6.13 Utilities and Service Systems

6.13.1 Introduction

This section describes impacts for utilities and service systems that would result from construction and operation of the CEQA Alternatives.

6.13.2 Regulatory Setting

There are no federal regulations associated with utilities that apply to the BART Extension and BART Extension with Transit-Oriented Joint Development (TOJD) Alternatives. State and local regulations are discussed below.

6.13.2.1 State

Assembly Bill 939

Assembly Bill 939 established the California Integrated Waste Management Board, which requires California counties to prepare integrated waste management plans and California municipalities to divert 50 percent of the waste stream.

California Senate Bill (SB) 610

Senate Bill (SB) 610 requires that water supply and demand information be prepared for projects that are the subject of an EIR. Water Code Section 10912 defines a "project" as, among other things, any proposal subject to discretionary approvals that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

California Urban Water Management Planning Act of 1983

Urban Water Management Plans (UWMPs) are prepared by California's urban water suppliers to support long-term resource planning and ensure that adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet[1] (AF) of water annually, or serves more than 3,000 urban connections, is required to assess the reliability of its water sources over a 20-year planning horizon, and report its progress on 20 percent reduction in per-capita urban water consumption by the year 2020. The plans must be prepared every 5 years and submitted to the California Department of Water Resources.

[1] 1 acre-foot is approximately 325,851 gallons.

6.13.2.2 Local

Envision San Jose 2040 General Plan

The following *Envision San Jose 2040 General Plan* (San Jose General Plan) policies apply to the BART Extension and BART Extension with TOJD Alternatives (City of San Jose 2011).

IN-1.5 Require new development to provide adequate facilities or pay its fair share of the cost for facilities needed to provide services to accommodate growth without adversely impacting current service levels.

IN-3.7 Design new projects to minimize potential damage due to storm waters and flooding to the site and other properties.

IN-3.9 Require developers to prepare drainage plans that define needed drainage improvements for proposed developments per City standards.

IN-3.10 Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit.

IN-3.5 Require mitigation for development which will have the potential to reduce downstream LOS to lower than "D", or development which would be served by downstream lines already operating at a LOS lower than "D". Mitigation measures to improve the LOS to "D" or better can be provided by either acting independently or jointly with other developments in the same area or in coordination with the City's Sanitary Sewer Capital Improvement Program.

IP-15.1 New development is required to construct and dedicate to the City all public improvements directly attributable to the site. This includes neighborhood or community parks and recreation facilities, sewer extensions, sewer laterals, street improvements, sidewalks, street lighting, fire hydrants and the like. In the implementation of the level of service policies for transportation, sanitary sewers, and neighborhood and community parks, development is required to finance improvements to nearby intersections or downstream sewer mains in which capacity would be exceeded, and dedicate land, pay an in lieu fee or finance improvements for parks and recreation needs which would result from the development.

MS-18.1 Demonstrate environmental leadership by adopting citywide policies that encourage or require new and existing development to incorporate measures to reduce potable water demand and/or increase water efficiency in order to reduce the City's need for imported water.

MS-18.3 Demonstrate environmental leadership by encouraging the creation and use of new technologies that reduce potable water demand and/or increase the efficiency of water use.

MS-18.15 Adopt city water use efficiency codes and standards and work with local, regional, state, and other public and private agencies to increase water use efficiency within San Jose and neighboring jurisdictions.

MS-19.4 Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.

City of Santa Clara 2010–2035 General Plan

The following *City of Santa Clara 2010–2035 General Plan* (Santa Clara General Plan) policies apply to the BART Extension and BART Extension with TOJD Alternatives (City of Santa Clara 2010a).

5.10.1-P5 Require adequate wastewater treatment and sewer conveyance capacity for all new development.

5.10.4-P1 Promote water conservation through development standards, building requirements, landscape design guidelines, education, compliance with the State Water Conservation Landscaping Ordinance and other applicable City-wide policies and programs.

5.10.4-P2 Expand water conservation and reuse efforts throughout the City.

5.10.4-P3 Promote water conservation, recycled water use and sufficient water importation to ensure an adequate water supply.

5.10.4-P4 Require an adequate water supply and water quality for all new development.

5.10.4-P5 Prohibit new development that would reduce water quality below acceptable State and local standards.

5.10.4-P6 Maximize the use of recycled water for construction, maintenance, irrigation and other appropriate applications.

5.10.4-P7 Require installation of native and low-water consumption plant species when landscaping new development and public spaces to reduce water usage.

5.10.4-P8 Require all new development within a reasonable distance of existing or proposed recycled water distribution systems to connect to the system for landscape irrigation.

