008, the City began requiring green waste recycling and reuse from City-contracted landscaping services for City properties and right-of-ways. If the green waste is not mulched on-site, the landscapers bring the material to City Hall's green waste bin and Allied Waste Services collects the material.

The current residential recycling programs feature every-other-week collection of commingled recyclables and green waste. In addition, Allied Waste Services operates a scheduled bulky-item pickup program and a used motor oil and filter program. The contract with Allied Waste Services requires that they recycle a minimum of 40 percent of all residential waste collected from City residents.

Residents currently have the choice of a 32, 64, or 96-gallon cart for garbage collection and pay a monthly fee based upon the size of the garbage cart selected. The primary objective of this program is to provide an economic incentive for customers to reduce waste and take full advantage of the commingled recycling and green waste collection programs.

In addition to the curbside recycling programs, one drop-off center and four buyback centers are located within the City. In 2006, resident recycling programs diverted 8,249 tons of material from landfill disposal, accounting for approximately 6.3 percent of total generation. Table 8-18 provides a summary of the existing government, residential and commercial recycling programs and the corresponding diversion tonnages for 2006.

Composting

Both the residential collector and commercial franchisees provide organics collection and processing services. The City's objectives for composting include the following:

- Achieve at least 3.2 percent of the 50 percent overall diversion goal from composting activities;

Table 8-18 Recycling Programs and Diversion Rates (2006)				
Program Type	Material Type	2006 Tonnage	% of 2006 Diversion	% of 2006 Generation
Government Recycling				
Government Recycling	Asphalt/Inerts	3,560	5.4%	2.71%
Residential Recycling				
Curbside Recycling	Mixed	8,249	12.5%	6.28%
Drop-off Centers	Aluminum	0	0.000%	0.00%
Drop-off Centers	Glass	87	0.13%	0.07%
Drop-off Centers	PETE	0	0.001%	0.00%
Buy-Back Centers	Aluminum	154	0.2%	0.12%
Buy-Back Centers	Glass	299	0.5%	0.23%
Buy-Back Centers	PETE	103	0.2%	0.08%
Buy-Back Centers	HDPE	5	0.01%	0.00%
Buy-Back Centers	Bimetal	0	0.00%	0.00%
Commercial Recycling				
On-Site Pickup	Commingled	161	0.2%	0.12%
On-Site Pickup	OCC	3,320	5.0%	2.53%
On-Site Pickup	Mixed Paper	1,236	1.9%	0.94%
On-Site Pickup	Newspaper	120	0.18%	0.09%
On-Site Pickup	Metal	34	0.1%	0.03%
On-Site Pickup	Toner cartridges	2	0.003%	0.00%
On-Site Pickup	Plastic	260	0.39%	0.20%
On-Site Pickup	Food Waste	62	0.1%	0.05%
On-Site Pickup	Wood	250	0.4%	0.19%
On-Site Pickup	Tires	264	0.400%	0.20%
On-Site Pickup	Aluminum cans	47	0.071%	0.04%
On-Site Pickup	Shopping Carts	1	0.002%	0.00%
On-Site Pickup	Glass	126	0.19%	0.10%
On-Site Pickup	Inerts	1,103	1.67%	0.84%
Self Haul	Tires	21	0.031%	0.02%
Self Haul	Inerts	340	0.5%	0.26%
Self Haul	Wood	2,234	3.4%	1.70%
Self Haul	Reclaimed Soil	2,203	3.3%	1.68%
Self Haul	Appliance	11	0.0%	0.01%
Self Haul	Green Waste	2,201,223	0.2%	0.09%
Self Haul	Recyclables (MRF)	54	0.1%	0.04%
Alternative Daily Cover (ADC)	Mixed Materials	10,974	16.6%	8.36%
Total		**35,403**	**54%**	**27.0%**
Source: Citrus Heights 2006 Waste Generation Study				

- Work with local landscaping maintenance companies to identify opportunities for organics drop-off and recycling locations within or near the City limits;
- Work with the commercial haulers to identify and implement additional organics collection and processing opportunities for the local business community;
- Encourage the use of recovered organic materials and products in the public and private sectors; and
- Encourage regional cooperation in order to bolster use of the proposed SWA GreenCycle Facility.

