

4.12 PUBLIC SAFETY AND SERVICES

4.12.1 Setting

a. Water Supply. Water supply for each segment of the MBSST Network project would be provided by one of several water districts and management agencies in the region. The service area, existing infrastructure, and a brief description of the water supplies contained within key water districts are described below.

County of Santa Cruz. In some unincorporated areas of Santa Cruz County, including along the northern reach, individual parcels and communities rely on private wells and stream diversions for their water supply, rather than service from a water district. Santa Cruz County, acting as a Local Primacy Agency for the California Public Health Department, oversees small water systems serving between 5 and 199 water connections. There are approximately 130 small water systems in Santa Cruz County serving approximately 2,500 households. Additionally, there are at least 8,000 private wells in Santa Cruz County that serve between one and four households.

As there are no water districts that serve the northern reach (with the exception of a portion of sub-segment 5.1, as described below), water supplies in this area are limited to existing small water connections or private wells, and are difficult to quantify (John Ricker, Santa Cruz County Water Resources Division Director, Personal Communication, November 26, 2012).

Davenport County Sanitation District. Water for the town of Davenport is supplied by the Davenport County Sanitation District (DCSD), which is owned and operated by the County of Santa Cruz. The DCSD serves approximately 500 people and provides both potable and recycled water for landscape irrigation (Fall Creek Engineering, November 2004). DCSD supplies approximately 40,000 gallons per day of potable water and is capable of producing approximately 120,000 gallons per day, under ideal conditions¹ (John Swenson, Davenport County Sanitation District, Personal Communication, December 18, 2012). Therefore, DCSD has a surplus capacity of 80,000 gallons per day [0.25 acre-feet per day or approximately 91 acre-feet per year (AFY)]. Water supply from the DCSD would only be available to the portions of the proposed MBSST Network that are located within the town of Davenport (John Ricker, Santa Cruz County Water Resources Division Director, personal communication, November 26, 2012). This may include a portion of segment 5.1, which is located across Highway 1 from Davenport.

City of Santa Cruz Water District. The City of Santa Cruz water system serves an area of approximately 30 square miles, including the entire City of Santa Cruz, adjoining unincorporated areas of Santa Cruz County, a small portion of the City of Capitola, and coastal agricultural lands north of the City (City of Santa Cruz, 2011). The City's water system is comprised of four main production elements: 1) the North Coast Sources, 2) the San Lorenzo River, 3) Loch Lomond Reservoir, and 4) the Live Oak Wells. Major facilities within the City's water supply system include a 20 million gallon per day (mgd) conventional surface water treatment plant, several pump stations, and 16 distribution reservoirs storing almost 15 million gallons of treated water. There are also approximately 300 miles of pipe and over 24,350 active water meters in service. Current (2010) water supplies in the District total approximately 4,130 million gallons per year (or approximately

¹ Production capacity could be less during the winter season.



12,674 AFY). The City of Santa Cruz Water District would serve segments 6 through 10 of the central reach.

Soquel Creek Water District. The Soquel Creek Water District (SqCWD) encompasses seven miles of shoreline along Monterey Bay, and extends from one to three miles inland into the foothills of the Santa Cruz Mountains, essentially following the County Urban Services Line. The City of Capitola is the only incorporated area within the SqCWD. The SqCWD currently receives 100 percent of its water from groundwater aquifers in the Soquel-Aptos area. SqCWD's water supply system consists of 18 groundwater production wells, 15 of which are currently active, approximately 130 miles of pipeline, and 18 water storage tanks. The total estimated production capacity of the system is about 7 mgd, and the total storage capacity is 7.5 million gallons. SqCWD would supply water to segments 11 through 15 of the central reach.

Pajaro Valley Water Management Agency. The Pajaro Valley Water Management Agency (PVWMA) is a state-chartered water management district formed to efficiently and economically manage existing and supplemental water supplies in order to prevent further increase in, and to accomplish continuing reduction of, long-term overdraft. PVWMA also works to provide and ensure sufficient water supplies for present and future anticipated needs within its boundaries, generally the greater coastal Pajaro Valley.

The PVWMA partnered with the City of Watsonville to introduce the Watsonville Area Water Recycling Project as part of the Agency's long-term plan to meet the water needs of the Pajaro Valley region. The recycled water facility would produce 4,000 AFY of recycled water. This recycled water, delivered through the Agency's coastal distribution system, would irrigate a portion of more than 6,000 acres during spring, summer and fall months.

While the PVWMA has the authority to manage groundwater resources in the basin, the Agency's activities typically focus on halting seawater intrusion by balancing the overdraft conditions in the basin. For example, PVWMA's charter specifically prevents supplying potable water, which is intended to remain the responsibility of local water purveyors (i.e. the City of Watsonville Water District). Therefore, all PVWMA water supplies are only for non-potable (irrigation) water (PVWMA, December 2012). The PVWMA would serve the non-potable water needs of segments 16 and 17 of the Watsonville reach.

City of Watsonville Water District. The Watsonville water service area extends beyond the city limits, into unincorporated Santa Cruz County, including parts of Corralitos, Freedom, and Pajaro Dunes (City of Watsonville, 2011). The service area consists of nine hydraulic pressure zones, 14 wells, eight reservoirs and water storage facilities, nine booster stations, over 150 miles of pipelines, and a slow sand filter water treatment plant. During years of normal rainfall, the City utilizes a combination of surface water and groundwater supply sources. The surface diversions are piped to the Corralitos Filter Plant (CFP) and provided treatment via slow sand filtration and disinfection. The CFP has a capacity of 2,400 AFY and currently produces an average of 900 AFY. The City's 14 groundwater wells are capable of providing 21,600 AFY. The City does not purchase water from any wholesale water suppliers. The City's wastewater treatment plant can provide up to 4,000 AFY of recycled water. Though this recycled water is treated to Title 22 standards, it is not connected to the general distribution system and is intended for agricultural purposes only.



