4.10 Water Resources

This section summarizes the existing water resources in the project area and the potential impacts of the proposed alternatives on these resources. The information in this section is based on the Water Resources Technical Memorandum, which is incorporated into this EIS/EIR as Appendix V, Water Resources Technical Memorandum.

This section has been updated since publication of the Draft EIS/EIR based on refinements to the Locally Preferred Alternative (LPA). A vertical line in the margin is used to show where revisions have occurred to this section since publication of the Draft EIS/EIR, excluding minor edits for consistency and correction of formatting and minor typographical errors.

Minor modifications have been made to this section since publication of the Draft EIS/EIR, which include the addition of information from Appendix V, Water Resources Technical Memorandum. Since designation of an LPA, mitigation measures have been refined and confirmed for the LPA, which are listed in Section 4.10.4.2 below, based on input received during the Draft EIS/EIR public review period. No changes to the NEPA impact findings or CEQA impact determinations were identified as a result of refinements to the LPA that have occurred since publication of the Draft EIS/EIR. Mitigation measures listed for the LPA in this section have been carried forward and included in the Mitigation Monitoring and Reporting Program (MMRP) for the LPA, Chapter 8, of this Final EIS/EIR.

The analysis of water resource impacts associated with the LPA is detailed below in Section 4.10.3.5.

4.10.1 Regulatory Framework

The NEPA guidance issued by the Federal Transportation Administration (FTA) recognizes the potential for wastewater generation and increased runoff to diminish water quality as possible impacts of transit projects.

CEQA guidelines provide a framework for evaluating potential effects. A significant impact to hydrology and water quality would occur if an alternative would:

- Violate any applicable water quality standards or waste discharge requirements, including those defined in Section 13050 of the Clean Water Act
- Affect the rate or change the direction of movement of existing groundwater contaminants, or expand the area affected by contaminants
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table
- Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site

- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality
- Place within a 100-year flood hazard area structures that would impede or redirect flood flows
- Expose people to a significant risk of loss, injury, or death involving flooding

The City of Los Angeles also specifies that a significant impact would occur if a project would increase the risk of harmful flooding during a 50-year storm.

Other applicable laws and guidance include:

- Federal:
  - Clean Water Act
  - National Flood Insurance Program regulations
- State:
  - Porter-Cologne Water Quality Control Act
  - State Antidegradation Policy
  - National Pollutant Discharge Elimination System
- Regional/Local:
  - Los Angeles Regional Water Quality Control Board (LARWQCB) requirements
  - County of Los Angeles General Plan
  - Los Angeles County Code
  - City of Los Angeles General Plan
  - City of Los Angeles Specific Plan for the Management of Flood Hazards
  - Los Angeles Department of Water and Power – Urban Water Management Plan

More information about these regulations and plans are provided in Appendix V, Water Resources Technical Memorandum.

4.10.2 Affected Environment

The proposed alternatives are located in the Los Angeles River Watershed Management Area. The Los Angeles River Watershed covers an area of over 834 square miles from the eastern portions of the Santa Monica Mountains, Simi Hills, and the Santa Susana Mountains in the west to the San Gabriel Mountains in the east.

The Los Angeles Department of Water and Power (LADWP) is responsible for supplying, treating, and distributing water for domestic and industrial uses in the project area. The City of Los Angeles obtains its water supply from local wells in the Los Angeles groundwater basin, the Los Angeles aqueducts, and by purchasing water from the Metropolitan Water District (MWD) (City of Los Angeles Planning Department 1995).

Groundwater is a major component of the water supply in the Los Angeles metropolitan area. Local groundwater resources provide about 15 percent of the total water supply. In drought years, this number can be as large as 30 percent (City of Los Angeles 2005a).

The proposed project alignment encompasses an area of approximately 1,200 acres in the central downtown area of Los Angeles. Surface water bodies are not directly located in the project area. The closest surface water feature is the Los Angeles River which runs approximately 0.5 mile east of Alameda Street and is near the project area's eastern boundary. Land use along this part of the river includes industrial, residential, and commercial uses, including major refineries and petroleum products storage facilities, major freeways, and rail lines (LARWQCB 2007). Surface water runoff and peak runoff rates have increased due to the impervious surfaces related to development in the project area. Another reason for the increase in peak runoff rates in the coastal plain areas stems from the elimination of natural ponding areas and improved hydraulic efficiency of water carriers such as streets and storm drain systems. Drainage in the immediate project area generally flows southeast via storm drains towards the Los Angeles River.

