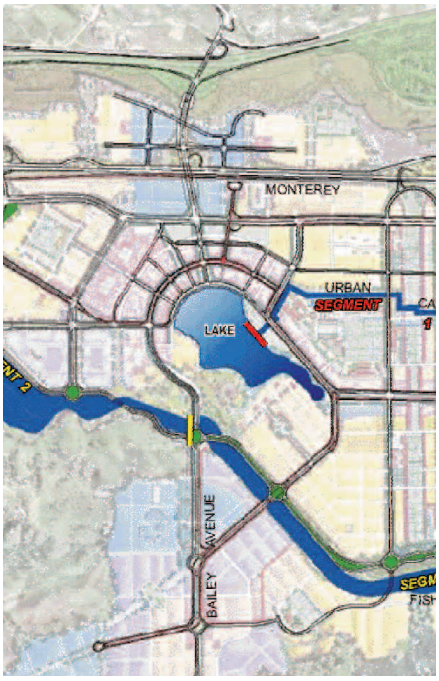
SECTION 8

INFRASTRUCTURE AND UTILITIES:

HOW TO SERVE THE NEW COMMUNITY?



INTRODUCTION

Geographically, Coyote Valley belongs to different utility service regimes. North Coyote is situated within the City of San José's Urban Service Area (USA) boundary where developments would be served by major utilities such as sanitary and storm sewerage facilities, some of which are already in place.

The Mid Coyote Urban Reserve and South Coyote Greenbelt, on the other hand, are situated outside USA, where there is little or no utilities exist. Thus, the development of the Coyote Valley Specific Plan would require substantial investment in utilities infrastructure to serve the needs of the future populations.

The main purpose of the Infrastructure Element is to establish the framework of the orderly and adequate development of utilities, taking into consideration the vision and guiding principles of the specific plan. This way, the Infrastructure Element provides the City, developers, and property owners the overall system of utilities that would be needed to support the full buildout of Coyote Valley. Technical Memoranda have been prepared for these utility systems, and referenced as necessary.

The Implementation Element of the CVSP establishes policies regarding the phasing and implementation alternatives of the proposed utility infrastructure systems.

HYDROLOGY AND STORM DRAINAGE, TREATMENT AND RETENTION

The development of Coyote Valley would need to be consistent with the National Flood Insurance Program (NFIP), the City's Special Flood Hazard Area Regulations (San José Municipal Code, Chapter 17.08), and other regulations adopted by the City of San José to address drainage and shallow flooding that occurs in the area. These regulations include the City's Special Flood Hazard Area Regulations (SJMC Section 17.08) and City Council Policies 6-29 and 8-14 [Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) Permit issued by the California Regional Water Quality Control Board (RWQCB) Permit, which includes water quality standards as well as a Hydromodification Management Plan (HMP)] to control increases in peak runoff resulting from development.

The CVSP proposes a regional solution for drainage and flooding in the Coyote Valley through a series of flood control and open space systems designed to provide sufficient flood storage detention, passage of peak flows, storm water treatment, and storm water detention/retention to accommodate increased urban runoff. Ultimately, the goal is to limit post-construction discharges to pre-development conditions. Planned hydrology and flood control components consist of the Lake, realigned Fisher Creek, detention basins and the Urban Canal, which would be designed to operate as dual-purpose or multi-use facilities. These systems are summarized below and discussed in detail in Appendix 11 (Technical Memorandum on Hydrology and Flood Control).

Hydrology and Flood Control

The Lake

The Lake in intended to serve as a vital component of the hydrological and flood control system of the post-developed Coyote Valley by providing flood storage detention and a source of irrigation

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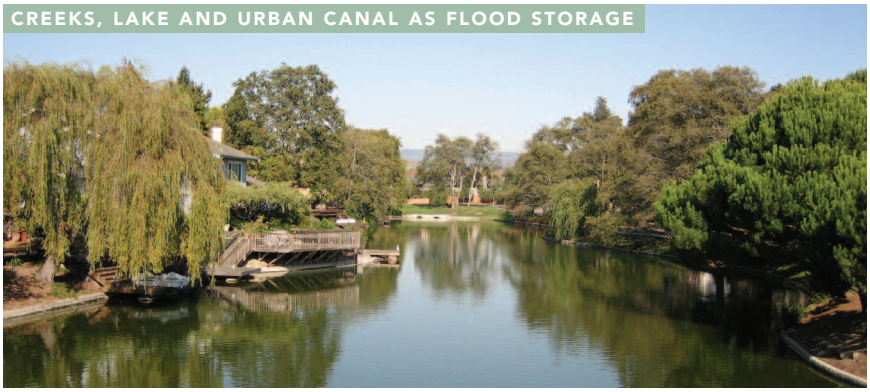
INFRASTRUCTURE AND UTILITIES

CREEKS, LAKE AND URBAN CANAL AS FLOOD STORAGE



supply. The Lake would be designed to retain (in accordance with Hydromodification Management Plan (HMP) standards of the local NPDES Permit Provision C.3) the amount of runoff equal to the difference in runoff volumes between the pre-project and post-project conditions of the watershed it drains. It would accommodate the storage of this volume of runoff in addition to its normal permanent level. The Lake would include a water volume of approximately 1,400 acre-feet when operating at normal seasonal level and would provide a flood storage volume of roughly 250 acre-feet. In addition, the Lake would function as a retention basin, trapping and settling residual pollutants from storm water discharges to the Lake, and improving water quality in Fisher Creek downstream of the Lake.