6.13.3 CEQA Methods of Analysis

The BART Extension and BART Extension with TOJD Alternatives would require water, stormwater, wastewater, and solid waste services. Demands to these services were analyzed

against the capacity of existing infrastructure and water entitlements in accordance with the CEQA thresholds of significance (listed below) to determine if a potentially significant or significant impact would occur.

6.13.4 CEQA Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, a project would have a significant impact if it would result in any of the following conditions.

- Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- Have insufficient water supplies to serve the project from existing entitlements and resources, therefore requiring new or expanded entitlements.
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- 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.
- 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.
- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

6.13.5 Environmental Consequences

This section identifies the impacts on utilities and service systems under CEQA, as well as mitigation measures necessary to reduce potentially significant impacts to a less-than-significant level.

6.13.5.1 No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed transportation improvements (see Chapter 2, Section 2.2.1, *NEPA No Build Alternative,* for lists of these projects) and other land development projects planned by the Cities of San Jose and Santa Clara.

The No Build Alternative projects could result in effects on utilities and service systems typically associated with transit, highway, bicycle, and pedestrian facilities, and roadway projects, as well as land development projects. All individual projects planned under the No Build Alternative would undergo separate environmental review to identify effects on

utilities and service systems. Review would include an analysis of impacts and identification of mitigation measures to reduce potential impacts

6.13.5.2 BART Extension Alternative

Impact BART Extension UTIL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board

Construction

Groundwater encountered during construction of the BART Extension Alternative would be pumped from the excavation zone and tested for contaminants. Uncontaminated groundwater would be discharged into the storm or sanitary sewer system. Contaminated groundwater would receive onsite treatment and/or disposal at a permitted offsite facility in accordance with applicable laws and regulations. Therefore, there would be no exceedance of Regional Water Quality Control Board (RWQCB) treatment requirements. A *less-than-significant* impact would occur. No mitigation is required.

Operation

Operation of the BART Extension Alternative would result in wastewater generation at the BART stations and Newhall Maintenance Facility from lavatories, janitorial uses, train washing, and other sources. The BART Extension Alternative would not generate or release industrial wastewater that would conflict with RWQCB treatment requirements. Therefore, there would be no exceedance of RWQCB treatment requirements. A *less-than-significant* impact would occur. No mitigation is required.

Impact BART Extension UTIL-2: Have insufficient water supplies to serve the BART Extension Alternative from existing entitlements and resources, therefore requiring new or expanded entitlements

Construction

Water trucks would be used for dust control during construction of the BART Extension Alternative. Water would also be required to operate the tunnel boring machines. Depending on the availability of recycled water near the individual construction sites at the time of construction, use of recycled water is a possibility for dust control. This water demand would be temporary and incremental, representing a *less-than-significant* impact. No mitigation is required.

Operation

San Jose

The Alum Rock/28th Street, Downtown San Jose, and Diridon BART Stations would require water supply for operational purposes, including restrooms and custodial needs. Approximately 2,000 gallons per day (gpd) of water would be required across the three

stations. The Newhall Maintenance Facility would also require 6,000 gpd of water, mostly related to the train car washer (San Jose Water Company 2016).

Water supplied to San Jose's BART facilities would be provided by San Jose Water Company (SJWC). SJWC prepared a Water Supply Assessment (WSA) for the BART Extension, which was approved by the City of San Jose on January 27, 2016. According to this WSA, SJWC supplied customers with 122,834 AF of water in 2010 (SJWC 2016). The BART Extension Alternative's water demands in San Jose would be approximately15.7 AF per year, which represents a negligible (0.01 percent) increase from SJWC's 2010 water demand.[2] Based on SJWC's assessment, existing water entitlements would be sufficient to service the BART Extension Alternative. A *less-than-significant* impact would occur. No mitigation is required.

Santa Clara

The Santa Clara BART station would require water supply for operational purposes, including restrooms and custodial needs. The portion of the Newhall Maintenance Facility located in Santa Clara would also require water supply, mostly related to the train car washer. Daily water usage at the BART station and Newhall Maintenance Facility in Santa Clara would be approximately 4,841.8 gallons (0.02 AF), which would be provided by Santa Clara Water and Sewer Utility (SCWSU).

SCWSU prepared a WSA that was approved by the City of Santa Clara on April 5, 2016. This WSA analyzed water demand associated with the BART Extension Alternative's station and facilities within Santa Clara. According to this WSA, SCWSU supplied 63.6 AF of water per day to customers in 2010 (SCWSU 2016). Therefore, the BART Extension Alternative's water demand in Santa Clara represents a negligible (0.02 percent) increase in SCWSU's 2010 water demand.[3] Based on SCWSU's assessment, existing water entitlements would be sufficient to service the BART Extension Alternative. A *less-than-significant* impact would occur. No mitigation is required.

