

# PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



Public facilities and infrastructure represent Riverside's hidden support network. In many cities around the world, people live in settlements without electricity, clean drinking water or adequate sewer systems, and where schools and community and healthcare centers are either nonexistent or not accessible. We take for granted the ability to turn on a light switch, run the washing machine, or visit the emergency room knowing that our infrastructure systems will not fail and public facilities will be available when we are in need.

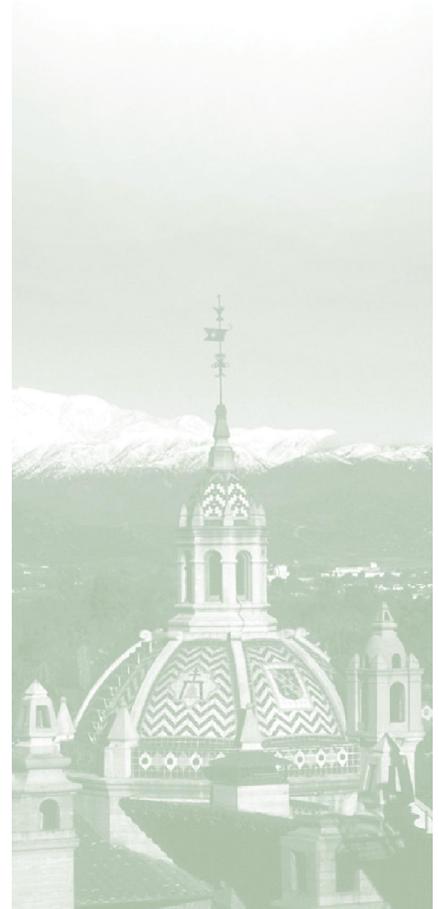
Well-designed and maintained infrastructure systems are critical to a community's economic development goals, and they enhance the quality of neighborhoods. Infrastructure such as sewer and water lines, broadband communication networks and solid waste collection and disposal must be sufficient to accommodate the present and future needs the community. As infrastructure ages or growth outpaces capacity, isolated failures represent a real potential. Providing quality public facilities such as libraries, hospitals and community centers are also of vital importance, as they contribute to the health, education and quality of life for all residents.

This Public Facilities and Infrastructure Element addresses these hidden support systems important to Riverside:

- ❖ Water Service and Supply
- ❖ Wastewater
- ❖ Stormwater Control
- ❖ Solid Waste
- ❖ Electric Power
- ❖ Telecommunications
- ❖ Medical Facilities
- ❖ Community Centers

## WATER SERVICE AND SUPPLY

The City of Riverside established its own water utility, the Riverside Public Utilities Department (RPU), in 1913. As of 2004, RPU provided water service to approximately 62,000 customers. RPU's service area encompasses seventy-four square miles, of which approximately sixty-eight square miles lie within the City limits and the balance within the sphere of influence.





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The well-established water supply system consists of local groundwater wells for domestic water production, irrigation wells, reservoirs and pumping stations.

Approximately 9.85 square miles within southeast Riverside are served by the Western Municipal Water District (WMWD), the Eastern Municipal Water District (EMWD) serves a small one-square-mile area of the City and the Riverside Highland Water Company serves the northern Sphere portion of the Planning Area, approximately 0.25 square miles.<sup>1</sup> (Figure PF-1, Water Service Areas).

### WATER USE

Table PF-1 (RPU Projected Domestic Water Supply), identifies the various sources from which RPU obtains domestic and agricultural water, and indicates the projected volumes available from each source through year 2030. RPU obtains all but a small portion of the water supply from groundwater basins in the area. As of 2003, a small amount of treated imported water was purchased during emergencies and when the groundwater supply does not meet the peak demands during a few hot summer days. As demand grows with the population, RPU anticipates that additional water supplies will result from recycling of treated effluent and from the Seven Oaks Conservation Pool. Recycled water will be utilized for uses such as landscape irrigation to reduce domestic water demand.

TABLE PF-1  
RPU PROJECTED DOMESTIC WATER SUPPLY (AC-FY/yr)

Water Supply Sources	2010	2015	2020	2025	2030
<b>Existing (as of 2005)</b>					
Total Groundwater	72,033	72,033	72,033	72,033	72,033
Imported Water*	3,800	5,300	6,800	8,300	9,800
Recycled Water**	200	200	200	200	200
<b>Planned</b>					
John W. North Water Treatment Plant (Groundwater)	10,000	10,000	10,000	10,000	10,000
Riverside Groundwater- Downtown Area	-	-	7,000	7,000	7,000
Additional Gage Exchange (groundwater)	5,388	5,388	5,388	5,388	5,388
Recycled water	1,000	3,250	5,500	7,750	10,000
Seven Oaks Dam Conservation Storage	2,000	2,000	2,000	2,000	2,000
<b>Total</b>					
Groundwater	87,421	87,421	94,421	94,421	94,421
Purchased (Imported) water	3,800	5,300	6,800	8,300	9,800
Recycled water	1,200	3,450	5,700	7,950	10,200
Seven Oaks Dam***	2,000	2,000	2,000	2,000	2,000
<b>Total</b>	<b>94,421</b>	<b>98,171</b>	<b>108,921</b>	<b>112,671</b>	<b>116,421</b>

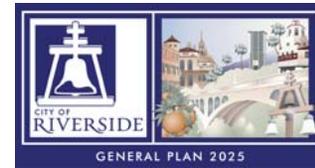
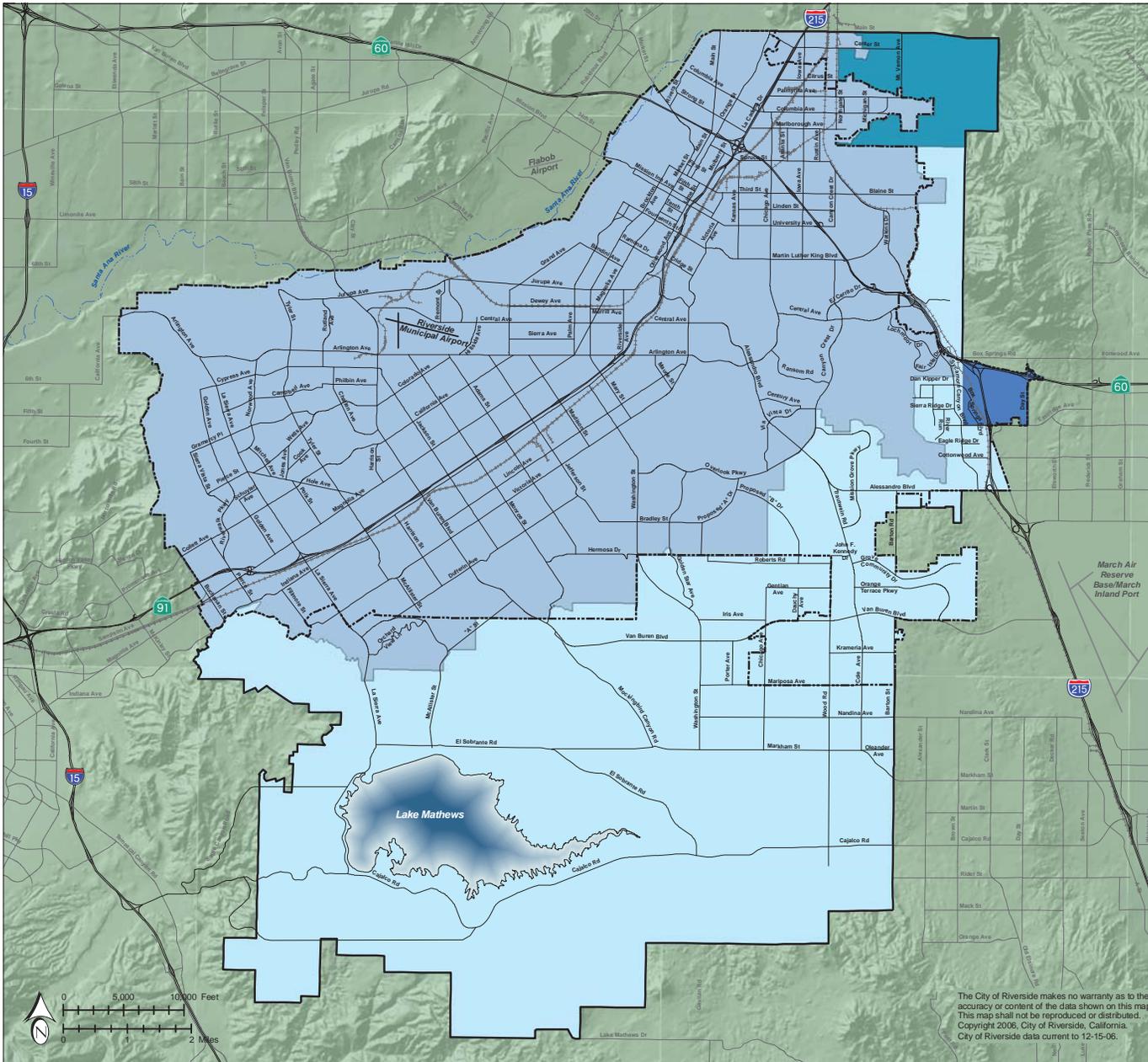
Source: City of Riverside Public Utilities Department. *Urban Water Management Plan, 2005*

\* Imported treated water purchased from WMWD during hot summer days.

\*\* Projection based on *City Draft Initial Study and Recycled Water Master Plan*. Recycled water to replace use of domestic water for landscaped areas.

\*\*\* Anticipated supply from the Seven Oaks Dam Conservation Pool.

<sup>1</sup>City of Riverside, Urban Water Management Plan. 2002.



**LEGEND**

- RIVERSIDE PUBLIC UTILITIES SERVICE AREA
- RIVERSIDE HIGHLAND WATER COMPANY
- EASTERN MUNICIPAL WATER DISTRICT
- WESTERN MUNICIPAL WATER DISTRICT
- RIVERSIDE CITY BOUNDARY
- RIVERSIDE PROPOSED SPHERE OF INFLUENCE

NOTE: THIS MAP IS FOR INFORMATION PURPOSES ONLY. PLEASE REFER TO THE OFFICIAL MAPS ON FILE WITH RIVERSIDE PUBLIC UTILITIES.

SOURCE: CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT, WESTERN MUNICIPAL WATER DISTRICT, EASTERN MUNICIPAL WATER DISTRICT

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Figure PF-1  
**WATER SERVICE AREAS**



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

In 1991, RPU began an exchange program with the Gage Canal Company to augment its domestic supplies. The water exchange program has helped RPU to reduce imported water deliveries. RPU can receive up to sixty-four hundred acre-feet per year of domestic water from Gage in exchange for up to eight thousand acre-feet per year of non-potable irrigation water (ratio of 1.0 to 1.25).<sup>2</sup> Exchange is limited by Gage operations and may be expanded in the future with additional non-potable water introduced higher in the Gage Canal system.

RPU has planned several planned water facilities within specific neighborhood service areas. The planned facilities include:

- ❖ Northside – water treatment plant
- ❖ Hunter Industrial Park - water treatment plant and booster pumping station
- ❖ University – water storage reservoir
- ❖ La Sierra Acres – booster pumping station
- ❖ La Sierra Hills – water storage reservoir
- ❖ La Sierra – water storage reservoir and booster pumping station
- ❖ Arlington Heights – two booster pumping stations and a water storage reservoir
- ❖ Alessandro Heights – two water storage reservoir and booster pumping stations
- ❖ Canyon Crest – water storage reservoir and booster pumping station

Since 1992, Riverside has also been delivering domestic supplies to WMWD and may continue the delivery in the future, provided an adequate water supply is available. The future domestic water delivery to WMWD is assumed to remain at about four thousand acre-feet per year.

For an up-to-date inventory of existing and planned RPU water facilities, readers should consult RPU's current water system master plan.

As part of its long-range planning efforts, RPU has projected water demand through year 2030 (Table PF-2, RPU Projected Water Demand). Existing and future users, including WMWD, are projected to demand almost one hundred five thousand acre-feet per year by 2030, which is within the supply parameters indicated in Table PF-1 (RPU Projected domestic Water Supply (AC-FT/YR)). To address long-term needs for supply, storage and delivery, RPU periodically updates its water system master plan.

<sup>2</sup>An acre-foot of water equals 325,851 gallons, or the approximate amount of water that a family of five uses in a year.

# PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



TABLE PF-2  
RPU PROJECTED WATER DEMAND

WATER USE SECTOR	2010	2015	2020	2025	2030
RESIDENTIAL	48,019	50,071	51,545	52,538	53,856
COMMERCIAL	13,188	13,752	14,157	14,430	14,792
INDUSTRIAL	12,152	12,672	13,046	13,297	13,630
AGRICULTURE	1,348	1,406	1,447	1,475	1,512
OTHER	456	476	490	499	512
SALE TO HOME GARDENS COUNTY WATER DISTRICT	540	540	540	540	540
UNACCOUNTED FOR WATER*	8,327	8,681	8,935	9,106	9,333
SUBTOTAL DOMESTIC DEMAND	84,031	87,598	90,158	91,885	94,174
RECYCLED WATER	1,200	3,450	5,700	7,950	10,200
TOTAL	85,231	91,048	95,858	99,835	104,374

SOURCE: CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT. *URBAN WATER MANAGEMENT PLAN, 2005*

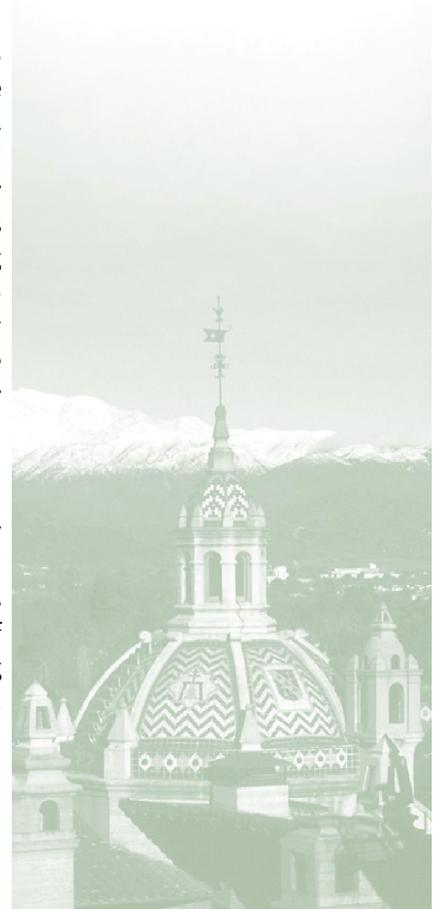
NOTE: DOMESTIC USES ASSUMED TO INCREASE 1% PER YEAR.

