

3.10 Utilities and Service Systems

Environmental Setting

PHYSICAL SETTING

Within the Planning Area, the City of Livermore, the Alameda County Flood Control and Water Conservation District (Zone 7), the California Water Company, and regional utility providers directly control the infrastructure systems responsible for storm drainage, flood control, wastewater, potable water, and recycled water.

Stormwater

The City's stormwater drainage system conveys runoff from developed areas into creeks, thereby protecting life and public property from flood hazards. The City of Livermore maintains the underground pipes that comprise the storm drainage system, as well as some of the creek channels. Zone 7 Water Agency owns and maintains some of the regional infrastructure for flood control, which collects the City's storm water discharge. Within the Planning Area, Zone 7 owns and maintains the Collier Creek from I-580 south to its connection with Arroyo Las Positas. Zone 7 only owns the north side of Arroyo Las Positas from Isabel to the crossing under Airway Blvd. Zone 7 does not own or maintain any facilities on the north side of I-580 in the Isabel Neighborhood.

As a result of the Plan, changes in land use will potentially impact stormwater runoff quantity and water quality. Development tends to increase runoff discharge rates due to the increase of impervious surfaces (i.e. roofs, walks, roadway and parking pavement), which prevent the natural infiltration of stormwater into soil. Runoff can result in detrimental environmental impacts if not managed properly. Current standards under the Municipal Regional Stormwater Permit (MRP) require new development to detain storm runoff to pre-development rates and treat runoff before it leaves the site using Low Impact Development methods. The City of Livermore enforces MRP requirements as part of the development review process. In addition, the City regulates the floodplain in accordance with the natural flood insurance program and community rating system class 9 standards. To mitigate for future flooding impacts within and around the City, there are four flood protection improvements that will be completed separately from this Plan. Outside of the city limits and east of Las Positas College, the City is proposing a debris and desilting basin that will mitigate for flooding that occurred in the Planning Area in early 2017. Within the Planning Area, the City is actively working on 1) Restoring an environmental mitigation basin that was damaged by silt from storms in early 2017, located where Collier Canyon Road shifts to the northeast, intercepting with Collier Canyon Creek; 2) Restoring the capacity of a portion of Arroyo Las Positas as it travels through the Las Positas Golf Course, west of Airway Boulevard; and 3) Desilting the portion of Arroyo Las Positas south of Lindbergh Avenue and west of Nissen Drive to restore the

capacity and the sections east of Airway Boulevard to Isabel Avenue. The Plan includes additional policies related to runoff rates and quality, listed in the goals and policies below.

Potable and Non-Potable Water

Zone 7 is the water wholesaler for most of the Tri-Valley. Zone 7 sells water to the City of Livermore (Municipal Water) and California Water Service Company (Cal Water) for distribution to end users (e.g., residents, businesses, etc.). The City of Livermore manages the network of sanitary sewers, Water Reclamation Plant, and recycled water system. Most of the Isabel Neighborhood is within the Municipal Water service area, while the portion south of I-580 and east of Isabel Avenue is within the Cal Water service area. The portion within the Municipal Water service area is also part of the recycled water system, with “purple pipe” mains in all main roadways.

Zone 7, the City, and Cal Water prepare Urban Water Management Plans (UWMP) to monitor water supply and demand for the following 20-year period. The agencies completed the mandatory five-year update in 2015/16. The City is currently updating its Water and Sewer Master Plans to evaluate specific infrastructure needs. As part of this effort, the City has updated its projections of water demands citywide and with the Isabel Neighborhood Plan, compared to the adopted UWMP. Based on the adopted UWMPs and updated projections, Zone 7 has indicated that there is sufficient water supply at this time to serve the City’s General Plan anticipated growth, which accounts for development under the Isabel Neighborhood Plan (West Yost Associates, 2017a).

New development will be responsible for installing underground pipes and connections to the existing water distribution and sanitary sewer systems as part of project construction. The capacity of the existing systems and the anticipated tie-in locations of new piping were evaluated to determine the need for specific improvements to accommodate new development under the Isabel Neighborhood Plan. The evaluation determined that the potable water distribution system is capable of meeting the increased demands related to storage capacity, pumping capacity, pressure regulating station capacity, and pipeline capacity (West Yost Associates, 2017b). Sanitary sewer upgrades, however, will be necessary. These include upsizing five segments of gravity mains and increasing the capacity of the existing Airport Pump Station (West Yost Associates, 2017c). Several of these improvements are already planned to serve growth under the General Plan, while three of the mains need upsizing for the additional development anticipated under buildout of the Isabel Neighborhood Plan.

