

## 4.10 UTILITIES AND SERVICE SYSTEMS

This section describes existing utilities and service systems serving John Wayne Airport (“JWA” or “Airport”) and identifies and addresses potential impacts related to the following utilities, with the service provider indicated in parentheses:

- Wastewater conveyance (Costa Mesa Sanitary District [“CMSD”] and Orange County Sanitation District [“OCSD”])
- Wastewater treatment (OCSD)
- Water conveyance and supplies (Mesa Water District [“Mesa Water”])

As discussed in Section 2.3.2, Issues to be Addressed in the Program Environmental Impact Report (“EIR”), and in the Notice of Preparation (“NOP”)/Initial Study in Appendix A, the Airport is fully developed, and the existing storm drain system has been constructed to accommodate storm flows in compliance with applicable standards. The General Aviation Improvement Program (“GAIP”) would keep the site developed and would not require or result in the construction or expansion of storm drainage facilities. In addition, the Regional Landfill Options for Orange County (“RELOOC”) report demonstrates that the County is able to provide sufficient long-term solid waste disposal capacity. Thus, the GAIP would be served by landfills with sufficient permitted capacity and would comply with federal, State, and local solid waste regulations. Therefore, less than significant impacts on storm drainage and solid waste disposal would occur, and these topics are not discussed in this section.

### 4.10.1 REGULATORY SETTING

#### State

##### ***General Waste Discharge Requirements for Sanitary Sewer Systems***

The State Water Resources Control Board (“SWRCB”) adopted Statewide General Waste Discharge Requirements (WDR) for Sanitary Sewer Systems, Order No. 2006-0003-DWQ on May 2, 2006. All public agencies that own or operate a sanitary sewer system that has more than one mile of pipes or sewer lines conveying wastewater to a publicly owned treatment facility must apply for coverage under this WDR. Coverage under the WDR requires these public wastewater agencies to develop and implement sewer system management plans and report all sewer system overflows to the SWRCB. The WDR prohibits sewer system overflows that result in a discharge of untreated or partially treated wastewater to waters of the United States or that creates a nuisance as defined in the *California Water Code*. It requires the public wastewater agency to take all feasible steps to eliminate overflows and, if an overflow occurs, to take all feasible steps to contain and mitigate the impacts of the overflow.

##### ***Urban Water Management Planning Act***

The California Urban Water Management Planning Act (*California Water Code*, Sections 10610–10656) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water conservation measures, it

also creates long-term planning obligations. The Urban Water Management Planning Act requires urban water suppliers that either provide over 3,000 acre-feet (“af”) of water annually or serve more than 3,000 or more connections to assess the reliability of its water sources over a 20-year planning horizon and to update the data in their urban water management plans every five years. In preparing their 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand during normal, dry, and multiple dry years.

### **Senate Bill 610 and Senate Bill 221**

Senate Bill (“SB”) 610 amended State law to improve the link between information on water supply availability and certain land use decisions made by cities and counties.<sup>1</sup> Specifically, it requires land use planning entities (in this case, the County of Orange), when evaluating certain large development projects, to request an assessment of water supply availability from the water supply entity that would provide water to a project. A water supply assessment (“WSA”) must be prepared in conjunction with the land use approval process and include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands, including the demand associated with the project in question, over a 20-year horizon that includes normal, single-dry, and multiple dry-years (DWR 2003). An SB 610 WSA is required for any “project” that is subject to the California Environmental Quality Act (“CEQA”) and that, among other things, is a business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; a proposed industrial, manufacturing, or processing plant or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; or a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

Due to the developed nature of the site and the proposed reconstruction and reconfiguration of buildings and site improvements associated with the GAIP that would retain the same land uses and activities, the anticipated increase in water use due to the level of development is not sufficient to require the preparation of a WSA pursuant to Section 10912 of the *California Water Code*, as required by SB 610.

### **Water Conservation Act of 2009**

The Water Conservation Act of 2009 or Senate Bill 7 (SBX7-7) was approved in November 2009 and requires urban water retail suppliers in California to reduce per capita water use by at least 10 percent on or before December 31, 2015, and to achieve a 20-percent reduction by December 31, 2020. In their Urban Water Management Plans (“UWMPs”), urban retail water suppliers must include the baseline daily per capita water use, the urban water use target, the interim urban water use target, and the compliance daily per capita water use, along with the basis for determining those estimates and references to the supporting data. Urban retail water suppliers and agricultural water suppliers would not be eligible for State water grants or loans for surface water or groundwater storage, recycling, desalination, water conservation, water

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<sup>1</sup> SB 610 amended Section 21151.9 of the *California Public Resources Code*, and amended sections 10631, 10656, 10910, 10911, 10912, and 10915 of, repealed section 10913 of, and added and amended section 10657 of, the *California Water Code*.

supply reliability, and water supply augmentation unless they comply with the water conservation requirements established by this Act.