The project area is outside of the 100-year and 500-year flood zones and thus would not be susceptible to these storm events as defined by FEMA (100-year and 500-year storms are defined as having a one percent and 0.2 percent chance, respectively, of occurring in any given year). The closest 100-year floodplain area is along the Los Angeles River between Broadway and Mission Road approximately 0.5 to 0.7 mile from the project area (City of Los Angeles 1996).

The Los Angeles Coastal Plain Groundwater Basins underlie the project area. These groundwater basins are incorporated into the Coastal Plain Hydrographic Subunit. The Coastal Plain Hydrographic Subunit contains the Central, West Coast, Santa Monica, and Hollywood Basins. The Central Sub-basin, one of the most important basins in the hydrographic subunit, directly underlies the project area (City of Los Angeles Planning Department 1995).

Exploratory borings in the vicinity of the proposed alternatives have discovered groundwater along Flower Street between 7th and 2nd Streets at depths ranging from approximately 15 to 35 feet below ground surface. Other borings made adjacent to Flower Street between 2nd and 5th Streets discovered groundwater at depths between approximately 18 to 27 feet below the ground surface. In the area of Hill and Alameda Streets, borings reported groundwater seepage at

depths between approximately 14 to 36 feet (Metro 2008). From these preliminary borings, it appears that groundwater is perched on the underlying San Fernando formation bedrock. Perched groundwater is groundwater that is separated from the water table and is often formed in response to water that collects during rain events or is in the process of being recharged by percolation from nearby surface water or other perched water zones.

The Inundation Hazard Zone is defined as areas that could flood should earthquake-induced failure of up-gradient dams, flood control facilities, or other water retaining structures occur. Multiple flood control facilities are located in the San Fernando Valley portion of the Los Angeles River Watershed. Failure of these flood control mechanisms would potentially cause inundation in the vicinity of the proposed alternatives. A limited portion of the eastern section of the proposed build alternatives is at the edge of a potential inundation area (near the intersection of Alameda Street with both Temple and 1st Streets) (City of Los Angeles 1996). However, the majority of the length of the build alternatives is not located in an area mapped to have the potential to be susceptible to this type of flooding. Figure 4.10-1 shows the locations of the proposed build alternatives relative to the inundation zone.

4.10.3 Environmental Impacts/Environmental Consequences

The following sections summarize the evaluation of potential water resource impacts for each alternative. Impact conclusions for all of the alternatives are based on the thresholds identified above in Section 4.10.1. Table 4.10-1 summarizes the results of the analysis.

Table 4.10-1. Summary of Potential Impacts to Water Resources

Alternative	Water Quality (NEPA/CEQA)	Groundwater Contamination (NEPA/CEQA)	Drainage Impacts (NEPA/CEQA)	Adverse NEPA Effects After Mitigation	Significant CEQA Impacts After Mitigation
No Build	None (No beneficial effects either)	None	None	None	None
TSM	None	None	None	None	None
At-Grade Emphasis LRT	Adverse effects/ significant impacts not adverse or significant after mitigation	Adverse effects/ significant impacts not adverse or significant after mitigation	None	None	None
Underground Emphasis LRT	Adverse effects/ significant impacts not adverse or significant after mitigation	Adverse effects/ significant impacts not adverse or significant after mitigation	Adverse effects/ significant impacts avoided through design	None	None

Table 4.10-1. Summary of Potential Impacts to Water Resources (continued)

Alternative	Water Quality (NEPA/CEQA)	Groundwater Contamination (NEPA/CEQA)	Drainage Impacts (NEPA/CEQA)	Adverse NEPA Effects After Mitigation	Significant CEQA Impacts After Mitigation
LPA	Adverse effects/ significant impacts not adverse or significant after mitigation	Adverse effects/ significant impacts not adverse or significant after mitigation	Adverse effects/ significant impacts avoided through design	None	None

4.10.3.1 No Build Alternative

The No Build Alternative would not involve any new construction or operation of transit service. Changes to groundwater resources or recharge would not occur within the project area. The No Build Alternative would not allow the transit network to replace as many automobile trips as the build alternatives would, so some increases in roadway pollutants would occur as traffic worsens. Roadway pollutants can wash off of surface streets into surface waters during rain events.