It is estimated that the Isabel Neighborhood would generate about 200,000 gallons of wastewater per day, under buildout conditions. The Water Reclamation Plant is currently treating 6 million gallons per day (MGD), but has the capacity to treat 8.5 MGD (average dry weather flow). The City’s Capital Improvement Program includes expansion of the plant to meet projected flows under buildout of the General Plan in 2025. With this expansion, there would be sufficient capacity to accommodate demand from Isabel Neighborhood development, as well as other planned growth citywide.

Offering recycled water for irrigation is a key strategy for reducing demand for potable water and increasing resilience during drought conditions. Since the Isabel Neighborhood is currently served by the City’s recycled water system, it is an ideal location to focus new development from a water planning perspective. In addition, multi-family residences tend to utilize less water per household

and per area of land. The City's existing policies related to water efficiency and conservation would further reduce water demand and maintenance needs resulting from new development.

The Water Reclamation Plant has capacity to produce over 2,000 million gallons of recycled water per year, although the City used only 760 million gallons in 2015 (City of Livermore, 2016). Therefore, there is capacity to serve new development within the Isabel Neighborhood, which would be responsible for connecting to the purple pipe mains. No upgrades to existing recycled water infrastructure are necessary to accommodate projected demand.

According to the Infrastructure Element of the General Plan, the approval of new development is conditioned on the availability of sufficient water supply, storage and pressure requirements and adequate long-term capacity of wastewater treatment, and conveyance and disposal facilities to service the proposed development. New development would be subject to development impact fees to cover the fair share cost of infrastructure upgrades related to the water, sewer, and wastewater treatment systems.

Water Supply and Demand

The City of Livermore's 2015 UWMP assesses current and projected water usage, supply, conservation, and recycling. Projected development in the Planning Area is not currently included in the City of Livermore's long-range water supply planning for future growth in Livermore.

Wastewater

The City of Livermore is responsible for operation and maintenance of the local sanitary sewer collection system within the Planning Area. The City of Livermore Water Resources Division (WRD) operates and maintains the wastewater collection system that conveys all the wastewater generated in the City to the Livermore Water Reclamation Plant (WRP). The treated wastewater that is not recycled is sent through the Livermore Amador Valley Water Management Agency (LAVWMA) pipeline for disposal in the San Francisco Bay. The City of Livermore has four lift stations that serve to pump wastewater to the WRP. Two of these lift stations are in, or adjacent to the Planning Area: the Airport Pump Station and the Junior College Pump Station.

Solid Waste

Livermore Sanitation collects and transports solid waste, including garbage, recyclables, and compostable materials, in addition to providing street sweeping services.

Landfills

Table 3.10-1 summarizes the capacity of the two landfills in the Livermore area. Collectively, the two landfills have 72.8 million cubic yards in remaining capacity.

Table 3.10-1: Landfill Summary

<i>Landfill</i>	<i>Location</i>	<i>Maximum Permitted Throughput (tons/day)</i>	<i>Permitted Capacity (cubic yards)</i>	<i>Remaining Capacity (cubic yards)</i>
Vasco Road	4001 N. Vasco Road, Livermore	2,518	32,970,000	7,379,000
Altamont	10840 Altamont Pass Road, Livermore	11,150	124,400,000	65,400,000

Source: CalRecycle, 2017a.

REGULATORY SETTING

State Regulations

California Water Code Article 4

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board or RWB) is the permitting agency for dischargers of treated wastewater. The WRP is responsible for the treatment of the City's wastewater which is ultimately disposed to the San Francisco Bay. The Plant acts as the City's publicly owned treatment works (POTW). The RWB develops requirements that are issued in orders which permit POTW to operate under the regulations provided in the California Water Code.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The RWB oversees the implementation of the Porter-Cologne Act largely through issuance of NPDES permits for point of source discharges and waste discharge requirements (WDRs).