\* UNMETERED WATER USED FOR CONSTRUCTION, MAINTENANCE AND WELL OPERATIONS.

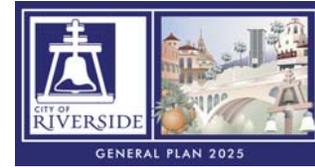
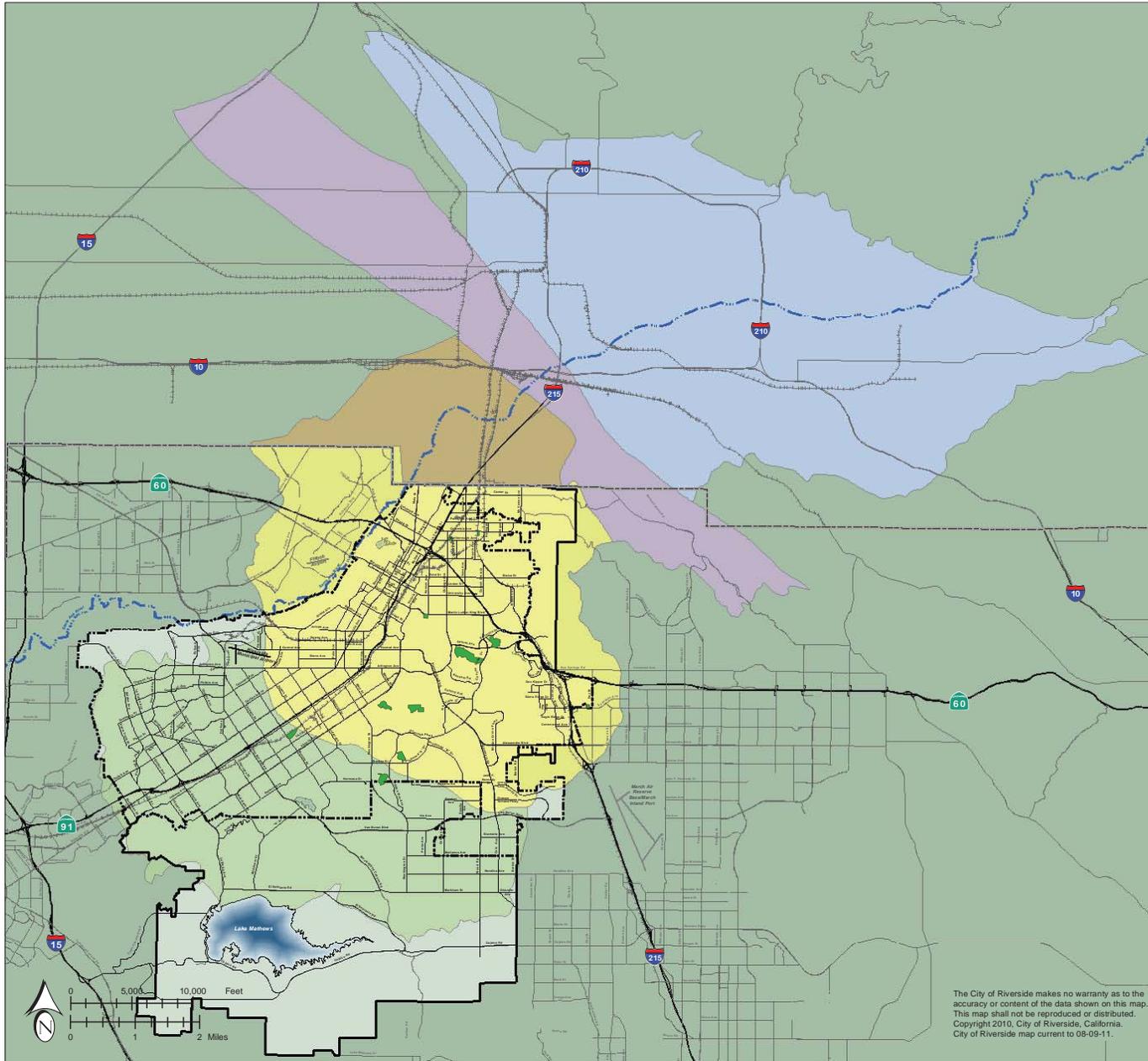
## WATER QUALITY

The sources of Riverside’s drinking water include groundwater basins and the rivers, streams, ponds and springs that replenish them (Figure PF-1.1, Waterbasins Groundwater Recharge Areas and Figure OS-8.1, Rivers, Creeks, and Streams). All of these water sources are exposed to elements that have potential to contaminate them. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or human activity. To ensure that tap water is safe to drink, the Federal Environmental Protection Agency and California Department of Health Services Department prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

The water supplied by RPU consistently meets or exceeds State and Federal water regulations and guidelines. RPU staff diligently monitors the quality of the water supply and complies with State and Federal regulatory activity requirements. Typically, the City collects over ten thousand water samples per year to test for a variety of contaminants. Samples are collected at water sources, along transmission pipelines and throughout the distribution systems, including reservoirs and boosting stations. Tests are performed by an independent laboratory.<sup>3</sup>



<sup>3</sup>City of Riverside Public Utilities. Water Quality Report. 2002.



**LEGEND**

- RIVERSIDE COUNTY FLOOD CONTROL FACILITIES
- BUNKER HILL WATERBASIN
- RIALTO-COLTON WATERBASIN
- RIVERSIDE NORTH WATERBASIN
- RIVERSIDE SOUTH WATERBASIN
- ARLINGTON WATERBASIN
- SANTA ANA RIVER
- RIVERSIDE / SAN BERNARDINO COUNTY BOUNDARY
- RIVERSIDE CITY LIMITS
- RIVERSIDE SPHERE OF INFLUENCE

SOURCE: CITY OF RIVERSIDE, RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (2010)

Figure PF 1.1  
**WATERBASINS  
GROUNDWATER  
RECHARGE AREAS**

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In August of 2000, RPU completed a study that assessed vulnerability of the drinking wells located in the upper Riverside Basin. The study indicated that sources of possible contaminants include septic systems, composting activities and business practices. As a result, a protection plan addressing septic systems was developed. As of 2002, the Riverside City Council stopped permitting additional septic systems in this sensitive area.

In 2002, an assessment of wells in the Bunker Hill Basin was completed. The contamination plumes include trichloroethylene (TCE), dibromochloropropane (DBCP) and perchlorate plumes.<sup>4</sup> DBCP contamination is primarily related to herbicide use in orange groves. These contaminants are being mitigated through water treatment and other methods.

## TREATMENT PLANTS

RPU operates five treatment plants that remove TCE, perchlorate and DBCP contaminants. RPU also operates chlorination stations that use chlorine gas or sodium hypochlorite to kill harmful bacteria.

## WATER CONSERVATION PROGRAMS

While local water supplies appear abundant, the City recognizes the importance of water conservation and has implemented conservation incentive and education and outreach programs to ensure residents and the business community view and value water as a precious resource. In 2004, the RPU implemented a one percent water conservation and reclamation surcharge to water rates. This surcharge will be used to support water conservation, research, education and efficiency programs, as well as to provide water service programs for low-income customers.

### **Clothes Washer Rebate Program**

RPU customers who receive both electric and water services are eligible for cash rebates toward a new water- and energy- saving clothes washer.

### **Kathleen M. Gonzales Memorial Water-Wise Garden**

In 2007, the City opened the Kathleen M. Gonzales Water-Wise Garden in the Casa Blanca neighborhood. This garden will educate customers in water conservation and provide a park-like setting for the community. The main goal of the Water-Wise Garden is to

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<sup>4</sup>Ibid.

A large, semi-transparent background image of a building with a prominent dome and spire, likely a cathedral or church, set against a light sky. The image is faded and serves as a background for the text box.

See the Open Space and Conservation Element for a discussion on water conservation programs.



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provide water-saving ideas that customers can incorporate into landscape design and gardening practices in their own homes. It is intended to be an educational exhibit, displaying plants that can be locally purchased and examples of water saving techniques. The garden will also include space for various community presentations and artwork.

### **Residential Ultra-Low-Flush Toilet Water Conservation Incentive Rebate Program**

The Ultra Low-Flush Toilet Rebate is a water conservation incentive program that offers residential water customers a chance to replace their existing high-water-use toilet fixtures for water-saving ultra-low-flush toilets. Rebates of up to \$55 are provided for each ultra-low-flush toilet installed that uses 1.6 gallons of water or less per flush.

### **Artificial Turf at Utilities Plaza**

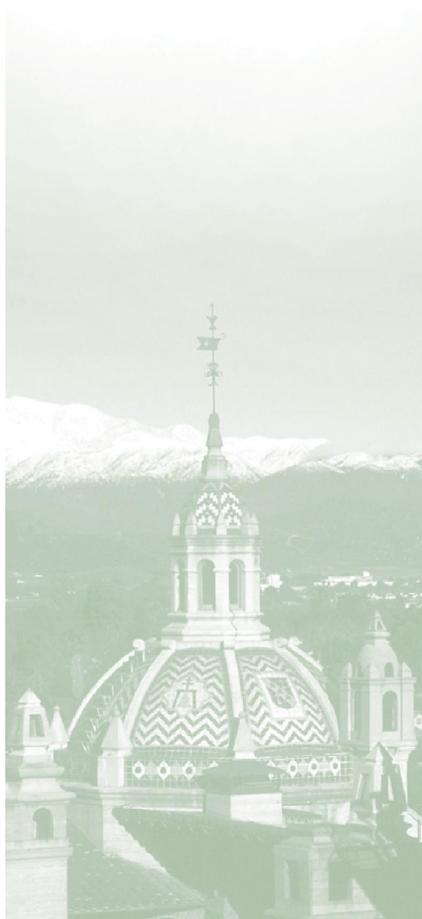
The Utilities installed the waterless grass called "Field Turf" under a project that was funded by Riverside Public Utilities' water reclamation and conservation surcharge. The demonstration project shows how waterless grass can be used to keep high traffic areas green, while reducing the cost of maintenance in such areas.

### **Energy and Water School Education Program**

For almost twenty years, Riverside Public Utilities has provided educational support to approximately one hundred schools in the area, including most schools in the Riverside and Alvord Unified School Districts and many private schools. In 2001-2002, close to thirty-five hundred students were active participants in the RPU educational program and over forty-four thousand individuals received educational materials which were distributed to schools and community groups. Water education programs include:

#### ❖ Water Theater Program

Schools are selected on a rotating basis to receive a professional theater performance of the "Adventures of the California Hydroforce" which takes a lighthearted look at water conservation. More than one million students and teachers have seen the show, which received the National Freedom's Foundation award for community service in 1986. It was also featured in the 1993 television special produced by National Geographic entitled "The Power of Water".





❖ Mini-Grant Program

Every elementary teacher and middle and high school science teacher has the opportunity to apply to win a water education mini-grant for up to \$500 in funding for classroom projects related to water. In 2001-2002, five teachers within the RPU service area received a total of \$1,726 for projects ranging from water management in school garden settings to water quality testing.

❖ Book Donation Program

Books, CD-ROMs and videos on water-related topics are distributed to school within Riverside. Each year a different grade level is targeted to receive the donation.

## WATER RECYCLING

The City owns and operates the Riverside Water Quality Control Plant (RWQCP), a sewage treatment plant that as of 2006, treated thirty million gallons a day. The plant discharges tertiary-treated effluent to the Santa Ana River, but RPU diverts some of the effluent as recycled water for irrigation of a golf course. As noted in the Open Space and Conservation Element, the cost of groundwater sources historically has been relatively low, creating economic disincentives for expanded use of recycled water. However, as part of its long-term view, the RPU continually monitors and studies the feasibility of expanding the use of recycled water. Recycled water could replace domestic water currently used for golf courses and parks and would thereby reduce the use of groundwater resources. RPU anticipates using approximately two thousand acre-feet per year of recycled water by 2005, with preliminary projection of an additional twenty-nine thousand acre-feet per year in the future.<sup>5</sup>

On June 26, 2007, the City adopted the Recycled Water Program that included adoption of the Recycled Water Phase I Feasibility Study and Citywide Master Plan, implementation of near-term and long-term projects to provide recycled water from the City's Regional Water Quality Control Plant, and approval by the State Water Resources Control Board of the City's water rights application and wastewater change petition for reducing permitted discharge to the Santa Ana River by 11,000 acre feet per year (afy) in connection with the Program.

