3.10 Water Resources

This section evaluates the potential long-term effects of the No Build Alternative and the Build Alternative on water quality, groundwater supply and recharge, drainage, and wetland and floodplains. Short-term construction effects are discussed in **Section 3.17** (Construction).

The assessment of reasonably foreseeable effects in this section is based upon the geographic and temporal proximity parameters detailed in **Chapter 3.0** (Introduction).

3.10.1 Affected Environment

The Study Area is the 0.5-mile to 2-mile radius from the guideway centerline described in **Section 3.1.1** (Study Area) to focus on the area where impacts are most likely to occur, such as changes in stormwater runoff and drainage. Regulations associated with water resources applicable to the Project are summarized in **Appendix S** (Regulatory Setting Summary).

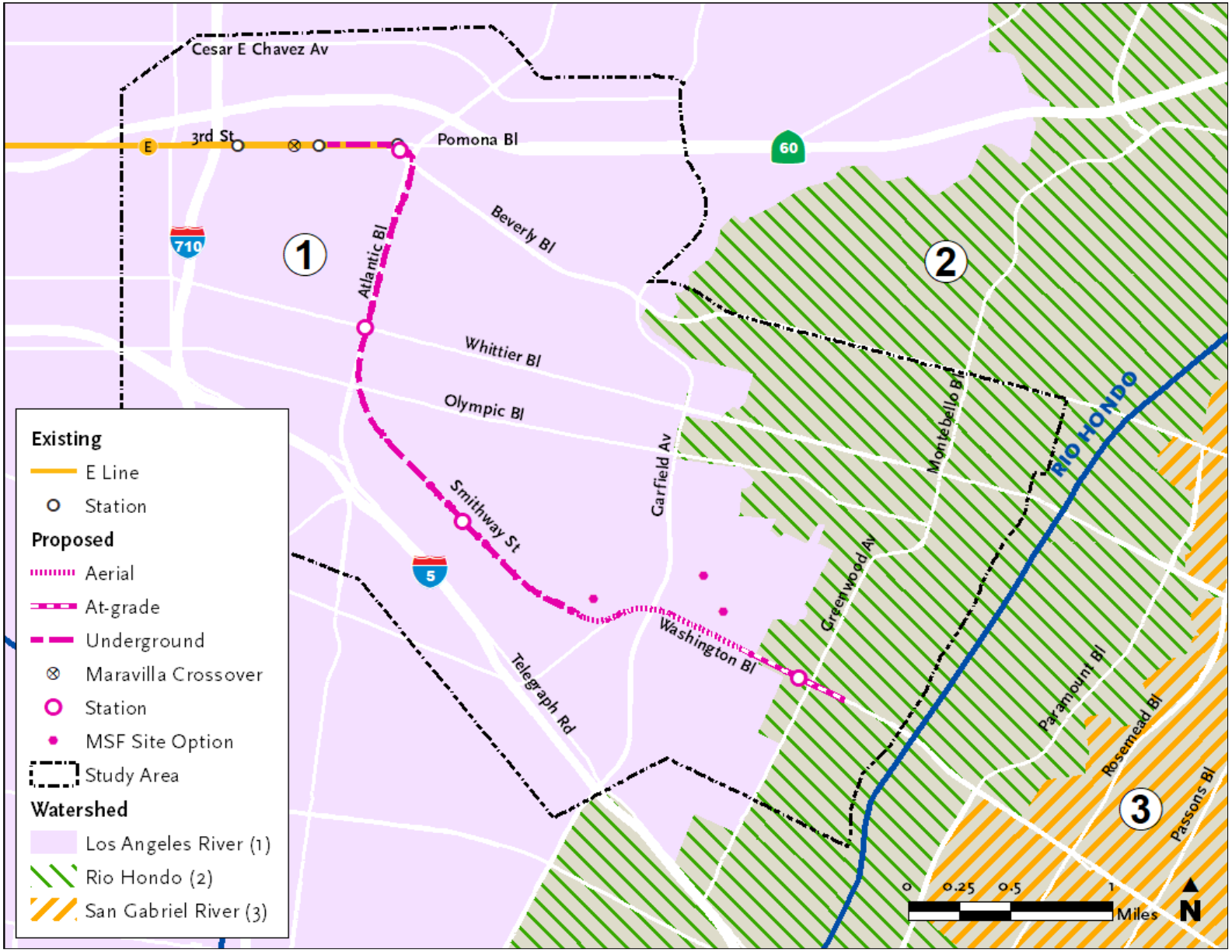
To evaluate potential effects, regional data on water quality, groundwater, drainage, and flood risks were analyzed. This assessment included a 2024 desktop review of federal wetland maps (United States Fish and Wildlife Service 2024a) and aerial imagery, supplemented by site visits conducted between 2021 and 2025. These investigations confirmed that no surface waters or wetlands exist within the Study Area.

