

4.11.2 WATER SUPPLY AND DISTRIBUTION

INTRODUCTION

This section describes the existing water supply and water distribution system in the City of Oxnard, and evaluates the impacts of the RiverPark Specific Plan. Sources used in the preparation of this section include the City of Oxnard Water System Master Plan, Urban Water Management Plan and the RiverPark Specific Plan.

ENVIRONMENTAL SETTING

Water Supply

Plans and Policies for Water Supply

Urban Water Management Planning Act

California State Assembly Bill 797 (California Water Code Section 10610, et seq.), adopted in 1983, requires every urban water supplier providing water for municipal purposes to more than 3,000 customers or more than 3,000-acre-feet of water on an annual basis to prepare an Urban Water Management Plan (UWMP). The intent of the UWMP is to assist water supply agencies in water resource planning given their existing and anticipated future demands. A number of mandatory elements are identified for inclusion in the plan, including: an estimate of past, current, and projected water use; identification of conservation measures currently adopted and being practiced; a description of alternative conservation measures which would improve the efficiency of water use with an evaluation of their cost and environmental or any other significant impacts; a schedule for the implementation of proposed actions indicated by the plan; and several other mandated elements. The law requires that the plans be submitted to the State Department of Water Resources.

The UWMP requirements were updated in 1995. Current UWMP's now must also include a water supply and demand assessment of the reliability of water service to customers during normal, dry, and critically dry water runoff years. The water supply and demand assessment must compare the total water supply available to the water supplier with the total projected water use over a 20-year period, which must be analyzed in five-year periods for each scenario identified above. The management plans must also be updated every five years, with the updates occurring in years ending in 0 and 5.

Related Legislation

Two senate bills addressing the adequacy of water supplies were recently signed into law. Senate Bill 221 prohibits a local planning agency from approving a tentative map, parcel map or development agreement for residential subdivisions of more than 500 units unless the water supplier issues a written verification that a sufficient water supply is available for the project, or the local agency finds that alternate water supplies are, or will be, available prior to completion of the project. This legislation was signed by the Governor in October 2001 and goes into effect on January 1, 2002.

Senate Bill 610, also signed by the Governor in October 2001 and effective on January 1, 2002, modifies the requirements for the water supply assessments already required to be provided by water suppliers to local planning agencies for certain types of projects. This legislation also expands the requirements for certain types of information in an UWMP, including an identification of any existing water supply entitlements, water rights, or water service contracts held relevant to the water supply assessment for a proposed project, and a description of water deliveries received in prior years.

City of Oxnard Urban Water Management Plan

The City of Oxnard (City) recently completed an update of the City's UWMP. Adoption of the UWMP is scheduled for December 2001. The UWMP reflects strong concerns for developing and maintaining a stable, long-term water supply that can accommodate both existing demand and future growth, with the expectation that drought conditions and water shortages may occur periodically. The UWMP includes descriptions of the City's water service area, local water agencies, existing water supply sources and future outlook, frequency and magnitude of water supply deficiencies, existing water management programs and future water management projects.

Existing Water Use and Supplies

The City's current water supply consists of imported surface water and local groundwater sources. The City blends the water from these two sources to achieve a balance between water quality, quantity and cost. While the ratio of local groundwater to imported surface water has varied over time, the City's current practice is to blend these sources at an approximate 1:1 ratio.

The City's imported water source consists of water from the State Water Project, which is purchased from, and delivered by, the Calleguas Municipal Water District (CMWD). Local groundwater from the Oxnard Plain Groundwater Basin is provided to the City by the United Water Conservation District

(UWCD) and from local wells owned and operated by the City. For example, over the period of 1992 to 2000, the City consumed an average of 22,866 acre-feet of water per year. In 2000, the City consumed 26,490 acre-feet of water, of which 44 percent was local groundwater and 56 percent was imported water. Of this total, 5,320 acre-feet came from City groundwater wells; 6,420 acre-feet came from UWCD; and 14,750 acre-feet was imported water purchased from CMWD. Each of these sources of water is described further below.