4.10.3.1.1 NEPA Finding

The No Build Alternative would not have adverse impacts to water resources, although with fewer transit options, potential reductions in roadway pollutants would not occur.

4.10.3.1.2 CEQA Determination

The No Build Alternative would not have significant adverse impacts to water resources.

4.10.3.2 TSM Alternative

The TSM Alternative includes the same provisions as the No Build Alternative, plus the addition of two new shuttle bus routes linking 7th Street/Metro Center Station and Union Station. These additional shuttle bus lines would require minor rebuilding of existing drainage structures to accommodate new curb bus stops and the effects of this activity would not cause changes to water quality, hydrology, or drainage. Like the No Build Alternative, the TSM Alternative would not allow the transit network to replace as many automobile trips as the build alternatives would, so some increases in roadway pollutants would occur as traffic worsens.

4.10.3.2.1 NEPA Finding

The TSM Alternative would not have adverse impacts to water resources, although the limited increase in transit ridership would limit potential reductions in roadway pollutants.

4.10.3.2.2 CEQA Determination

The TSM Alternative would not have significant adverse impacts to water resources.

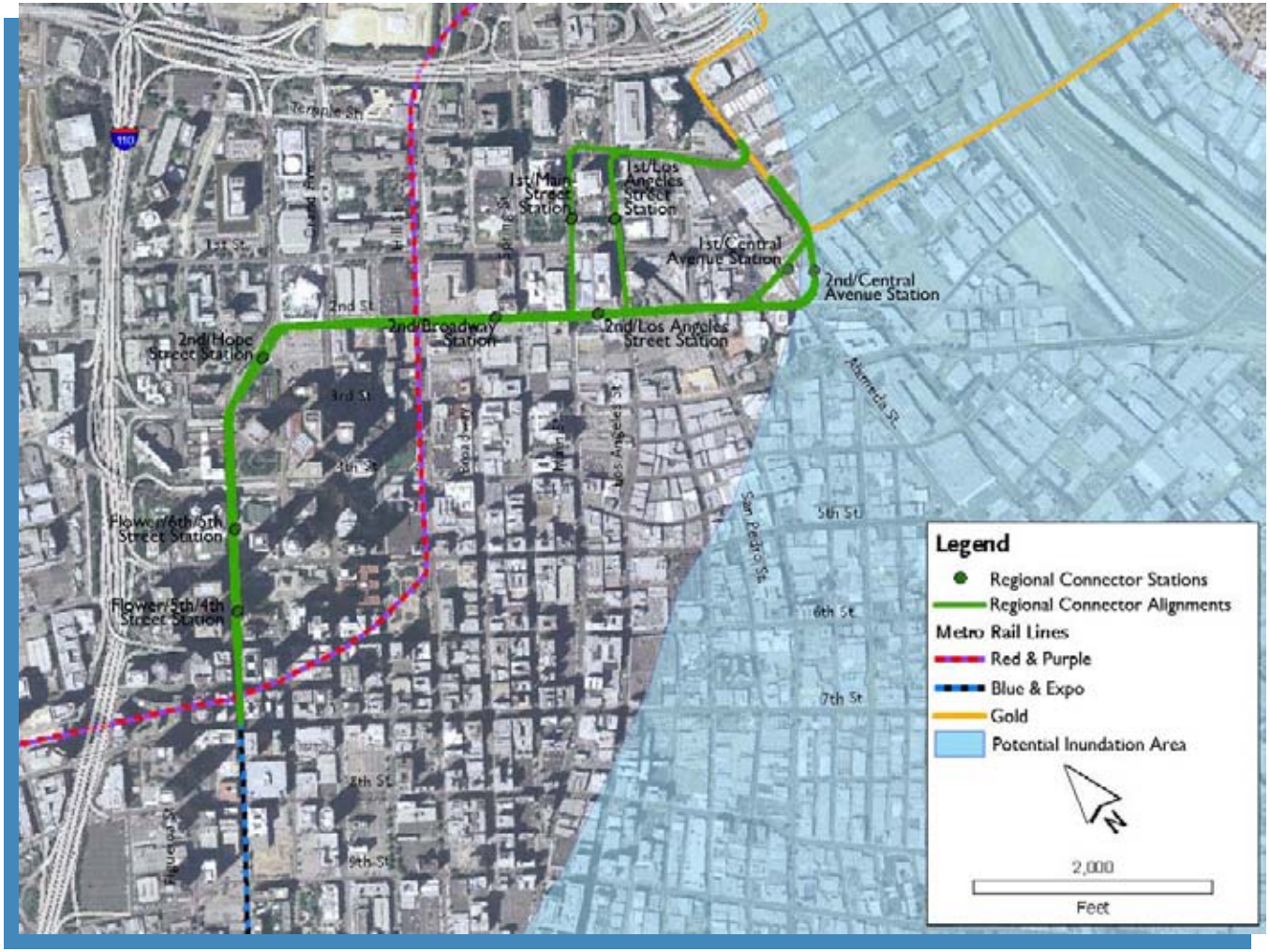

Figure 4.10-1. Potential Inundation Areas Relative to the Project

4.10.3.3 At-Grade Emphasis LRT Alternative

While approximately half of the At-Grade Emphasis LRT Alternative would be constructed at-grade and would not require as much excavation as the other build alternatives, there would still be a potential need for dewatering if groundwater is encountered during construction activities. Stations and tunneling would occur as deep as 80 feet below the surface. Exploratory borings showed groundwater depths of 15 to 35 feet below ground on Flower Street in the vicinity of the proposed alignment. As such, it is likely that groundwater would be encountered during excavation activities. This groundwater is known to be contaminated with pollutants common to urban and commercial activities.

Given the likelihood of encountering contaminated groundwater, compliance with federal, state, and local laws and regulations (as described in Section 4.9) would be required during construction activities. A dewatering permit from the LARWQCB would be necessary and any contaminated groundwater would be properly treated prior to being discharged. Uncontaminated groundwater may be treated and pumped back into the groundwater table, pumped to the sewer or storm drain system, or used on-site for dust control purposes. Additional site-specific groundwater investigation may be necessary to define the extent and location of groundwater contaminants for final design and to refine necessary mitigation measures.