Segments 18 and 19 of the Watsonville reach would be served by the City of Watsonville Water District.

Pajaro/Sunny Mesa Community Services District (PSMCSD). PSMCSD provides potable water services, fire flows, parks, streetlights, and sanitary sewer services to thousands of residents of North Monterey County. It is the only public agency which provides public potable water services in the Pajaro, Elkhorn, and Prunedale areas (PSMCSD, December 2012). Therefore, PSMCSD would serve segment 20 of the Watsonville reach.

Table 4.12-1 shows the projected surplus water supplies for water districts within the MBSST Network project area.

**Table 4.12-1
 Projected Water Supply Surplus for Water Purveyors Serving the
 MBSST Project Area (acre-feet)**

	2015	2020	2025	2030
County of Santa Cruz	n/d	n/d	n/d	n/d
Davenport County Sanitation District	91	n/d	n/d	n/d
City of Santa Cruz Water District	1,000	654	503	350
Soquel Creek Water District	0	0	0	0
Pajaro Valley Water Management Agency*	-	-	-	-
City of Watsonville Water District	16,263	16,122	15,914	15,733
Pajaro/Sunny Mesa Community Services District	n/d	n/d	n/d	n/d

*City of Santa Cruz, 2010 Urban Water Management Plan
 City of Watsonville, 2010 Urban Water Management Plan
 Soquel Creek Water District, Urban Water Management Plan 2010, September 2011.
 John Swenson, Davenport County Sanitation District, Personal Communication, December 18, 2012
 John Ricker, Santa Cruz County Water Resources Division Director, Personal Communication, November 26, 2012
 PSMCSD, December 2012
 n/d = no data available.
 * Provides non-potable water only.*

As shown in Table 4.12-1, the City of Santa Cruz Water District and City of Watsonville Water District have surplus supplies through 2030, while the Davenport County Sanitation District has surplus supplies in the near-term. For other water purveyors, including the County of Santa Cruz (who oversees small systems and private wells) and the Pajaro/Sunny Mesa Community Services District, the availability of surplus supplies is unknown. SqCWD does not have a surplus of water.

It should be noted that the City of Santa Cruz and SqCWD are pursuing the development of a 2.5 mgd seawater desalination plant, which would function as a backup water supply in times of drought. The two agencies formed the *SCWd2 Desalination Program* to jointly evaluate and plan for a shared desalination project (SqCWD, 2011). To date, a one-year pilot study and feasibility studies for intake, brine disposal and pre-treatment have been completed to inform the Environmental Impact Report (EIR), which is underway. An Energy Minimization and Greenhouse Gas Reduction Study is also being conducted.

b. Emergency Access. Local fire departments, including the City of Santa Cruz Fire Department, the Capitola Fire Department, the Watsonville Fire Department, and the Santa Cruz County Fire Department, would provide fire and emergency services for the proposed MBSST



Network within their respective jurisdictions. Segment 20 of the proposed MBSST Network, which is located in Monterey County, would be located within the jurisdiction of the North County Fire District. Local police departments, including the City of Santa Cruz Police Department, the Capitola Police Department, the Watsonville Police Department, and the Santa Cruz County Sheriff's Department would provide police services for the proposed MBSST Network within their respective jurisdictions. Emergency medical services within the County are contracted to American Medical Response (AMR). The following is a description of fire, police, and emergency services that would serve the proposed MBSST Network.

Santa Cruz County.

Fire Protection Services. Fire protection services to portions of the MBSST Network that are in unincorporated Santa Cruz County would be provided by the Santa Cruz County Fire Department (contracted to the California Department of Forestry and Fire Protection [CAL FIRE]), the Central Fire Protection District (CFPD), and the Aptos/La Selva Fire Protection District (ALSFPD). CAL FIRE would provide fire protection services to the entire northern reach and segments 16 and 17 of the Watsonville reach, which are rural areas. CAL FIRE maintains an average response time of approximately five to six minutes in urban areas and nine to ten minutes in rural areas (Applied Survey Research, 2011).

CFPD would serve the southern portion of segment 9, segment 10, and the northern portion of segment 11 within the central reach. The CFPD has two stations in the City of Santa Cruz, a station in Soquel, and a station in the City of Capitola. The CFPD maintains a response time of five minutes to the coastal/urban areas (John Walbridge, Battalion Chief, Email Communication, November 22, 2012).

ALSFPD would serve the southern portion of segment 11 and segments 12 through 14 of the central reach, as well as segment 15 of the Watsonville reach. The ALSFPD has three stations in Aptos. The ALSFPD maintains an average response time for emergency calls of between five and six minutes (Applied Survey Research, 2011).

Police Protection Services. The Santa Cruz County Sheriff's Department would provide police protection services to portions of the proposed MBSST Network located in the unincorporated County. The County's Sheriff Department provides police protection services to the communities of Aptos, Live Oak, San Lorenzo Valley, and the south County. Average response times to the unincorporated areas of the County are between eight and nine minutes for priority 1 calls² (Applied Survey Research, 2011).

Emergency Medical Services. The Public Health Department of the Santa Cruz County Health Services Agency contracts emergency ambulance services in the County (including all incorporated cities) to AMR (Santa Cruz County Health Services Agency, November 2012). Since 1990, AMR has been the sole 24-hour Advanced Life Support (ALS) ambulance transport provider in the County. AMR maintains ten ambulance station locations throughout Santa Cruz County.³

² Priority 1 calls are defined as calls for assistance that involve a person or accident.

³ Station locations include: Boulder Creek (San Lorenzo Valley), Santa Cruz, Capitola (Mid-County), Watsonville, Capitola/Soquel, Aptos, Felton, Dominican, Westside/Extra, All-County.



Between four and eight ambulances are deployed to station locations, depending on anticipated demand. AMR also deploys additional units during peak demand times, such as holidays.