Fisher Creek Realignment

The CVSP addresses existing flooding issues surrounding Fisher Creek by providing four segments of channel improvements with primary objectives to maintain existing flood storage, convey the 100-year event, and provide additional flood storage to accommodate increased urban runoff. The ultimate goal is to maintain existing discharges at Fisher Creek's confluence with Coyote Creek by limiting post-construction discharges to match pre-development conditions. Another goal is to restore the channel to a more natural state by realigning it to the lowest-lying areas of the Valley along its historic course at the base of the Santa Teresa foothills.

Recreational Area Detention Basins

To make efficient use of the land, sites designated for recreational purposes in the CVSP have also been identified for potential flood storage, storm water treatment, and hydromodification areas in the form of multi-use storm water detention basins. As part of the master flood control plan for Coyote Valley, detention basins would detain water during storm events and gradually discharge into the storm system, so as not to overload regional conveyance facilities such as the Lake, realigned Fisher Creek, and ultimately Coyote Creek at the Coyote Narrows. The detention basins would be designed in accordance with the flow duration basin design criteria established by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) HMP Report, dated June 2005, in order to minimize the potential erosion impacts on these receiving waters. In addition to reducing the discharge, the basins would also provide storm water treatment through infiltration by allowing runoff to percolate into the ground, and through evapo-transpiration by plant materials.

North Coyote Valley Detention Basins

As part of the master flood control plan for the Coyote Valley, two flood detention basins would be constructed at the north end of Coyote Valley within the historical location of Laguna Seca. These two detention basins were previously permitted as part of the North Coyote Valley flood control improvements. They would be interconnected by an existing reinforced concrete box culvert (4 feet by 8 feet), extending beneath Santa Teresa Boulevard. The two detention basins

would have a total storage volume of 1,700 acre-feet. The detention basins would fill with storm water from a series of weirs located along the adjacent Fisher Creek channel that would spill off creek flows that exceed the pre-project discharge to Coyote Creek, which is approximately a 10-year storm event.

Urban Canal

The Urban Canal would include a shallow linear channel with both hard and soft edges. It would be lined, separating it from the groundwater table, and provide recreational, water quality, and hydrograph modification functions through such features as a parallel linear park, weirs, and drop structures to create elevation changes for small waterfalls. During the rainy season, the Urban Canal would convey storm water runoff from developed areas. Major components of the Urban Canal would include a low-flow channel and a main channel to accommodate peak runoff. The low-flow channel is intended to contain summer flows of a would be designed to contain the 100-year storm flow.