Impact BART Extension UTIL-3: Result in a determination by the wastewater treatment provider that serves or may serve the BART Extension that it has inadequate capacity to serve the projected demand in addition to the provider's existing commitments

Construction

Groundwater pumped from the BART Extension Alternative's excavation zones during construction may be discharged into the sanitary sewer system. This process would increase wastewater flows to the San Jose/Santa Clara Water Pollution Control Plant (WPCP).

[2] 15.7 AF (estimated annual water usage at BART Extension Alternative in San Jose) divided by 336 AF (annual water supplied by SJWC in 2010) = 0.0001

[3] 0.02 AF (estimated daily water usage at the BART Extension Alternative in Santa Clara) divided by 63.6 AF (daily water supplied by SCWSU in 2010) = 0.0003 AF.

However, construction-related groundwater discharge into the sanitary sewer system would be temporary and would not permanently affect capacity at the WPCP. Therefore, this impact would be *less than significant*. No mitigation is required.

Operation

Operation of the BART Extension Alternative would result in incremental wastewater generation at the BART stations and Newhall Maintenance Facility. WPCP treats wastewater from both San Jose and Santa Clara and has the capacity to treat 167 million gallons per day (mgd) of wastewater during average dry-weather conditions. The WPCP currently operates at 65 percent of its 167 mgd treatment capacity.

The total amount of wastewater generated by operation of the BART Extension Alternative would not exceed the estimated 12,841.8 gpd of water supplied by SJWC and SCWSU. Assuming 100 percent of this water is converted to wastewater, operation of the BART Extension would increase wastewater flows to the WPCP by 12,841.8 gpd, or 0.01 percent of the WPCP's remaining capacity.[4] This incremental increase in wastewater flows to the WPCP represents a *less-than-significant* impact, and no mitigation is required.

During BART operations, several pump stations would collect groundwater seepage and/or rainwater at the lowest elevation points along the tunnel track alignment, which may then be collected and off-hauled to a local sanitary sewer. Dewatering may also be necessary to remove groundwater that infiltrates the cut and cover stations, tunnels, and underground facilities; however, the total quantity of removed groundwater water is anticipated to be minimal. This impact would be *less than significant*. No mitigation is required.

Impact BART Extension UTIL-4: 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

Construction

Water trucks would be used for dust control during BART Extension construction. Water would also be required to operate the tunnel boring machines. Depending on the availability of recycled water near the individual construction sites at the time of construction, use of recycled water is a possibility for dust control. This water demand would be temporary and incremental, representing a *less-than-significant* impact. No mitigation is required.

Operation

Water Treatment Infrastructure

SJWC and SCWSU adopted UWMPs in 2010 (San Jose Water Company 2011; City of Santa Clara Water and Sewer Utility 2011). A UWMP must demonstrate that the water supplier has

[4] 12,841.8 gallons (estimated daily water requirements for BART Extension Alternative) divided by 108,550,000 gallons (remaining daily WPCP capacity) = 0.00012 gallons

sufficient entitlements and infrastructure to meet future water demands in its service area. Future water demands are determined using population growth estimates from the relevant general plan. If existing water treatment facilities would be insufficient to service increased population anticipated by a general plan, the UWMP must identify new or expanded water treatment facilities to meet additional water demand.

If a development project is compliant with its general plan, that project's impact on water treatment facilities would be captured and planned for in the corresponding UWMP. If a development project is not compliant with its general plan, it would require evaluation to determine if it independently triggers a need for new or expanded facilities.

The BART Extension is compliant with the San Jose General Plan and the Santa Clara General Plan. As such, the BART Extension's water demand is consistent with SJWC's 2010 UWMP growth projections and SCWSU's 2010 UWMP growth projections. Therefore, the BART Extension's impact on water treatment facilities is captured in SJWC'S 2010 UWMP and SCWSU's 2010 UWMP and would not trigger a need for new or expanded water treatment facilities beyond the needs identified in these documents. This impact would be *less than significant*. No mitigation is required.

Water Conveyance Infrastructure

SJWC owns and operates the water conveyance system that would serve the BART Extension Alternative in San Jose. SCWSU owns and operates the water conveyance system that would serve the BART Extension Alternative in Santa Clara. SJWC and SCWSU would be responsible for providing onsite water infrastructure to connect BART stations and facilities to the existing water supply system.