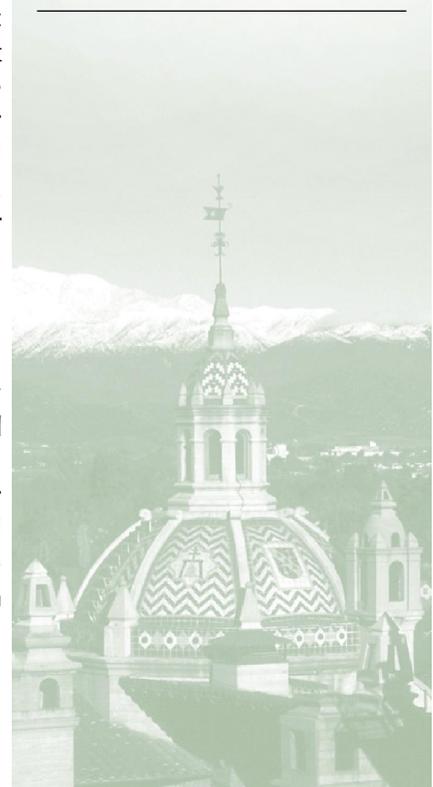
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See Air Quality Element under Sustainable Riverside and Global Warming for additional policies relating to water resources.

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<sup>5</sup>City of Riverside Public Utilities. Comment by Kevin S. Milligan 04/28/04





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

### WESTERN MUNICIPAL WATER DISTRICT

The Western Municipal Water District, or WMWD, was formed by the voters in 1954 to bring supplemental water to growing western Riverside County. As of 2004, WMWD served more than 18,000 domestic retail customers, 260 retail agricultural customers, 181 commercial customers, 172 other users and nine wholesale customers with water from the Colorado River, the State Water Project and the City of Riverside.<sup>6</sup>

As a member agency of the Metropolitan Water District of Southern California, WMWD provides supplemental water to the cities of Corona, Norco and Riverside and the water agencies of Elsinore Valley and Rancho California. The service area covers a five-hundred-ten-square-mile area of western Riverside County and sells approximately ninety thousand acre-feet of water annually.<sup>7</sup>

As of 2005, WMWD had a water supply of 108,162 acre-feet/year from various sources (Table PF-3 – Western Municipal Water District Projected Domestic Water Supply (AC-FT/YR)). WMWD’s primary source of water is the Metropolitan Water District, with a seasonally low demand secondary supply provided by the City of Riverside.

TABLE PF 3  
WESTERN MUNICIPAL WATER DISTRICT  
PROJECTED DOMESTIC WATER SUPPLY (AC-FT/YR)

Water Supply Sources	2005	2010	2015	2020	2025	2030
MWD-Retail Service Area	26,688	31,007	35,726	41,278	47,809	55,491
MWD-Western Wholesale Service	78,024	88,902	101,146	111,837	123,784	134,028
Riverside/Corona Feeder (Potential as needed source)	-	-	10,000	40,000	40,000	40,000
Agricultural Water Purchase	3,000	6,000	6,000	6,000	6,000	6,000
Recycled Water - March WWRF	450	2,680	3,850	4,430	5,210	6,130
<b>Total (acre feet/year)</b>	<b>108,162</b>	<b>128,589</b>	<b>156,722</b>	<b>203,545</b>	<b>222,803</b>	<b>241,649</b>

Source: Western Municipal Water District *Urban Water Management Plan*. 2005.  
Notes: USBR- US Bureau of Reclamation. DWR: Department of Water Resources

The Riverside/Corona Feeder project will capture and store new water in wet years in order to increase water supplies, reduce water costs and improve water quality. Water supplies are expected to increase to 114,641 acre-feet/year by 2025.

<sup>6</sup>Western Municipal Water District. *Urban Water Management Plan*. 2000

<sup>7</sup>Western Municipal Water District. Construction and Operations Report, April 2004

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By year 2025, WMWD’s projected water demand from water retailers is expected to be 47,261 acre feet/year (Table PF-4, Current and Projected Water Use), with 172,792 acre-feet/year available for wholesale water usage.

TABLE PF-4  
WMWD CURRENT AND PROJECTED WATER USE

Water Use Sectors	2000	2005	2010	2015	2020	2025	2030
Residential	12,406	17,518	20,887	24,568	28,898	33,992	39,983
Commercial	756	1,890	2,254	2,651	3,118	3,668	4,314
Industrial	407	720	858	1,009	1,187	1,396	1,643
Institutional and Governmental	543	578	689	810	953	1,121	1,319
Landscape	1,032	1,472	1,755	2,065	2,429	2,857	3,360
Agriculture	8,049	4,227	4,227	4,227	4,227	4,227	4,227
<b>Total</b>	<b>23,193</b>	<b>26,405</b>	<b>30,670</b>	<b>35,330</b>	<b>40,812</b>	<b>47,261</b>	<b>54,846</b>
Sales to Other Agencies	72,120	78,024	88,902	101,146	111,837	123,784	134,028
Additional Water Uses							
Unaccounted for system loss	6	1,415	1,690	1,980	2,330	2,750	3,230

Source: Western Municipal Water District. *Urban Water Management Plan*. 2005.

Water delivered to Western Municipal Water District customers consistently meets or exceeds State and Federal drinking water requirements. WMWD staff work with the Metropolitan Water District of Southern California, the California State Department of Health Services and independent certified testing laboratories to continuously monitor the quality of the water supplies.

An assessment of the drinking water sources for the City of Riverside (Mockingbird) was completed in 2000 for the North Orange Well Field. Results indicated that wells in the North Orange area are most vulnerable to contamination from septic systems.<sup>8</sup> However, as noted above, the City adopted an ordinance preventing installation of new septic systems in the area.

Like Riverside Public Utilities, WMWD sponsors programs and brochures on water conservation and education for individual users.



In 2003, the Riverside Public Utilities Department provided water services to over 58,000 water service connections within



<sup>8</sup>Western Municipal Water District. 2000 Water Quality Report.



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### Western's Landscapes Southern California Style <sup>SM</sup>

In 1989, WMWD, in conjunction with the UC Cooperative Extension, opened Landscapes Southern California Style<sup>SM</sup>. This unique one-acre conservation garden includes more than two hundred species of plants. Visitors to the garden can see the plant materials, layouts and irrigation systems that contribute to water efficiency. The garden has approximately thirteen thousand visitors annually.

### Water Education for Life

Since 1982, WMWD has provided regional water education programs to public and private schools in Riverside County. Materials, speakers, lesson plans and theater programs are provided at no cost. Students learn about where water comes from, water conservation, how water is used and water reclamation.

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See also Air Quality Element. for additional discussion regarding water resources.

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### High-Efficiency Clothes Washer Rebate Program

This program offers a cash rebate to Western retail customers who purchase an eligible clothes washer.

### Ultra-Low-Flush Toilet Rebate Program

This program provides a credit on the water bill of up to \$75 to customers who replace their old, non-conserving toilets with newer, ultra-low-flush toilets.

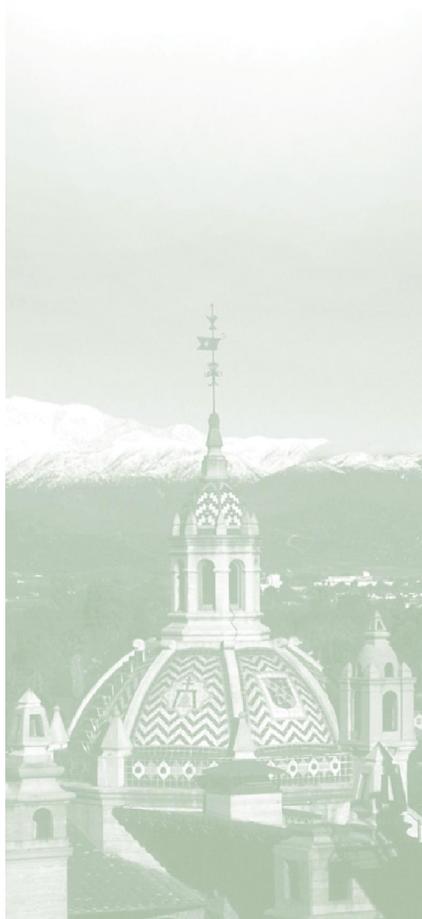
#### **Objective PF-1: Provide superior water service to customers.**

Policy PF-1.1: Coordinate the demands of new development with the capacity of the water system.

Policy PF-1.2: Support the efforts of the Riverside Public Utilities Department, Eastern Municipal Water District and Western Municipal Water District to work together for coordination of water services.

Policy PF-1.3: Continue to require that new development fund fair-share costs associated with the provision of water service.

Policy PF-1.4: Ensure the provision of water services consistent with the growth planned for the General Plan area, including the Sphere of Influence, working with other providers.



# PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



Policy PF-1.5: Implement water conservation programs aimed at reducing demands from new and existing development.

Policy PF-1.6: Examine creating a “gray water” ordinance which would provide incentives for new residential development construct a gray water reclamation system. This system would keep water re-circulating in the home before going into sewage system.

Policy PF-1.7: Protect local groundwater resources from localized and regional contamination sources such as septic tanks, underground storage tanks, industrial businesses and urban runoff.

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See also Objective OS-10 in the Open Space and Conservation Element.

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**Objective PF-2: Find new and expanded uses for recycled wastewater.**

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See also Policy PF-3.3 in this Element concerning waste water collection systems.

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Policy PF-2.1: Expand the use of reclaimed water for irrigation and other applications.

Policy PF-2.2: Continue to monitor and study the costs of extending recycled water service to developing areas for accepted applications.

## WASTEWATER

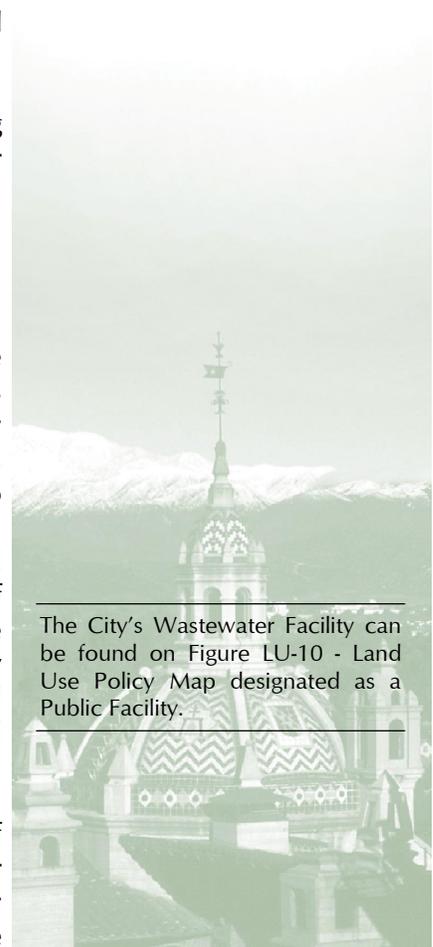
The Riverside Public Works Department operates a comprehensive wastewater collection, treatment and disposal system that serves most of the City, as well as portions of the sphere area and, under contract, the unincorporated communities served by the Jurupa, Rubidoux and Edgemont Community Services Districts. RPU also serves the unincorporated community of Highgrove through an agreement with the County of Riverside. The Western Municipal Water District is responsible for collection and treatment of wastewater flows only in a small portion of the City. Historically, the City’s Public Works Department and WMWD have cooperatively determined which agency can best serve an area with water and wastewater services. This arrangement has led to a mixing and matching of service providers.

The City’s wastewater collection system includes over 102.7 miles of gravity sewers and 18 wastewater pump stations (Figure PF-2, Sewer Facilities Map). Treatment occurs at the Riverside Regional Water Quality Treatment Plant which, in 2005, treated almost thirty-three

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The City’s Wastewater Facility can be found on Figure LU-10 - Land Use Policy Map designated as a Public Facility.

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## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

million gallons of sewage per day for two hundred eighty thousand residents of Riverside and other served communities.<sup>9</sup> A team of one hundred people operates the plant twenty-four hours a day every day of the year.

### RIVERSIDE REGIONAL WATER QUALITY TREATMENT PLANT

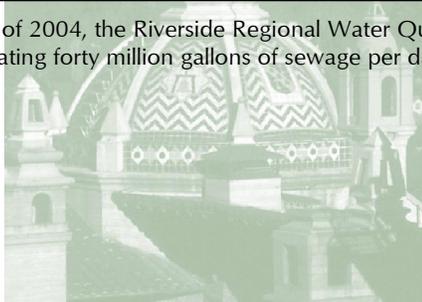
At the Riverside Regional Water Quality Treatment Plant, a limited volume of effluent is reclaimed for beneficial reuse and the remainder of the tertiary-treated effluent is discharged into the Santa Ana River. In 2005, the plant had a capacity of forty million gallons per day, with capacity anticipated to be reached not before 2025. A planned expansion will allow the facility ultimately to treat 52.2 million gallons of wastewater per day. The plant provides full tertiary treatment for all flows.

Tertiary treatment is the final step in wastewater treatment process. Wastewater is passed through a filter to remove viruses and minute suspended particles and chlorine is injected into the wastewater to disinfect bacteria. The final water product is then dechlorinated to protect the habitat in the receiving Santa Ana River.