The targeted wastes for composting are the following:

- Residential and commercial organics
- Grass clippings and leaves
- Holiday trees

In addition to every-other-week residential green waste collection services, residential customers are also provided with an extra 90-gallon green waste container upon request and at no additional charge. Residents can also participate in seasonal collection programs for holiday trees, which can either be collected at the curb or delivered to several drop-off locations. Table 8-19 provides a summary of existing composting and biomass programs and the corresponding diversion tonnages for 2006:

Table 8-19
Composting and Biomass Programs and Diversion Rates (2006)

Program Type	Material Type	2006 Tonnage	% of 2006 Diversion	% of 2006 Generation
Composting				
Residential Curbside Green Waste	Green Material	3,165.1	4.8%	2.41%
On-Site Green Waste Pick-up	Green Material	585	0.9%	0.45%
On-Site Green Waste Pick-up	Food Waste	352	0.5%	0.27%
Self-Haul Green and Wood Waste	Mixed	40	0.1%	0.03%
Total		**4,142.8**	**3.2%**	**3.2%**

Source: Citrus Heights 2006 Waste Generation Study

Special Waste

Special wastes include materials that require special handling and management methods due to potential health and environmental effects. The City's objectives for handling and managing special waste include the following:

- Achieve 18.5 percent diversion of the 50 percent overall diversion goal from special wastes;

- Work with the franchisees and construction industry to increase the recovery, reuse and recycling of inert materials and wood waste;
- Encourage the promotion and use of local drop-off facilities that accept clean inert materials;
- Work with local woodworking and lumber businesses to identify opportunities for the reuse and recycling of wood waste;
- Consider the use of recycled asphalt road-base materials in new road construction projects sponsored by the City;
- Promote recycling and recovery of grease and tallow from local restaurants.

The targeted special wastes include the following:

- Rendering (grease and tallow)
- Wood waste
- Scrap metal
- Concrete, asphalt, rubble, and other inert construction and demolition debris
- Tires
- White goods

The special wastes targeted by the City are primarily handled by the commercial franchisees and self-hauled by commercial generators. Commercial franchisees reported that they use Sims Metal, Recycle America, Schnitzer, and Elder Creek Recovery and Transfer Station to recycle metals.

The commercial franchisees and self-haulers from local construction and demolition projects also recover the majority of inert materials generated within the City. The franchisees reported using a variety of facilities located in Sacramento and Placer Counties. The majority of wood waste identified as recycled in 2006 originated form construction and demolition projects.

Grease and tallow materials collected throughout the City are handled either through rendering companies or back-hauled by the parent companies. Based on the results of the Citrus Heights 2006 Solid Waste Generation Study, it appears that rendering companies are predominately used by Citrus Heights businesses. Most rendering services are provided by companies based in the greater Sacramento region.

Table 8-20 provides a summary of special waste programs and the corresponding diversion tonnages for 2006.

Table 8-20 Special Waste Programs and Diversion Rates (2006)				
Program Type	Material Type	2006 Tonnage	% of 2006 Diversion	% of 2006 Generation
Special Waste Materials				
Rendering	Bone/Fat/Cooking Oil	305	0.5%	0.23%
White Goods	White Goods	26	0.0%	0.02%
Scrap Metal	Scrap Metal	528	0.8%	0.40%
Concrete/Asphalt/Rubble	Concrete Asphalt	23,500	35.6%	17.89%
Total		**24,359**	**36.9%**	**18.5%**
Source: Citrus Heights 2006 Waste Generation Study				

DISPOSAL FACILITIES

No existing, active, or permitted solid waste landfills or transformation facilities are located within the planning area. Beginning on January 1, 2006, all residential solid waste was tipped at the Elder Creek Transfer Station and transferred to Forward Landfill in San Joaquin County. Commercial solid waste is disposed at a variety of locations, including Kiefer Landfill, L&D Landfill, Forward Landfill, and Western Regional Sanitary Landfill.

