7.15 Utilities and Service Systems

This section considers the setting and utilities and service system impacts of implementation of the 2014 LRDP at the Mission Bay campus site. The Regional Setting, Regulatory Considerations, Significance Standards and Analysis Methodology for analysis of potential effects of Utilities and Service Systems are contained in Section 4.15 of this EIR. The CEQA Significance Standards presented in Section 4.15.3 are used to evaluate the potential utilities and service systems impacts of all proposed 2014 LRDP activities.

The overall effects on water supply, wastewater treatment, storm drainage facilities, solid waste disposal and energy demand resulting from implementation of the 2014 LRDP were evaluated in Chapter 5, *2014 LRDP – Impacts and Mitigation Measures*. As discussed in Chapter 5, these overall effects would be less than significant. Impacts that are specific to the Mission Bay campus site are discussed below.

7.15.1 Utilities and Service Systems – Mission Bay Impacts and Mitigation Measures

Impact UTIL-MB-1: There would be sufficient water supply infrastructure to serve 2014 LRDP development at the Mission Bay campus site. (Less than Significant)

Engineering studies have determined that it is not necessary to replace and/or upsize City low pressure piping already constructed, as there is sufficient capacity in the pipe system to supply increased water demand in order to serve the proposed 2014 LRDP development at the Mission Bay campus site, including development on Blocks 33 and 34. However, in order to obtain required pressures within proposed buildings, water pumps may need to be installed. This would be determined at the time buildings are designed (Freyer & Laureta, Inc, 2013 and 2014). The impact would be less than significant.

There also is sufficient capacity in the Fire Protection Water Supply System to meet fire flow requirements for each proposed building, including development on Blocks 33 and 34 (Freyer & Laureta, 2013 and 2014). Additional campus fire protection water supply piping would need to be installed by UCSF per Exhibit 4, Low Pressure Water Exhibit, as described in the *UCSF Mission Bay Civil Master Plan*, adjacent to development blocks to serve future buildings (Freyer & Laureta, Inc, 2013). The impact would be less than significant.

Mitigation: None required.

Impact UTIL-MB-2: There may be impacts related to wastewater infrastructure as a result of 2014 LRDP development at the Mission Bay campus site. (Potentially Significant)

UCSF independent engineering studies based on pre-hospital sanitary sewer flows (original projects) have determined that it is not necessary to replace and/or upsize City and University sanitary sewer conveyance piping already constructed in order to serve the proposed growth at the

Mission Bay campus site, including development on Blocks 33 and 34. The City has not validated these studies and will still need to evaluate collection system capacities to ensure adequate capacity remains during detailed project design phase(s). However, sanitary sewer piping would need to be constructed to serve future development parcels. This does not deviate from the *UCSF Mission Bay Civil Master Plan* (Freyer & Laureta, Inc, 2013 and 2014).

The estimated peak flow increase to the pump station on Mission Bay Redevelopment Area Block P15 due to the University's proposed growth is 159 gallons per minute (0.23 million gallons per day), resulting in the need for pump station capacity of 6.63 million gallons per day. This is below the pumping capacity of the pump station. Based on engineering studies and original projections of demand at the UCSF campus to provide extra capacity for UCSF LRDP, the pump station can be modified without structural or piping modifications by replacing existing 25 horsepower (hp) pumps with 30 hp pumps. These more powerful pumps are physically the same size as the existing pumps and can be connected to the existing discharge piping. Replacement of existing pumps with 30 hp pumps would increase the pump station capacity to 5,100 gpm (7.34 million gallons per day) (Freyer & Laureta, Inc, 2013). However, these engineering studies' assumptions will need to be confirmed with the San Francisco Public Utilities Commission (SFPUC). The SFPUC has recently indicated that additional upgrades and modifications to the P15 pump station may include (1) replacement of existing pumps with larger pumps than those assumed above; (2) additional pumps and enlargement of the pump station wet well with associated controls; (3) modification of the force main; (4) odor control; (5) other modifications may be necessary for proper operations. (Michael Tran, SFPUC, August 7, 2014). However the University will only address pump capacity and not any pre-existing pump station deficiencies observed by the SFPUC.