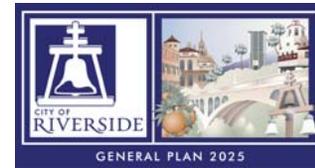
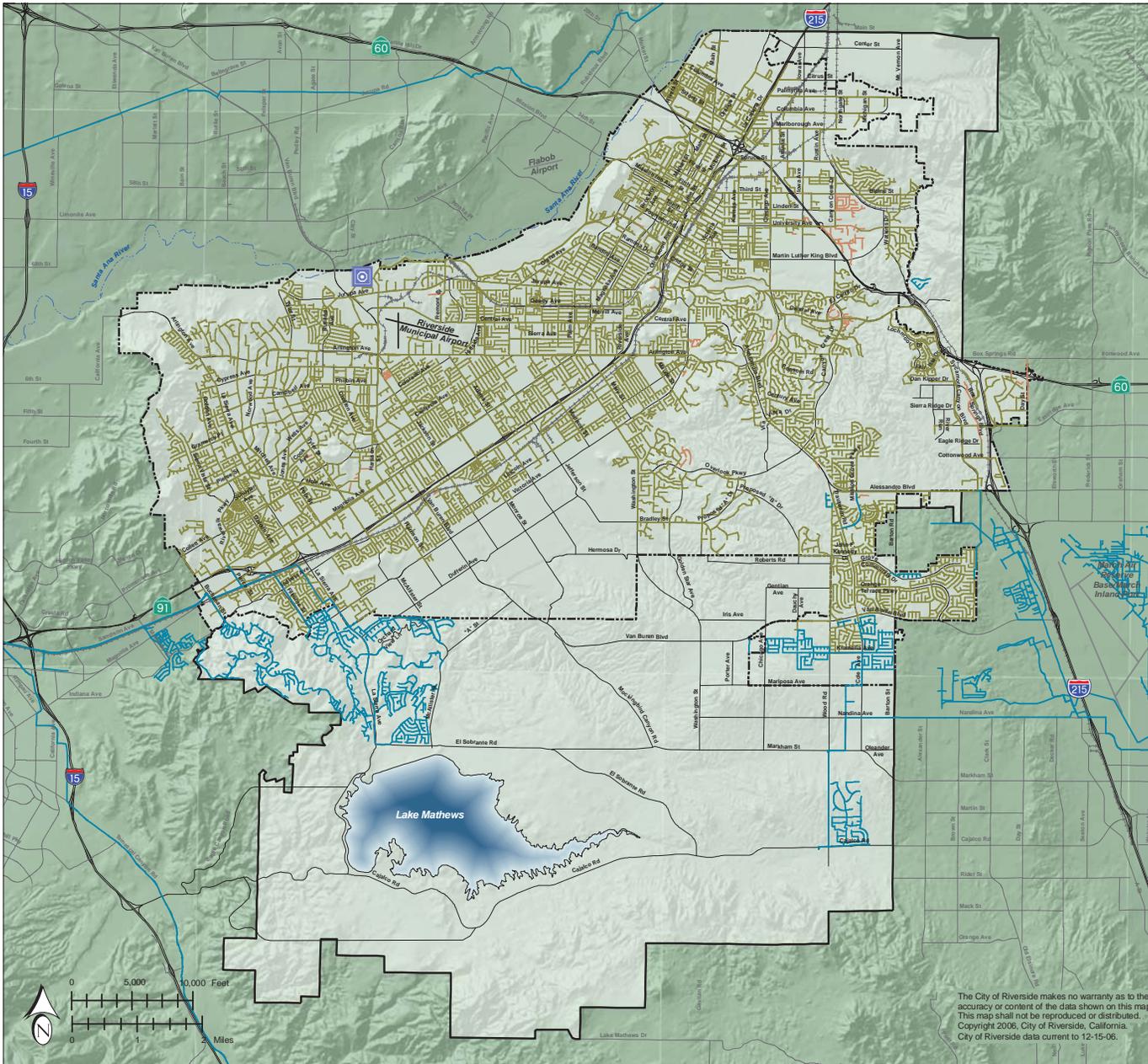


The City has adequate planned capacity to meet the wastewater treatment needs of all future Riverside residents and businesses. Policies therefore focus on ensuring timely provision of wastewater collection facilities and maximizing beneficial reuse of treated effluent.

As of 2004, the Riverside Regional Water Quality Treatment Plant had a capacity of treating forty million gallons of sewage per day.



<sup>9</sup>John Claus, Riverside Wastewater Operations Manager (formally employed). 2004.



**LEGEND**

-  WATER QUALITY CONTROL PLANT
-  RIVERSIDE PUBLIC WORKS DEPARTMENT SEWER LINE
-  OTHER SEWER LINE IN CITY
-  WESTERN MUNICIPAL WATER DISTRICT SEWER LINE
-  RIVERSIDE CITY BOUNDARY
-  RIVERSIDE PROPOSED SPHERE OF INFLUENCE

NOTE: THIS MAP IS FOR INFORMATION PURPOSES ONLY. PLEASE REFER TO THE OFFICIAL MAPS ON FILE WITH RIVERSIDE PUBLIC WORKS.

SOURCE: CITY OF RIVERSIDE PUBLIC WORKS DEPARTMENT AND WESTERN MUNICIPAL WATER DISTRICT

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Figure PF-2  
**SEWER FACILITIES MAP**



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

### **Objective PF-3: Maintain sufficient levels of wastewater service throughout the community.**

- Policy PF-3.1: Coordinate the demands of new development with the capacity of the wastewater system.
- Policy PF-3.2: Continue to require that new development fund fair-share costs associated with the provision of wastewater service.
- Policy PF-3.3: Pursue improvements and upgrades to the City’s wastewater collection facilities consistent with current master plans and the City’s Capital Improvement Program.
- Policy PF-3.4: Continue to investigate and carry out cost-effective methods for reducing stormwater flows into the wastewater system and the Santa Ana River.

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See also Objectives and Policies regarding recycled water under Objective PF-2.

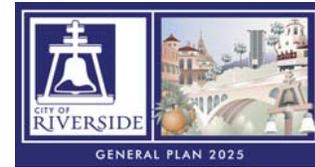
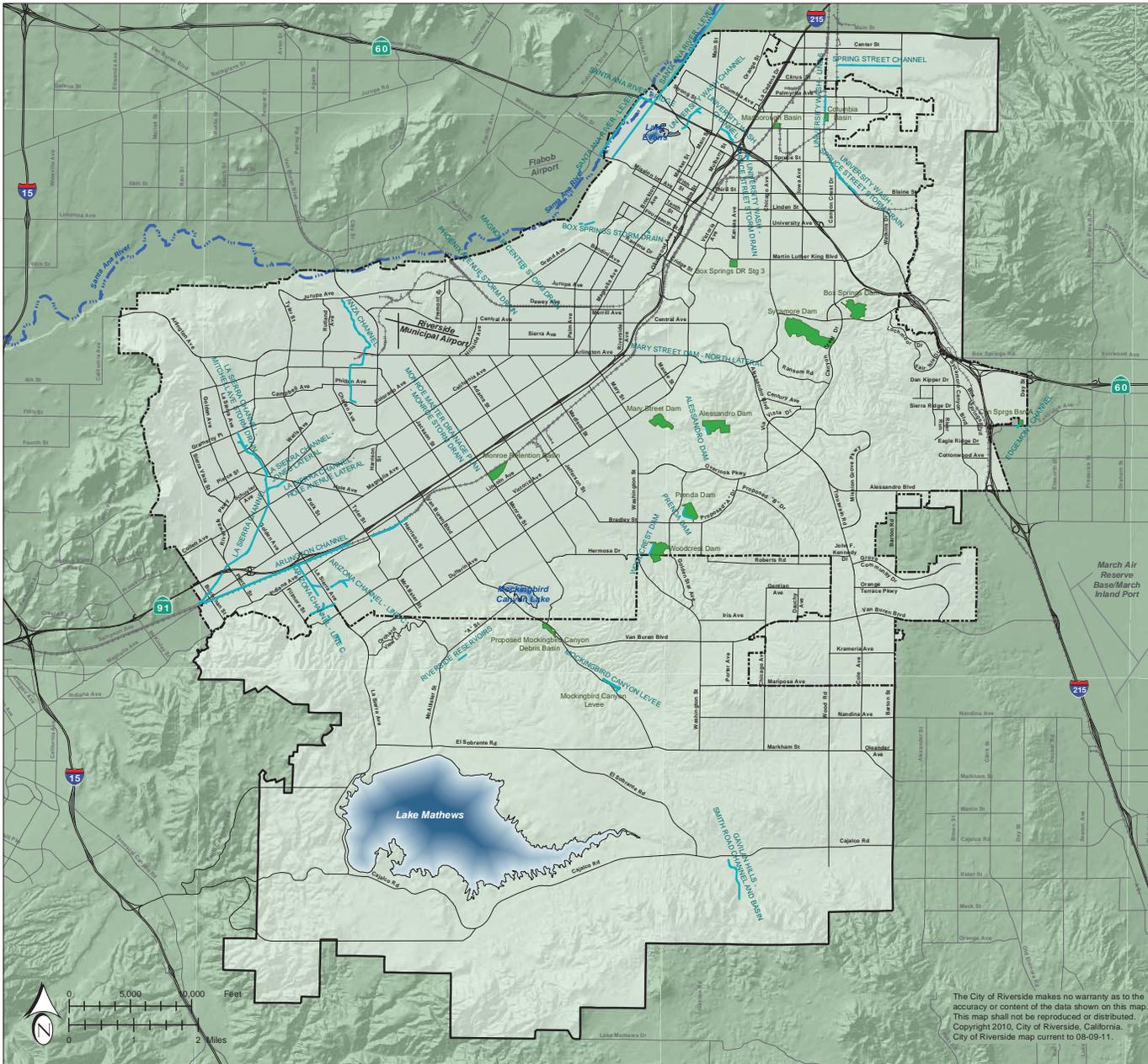
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## STORMWATER CONTROL

Stormwater is rainwater plus anything the rain carries along with it. In urban areas, rain that falls on roofs or collects on paved areas is carried away through a system of gutters, pipes and culverts. Stormwater runoff flows directly into the City’s storm drain system via street gutters and other inlets and this flow in turn discharges into the Santa Ana River flood control channel built and maintained by the U.S. Army Corps of Engineers.

The Santa Ana River drains a watershed of over twenty-six hundred square miles which includes much of Orange County, the northwestern corner of Riverside County, the southwestern corner of San Bernardino County and a small portion of Los Angeles County. Eleven principal drainage basins in Riverside feed the river, including University, Box Springs, Central Riverside, Monroe, La Sierra, Southwest Riverside, Home Gardens, Moreno Valley West End, Norco, Perris Valley and Mead Valley. Ten of these basins discharge directly into the Santa Ana River. There is a small portion of the eastern edge of the Orangecrest Neighborhood, in the Perris Valley drainage area, that is located in the San Jacinto Watershed, instead of the Santa Ana River Watershed. Figure OS-9, Watersheds depicts the boundary between the Santa Ana Watershed and San Jacinto Watershed. Figure PF-2.1, Stormwater Management Areas, depicts existing stormwater facilities that are maintained and operated by the Riverside County Flood Control and Water Conservation District.

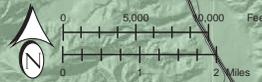




**LEGEND**

- RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT FACILITIES
- RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT ABOVE GROUND FACILITIES
- SANTA ANA RIVER
- RIVERSIDE CITY LIMITS
- RIVERSIDE SPHERE OF INFLUENCE

SOURCE: RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



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Figure PF 2.1  
**STORMWATER  
MANAGEMENT AREAS**



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

From San Bernardino to Riverside, the Santa Ana River flows perennially, primarily due to treated discharges from wastewater treatment plants. The river then flows into the Orange County Coastal Plain and then on into the Pacific Ocean. The Santa Ana River watershed is managed by the Santa Ana Watershed Project Authority (SAWPA).

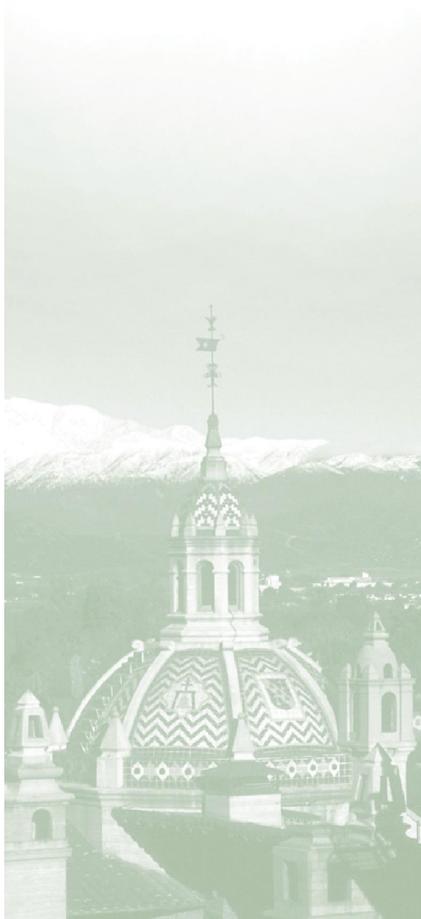
SAWPA was first formed in 1968 as a planning agency and reformed in 1972 with a mission to plan and build facilities to protect the water quality of the Santa Ana River Watershed. SAWPA is a Joint Powers Authority, classified as a Special District. In Riverside, SAWPA’s water lines and wells are located between Tyler and Pierce streets. The SAWPA desalting facility is located adjacent to the Magnolia/91 freeway overpass.

From a planning standpoint, the two important considerations to focus on regarding storm drains are: 1) ensuring adequate capacity to collect and carry stormwater and thereby avoid flooding, and 2) working to reduce pollutant loads in storm water as part of regional efforts to improve water quality in surface waters. The flood protection aspects of stormwater control are addressed in the Public Safety Element, beginning on page PS-10.

### STORMWATER POLLUTANTS

As rainwater flows down a gutter or culvert, the trash, litter, silt, automotive chemicals (oils, grease, antifreeze and fine dust from tire wear) animal wastes and many other contaminants it picks up are washed into the storm drain system. Since storm drains are designed to carry only stormwater, these drains typically are not equipped with filters or cleaning systems and consequently, deliver polluted urban runoff directly into local flood control channels and eventually into the ocean. Many of the pollutants found in this runoff are toxic to fish, marine mammals and other aquatic life.

The Federal Water Pollution Control Act prohibits the discharge of any pollutant to navigable waters from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the passage of the Water Quality Control Act established NPDES permit requirements for discharges of storm water. The NPDES permit program controls water pollution by regulation point sources that discharge pollutant into waters of the United States. Since 1990, operators of stormwater systems have been required to develop a stormwater management program designed to prevent harmful pollutants from being washed away by storm water runoff and discharged into local water bodies.