Storm Drainage

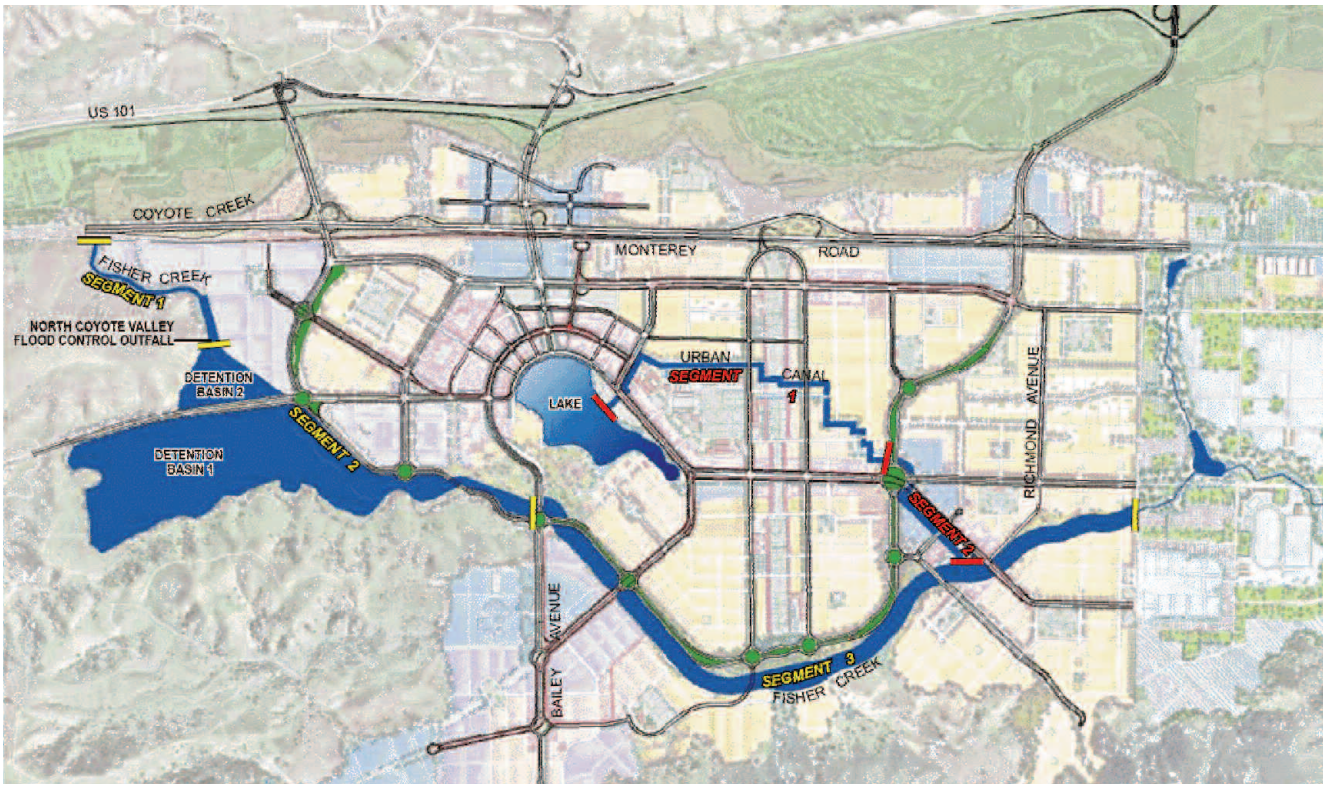
The proposed storm drain approach for the CVSP conceptualizes a system that mimics the way nature uses vegetated depressions, wetlands, and marshes to clean pollutants from storm water. Traditional hard pipe and storage facilities are replaced, where practical, with vegetated conveyance and storage facilities that also perform biofiltration of storm waters prior to discharging it into receiving waters (i.e. Coyote and Fisher Creeks, and ultimately South San Francisco Bay). The areas reserved for open space and recreational uses by the CVSP have been evaluated and incorporated into this concept based on their proximity to effective floodplains, location within a post-development tributary drainage area, efficiency of land use, and existing drainage characteristics of the Coyote Valley. The CVSP presents the opportunity to design a primary storm drain system runoff with the efficiency of a traditional hard pipe system, while having a positive effect on the environment, and also meeting the NPDES Permit objectives of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

The conventional piping system for the project would include pipeline trunks and collectors, manholes, and outfalls, but does not include pipelines for in-tract subdivisions, storm drain inlets or laterals. The storm drain network would consist of approximately 33,000 linear feet of pipelines ranging in size from 15-inch to 90-inch to convey storm water runoff from the development to storage and treatment facilities prior to being discharged to Fisher Creek.

Water Quality / Storm Water Treatment

Buildout of the CVSP would increase the total amount of impervious surface area within the Coyote Valley over time, resulting in increased volumes and

FIGURE 30: FLOOD CONTROL SYSTEM



velocities of storm water runoff and its associated sediment and pollutant loads to local receiving waters consisting of Fisher Creek, Coyote Creek, and ultimately, the San Francisco Bay. The storm drainage infrastructure proposed for the CVSP is designed to mitigate the detrimental effects of these increases.