The 20x2020 Water Conservation Plan, issued by the Department of Water Resources (“DWR”) in 2010 pursuant to the Water Conservation Act of 2009, established a water conservation target of a 20-percent reduction in water use by 2020 compared to 2005 baseline use.

### ***California Green Building Standards Code***

The *2016 California Green Building Standards Code* (24 California Code of Regulations [“CCR”] Part 11), also known as the CALGreen Code, sets planning, design and development methods that promote energy efficiency, water efficiency and conservation, material conservation, and resource efficiency and encourages sustainable construction practices for improved environmental quality. The mandatory non-residential measures in the CALGreen Code include water efficiency and conservation regulations for water meters, plumbing fixtures and fittings, commercial kitchen equipment, and landscape irrigation (ICC 2017a).

## **Regional**

### ***Waste Discharge Requirements***

The Santa Ana Regional Water Quality Control Board (“RWQCB”) issued Order No. R8-2012-0035, which serves as the WDR and National Pollutant Discharge Elimination System (“NPDES”) Permit for OCSD Reclamation Plant No. 1 and Treatment Plant No. 2. This Order sets the discharge prohibitions, effluent limitations and discharge specifications, and receiving water limitations that have been imposed on the OCSD plants for compliance with the Clean Water Act and NPDES program, as well as to protect groundwater and surface water quality in accordance with the California Ocean Plan and Santa Ana Region Basin Plan (Santa Ana RWQCB 2012).

### ***OCSD Sewer System Management Plan***

In compliance with the Statewide General WDR for Sanitary Sewer Systems, the OCSD has developed and is implementing a Sewer System Management Plan (“SSMP”). This plan describes its sewer system design and performance provisions for the installation of new sewer systems and the rehabilitation and repair of existing systems; operation and maintenance program; overflow emergency response plan; fats, oils, and grease control program; a Capital Improvement Plan to provide adequate hydraulic capacity for the sewer collection system; sewage discharge prohibitions; monitoring, measurement, and program modifications; periodic internal audits; and communication program (OCSD 2005a).

The SSMP contains the sewer design guidelines and master specifications and standard drawings for new sanitary sewer systems, pump stations, and other appurtenances. These guidelines are used in identifying deficiencies to be included in the Capital Improvement Plan to ensure adequate capacity to serve peak flow conditions and storm or wet weather events. The SSMP also outlines OCSD response procedures in the event of an overflow or spill and its associated reporting program.

## ***OCSD Regulations***

OCSD provides regional wastewater collection, treatment, recycling, and disposal services that are primarily paid for by property taxes (i.e., annual sewer service user fees) and fees and charges (through permit user fees and discharge permit fees), in accordance with Ordinance Nos. OCSD-41 (OCSD 2013b) and OCSD-46 (OCSD 2014a). In addition to the fees, the OCSD has adopted a number of regulations that establish specific requirements, permit conditions, discharge limits, prohibitions, on-site facilities (e.g., pretreatment equipment, pollution control facilities, spill containment facilities, accidental slug control plans, and monitoring/metering facilities), and operating and maintenance requirements.

Ordinance No. OCSD-25 adopts fats, oils, and grease control regulations to prevent sewer system overflows due to the blockage of sewer lines by fats, oils, and grease. The Ordinance establishes quantity and quality standards on wastewater discharges containing fats, oils, and grease. Food service establishments are required to obtain a permit and implement best management practices that minimize the discharge of fats, oils, and grease into the sewer system. The ordinance also prohibits food grinders and additives; the disposal of waste cooking oil, certain wastewaters, and wastes; and other permit conditions. It requires the installation of grease interceptors to separate and remove fats, oils, and grease in wastewater discharges or payment of a grease disposal mitigation fee (OCSD 2005a).

Ordinance No. OCSD-48 establishes wastewater discharge regulations to comply with State and federal laws, including the Clean Water Act and the Porter-Cologne Water Quality Control Act. This Ordinance prohibits pollutants, wastewater, or flows that would violate federal, State, and local requirements, including those that may cause obstruction of flows; create a fire or explosive hazard; produce noxious, malodorous liquids, gases, solids, or other wastewater; result in toxic gases, vapors, or fumes; contain radioactive wastes or isotopes; create foaming; and other specific prohibitions. Permits are required for specific discharges (e.g., significant industrial users, discharges other than sanitary wastes, dry weather urban runoff discharges, special purpose discharges, and waste hauler discharges), which come with specific conditions for pretreatment facilities, spill containment facilities, accidental slug control plans, monitoring and reporting, and/or inspection and sampling (OCSD 2016).