Water supply at the BART stations and facilities may contribute to capacity deficiencies within offsite supply networks, which represents a potential impact to utility systems. With implementation of Mitigation Measures UTIL-A and UTIL-B, this impact would be *less than significant*.

Mitigation Measure UTIL-A: Prepare a San Jose Water Supply Infrastructure Capacity Assessment

VTA will coordinate with SJWC and prepare a Cooperative Agreement to establish the BART Extension Alternative's participation in improvements to offsite water supply infrastructure. The SJWC may conduct a detailed engineering study and flow analysis to determine the extent of these impacts.

Capacity-relief upgrades will occur during the utility relocation phase of construction and will be implemented in accordance with SJWC requirements. Construction activities will be subject to provisions outlined in this environmental document, including implementation of the construction education and outreach plan, to reduce potential impacts.

Mitigation Measure UTIL-B: Prepare a Santa Clara Water Supply Infrastructure Capacity Assessment

VTA will coordinate with SCWSU and prepare a Cooperative Agreement to establish the BART Extension Alternative's participation in improvements to offsite water supply infrastructure. The SCWSU may conduct a detailed engineering study and flow analysis to determine the extent of these impacts.

Capacity-relief upgrades will occur during the utility relocation phase of construction, and will be implemented in accordance with Chapter 17.15.210 of the Santa Clara City Code. Construction activities will be subject to provisions outlined in this environmental document, including implementation of the construction education and outreach plan, to reduce potential impacts.

Wastewater Treatment

San Jose's average wastewater generation is 69.8 mgd, or 64 percent of San Jose's total allocated 108.6 mgd of wastewater flow to the WPCP. The BART Extension Alternative within San Jose would increase the amount of wastewater flowing to the WPCP by approximately 8,000 gpd, or 0.02 percent of San Jose's remaining allocated capacity at the WPCP.[5]

Santa Clara's average wastewater generation is approximately 13.3 mgd, or 59 percent of Santa Clara's allocated 22.585 mgd of wastewater flow to the WPCP. The BART Extension Alternative in Santa Clara would increase the amount of wastewater flowing to the WPCP by approximately 4,841.8 gpd, or 0.05 percent of Santa Clara's remaining allocated capacity at the WPCP.[6]

The BART Extension would incrementally increase the amount of wastewater flowing to the WPCP, but would not trigger the need for new or expanded wastewater treatment facilities. This impact would be *less than significant*. No mitigation is required.

Wastewater Conveyance Infrastructure

Wastewater generated by operation of the BART Extension Alternative in San Jose would be conveyed to the WPCP through the San Jose sanitary sewer system. Wastewater generated by operation of the BART Extension Alternative in Santa Clara would be conveyed to the WPCP through the Santa Clara sanitary sewer system.

The BART Extension Alternative would be responsible for providing onsite sewer infrastructure, such as laterals and extensions, connecting BART stations and facilities to the

[5] 8,000 gallons (daily water requirements for San Jose's portions of the BART Extension Alternative) divided by 38,800,000 gallons (San Jose's remaining capacity at the WPCP) = 0.0002.

[6] 4,841.8 gallons (daily water requirements for Santa Clara's portions of the BART Extension Alternative) divided by 9,285,000 gallons (Santa Clara's remaining capacity at the WPCP) = 0.0005

existing sewer system. New sewer infrastructure would be designed in accordance with applicable LOS guidelines and installed during BART Extension construction.

Wastewater generated at the BART stations and facilities may contribute to capacity deficiencies within offsite sewer systems, which represents a potential impact to utility systems. With implementation of Mitigation Measures UTIL-C and UTIL-D, this impact would be *less than significant*.

Mitigation Measure UTIL-C: Prepare a San Jose Sewer Capacity Assessment

VTA will coordinate with the San Jose Department of Public Works and prepare a Cooperative Agreement to establish the BART Extension Alternative's participation in improvements to offsite sanitary sewer capacity deficiencies. The San Jose Department of Public Works may conduct a detailed engineering study and hydraulic analysis to determine the extent of these impacts.

New development in San Jose that would increase wastewater flow to capacity-deficient areas of the sanitary sewer system must contribute to system improvements. VTA will mitigate impacts on downstream sewer systems in San Jose through payment of the Sanitary Sewer Connection Fee, which is used to rehabilitate and enhance sewer capacity through San Jose's Sanitary Sewer Capital Improvement Program.

If payment to the Sanitary Sewer Connection Fee does not adequately mitigate potential offsite sewer capacity impacts related to the BART Extension, direct upgrades to the sewer system will be required. If sewer system overcapacity is a result of projected cumulative development, San Jose and VTA shall develop a Cooperative Agreement to determine the BART Extension Alternative's participation in upgrades to the current system.