Santa Cruz County is currently divided into three emergency response time zones (Zones A, B, and C). Response time zone A spans the entire northern portion of Santa Cruz County. Response time zone B covers the entire mid-section of the County, between the City of Santa Cruz and Aptos, and response time zone C covers the entire southern portion of the County, including the City of Watsonville. As the proposed MBSST Network stretches the entire length of Santa Cruz County, portions of the proposed MBSST Network would be located within all three response time zones. Average response times, in the event of an emergency involving ALS, are 8 minutes (zone A), 12 minutes (zone B), or 20 minutes (zone C), depending on the location of the emergency. Average response times, in the event of an emergency involving paramedic and ambulance services, are 12 minutes (zone A), 18 minutes (zone B), or 30 minutes (zone C), depending on the number of ambulances deployed and the location of the emergency.

City of Santa Cruz.

Fire Protection Services. The City of Santa Cruz is served by the City of Santa Cruz Fire Department, which operates one administrative office, three fire stations, and one lifeguard headquarters. All three fire stations are located within one mile of the MBSST Network segments located in the City of Santa Cruz. The City of Santa Cruz Fire Department would serve segments 6 through 8 and the northern portion of segment 9 within the central reach. The station closest to the proposed MBSST Network is Fire Station 3, located at 335 Younglove Avenue, approximately 0.09 miles north of the segment 7. The Fire Department maintains a response time goal of eight minutes 90 percent of the time, for full deployment of fire protection services, which could include up to 13 personnel. Average response times within the City currently range from one minute to ten minutes, depending on the location of the incident (Eric Aasen, Fire Division Chief, City of Santa Cruz Fire Department, Personal Communication, November 19, 2012).

Police Protection Services. The City of Santa Cruz Police Department would serve segments 6 through 8 and the northern portion of segment 9, within the central reach. The Police Department is located at 155 Center Street, approximately 0.3 miles north of segment 8 within the central reach. The Santa Cruz Police Department maintains an average response time of two to four minutes within the City (Larry Richard, Lieutenant, Santa Cruz Police Department, Email Communication, November 22, 2012).

Emergency Medical Services. Emergency medical services in the City of Santa Cruz are provided by AMR. The City of Santa Cruz is located in zone B. The average response time to zone B is 18 minutes.

City of Capitola.

Fire Protection Services. The City of Capitola is served by the Central Fire Protection District (CFPD) (City of Capitola, September 28, 1989). The CFPD operates an administrative office and four fire stations, located in Santa Cruz, Soquel, and Capitola. Although all the fire stations within the Central Fire Protection District would serve the segments that traverse the City of Capitola (the southern portion of segment 10 and the northern portion of segment 11), Station 4 is the closest



station to the MBSST Network corridor, approximately 75 feet north of segment 11. The CFPD maintains a response time goal of five minutes (John Walbridge, Battalion Chief, Email Communication, November 22, 2012).

Police Protection Services. The City of Capitola Police Department is located at 422 Capitola Avenue, approximately 200 feet west of segment 11. The City of Capitola Police Department would serve the segments of the central reach that traverse the City of Capitola (the southern portion of segment 10 and the northern portion of segment 11). The Capitola Police Department maintains an average response time of approximately three to five minutes (Applied Survey Research, 2011).

Emergency Medical Services. Emergency medical services in the City of Capitola are provided by AMR. The City of Capitola is located in zone B. The average response time to zone B is 18 minutes.

City of Watsonville.

Fire Protection Services. The City of Watsonville is served by the Watsonville Fire Department, which would also serve segments 18 and 19 of the MBSST Network project. The Watsonville Fire Department operates one administrative headquarters, a training center, and two fire stations. Although both fire stations would serve the project, Station 1 is closest to the MBSST Network segments within the City of Watsonville. This station is located approximately 0.15 miles northeast of segment 19. The average response time to emergency calls for the Watsonville Fire Department is between four and six minutes (Rob Ryan, Fire Marshal, Watsonville Fire Department, Email Communication, November 29, 2012).

Police Protection Services. The Watsonville Police Department is located at 215 Union Street, approximately 0.32 miles east of segment 19. The Watsonville Police Department would serve segments 18 and 19 of the MBSST Network project. The Police Department maintains average response times of three to five minutes (Applied Survey Research, 2011).

Emergency Medical Services. Emergency medical services in the City of Watsonville are provided by AMR. The City of Watsonville is located in zone C. The average response time to zone C is 30 minutes.

Monterey County. Segment 20 of the proposed MBSST Network is located in Monterey County, and would be served by the North County Fire Protection District in the event of an emergency. The North County Fire Protection District maintains a response time goal of arriving within eight minutes, 90 percent of the time, to all medical emergencies within five miles of the District's station (Chris W. Orman, Fire Chief, North County Fire Protection District, Email Communication, November 29, 2012).

c. Trail Conflicts. It is increasingly common for trail users to encounter other users (or evidence of use) on trails. Some encounters are with users participating in the same activity, and some are with fellow trail users engaged in different activities. Trail safety hazards may occur between different types of trail users (i.e. between bicyclists and pedestrians, bicyclists and equestrians, and/or pedestrians and equestrians); among trail users within the same group (i.e.



between two bicyclists traveling at different speeds); and as a result of factors not related to users' trail activities. Conflicts may be related to activity style (mode of travel, level of technology, or trail dominance), focus of trip, and attitudes toward other trail users. Specific hazards include collisions or near misses among users, reckless behavior, or accident caused by unsafe trail conditions (e.g. uneven pavement or presence of debris).

Impacts related to trail conflicts between trail users and automobiles and between trail users and railroad operations are discussed in Section 4.11, *Transportation/Traffic*. Impacts between the types of trail users (i.e. between bicyclists and pedestrians, bicyclists and equestrians, and/or pedestrians and equestrians) and between trail users and railroad operations are discussed in Section 4.12.2(b) (Project Impacts and Mitigation Measures).