The Build Alternative is in the South Coast hydrologic region (California Interagency Watershed Mapping Committee 2023), the Los Angeles River Watershed, and partially within the Rio Hondo Watershed (**Figure 3.10-1**) (United States Geological Survey 2019). The nearest surface water feature is the Rio Hondo, approximately 1,600 feet east of the Build Alternative (**Figure 3.10-2**). This reach of the Rio Hondo (Reach 2) is concrete-lined, and high flows are directed to the adjacent spreading grounds (Baack 2022). It is surrounded by highly urbanized, impervious surfaces (e.g., pavement), resulting in runoff that has the potential to transfer pollutants, such as oil and grease into the river. Reach 2 is impaired for cyanide and coliform bacteria according to State Water Resources Control Board's 303(d) list of impaired water bodies. The Los Angeles Regional Water Quality Control Board's 2014 Basin Plan provides water quality objectives to address these impairments and protect beneficial uses.

The Rio Hondo Spreading Grounds east of the Rio Hondo hold water and allow for groundwater infiltration into the Central Subbasin, which underlies the Project, and is used for potable water. Groundwater depths vary throughout the region. The historic high groundwater levels in the Study Area ranged from 120 to 150 feet below ground surface on the northwest at Atlantic Boulevard and 5 to 15 feet below ground surface at the Rio Hondo and San Gabriel River (Diaz-Yourman and Associates 2021).