Capacity-relief upgrades will occur during the BART Extension's construction phase, and will be conducted in accordance with applicable San Jose standards regarding sewer infrastructure improvements. Generally, sewer infrastructure improvements will be located within the existing public right-of-way, with minimal potential to impact sensitive environmental resources. Construction activities will be subject to provisions outlined in this environmental document, including implementation of the construction education and outreach plan, to reduce potential impacts.

Mitigation Measure UTIL-D: Prepare a Santa Clara Sewer Capacity Assessment

VTA will coordinate with SCWSU and prepare a Cooperative Agreement to establish the BART Extension Alternative's participation in improvements to offsite sanitary sewer capacity deficiencies. SCWSU may conduct a detailed engineering study and hydraulic analysis to determine the extent of these impacts.

New development in Santa Clara that would increase wastewater flow to capacity-deficient areas of the sanitary sewer system must contribute to system

improvements. VTA will mitigate impacts on downstream sewer systems in Santa Clara through payment of the Sanitary Sewer Connection Charge, which is used to rehabilitate and enhance sewer capacity through Santa Clara's Capital Improvement Program.

If payment to the Sanitary Sewer Connection Charge does not adequately mitigate potential offsite sewer capacity impacts related to the BART Extension, direct upgrades to the sewer system may be required. If sewer system overcapacity is a result of cumulative development, Santa Clara and VTA shall develop a Cooperative Agreement to determine the BART Extension Alternative's proportional participation to the upgrades to current system capacity.

Capacity-relief upgrades improvements would occur during the BART Extension's construction phase, and will be implemented in accordance with Chapter 17.15.210-280 of the Santa Clara City Code. Generally, sewer infrastructure improvements will be located within the existing public right-of-way, with minimal potential to impact sensitive environmental resources. Construction activities will be subject to provisions outlined in this environmental document, including implementation of the construction education and outreach plan, to reduce potential impacts.

Impact BART Extension UTIL-5: 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

Analysis of stormwater impacts resulting from the BART Extension is provided in Section 6.15, *Water Resources, Water Quality, and Floodplains*.

Impact BART Extension UTIL-6: Be served by a landfill with sufficient permitted capacity to accommodate the BART Extension's solid waste disposal needs

Construction

Construction of the BART Extension would generate solid waste requiring special consideration, such as material extracted during tunnel boring. Excavation of the underground station structures, system facilities, and tunnel portals/corridors are expected to generate 1,450,000–1,520,000 cubic yards of material with the Twin-Bore Option and approximately 1,830,000 cubic yards of material with the Single-Bore Option. Soils extracted during tunnel construction would be tested for contaminants and disposed of in accordance with all applicable regulations, as determined by VTA's Contaminant Management Plan as discussed in Section 6.10, *Hazards and Hazardous Materials*.

Demolition of existing structures, buildings, pavement, and other site features would primarily occur at the four stations, two mid-tunnel ventilation structure sites, and two tunnel portals. The BART Extension would be required to divert at least 75 percent of demolition debris in San Jose and 50 percent of demolition debris in Santa Clara to comply with local Construction and Demolition Diversion/Recycling programs. Remaining debris would be

hauled to landfills serving the construction area, representing a one-time impact on solid waste facilities.

The Newby Island Landfill currently services San Jose and Santa Clara, and has a remaining capacity of approximately 21.2 million tons (California Department of Resources Recycling and Recovery 2015). Therefore, the Newby Island Landfill has sufficient capacity to handle the debris generated by demolition of existing structures to accommodate construction of BART facilities. This impact would be *less than significant*, and no mitigation is required.

Operation

BART facilities would generate solid waste related to users at the stations. The three stations in San Jose would generate approximately 3.3 tons per day (tpd) of solid waste, and the Santa Clara Station would generate approximately 1.1 tpd of solid waste. The Newhall Maintenance Facility would generate approximately 0.8 tpd of solid waste in San Jose, and 0.7 tpd in Santa Clara. In total, 5.9 tpd of solid waste would be generated by the BART facilities. Daily maintenance of the tracks and right-of-way may also require waste disposal, but this amount of waste is expected to be negligible.