California's Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) is the State's leading authority on recycling, waste reduction, and product reuse. CalRecycle plays an important role in the stewardship of California's vast resources and promotes innovation in technology to encourage economic and environmental sustainability. CalRecycle brings together the State's recycling and waste management programs and continues a tradition of environmental stewardship. Mandated responsibilities of CalRecycle are to reduce waste, promote the management of all materials to their highest and best use, and protect public health and safety and the environment.

California Integrated Waste Management Act (AB 939)

AB 939, California's Integrated Waste Management Act of 1989, mandates that 50 percent of solid waste be diverted by the year 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. This requires each region to prepare a source reduction and recycling element to be submitted to CalRecycle.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327)

AB 1327 was established in 1991, which required CalRecycle to develop a model ordinance for the adoption of recyclable materials in development projects. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects. In 2005, California diverted 52 percent of its waste from landfills; therefore, the state, including the Planning Area, reached this goal and is in compliance with this law.

Disposal Measurement System Act of 2008 (SB 1016)

SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, while establishing revised calculations for those entities that did not meet the 50 percent diversion rate. SB 1016 also established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal-based indicator—the per capita disposal rate—uses only two factors: a jurisdiction’s population (or in some cases employment) and its disposal as reported by disposal facilities.

Solid Waste Diversion (AB 341)

Effective July 1, 2012, AB 341 requires that commercial enterprises that generate four cubic yards or more of solid waste weekly participate in recycling programs. This requirement also includes multifamily housing complexes of five units or more, regardless of the amount of solid waste generated each week. The legislature and Governor Brown, through enactment of AB 341, set a goal of 75 percent recycling, composting, or source reduction of solid waste by 2020. Instead of focusing primarily on local diversion, the law calls for the State and CalRecycle to take a statewide approach to decreasing California’s reliance on landfills.

Local Regulations

City of Livermore General Plan

The City of Livermore General Plan Infrastructure and Public Services Element outlines objectives and policies that relate to potable water infrastructure, quality, and availability. Domestic water policies include the availability of potable water to all of the City’s residents and businesses, the approval of new development conditioned on the availability of sufficient water supply, and, when appropriate, the use of recycled water. The element calls for the City to adopt a series of Best Management Practices for water conservation measures that will be mandatory in new development and strongly encouraged in existing developments. Additionally, the General Plan addresses water infrastructure, calling for careful planning when utility lines must cross seismic fault and minimizing the crossing of wetland or creeks.

The Infrastructure and Public Services Element also addresses landscape water and stormwater. For landscape water, it is required that projects adhere to the State’s mandatory water efficient landscape ordinance. Stormwater policies encourage the proper carrying capacity of stormwater flows, regulate runoff, and place the responsibility of addressing stormwater infrastructure for new developments with the developer. The element also limits stream modifications to projects that better contain flood flows, re-route stormwater to restore creek conveyance capacity and enhance groundwater recharge, stabilize creek beds and banks and control erosion, remove sediment and debris,

provide public access for maintenance and emergency vehicles, provide for trails and recreational facilities, restore creek natural habitat and wetlands areas and provide for water filtration.

The Infrastructure and Public Services Element also addresses wastewater through policies regarding the availability of wastewater treatment for the city's residents and businesses, the approval of new development based upon the availability of wastewater treatment, the adequate installation and maintenance of sewer lines, properly planning for sewer lines that cross seismic faults, and implementing programs to reduce the impact of restaurants and businesses discharging grease into the wastewater system. Additionally, the element requires the City to develop a wastewater master plan that may include any, or a combination of the following components:

- Increased water reclamation, storage and disposal via agriculture irrigation and/or other uses;
- Increased water reclamation, storage within an approved Zone 7 facility such as the Chain of Lakes, and disposal via irrigation within Livermore and the surrounding vicinity;
- The purchase of additional capacity in the LAVWMA export pipeline. This option must be approved by the voters of Livermore through a subsequent ballot measure; or
- Other options as may be developed that are more cost effective and/or environmentally superior.

The Infrastructure and Public Services Element also covers solid waste, and outlines objectives and policies to increase waste diversion from landfill and recycling and to address source reduction of solid waste for City facilities and local businesses.

City of Livermore Municipal Code: Public Services

Projects within the proposed development are to abide by the regulations set in the City of Livermore Municipal Code (LMC), Title 13, "Public Services." These include, but are not limited to, the codes stated below.