4.12.2 Impact Analysis

a. Methodology and Significance Thresholds. A significant impact would occur if the proposed MBSST Network project would result in any of the following conditions:

- 1) *Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- 2) *Have insufficient water supplies available to serve the project from existing entitlements and resources;*
- 3) *Result in substantial adverse physical impacts associated with the provision of new or physically altered government and public services facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, or other emergency service providers; and/or*
- 4) *Expose people to existing or potential public safety hazards other than those set forth above.*

It should be noted that the proposed MBSST Network project would not generate an increase in population that would warrant the construction of new school facilities. The proposed Master Plan would enhance public transportation and recreation options and would not create physical deterioration of existing recreation facilities, nor generate demand for new recreation facilities. In addition, the proposed MBSST Network project would not exceed wastewater treatment requirements or require the construction of new wastewater treatment facilities. Drainage improvements included in the proposed MBSST Network project would ensure that runoff flows would not exceed historic flows, such that the proposed project would not be expected to result in the need for new storm drain facilities. Finally, the proposed MBSST Network is not anticipated to generate significant amounts of solid waste and, therefore, would not cause a landfill to exceed its permitted capacity or violate any regulations related to solid waste. As a result, the checklist items related to these conditions were excluded from the above list and further discussion can be found in the Initial Study (Appendix A of this document).

Impacts related to hazardous materials and wildland fires are discussed in Section 4.8, *Hazards and Hazardous Materials*. Conflicts between trail users and automobiles and railroad operations are addressed in Section 4.11, *Transportation/Traffic*.



The following is a description of the specific methodologies and significance criteria used to determine impacts related to water supply and infrastructure and emergency response services (including fire protection services, police protection services, and EMS services).

Water Supply and Infrastructure. There are no pre-established water demand factors for a recreational trail like the proposed MBSST Network project. Therefore, in order to estimate water demand, the proposed MBSST Network project was treated as a park use, with demand rates applied to the estimated acreage of the entire trail. Based on the trail's approximate length of 49.6 miles and approximate trail and shoulder width (disturbance area) of 25 feet, the approximate activity area of the MBSST is estimated to be 150.3 acres. A demand factor of 571,429 gallons per acre per year was used, which is consistent with the rate used in the City of Santa Cruz, *Water Supply Assessment for General Plan 2030* (2011).

For the purpose of this analysis, the proposed MBSST Network would have a significant effect on water supplies if the project would generate demand that would exceed the available surplus supply of water, thereby causing water shortages during average or peak demand periods. Impacts would also be significant if the proposed MBSST Network would require the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Fire, Police, and EMS Services. Police, fire, and EMS service providers were contacted to ascertain the current average response times within their jurisdictions, estimated response times to the proposed MBSST Network, and whether or not each agency anticipates any accessibility issues along the segments of the proposed MBSST Network within their jurisdiction. Estimated response times to the proposed MBSST Network project were then compared to the current average response times. For the purpose of this analysis, impacts to emergency services would be considered significant if average response times could not be met, such that the construction of new facilities would be required to ensure adequate response to the proposed MBSST Network project.

b. Project Impacts and Mitigation Measures.

Impact PS-1 The proposed MBSST Network would result in an incremental increase in water demand, and some segments would be located in areas without adequate water to serve this demand. Impacts would be Class II, *significant but mitigable*.

The proposed MBSST Network project would generate new water demand for landscaping maintenance and to service one proposed restroom in the Watsonville Reach. The proposed MBSST Network project would also incrementally increase water demand at existing restrooms and drinking fountains along the trail network. The following is a discussion of the water supply and infrastructure impacts associated with each reach of the proposed MBSST Network.

Northern Reach. The northern reach of the proposed MBSST Network would create new demand for water for landscape irrigation and would incrementally increase demand at existing restrooms and drinking fountains. No new public restroom facilities are proposed along this reach.



Water supply to the northern reach may be provided by small water systems or private wells (overseen by Santa Cruz County) or the DCSD, which provides water to the community of Davenport. The northern reach is 22.74 miles in length. Using an approximate disturbance area of 25 feet wide, the northern reach constitutes approximately 68.9 acres. Based on a water duty factor of 571,429 gallons per acre per year, the northern reach would demand an estimated 39.4 million gallons of water per year, or 120.8 acre feet per year (AFY). Water surplus available to the northern reach is unknown, as supplies (if available) may come from private wells or other small water systems. Further, although the DCSD has an existing surplus, it is not clear if the DCSD would serve the sub-segment 5.1, which is located across Highway 1 from the Davenport community. Therefore, it is unclear if there is adequate supply to meet this projected demand.

As discussed in Section 4.12.2(a) (Methodology and Significance Threshold), the water duty factor used in this analysis is for a park use, which would typically include grass and other landscaping that requires irrigation; public restroom(s); and drinking fountain(s). The northern reach would not include intensive landscaping, nor would it include the installation of new restrooms or drinking fountains. Further, this duty factor assumes that the entire 68.9 acres would be developed as a park; however, in reality improvements along the northern portion of the northern reach (segments 1 and 2) would be limited, as the trail would consist of a Class III on-street/road shoulder bike route, much of which is currently in place. Improvements would therefore be limited to routine road edge clearing, signs, and shoulder pavement striping. No landscaping is expected in these segments. Beginning in segment 3, the proposed MBSST Network would include a new multi-use paved path adjacent to Highway 1. This path would be a twelve foot wide paved surface with center lane striping adjacent to a six foot unpaved (decomposed granite) path and minimum two foot buffer between the trail and adjacent railroad. Thus, at least 20 feet of the trail width would not be landscaped and thus would not result in a demand for water.

Based on the above, the duty factor used for this analysis is considered a very conservative estimate of water demand, as actual demand along the northern reach would likely be much lower. Nevertheless, some water could be required for irrigation of landscaping and increased use of existing restrooms and water fountains at trail heads in the northern reach. In addition, the available capacities of the water and wastewater treatment and conveyance infrastructure that would serve the existing restrooms and water fountains at the time the segments are proposed to be constructed are unknown. As water supply volumes and infrastructure to serve the segments is not assured, this is a potentially significant impact and mitigation is required.