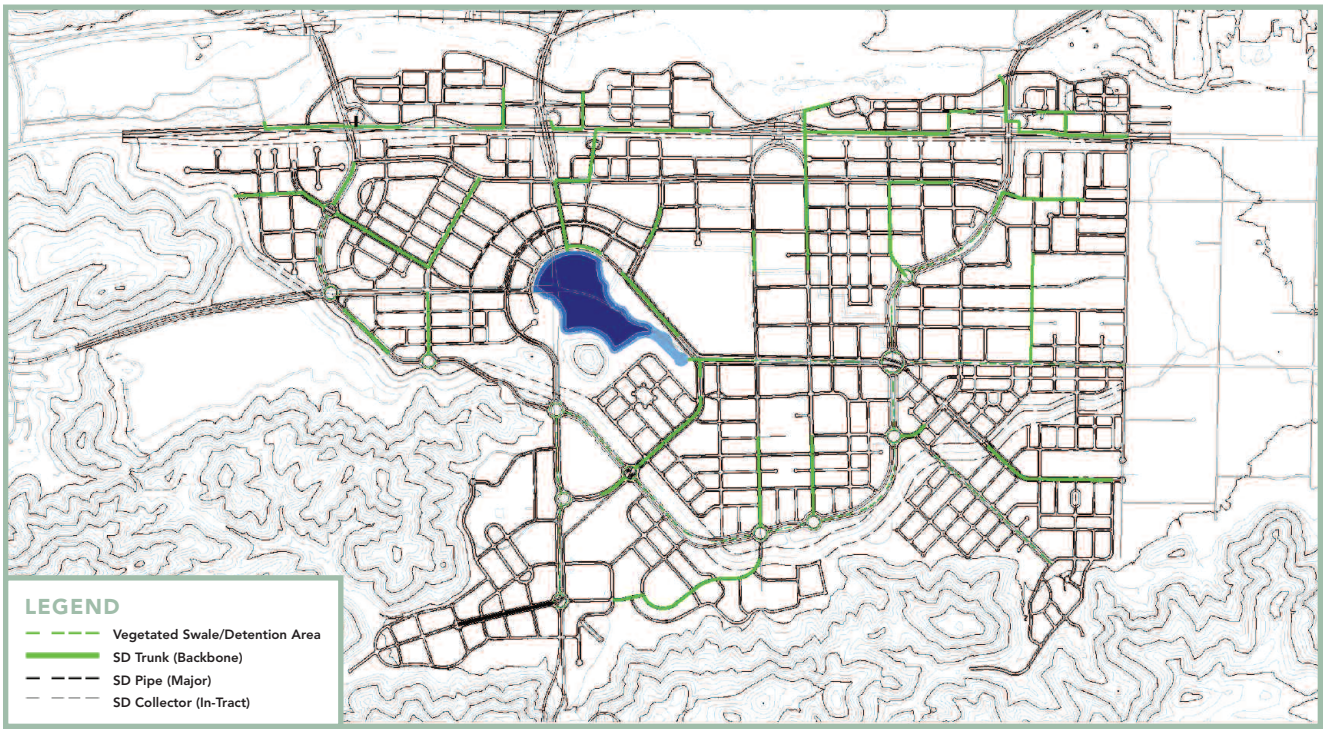
The design of the proposed storm drain system for the project would help meet the storm water quality objectives of the City's National Pollutant Discharge Elimination System Separate Storm Sewer System Permit (NPDES Permit) and City Policies 6-29 and 8-14. The system consists of a hierarchy of runoff conveyance facilities that ranges from conventional hard piped storm drain lines and appurtenances (laterals, inlets, manholes, etc.) located in neighborhood streets, to vegetated swales and basins in the medians of Coyote Valley Parkway, to reconstructed natural and man-made channels (i.e. realigned Fisher Creek and the Urban Canal). The Lake is the largest component of the storm drain system, and would provide a significant amount of flood storage in addition to performing pollutant removal and flow duration control functions.

The vegetated median areas within the Coyote Valley Parkway would form an interconnected network of detention and biofiltration facilities that would be sized in accordance with the criteria for volume-based storm water treatment controls and flow-based treatment controls mandated by the NPDES Permit. These areas would function as the primary treatment facilities for runoff collected from the various neighborhoods and conveyed through roadside swales and conventional hard pipe systems. Permeable surface soils would be used in the construction of the basins and swales to promote biofiltration, and gravel under drains would be installed to ensure proper drainage of the facilities and avoidance of vector problems. Using this treatment approach would maximize pollutant removal. In addition to incorporating the low-flow design criteria for treating the water quality volume, the median facilities would also be sized to adequately convey the conventional 10-year storm flows.

Roadside vegetated swales are another component of the proposed storm drain system. The roadside swales, which are primarily intended to provide treatment for street runoff, would be sized in accordance with City Council Policy 6-29 (Provision C.3 criteria) for flow-based treatment facilities, and would be incorporated into the parkway design of major streets throughout the CVSP area. The swales would typically be of an open trapezoidal channel design, with gentle side slopes to allow standard maintenance, and have bottoms constructed with uncompacted, permeable soils with a low clay content to promote plant growth and biofiltration function. The swales would contain under drains to prevent flooding and vector problems.

Natural open spaces, parks and school sites would also function as storm water runoff infiltration sites. Where appropriate, runoff would be directed to these areas for infiltration into the ground.

FIGURE 31: CONCEPTUAL STORM DRAINAGE SYSTEM



Conformance with Santa Clara Valley Water District regulations regarding infiltration facilities would be required.

All of the proposed drainage system components in the CVSP that utilize detention as the primary means of pollutant removal would be designed to also function as flow duration control facilities, in conformance with the City Council Policy 8-14 (NPDES Permit's Hydromodification Management Plan).