13.16.030 Number of Consumers Served by a Single Meter-Property Owner Liability

- A. Where more than one residential consumer is supplied through one service connection and one meter, the city shall hold the owner of the property responsible for payment of all water furnished through such one service connection and one meter.
- B. Where practicable to serve each consumer through a separate meter service from a single connection, the city may install meters for each consumer at the property owner's or consumer's expense, and collect at the established meter rates for water supplied through each meter.

13.24.010 Water Meter Permit Required-Purpose

For the purpose of administering the Zone 7 Alameda County Flood Control and Water Conservation District water connection charges within the city, as established by Ordinance 72-1 of said Zone 7, there is required a water meter permit for each new or enlarged water service established within the city.

All commercial buildings must be equipped with a separate water meter to comply with Section 10631 of the California Water Code. Commercial buildings that have multiple consumers on one or more water services must have a separate meter for each customer in the building.

13.32.060 General Discharge Prohibitions

A. No person shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which will interfere with the operation or performance of the POTW. These general prohibitions apply to all such users of the POTW whether or not the user is subject to national categorical pretreatment standards or any other national, state or local pretreatment standards or requirements. A user may not contribute the following substances to the POTW:

1. Any liquids, solids or gases with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 [Code of Federal Regulations] CFR 261.21. At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the system (or at any point in the system) be more than five percent nor any single reading over 10 percent of the lower explosive limit (LEL) of the meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides and any other substances which the city, the state or EPA has notified the user is a fire hazard or a hazard to the system;
2. Solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the wastewater treatment facilities such as, but not limited to: grease, garbage with particles greater than one-half inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, wastepaper, wood, plastics, gas, tar, asphalt residues, residues from refining, or processing of fuel or lubricating oil, mud, or glass grinding or polishing wastes.

Specifically excluded from the sewers are waste products resulting from the handling, storage and sale of fruits and vegetables from other than retail produce establishments, or other foods not intended primarily for immediate consumption;

3. Any wastewater having a pH less than 6.0 or greater than 10.5, unless a city permit is obtained (see LMC 13.32.120). Discharge of wastewater with a pH lower than 5.0 is prohibited at all times. Wastewater having any other corrosive property capable of causing damage or hazard to structures, equipment and/or personnel is also prohibited;
4. Any wastewater containing toxic pollutants in sufficient quantity, either singly or by interaction with other pollutants, to injure or interfere with any wastewater treatment process, constitute a hazard to humans or animals, create a toxic effect in the receiving waters of the POTW, or to exceed the limitation set forth in the categorical pretreatment standard. A toxic pollutant shall include, but not be limited to, any pollutant identified pursuant to Section 307(a) of the Act;

5. Any noxious or malodorous liquids, gases or solids which either singly or by interaction with other wastes are sufficient to create a public nuisance or hazard to life or are sufficient to prevent entry into the sewers for maintenance and repair;
 6. Any substance which may cause the POTW's effluent or any other product of the POTW such as residues, sludges, scums or gases, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case shall a substance discharged to the POTW cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under Section 405 of the Act, any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or state criteria applicable to the sludge management method being used;
 7. Any waters or wastes which contain more than 300mg/l of oil and grease of animal and vegetable origin and/or 100 mg/l of oil and grease of mineral origin;
 8. Any substance which will cause the POTW to violate its NPDES permit or the receiving water quality standards;
 9. Any wastewater with objectionable color not removed in the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions;
 10. Any wastewater having a temperature which will inhibit biological activity in the POTW treatment plant resulting in interference, but in no case wastewater with a temperature at the introduction into the POTW which exceeds 40 degrees Centigrade (104 degrees Fahrenheit);
 11. Any pollutants, including oxygen-demanding pollutants (BOD, etc.) released at a flow rate and/or pollutant concentration which a user knows or has reason to know will cause interference to the POTW;
 12. Any wastewater containing any radioactive wastes or isotopes of such half-life or concentration as may exceed the limits established by the state or federal regulatory agency applicable to the user;
 13. Any wastewater which causes a hazard to human life or creates a public nuisance;
 14. Any wastewater which contains any pollutant, including oxygen-demanding pollutants, at a flow rate and/or pollutant concentration which causes or threatens to cause interference with the wastewater treatment process. For the purposes of this section, any discharge at a flow rate or concentration which could cause a violation of the prohibited discharge standards or specific pollutant limitations set forth in LMC 13.32.110 shall be deemed a slug discharge.
- B. When the water resources division manager determines that a user(s) is contributing to the POTW any of the above-enumerated substances in such amounts as to interfere with the operation of the POTW, the water resources division manager shall: (1) advise the user(s) of the impact of the contribution on the POTW; and (2) develop effluent limitation(s) for such user to correct the interference with the POTW.