## ***Costa Mesa Sanitary District Operations Code***

The CMSD Operations Code is the ordinance establishing the CMSD and includes general regulations for all CMSD operations. The Operations Code requires that all sewer mains be constructed and installed in accordance with the standards and specifications of the CMSD and the California Plumbing Code. It includes the CMSD's sewer maintenance activities and required connection, user, fixture, and other fees, permits and charges for developments to obtain sewer collection services from CMSD. The Code also outlines grease control measures, including discharge prohibitions, food service establishment permits, best management practices to minimize the discharge of fats, oils, and grease, and pre-treatment and interceptor requirements. Mesa Water Urban Water Management Plan

Mesa Water District ("Mesa Water"; formerly Mesa Consolidated Water District) provides potable (domestic) water service to John Wayne Airport, which is located within the northeastern portion of Mesa Water's service area. In compliance with the California Urban

Water Management Planning Act, Mesa Water adopted its *2015 Urban Water Management Plan* (“UWMP”) in June 2016. The UMWP identifies the Airport as one of the major regional facilities in the service area.

The 2015 UWMP states that Mesa Water will meet future demands using local groundwater and recycled water through 2040. Its available water supplies can meet projected demands of 20,610 to 20,874 af per year from 2020 to 2040, consisting mainly of groundwater and 1,100 af of recycled water. While Mesa Water will depend on local water supplies, imported water is available to supplement its supply, as provided in the Metropolitan Water District’s *2010 Integrated Water Resources Plan*, which states that it can meet full-service demands of retail agencies under all foreseeable hydrologic conditions. The UWMP shows that Mesa Water can reliably meet demands during a normal year, a single-dry year, and multiple dry-years from 2020 to 2040.

In compliance with SBX7-7, the UWMP sets the baseline water use at 180 gallons per capita per day (“gpcd”) and a 2015 target of 162 gpcd and a 2020 target of 144 gpcd. Actual water use in 2015 was 108 gpcd, which meets the 2015 and 2020 targets ahead of schedule. As a member of the Orange County 20x2020 Regional Alliance, the 2015 target for the region is 176 gpcd, and the 2020 target is 158 gpcd. Actual 2015 water use in the region was 125 gpcd, which also meets the 2015 and 2020 targets. The UWMP outlines the water conservation programs and plans the Mesa Water has implemented to reduce water demand and respond to water shortages, as well as regulations and prohibitions to reduce water use.

## **County**

### ***Orange County Municipal Code***

Section 7-9-133.5, Landscape Water Use Standards, of the Orange County Code sets the estimated applied water use allowed for landscaped areas for water conservation and water waste prevention.

Section 7-1-12 of Title 7 of the Code adopts by reference the 2016 *California Building Code* and *California Green Building Standards Code* (CALGreen Code), among other codes, “to prescribe regulations for the erection, construction, enlargement, alteration, repair, improving, removal, conversion, demolition, occupancy, equipment, use, height, area and maintenance of all buildings and structures” in the unincorporated areas of the County.

## **4.10.2 METHODOLOGY**

Information presented in this section was derived from the JWA EIR 617 for the *John Wayne Airport Settlement Agreement Amendment* and publicly available publications of Mesa Water, CMSD, and the OCSD, as referenced herein. The number of general aviation users was developed through the use of trip generation factors. In addition, Mesa Water and the OCSD were provided with the NOP to solicit comments on the proposed improvements to general aviation facilities at the Airport.

## 4.10.3 EXISTING CONDITIONS

### **Wastewater**

The OCSD is responsible for collection, treatment, and disposal of the wastewater generated by 2.5 million people living in a 479-square-mile area of central and northwest Orange County, including the Airport (OCSD 2017b), except for a small area at the western boundaries of the Airport property, which is served by the CMSD<sup>2</sup>. The CMSD has gravity main lines in Airway Avenue, Paularino Avenue, Clinton Street, and nearby streets that are part of its 325-mile sewer network for wastewater collection and conveyance to OCSD facilities, which provide wastewater treatment and disposal (CMSD 2018a).

OCSD currently operates two wastewater treatment plants that treat wastewater to secondary standards: Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 in Huntington Beach. These plants have a combined capacity to treat 372 million gallons per day (“mgd”) for primary treatment (208 mgd for Plant 1 and 168 mgd for Plant 2) and 332 mgd for secondary treatment (182 mgd for Plant 1 and 150 mgd for Plant 2). These plants treated a total of approximately 188 mgd in 2016-2017 (OCSD 2017d). Wastewater treatment requirements under Order No. R8-2012-0035 have been issued by the Santa Ana RWQCB for both OCSD treatment plants to ensure that adequate levels of treatment would be provided for the wastewater flows emanating from all land uses within its service area.