Calleguas Municipal Water District

To provide for long-range improvement of its water quality, the City annexed to CMWD in February of 1961. CMWD is a member agency of the Metropolitan Water District of Southern California (MWD), from which CMWD purchases imported water. The MWD/CMWD imported water supply delivered to the City originates in northern California and is conveyed over 500 miles to southern California through the State Water Project's (SWP) system of reservoirs, aqueducts and pump stations. Water is filtered and disinfected at MWD's Joseph Jensen Filtration Facility in Granada Hills. CMWD receives the treated water from MWD via the MWD West Valley Feeder. CMWD then either stores the treated water in Lake Bard or feeds the water directly to the 18-million gallon Springville Reservoir near Camarillo. The City receives water from Springville Reservoir through the City's Oxnard and Del Norte Conduits that feed the City's four water blending stations.

United Water Conservation District

UWCD is a regional water management agency that obtains water from a variety of sources for the benefit of agricultural and municipal entities throughout western Ventura County. UWCD diverts surface water from the Santa Clara River either for direct delivery to agricultural entities or to several percolation ponds to augment the recharge of local groundwater basins. UWCD also operates several groundwater extraction wells, providing the groundwater to agricultural and municipal users, including the City. As noted above, groundwater obtained from UWCD currently provides about one quarter of the City's total water supply.

In particular, UWCD provides groundwater to the City through the El Rio groundwater wellfield, located at UWCD's El Rio Spreading Grounds. UWCD diverts Santa Clara River water at the Freeman Diversion Dam northwest of Saticoy and delivers a portion of the water to the El Rio Spreading Grounds through a pipeline. This water percolates into, and recharges, the underlying Montalvo Groundwater Basin. The eleven El Rio wells are located adjacent to the El Rio Spreading Grounds.

Three of these wells extract water from the lower aquifer system (LAS), and the remaining eight wells extract water from the upper aquifer system (UAS).

The El Rio wellfield has a total active pumping capacity of 53.0 cubic feet per second (cfs). Water extracted by these wells is delivered to UWCD's El Rio Pumping Station, chlorinated, and pumped directly through UWCD's Oxnard-Hueneme (O-H) Pipeline to the City's four water blending stations. UWCD built the O-H Pipeline in 1954 to move municipal groundwater extraction away from the coastal areas subject to seawater intrusion. The O-H Pipeline consists of 12 miles of distribution pipeline. The O-H Pipeline delivers potable water to several customers on the Oxnard Plain, including the City, Port Hueneme Water Agency, and a number of other smaller water users. The O-H Pipeline is designed to deliver up to 55 cfs of potable water.¹

The City purchases water from United pursuant to a long-term water supply agreement. That agreement entitles the City to use up to 26.75 cfs of the O-H Pipeline capacity. In 1999 UWCD delivered 12,225 AF, or 16.9 cfs of water to the City. The City's existing peak capacity in the O-H Pipeline would allow for additional deliveries of groundwater of approximately 7,000 AF per year or 9.85 cfs. It should be noted that pumping capacity is a function of aquifer condition as well as the condition of the well, pumping equipment, groundwater levels, and distribution system pressure.

City of Oxnard Wells

The City owns seven wells in the Oxnard Plain Basin (two in the Upper Aquifer System (UAS) and five in the Lower Aquifer System (LAS)). The UAS wells include Nos. 22 and 23 that are located at the City Water Division Yard on 251 South Hayes Street. These wells pump groundwater from the Oxnard Aquifer into a 220,000-gallon clearwell reservoir. The reservoir acts as a suction forebay for water Blending Station No.1. This station boosts the water to above the system pressure for mixing with imported water at the water blending station. The UAS wells have a total active pumping capacity of 6,000 gpm. It should be noted that pumping capacity is a function of aquifer condition as well as the condition of the well, pumping equipment, groundwater levels, and distribution system pressure.