The Newby Island Landfill has a maximum permitted throughput of 4,000 tpd of solid waste, and currently receives an average of 2,600 tpd of solid waste (Boccaleoni pers. comm.). Solid waste generated by the BART facilities would represent 0.4 percent of Newby Island Landfill's remaining daily capacity.[7]

The BART Extension Alternative is scheduled for operation beginning in 2026, and therefore extends beyond San Jose and Santa Clara's current contracts with the Newby Island Landfill. These contracts were based on Newby Island Landfill's original 2025 closure date. In 2014, the state granted an expansion of the Newby Island Landfill and extended the landfill's estimated closure date from 2024 to 2041. Though it is uncertain whether San Jose and Santa Clara will continue to dispose of solid waste at the Newby Island Landfill beyond 2024, this facility has sufficient capacity to accept solid waste generated by the BART Extension Alternative. Therefore, solid waste generated by the BART Extension Alternative would not exceed the collective capacity of regional landfills that may serve the BART Extension beyond 2024. This impact would be *less than significant*. No mitigation is required.

Impact BART Extension UTIL-7: Comply with federal, state, and local statutes and regulations related to solid waste

Hazardous materials, such as motor fuels, oils, solvents, and lubricants, would be routinely managed during construction and operation of the BART Extension, particularly at the Newhall Maintenance Facility. As discussed in Section 6.10, *Hazards and Hazardous Materials*, handling of these materials would be compliant with applicable regulations

[7] 5.9 tons (daily solid waste generated by the BART Extension Alternative) divided by 1,400 tons (daily input capacity remaining at Newby Island Landfill) = 0.004.

regarding the disposal of hazardous materials. This impact would be *less than significant*. No mitigation is required.

6.13.5.3 BART Extension with TOJD Alternative

Impact BART Extension + TOJD UTIL-1: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board

Construction

Groundwater encountered during BART Extension with TOJD Alternative construction would be pumped from the excavation zone and tested for contaminants. Uncontaminated groundwater would be discharged into the storm or sanitary sewer system. Contaminated groundwater would receive onsite treatment and/or disposal at a permitted offsite facility in accordance with applicable laws and regulations. Therefore, there would be no exceedance of RWQCB treatment requirements. This impact would be *less than significant*. No mitigation is required.

Operation

Operation of the BART Extension with TOJD Alternative would result in wastewater generation at the BART stations and Newhall Maintenance Facility from lavatories, janitorial uses, train washing, and other sources. The BART Extension with TOJD Alternative would not generate or release industrial wastewater that would conflict with RWQCB treatment requirements. Therefore, there would be no exceedance of RWQCB treatment requirements. This impact would be *less than significant*. No mitigation is required.

In addition to the wastewater treatment discussed above, wastewater generated by the TOJDs would originate from residential and commercial sources, which would not be expected to increase pollutant loads that would require special treatment. Therefore, the BART Extension with TOJD Alternative would not exceed RWQCB wastewater treatment requirements. This impact would be *less than significant*. No mitigation is required.

Impact BART Extension + TOJD UTIL-2: Have insufficient water supplies to serve the BART Extension with TOJD from existing entitlements and resources, therefore requiring new or expanded entitlements

Construction

Water trucks would be used for dust control during construction of the BART Extension with TOJD Alternative. Water would also be required to operate the tunnel boring machines. Depending on the availability of recycled water near the individual construction sites at the time of construction, use of recycled water is a possibility for dust control. This water demand would be temporary and incremental, representing a *less-than-significant* impact. No mitigation is required.

Operation

San Jose

Water supplied to the San Jose BART facilities plus TOJD would be provided by SJWC. SJWC prepared a WSA, which was approved on January 27, 2016. The WSA analyzed water demand associated with the BART stations, venting structures, Newhall Maintenance Facility, and TOJD located within the City of San Jose.

According to the SJWC WSA, the BART Extension with TOJD Alternative's water demands in San Jose would be approximately 370 AF per year. However, existing development, which is being replaced, uses an average of 35 AF per year. Therefore, the estimated net system increase in water demand for the BART Extension with TOJD Alternative is 335 AF per year, which represents a 0.27 percent increase from SJWC's 2010 potable water demand.[8] SJWC concluded that sufficient water supply exists to serve the BART Extension with TOJD Alternative in San Jose. A *less-than-significant* impact would occur. No mitigation is required.

Santa Clara

Water supplied to the BART Extension plus TOJD Alternative in Santa Clara would be provided by SCWSU. According to the SCWSU WSA, the BART Extension with TOJD Alternative's water demands in Santa Clara would be approximately 116.2 AF per year. However, existing development, which is being replaced, uses an average of 6.7 AF per year. Therefore, the estimated net system increase in water demand is 109.5 AF per year, which represents a 0.47 percent increase from SCWSU's 2010 potable water demand.[9] SCWSU concluded that sufficient water supply exists to serve the BART Extension with TOJD Alternative in Santa Clara. A *less-than-significant* impact would occur. No mitigation is required.