According to the Citrus Heights 2006 Waste Generation Study, Citrus Heights' waste as part of the SWA went to 18 landfills including Kiefer Landfill, L&D Landfill, Forward Landfill, Anderson Landfill, Potrero Hills Landfill, and Lockwood Landfill. Of the materials sent to these facilities, 10,975 tons were used as alternative daily cover (i.e., alternative materials such as processed green waste used to cover the landfill).

8.9 STORM DRAINAGE

STORM DRAINAGE REGULATORY SETTING

FEDERAL

Clean Water Act

The CWA regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System Permit Program (NPDES) was established under the CWA to address municipal and industrial discharges to surface waters. This includes regulations for point-source discharges (e.g., wastewater treatment plant effluent discharges) and non-point discharges associated with stormwater. In general, NPDES permit provisions consist of discharge restrictions and limitations (including numeric and narrative) intended to protect beneficial uses of the receiving water as well as maintenance of public health and safety.

Phase 1 of the NPDES permitting program for municipal discharges of stormwater for urban areas where the population exceeds 100,000, industrial activity stormwater discharges and general construction activity discharges (disturbance of 5 acres or greater) was established in 1990. Phase 2 of NDPES (2003) addresses municipal discharges of urban areas of less than 100,000 in population as well as for construction activities that disturb 1 acre or greater.

National Flood Insurance Program

Citrus Heights is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. The City is occasionally audited by the California Department of Water Resources (DWR) to insure the proper implementation of FEMA floodplain management regulations.

STATE

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act governs the coordination and control of water quality in the state, and includes provisions relating to non-point source pollution. The California Coastal Commission, pursuant to the Coastal Act, specifies duties regarding the federally approved California Coastal Management Program. This law required that the SWRCB, along with the California Coastal Commission, regional boards, and other appropriate state agencies and advisory groups, prepare a detailed program to implement the state's non-point source management plan on or before February 1, 2001. The law also requires that the state board, in consultation with the Commission and other agencies, submit copies of prescribed state and regional board reports containing information related to non-point source pollution, on or before August 1 of each year.

State Water Resources Control Board

The SWRCB is responsible for the establishment and implementation of statewide water quality policy and delegates some of this responsibility to the nine regional water quality control boards in the state. SWRCB has established the state's nondegradation policy as well as the State Implementation Policy of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries.

REGIONAL/LOCAL

Central Valley Regional Water Quality Control Board

The Regional Water Quality Control Board, Central Valley Region provides planning, monitoring, and enforcement techniques for surface and groundwater quality. A basin plan provides more specific information for specific waterways within the region, in terms of establishing monitoring techniques to control pollutant levels within the waterways. The RWQCB also monitors storm water quality from construction activities through an NPDES permitting process.

Central Valley Regional Water Quality Control Plan

The Central Valley Regional Water Quality Control Plan covers all the drainage basin areas for the Sacramento and San Joaquin rivers, extending approximately 400 miles from the California- Oregon border to the headwaters of the San Joaquin River. This plan describes the beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved.

Business Environmental Resource Center

The Business Environmental Resource Center (BERC) was established in 1993 as a one-stop, non-regulatory Permit Assistance Center to help Sacramento County Businesses understand and comply with federal, state, and local environmental regulations. BERC's mission is promoting business success and enhancing environmental quality by providing free technical resource center on behalf of local government.