13.45.030 Discharge of Pollutants

No person shall cause a discharge of non-stormwater discharges to the city storm sewer system, except the following:

- A. Any discharge regulated under a national pollutant discharge elimination system (NPDES) permit issued to the discharger and administered by the state of California under authority of the United States Environmental Protection Agency; provided that the discharger is in full compliance with all requirements of the permit and other applicable laws or regulations;
- B. Discharges from the following activities when properly managed in a manner satisfactory to the water resources manager: water line flushing, landscape irrigation, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration to separate storm sewers, uncontaminated pumped groundwater, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washings, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges or flows from fire-fighting.

13.45.100 Notification of Intent and Compliance with General Permits

Each industrial discharger, discharger associated with construction activity or other discharger, described in any general stormwater permit addressing such discharges, as may be adopted by the United States Environmental Protection Agency and the State Water Quality Control Board, San Francisco Bay region, shall provide notice of intent, comply with and undertake all other activities required by any general stormwater permit applicable to such discharges.

Each discharger identified in an individual NPDES permit relating to stormwater discharges shall comply with and undertake all activities required by such permit.

13.45.110 Best Management Practices

Where best management practice guidelines or requirements have been adopted by any federal, state of California, regional and/or city agency for any activity, operation or facility which may cause or contribute to stormwater pollution or contamination, illicit discharges, and/or discharge of nonstormwater to the stormwater system, every person undertaking such activity or operation, or owning or operating such facility shall comply with such guidelines or requirements as may be identified by the director of public works.

13.48.050 Compliance prerequisite to building permit issuance

Any persons applying for a building permit or other permit or permission to improve land located within any underground utility district, or desiring electric power or communication service to serve any such land shall be responsible for compliance with this chapter, and no such building permit or other permit or permission shall be issued or given unless and until such person shall submit satisfactory proof that necessary arrangements have been made with utility companies (or agents involved) for underground installation of facilities as required pursuant to this chapter.

13.48.070 Underground facilities – Plans required

Prior to the hearing specified in LMC 13.48.020, each utility shall submit to the city engineer a plan showing the location, alignment, depth and character of work to underground its utility in the district proposed to be established by the city council. Such plans shall designate the points of transition from overhead to underground. Sufficient copies of such plan shall be provided to the city engineer in order to facilitate coordination with other utilities or jurisdictions.

13.48.090 Use of Trenches by Several Utilities

The supplying utilities shall consult with the city engineer regarding the feasibility of installing two or more utility services in the same trench.

City of Livermore Municipal Code: Solid Waste Management

Chapter 8.08, “Solid Waste Management,” of the LMC establishes requirements for recycling and composting to achieve the diversion goals mandated by AB 939, discussed above under *State Regulations*.

Impact Analysis

SIGNIFICANCE CRITERIA

Implementation of the proposed Plan would have a potentially significant adverse impact if it were to:

- Criterion 1:** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Criterion 2:** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Criterion 3:** Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Criterion 4:** Not have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements needed.
- Criterion 5:** Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments.
- Criterion 6:** Result in solid waste disposal needs that exceed the permitted landfill capacity serving the project.
- Criterion 7:** Cause solid waste levels to be in non-compliance with federal, State, or local regulations related to solid waste.

METHODOLOGY AND ASSUMPTIONS

Potential impacts to utilities and service systems are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, the City of Livermore's Standard Conditions of Approval, and the policies included in the proposed Plan. In addition, a Water Supply Assessment and sewer evaluation was prepared for the proposed Plan. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less than significant.