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



In most states, including California, a state agency administers the NPDES permitting program, rather than the EPA. In California, nine Regional Water Quality Control Boards administer the program. Portions of Riverside County fall under the jurisdiction of three of these Boards: the Santa Ana, the San Diego and the Colorado River Basin Regional Water Quality Control Boards. The City of Riverside lies wholly within the Santa Ana region.

Recognizing that this regulation would affect them all, the City of Riverside, the Riverside County Flood Control and Water Conservation District, other cities in Riverside County (excluding Blythe) and the Coachella Valley Water District joined forces to apply for joint NPDES municipal permits, rather than separate ones. This has allowed the "co-permittees" to share resources, eliminate duplicate efforts and minimize program costs to the public.

Given that much of Riverside's urban runoff – and agricultural runoff as well – discharges into the Santa Ana River, and given that a key City objective is to protect the quality of this resource, the City has established strong policies regarding stormwater quality. These policies work in tandem with the flood control policies contained in the Public Safety Element under Objective PS-2.

**Objective PF-4: Provide sufficient levels of storm drainage service to protect the community from flood hazards and minimize the discharge of materials into the storm drain system that are toxic or which would obstruct flows.**

Policy PF-4.1: Continue to fund and undertake storm drain improvement projects as identified in the City of Riverside Capital Improvement Plan.

Policy PF-4.2: Continue to cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.

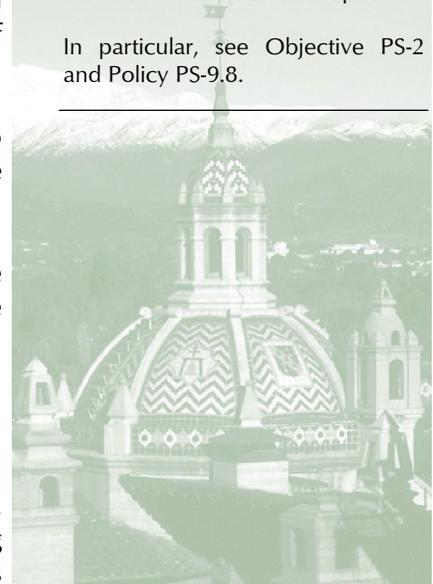
Policy PF-4.3: Continue to routinely monitor and evaluate the effectiveness of the storm drain system and make adjustments as needed.

## SOLID WASTE

Nearly everything we do leaves behind some kind of waste. Households create ordinary garbage, industrial and manufacturing processes create solid and hazardous waste and construction activities

See the Public Safety Element for more information on this topic.

In particular, see Objective PS-2 and Policy PS-9.8.





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

leaves behind large chunks of debris and inorganic materials. Approximately two hundred twenty million tons of solid waste is generated in the United States each year. This translates into an average of almost four and one-half pounds of solid waste produced per person per day.<sup>10</sup>

By actively recycling, reducing and reusing waste, we reduce the need for new landfills and incinerators, prevent the emissions of many greenhouse gases and water pollutants, supply valuable raw materials to industry and conserve land and resources for future generations.

Riverside has earned the distinction of being a “Model City for Local Government Recycling and Waste Reduction”.<sup>11</sup> Prior to the passage of the California Integrated Waste Management Act in 1989, Riverside had no municipally sponsored recycling program. After passage of the Act, Riverside became extremely proactive in the recycling and reduction of solid waste. Riverside met the Act's requirement of diverting fifty percent of solid waste from landfills by the year 2000 five years early. As of 2004, Riverside boasted a diversion rate of sixty percent.

The Riverside Public Works Department collects trash from seventy percent of all households. Excessive waste generation is discouraged by charging additional costs if a second trash container is required. The remaining portion of the City is collected by a private contractor. The private collector services approximately twenty thousand customers in the La Sierra, University and Orangecrest neighborhoods.<sup>12</sup>

All solid waste collected is tipped at the Robert A. Nelson Transfer Station, which is owned by the County of Riverside. The waste is then transferred to either the Badlands Landfill in Moreno Valley, the El Sobrante Landfill located east of Interstate 15 south of the City of Corona or the Lamb Canyon Landfill located between the City of Beaumont and the City of San Jacinto for disposal.<sup>13</sup>

As of June 2007, the El Sobrante Landfill had a remaining capacity of 36.89 million tons in-county (109 million tons total), translating into a remaining life of approximately fifteen years. The Badlands Landfill has an overall remaining disposal capacity of approximately 8.289 million

<sup>10</sup>Environmental Protection Agency. 1998.

<sup>11</sup>California Integrated Waste Management Board. Innovations: An Analysis of Successful Local Programs. “City of Riverside: A Model for Local Government Recycling and Waste Reduction” Bernie Meyerson of EMS Consulting and UC Santa Cruz Extension staff. 2000.

<sup>12</sup>City of Riverside. 2004

<sup>13</sup>Riverside County Waste Management Department. Letter. March 15, 2004



tons, with the expected capacity to be reached in 2016. However, further landfill expansion potential exists at the Badlands Landfill site. The Lamb Canyon Landfill has a remaining disposal capacity of 11.391 tons, which is estimated to be reached in 2018.

Implementation of the General Plan is anticipated to increase solid waste collection and disposal capacity between 884 tons per day and 2,573 tons per day at buildout. The City currently contributes approximately 287 tons per day (2%) of solid waste the landfills are allowed to accept daily. By 2025, the City will contribute 14% of the amount of solid waste. With the remaining capacity of approximately 56.57 million tons as well as a 9 to 15 year lifespan (with potential for expansion to both Badlands Landfill and Lamb Canyon Landfill), the increase in solid waste generated by the development under the proposed General Plan is not anticipated to exceed capacity of the landfills. In addition, Public Resource Code Section 41780 requires every city and county to divert from landfills at least 50% of waste generated within their jurisdiction, and the City has exceeded its required reduction in recent years.

## WASTE REDUCTION PROGRAMS

Riverside offers a number of waste reduction, recycling and community clean-up programs.

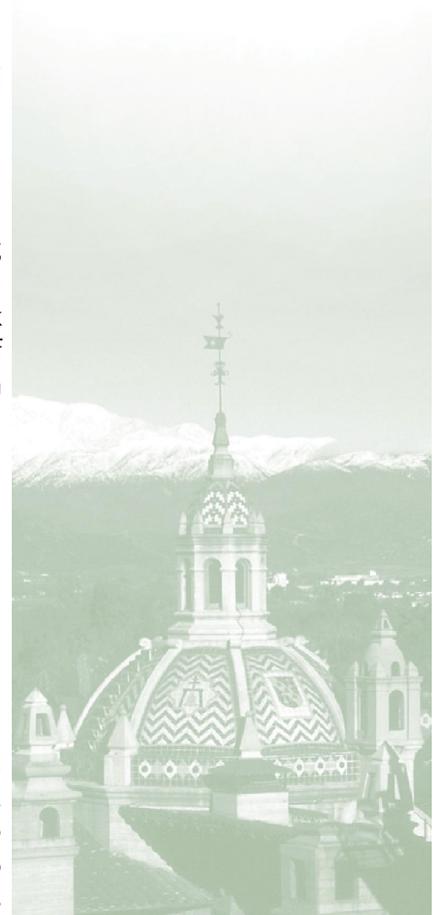
### Green Waste Collection

Riverside took the unusual, but highly successful, step of initiating green waste collection as the first program geared to attain diversion goals. Switching from twice-a-week collection of trash to once-a-week collection of trash and green waste allowed the attainment of significant diversion without an increase in operating cost. The green waste collection program includes:

- ❖ Plants
- ❖ Grass
- ❖ Weeds
- ❖ Leaves
- ❖ Tree limbs
- ❖ Wood waste
- ❖ Christmas trees (at specified times in January)

### Curbside Recycling

Riverside did not start off its diversion efforts with a residential curbside collection as did most other communities in California. A student-led initiative brought the issue to the City Council. Riverside responded positively, directing its staff to study the issue and to develop a fully automated collection system. The program includes





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

weekly collection of glass, plastics and metals. "Blue container" recyclables are tipped at the Robert A. Nelson Transfer Station and transferred to an intermediate processing facility.

### **Newspaper Drop-Off**

In addition to its curbside collection of old newspapers, the City, in co-sponsorship with the local Press-Enterprise, maintains twenty-four-hour drop-off sites for newspapers. Each site has a recycled plastic barn to house the paper.

### **Car Tire Amnesty Program**

Riverside offers a "car tire amnesty program" in conjunction with collections of household hazardous wastes. City residents are allowed to bring up to nine used auto tires to these collection events. Truck tires and tires from commercial sources are not acceptable. A contractor recycles them into a crumb rubber product.

### **Household Hazardous Waste**

Riverside offers periodic mobile collections for a variety of household hazardous waste products, including oil, paint, cleaning solvent, corrosive liquids and automotive batteries. County sites will also accept antifreeze, batteries, oil and paint.

### **Backyard Composting Workshops**

Since 2004, the City has hosted several free Backyard Composting Workshops. Riverside residents can learn to properly compost green waste.

### **Appliances**

Residents served by a private waste collection hauler are able to receive collection for older, non-working appliances. Riverside contracts with a private company to pick up appliances for removal of freon. Non-freon appliances are taken to scrap metal companies for recycling by the property owner.

### **Refrigerator Recycling Rebate Program (Cool Returns Program)**

Cool Returns is a public benefit program that offers residential electric customers a rebate for recycling older, still-functional yet inefficient refrigerators and stand-alone freezers. Additionally, the program includes a provision for these units to be picked-up free of charge and transported to a recycling facility for dismantling and processing.





### **Refrigerated Appliance Collection Program**

Riverside Public Utilities collects non-working refrigerators and appliances for residents served by the Riverside Public Works Department. The purpose of this program is to remove non-efficient appliances, reduce illegal dumping and maximize the use of energy-efficient appliances. Working in partnership with RPU, the Public Works Department and the Appliance Recyclers of America, this program will collect all varieties of non-working household appliances. Using a 1-800 telephone number, City residents are able to schedule one free pick up per year for refrigerators, appliances and room air conditioners.

### **C.U.R.E. – Clean Up Riverside’s Environment**

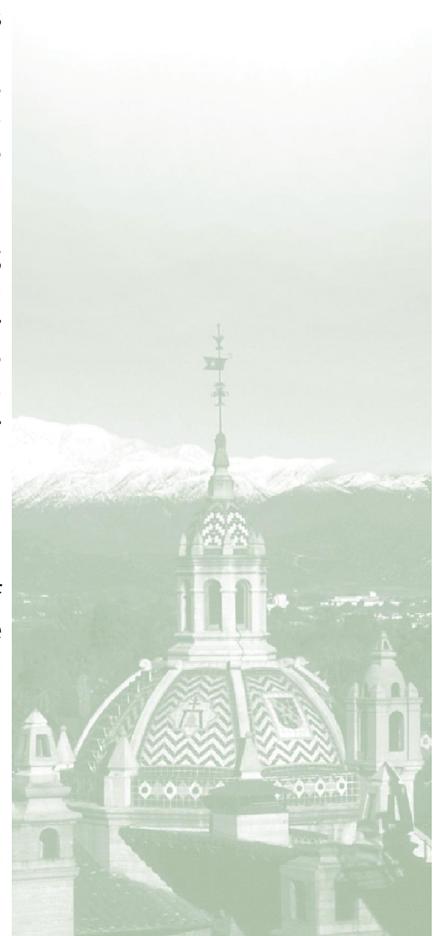
C.U.R.E. is a community-wide program that focuses on promoting the value to having a clean city, raising consciousness of litter habits and improving overall community pride and involvement. Past community events have included the Incredible Bulk and F.O.O.T. (Focusing on Offensive Trash) Patrol. The Incredible Bulk, a regular occurring event, is a free bulky item drop-off event that enables residents to get rid of bulky items such as electronic waste and tires. The F.O.O.T. Patrol has residents work together to clean up debris and garbage from public locations. A new program includes the C.U.R.E. Computer Recycling Program part of the SmartRiverside Program. Riverside is working with the SmartRiverside program to recycle donated computers to give to residents who have completed a computer training course through a Parks & Recreation training program at various local community centers. The Digital Inclusion Program Resources and support come from private and public sector volunteers, all trying to facilitate the Digital Inclusion program. The program is a combination of many ideologies, working for the common goal, to foster student's academic success, to foster community participation, and to raise quality of life.

### **Electronic Waste**

Riverside contracts with a private company to properly dispose of electronic waste such as televisions and computer monitors. The Electronic Waste site is collected at periodic collection events such as the Household Hazardous Waste and Incredible Bulk event.

### **Curbside Oil Collection Program**

Riverside has implemented a pilot program to collect used motor oil and filters from residents’ door steps. The motor oil is processed and recycled by a private, environmental waste handler.





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

### Keep Riverside Clean and Beautiful

Keep Riverside Clean and Beautiful is a non-profit program coordinated by the Riverside Chamber of Commerce. Its mission is to provide a sense of community, pride and leadership within Riverside by creating partnerships that work toward the beautification of the City. Projects include citywide and neighborhood clean ups, tree planting programs, adopt-a-street program, anti-graffiti program, litter prevention program, a clean campus program for public and private Riverside schools and various fundraisers and events.

### Recycling Market Development Zone

The City has a state-designated Recycling Market Development Zone for businesses which either divert recyclable materials from the waste stream or utilize recycled material in their manufacturing process. Recyclers may qualify for below market, low interest loans up to \$2 million to finance land, building or equipment, as well as working capital.

### Outreach and Education

Riverside is involved in extensive outreach and education activities with respect to the three R's: reduce, reuse, recycle. Riverside acts independently and in conjunction with a variety of institutions, including:

- ❖ County of Riverside
- ❖ Chamber of Commerce (Keep Riverside Clean and Beautiful)
- ❖ Western Riverside County Council of Governments
- ❖ Local school districts
- ❖ Local colleges and universities

#### **Objective PF-5: Minimize the volume of waste materials entering regional landfills.**

Policy PF-5.1: Develop innovative methods and strategies to reduce the amount of waste materials entering landfills. The City should aim to achieve 100% recycling citywide for both residential and non-residential development.