Sacramento Stormwater Quality Partnership

Sacramento area public agencies, including the County of Sacramento and the Cities of Sacramento, Citrus Heights, Elk Grove, Folsom, Galt, and Rancho Cordova, have joined together to form the Sacramento Stormwater Quality Partnership (SSQP). The agencies work together to implement the conditions of the Sacramento Municipal Separate Storm Sewer System NPDES Stormwater Permit. In addition to implementation of the permit requirements, the goals of the SSQP are to:

- educate and inform the public about urban runoff pollution,
- encourage public participation in community and clean-up events,
- work with industries and businesses to encourage pollution prevention,
- require construction activities to reduce erosion and pollution, and
- require developing projects to include pollution controls that will continue to operate after construction is complete.

The SSQP coordinates and cost-shares various major elements of its activities, including monitoring, target pollutant reduction, special studies, regional public outreach, and program evaluation. The partnership members also coordinate and cost-share selected construction/new development and commercial/industrial activities. The County and City of Sacramento generally conduct and manage the joint work and are reimbursed by the other members according to a cost-share Memorandum of Understanding (MOU).

Sacramento County Environmental Management Department

Sacramento County Environmental Management Department, Water Protection Division, currently performs routine inspection services of businesses for all the Municipal Separate Storm Sewer Systems (MS4) permittees in the region. Each of the regional agencies – Citrus Heights, Elk Grove, Folsom, Galt, Sacramento City and Sacramento County – has executed an agreement to enforce best management practices for clean water. All licensed businesses are inspected under this program. The department also provides public outreach, brochures on storm water best management practices for particular industries and reporting data for submission to the state. The reporting data is transmitted to the State DWR as well as each permittee.

Sacramento County Department of Water Resources

Sacramento County Department of Water Resources provides a variety of services from Flood Protection and Operations and Maintenance of the storm system to assistance in preparing and implementing water quality and public outreach programs for Water Quality. Residents within the City pay a drainage tax to support these operations. These contract services will be privatized beginning July 1, 2010.

Sacramento Regional Conservation Corps

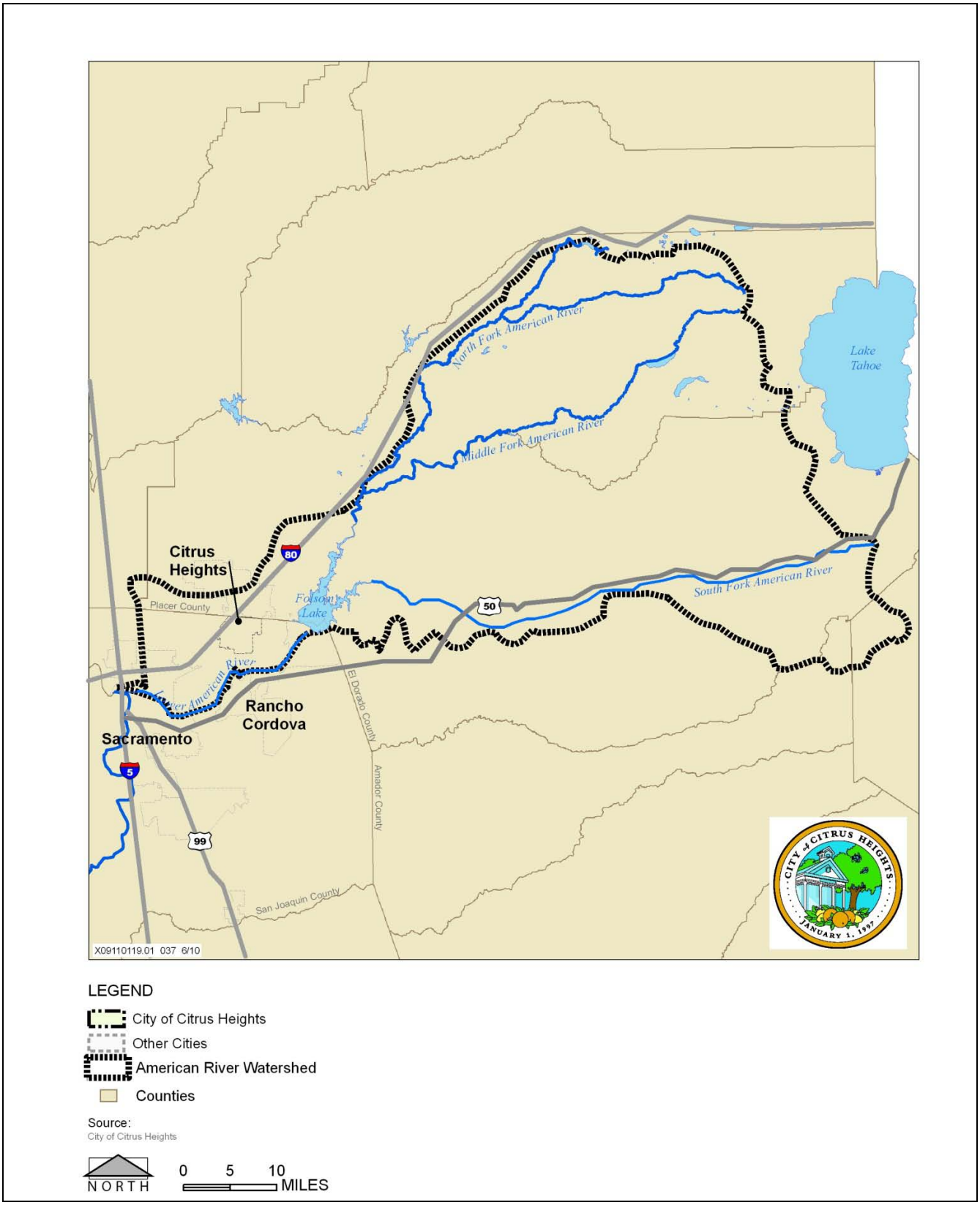
The Sacramento Regional Conservation Corps provides crews to maintain flowage and clean trash and debris within the creeks. From August to March, the crews perform hand clearing of invasive non-native plants and berry bushes as well as remove a variety of debris and trash.