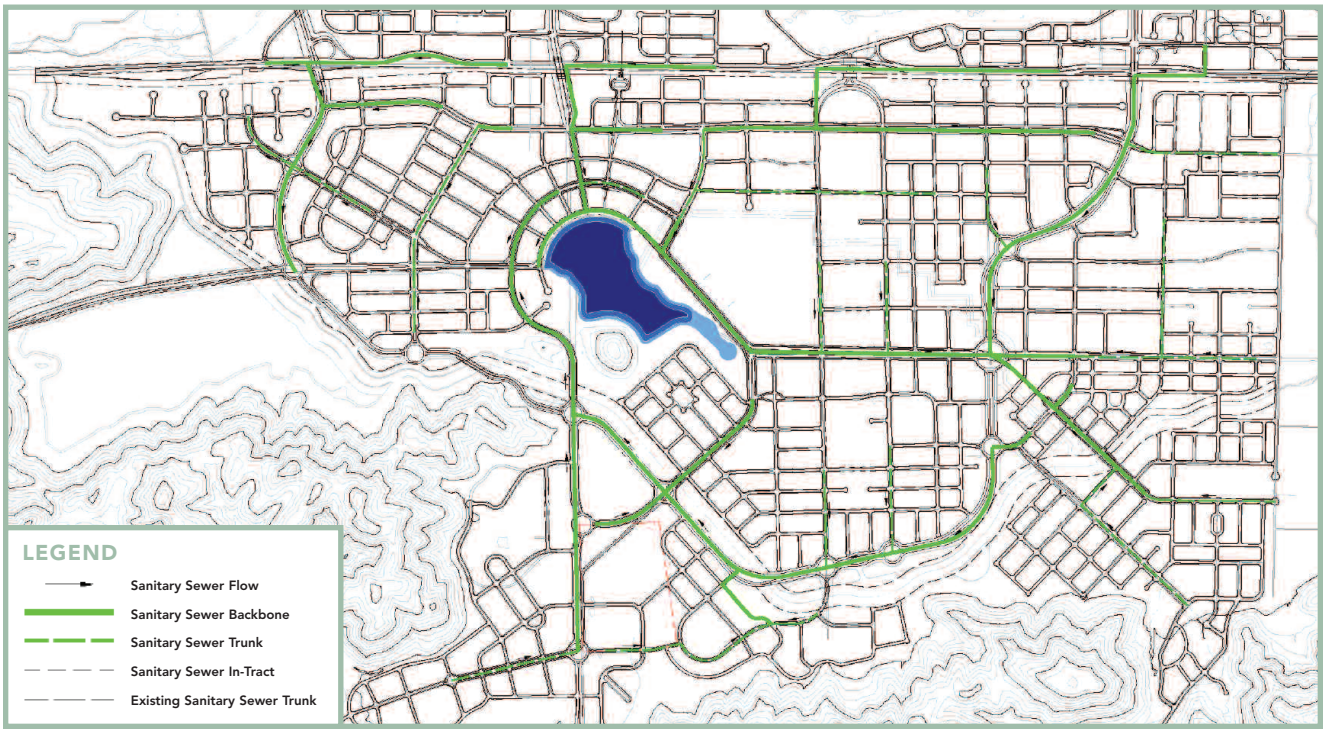
FIELD FOR STORM DRAINAGE

SANITARY SEWERAGE

The CVSP sanitary sewer system would consist of approximately 117,000 linear feet of 8-inch to 36-inch pipeline distributed along major arterial and collector roadways within the CVSP project area. This length includes "backbone" sewer trunks and collectors and does not include subdivision feeders, service laterals, and septic tank/leach field abandonment. The limited existing sewer facilities within the CVSP area will be removed as part of the sewer improvements from the Plan. The main sewer trunk line would begin at the intersection of Palm Avenue and Santa Teresa Boulevard and continue northward through the development to connect with the existing 48-inch sewer main in Santa Teresa Boulevard, just north of the proposed Lake. Primary sewer collectors would generally follow the natural grade patterns of the Valley and flow in an east-west direction to the proposed sewer trunk line.

The sewer system improvements would include approximately 400 new manhole structures; removal of approximately 1,000 feet of existing 48-inch sewer in Santa Teresa Boulevard; and removal of approximately 3,600 feet of existing 12-inch to 21-inch sewer in Bailey Avenue. No pump stations are also anticipated. Once collected, the wastewater would be conveyed to the existing San José/ Santa Clara Water Pollution Control Plant (WPCP) through approximately 20 miles of existing sewer trunk mains. (Additional discussion will be provided after the EIR is completed.)

FIGURE 32: CONCEPTUAL SANITARY SEWER SYSTEM



WATER DEMAND AND SOURCES

For the CVSP, a water supply assessment (WSA) must be furnished to the City by the public water suppliers in accordance with the provisions of State legislation Senate Bill 610 (Chapter 643, Statues of 2001). The WSA is written to assist local governments in making decisions about specified large land development projects with respect to water supply availability. The City prepared its own independent Water Supply Evaluation (WSE), based on the WSAs submitted by the three potential water retailers.