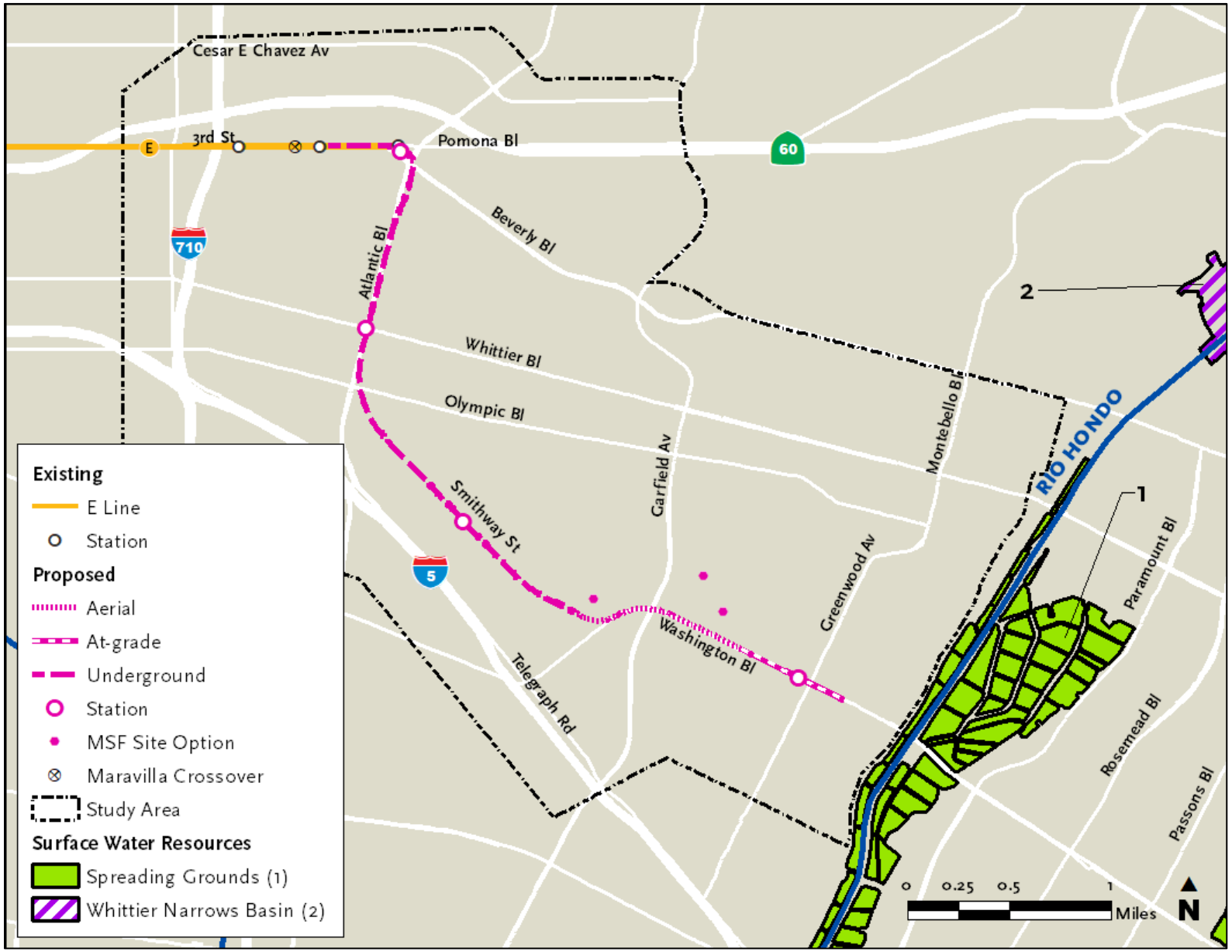
Watershed and Surface Water Context

- **Project Location:** South Coast hydrologic region, traversing the Los Angeles River and Rio Hondo watersheds
- **Water Resources:** The closest surface water is Reach 2 of the Rio Hondo and its spreading grounds. Spreading grounds hold water and allow for groundwater infiltration.
- **Water Quality Risks:** Extensive urban impervious surfaces that increases the risk of oil and grease runoff into the Rio Hondo



Source: United States Geological Survey 2019; Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-1 Watersheds in the Study Area



Source: United States Geological Survey 2019; Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-2 Surface Water Resources near the Study Area

Most groundwater supply wells in or near the Study Area are near the Rio Hondo and its spreading grounds (Los Angeles County Department of Public Works 2024). Wells near the underground alignment are generally 140 to over 200 feet deep and at least 0.2 mile from the Build Alternative. One drinking water well near Woods Avenue between Eagle Street and 6th Avenue is about 200 feet west of the alignment and more than 200 feet deep (Los Angeles County Department of Public Works 2024) and another is approximately 150 feet north of the at-grade alignment (Geokinetics Inc 2025). There are no groundwater wells underlying the MSF site options. Additional information on municipal water supply and suppliers within the Study Area is provided in **Section 3.16** (Utilities).