Impact BART Extension + TOJD UTIL-3: Result in a determination by the wastewater treatment provider that serves or may serve the BART Extension with TOJD that it has inadequate capacity to serve the projected demand in addition to the provider's existing commitments

Construction

Groundwater pumped from the excavation zone during construction of the BART Extension with TOJD Alternative may be discharged into the sanitary sewer system. This process would increase wastewater flows to the San Jose/Santa Clara WPCP, which is the wastewater treatment provider. However, construction-related groundwater discharge into the sanitary

[8] 335 AF (net increase in annual water demand resulting from BART Extension with TOJD Alternative) divided by 122,834 AF (annual water supplied by SJWC in 2010) = 0.0027

[9] 109.5 AF (net increase in annual water demand resulting from BART Extension with TOJD Alternative) divided by 23,214 AF (annual water supplied by SCWSU in 2010) = 0.0047

sewer system would be temporary and would not permanently affect capacity at the WPCP. Therefore, this impact would be *less than significant*, and no mitigation is required.

Operation

Assuming all of the water supplied to the BART Extension with TOJD Alternative is converted to wastewater, wastewater flows to the WPCP would increase by approximately 402,804 gpd,[10] or approximately 0.37 percent of the WPCP's remaining capacity.[11] The BART Extension with TOJD Alternative would incrementally increase the amount of wastewater flowing to the WPCP, but would not trigger the need for new or expanded wastewater treatment facilities. Therefore, this impact would be *less than significant*. No mitigation is required.

Impact BART Extension + TOJD UTIL-4: 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

Construction

The WPCP may be required to treat groundwater extracted from the excavation area. However, this dewatering process represents a temporary impact that would not generate enough wastewater to trigger the expansion of existing wastewater treatment facilities. Therefore, this impact would be *less than significant*. No mitigation is required.

Operation

Water Treatment

As discussed above, the BART Extension with TOJD Alternative is consistent with the applicable UWMPs, and would not independently trigger the need for new or expanded water treatment facilities beyond those addressed in the UWMPs. This impact would be *less than significant*. No mitigation is required.

Water Conveyance Infrastructure

SJWC and SCWSU would be responsible for providing onsite water infrastructure to connect BART facilities and TOJD to the existing water supply system. These water suppliers would also evaluate the need for offsite water infrastructure improvements prior to the issuance of a building permit. Water supply at the BART stations and facilities may contribute to capacity deficiencies within offsite supply networks, which represents a potential impact to utility systems; however, implementation of Mitigation Measures UTIL-A and UTIL-B would reduce this impact to a *less-than-significant* level.

[10] 299,068 gallons (estimated daily water requirements for BART Extension with TOJD Alternative in San Jose) plus 103,736 gallons (estimated daily water requirements for BART Extension with TOJD Alternative in Santa Clara) = 402,804 gallons.

[11] 402,804 gallons (estimated daily water requirements for BART Extension with TOJD Alternative) divided by 108,550,000 gallons (remaining daily WPCP capacity) = 0.0037

Wastewater Treatment

As discussed above, wastewater generated by BART Extension with TOJD Alternative would not exceed the WPCP's capacity. No new or expanded wastewater treatment facilities would be required, and this impact would be *less than significant*. No mitigation is required.

Wastewater Conveyance Infrastructure

The BART Extension with TOJD Alternative would be responsible for providing onsite sewer infrastructure, such as laterals and extensions, connecting BART facilities and TOJD to the existing sewer system. New sewer infrastructure would be designed in accordance with applicable LOS guidelines and installed during construction. Wastewater generated at the BART facilities and TOJD may contribute to capacity deficiencies within offsite sewer systems, which represents a potential impact to utility systems; however, implementation of Mitigation Measures UTIL-C and UTIL-D would reduce this impact to a *less-than-significant* level.

Impact BART Extension + TOJD UTIL 5:-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

Analysis of stormwater impacts resulting from the BART Extension with TOJD Alternative is provided in Section 6.15, *Water Resources, Water Quality, and Floodplains*.

Impact BART Extension + TOJD UTIL-6: Be served by a landfill with sufficient permitted capacity to accommodate the BART Extension with TOJD's solid waste disposal needs

Construction

The BART Extension with TOJD Alternative's construction would generate solid waste requiring special consideration, such as material extracted during tunnel boring. Excavation of the underground station structures, system facilities and tunnel portals/corridors is expected to generate 1,450,000–1,520,000 cubic yards of material with the Twin-Bore Option and approximately 1,830,000 cubic yards with the Single-Bore Option. Soils extracted during tunnel construction would be tested for contaminants and disposed of in accordance with all applicable regulations, as determined by VTA's Contaminant Management Plan as discussed in Section 6.10, *Hazards and Hazardous Materials*.