The LAS wells include Nos. 19, 20, 21, 24, and 25. Well Nos. 20 and 21 are located at the City Water Division Yard on 251 South Hayes Street and pump groundwater from the Hueneme Aquifer. Groundwater from Well Nos. 20 and 21 is blended with imported water at the water blending station. Well Nos. 19, 24, and 25 are currently being completed at the City's Blending Station No. 3 at the

¹ United Water Conservation District (UWCD). *Surface and Groundwater Conditions Report Water Year 1998*.

intersection of Gonzalez Road and Rose Avenue. Well No. 19 pumps groundwater from the Fox Canyon Groundwater Basin, Well No. 24 pumps from the Oxnard Basin, and Well No. 25 pumps from the Hueneme Basin. Groundwater from Well Nos. 19, 24, and 25 is blended with imported water at the Blending Station No. 3. The LAS wells have a total active pumping capacity of 14,000 gpm.

Future Water Demand and Supplies

The City's UWMP includes a projection of water demand through the year 2020. Using a straight-line demand approach, the City is projected to use a total of 44,565 acre-feet in 2020 if all land uses allowed by the City's *2020 General Plan* are developed at maximum allowed intensities. Water demand is projected to increase by approximately 68 percent from the year 2000 to 2020, resulting in an approximate annual increase of 2.6 percent.

The City does not have an existing agreement with CMWD or MWD that guarantees the quantity of water the City may purchase. CMWD has also suggested that future imported water deliveries may be limited through rate restructuring.

Local groundwater extractions are managed by the Fox Canyon Groundwater Management Agency (FCGMA). To mitigate overdraft conditions in the Oxnard Plain Basin, the FCGMA has assigned allocations to each party or agency that pumps groundwater. The FCGMA is implementing a series of cutbacks in these allocations to reduce overall groundwater extractions to 75 percent of 1990 levels to eliminate the overdraft of the local aquifer system by 2010.

UWCD holds a groundwater sub-allocation from the FCGMA on behalf of the City. In 2000 this allocation was 5,302. As a result of the cutbacks of groundwater extractions scheduled by the FCGMA, this allocation will be reduced to 4,990 acre-feet in 2005 and 4,768 acre-feet in 2010. The City also has accumulated approximately 10,000 acre-feet of conservation credits. These credits can be used on a one-time basis to supplement the available allocation. Like the UWCD sub-allocation, the City also has a groundwater allocation from the FCGMA. For 2000, the City's allocation is 5,879 acre-feet. Cutbacks in 2005 and 2010 will result in allocations of 5,568 and 5,256 acre-feet, respectively. The City is also able to draw upon 600 acre-feet per year of unused allocation held by the Oceanview Municipal Water District that would be delivered by UWCD through the O-H Pipeline.

Availability of future water supplies is affected by the groundwater extraction restrictions imposed by the FCGMA, the capacity of the CMWD water distribution system and the reliability of the State

Water Project deliveries. To bolster the reliability and security of its water supplies to meet current and projected demands, the City is pursuing a variety of water resource programs.

First, the City is planning to improve its wells to allow increased groundwater extractions. The City is planning a manganese removal/treatment system and three new wells at the City's existing Blending Station No. 3. While these wells and the related treatment facilities will not secure additional groundwater rights, they will allow for increased extraction if additional groundwater rights become available and increased reliability and flexibility for the City's internal supply system.

Second, the City has exclusive rights to use capacity for delivery of additional local groundwater supplies in the O-H Pipeline. This additional capacity would allow delivery of up to 7,000 additional acre-feet per year provided additional groundwater extraction allocations can be acquired by the City.

Third, MWD and its member agencies, including CMWD, have made a number of investments since 1991 in conservation, water recycling, storage and supply. As a result of these efforts, CMWD's water supply deliveries to the City are anticipated to become 100 percent reliable over the next 10 years. CMWD, in cooperation with the MWD, has developed a below-ground storage reservoir in the Las Posas Groundwater Basin. The Las Posas Basin Aquifer Storage and Recovery project is designed to provide up to 300,000 acre-feet of imported water for use to meet emergency, drought and peak demands from CMWD's member agencies.

Fourth, the City is developing a new program called the Groundwater Recovery Enhancement and Treatment (GREAT) Program, to further enhance the reliability of its own local water supplies. Under the GREAT Program, the City will upgrade its wastewater treatment plant to produce tertiary recycled water. This water will also undergo advanced demineralization treatment and then provided in-lieu to UWCD to serve agricultural users. These users will in turn exchange their groundwater pumping allocation to UWCD who will provide additional groundwater to the City for domestic use. The City will enhance the quality of a portion of this groundwater supply through an additional demineralization treatment system to maintain the current water quality delivered to City customers.