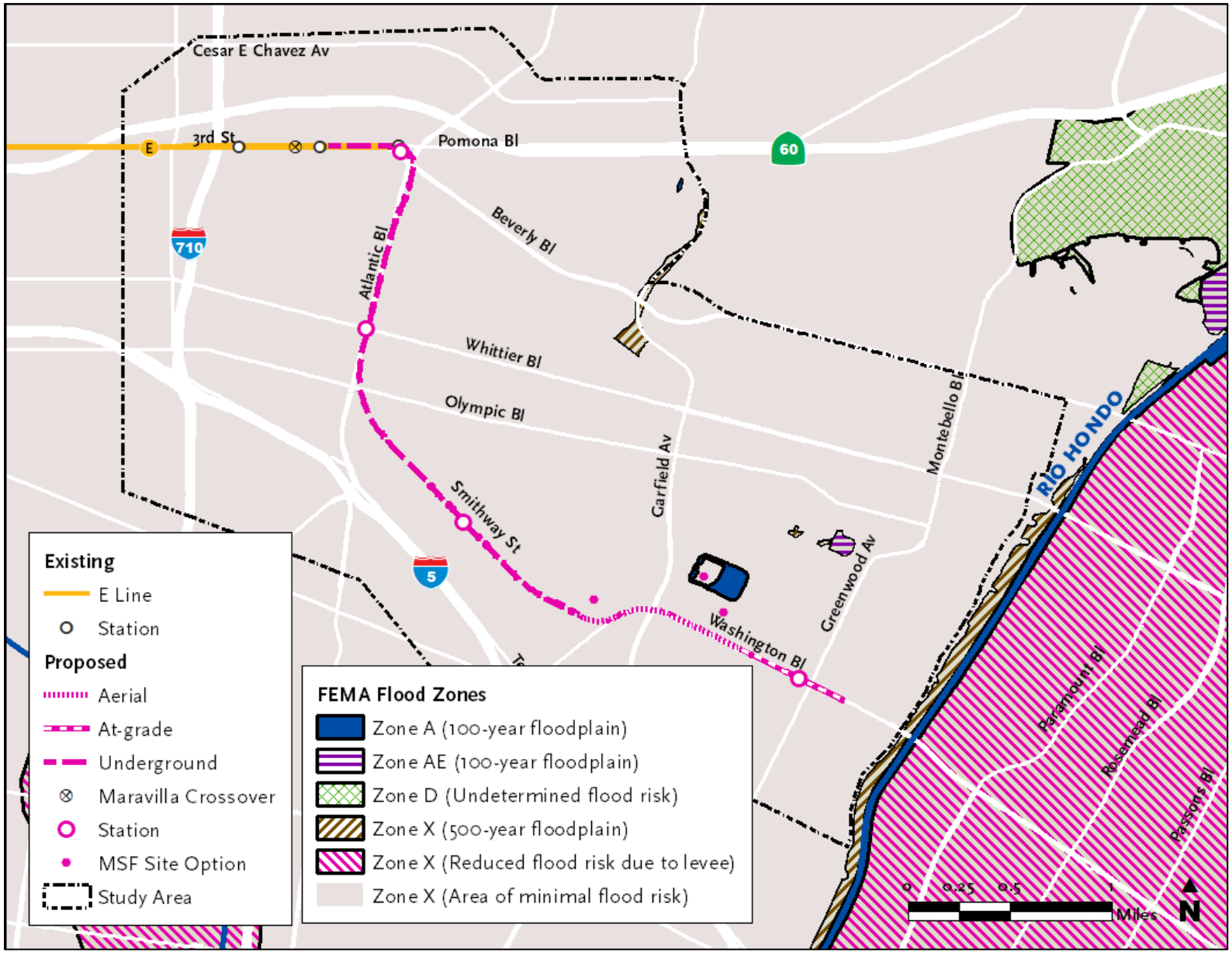
The Water Replenishment District's monitoring for Water Year 2023-2024 found that groundwater quality in the District generally remains high (Water Replenishment District 2025). However, there are sites in the Study Area where groundwater contamination has been documented, as discussed in **Section 3.9** (Hazardous Materials), and **Appendix J** (Hazardous Materials Impacts Report). Further, groundwater within the Study Area could be contaminated from unknown sources, such as leaking underground storage tanks.

Because the Study Area is primarily covered by impervious surfaces, the majority of stormwater and surface water runoff is conveyed via local structural stormwater infrastructure and flood control measures to municipal storm drains. The majority of the at-grade and aerial segments are along major arterials with curb and gutter features and there are multiple storm drains and drainage features within the Study Area. Stormwater within the Study Area is transported downstream to the Rio Hondo through constructed at-grade and underground drainages (Los Angeles County Department of Public Works 2006).

According to Federal Emergency Management Agency Flood Insurance Rate Maps, the Build Alternative alignment and MSF Site 3 are within zone X, an area of minimal flood risk, and would not be susceptible to 100-year or 500-year flood events (**Figure 3.10-3**). Although MSF Sites 1 and 2 are shown to be within a 100-year flood zone (flood zone A), a Letter of Map Change revised this area to zone X, an area of minimal flood risk. Historically, this area was a landfill disposal pit that collected stormwater and flooded. The landfill was filled to street level in the 1980s and developed, and stormwater is now directed to the municipal stormwater management system; thus, the site no longer floods. See **Appendix J** for historical information on the closed landfill. Limited areas of floodplain occur within the Study Area north of the alignment (**Figure 3.10-3**).

Flood Zones Data Sources

- Federal Emergency Management Agency Flood Insurance Rate Maps panels were reviewed to determine the potential flood hazards associated with the Build Alternative: 06037C1641F, 06037C1645F, 06037C1663F, 06037C1810F, and 06037C1830F, all effective September 26, 2008 (Federal Emergency Management Agency 2024).
- Letter of Map Change (Case Number 05-09-A390V-060141), effective September 27, 2008.



Source: Federal Emergency Management Agency 2024; Metro and CDM Smith/AECOM JV 2026.