OCSD, in partnership with Orange County Water District, operates the Orange County Groundwater Replenishment System and Green Acres Project. The Groundwater Replenishment System purifies secondary treated wastewater and injects it into the seawater barrier or pumps it to ponds for percolation into deep aquifers. The Green Acres Project provides up to 8,400 af per year of recycled water for irrigation and industrial uses. Mesa Water provides recycled water from OCSD to customers for use in landscape irrigation and golf course irrigation.

The area along the western boundary of JWA is served by sewer mains in local streets that are owned and maintained by the CMSD (CMSD 2018b), but the majority of the JWA is tributary to two OCSD sewers: the 18-inch-diameter North Airport Diversion Sewer, located in Business Center Drive, and the 12-inch-diameter South Airport Diversion Sewer, located in Campus Drive. The two sewer lines cross MacArthur Boulevard on the eastside of JWA in the area referred to as the Irvine Business Complex (JWA 2014). OCSD also has a sewer main in Baker Street (west of JWA) and pump stations, sewer main lines, and a vortex structure north and southeast of the Airport but outside the project site (i.e., general aviation facilities) (OCSD 2014b, 2017c).

In conjunction with the development of the terminal facilities provided for in the 1985 Master Plan (Terminals A and B), JWA and OCSD developed a Sewer Service Agreement (“1990 Service Agreement”) to accommodate all future discharges and ensure adequate capacity to serve 10.24 million annual passengers (“MAP”). This agreement assumed wastewater discharge for 10.24 MAP having a rated flow of 2.5 gallons per flush. In 2005, this agreement was modified in conjunction with a “will serve” letter from OCSD for the Terminal C improvements and 10.8 MAP. The “will serve” letter indicates that by installing water-efficient facilities (not more than one

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<sup>2</sup> The CMSD provides solid waste and sewer collection services within its service boundaries but does not provide solid waste collection services to the Airport.

gallon per flush), the resulting discharge for 10.8 MAP would be at least 20 percent less than the earlier anticipated volume for the 10.24 MAP (OCSO 2005b). In conjunction with the Final EIR 617, it has been estimated that by using water-efficient facilities, there is capacity to serve approximately 12.96 MAP (10.8 MAP plus 20 percent). The 2014 Settlement Agreement Amendment provides for up to 12.5 MAP in Phase 3 (2026-2030).<sup>3</sup> Therefore, an increment of wastewater capacity is available under the 1990 Service Agreement. The required water-efficient facilities have been installed throughout the Terminal Buildings (Terminals A through C).

## **Water Supply**

Mesa Water provides water service to an 18-square-mile service area that includes most of the city of Costa Mesa, portions of the city of Newport Beach, and a small portion of unincorporated County of Orange, including JWA. Mesa Water receives its water from two main sources: (1) the Lower Santa Ana River Groundwater Basin (“Basin”), which is managed by the Orange County Water District; and (2) imported water from the Municipal Water District of Orange County. It has approximately 317 miles of mainlines, 5,139 mainline valves, 3,383 fire hydrants, 2 booster pump stations, 3 storage reservoirs, and 7 groundwater wells (Mesa Water 2017a).

Groundwater is obtained from six wells that pump clear water from the Basin and two wells that pump colored water (amber-colored from historic redwood forests) located below the main production aquifer. The colored water is treated at the Mesa Water Reliability Facility (“MWRF”; formerly the Colored Water Treatment Facility). There is no groundwater well at the Airport; the nearest well is at the Newport Beach Golf Course. Imported water from the Colorado River via the Colorado River Aqueduct and from the Lake Oroville watershed through the State Water Project are treated at the Diemer Filtration Plant and delivered to Mesa Water through the imported water connections (Mesa Water 2016).

Groundwater is used to meet approximately 94 percent of Mesa Water’s annual demand. In 2015, Mesa Water supplied approximately 16,844 acre-feet<sup>4</sup> of groundwater and 1,158 acre-feet of recycled water to meet demand. Imported water was available as a reserve but was not used to meet demand. Mesa Water also projects that 100 percent of its future water supply will come from local groundwater and recycled water (Mesa Water 2016).