Central Reach. The central reach of the proposed MBSST Network would create new demand for water for landscape irrigation and would incrementally increase demand at existing restrooms and drinking fountains. No new public restroom facilities are proposed along this reach.

Water supply to the central reach would be provided by the City of Santa Cruz Water District, or the SqCWD. The central reach is 13.46 miles in length. Using an approximate disturbance area of 25 feet wide, the central reach constitutes approximately 40.8 acres. Based on a water duty factor of 571,429 gallons per acre per year, the central reach would demand an estimated 23.3 million gallons of water per year, or 71.5 AFY. The City of Santa Cruz Water District has



adequate surplus supplies through 2030 to meet this projected demand; however, the SqCWD has no surplus supplies. Therefore, the portion of the central reach within the SqCWD (segments 11 through 14) may not have adequate supply to meet this projected demand.

As discussed above, the water duty factor used in this analysis is for a park use, which would typically include grass and other landscaping that requires irrigation; public restroom(s); and drinking fountain(s). The central reach would not include intensive landscaping, nor would it include the installation of new restrooms or drinking fountains. Further, this duty factor assumes that the entire 40.8 acres would be developed as a park; however, in reality the proposed MBSST Network would include a new multi-use paved path adjacent to the Santa Cruz Branch Rail Line. For most of the central reach, this path would be an approximately eight to twelve foot wide paved surface with center lane striping in some areas adjacent to a six foot unpaved path (in some areas) and minimum two foot buffer between the trail and adjacent railroad. Thus, up to 20 feet of the trail width would not be landscaped and thus would not result in a demand for water. Along segment 8 (near the Santa Cruz Beach Boardwalk), trail improvements would be limited to improvements to existing pedestrian and bicycle facilities, and would therefore not include landscaping.

Based on the above, the duty factor used for this analysis is considered a very conservative estimate of water demand, as actual demand along the central reach would likely be much lower. Nevertheless, some water could be required for irrigation of landscaping and increased use of existing restrooms and water fountains at trail heads in the central reach. In addition, the available capacities of the water treatment and conveyance infrastructure that would serve the existing restrooms and water fountains at the time the segments are proposed to be constructed are unknown. As water supply volumes and infrastructure to serve portions of the central reach is not assured, this is a potentially significant impact and mitigation is required.

Watsonville Reach. The Watsonville reach of the proposed MBSST Network would demand water for landscape irrigation and would incrementally increase demand at existing restrooms and drinking fountains. In addition, one new public restroom facility would be constructed within the Watsonville reach.

Water supply to the Watsonville reach would be provided by the SqCWD, the PVWMA, the City of Watsonville Water District, and the PSMCSD, depending on the segment. The Watsonville reach is 13.43 miles in length. Using an approximate disturbance area of 25 feet wide, the central reach constitutes approximately 40.7 acres. Based on a water duty factor of 571,429 gallons per acre per year, the central reach would demand an estimated 23.3 million gallons of water per year, or 71.4 AFY. The City of Watsonville Water District has adequate surplus supplies through 2030 to meet this projected demand; however, the SqCWD has no surplus supplies, the PVWMA only supplies non-potable water, and the water availability of the PSMCSD is unknown. Therefore, several segments of the Watsonville reach may not have adequate supply to meet this projected demand.

As discussed above, the water duty factor used in this analysis is for a park use, which would typically include grass and other landscaping that requires irrigation; public restroom(s); and drinking fountain(s). The central reach would not include intensive landscaping. Further, this duty factor assumes that the entire 40.7 acres would be developed as a park; however, in reality



the proposed MBSST Network would include a new multi-use paved path adjacent to the Santa Cruz Branch Rail Line. For most of the Watsonville reach, this path would be an approximately twelve foot wide paved surface with center lane striping in some areas adjacent to a six foot unpaved path (in some areas) and minimum two foot buffer between the trail and adjacent railroad. Thus, up to 20 feet of the trail width would not be landscaped. Along segment 19 (within the City of Watsonville), trail improvements would be limited to improvements to existing pedestrian and bicycle facilities, and would therefore not include landscaping.

One new public restroom facility would be constructed within the Watsonville reach. Although its precise location has not been determined, it is anticipated that this restroom would be in a predominantly rural location and utilize a septic disposal system. The proposed restroom would require the extension of existing water infrastructure systems (i.e. water utility lines) in order to serve the water supply needs. The precise location of the restroom is unknown at this time; therefore, the existing capacity of the water treatment and conveyance infrastructure that would serve the facility at the time it is proposed to be constructed is also unknown. However, the extension of water utility lines to a future restroom and to serve existing facilities along this reach, if required as a result of increase in demand, would be subject to the approval of the appropriate jurisdiction in which the proposed restroom would be constructed. This would also be the case should permanent irrigation facilities be required for landscaping along the reach. Moreover, the new planned restroom would be required to be consistent with CalGreen standards including the installation of low-flow plumbing fixtures to reduce water use and wastewater generation.

Based on the above, the duty factor used for this analysis is considered a very conservative estimate of water demand, as actual demand along the Watsonville reach would likely be much lower. Nevertheless, some water could be required for irrigation of landscaping, increased use of existing restrooms and water fountains at trail heads, and new demand from the restroom facility in the Watsonville reach. In addition, depending on the capacity of existing water treatment and conveyance facilities, development of the Watsonville reach could result in demand that exceeds the capacity of existing infrastructure, resulting in the need for construction of new water facilities or expansion of existing facilities. Therefore, as water supply to portions of the central reach is not assured and the future capacity of existing infrastructure is unknown, this is a potentially significant impact and mitigation is required.