Excavation activities also have the potential to create a preferential pathway for the spreading of contaminated groundwater in the groundwater basin. This impact could be mitigated by the use of impermeable concrete grouting materials which would reduce contaminant migration. Further mitigation measures to protect against potential environmental impacts from encountering contaminated groundwater are also described in Section 4.9.

Under the At-Grade Emphasis LRT Alternative, there is a potential for conflicts with the existing drainage system along 2nd Street between Grand Avenue and Olive Street where the alignment would be constructed through the 2nd Street Tunnel. Overall however, construction of the At-Grade Emphasis LRT Alternative would be expected to result in minimal impacts to and need for relocation of the current drainage system. In the case where construction activities would result in the need to relocate certain drainage infrastructure, temporary lines would be installed during the construction period. Construction of the At-Grade Emphasis LRT Alternative would have no significant impact on the overall drainage pattern in the project area.

The proposed alignment is outside of the 100-year flood hazard area; therefore, construction and operation of the At-Grade Emphasis LRT Alternative would not alter any existing flood zones.

In order to reduce any potential impacts related to stormwater runoff, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared and implemented during construction. Additionally, a Standard Urban Stormwater Management Plan (SUSMP) would be prepared and implemented in accordance with the Los Angeles Municipal Code, to ensure that stormwater runoff is managed for water quality concerns through implementation of appropriate best management practices (BMPs). Prior to issuance of any grading or building permits, the County and/or Stormwater Division of the Bureau of Sanitation must approve the SUSMP.

Due to the predominance of impervious surfaces throughout the project area, there is minimal percolation to the underlying groundwater basins. In addition, the alternative is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge and it would not affect percolation rates. Therefore, any potential increases in contaminated surface water runoff would have no significant impact on groundwater quality.