Mesa Water obtains its groundwater supplies from the Orange County Groundwater Basin, which is managed by the Orange County Water District (“OCWD”) (Mesa Water 2016). The California Department of Water Resources does not identify this groundwater basin as subject to critical conditions of overdraft (DWR 2016) but has designated it as a medium priority basin, pursuant to the Sustainable Groundwater Management Act (DWR 2015). The OCWD Groundwater Management Plan states that since the basin is operated to continuously fluctuate within the safe operating range, overdraft conditions in the traditional sense does not exist in the groundwater basin (OCWD 2015). Based on the Mesa Water 2015 UWMP, the 2015 water consumption within Mesa Water’s service area was 108 gallons per capita per day (gpcd) (ratio

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<sup>3</sup> The background on the 1985 Settlement Agreement Amendment and subsequent amendments is discussed in Section 2.6.3 of this Program EIR.

<sup>4</sup> One acre-foot is the volume of water that will cover an area of one acre to a depth of one foot, equivalent to 325,851 gallons

between total water consumption and service area population) or an average of approximately 39,420 gallons per year (0.12 afy) (Mesa Water 2016).

#### **4.10.4 THRESHOLDS OF SIGNIFICANCE**

In accordance with the County's Environmental Analysis Checklist, the GAIP would result in a significant impact related to public services and utilities if it:

- Threshold 4.10-1** Would exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board ("RWQCB").
- Threshold 4.10-2** Would require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.
- Threshold 4.10-3** Would not have sufficient water supplies available to serve the project from existing entitlements and resources, or new or expanded entitlements would be needed.
- Threshold 4.10-4** Would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

#### **4.10.5 REGULATORY REQUIREMENTS AND STANDARD CONDITIONS OF APPROVAL**

Implementation of the GAIP assumes compliance with existing regulations related to water use and wastewater generation, as discussed under Section 4.10.1, Regulatory Setting, above. These include the following Regulatory Requirements ("RR"):

- RR UTL-1** In conjunction with the development of the GAIP projects, building plans and site improvement plans shall show compliance with pertinent regulations of CMSD and/or OCSD related to sewer system connections, installation of on-site facilities for industrial dischargers and food service establishments (e.g., pretreatment equipment, pollution control facilities, spill containment facilities, accidental slug control plans, and monitoring/metering facilities), as well as obtain the necessary discharge permits and comply with the discharge limits, prohibitions, monitoring and reporting, inspection and sampling, and other provisions of the permit. Compliance shall be in a manner meeting the approval of the Manager, Building and Safety compliance prior to issuance of any building permit.
- RR UTL-2** In conjunction with the development of the GAIP projects, building plans and site improvement plans shall demonstrate compliance with applicable non-residential mandatory measures in the California Green Building Standards Code (CALGreen Code) and the County's Landscape Water Use Standards in a manner

meeting the approval of the Manager, Building and Safety compliance prior to issuance of any building permit.<sup>5</sup>

- RR UTL-3** In conjunction with the development of the GAIP projects, new or modified water service to the site shall comply with Mesa Water District's rules and regulations, including design and construction of connections and water facilities, payments for service, conditions for service, and compliance with its permanent and emergency water conservation programs that outline water waste prohibitions, escalating water restrictions under water supply shortage conditions and other general provisions.

## 4.10.6 IMPACT ANALYSIS

Given that the GAIP's proposed uses are consistent with the current uses at the Airport, the potential for increased demand for potable water supplies and generation of wastewater would be tied to the number of people served at the Airport. The following analysis is focused on potential impacts from the change in the number of people that currently use the general aviation facilities at the Airport under the existing conditions to those under the Proposed Project and Alternative 1.

Implementation of the GAIP is scheduled to occur over a multi-year period. Therefore, the analysis of impacts related to water demand and supplies, wastewater generation, and changes in water and sewer services associated with the construction of the proposed improvements and facilities that may occur with the Proposed Project and Alternative 1 considers phased redevelopment of the general aviation facilities at the Airport.

### **Thresholds 4.10-1, 4.10-2, and 4.10-4**

- ***Would the project exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board?***
- ***Would the project require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts?<sup>6</sup>***
- ***Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

<sup>5</sup> CALGreen Appendix A4 contains the voluntary measures (Tier 1 and Tier 2) that were developed to provide a statewide method of enhancing green construction practiced beyond the Code's minimum levels. It should be noted, although RR UTL-2 identifies compliance with the California Green Building Standards Code, the *John Wayne Airport Climate Action Plan* requires fixed based operators and vendors to meet stringent energy efficiency requirements equivalent of CalGreen Tier 1 and Envision Gold or higher for applicable components of GAIP facilities. This requirement is identified in the consistency evaluation with the CAP, provided in Table 4.4-10, item E-11 (included in Section 4.4, Greenhouse Gas Emissions).

<sup>6</sup> The following analysis addresses wastewater only. The analysis of potable water facilities under this threshold is addressed below in this section.