Demand Forecast

Water demands of the specific plan have been forecast for anticipated residential and commercial/industrial development using a two-part process consisting of (1) demographic forecasts of population, housing, employment, and land use; and (2) unit water factors for each of these demographic factors that consider water conservation practices. The forecast was generated for three portions of the study area consisting of the development area north of Palm Avenue, South Coyote Valley Greenbelt, and surrounding areas outside the CVSP area. Although only the area north of Palm Avenue is proposed for urban development under the specific plan, all of these areas are within the Coyote Groundwater Subbasin, which is the principal water supply source. The water demand forecast is summarized below, and outlined in more detail in the Water Supply Assessment for the CVSP.

CVSP Development

For the entire Coyote Valley sub-basin at CVSP project buildout, demand is forecasted to be about 18,500 acre-feet per year (ac-ft/yr). Of this amount, approximately 14,200 ac-ft/yr is potable water demand. The water demands of the Greenbelt and the City of Morgan Hill's Sphere of Influence are also included in the analysis completed for the WSE. Non-potable water demand of the sub-basin is estimated to be 4,300 ac-ft/yr plus an additional 6000 ac-ft/yr for groundwater recharge for a total of 10,300 ac-ft/yr.

Water Sources

The following is a summary of potential water sources as identified in the SCVWD's Urban Water Management Plan and the WSAs prepared by the tree potential water retailers. It should be noted that all of the water retailers have indicated that they have or will have water resources available to serve the CVSP project.