Tunneling during construction could potentially create a preferential pathway for contaminated groundwater that could be encountered. This could cause the contamination to spread at higher rates than would normally occur without disruption by construction activity. This potential impact would be reduced to a less than significant level with implementation of mitigation measures described in Section 4.10.4 of the Draft EIS/EIR.

Although unlikely during the operation phase of the At-Grade Emphasis LRT Alternative, groundwater dewatering and subsequent discharge may occur. The tunnel and underground stations would be constructed to preclude gas leakage or groundwater intrusion into the tunnel using a technique similar to that used for the Metro Gold Line tunnels in Boyle Heights. During operation, in the unlikely event that any water accumulates in the tunnel portions of the alignment, it would be pumped out by sump pumps and treated in accordance with applicable discharge permits before being discharged into the drainage system. Therefore, potential impacts to groundwater would be less than significant.

Operation of the At-Grade Emphasis LRT Alternative would likely decrease Vehicle Miles Traveled (VMT) of personal automobiles through the project area. An overall reduction in VMT could decrease the primary pollutants associated with all types of transportation operations such as heavy metals, solvents, and petroleum hydrocarbons. This would be a beneficial impact to surface water quality in the project area.

In regards to cumulative impacts, each of the reasonably foreseeable concurrent projects would be subject to applicable water quality regulations and each would be required to prepare a SWPPP for construction activities, incorporate BMPs to control pollutant discharges, and operate in compliance with Chapter 13.29, Stormwater and Urban Runoff Pollution Prevention Control and SUSMP. Also, it is not expected that any of the cumulative projects would result in a substantial change to the amount of impervious land cover in the project area, or a substantial alteration of the drainage systems. Overall, construction and operation of the At-Grade Emphasis LRT Alternative would not contribute to significant cumulative water quality, hydrology, and/or drainage impacts.

4.10.3.3.1 NEPA Finding

The At-Grade Emphasis LRT Alternative would have adverse effects with respect to water quality and groundwater contamination during construction. Operation of the alternative would have the potential beneficial effect of reducing automobile use and related roadway pollutants in stormwater runoff. Compliance with applicable regulations and implementation of the proposed mitigation measures in Section 4.10.4 of the Draft EIS/EIR would reduce potential adverse impacts to a less than significant level.

4.10.3.3.2 CEQA Determination

The At-Grade Emphasis LRT Alternative would not have significant impacts with respect to water quality and groundwater contamination after proposed mitigation measures are considered. Compliance with federal, state, and local laws in conjunction with implementation of mitigation measures proposed in Section 4.10.4 of the Draft EIS/EIR would reduce these potential impacts to a less than significant level.

4.10.3.4 Underground Emphasis LRT Alternative

The potential construction-related water quality and hydrology impacts of the Underground Emphasis LRT Alternative would be similar to those of the At-Grade Emphasis LRT Alternative. However, because the Underground Emphasis LRT Alternative involves more tunneling and generally greater intensity of construction activities, the potential for excavation to create a preferential pathway for the spreading of groundwater contamination in the groundwater basin would be greater. The use of impermeable concrete grouting materials would reduce potential contaminant migration, as described in Section 4.10.4 of the Draft EIS/EIR, to a less than significant level. The Underground Emphasis LRT Alternative would also impact a storm drain backbone line along Flower and 2nd Streets, but design measures would address the potential conflicts and avoid changes to system capacity or the overall direction of storm flows through the drainage infrastructure in the project area.

The Underground Emphasis LRT Alternative would have similar operation-related water quality, hydrology, and drainage impacts as the At-Grade Emphasis LRT Alternative. As with the At-Grade Emphasis LRT Alternative, this alternative would have slightly beneficial water quality impacts associated with a reduction in annual VMT of automobiles through the project area, which would reduce build-up of pollutant loads associated with automobile use such as oil, grease, and metals.

4.10.3.4.1 NEPA Finding

The Underground Emphasis LRT Alternative would have adverse effects with respect to water quality and groundwater contamination during construction. Operation of the alternative would have the potential beneficial effect of reducing automobile use and related roadway pollutants in stormwater runoff. Compliance with applicable regulations and implementation of the proposed mitigation measures in Section 4.10.4 of the Draft EIS/EIR would reduce potential adverse impacts to a less than significant level.