IMPACTS

Impact 3.10-1 Implementation of the proposed Plan would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (*Less than Significant*)

The Regional Water Board oversees the permitting of the WRP. The WRP has the capacity to treat 8.5 million gallons per day (MGD) and is currently treating only 6 MGD, resulting in a difference of 2.5 MGD between capacity and current treatment level. According to the Isabel Neighborhood Plan Sewer System Evaluation, additional development resulting from implementation of the proposed Plan would require treatment of an additional 0.42 MGD of Average Dry Weather Flow (West Yost Associates, 2017b). Therefore, implementation of the proposed Plan would not cause the WRP to exceed treatment requirements, resulting in a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.10-2 Implementation of the proposed Plan would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

The 2017 Potable Water System Evaluation determined that there are no infrastructure requirements needed to meet the additional demands of new development under the proposed Plan. Development resulting from implementation of the proposed Plan would lead to an additional potable water demand of 0.53 MGD. This increase represents less than 1 percent of the demands for Livermore and Cal Water-Livermore combined and is not significant enough to require new water facilities to be installed. The Airway booster pump station was found to have a deficit of 179 gallons per minute when the Planning Area demands at buildout are considered. However, this is only the case when it is assumed that all supply into Zone 1 is from the Airway booster pump station. Turnouts 5 and 9 are capable of supplying this area by gravity, so the capacity deficit does not trigger the need for an increase in pumping capacity as long as the area in question is supplied by Turnouts 5 and 9. The City's available water storage capacity is determined to be sufficient to meet the Planning Area's demands with a surplus of 0.26 million gallons, and no upgrades to pumping infrastructure are recommended as a result of the additional demands from the Planning Area (West Yost Associates, 2017b). Therefore, the proposed Plan would have a less than significant impact related to the expansion of water facilities.

As mentioned under Impact 3.10-1, the WRP has a remaining capacity to treat 2.5 MGD of wastewater. However, the pump system would need to be upgraded, regardless of implementation of the proposed Plan, though to a greater extent when the proposed Plan is considered. These include upsizing five segments of gravity mains and increasing the capacity of the existing Airport Pump Station (West Yost Associates, 2017c). Furthermore, the pump station improvements would be subject to State and local regulations regarding environmental review and the minimization of impacts from construction related activities such as grading, as well as policies in the General Plan that require that new utilities be designed and constructed in such a manner as to minimize potential environmental impacts. Therefore, the proposed Plan would have a less than significant impact related to the expansion of wastewater facilities.

Mitigation Measures

None required.

Impact 3.10-3 Implementation of the proposed Plan would not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

City of Livermore Standard Conditions and Zone 7 regulations require all development projects to meet hydromodification requirements that limit storm runoff from new construction to the pre-project flow levels. This results in a net-zero increase in storm water drainage flowing to and through the existing drainage infrastructure.

Chapter 7 of the Alameda County C3 Technical Guidance Manual identifies three types of hydromodification management measures: on-site controls, regional controls, and in-stream measures (Alameda Countywide Clean Water Program, 2016). On-site controls include minimizing impervious area, disconnecting roof downspouts from the storm drain system so that they discharge to the ground, providing localized detention, and including extended detention basins, wet ponds, and constructed wetlands. Regional hydromodification measures include flow control structures that collect stormwater runoff discharge from multiple projects so that the hydromodification standards are met for all projects at the point where the regional hydromodification control discharges. In-stream measures include biostabilization techniques using live vegetation roots to stabilize banks and localized structural measures such as rock weirs, boulder clusters, or deflectors. There are no existing deficiencies in the Planning Area's stormwater system that development of the proposed Plan would exacerbate. Therefore, the proposed Plan would have a less-than-significant impact related to stormwater drainage facilities.

Mitigation Measures

None required.

Impact 3.10-4 Implementation of the proposed Plan would not result in insufficient water supplies available to serve the project from existing entitlements and resources, or require expanded entitlements. (*Less than Significant*)

The Water Supply Assessment prepared for the proposed Plan and reviewed by Zone 7 and Cal Water indicated that the projected demands are within the existing entitlements and resources planned for future water supply (West Yost Associates, 2017a). Based on information provided by the City, the City of Livermore Standard Conditions of Approval would require that all development within the Planning Area would use recycled water for irrigation purposes.¹ This requirement would help reduce the demand for potable water supply and ultimately support a sufficient water supply.

Mitigation Measures

None required.

Impact 3.10-5 Implementation of the proposed Plan would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (*Less than Significant*)

As discussed under Impact 3.10-1, the WRP has the capacity to treat 8.5 MGD, but is currently treating only 6 MGD. The surplus capacity is more than five times greater than the additional 0.42 MGD of Average Dry Weather Flow of wastewater treatment that would be required as a result of implementation of the proposed Plan. Therefore, there is sufficient capacity at the treatment facility to treat the additional demands resulting from the proposed Plan, and there would be a less-than-significant impact.