Demolition of existing structures, buildings, pavement, and other site features would primarily occur at the four stations, two mid-tunnel ventilation structure sites, tunnel portals, and TOJD sites. The BART Extension with TOJD Alternative would be required to divert at least 75 percent of demolition debris in San Jose and 50 percent of demolition debris in Santa Clara to comply with local Construction and Demolition Diversion/Recycling programs. Remaining debris would be hauled to landfills serving the construction area, representing a one-time impact on solid waste facilities.

As discussed above under Impact BART Extension UTIL-6, construction-related debris represents a one-time impact on solid waste facilities. The Newby Island Landfill has sufficient capacity to handle the debris generated by demolition of existing structures to accommodate construction of the BART Extension with TOJD Alternative. This impact would be *less than significant*. No mitigation is required.

Operation

As discussed above under Impact BART Extension UTIL-6, the BART facilities in San Jose and Santa Clara would generate 5.9 tpd of solid waste from operation of the stations and Newhall Maintenance Facility.

The TOJDs in San Jose would create approximately 275 residential dwelling units, 290,000 square feet of retail space, and 1,478,000 square feet of office space. The *Envision San Jose 2040 General Plan EIR* assumed that multifamily residences would generate 4.44 pounds per day (ppd) of solid waste, office land uses would generate 1.24 pounds per employee per day, and retail land uses would generate 10.53 pounds per employee per day. Based on these assumptions, the San Jose TOJD would generate approximately 13 tpd of solid waste.[12]

The Santa Clara TOJD would result in the addition of approximately 220 residential dwelling units, 30,000 square feet of retail space, and 500,000 square feet of office space. The *City of Santa Clara 2010–2035 General Plan EIR* assumed that multifamily houses would generate 5.1 ppd of solid waste, and office uses would generate 1.0 pounds per 100 square feet per day. Borrowing from San Jose's retail land use solid waste assumption of 10.53 pounds per employee per day,[13] the Santa Clara TOJD would generate approximately 3.5 tpd of solid waste. In sum, the BART Extension with TOJD Alternative would generate 22.4 tpd of solid waste, which represents 1.6 percent of Newby Island Landfill's remaining daily capacity.[14]

The BART Extension with TOJD Alternative is scheduled for operation beginning in 2026, and therefore extends beyond San Jose's and Santa Clara's current contracts with the Newby Island Landfill. These contracts were based Newby Island Landfill's original 2025 closure date. In 2014, the state granted an expansion of the Newby Island Landfill and extended the landfill's estimated closure date from 2024 to 2041. Though it is uncertain whether San Jose and Santa Clara will continue to dispose of solid waste at the Newby Island Landfill beyond 2024, this facility has sufficient capacity to accept solid waste generated by the BART Extension with TOJD Alternative. Therefore, solid waste generated by the BART Extension with TOJD Alternative would not exceed the collective capacity of regional landfills that

[12] The Job Growth Projections and Employment Land Demand assume square footage per employee by land use type in San Jose (City of San Jose Department of Planning 2009). Small retail land uses would require 1 employee per 300 square feet, and mid/high rise offices require 1 employee per 125 square feet. Therefore, approximately 0.6 tpd would be generated by residential land uses, 5.1 tpd by retail uses, and 7.3 tpd from office uses.

[13] The *City of Santa Clara 2010–2035 General Plan* assumes 1 employee per 400 square feet for retail land uses.

[14] 22.4 tons (daily solid waste generated by BART Extension with TOJD Alternative) divided by 1,400 tons (daily input capacity remaining at Newby Island Landfill) = 0.016

may serve the BART Extension with TOJD beyond 2024. This impact would be *less than significant.* No mitigation is required.

Impact BART Extension + TOJD UTIL-7: Comply with federal, state, and local statutes and regulations related to solid waste

Hazardous materials, such as motor fuels, oils, solvents, and lubricants, would be routinely managed during construction and operation of the BART Extension with TOJD Alternative, particularly at the Newhall Maintenance Facility. As discussed in Section 6.10, *Hazards and Hazardous Materials*, handling of these materials would be compliant with applicable regulations regarding the disposal of hazardous materials. Therefore, this impact would be *less than significant,* and no mitigation is required.

6.13.6 CEQA Conclusion

With implementation of Mitigation Measures UTIL-A through UTIL-D, the BART Extension Alternative and BART Extension with TOJD Alternative would result in *less-than-significant* impacts regarding utilities.