FIGURE 33: CONCEPTUAL POTABLE WATER SUPPLY SYSTEM

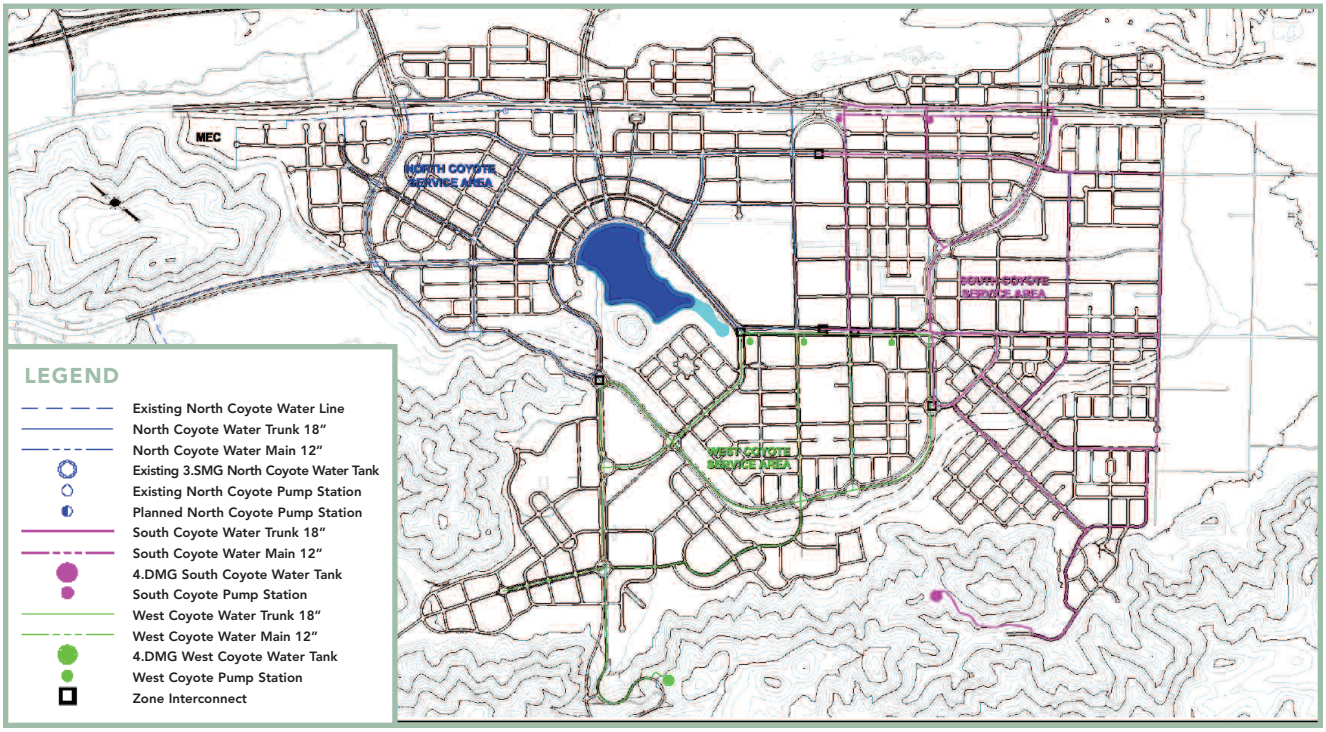
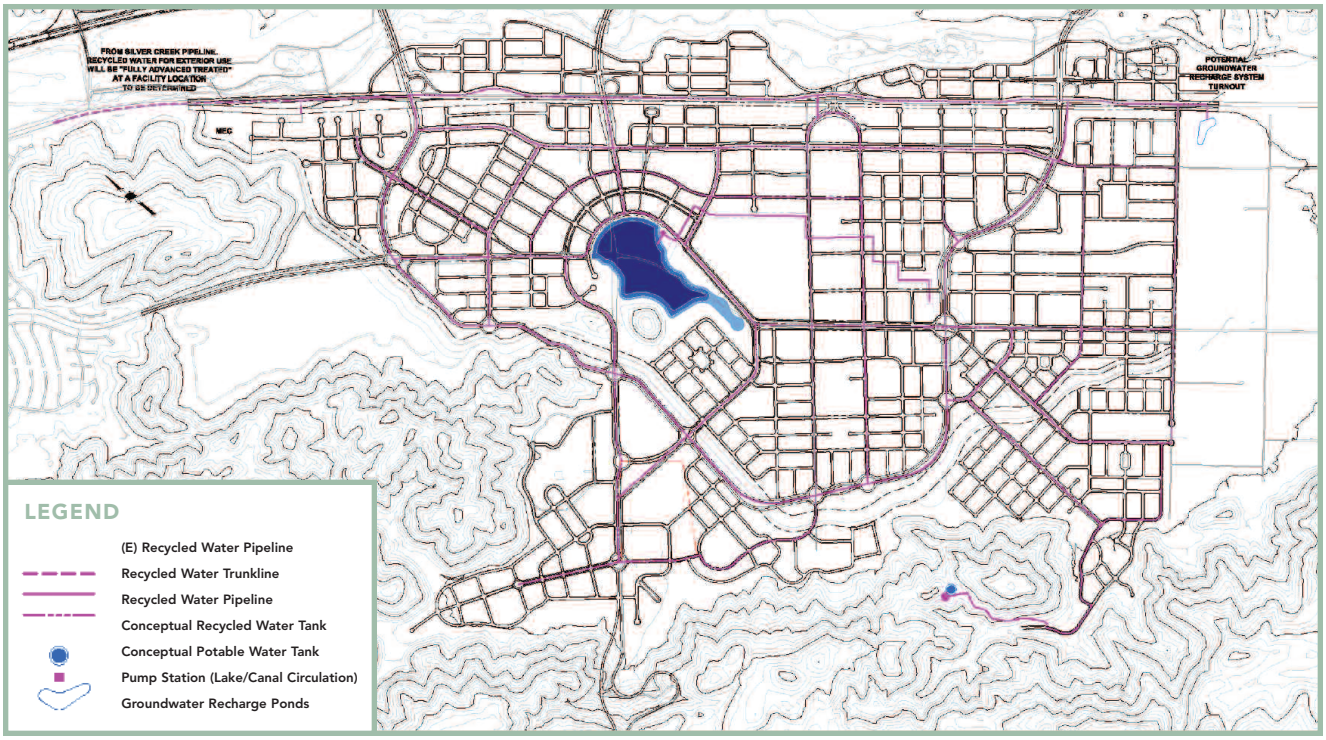


FIGURE 34: CONCEPTUAL RECYCLED WATER SUPPLY SYSTEM



a. *Groundwater Recharge:* Groundwater recharge within the CVSP Area could occur in percolation basins that could be located within the Greenbelt or through in-stream recharge within relocated and restored Fisher Creek, most likely, south of Bailey Avenue. Sources of recharge water may include untreated water from the Cross Valley Pipeline and/or recycled water obtained by extending the existing pipeline that currently serves MEC and constructing a new advanced treatment. The construction of the groundwater recharge ponds and the advanced treatment facility would require separate environmental review.

b. *Water Demand for Direct Non-Potable Use:* Water demands for irrigation, filling the focal lake, and other appropriate non-potable use could also be met by using advanced treated recycled water.

c. *Water Demand for Direct Potable Use:* Currently, water demand in the Sub-basin is approximately 8,000 ac-ft/yr, primarily for irrigation, which is extracted from the groundwater basin through the use of wells. At project buildout, it is estimated that total water demand would be 18,500 ac-ft/yr, of which approximately 14,200 acre feet is potable water demand. According to the SCVWD, approximately 13,000 ac-ft/yr can be extracted from the Coyote groundwater basin (the existing 8,000 ac-ft plus an additional 5,000 ac-ft/yr); therefore total unmet potable water demand is estimated to be 1,200 ac-ft/yr. The projected unmet demand for potable water (1,200 ac-ft/yr) could be met using water delivered to Coyote Valley from the existing Santa Teresa Water Treatment Plant or groundwater extracted from the Santa Clara Sub-basin north of the Coyote Narrows, where groundwater reserves currently exceed the additional demand of the CVSP project.

d. Water Demand Met by Conservation: Water demand for the CVSP project and the Coyote Sub-basin was derived using factors based on standard water conservation measures. By implementing more stringent conservation measures, demand would be reduced and potentially less water would need to be extracted from the groundwater and/or required from other sources. The SCVWD strongly encourages that conservation measure be included in the CVSP project design.