Policy PF-5.2: Gradually expand recycling and waste diversion programs to all City addresses.





Policy PF-5.3: Develop programs that encourage residents to donate or dispose of surplus furniture, old electronics, clothing and other household items rather than disposing of such materials in landfills.

Policy PF-5.4: Implement more severe fines for dumping bio-solids into the City's sewer and storm drain system.

## ELECTRIC POWER

Electrical service in most of Riverside is provided by the City-owned Public Utilities Department. Southern California Edison generally serves customers outside of the City limits. The City's electric service system, established in 1895, includes almost ninety miles of transmission lines and over one thousand miles of distribution lines. The Riverside Public Utilities Department has provided power to residential and business customers for over one hundred years and in 2004, added its one hundred thousandth customer. The Utility has provided lower rates, safe high quality services and community benefits during its existence.

Its vision is to be recognized as a community treasure; a resource that helps make the City of Riverside the focal point of the Inland Empire.

As of 2006, the largest proportion (sixty-eight percent) of the local electrical supply was generated from the burning of coal, followed by nuclear power (thirteen percent) and natural gas combustion and hydroelectric (three percent each). Renewable energy sources, including geothermal, wind, biomass/waste, small-scale hydroelectric and solar power, account for twelve percent. In 2002, the City completed work on the Springs Substation, a forty-megawatt power plant dedicated to emergency power generation.<sup>14</sup>

One of the benefits a locally operated electric provider offers is lower energy rates than other Southern California private utilities. On average, residential bills are ten percent lower and business bills twenty-five percent lower than a typical Southern California Edison bill. These lower rates assist in attracting businesses to Riverside through special economic development rates, thereby allowing local residents the ability to find jobs closer to home and expanding the local economic base. The Riverside Public Utilities Department continues to educate and inform State and National elected officials of the benefits Riverside has and continues to receive by owning and operating its own electrical utility. The residents of Riverside own their electric

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See the discussion on energy resources in the Open Space and Conservation Element under the heading "Energy and Water for Our Future."

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<sup>14</sup> City of Riverside Public Utilities Department. Power Content Label 2003.





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

utility and their interests should not be diminished through poor legislation.

Since the first energy crises of the 1970s, the City has actively pursued programs to encourage intelligent and measured use of finite energy resources and has invested in cleaner “green” sources. The Riverside Public Utilities Department offers programs that enable customers to reduce their electric bills wherever possible. As of 2004, over \$5 million dollars per year is expended for programs related to conservation and education, renewable energy, research and development and low-income assistance. Allocation of these funds is controlled through oversight of the City Council and implemented to provide the best benefit for Riverside customers. Local control is a cornerstone of a municipal utility, providing direct benefits to its customer-owners. In addition, the Department spends over \$250,000 annually supporting local events and organizations in an effort to improve services in the community and celebrate the City of Riverside.

### ENERGY CONSERVATION PROJECTS

#### Green Power

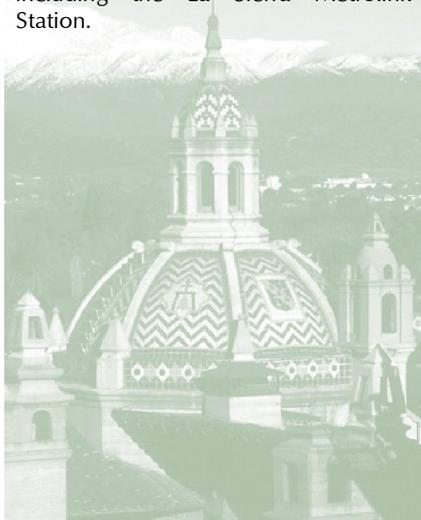


Riverside Public Utilities has completed three solar energy projects, including the La Sierra Metrolink Station.

Riverside Public Utilities has constructed several new photovoltaic stations within the City. The new sites, combined with existing photovoltaic power stations such as those at the Autumn Ridge Apartments and the La Sierra Metrolink Station, will allow the Public Utilities Operation Center to generate more green power energy for the City. Several more large photovoltaic power stations are planned throughout the City to provide renewable power and to educate local residents and school children on the availability and benefit of renewable energy. The goal of the Riverside Public Utilities Department is to have one megawatt of local photovoltaic generation – enough power to supply one thousand homes.

#### Downtown Power Upgrade Project

In order to prepare for increasing population growth and continued record-breaking energy demand, Riverside Public Utilities will build a 96-megawatt (MW) power plant and a local transmission line. The facility will be called the Riverside Energy Resource Center (RERC) and will be located near the Santa Ana River east of the Wastewater Treatment Plant near Van Buren Boulevard and Jurupa Avenue.





### Grease for Gas

The City of Riverside is turning restaurant grease into inexpensive electricity at its wholly owned wastewater treatment plant. The plant, a publicly owned treatment works (POTW), is designed to handle 40 million gallons per day (MGD). Currently it treats an average of 33 MGD using a fully tertiary treatment process utilizing anaerobic digestion. Starting in April 2005, the City began adding collected grease wastewater to the existing anaerobic digesters to generate methane gas. The methane gas is then fed into an on-site cogeneration facility that produces electricity for the plant. The “grease-to-gas” program has been a resounding success, creating more than enough cost savings to pay for itself in the first year of operation and provide additional revenue for the City.

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See Air Quality Element for additional information on Grease for Gas Program.

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### Additional Facilities

Anticipating that two long-term contracts with the California Department of Water Resources will end in 2005 and 2008, Riverside will build two additional fifty-megawatt peak power plants. The natural gas powered plants would be tapped only during the hottest hours of the hottest summer days, when air conditioner use creates huge peaks in energy consumption. These new plants will assist in keeping utility rates stable for Riverside homeowners and businesses and since the plants will not be connected to the state power grid, the plants will keep critical services running during emergencies.<sup>15</sup>

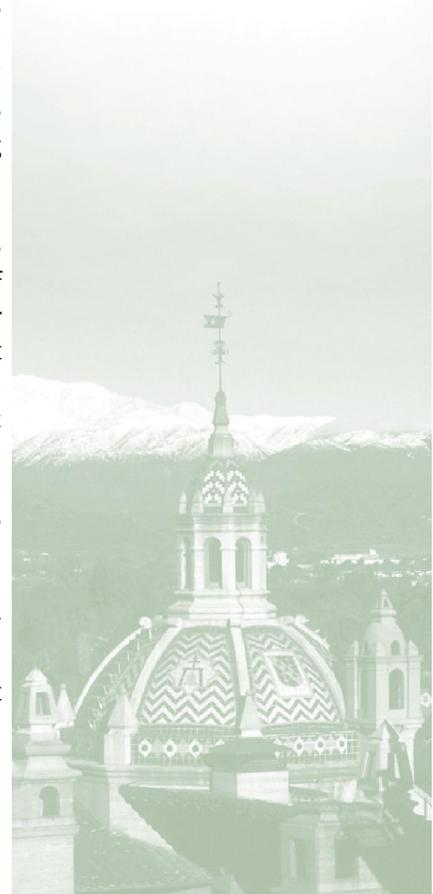
Construction of the power generation stations will enable the Riverside Public Utilities Department to supply the needs of emergency operations by directing power to those facilities as power is restored to the larger geographic area. The power system will not have to rely on state or regionally operated transmission lines as all distribution lines will be owned and operated by the Riverside Public Utilities Department.

The Riverside Public Utilities Department offers many electric rebate and incentive programs. These include:

1. **SHARE** — Helps qualified, low-income residents pay their utility bills
2. **UTILICARE** — Helps customers that depend on life support systems a special rate

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<sup>15</sup>Riverside OKs Building 2 Power Plants to Ensure Supply During Peak Demand. Los Angeles Times. February 4, 2004.





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

- 3. **WE CARE** — For senior, disabled or low-income customers. Provides a free home energy survey, free weatherization and conservation devices plus installation.

The Riverside Public Utilities Department also offers an additional ten rebate programs and another fifteen rebate programs for businesses.

**Objective PF-6: Provide affordable, reliable and, to the extent practical, environmentally sensitive energy resources to residents and businesses.**

Policy PF-6.1: Continue to support the development of green power and expand the use of green power in the City’s energy portfolio.

Policy PF-6.2: Ensure that adequate back-up facilities are available to meet critical electric power needs in the event of shortages or temporary outages.

Policy PF-6.3: Promote and encourage energy conservation.

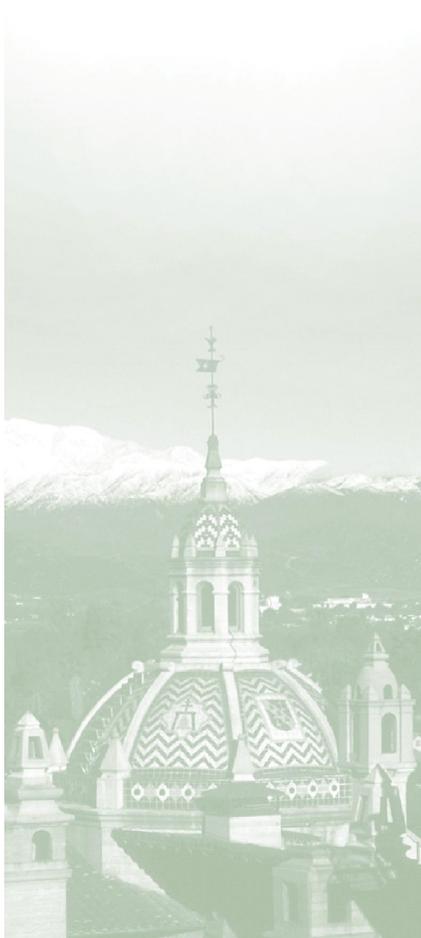
Policy PF-6.4: Encourage energy-efficient development through its site plan and building design standard guidelines.

Policy PF-6.5 Promote green building design.

## TELECOMMUNICATIONS INFRASTRUCTURE

Compared to traditional types of infrastructure such as roads and water lines, planning for high-tech infrastructure is a relatively recent phenomenon. The convergence of data, voice and video and the personal computer has created a dynamic world of interactive communications possibilities. Providing and supporting evolutions in communications infrastructure will provide a vital framework for job and commercial growth, educational opportunities and quality of life issues in Riverside.

The City has already differentiated itself from other communications by planning for electronic infrastructure needs and creating environments attractive to the workforce and to the community as a whole. The City’s Public Utilities Department owns and operates an extensive fiber optic communications system. The City has a total of 4,167 fiber strand miles of fiber installed along 67.5 miles of fiber cable route. The City will be adding another 1,688 strand miles of fiber along an additional 17.6 miles of fiber cable route as part of the fiber extension to City facilities connecting 26 additional City



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



facilities by 2008 which will provide fiber to all City facilities. Spare capacity is used to provide telecommunications services to many City Department and a few private companies. As a result, many City Department receive much high data rate service services than they could otherwise afford. RPU's fiber is available for use by other telecommunications companies to allow them to economically reach portions of the City that might not otherwise be able to have fiber based communications. For example, a portion of RPU's fiber system serves the UCR Research Park.

Key City telecommunications programs include the City-wide WiFi project, Wireless Public Safety 4.9Ghz network, Voice over IP project, electronic libraries called "cybraries" and the SmartRiverside Digital Inclusion program which provide free refurbished PCs and internet access to low income families in Riverside.

### City-Wide WiFi

In 2004, the City in conjunction with SmartRiverside (a non-profit corporation) implemented free WiFi in the City's downtown Mall. The project was so successful, that SmartRiverside and the City went out to bid for a City-wide WiFi project that would include free WiFi for all residences and businesses, plus deliver a high speed wireless network for City and Public Safety use. In October 2006, a contract was awarded and City-wide WiFi coverage is expected by August 2008. The City wide WiFi will be used to automate City ball field lights, parking meters, supervisory control and data acquisition systems, traffic signals, and provide video surveillance to locations where hard wire connections are not possible. The free City Wide WiFi will enable any notebook or PC to have free access to the internet up to speeds of 512 Kbps. This network is supported by ads which local companies can place on a banner page. There is also a secure and encrypted 4.9Ghz Public Safety network which enables high speed communications to patrol cars and fire engines as well as provide in car video downloads back to City Hall. The City of Riverside was the first to deploy both a free and a public safety network City Wide and the largest nationwide at the time it went live.

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See WiFi availability map at [www.smartriverside.com](http://www.smartriverside.com).

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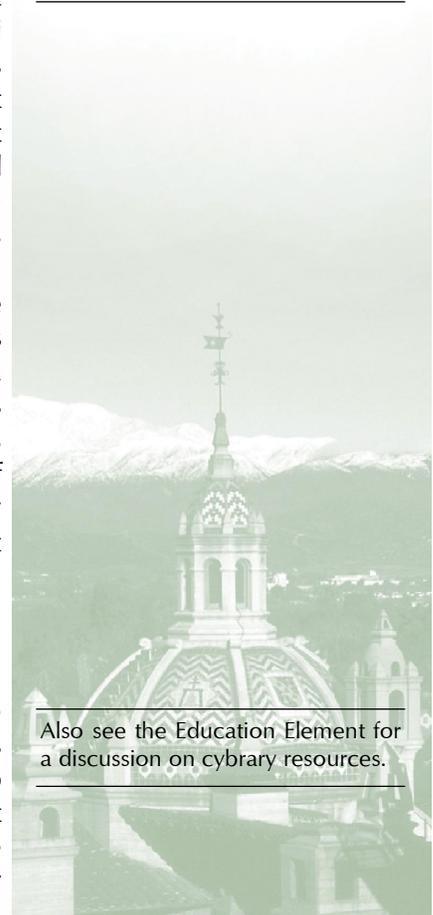
### Cybraries

While rapid development of the internet has expanded access to communication, education, information and consumer opportunities for many people, the internet has also created a "digital divide: - a gap between those who have easy access to an internet connection at home and those who do not. In 1998, Riverside began an innovative program to create several "cybraries" in areas of the community where access to libraries and the internet is limited.