The GREAT Program may produce more recycled water than can be directly used by agricultural customers. Additional recycled water will be treated to advanced standards and then injected into a seawater intrusion barrier. The City would obtain additional groundwater pumping credits from the Fox Canyon Groundwater Management Agency by establishing this seawater intrusion barrier.

Discussions held with the CMWD, Port Hueneme Water Agency, UWCD, and FCGMA indicated significant support for the project. The City is currently preparing an advanced planning study for the GREAT Program. This study, scheduled to be completed by the end of 2001, will address preliminary design, governance issues, and will contain a cost estimate and schedule for implementation of the GREAT Program.

The Urban Water Management Planning Act requires urban water suppliers to assess water supply reliability. This assessment must address the normal/average year, a single dry year and multiple dry years. The assessment in the City's UWMP indicates that the City's water supply is sufficient for a normal/average year but a deficit would exist in a single dry year or over a period of three dry years. The single dry year assessment assumed city-wide demand as projected in 2005 with no reduction in demand from drought conservation efforts, a 15 percent reduction in the delivery of imported water by CMWD and a 5 percent reduction in the availability of groundwater from UWCD and city wells as a result of the next FCGMA scheduled cutbacks in groundwater allocations. This scenario would result in a supply deficit of approximately 9,400 acre-feet. The assessment of multiple dry-years considered demand projections for the period of 2001 to 2003 with no reduction from drought conservation efforts and reductions of 5 percent per year in deliveries from CMWD, based on the drought conditions in the early 1990's. With this scenario, a supply deficit of 5,600 acre-feet would occur in the first year, 6,700 acre-feet in the second year and 7,700 acre-feet in the third year. Should either of these scenarios occur, the City would use most or all of its 10,000 acre-feet of accumulated conservation credits to pump additional groundwater and would rely on other programs to meet demands.

The supply and demand comparisons required by the UWMP are theoretical in nature and are intended to show the impacts of single and multiple dry year weather conditions to support water supply contingency planning. In the City's case, these impacts are further exacerbated by increasing demands and decreasing groundwater allocations. As required by the Urban Water Management Planning Act, the City's UWMP also contains a water shortage contingency plan. The planning and supply enhancement programs discussed above are designed to ensure the reliability of the City's water sources in normal and drought conditions. The UWMP includes a series of 14 specific demand management measures that are projected to reduce overall demand by 5 to 10 percent. The City currently anticipates that the GREAT Program will provide the majority of the additional water needed to meet projected demands through the year 2020.

Existing Water Use

Existing land uses within the Specific Plan Area include agriculture, commercial offices and institutional uses in the RiverPark Area 'A'. Existing uses in RiverPark Area 'B' consist of the ready mix concrete batch plants, asphalt plant, and recycling plant on the existing mine site, agricultural uses on a portion of the County El Rio Retention Basin No. 2 site and a small parcel immediately north of the Retention Basin site on Vineyard Avenue. All of the existing agricultural uses and the sand and gravel mine site are supplied with local groundwater from wells located on these sites. The other existing uses are supplied with domestic water by the City.

Water Distribution System

Existing water lines in the vicinity of the Specific Plan Area are shown in **Figure 4.11.2-1**. As shown in this figure, an 18-inch water line currently located in Ventura Road and Town Center Drive provides water service to the two existing office buildings in the southwest corner of the Specific Plan Area. On the eastern side of the Specific Plan Area, a 14-inch line in Vineyard Avenue extends north to Simon Drive and a 12-inch line extends in Myrtle Street to Colonia Avenue.

PROJECT IMPACTS

Thresholds of Significance

Based on Appendix G of the CEQA *Guidelines*, the City considers impacts on water supply to be significant if:

- the City would not have a sufficient water supply to serve the project from existing entitlements and resources or new resources currently being developed;

In addition, the City considers impacts on water supply to be significant if:

- a project would use water in a wasteful manner

The City considers the impact of a project on the City's water distribution system to be significant if:

- the City's water distribution system would be unable to serve the Specific Plan Area with adequate flow and pressure per applicable City standards.