EXISTING CONDITIONS

AMERICAN RIVER WATERSHED

Citrus Heights is located in the western-most portion of the American River Watershed, which contains approximately 2,100 square miles of the western slope of the Sierra Nevada Mountain Range. Rainwater runoff flows out of the Sierra Nevada through numerous small creeks and the three higher forks of the American River, as shown in Figure 6-11. The three forks flow into Folsom Lake just east of Sacramento County, then back out as a single American River, which winds its way through the southern portion of the County before flowing into the Sacramento River to the west.

The County's American River Flood Control System (ARFCS) consists of the Folsom Dam, Nimbus Dam, an auxiliary dam at Mormon Island, eight earth-filled dikes, and four miles of levees on the north bank of the American River. The Folsom Dam is undergoing modifications, a two-fold project, to increase flood protection. According to the Draft Environmental Impact Report (EIR) for the Sacramento County 2030 General Plan, Folsom Dam currently provides approximately 100-year flood protection. After construction to of an auxiliary spillway that will allow greater releases out of the dam during the first parts of a storm, Folsom Dam will provide



American River Watershed Map **Figure 8-12**

200-year protection. Project completion for the auxiliary spillway is estimated in 2015. The second part of the project will raise the existing dikes by 3.5 feet, which will increase the amount of flood storage available to route the flood safely through the dam and downstream levee system. Raising the dikes will increase the protection level from 200-year to 240-year, and is expected to be completed in 2016.

Although located within the American River Drainage Basin, the creeks within Citrus Heights feed into the County's Sacramento River Flood Control System (SRFCS). The SRFCS consists of the Fremont Weir, Sacramento Weir, Yolo Bypass Channel, and levees along the Sacramento River, Lower American River, Natomas East Main Drainage Channel, Arcade Creek, Natomas Cross Channel, and the Sacramento Bypass Channels.

FEMA prepares maps for the NFIP which delineate all areas subject to inundation of more than one foot from a 100-year interval rainfall event. Please refer to Chapter 4, Natural Resources, for floodplain information and maps.