Mitigating Design Features. The landscaping treatment along the proposed MBSST Network would vary along the corridor as it traverses from one region to another. The landscape treatment would be limited by availability of space in the trail corridor, narrow rights-of-way, railway operational clearance, agricultural operations, sensitive coastal bluffs, and other mitigating factors, and would be determined through the design phase of each segment in coordination with the primary managing agency.

Currently there are existing segments of the MBSST corridor that follow highly urbanized areas with landscape treatments existing along street corridors, parks, adjacent open space, harbor edges, and beachfront areas. The landscape for new segments of the MBSST would vary with the setting and with the agency responsible for the design, implementation, and long-term maintenance. Landscape treatment in intense urbanized areas would include both native and non-native drought tolerant plant palettes. However, areas where the trail is located in and/or



adjacent to native landscape settings, or rural and agricultural lands, every effort would be taken to maintain native and indigenous plant species in the planting and restoration efforts. Plant palettes would be determined as part of the design phase for each segment in coordination with the implementing entity. Planting plans would also comply with environmental studies and recommendations concerning sensitive or critical native plant habitats. Other precautions would consist of the strict avoidance of invasive species being included in any planting plans.

Mitigation Measures. Although the proposed MBSST Network project is not anticipated to result in substantial water demand or a substantial increase in demand for water treatment, some segments of the trail are located in areas where water supply cannot be assured and/or where future water treatment capacity may be insufficient. In addition, the water landscape in Santa Cruz County is evolving, and fewer (or more) supplies may be available at the time a specific segment is proposed for development.

Given the existing uncertainty, the following mitigation measures are required to reduce impacts to a less than significant level.

PS-1(a) Landscaping Irrigation. Where a segment is proposed in an area that may not have adequate water supplies or water treatment facilities, one or a combination of the following options shall be implemented:

- 1) Landscaping shall be excluded from the trail design;
- 2) Landscaping shall consist of native and drought-tolerant species that do not require long-term irrigation; or
- 3) Landscaping requiring long-term irrigation shall utilize recycled water supplies.

Landscaping plans shall be reviewed and approved by the implementing entity, in consultation with the water purveyor, prior to approval of each segment.

PS-1(b) Retrofitting Existing Facilities. Where a segment is proposed in an area that may not have adequate water, the RTC and/or implementing entity shall ensure that there is no net increase in water demand for the affected water service area as a result of increased use of existing restrooms or water fountains. This may occur through one of the following options, or a combination thereof:

- 1) Retrofit existing public restroom facilities at existing trail heads and staging areas (refer to Table 2-1 in Section 2.0, *Project Description*) to include low-flow toilets and other water saving devices;
- 2) Retrofit existing public restroom facilities at existing trail heads and staging areas to allow use of recycled water at existing facilities; and/or



- 3) Retrofit off-site public facilities (e.g. city or county offices, schools, etc.) that are within the same groundwater service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the implementing entity in consultation with the RTC and applicable water service provider(s).

PS-1(c) New Bathroom in Watsonville Reach. Should the proposed new bathroom on the Watsonville Reach be sited in an area without adequate surplus water supplies to serve the facility, then one of the following options shall be implemented to ensure no net increase in water demand:

- 1) Retrofit off-site public facilities (e.g. city or county offices, schools, etc.) that are within the same groundwater service area. The determination of the water demand that requires an offset, and the mechanisms for the offset, shall be determined by the implementing entity in consultation with the RTC and applicable water service provider(s);
- 2) Install zero-water demand restroom facility (e.g. compost toilet);
or
- 3) Omit development of the new restroom facility.

Significance After Mitigation. Implementation of the above mitigation measure would reduce potential water supply impacts to a less than significant level.

Impact PS-2 The proposed MBSST Network is anticipated to allow sufficient emergency access. In addition, demand generated by trail users would not result in an exceedance of average response times requiring construction of new facilities. Adjacent on-street facilities would also provide emergency access. Impacts to police, fire, and emergency services would be Class III, less than significant.

The proposed MBSST Network would result in the construction of new facilities for alternative and active modes of transportation in Santa Cruz County, including bicycle, pedestrian, and equestrian paths. The proposed MBSST Network project would not generate additional population (i.e. residents or employees) that would require police, fire, or EMS services. However, potential emergency situations along the trail (i.e. medical emergencies or fires) could result in altered demand for existing police, fire, and EMS services in the County. As such, the adequacy of emergency access and potential response times to the portions of the proposed MBSST Network are discussed below.

Emergency Access. Emergency service providers (including police, fire, and EMS) would be able to access the proposed MBSST Network from 84 roadway crossings and 22 access and staging areas. Removable bollards would be installed at various locations throughout the proposed MBSST Network to prevent unauthorized motorists from entering the trail. Where



removable bollards are installed, the Trail Manager would ensure that all appropriate agencies (i.e. fire, police, and EMS service providers) have keys for access.

As part of this analysis, police, fire, and EMS service providers were contacted to ascertain whether any agency anticipates accessibility issues along the segments of the proposed MBSST Network project within their jurisdiction. Most providers did not indicate any emergency access issues. Several providers (including CAL FIRE, the CFPD, and City of Watsonville Fire Department) noted that minimum trail widths would be required to accommodate emergency vehicles. Specifically, CAL FIRE indicated that a minimum width of 12 feet would be required (Christopher Walters, Deputy Fire Marshal, CAL FIRE, Santa Cruz County Fire Department, Email Communication, November 28, 2012), while the CFPD indicated that a surface improvement width of 10 to 12 feet would be sufficient (John Walbridge, Battalion Chief, Personal Communication, November 15, 2012).

The northern portion of the northern reach (segments 1 and 2) would consist of a Class III on-street/road shoulder bike route. As these segments would be accessible from any point along Highway 1, emergency access along these segments is not a concern. Beginning in segment 3 through the end of the northern reach (segment 5), the proposed MBSST Network would include a new multi-use paved path adjacent to Highway 1. This path would be an approximately 12 foot wide paved surface with center lane striping in some areas. Because segments 3 through 5 would be at least 12 feet wide, they would accommodate CAL FIRE emergency service vehicles.