Mitigation Measures

None required.

Impact 3.10-6 Implementation of the proposed Plan would not result in solid waste disposal needs that exceed the permitted landfill capacity serving the Planning Area. (*Less than Significant*)

Solid waste from Livermore is primarily disposed of at the Vasco Road Sanitary Landfill operated by Republic Services of California and the Altamont Landfill operated by Alameda County. The Vasco Road Sanitary Landfill has a maximum permitted throughput of 2,518 tons per day. Its maximum permitted capacity is 32,970,000 cubic yards, of which 7,379,000 cubic yards remain. The Altamont Landfill has a maximum daily throughput of 2,000 tons and a permitted capacity of 124,400,000 cubic yards. Its remaining capacity is 13,605,388 cubic yards.

¹ Conversation with Lori Parks from the City of Livermore on 7/18/17.

Table 3.10-2 shows Livermore disposal tonnage trends. Between 2010 and 2016, disposal varied between about 57,000 and 66,000 tons per year. Vasco Road Sanitary Landfill and Altamont Landfill have the capacity to accommodate about 5,534,000 and 10,204,000 additional tons respectively², for a combined total of 15.7 million tons. If Livermore produces 66,000 tons of disposal per year for the next 25 years, it would only fill about 10 percent of the remaining space in landfills. Table 3.10-3 shows disposal rates for waste management in Livermore. Disposal targets were met for both residential and employment disposal from the years 2010 through 2015.

Table 3.10-2: Livermore Disposal Tonnage Trend

<i>Year</i>	<i>Tons of Disposal</i>
2010	65,600
2011	64,031
2012	57,720
2013	57,317
2014	60,456
2015	65,094
2016	65,998

Source: Calrecycle, 2016.

Table 3.10-3: Livermore Per Capita Disposal Rates Compared to Target Rates

<i>Year</i>	<i>Population Disposal (PPD)^{1,2}</i>		<i>Employment Disposal (PPD)</i>	
	<i>Target</i>	<i>Annual</i>	<i>Target</i>	<i>Annual</i>
2010	8.3	4.4	18.1	12.0
2011	8.3	4.3	18.1	11.1
2012	8.3	3.8	18.1	9.7
2013	8.3	3.8	18.1	9.2
2014	8.3	3.9	18.1	7.6
2015	8.3	4.1	18.1	7.7

Notes

1. In 2007, California Department of Resources Recycling and Recovery (CalRecycle) introduced a new system of measuring diversion rates based on a per capita disposal measurement system equivalent to the 50 percent diversion requirement. The previous system is no longer used. The new per capita disposal measurement system is one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs.

2. PPD = Pound per person per day.

Source: CalRecycle, 2017b.

² Based on a density of in-landfill mixed solid waste of 0.75 tons per cubic yard (CalRecycle, 2013).

Given the City's ability to meet its disposal targets, as well as the remaining capacity in area landfills, the collection, transfer, recycling, and disposal needs of the projected population increase under the proposed Plan (which, as discussed in Section 3.1 of this EIR, "Land Use, Population, and Housing," does not exceed growth expected under the City's General Plan) would not result in adverse impacts on landfill facilities. It is also likely that changes in regulations will occur that would decrease the need for landfill capacity through new recycling measures. Therefore, impacts would be less than significant. Compliance with solid waste regulations and implementation of General Plan policies would further reduce the potential impact.

Mitigation Measures

None required.

Impact 3.10-7 Development under the Proposed Project would comply with federal, State, and local statutes and regulations related to solid waste. (*Less than Significant*)

As described under the Physical Setting section, waste collection services in the Planning Area are provided by Livermore Sanitation. Livermore Sanitation, the City's current franchisee, collects and transports solid waste, including trash, recyclables, and organic materials. Hazardous and electronic waste is managed by Alameda County, which operates a household hazardous and electronic waste disposal drop-off facility in Livermore. Chapter 8.08 of the LMC establishes requirements for recycling to facilitate compliance with State recycling mandates.

Development of future land uses, as designated in the proposed Plan, would be required to comply with federal, State, and local statutes and regulations related to solid waste. Therefore, the impact would be less than significant.

Mitigation Measures

None required.

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