CAPITAL IMPROVEMENT PROJECTS

The Citrus Heights CIP for FY 2010–FY 2014 includes over 40 drainage improvement projects ranging from constructing and replacing storm drain pipes to relocating inlets so that new ADA ramps may be constructed. Table 8-21 lists all drainage capital projects as well as budget estimates for FY 2009/2010, FY 2010/2011, FY 2011/2012, FY 2012/2013 and FY 2013/2014.

Table 8-21
Planned Citywide Drainage Improvements (FY 2009–FY 2014)

Projects for Fiscal Year 09/10	
Cleaning Bridges & Box Culverts: Clean out specified bridges and box culverts and re-align channels to maximize scouring velocities within structures. Project includes rip-rapping channels adjacent to bridges and box culverts.	$10,000
Corrugated Steel Pipe Replacement at Lauppe Lane: Replace existing 54" corrugated steel pipe under the mobile home park with reinforced concrete pipe. Extensive repaving of the mobile home park streets due to construction traffic may be necessary.	$1,200,000
Extension of 18" Storm Drain Pipe on Greenback Lane: Extend an 18" SD pipe to remove a ditch located at the approved Legends Homes project site.	$10,000
Construction of New Storm Drain Pipe on Highland Avenue: Construct new storm pipe system on Highland Avenue near Mariposa Avenue so the street may be widened in the future.	$50,000
Storm Drain Pipe Replacement on Pretty Girl Court: Replace failed system that has severe root intrusion and collapsing pipe.	$30,000
Construction of New Storm Drain Pipe on Cross Drive: Construct new storm pipe system in the location of an open ditch behind the properties on Cross Drive.	$80,000
Construction of New Drainage System on Old Auburn & Mariposa Avenue: Install new drainage system on the southwest corner	$30,000

Table 8-21 Planned Citywide Drainage Improvements (FY 2009–FY 2014)	
Construction of Stock Ranch Erosion Protection: Install rock erosion protection adjacent to the Costco bridge and siltation pond to protect the ponds outfall channel from collapsing.	$25,000
Construction of Undefined Small Drainage Improvements in Citrus Heights: The account pays for unscheduled small improvements such as DIs or short lengths of pipes. This account is for quick turn-around projects that require immediate action.	$30,000
Inlet Relocations for new ADA Ramps: Relocate inlets within intersections so that new ADA ramps may be constructed at the optimal location.	$30,000
Drainage Studies & Designs at Greenback Lane and Sylvan Road: The section of pipe from Greenback Lane to the creek at Sylvan Road is collapsing and needs replacing. A study is needed to determine the size and location of the new pipe.	$50,000
Projects for FY 10/11	
Cleaning Bridges & Box Culverts: Clean out specified bridges and box culverts and re-align channels to maximize scouring velocities within structures. Project includes rip-rapping channels adjacent to bridges and box culverts.	$50,000
Corrugated Steel Pipe Replacement on Sylvan Road: Replace an existing corrugated steel pipe that is collapsing in numerous locations on Sylvan Road, from Greenback Lane to San Juan Avenue. Depending on the study, this system may be a candidate for insitu-form lining.	$1,100,000
Construction of Undefined Small Drainage Improvements in Citrus Heights: The account pays for unscheduled small improvements such as DIs or short lengths of pipes. This account is for quick turnaround projects that require immediate action.	$50,000
Inlet Relocations for new ADA Ramps: Relocates inlets within intersections so that new ADA ramps may be constructed at the optimal location.	$20,000
Drainage Studies & Designs at Birdcage Drive and Macy Plaza (Guinevere Way): The section of drainage system is inadequate.	$30,000
Projects for FY 11/12	
Cleaning Bridges & Box Culverts: Clean out specified bridges and box culverts and re-align channels to maximize scouring velocities within structures. Project includes rip-rapping channels adjacent to bridges and box culverts.	$70,000
Construction of Undefined City Road Improvement Project: This fund will pay for the storm drain improvements programmed within a city street Capital Improvement Project.	$70,000
Construction of Birdcage/Macy Plaza (Guinevere Way): Implement the design to remediate flooding issues.	$200,000
Construction and Replacement of Undefined Corrugated Steel Pipe: Replace an existing corrugated steel pipe that is collapsing in numerous locations.	$100,000
Replacement of Corrugated Steel Pipe at Mariposa Avenue: Replace an existing corrugated steel pipe that is collapsing in numerous locations.	$100,000
Construction of Undefined Storm Drain Pipes: Remove Open Ditches and construct new storm pipe system within the confines of the open ditch area.	$50,000
Construction of Undefined Small Drainage Improvements in Citrus Heights: The account pays for unscheduled small improvements such as DIs or short lengths of pipes. This account is for quick turnaround projects that require immediate action.	$50,000
Inlet Relocations for new ADA Ramps:	$20,000