## **Proposed Project**

Wastewater generated by general aviation facilities and activities at the JWA is currently treated by facilities owned and operated by OCSD and would continue to be treated by OCSD under the Proposed Project. The new, reconstructed and/or reconfigured general aviation facilities under the Proposed Project would have to comply with the wastewater regulations and requirements of OCSD and/or CMSD in order to obtain sewer service. This would include design and construction of sewer system connections; installation of required pretreatment equipment, pollution control facilities, spill containment facilities, accidental slug control plans, and/or monitoring/metering facilities; application for the necessary discharge permits; and compliance with CMSD and/or OCSD ordinances (RR UTL-1) that have been developed to comply with the Statewide General WDR for Sanitary Sewer Systems and the Santa Ana RWQCB's WDR and NPDES Permit for OCSD. OCSD and CMSD implementation of its SSMP would also avoid discharges that violate the WDR for wastewater. Therefore, the Project would not exceed the wastewater treatment requirements of the RWQCB.

The proposed demolition, new construction, reconstruction, and reconfiguration of general aviation facilities may require the removal of existing on-Airport sewer conveyance lines, as well as the construction of new sewer conveyance lines to serve new buildings and facilities. The construction of sewer lines and new sewer system connections would have to be made in compliance with OCSD or CMSD requirements.

Based on the number of aircraft parking space and vehicles coming to and from the site, the existing employees, visitors, and other people who come to the general aviation buildings at the site are estimated at 1,877 persons per day on a peak day. With the proposed reconstruction of general aviation buildings and facilities under the Proposed Project, it is projected that the number of people would increase to 1,905 persons per day on a peak day by 2026. Thus, wastewater generation is also anticipated to increase by approximately 1.5 percent.

The OCSD estimates wastewater generation at 3,167 gallons per acre for industrial land uses and the CMSD estimates wastewater generation at 3,500 gallons per acre (OCSD 2014c and CMSD 2012). Since no increase or decrease in the size of the Project site will occur, the increase in wastewater generation would come directly from the projected increase of 28 persons per day at the site, thus generating wastewater from the use of restrooms, kitchens, and other washing facilities. Using the OCSD's 2015 average per capita flow of 75 gallons per person per day (OCSD 2017e), the increase in 28 persons per day at the site would increase wastewater flows by 2,100 gallons per day. This estimate is very conservative, since many of the users would only be at the Airport for a short-period of time (i.e., prior to and immediately after their flights).

Reconstruction of the existing buildings would lead to the installation of facilities that comply with current code requirements and more water-efficient appliances and plumbing fixtures over those in existing older buildings, in compliance with the 2016 CALGreen Code (RR UTL-2). An estimated 20-percent decrease in indoor water use could be expected with compliance with the CALGreen Code (ICC 2017b). Thus, the 2,100-gallon or 1.5-percent increase in wastewater generation from the 28 additional persons at the general aviation facilities at the Airport is expected to be offset by the water-efficient appliances and fixtures that would be installed as part of newly constructed general aviation buildings under the Proposed Project. It should also be noted, the general aviation-related passengers and workers at JWA make up a small portion

of the total Airport users. In 2016, the Airport served nearly 10.5 million commercial carrier passengers (JWA 2017).

As noted under Existing Conditions, throughout the years, JWA has coordinated with OCSD to ensure sufficient wastewater treatment capacity exists to serve the Airport facilities. It has been estimated that by using water-efficient facilities at JWA, there is capacity to serve approximately 12.96 MAP, which exceeds the passenger level approved by the 2014 Settlement Agreement Amendment. Since the Proposed Project would increase the number of persons using general aviation facilities only by an estimated 28 persons per day and, at the same time, would be replacing older plumbing fixtures at the general aviation facilities with more water-efficient ones, the Proposed Project would not result in a significant impact related to the wastewater conveyance facilities that serve the Airport. Thus, the Proposed Project does not have the potential to require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Less than significant impacts are expected, and no mitigation is required.

**Impact Conclusion:** *The Proposed Project would not exceed the wastewater treatment requirements of the Santa Ana RWQCB or result in discharges that would require the construction of new wastewater treatment facilities or the expansion of existing facilities. RR UTL-1 requires all new construction to comply with CMSD and OCSD controls on discharge requirements. As noted above, the Proposed Project is projected to increase the number of average daily users at the Airport by approximately 28 additional persons. The installation of new water-efficient appliances and fixtures that would be installed as part of newly constructed general aviation buildings per RR UTL-2 would be expected to offset the incremental increase in wastewater generation. The Proposed Project would have less than significant impacts under Thresholds 4.10-1, 4.10-2, and 4.10-4 pertaining to wastewater.*