Through the central reach, the proposed multi-use trail would be approximately eight to 12 feet in width. Where the paved surface would be eight feet wide, the trail would include a minimum two foot buffer on either side of the paved trail, such that the total width would be 12 feet. Because the entire central reach of the proposed MBSST Network project would be at least 12 feet wide, the project would accommodate emergency vehicles.

Segments 15 through 18 and 20 of the Watsonville reach would include a paved surface of at least 12 feet in width, and would therefore provide sufficient emergency vehicle access. Segment 19 would consist of a new Class II bike lane and new sidewalks along Walker Street in the City of Watsonville. As this segment would be accessible from any point along Walker Street, emergency access along this segment would be sufficient.

Overall, the proposed MBSST Network project would be at least 12 feet wide, or would be located adjacent to an existing roadway, such that adequate space for emergency response vehicles would be provided.

Average Response Times. Table 4.12-1 provides a list of the emergency service providers that would serve the proposed MBSST Network, the existing average response times by those agencies, the expected response time to the proposed project, and whether the proposed MBSST Network would be within the average response time.



**Table 4.12-2
 Emergency Services and Response Times to the Proposed MBSST Network**

Service Provider	MBSST Network Segments Served	Existing Average Response Time (minutes)	Expected Response Time to Project (minutes)	Within average response time? (Y/N)
Northern Reach				
CAL FIRE	1-5	9-10 (rural)	4-15	N
Santa Cruz County Sheriff's Department	1-5	8-9 (priority 1)	Not Provided	n/d
AMR	1-5	12	1-15	N
Central Reach				
City of Santa Cruz Fire Department	6-9	1-10	5	Y
Central Fire Protection District	9-11	5	5	Y
Aptos/La Selva Fire Protection District	11-14	5-6	6	Y
City of Santa Cruz Police Department	6-9	2-4	2-4	Y
City of Capitola Police Department	10 and 11	3-5	2-5	Y
Santa Cruz County Sheriff's Department	12-14	8-9 (priority 1)	Not Provided	n/d
AMR		18-30	16-30	Y
Watsonville Reach				
Aptos/La Selva Fire Protection District	15	5-6	6	Y
City of Watsonville Fire Department	16-19	4-6	4-6	Y
North County Fire Protection District	20	8 (90 percent)	4-8	Y
Santa Cruz County Sheriff's Department	15-17	8-9 (priority 1)	Not Provided	n/d
City of Watsonville Police Department	18 and 19	3-5	Not Provided	n/d
AMR	15-20	30	30-42	N

Sources:

Applied Survey Research, 2011

Christopher Walters. Deputy Fire Marshal. CAL FIRE. Santa Cruz County Fire Department. Pajaro Valley Fire Protection District. Email Communication. November 28, 2012

Brenda Brenner. Director of Operations. Santa Cruz County Division of American Medical Response. Personal Communication. November 27, 2012

Eric Aasen. Fire Division Chief. City of Santa Cruz Fire Department. Personal Communication. November 19, 2012

John Walbridge. Battalion Chief. Central Fire Protection District of Santa Cruz County. Email Communication. November 15, 2012 and November 22, 2012

Jeff Terpstra. Fire Chief. Aptos/La Selva Fire Protection District. Email Communication. November 28, 2012

Larry Richard. Lieutenant. Santa Cruz Police Department. Email Communication. November 22, 2012

Traci Hernandez. City of Capitola Police Department. Personal Communication. December 5, 2012

Rob Ryan. Fire Marshal. Watsonville Fire Department. Email Communication. November 29, 2012

Chris W. Orman. Fire Chief. North County Fire Protection District. Email Communication. November 29, 2012

Notes:

Not Provided – for these service providers, response time estimates were not provided. However, response times would be expected to vary depending on the location of the incident.

n/d=no data (response time estimates not provided by service provider; therefore, it is unknown whether future response times would meet or exceed current average response times).

As shown in Table 4.12-1, response times to the proposed MBSST Network project would vary, but would generally be within the existing average response times to those areas. Of the 16 providers listed in Table 4.12-1, only three providers estimate that the response times to the



proposed MBSST Network project may exceed existing average response times. For each of those providers (CAL FIRE and AMR in the northern reach, and AMR in the Watsonville reach), exceedances would occur only some of the time. For four of the 16 providers, future response time estimates were not provided. However, response times for these agencies would be expected to vary depending on the nature and location of the incident, and may exceed current averages. However, for all providers, the need to respond to an emergency along the trail would be expected to be infrequent and only occasional exceedances of average response times would occur.

As described previously, the proposed MBSST Network project would not generate additional population (i.e. residents or employees) that would require police, fire, or EMS services. In addition, emergency access to the proposed trail network would be sufficient, and the project would not cause emergency providers to consistently exceed existing average response times. As such, the MBSST network project would not generate sufficient demand for emergency services such that the construction of new facilities would be required. Impacts would be less than significant.

Mitigating Design Features. The proposed MBSST Network project contains risk management strategies and design guidelines that would limit potential adverse impacts related to emergency access and response times. For example, the Trail Manager and Trail Ranger would be responsible for observing trail operations to ensure the trail can accommodate all emergency (i.e. police, EMS, and fire) vehicles that might need to obtain access. In addition, removable bollards would be installed at various locations along the MBSST Network to prevent unauthorized motorists from entering the trail. Where removable bollards are installed, the Trail ~~Manager~~ Ranger would ensure that all appropriate agencies (i.e. fire, police, and EMS service providers) have the keys for access.