FIGURE 4.11.2-1

RiverPark Specific Plan Water Master Plan

Project Impacts

Water Supply

Project Water Demand

As shown in **Table 4.11.2-1**, the water demand for the uses allowed by the RiverPark Specific Plan was developed based on the water consumption factors outlined in the City's UWMP and historical city data. The factors for single family residential, multi-family residential, and commercial uses reflect an unaccounted for water loss factor of 5 percent added to historical demands. The water demand for parks and other irrigated open space areas were developed from historical city park irrigation demand data from 1999/2000. Based on the amount of parkland irrigated and the amount of water consumed, a unit demand factor of 2.2 acre-feet per acre was derived. If all uses permitted by the proposed RiverPark Specific Plan are built at the maximum allowed intensity, approximately 1,835 acre-feet per year of water would be required. This demand would build over time as individual building projects within the Specific Plan Area are developed. As described in **Section 3.0, Project Description**, the first occupancy of residences or commercial structures would be in 2003. It is anticipated that the Specific Plan Area would not be fully built-out until the year 2020.

**Table 4.11.2-1
Projected Water Demand
RiverPark Specific Plan**

Proposed Land Use	Units	Annual Water Consumption Acre-Feet/Acre²	Annual Water Demand in Acre-Feet
Single Family Residential	174 acres	2.46 acre-feet/acre	428
Multi-Family Residential	70 acres	8.57 acre-feet/acre	599
Commercial	164 acres	3.58 acre-feet/acre	559
Parks	113 acres	2.20 acre-feet/acre	249
Other Open Space	180 acres	N/A	<u>N/A</u>
Total	701 acres		1,835

Source: Impact Sciences

² The Oxnard Urban Water Management Plan does not define water consumption rates for public facilities such as schools and fire stations. For this estimate, the proposed fire station site and the portion of the school sites that would be occupied with buildings and related facilities were included as commercial uses. The portions of the school sites that would be occupied by play fields and related recreational facilities was included as park uses. This estimate is based on 35 percent coverage of the 41 acres of school sites with buildings and related facilities.

As previously discussed, the FCGMA manages groundwater extractions within the Oxnard Plain Basin. These regulations are contained in FCGMA Ordinance 5.9, adopted in February 2001. To mitigate an overdraft condition in the basin, it has assigned allocations to each groundwater pumper. Historical extraction allocations are based on the average groundwater extraction between 1985 and 1989. The FCGMA also has implemented a series of cutbacks to reduce overall groundwater extractions to 75 percent of 1990 levels to eliminate overdraft conditions in the aquifer system by 2010 and create a safe yield of groundwater.

Article 3 of FCGMA Ordinance 5.9 addresses adjustments to extraction allocations. Section 2 of Article 3 defines the types of adjustments allowed, while Section 3 outlines the procedures for adjustments. When irrigated agricultural land changes to a Municipal and Industrial (M&I) use, the groundwater extraction allocation is transferred to the provider of the M&I water supply. The amount of allocation available for transfer from agricultural land is based on the amount of land irrigated for agriculture during the 1985-1989 base period. Up to two acre-feet can be transferred to the M&I provider for each acre of land irrigated for agricultural uses during the base period. Any remaining amount of the historic extraction allocation is eliminated. The FCGMA also allows the assignment of an extraction allocation from one party to another.

In the case of the RiverPark Project, the City will be the M&I service provider. The RiverPark Project will involve the conversion of agricultural land to M&I use. In addition, the extraction allocations associated with the existing sand and gravel mine site and the County retention basin property will be transferred to the City. The existing agricultural land and mine site currently pump water from eight wells within the Specific Plan Area.

The existing mine site in RiverPark Area 'B' contains three wells with M&I extraction allocations³ and two wells with agricultural allocations.⁴ A total extraction allocation of 1,508 acre-feet is available for transfer from the three M&I wells. The two agricultural wells have historic extractions allocations of 43 acre-feet established through agricultural use of 18.4 acres during the 1985-1989 base period. This permits an agricultural to M&I transfer allocation of 2 acre-feet per acre for the 18.4 acres of agricultural use during the base period. This results in an allocation for these two wells of approximately 37 acre-feet that can be transferred to the City.