Table 8-21 Planned Citywide Drainage Improvements (FY 2009–FY 2014)	
Relocates inlets within intersections so that new ADA ramps may be constructed at the optimal location.	
Drainage Studies & Design for Canady Lane: Study how to fix drainage issues in this area.	$30,000
Projects for FY 12/13	
Construction of Access Ramps to Creeks/Channels: Clean out specified bridges and box culverts and re-align channels to maximize scouring velocities within structures. Project includes rip-rapping channels adjacent to bridges and box culverts.	$25,000
Auburn Boulevard Enhancement Project: This fund will pay for the storm drain improvements programmed within a city street Capital Improvement Project.	$300,000
Canady Lane Project: This fund will pay for the storm drain improvements programmed within a city street Capital Improvement Project.	$150,000
Construction of Wing Walls at Various Culverts & Bridges: Designed and constructed to increase flow velocities in culverts and ultimately reduce maintenance costs.	$150,000
Construction of Storm Drain Pipes at Undefined Open Ditch Areas: Construct new storm pipe system within the confines of the open ditch area.	$50,000
Construction of Undefined Small Drainage Improvements in Citrus Heights: The account pays for unscheduled small improvements such as DIs or short lengths of pipes. This account is for quick turnaround projects that require immediate action.	$50,000
Construction of Inlet Relocations for New ADA Ramps: Relocates inlets within intersections so that new ADA ramps may be constructed at the optimal location.	$50,000
Projects for FY 13/14	
Cleaning Bridges & Box Culverts: Construct improved access points to creeks and channels.	$50,000
Construction of Access Ramps to Creeks/Channels: Clean out specified bridges and box culverts and re-align channels to maximize scouring velocities within structures. Project includes rip-rapping channels adjacent to bridges and box culverts.	$20,000
Construction of Undefined City Road Project: This fund will pay for the storm drain improvements programmed within a city street Capital Improvement Project.	$150,000
Construction of Undefined City Drainage Project: This fund will pay for the storm drain improvements programmed within a city street Capital Improvement Project.	$100,000
Construction of Wing Walls at Carious Culverts & Bridges: Designed and constructed to increase flow velocities in culverts and ultimately reduce maintenance costs.	$80,000
Construction of Undefined Corrugated Steel Pipe: Replace an existing corrugated steel pipe that is collapsing in numerous locations.	$100,000
Construction of New Storm Drain Pipe at Undefined Open Ditch Areas: Construct new storm pipe system within the confines of the open ditch area.	$100,000
Construction of Undefined Small Drainage Improvements in Citrus Heights: The account pays for unscheduled small improvements such as DIs or short lengths of pipes. This account is for quick turnaround projects that require immediate action.	$50,000
Inlet Relocations for New ADA Ramps: Relocate inlets within intersections so that new ADA ramps may be constructed at the optimal location.	$50,000