The replacement of the P15 pumps proposed by UCSF would be subject to review and approval by the SFPUC. Because it is unknown at this time whether the SFPUC would approve this upgrade or require additional modifications to the P15 pump station, UCSF has conservatively concluded that potential improvements to the P15 pump station may be required that may also result in physical environmental effects.

The planned storm drain pump station on Block P23 (to be installed by FOCIL-MB, LLC/Mission Bay Development Group) would remove stormwater that is currently directed to the Mariposa Pump Station. Mariposa Pump Station is a combined sewer pump station, but it will be used to convey sanitary flows for the areas within Mission Bay, including the Phase 1 Medical Center at Mission Bay, when the storm drain pump station on Block P23 is complete. The new storm drain pump station on Block P23 would drastically reduce the volume of Mission Bay wet weather flow from entering the Mariposa Pump Station. Although Mission Bay wet weather flow would not be directed to the Mariposa Pump Station in the future (when the storm drain pump station on Block P23 is complete), the station must be operated with a clear distinction between wet and dry weather under strict State and Federal regulations, and thus not increase the actual dry weather capacity of the pump station.

However, the SFPUC has recently indicated to UCSF that average dry weather flows to the Mariposa Pump Station are exceeding previous projections and existing capacity for dry weather

flows, which in turn requires occasional use of the wet weather pumps to handle the increased dry weather flows. This flow increase is not a result of UCSF Mission Bay development since developed blocks in Mission Bay do not yet discharge the projected flow rate from blocks tributary to the Mariposa Pump Station, as defined in the *Mission Bay Sanitary Sewer Master Plan.* The SFPUC has further indicated to UCSF that the dry weather pump station may need to be upsized to handle increased demand in dry weather flows to the Mariposa Pump Station. The SFPUC is currently evaluating the adequacy of temporary measures such as pipe reconfiguration to handle existing and planned flows during the interim period between the opening of the Phase 1 Medical Center on February 1, 2015 and a permanent long term solution for Mariposa Pump Station and the associated growth in the pump station service area. (Michael Tran, SFPUC, August 1, 2014). It is not known at this time whether any pipe improvements downstream of the pump station has affected pump performance at this time.

Because it is unknown at this time whether the capacity of the Mariposa Pump Station and associated sanitary collection system are adequate to handle flows resulting from 2014 LRDP development at the Mission Bay campus site, UCSF has conservatively concluded that potential improvements to the pump station may be required that may also result in physical environmental effects.

> **Mitigation Measure UTIL-MB-1:** UCSF will monitor sanitary sewer flows to the P15 pump station in congruence with on-going monitoring conducted by the SFPUC. If the SFPUC determines that improvements are required to increase the capacity of the P15 pump station as a result of development within the pump station basin, including 2014 UCSF LRDP development at the Mission Bay campus site, UCSF will contribute its fair share to SFPUC for the potential required pump capacity improvements.
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> UCSF will monitor sanitary sewer flows to the Mariposa Pump Station in congruence with on-going monitoring conducted by the SFPUC. If the SFPUC determines that improvements are required to increase the capacity of the Mariposa Pump Station as a result of development within the pump station basin, including 2014 UCSF LRDP development at the Mission Bay campus site, UCSF will contribute its fair share to SFPUC for the potential required improvements.
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> **Significance after Mitigation: Significant and Unavoidable**. Because potential improvements are outside UCSF jurisdiction to implement, the impact is considered significant and unavoidable even with the incorporation of the above-noted mitigation measures.

Impact UTIL-MB-3: There would be sufficient storm drainage infrastructure to serve 2014 LRDP development at the Mission Bay campus site. (Less than Significant)

The storm drain piping in the public streets surrounding and traversing the Mission Bay campus site is of sufficient size to collect planned 5-year storm runoff from the campus site. The increase in growth proposed by the 2014 LRDP does not increase planned drainage volumes from development blocks. Based upon understanding of the *Mission Bay Storm Drainage Master Plan* and Campus Storm Drain Piping, engineering studies have determined there is no need to replace and/or upsize City and University storm drainage conveyance piping already constructed