### **Alternative 1**

The analysis provided for the Proposed Project for these thresholds would also be applicable to Alternative 1 with respect to compliance with OCSD and CMSD regulations for consistency with wastewater treatment requirements. Alternative 1 is projected to result in an increase in the number of persons using general aviation facilities from 1,877 persons per day in 2016 to 1,919 persons per day in 2026. This 42-person increase, which represents a 2.2-percent increase in general aviation users, would potentially result in an increase in wastewater generation. Using the OCSD's 2015 average per capita flow of 75 gallons per person per day (OCSD 2017e), the increase in 42 persons per day at the site would conservatively increase wastewater flows by 3,150 gallons per day under Alternative 1. However, as with the Proposed Project, the replacement of older plumbing fixtures and appliances at the site with fixtures and appliances that comply with current code requirements and water-efficient systems would offset the projected increase in wastewater generation. Thus, the wastewater generation under Alternative 1 would not affect the ability of OCSD to serve the wastewater treatment demand generated by the increase in the number of persons at the site. As indicated above, based on the construction of new buildings and the use of new water efficient facilities, it is anticipated that wastewater generation from the site would not increase; and the OCSD would have the capacity to serve general aviation activities under this Alternative. Thus, Alternative 1 does not have the

potential to require or result in the construction of new wastewater treatment facilities or expansion of existing facilities. Less than significant impacts are expected, and no mitigation is required.

**Impact Conclusion:** *Alternative 1 would not exceed the wastewater treatment requirements of the Santa Ana RWQCB or result in discharges that would require the construction of new wastewater treatment facilities or the expansion of existing facilities. RR UTL-1 requires all new construction to comply with CMSD and OCSO controls on discharge requirements. Alternative 1 is projected to increase the number of average daily users at the Airport by approximately 42 additional persons. The installation of new water-efficient appliances and fixtures that would be installed as part of newly constructed general aviation buildings per RR UTL-2 would be expected to offset the incremental increase in wastewater generation. Alternative 1 would have less than significant impacts under Thresholds 4.10-1, 4.10-2, and 4.10-4 pertaining to wastewater.*

### **Thresholds 4.10-2 and 4.10-3**

- ***Would the project require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts?***<sup>7</sup>
- ***Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

### ***Proposed Project***

The actual building area (i.e., space that use water such as offices and terminal area) for the Proposed Project is projected to be less than currently exists (i.e., 97,000 square feet compared to the current 134,000 square feet). Therefore, using water demand factors based on the size of the new facilities would not be an appropriate characterization for the GAIP. The Proposed Project would result in an increase of approximately 28 persons per day using the new general aviation facilities on a peak day in 2026 compared to the existing facilities (2016). This represents an increase of 1.5 percent of the general aviation users at the Airport. This incremental increase may result in a higher demand for water for drinking, cleaning, washing, kitchen, and maintenance activities. Using the Mesa Water's average 2015 water consumption of 108 gallons per capita per day, the 28 additional persons at the site could increase water use by 3,024 gallons per day. However, many of the users would be at the Airport for a short-period of time (i.e., prior to and immediately after their flights); therefore, the actual demand would be considerably less than Mesa Water's average per capita daily consumption. As discussed above, the Proposed Project would be substantially below the threshold for requiring a WSA. The incremental increase in number of demand would reasonably be offset by installation of water-efficient plumbing fixtures as part of new construction in compliance with the CALGreen Code and the County's Landscape Water Use Standards (RR UTL-2) since the mandatory measures in the CALGreen Code would result in a 20-percent reduction in indoor water use over buildings

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<sup>7</sup> The following analysis addresses potable water supply only. The analysis of wastewater treatment facilities under this threshold is addressed above in this section.

constructed before 2010 (ICC 2017b). Even without the increased efficiency, the Proposed Project would not substantially increase the demand for water, necessitating the construction of new facilities or expanded water supplies. The 2015 UWMP of Mesa Water indicates that it has adequate supplies to serve water demand under a normal, single dry-year, and multiple dry-years to 2040. This assumes the use of local groundwater and recycled water supplies only. Mesa Water also has imported water allocations that serve as supplemental supplies.

Mesa Water provides water service to its customers, subject to the availability of water and/or the facilities necessary to provide the service, conditional upon receipt of all required fees and charges, and in accordance with their rules and regulations. Any removal and construction of water distribution lines as under the Proposed Project shall be made in compliance with Mesa Water regulations, including payment for services and compliance with water conservation programs and water use restrictions (RR UTL-3).

The Proposed Project would result in less than significant impacts related to sufficient water supplies or the need for new or expanded water treatment facilities, and no mitigation is required.