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Acronyms

Residents' Empowerment Association of Citrus Heights (REACH
Citrus Heights Association Number Three (CHANT
Citrus Heights Area Seven and Eight (CHASE
Sylvan Old Auburn Road (SOAR
Occupational Safety and Health Administration (OSHA
Immediately Dangerous to Life and Health (IDLH
self-contained breathing apparatus (SCBA
National Fire Protection Association (NFPA
California Occupational Safety and Health Administration (CalOSHA
Uniform Fire Code (UFC
Sacramento Metropolitan Fire District (SMFD
Sacramento County Sheriff's Department (SCSD
Citrus Heights Police Department (CHPD
Crime Scene Investigations (CSI
Special Weapons and Tactics (SWAT
Advanced Life Support (ALS
Emergency Medical Services (EMS
Fire Insurance (ISO
Fiscal Year (FY
Sunrise Recreation and Park District (SRPD
National Recreation and Park Association (NRPA
No Child Left Behind Act (NCLB Act
adequate yearly progress (AYP
California Department of Education (CDE
San Juan Unified School District (SJUSD
Clean Water Act (CWA
Urban Water Management Plan (UWMP
Senate Bill (SB
Assembly Bill (AB
Water Forum Agreement (WFA
purveyor specific agreements (PSAs
Sacramento County Water Agency (SCWA
Sacramento Municipal Utility District (SMUD
Central Valley Project (CVP
Citrus Heights Water District (CHWD
Sacramento City-County Office of Metropolitan Water Planning (CCOMWP

gallons per person per day (gpcpd)
San Juan Water District (SJWD
Water Treatment Plant (WTP
Sacramento Groundwater Authority (SGA
Regional Water Authority (RWA
gallons per minute (gpm)
Cooperative Transmission Pipeline (CTP
pounds per square inch (psi
United States Bureau of Reclamation (USBR
Best Management Practices (BMPs
Capital Improvement Plan (CIP
California American Water Company (CAW
Citizens Utilities Company of California (CUCC
Lincoln Oaks Service Area (LOSA
million gallons per day (mgd
California Urban Water Conservation Council's (CUWCC
Memorandum of Understanding (MOU
Sacramento Suburban Water District (SSWD
Arcade Water District (AWD
Northridge Water District (NWD
North Service Area (NSA
South Service Area (SSA
Placer County Water Agency (PCWA
million gallons (mg
Antelope Conveyance Pipeline (ACP
San Juan Cooperative Transmission Pipeline (CTP
polyvinyl chloride (PVC
California Department of Health Services (DHS
State Water Resources Control Board (SWRCB
Code of Federal Regulations (CFR
Sacramento Regional County Sanitation District (SRCSD
Sacramento Area Sewer District (SASD
County Sanitation District 1 (CSD-1
Master Interagency Agreement (MIA
Sacramento Regional Wastewater Treatment Plant (SRWTP
Cordova (COR
Folsom Interceptor Trunks (FOI
Northeast Interceptor Trunks (NEI
million gallons per day (mgd
average dry weather flow (ADWF
peak dry weather flow (PDWF
peak hour wet weather flow (PHWWF
Sacramento Area Sewer District (SASD
solids storage basins (SSBs
dedicated land disposal (DLD
Resource Conservation and Recovery Act (RCRA
underground storage tanks (USTs
Hazardous and Solid Waste Amendments (HSWA
Source Reduction and Recycling Element (SSRE
California Integrated Waste Management Board (CIWMB
Household Hazardous Waste Element (HHWE
Non-disposal Facility Element (NDFE

Sacramento County Waste Management and Recycling Division (SCWMRD
Solid Waste Authority (SWA
Alternative Daily Cover (ADC
National Pollutant Discharge Elimination System Permit Program (NPDES
National Flood Insurance Program (NFIP
Federal Emergency Management Agency (FEMA
Intermediate Regional Flood (IRF
Department of Water Resources (DWR
Water Resources Division (WRD
American River Flood Control System (ARFCS
Sacramento River Flood Control System (SRFCS

Citations

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