4.10.3.4.2 CEQA Determination

The Underground Emphasis LRT Alternative would not have significant impacts with respect to water quality and groundwater contamination after proposed mitigation measures are considered. Compliance with federal, state, and local laws in conjunction with implementation of mitigation measures proposed in Section 4.10.4 of the Draft EIS/EIR would reduce these potential impacts to a less than significant level.

4.10.3.5 Locally Preferred Alternative

Potential construction-related water quality impacts of the LPA would be similar to those of the Underground Emphasis LRT Alternative. The primary differences between the two alternatives is

that the LPA includes a new station at 1st Street and Central Avenue, an underground rail junction beneath 1st and Alameda Streets, and the LPA would not impact the storm drain backbone line along Flower and 2nd Streets. This would result in more intense excavation activities in the potential inundation area than the Underground Emphasis LRT Alternative; however, the area is already fully urbanized and highly impervious so there would not be significant increases in the potential severity of inundation impacts.

Given the existing impervious nature of the project area, there is minimal infiltration to groundwater under existing conditions. The NEPA and/or CEQA thresholds identified in Section 4.10.1 were used for evaluating each alternative's (including the LPA) potential effect on water resources. Based on these thresholds, implementation of the LPA would not significantly impact groundwater recharge.

There would be a potential need for dewatering if groundwater is encountered during construction activities. It is likely that groundwater would be encountered during excavation activities. This groundwater is known to be contaminated with pollutants common to urban and commercial activities. Given the likelihood of encountering contaminated groundwater, compliance with federal, state, and local laws and regulations (as described in Section 4.9) would be required during construction activities. A dewatering permit from the LARWQCB would be necessary and any contaminated groundwater would be properly treated prior to being discharged. Uncontaminated groundwater may be treated and pumped back into the groundwater table, pumped to the sewer or storm drain system, or used on-site for dust control purposes. Additional site-specific groundwater investigation may be necessary to define the extent and location of groundwater contaminants for final design and to refine necessary mitigation measures.

Excavation activities also have the potential to create a preferential pathway for the spreading of contaminated groundwater in the groundwater basin. The use of impermeable concrete grouting materials would reduce potential contaminant migration, as described in Section 4.10.4.2 below, to a less than significant level. Further mitigation measures to protect against potential environmental impacts from encountering contaminated groundwater are also described in Section 4.9.

In the case where construction activities would result in the need to relocate certain drainage infrastructure, temporary lines would be installed during the construction period. Construction of the LPA would have no significant impact on the overall drainage pattern in the project area.

The proposed alignment is outside of the 100-year flood hazard area; therefore, construction and operation of the LPA would not alter any existing flood zones.

In order to reduce any potential impacts related to stormwater runoff, a SWPPP would be prepared and implemented during construction. Additionally, a SUSMP would be prepared and implemented consistent with the Los Angeles Municipal Code, to ensure that stormwater runoff is managed for water quality concerns through implementation of appropriate BMPs. Prior to issuance of any grading or building permits, the County and/or Stormwater Division of the Bureau of Sanitation must approve the SUSMP.

Due to the predominance of impervious surfaces throughout the project area, there is minimal percolation to the underlying groundwater basins. In addition, the alternative is not expected to substantially deplete groundwater supplies or interfere substantially with groundwater recharge and would not affect percolation rates. Therefore, any potential increases in contaminated surface water runoff would have no significant impact on groundwater quality.

Tunneling during construction could potentially create a preferential pathway for contaminated groundwater that could be encountered. This could cause the contamination to spread at higher rates than would normally occur without disruption by construction activity. This potential impact would be reduced to a less than significant level with implementation of mitigation measures described in Section 4.10.4.2 below.

Although unlikely during the operation phase of the LPA, groundwater dewatering and subsequent discharge may occur. The tunnel and underground stations would be constructed to preclude gas leakage or groundwater intrusion into the tunnel using a technique similar to that used for the Metro Gold Line tunnels in Boyle Heights. During operation, in the unlikely event that any water accumulates in the tunnel portions of the alignment, it would be pumped out by sump pumps and treated in accordance with applicable discharge permits before being discharged into the drainage system. Therefore, potential impacts to groundwater would be less than significant.