**Impact Conclusion:** *The increase in the number of persons using the general aviation facilities associated with the Proposed Project would potentially result in an incremental increase in water usage; however, water-efficient plumbing fixtures and appliances that would be installed in new general aviation facilities, as required by RR UTL-2, would offset the minor increase in water demand under the Proposed Project. Thus, the Proposed Project would not require additional water supplies or create the need for new or expanded water treatment facilities. Impacts would be less than significant under Thresholds 4.10-2 and 4.10-3 pertaining to water usage.*

### **Alternative 1**

The increase in water demand under Alternative 1 would be attributed to the 42-person increase in the number of persons using the general aviation facilities and generating additional water demand. Using the Mesa Water's average 2015 water consumption of 108 gallons per capita per day, the 42 additional persons at the site could conservatively increase water use by 5,184 gallons per day. Similar to the Proposed Project, water-efficient appliances, plumbing fixtures, and landscape irrigation systems installed in new construction would offset those in existing older buildings, in compliance with the CALGreen Code and the County's Landscape Water Use Standards (RR UTL-2). Thus, the increase in water demand from the general aviation facilities at JWA under Alternative 1 associated with 42 additional persons at the site would be offset by the associated water conservation measures. Thus, Alternative 1 would not create substantial demands for water nor require the construction of new water treatment facilities or expansion of existing facilities. Existing distribution water lines on site may be removed and new ones constructed to serve new buildings in accordance with Mesa Water regulations (RR UTL-3), but service connections and water mains would remain. Less than significant impacts are expected.

**Impact Conclusion:** *The increase in the number of persons using the general aviation facilities associated with Alternative 1 would potentially result in an incremental increase in water usage; however, water-efficient plumbing fixtures and appliances that would be installed in new general aviation facilities, as*

*required by RR UTL-2, would offset the minor increase in water demand under Alternative 1. Thus, Alternative 1 would not require additional water supplies or create the need for new or expanded water treatment facilities. Impacts would be less than significant under Thresholds 4.10-2 and 4.10-3 pertaining to water usage.*

#### **4.10.7 CUMULATIVE IMPACTS**

The GAIP (the Proposed Project and Alternative 1) would result in a limited increase in the average number of people using the Airport on an average day, resulting in a nominal increase in water demand and wastewater generation. A review of the cumulative projects indicate that only the 2014 Settlement Agreement Amendment would result in an increased demand for water and wastewater generation. The Settlement Agreement Amendment only addresses commercial carrier operations; therefore, the potential for cumulative wastewater impacts would only be associated with the OCSD, which services flows from the terminal building. As discussed above, in conjunction with the Final EIR 617, it has been estimated that by using water-efficient facilities, there is capacity to serve approximately 12.96 MAP (10.8 MAP plus 20 percent). Therefore, wastewater capacity under the 1990 Service Agreement between JWA and the OCSD would provide sufficient capacity to serve the increased demand associated with the 2014 Settlement Agreement Amendment (which provides for up to 12.5 MAP in Phase 3) and the GAIP facilities that would be serviced by OCSD. Cumulative impacts associated with wastewater treatment requirements or capacity would be less than significant.

During the preparation of Final EIR 617, the Mesa Water District concluded there are sufficient water supplies (which also included water treatment) to meet the estimated water demand for any of the 2014 Settlement Agreement Amendment alternatives through Phase 3.<sup>8</sup> At that time, Mesa Water District was in the process of updating their Water Master Plan and intended to incorporate the anticipated future water demand from JWA based on increased annual commercial passenger throughput. The general aviation activities would have been part of the baseline assumptions in Final EIR 617. Given that Mesa Water District determined there was sufficient capacity to accommodate the long-term demand at the Airport, and the GAIP (Proposed Project and Alternative 1) would not result in a substantial increase in people being served at the Airport, the cumulative impacts would result in less than significant impacts related to sufficient water supplies or the need for new or expanded water treatment facilities.

#### **4.10.8 MITIGATION PROGRAM**

No significant adverse impacts related to utilities and service systems would occur, and no mitigation measures would be required for the Proposed Project or Alternative 1.

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<sup>8</sup> Final EIR 617 evaluated four scenarios at an equal level of detail. The alternative selected by the Board of Supervisors provided for an increase in the number of passengers served by the Airport to increase up to 12.5 MAP beginning on January 1, 2026 if certain conditions have been met. The water demand for the selected alternative was estimated to be an additional 1.61 acre feet annually compared to the 2013 baseline. Alternative C was the most intense alternative, which would have provided for up to 16.9 MAP, and would have required approximately an additional 3.75 acre feet per year annually. Although not selected by the Board of Supervisors, in 2014 Mesa Water District identified that there would be capacity to service this level of increased passenger service,

## 4.10.9 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Direct and cumulative impacts on utilities associated with the Proposed Project and Alternative 1 would be less than significant and no mitigation is required.

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