³ State Well Numbers 2N/22W-15Q01, 2N/22W-15Q03 and 2N/22W-15R01.

⁴ State Well Numbers 2N/22W-22H01, and 2N/22W-23D05.

The agricultural land in RiverPark Area 'A' contains 2 wells with agricultural allocations.⁵ These wells have historic extraction allocations of 624 acre-feet established through agricultural use of 213 acres during the 1985-1989 base period. The allowable agricultural to M&I allocation transfer at 2 acre-feet for the 213 acres of agricultural use during the base period results in an allocation of 426 acre-feet that can be transferred to the City.

The El Rio Retention Basin No. 2 site contains one well with an agricultural extraction allocation. This well has a historical allocation of 280 acre-feet established through agricultural use of the entire 67.4-acre property during the 1985-1989 base period (prior to construction of the retention basin). The allowable agricultural to M&I allocation transfer at 2 acre-feet per acre for the 67.4 acres of agricultural use during the base period results in an allocation of 135 acre-feet that can be transferred to the City.

Based on this information, the total amount of extraction allocations that can be transferred to the City is approximately 2,106 acre-feet. As previously discussed, the FCGMA is reducing all groundwater allocations by 25 percent after 2009 under FCGMA Ordinance 5.9. With this reduction, the total amount of the extraction allocations transferred to the City will be approximately 1,580 acre-feet. The City will also have sufficient facilities to extract and-or accept delivery of this additional groundwater. As previously discussed, the City is developing additional well capacity at the City's Blending Station No. 3 and the City has additional capacity for delivery of additional local groundwater supplies in the UWCD O-H Pipeline.

This 1,580 acre-feet increase in the City's groundwater extraction allocation will offset the majority of the 1,835 acre-feet per year increase in water demand associated with the proposed project. As previously discussed, the City is developing additional local water supplies through its GREAT Program, which will be available to meet the additional 255 acre-feet per year annual demand for water not directly provided through the increased groundwater allocations associated with the project.

The proposed Specific Plan designates the reclaimed mine pits for use as water storage and recharge basins and allows the pits to be used by the United Water Conservation District (UWCD) as water storage and recharge basins at some future date. As discussed previously, UWCD built the Freeman Diversion Dam in 1991 to divert water from the Santa Clara River for groundwater recharge and agricultural use. The District's current ability to recharge the local aquifer system is limited after about four weeks of precipitation in wet years due to the limited capacity of the existing spreading

⁵ State Well Numbers 2N/22W-21H01 and 2N/22W-22G01.

grounds. In addition, UWCD does not divert water from the river immediately after a storm due to the high level of silt. As a result, UWCD is not able to divert the full amount of water from Santa Clara River to which it is currently entitled. UWCD has expressed interest in using the existing mine pits within the Specific Plan Area, after implementation of the proposed reclamation plan, for the storage of water diverted from the Santa Clara River at the Freeman Diversion structure. Water stored in the pits would be allowed to infiltrate or be transferred to other UWCD facilities for recharge. This allowed use would increase the reliability of local groundwater resources and would be a beneficial impact of the project.

Water Conservation

Individual building projects within the Specific Plan Area would be required to meet standard requirements of the City, State and the Uniform Building Code. These requirements act to conserve potable water, ensure adequate water flow, and pay for the construction of improvements to the water distribution system as outlined in the City's Water System Master Plan. Requirements to which all future developments must conform include the following:

- All subdivisions must comply with Section 17921.3 of the *Health and Safety Code* which requires low-flush toilets and urinals.
- All subdivisions must comply with Title 20 of the *California Administrative Code* [Section 1604 (f)] which establishes efficiency standards for maximum flow rates for shower heads, lavatory faucets, and sink faucets.
- All subdivisions must comply with Title 24 of the *California Administrative Code* [Section 2-5307(b)] which establishes efficiency standards for maximum flow rates for shower heads, lavatory faucets, and sink faucets.
- All subdivisions must comply with Title 24 of the *California Administrative Code* [Section 2-5352(I) and (j)] which addresses pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures, including the insulation of water-heating systems.
- All subdivisions must comply with Section 4047 of the *Health and Safety Code* which prohibits the installation of residential water softening or conditioning appliances unless they are accompanied by water conservation devices.
- All subdivisions must comply with Section 7800 of the *California Government Code* which requires that lavatories in all public facilities be equipped with self-closing faucets that limit flow of hot water.
- All subdivisions must pay all water connection fees in effect at the time of tract map or site plan approval.
- All subdivisions must comply with all City of Oxnard water conservation requirements in effect at the time of tract or site plan approval.

- All water supply lines must comply with City of Oxnard Water Division and Fire Department flow rate criteria.

Compliance with these standards would ensure that water is not used in a wasteful manner. No significant impact to the City's water supply would result, therefore, from the uses permitted by the proposed RiverPark Specific Plan.

Water Distribution

The proposed on-site water distribution system would consist of a looped network of 12-inch water transmission lines in the major streets, as shown in **Figure 4.11.2-1**. There would be 5 points of connection to the City's existing water delivery system. As shown, the water transmission system for the RiverPark Specific Plan Area would connect to the City's system at Ventura Road, Town Center Drive, Myrtle Street, and at two points on Vineyard Avenue, Santa Clara River Boulevard and Northpark Drive. The proposed water transmission system has been designed to conform to all City of Oxnard standards. A pipe sizing and water demand analysis was completed by the project civil engineers, Huitt-Zollars, based on a model of existing system pressures and flow rates at the connection points contained in the City's Water Master Plan. This analysis show that the proposed water distribution system would support the maximum day demand of all uses permitted by the proposed Specific Plan at the City's flow and pressure requirements. Commercial land uses are required to have a fire flow of 4,500 gallons per minute at 20 pounds per square inch (psi), and residential land uses are required to have a fire flow of 2,500 gallons per minute at 20 psi. During the maximum-day demand and peak-hour demand, the pressure ranged from 53 psi to 59psi and 52 psi to 59 psi, respectively.

During the maximum-day demand fire flow run, the lowest available flow was 4,537 gpm in the planned commercial areas and 2,513 gpm at 52 psi residual pressure in the planned residential areas. Based on this analysis, no significant impacts to the City's water distribution system will result.

CUMULATIVE IMPACTS

Water Supply

The City's UWMP contains projections that consider development of all land uses allowed by the City's *2020 General Plan*. As previously discussed in this section, the City is projected to use a total of 44,565 acre-feet in 2020 if all land uses allowed by the City's *2020 General Plan* are developed at maximum allowed intensities. This represents an increase of 18,077 acre-feet per year from the 26,488 acre-feet

used by the City in 2000. The UWMP identifies sufficient water sources to meet projected demand. The City plans to meet the majority of this new demand with additional local water resources brought about by conservation and new water supply programs. As discussed above, existing groundwater extraction allocations can be transferred to the City under FCGMA Ordinance 5.9. An example is the groundwater allocations associated with the RiverPark site, which will provide additional water supplies to the City to offset the increase in water demand associated with the RiverPark Project. The City currently anticipates that implementation of the GREAT Program, as described above, will provide the majority of the additional water supply needed to meet projected demands through the year 2020. Based on the projections and other information in the Urban Water Management Plan, no significant cumulative impacts will occur.

Water Distribution

The City's Water System Master Plan considers development of all land uses allowed by the City's *2020 General Plan*. As other projects are approved, constructed, and occupied within the City, increased demand will be placed on the City's water distribution system. The Water System Master Plan identifies improvements to the City's water transmission system needed to ensure that enough water can be delivered at adequate pressure and fire flow levels to new customers that are added to the system. Further, each individual project will be required to provide an on site water distribution system that meets all City standards. Considering the above, no significant cumulative impacts will occur.

MITIGATION MEASURES

No mitigation measures are required as no significant impacts have been identified.

UNAVOIDABLE SIGNIFICANT IMPACTS

No unavoidable significant impacts on water supply or distribution will result from the RiverPark Project.