Figure 3.10-3 Federal Emergency Management Agency Flood Zones in the Study Area

3.10.2 No Build Alternative

The No Build Alternative, as described in **Section 2.2** (No Build Alternative) of the EA, would include already planned and funded roadway and transit projects but would not provide a rail transit option for communities in eastern Los Angeles County. The No Build Alternative would not result in impacts on water resources or quality. The No Build Alternative would not substantively change existing conditions related to impervious surfaces, groundwater supplies or recharge areas, drainage, or erosion in the Study Area. The No Build Alternative would not affect floodplains or wetlands. Overall, as shown in **Table 3.10-1,** the No Build Alternative would not change or impact existing conditions of water resources, and would result in no long-term adverse effects on water resources.

Table 3.10-1 Water Impact Summary – No Build Alternative

Topic	Impact	Rationale
Water Resources or Quality	No Adverse Effect	▪ Already planned transit and roadway projects would comply with federal, state, and local regulations protecting water quality, which would minimize impacts on water quality.
Groundwater supplies or recharge areas, drainage, erosion	No Adverse Effect	▪ The Study Area is urbanized and mostly covered by impervious surfaces. ▪ Implementation of already planned transit and roadway projects could result in minor changes to impervious surfaces, such as the reduction or addition of landscaped areas in the right-of-way. However, because these changes would occur along existing roadways in developed areas, there would be no substantive changes to existing conditions.
Floodplains and wetlands	No Adverse Effect	▪ Limited areas of floodplain occur within the Study Area; wetlands do not occur in the Study Area. ▪ Already planned transit and roadway projects would comply with federal, state, and local regulations protecting floodplains, and no substantial change in impervious surfaces would occur under the No Build Alternative.

Source: Metro; CDM Smith/AECOM JV 2026.

3.10.3 Build Alternative

3.10.3.1 Water Quality

The Build Alternative would terminate approximately 1,600 feet west of the Rio Hondo and its spreading grounds. Ground-disturbing activities have the potential to result in erosion that generates sediment that could be transferred into nearby surface waters through means such as stormwater runoff. Operation of the Build Alternative would not result in ground disturbance, and therefore there would be no change in erosion or sedimentation in the long-term.

Operation of the Build Alternative has the potential to increase pollutants typically associated with light rail transit projects (e.g., heavy metals, oil, and grease). Thus, there could be adverse effects on surface water quality if these pollutants are conveyed to the Rio Hondo via runoff. In compliance with National Pollutant Discharge Elimination System permits, including the Construction General Permit, Municipal Separate Storm Sewer Systems Permit, Industrial General Permit for the MSF, and local Low Impact Development ordinances, post-construction best management practices would be installed to reduce runoff and pollution from runoff. Examples of post-construction best management practices required by law and/or permit approvals, such as treatment of stormwater runoff using infiltration best management practices and development of a stormwater pollution prevention plan, are provided in NEPA Project Measure (NPM) HWQ- 1 (**Section 3.10.4**). Because of implementation of best management practices and compliance with standards, the Build Alternative would not have long-term adverse effects on surface water quality from runoff and release of pollutants.

There could be adverse effects on water quality from the accidental release of hazardous materials used in operational and maintenance activities (e.g., fuels, paints, solvents) that are conveyed in runoff from the guideway or MSF. As described in **Section 3.9** and **Appendix J**, the Build Alternative would comply with laws and regulations pertaining to use and control of hazardous materials, including hazardous materials inventory and emergency response planning, risk planning and accident prevention, employee hazard communication, public notification of potential exposure to specific chemicals, and storage and handling of hazardous materials. Thus, there would be no adverse effect on water quality from the accidental release of hazardous materials.

Adverse effects on groundwater quality could occur if stormwater polluted from the Build Alternative infiltrates into groundwater basins underlying the Study Area via limited pervious surfaces or within the spreading grounds where it is discharged. However, as described above, implementation of post-construction best management practices identified in NPM HWQ-1 would reduce stormwater and non-stormwater runoff from the Study Area following construction. Treatment of stormwater runoff using infiltration best management practices would reduce the risk that polluted water would percolate into groundwater basins underlying the Study Area. Thus, there would be no long-term adverse effects on groundwater quality from percolation of polluted surface water.