Mitigation Measures. No mitigation is required.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact PS-3 **The proposed MBSST Network may result in safety hazards due to conflicts between different types of trail users. However, with adherence to strategies and design requirements contained in the proposed MBSST Network Master Plan, impacts would be Class III, less than significant.**

Northern Reach. The northern reach of the proposed MBSST Network project would include 4.61 miles of coastal bluff trails, a Class III on-street/road shoulder bike route, a new multi-use paved path adjacent to Highway 1, and would accommodate pedestrian, bicycle, as well as equestrian uses. Equestrian use on the MBSST Network would be limited to the north coast area extending from Wilder Ranch to Davenport. Trail safety hazards in the northern reach may occur between different types of trail users (i.e. between bicyclists and pedestrians, bicyclists and equestrians, and/or pedestrians and equestrians); among trail users within the same group (i.e. between two bicyclists or two pedestrians with dogs); and as a result of factors not related to users' trail activities at all. Conflicts may be related to activity style (mode of travel, level of technology, or trail dominance), focus of trip, and attitudes toward other trail



users. Specific hazards include collisions or near misses among users, reckless behavior, or accident caused by unsafe trail conditions (e.g. uneven pavement or presence of debris).

Central and Watsonville Reaches. Trail safety hazards in the central and Watsonville reaches may occur between different types of trail users (e.g. between bicyclists and pedestrians); among trail users within the same group (i.e. between two bicyclists or two pedestrians with dogs); and as a result of factors not related to users' trail activities at all. Conflicts may be related to activity style (mode of travel, level of technology, or trail dominance), focus of trip, and attitudes toward other trail users. Specific hazards include collisions or near misses among users, reckless behavior, or accident caused by unsafe trail conditions (e.g. uneven pavement or presence of debris). In addition, a lack of trail security could result in safety concerns related to crime, emergency response, and vandalism throughout segments of the MBSST Network. Impacts related to emergency response are address above, in Impact PS-2.

Mitigating Design Features. The MBSST Network Master Plan identifies preventative measures to anticipate heavy use and preclude user conflict in multiple-use trails permitting use by walkers, runners, bicyclists, etc. These include the following:

1. *Involve all potential user groups in the planning process to raise issues and help address them*
2. *Design to minimize conflicts with separate trails or shoulders for pedestrian and equestrian use where possible, provide adequate width and sight lines, furnish turnouts at stopping points, etc.*
3. *Use clear signage or pavement markings to define etiquette and yielding protocol*
4. *Set expectations for multi-use*
5. *Enforcement of rules by volunteer trail patrols and/or a uniformed presence – especially when a trail is new to establish precedent and expectations*

The proposed Master Plan emphasizes trail etiquette through both informal and formal means. The proposed Master Plan recommends visual and simple displays of expectations, including the following courtesy advisories:

- *Wheels yield to heels*
- *Be courteous to all trail users*
- *Travel at a reasonable speed in a consistent and predictable manner*
- *Always look ahead and behind before passing*
- *Pass slower traffic on their left; yield to oncoming traffic when passing*
- *Give a clear warning signal before passing – use voice signal, not horn or bell, when passing horses*
- *Keep all pets on a short leash*
- *Respect the rights of adjacent property owners*
- *Don't be a litterbug*
- *Please clean up after your pets*
- *Move off the trail when stopped to allow others to pass*
- *Yield to other users when entering and crossing the trail*
- *Motorized vehicles are prohibited (except electric wheelchairs)*
- *Alcoholic beverages and illegal drugs are not permitted on the trail*
- *Firearms, fireworks, and fires are not permitted on the trail*
- *All trail users should use a light and reflectors after dusk and before dawn*
- *Travel no more than two abreast*



- *Be aware and courteous to others while using a cellular phone*

In addition, various types of fencing would be used for the following reasons: safety, security, trespass prevention, environmental impacts, and privacy. Moreover, a primary contact point (the Trail Manager) would be identified and be made available to the general public within their jurisdictions for general inquiries and management.

The Trail ~~Manager~~ Ranger would be responsible for the day-to-day operation and maintenance of the MBSST Network. This includes trash clean up and disposal and repairs to trail features. This would help ensure proper maintenance of the trail, thereby avoiding potential collisions or accidents caused by unsafe trail conditions (e.g. uneven pavement or presence of debris).

Mitigation Measures. No mitigation is required.

Significance After Mitigation. With adherence to the existing requirements of the proposed MBSST Network Master Plan, impacts would be less than significant.

c. Cumulative Impacts.

Water Supply and Infrastructure. Additional development resulting from buildout of Santa Cruz County and the cities of Santa Cruz, Capitola, and Watsonville would increase the demand for water and the associated infrastructure. As discussed in Impact PS-1, although the proposed MBSST Network project is not anticipated to result in substantial water demand, some segments of the trail are located in areas where water supply cannot be assured. In addition, the water landscape in Santa Cruz is evolving, and fewer (or more) supplies may be available at the time a specific segment is proposed for development. Implementation of mitigation measure PS-1 would prevent the project from incrementally contributing to cumulative effects on water supply availability and provision of adequate infrastructure within the water service areas that serve the trail corridor; therefore, no significant cumulative impacts are anticipated.

Emergency Services. New development in the County would increase demands on fire, EMS, and police protection services and generate additional traffic congestion that could hinder emergency response. In addition, as development continues to occur, it could create the need for new or expanded fire, police, or EMS facilities in the future, the construction of which could cause environmental impacts. However, the location, size and type of such facilities is speculative at this point in time, and would be subject to subsequent environmental review. Until such facilities are constructed, impacts would continue to be mitigated on a case-by-case basis. The proposed MBSST Network would incrementally contribute to this cumulative effect. Project design features would in part address these impacts. In addition, the infrequent demand generated by the proposed MBSST Network would not necessitate the construction of new or expanded police, fire or EMS facilities. Therefore, it is anticipated that the project's contribution to cumulative impacts across the County would be less than significant.

Trail Conflicts. Future bike/pedestrian trail projects in Santa Cruz County could increase the potential for safety hazards due to trail conflicts. However, safety hazards associated with the various types of trail conflicts, as described in Impact PS-3, are project specific. As such, impacts associated with trail conflicts would be evaluated on a case-by-case basis as new development is proposed in the future and no significant cumulative impacts would occur.