Recycled Water

There are strict State and Local laws, regulations and policies which regulate the treatment, use and application of recycled water. The Santa Clara Valley Water District (SCVWD) has prepared "Guiding Principles" for the CVSP that include a goal of having a reliable supply of high quality water, including the promotion of the use of recycled water. To meet this goal and policy, CVSP includes the use of recycled water primarily for landscape irrigation

particularly in the public realm areas of medians and rights of way, parks, and schoolyards, as well as for commercial landscape frontages and groundwater recharge.

The primary source of recycled water is expected to be the existing South Bay Water Recycling (SBWR) 30-inch Silver Creek Pipeline Extension, which has an additional capacity of 5 million gallons per day (mgd) and is reserved for the SCVWD's use. The pipeline terminates near the Metcalf Energy Center (MEC) at Blanchard Road.

Because of the sensitivity of the unconfined groundwater basin to potential contamination, recycled water used for irrigation or groundwater recharge should be advanced treated beyond the current level of treatment at the WPCP. Thus, a new Advanced Recycled Water Treatment (ARWT) Plant would be required to be constructed in Coyote Valley.

ENERGY

Electric power and natural gas services are provided to Coyote Valley by the Pacific Gas and Electric Company (PG&E). PG&E has a number of existing electrical transmission towers and high voltage lines that connect to the PG&E Metcalf Substation and overhead electrical lines that supply electricity to the Coyote Valley region.

Natural gas service is provided through existing gas utilities in Santa Teresa Boulevard and Monterey Road. There is an existing 34" high-pressure gas line that runs parallel to U.S.101 that connects to the north corner of the CVSP area, across U.S.101 and Fisher Creek, and enters the North Coyote area near the Metcalf Energy Center.

The Metcalf Energy Center (MEC) is a state-of-the-art power generation facility in the Coyote Valley area of San José. The facility is designed to utilize natural gas for fuel and to use and evaporate an average of three million gallons per day of recycled water in the plant's cooling system. The facility is located across from the existing PG&E Metcalf Substation and the existing natural gas lines that run along U.S.101. The plant began operations in June 2005 and delivering up to 600-megawatts of power to the northern California power market. MEC is the first large power generator in Silicon Valley and is expected to be the cornerstone of energy supply and reliability for the region, while reducing the region's reliance on diesel power.

The CVSP encourages solar energy and other non-fossil fuel energy sources. These sources tend to support the energy needs of individual developments; however, during the buildout of the specific plan, locally generated "alternative" sources are encouraged.

TELECOMMUNICATIONS

Coyote Valley is a near-Greenfield, and therefore its development into a vibrant urban area would require significant infrastructure investments, including telecommunications. A major Southwestern Bell Corporation (SBC), now AT&T, telephone-switching station which was recently constructed on the north side of Bailey Avenue has the capacity to deliver significant service to Coyote Valley. As future new development is entitled, close coordination with AT&T would be essential to ensure that adequate planning is being made for any facility enhancements given the new demand.

All electrical, telecom and CATV services are to be underground (i.e no aerial utility services). (Additional discussion of cellular antennas and equipment, including location criteria, is under preparation.)

SOLID WASTE

Coyote Valley is proximate to the Kirby Canyon Landfill, which is east of U.S. 101 in the vicinity of Coyote Creek Golf Drive. While this landfill is nearly adjacent to the boundaries of the CVSP, the project site is not currently within the service area of the landfill. Annexation into the sanitation district would be needed. Coyote Valley is expected to participate fully in the City's service programs including recycling, and the collection and use of green waste.

INFRASTRUCTURE MAINTENANCE

Given the amount of infrastructure requirements of the new Coyote Valley community, and the need for their regular maintenance, the CVSP land plan locates potential maintenance yards for use by the variety of agencies that would be involved in delivering services such as the Morgan Hill Unified School District, and the City's Department of Transportation (DOT). Since most of these service agencies have similar maintenance needs, the CVSP proposes a single joint use maintenance and vehicle storage facility for DOT, the Department of Parks, Recreation and Neighborhood Services, and others. This facility is planned to be located in the north portion of the Valley in the area near the Metcalf Energy Center. The use of this location for maintenance activities, unlike residential and high technology, is compatible with the Metcalf Energy Center. The proposed location also provides convenient access to major street networks allowing easy access around the community.