As identified in **Appendix O** (Transportation Impacts Report), operation of the Build Alternative would result in reduced VMT compared to the No Build Alternative. An overall reduction in VMT in the Study Area could decrease the primary pollutants associated with all types of transportation operations (Fang and Volker 2017) such as fuels, oil, and grease; particulates and heavy metals; and dirt (Nixon and Saphores 2007; Trumbull and Bae 2000). This would reduce the presence of these pollutants in runoff and have a long-term beneficial effect on surface water quality in the Study Area.

3.10.3.2 Groundwater Supplies and Recharge

As discussed in **Section 3.10.1**, the Build Alternative would not be within the Rio Hondo or its spreading grounds. Further, there are no groundwater wells underlying or near the Build Alternative, so there would be no impacts on groundwater wells. The at-grade and aerial alignment and MSF would be in areas that do not provide notable groundwater recharge because existing surfaces are primarily impervious. Operational activities would not change the amount of impervious surface within the Rio Hondo Spreading Grounds where most of the groundwater recharge occurs. Thus, the Build Alternative would not result in long-term adverse effects on groundwater supplies or recharge.

3.10.3.3 Drainage

There could be a negligible increase in the amount of impervious surface from operation of the Build Alternative because of removal of small areas of landscaping. This could adversely affect drainage by increasing the amount of runoff from impervious surfaces. However, because the increase in impervious surfaces would be small, it would not meaningfully change the rate or amount of stormwater runoff generated in the Study Area, nor impact the spreading grounds where the majority of infiltration occurs. Further, the Build Alternative would comply with post-construction measures in applicable National Pollutant Discharge Elimination System permits, low impact development standards, and local policies protecting water quality, as identified in NPM HWQ-1 (**Section 3.10.4**). Permanent additions of stormwater infrastructure would be operated in compliance with Los Angeles County Department of Power and Water and Metro drainage standards. Therefore, the Build Alternative would have no long-term adverse effect on drainage.

3.10.3.4 Floodplains and Wetlands

As discussed in **Section 3.10.1**, the Build Alternative, including the MSF site options, is entirely within an area of minimal flood risk. The Build Alternative would have no effect on the small areas of floodplain located north of the alignment within the Study Area. Therefore, no further compliance with Executive Order 11988 and Department of Transportation Order 5650.2 would be required.

As discussed in **Section 3.10.1**, no wetlands occur within the Study Area. Therefore, the Build Alternative would have no effect on wetlands and no further compliance with Executive Order 11990 and Department of Transportation Order 5660.1A would be required.

3.10.4 Avoidance, Minimization, and Mitigation Measures for the Build Alternative

The measures identified in **Table 3.10-2** would be implemented for the Build Alternative in the long term. Construction measures are provided in **Section 3.17**.

Table 3.10-2 Long-Term Avoidance, Minimization, and Mitigation Measures

Topic	Potential Effect	Proposed Measure	Measure Type	Effects After Implementation of Measure(s)
Water Quality	Generation of pollutants from light rail operations could be transferred into surface and groundwater via runoff and percolation, and from accidental release of hazardous materials	**NPM HWQ-1 (Operational Best Management Practices for Water Resources)**. Operational best management practices (BMP) may include but shall not be limited to: ▪ Treatment of stormwater runoff using infiltration BMPs such as detention basins or tanks, infiltration basins, bioretention facilities, media filters, porous pavement, or vegetated filter strips to remove particulate pollutants. ○ Development of a stormwater pollution prevention plan (SWPPP) in compliance with the State Water Resources Control Board (SWRCB) Industrial General Permit for maintenance and storage facility (MSF) operations. The SWPPP shall include BMPs such as: Preventing disposal of any rinse/wash waters or industrial materials into the stormwater conveyance system. ○ Establishing procedures for prompt maintenance and repair of equipment that may result in leaks and spills.	Project Measure	**No Adverse Effect -** Operational best management practices and runoff and pollution control measures would be implemented to protect water quality
Groundwater Supplies and Recharge	No change to groundwater recharge areas or water wells	No avoidance, minimization, or mitigation measures needed	None	**No Adverse Effect**
Drainage	Negligible increase in impervious surface	**NPM HWQ-1** (defined previously)	Project Measure	**No Adverse Effect -** Operational best management practices and runoff and pollution control measures would be implemented to control runoff
Floodplains and Wetlands	No effect as the Build Alternative is not within any floodplains or wetlands	No avoidance, minimization, or mitigation measures needed	None	No Effect

Source: CDM Smith*/AECOM JV 2026.*