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Also see the Education Element for a discussion on cybrary resources.

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## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

Developed in 1998, the Eastside Cybrary is a satellite service point of the Riverside Public Library’s online database, and the internet. The Cybrary also provides training for youth in the use of computer technology for finding and evaluating information. Adult training consists of training in basic computer and information literacy skills, special workshop presentations and access to GED, ESL, literacy resources and career development.

In 2000, the Nichols Cybrary Center opened its doors and is also a satellite service point of the Riverside Public Library located in the Joyce Jackson Community Center at Nichols Park. This Center offers students a collection of virtual materials found through the library system’s online databases, and the internet.

### **SmartRiverside**

SmartRiverside is a nonprofit corporation with the roll of attracted and retaining high technology companies in Riverside, but to also advocate technology use City wide. For business attraction, SmartRiverside offers a Tenant Improvement program where companies relocating into Riverside can be reimbursed up to \$20,000 for tenant improvements in any leased facilities. Employees of high technology companies relocating from outside Riverside, qualify for \$1,000 from SmartRiverside upon closure of escrow on a Riverside home. For the residences of Riverside with incomes under \$45,000, SmartRiverside offers a Digital Inclusion program where upon completion of an 8 to 10 hour class at one of the Park and Recreation Community Centers, the family is able to receive a free refurbished PC and a wireless access devices which can access the City Wide WiFi network for free Internet Access. Project Bridge resources (reformed gang members) do the refurbishment at Public Works Water Reclamation Facility.

### **The Smart Home Infrastructure Program (SHIP)**

The Smart Home Infrastructure Program is driven by telecommunications companies and the developers to provide incentives to home builders to pre-wire homes to accommodate future technologies which use coaxial cable and/or phone lines.

### **Riverside Green Builder Program**

The City of Riverside has implemented the Riverside Green Builder (RGB), a voluntary program primarily for production home builders. The RGB is based on the California Green Builder Program that is recognized by the California Public Utilities Commission, the California Energy Commission and the California League of Cities,

See June 12, 2007 City Council Report on Riverside Green Builder Program and the Air Quality Element for additional information.

## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



and is the largest residential green builder program in California. The RGB is a resource effective and cost effective green building program. A RGB certified home must meet five criteria: energy efficiency, water conservation, waste reduction, wood conservation and indoor air quality.

**Objective PF-7: Ensure that Riverside residents, the business community and educational institutions have easy access to state-of-the-art internet services and modern telecommunications technology.**

- Policy PF-7.1: Provide innovative, targeted technology projects and related economic development incentives.
- Policy PF-7.3: Prepare and implement a Telecommunications Master Plan.
- Policy PF-7.4: Encourage new development to be wired or provided with other necessary infrastructure for up-to-date telecommunications services.
- Policy PF-7.5: Market and encourage homebuilders to participate in the Smart Home Infrastructure Program.
- Policy PF-7.6: Provide flexibility within the Zoning Code to encourage technology and home-based businesses.
- Policy PF-7.7: Examine the option of the City owning a television station.
- Policy PF-7.8: Encourage competition of cable providers.
- Policy PF-7.9: Continue to work with Riverside Public Utilities and private telecommunications infrastructure operators and owners to ensure that Riverside has state-of-the-art internet and telecommunication facilities, system upgrades, features and coverages.

**Objective PF-8: Expand the accessibility of internet and similar communications services throughout the community.**

- Policy PF-8.1: Develop partnerships with K-12 schools to promote the student use of technology to promote high-level learning.

Also see the Objectives and Policies contained in the Education and Arts and Culture Elements.

In particular, see ED-2, ED-5 and AC-1.



## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

Policy PF-8.2: Encourage innovative internet access projects such as the City Wide WiFi project.

Policy PF-8.3: Expand development of cybraries.

## HEALTH CARE FACILITIES

Hospitals and medical facilities provide critical health services and jobs to a community. Quality health care services can attract businesses and residents to Riverside and help strengthen the tax base. By supporting and promoting diverse health care facilities in the community, the City can promote good health for residents and the economy.

Cooperative community programs that have proven successful include community-based health promotion efforts, health education services, advocacy for holistic community health and reaching out to disadvantaged and special groups, such as the elderly. The several hospitals and medical clinics operating in Riverside can work together to build a strong network and thereby maximize each other's strengths and compensate for any gaps in services.

Supportive to the medical centers are medical and related office complexes throughout the City. Riverside's goal is to support expansion of health-care related businesses in strategic locations to meet the needs of Riverside residents and persons throughout the Inland Empire, establishing Riverside as a central location for diverse medical and dental businesses and services.

## DIVERSE MEDICAL FACILITIES

Riverside has several long-established medical institutions.

### **Riverside Community Hospital**

Founded in 1902, Riverside Community Hospital is licensed for three hundred sixty-nine beds and has over three hundred fifty physicians representing a wide array of specialties. Services offered at Riverside Community Hospital include the Family BIRTHplace, a Neonatal Intensive Care Unit for seriously ill infants; the Health Care Center offering a full range of inpatient and outpatient cardiovascular services, a transitional care unit; and many ancillary services which all work together to promote the health and wellness of patients.





### **Parkview Community Hospital Medical Center**

Parkview Community Hospital Medical Center, Riverside's only non-profit community hospital, was founded in 1958. This facility has a staff of over three hundred fifty physicians representing a multitude of specialties. Parkview offers a host of services, including Maternity Care, Neonatal Intensive Care, Diabetes Care, Cancer Treatment, Pediatrics, General Surgery and Physical Rehabilitation.

### **Kaiser Permanente Medical Center**

Kaiser Permanente Medical Center, Riverside is a full-service medical care center serving more than one hundred thousand health plan members in the Riverside County area. More than sixteen hundred employees and one hundred thirty physicians are employed at the medical center.

The thirty-nine-acre facility includes the Park Sierra Medical Offices and the hospital and medical office tower. Services offered at the medical center include Family Practice, Optometry, Pediatrics, Ob/Gyn, Radiology, Physical Therapy, Emergency Services and General Surgery, among others.

**Objective PF-9: Make Riverside the central location for quality and diverse health care services in the Inland Empire.**

- Policy PF-9.1: Support the efforts of local medical facilities and other health-care providers to expand health care and health services in the community.
- Policy PF-9.2: Provide health-related outreach activities and informative workshops at local community centers.
- Policy PF-9.3: Encourage a standing committee to promote high quality health care facilities.
- Policy PF-9.4: Support UCR's proposed medical school and nursing programs at Riverside Community College and California Baptist University.
- Policy PF-9.5: Determine the health care needs of the community on a per capita basis (hospital beds, medical facilities, and urgent care clinics, emergency facilities, etc.) and work with the health care industry to meet these requirements.





# PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

## COMMUNITY CENTERS

Community centers are often the heart of their neighborhoods. They provide space where meetings, workshops, classes, sports and events can occur. Centers offer space for recreational and educational activities, including sports, art classes, nutritional programs, job training and service programs.

City community centers, senior centers, social service centers, clubhouses and activity centers throughout Riverside (Table PF-5, Community/Senior/Social Service Centers) act as hubs for the activities of local neighborhoods. Typically operated by the Parks, Recreation and Community Services Department, community centers offer recreational, educational and human service programs. As identified in Figure PF-3 (Community Centers), all of Riverside’s community centers are located within or next to parks. (See also Table PR-1 Park and Recreation Facilities in the Park and Recreation Element for a full list of park facilities.)

Recreational programs include softball, basketball leagues, adult and youth sport leagues, aquatics programs, volleyball leagues and fitness and yoga classes. In addition, community centers provide many life enrichment, educational and cultural programs, including homework and computer assistance, dance classes, art classes, foreign language classes, music programs and a variety of enrichment classes for all ages. Day camps and child care are also provided through many centers. Community centers also allow non-profit and private groups to hold special events and meetings and conduct specialized programs.

See the Introduction under “Riverside Renaissance Initiative” for more information on this program.

As part of the Riverside Renaissance Initiative, the Bobby Bonds Youth Opportunity Center, the Orange Terrace Community Center, and the Bordwell Childcare Center are all under construction. In addition the Bordwell Stratton Senior Center Room Addition has gone out to bid.

The Riverside and Alvord Unified School Districts and the City of Riverside implement the "PRIME Time and HALF Time" after-school program held at elementary and middle schools throughout Riverside. The program operates throughout the school year and includes an academic component, tutorial and enrichment activities such as recreation and various clubs. Riverside Park, Recreation and Community Services staff also conduct a "Kids-in-Action" after school program at the Mountain View Elementary School. Activities include intramural sports, games, dance, cheer, homework, community clubs and cooking.

# PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT



TABLE PF-5  
RECREATIONAL CENTERS IN RIVERSIDE  
COMMUNITY/SENIOR/SOCIAL SERVICE CENTERS

CENTER	ADDRESS	SIZE
<b>COMMUNITY CENTERS</b>		
ARLANZA CENTER/BRYANT PARK	7950 PHILBIN AVE.	22,500 SQ. FT.
JOYCE JACKSON CENTER /NICHOLS PARK	5505 DEWEY AVE.	8,270 SQ. FT.
LA SIERRA CENTER/LA SIERRA PARK	5215 LA SIERRA AVE	9,980 SQ. FT.
LINCOLN COMMUNITY CENTER/LINCOLN PARK	4261 PARK AVE.	1,600 SQ. FT.
ORANGE TERRACE	20010 ORANGE TERRACE	25,440 SQ. FT.
RENCK CENTER/HUNT PARK	4015 JACKSON ST.	6,337 SQ. FT.
RUTH LEWIS CENTER/REID PARK	701 N. ORANGE ST.	8,280 SQ. FT.
YOUTH OPPORTUNITY CENTER/BOBBY BONDS PARK	2060 UNIVERSITY AVE.	6,050 SQ. FT.
YSMAEL VILLEGAS CENTER/VILLEGAS PARK	7260 MARGUERITA AVE.	21,690 SQ. FT.
<b>SENIOR CENTERS</b>		
DALES SENIOR CENTER/WHITE PARK	3936 CHESTNUT ST.	10,720 SQ. FT.
JANET GOESKE SENIOR/DISABLED CENTER/STREETER PARK	5257 SIERRA AVE.	26,000 SQ. FT.
LA SIERRA SENIOR CENTER	5215 LA SIERRA AVENUE	12,787 SQ. FT.
STRATTON CENTER/BORDWELL PARK	2008 MARTIN LUTHER KING BLVD.	12,617 SQ. FT.
<b>SERVICE CENTERS</b>		
CESAR CHAVEZ CENTER/BOBBY BONDS PARK	2060 UNIVERSITY AVENUE	37,604 SQ. FT.
ERIC N. SOLANDER CENTER/BRYANT PARK	7801 GRAMERCY PL., SUITE B.	8,640 SQ. FT.
*UNDER CONSTRUCTION		

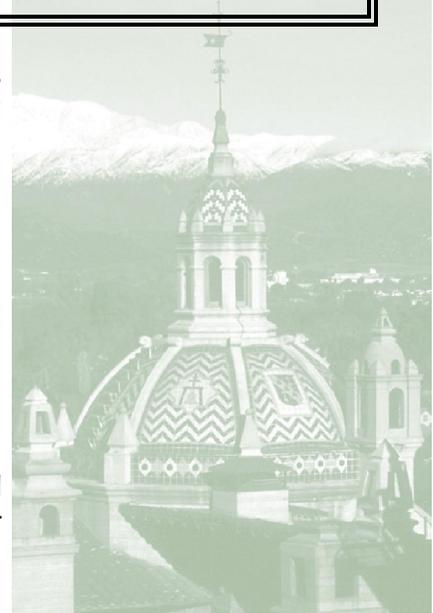
Bryant, Nichols, La Sierra, Reid and Villegas Parks also have free computer labs available to assist with homework, internet access and tutoring.