Operation of the LPA would likely decrease VMT of personal automobiles throughout the project area. An overall reduction in VMT could decrease the primary pollutants associated with all types of transportation operations such as heavy metals, solvents, and petroleum hydrocarbons. This would be a beneficial impact to surface water quality in the project area.

With regard to cumulative impacts, each of the reasonably foreseeable concurrent projects would be subject to applicable water quality regulations and each would be required to prepare a SWPPP for construction activities, incorporate BMPs to control pollutant discharges, and operate in compliance with Chapter 13.29, Stormwater and Urban Runoff Pollution Prevention Control and SUSMP. Also, it is not expected that any of the cumulative projects would result in a substantial change to the amount of impervious land cover in the project area, or a substantial alteration of the drainage systems. Overall, construction and operation of the LPA would not contribute to significant cumulative water quality, hydrology, and/or drainage impacts.

4.10.3.5.1 NEPA Finding

The LPA would have adverse effects with respect to water quality and groundwater contamination during construction. Operation of the alternative would have the potential beneficial effect of reducing automobile use and related roadway pollutants in stormwater runoff. Compliance with applicable regulations and implementation of the mitigation measures in Section 4.10.4.2 below will reduce potential adverse effects to not substantially adverse.

4.10.3.5.2 CEQA Determination

The LPA would not have significant impacts with respect to water quality and groundwater contamination after proposed mitigation measures are considered. Compliance with federal, state, and local laws in conjunction with implementation of mitigation measures in Section

4.10.4.2 below would reduce these potential impacts to a less than significant level. Overall, construction and operation of the LPA would not contribute to significant cumulative water quality, hydrology, and/or drainage impacts.

4.10.4 Mitigation Measures

4.10.4.1 Updates to the Candidate Mitigation Measures from the Draft EIS/EIR

The Draft EIS/EIR included candidate mitigation measures for review and comment by the public, agencies and other stakeholders. Since publication of the Draft EIS/EIR, Metro has added specificity to the candidate mitigation measures for water resource impacts presented in the Draft EIS/EIR. The final LPA mitigation measures, shown in Section 4.10.4.2 below, are included in the MMRP for the LPA, Chapter 8, of this Final EIS/EIR, and supersede candidate mitigation measures identified in the Draft EIS/EIR.

4.10.4.2 Final Mitigation Measures for the Locally Preferred Alternative

Mitigation measures listed for the LPA in this section have been carried forward and included in the MMRP for the LPA, Chapter 8, of this Final EIS/EIR. They are the final committed mitigation measures for the LPA. MMRP index numbers are shown in parenthesis after each mitigation measure.

An erosion control plan shall be prepared prior to construction and shall specify procedures for implementing the following mitigation measures: (WR-1)

- Natural drainage, detention ponds, sediment ponds, or infiltration pits shall be used to allow runoff to collect and reduce or prevent erosion. (WR-2)
- Barriers shall be used to direct and slow the rate of runoff and to filter out large-sized sediments. (WR-3)
- Down-drains or chutes shall be used to carry runoff from the top of a slope to the bottom. (WR-4)
- Use of water for irrigation and dust control shall be controlled so as to avoid off-site runoff. (WR-5)

Potentially significant impacts to water quality stemming from both construction and operation of the LPA will be mitigated with the following measures as appropriate:

- Project design shall include properly designed and maintained biological oil and grease removal systems in new storm drain systems to treat water before it leaves project sites. (WR-6)
- Hazardous materials shall be stored properly to prevent contact with precipitation and runoff. (WR-7)
- An effective monitoring and cleanup program for spills and leaks of hazardous materials shall be developed and maintained. (WR-8)

- Equipment to be repaired or maintained shall be placed in covered areas on a pad of absorbent material to contain leaks, spills, or small discharges. (WR-9)
- Periodic and consistent removal of landscape and construction debris shall be performed. (WR-10)
- Any significant chemical residue on the project sites shall be removed through appropriate methods. (WR-11)
- Non-toxic alternatives for any necessary applications of herbicides or fertilizers shall be used. (WR-12)
- Detention basins shall be installed to remove suspended solids by settlement. (WR-13)
- Water quality or runoff shall be periodically monitored before discharge from project sites and into the storm drainage system. (WR-14)