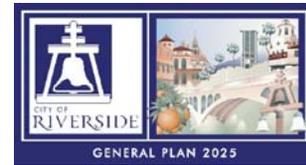
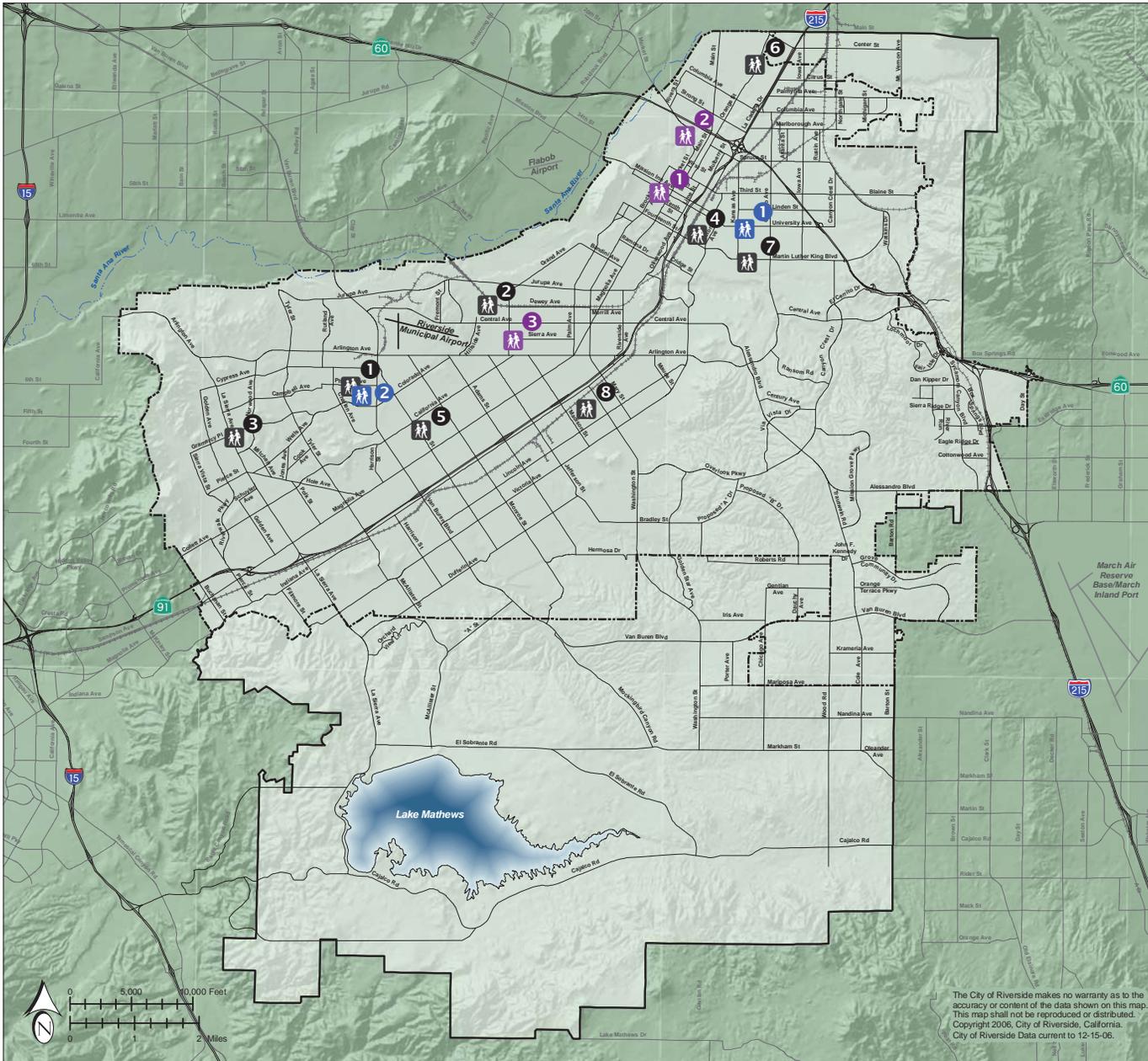
### Adult and Senior Programs

Adult activity classes vary tremendously and include karate, dancing, yoga, dog training, kick boxing, resume writing, gymnastics and real estate. Adult sports leagues include softball, basketball and volleyball.

### Senior Programs

The community of Riverside offers senior-oriented programs and services through various recreation centers, the Dales Senior





**LEGEND**

-  COMMUNITY CENTERS
- ① ARLANZA CENTER
- ② JOYCE JACKSON CENTER
- ③ LA SIERRA CENTER
- ④ LINCOLN COMMUNITY CENTER
- ⑤ RENCK CENTER
- ⑥ RUTH LEWIS CENTER
- ⑦ STRATTON CENTER
- ⑧ YSMAEL VILLEGAS CENTER
-  SENIOR CENTERS
- ① DALES SENIOR CENTER
- ② FAIRMOUNT SENIOR CENTER
- ③ JANET GOESKE SENIOR CENTER
-  SERVICE CENTERS
- ① CESAR CHAVEZ CENTER
- ② ERIC N SOLANDER CENTER
- RIVERSIDE CITY BOUNDARY
- RIVERSIDE PROPOSED SPHERE OF INFLUENCE

SOURCE: CITY OF RIVERSIDE

Figure PF-3  
**RECREATIONAL CENTERS**

The City of Riverside makes no warranty as to the accuracy or content of the data shown on this map. This map shall not be reproduced or distributed. Copyright 2006, City of Riverside, California. City of Riverside Data current to 12-15-06.



Center, and the Janet Goeske Senior/Disabled Center. Services at the Janet Goeske Center include regularly scheduled health, art and computer classes; a lunch program; nutrition and support groups; seminars; referral services; health screening; day trips; and other activities.

The Dales Senior Center also offers numerous programs to enhance the quality of life for the City's senior population including health, special interest and fitness classes, the Vitamin Relief USA Senior Support program and the Riverside Walkers for Health and Fun.

## OTHER COMMUNITY FACILITIES AND PROGRAMS

### **Office of Neighborhoods**

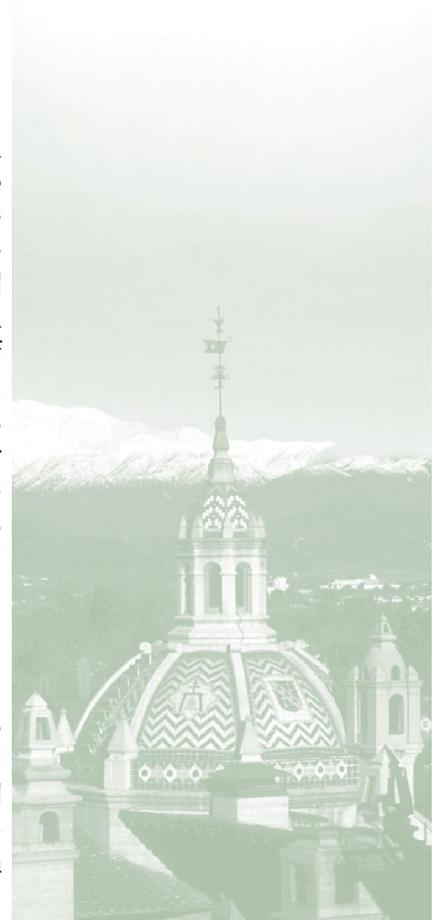
The Office of Neighborhoods was created by the City of Riverside in 2001 to increase and improve communication between the City and its neighborhoods. The office encourages citizen participation through neighborhood organizing and provides free information and support to residents interested in working together to improve their neighborhoods.

### **Arlanza Family Resource Center**

The Arlanza Family and Neighborhood Resource Center represents a unique multi-disciplinary collaboration of various agencies. These include the Riverside County Department of Mental Health, the Department of Public Social Services, the Alvord and Riverside Unified School Districts, various community-based organizations and neighborhood residents. Centrally located in the Arlanza Neighborhood, the center provides local residents with a variety of social services, programs and workshops including education classes, English classes, day-care center, health care, parenting skills workshops, violence prevention workshops, legal aid and many other services as deemed necessary by the local residents. In addition to these core services and programs, the resource center provides guidance on how to identify local people who are willing to lend their time and skills to neighborhood projects.

### **Curtailing Abuse Related the Elderly Program (CARE)**

The CARE Program, a division of Riverside County Adult Protective Services, is an elderly and dependent adult abuse prevention and education program working in partnership with law enforcement and other human service providers to raise public awareness and provide a coordinated response to abuse. The CARE program began as a





## PUBLIC FACILITIES AND INFRASTRUCTURE ELEMENT

pilot effort in 1997 and has since recovered and saved \$28.7 million for Riverside County seniors.<sup>16</sup>

In April 2004, the CARE program initiative was selected as a finalist for the Innovations in American Government Award program by the Ash Institute for Democratic Governance and Innovation. This non-profit group is associated with Harvard University's Kennedy School of Management.

### **Care Connexus Adult Day Services**

Care Connexus Adult Day Services is a non-profit, charitable organization that serves seniors within Riverside County since 1978. Care Connexus operates a licensed center in the City of Riverside and in Sun City/Menifee Valley. Care Connexus works to improve the quality of life for older and younger qualifying adults that are physically, mentally or socially dependent on others to meet their daily needs. Connexus offers several specialized programs including adult day health care, adult day care, family and care giver support services and the Alzheimer's Day Care Resource Center.

### **Casa Blanca Home of Neighborly Service**

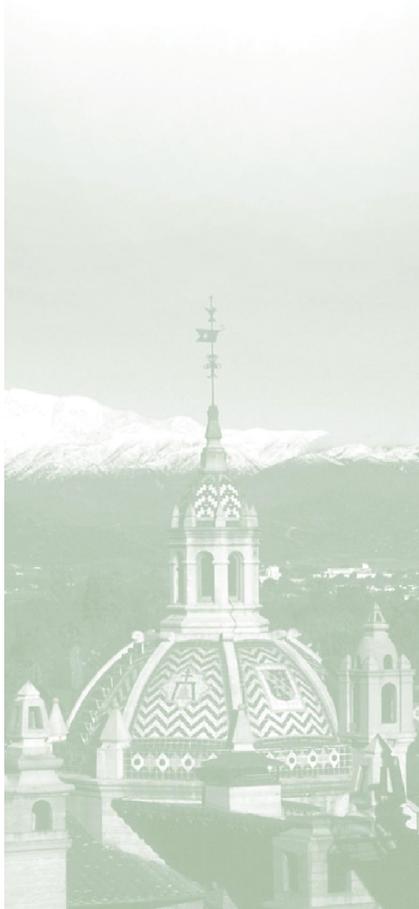
This community center provides human services to residents of the Casa Blanca community. Services include day classes and an after-school program, including children and family literacy, computer instruction, tutoring for teens, parent education, homework assistance and counseling services.

### **Youth Action Office**

The Youth Action Office is an advocacy agency that works to improve the resources available in Riverside for youth and families. The mission of the Office is to be the focal point and lead agency to identify, enhance and maximize the resources available in Riverside to address problems and issues affecting or relating to Riverside's young people, in order that Riverside becomes a "Family Friendly City".

The Office collaborates with youth service providers, agencies, educational institutions and the business community to share information, provide support and improve access to activities and services for young people and families.

<sup>16</sup> "CARE: The University Non-Profit Recognizes the Effort as One of the Best in the Country." The Press-Enterprise. April 29, 2004. Michael Coronodo.





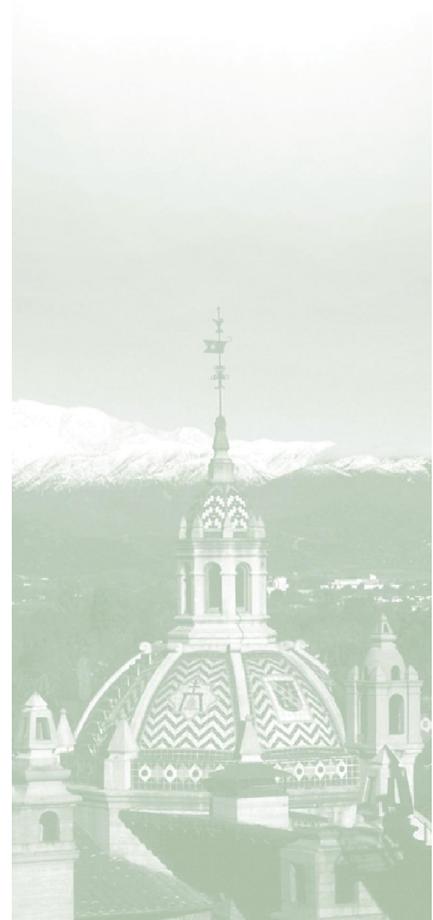
### Youth Service Center

Founded in 1969, the Youth Service Center is a private, nonprofit agency specializing in the needs of children and families. The YSC was established by a community task force and continues to receive support from and offer needed services to the community. The YSC's provides a variety of service programs and classes including therapy, prevention and early intervention services to elementary, middle and high school and other community sites, parenting classes and affordable childcare.

### SERVICE PROVIDERS

While Riverside offers a variety of community service programs at senior and community centers, residents also look to many non-profits, agencies and community groups that offer diverse activities and services. Some of the established groups in Riverside and the region include:

- ❖ Alternatives to Domestic Violence
- ❖ Alzheimer's Association of Riverside
- ❖ American Cancer Society
- ❖ American Red Cross
- ❖ ARC Riverside
- ❖ Valley Restart Center
- ❖ Arthritis Foundation
- ❖ Blindness Support Services
- ❖ Boy Scouts of America
- ❖ Care Connexus
- ❖ CASA for Riverside County
- ❖ Catholic Charities
- ❖ Center for Community Action
- ❖ Center for Employment Training
- ❖ Child Abuse Prevention Center
- ❖ Children's Center of Riverside
- ❖ Community Access Center, Community Foundation
- ❖ Community Health Systems
- ❖ Community Settlement Association
- ❖ Fair Housing Council of Riverside County
- ❖ Family Service Association of Riverside
- ❖ First Steps
- ❖ Girl Scouts of America
- ❖ Goodwill
- ❖ Inland AIDS Project
- ❖ Jefferson Transition Programs
- ❖ Jewish Family Services
- ❖ Libreria Del Pueblo





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- ❖ Operation Safe House
- ❖ Parkview Foundation
- ❖ Riverside Community Health Foundation
- ❖ Salvation Army
- ❖ Walden Family Services
- ❖ YMCA/YWCA

The community centers provide a venue for many programs and lectures offered by these groups.

See the Land Use and Urban Design Element under “Citywide Objectives - Community Facilities,” the Park and Recreation Element under “Park and Recreation Master Plan” and the Air Quality Element under “Land Use Strategies - Land Densities” for more information on recreational and service needs.

In particular, review Objectives LU-26, PR-1, PR-2 and Policy AQ-1.26.

**Objective PF-10: Meet the varied recreational and service needs of Riverside’s diverse population.**

Policy PF-10.1: Provide every neighborhood with easy access to recreation and service programs by decentralizing community centers and programs. Promote the development of shared facilities and satellite offices in each Riverside neighborhood.

Policy PF-10.2: Work cooperatively with the Riverside Transit Agency to improve transportation services to community centers for those who rely on public transportation, such as seniors, the disabled and teenagers.

Policy PF-10.3: Explore innovative funding and development concepts with non-profit groups.

Policy PF-10.4: Ensure that youth activities and programs are provided or are accessible by all neighborhoods, either in City facilities or through joint-use or cooperative agreements with other service providers.

