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## 4.13 Floodplains

### 4.13.1 Introduction

The floodplains analysis addresses the potential impacts of the Master Plan alternatives on floodplains, as designated by the Federal Emergency Management Agency (FEMA). Impacts associated with drainage and localized flooding are addressed in Section 4.7, *Hydrology and Water Quality*.

### 4.13.2 General Approach and Methodology

As defined in Executive Order 11988, *Floodplain Management*, floodplains are "lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year." This flooding is defined as a 100-year flood event, and the area that is subject to a 1 percent chance of flooding in any given year is referred to as the 100-year floodplain.

To determine whether the No Action/No Project Alternative and the four build alternatives would result in impacts to floodplains or floodplain management, the locations of the proposed improvements were evaluated to determine if they would result in development within a floodplain. The study area for this evaluation is limited to the composite Master Plan boundaries as defined in the Introduction to Chapter 4 of this Final EIS/EIR.

FEMA and the U.S. Army Corps of Engineers determine floodplain boundaries on the basis of hydrologic modeling. These boundaries are presented on Flood Insurance Rate Maps. The area within the Master Plan boundaries was identified on the Flood Insurance Rate Map to determine if project activities would be located within a designated floodplain. The potential for encroachment within a 100-year floodplain was evaluated in accordance with Executive Order 11988, *Floodplain Management*, and U.S. Department of Transportation (USDOT) Order 5650.2, *Floodplain Management and Protection*.

### 4.13.3 Affected Environment/Environmental Baseline

#### Regulatory Provisions Concerning Floodplains

Executive Order 11988, *Floodplains Management*, directs federal agencies to take actions to "reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains." USDOT's policies and procedures for implementing this executive order are contained in USDOT Order 5650.2, *Floodplain Management and Protection*. The executive order and the USDOT order establish a policy to avoid taking an action within a 100-year floodplain where practicable. As stated in FAA Order 5050.4A, *Airport Environmental Handbook*, "practicable means feasible." "Feasibility," in turn, is defined in terms of "safety, meeting transportation objectives, design, engineering, environment, economics, and any other applicable factors."<sup>626</sup> In accordance with these directives, every effort must be made to minimize the potential risks to human safety and property damage, and to avoid adverse impacts on natural and beneficial floodplain values, associated with development within floodplains.

According to USDOT Order 5650.2, if a proposed action is within the limits of a base floodplain, this is considered to be a floodplain encroachment. The USDOT order distinguishes between "encroachment" and "significant encroachment." As defined by USDOT Order 5650.2, a significant floodplain encroachment would occur if a proposed action would likely result in one or more of the following conditions:

- ◆ A considerable probability of loss of human life.
- ◆ Likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility.
- ◆ A notable adverse impact on natural and beneficial floodplain values.

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<sup>626</sup> Federal Aviation Administration, "Airport Environmental Handbook", *FAA Order 5050.4A*, October 8, 1985.

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USDOT Order 5650.2 defines the natural and beneficial values served by floodplains as "natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry."

If it were determined that a proposed action would result in a "significant encroachment," further analysis of the impacts of, and practicable alternatives to, the action would be required. In accordance with USDOT Order 5650.2, and with FAA Order 5050.4A, if a practicable alternative were identified that would avoid floodplain encroachment, implementation of that alternative would be required.<sup>627</sup> In accordance with FAA Order 5050.4A, "If no significant encroachment within a base floodplain is involved, it may be assumed that there would be no significant floodplain impact."

The City of Los Angeles also regulates development within floodplains. The City's Flood Hazard Management Specific Plan establishes permit review and mitigation procedures for issuance of development permits in areas prone to flooding. To achieve the city's goal of minimizing effects due to flooding, the city's Safety Element of the Los Angeles City General Plan contains Policy 1.1.6, which requires compliance with "applicable state and federal planning and development regulations, e.g., Cobey-Alquist Flood Plain Management Act."<sup>628</sup> In addition, City of Los Angeles General Plan Framework Policy 6.3.1 indicates that floodplains should be preserved as open space, wherever possible, to minimize risks to public safety.<sup>629</sup>

### **Designated Floodplains**

FEMA maps of flood-prone areas throughout the U.S. are used as a basis for floodplain management decisions by local agencies, and as a basis for flood insurance rates by the National Flood Insurance Program (NFIP). In communities that participate in the NFIP, flood insurance is available for all properties within the 100-year floodplain. The City of Los Angeles participates in the NFIP.

A review of the then current FEMA Flood Insurance Rate Map for the LAX area (February 4, 1987) undertaken for preparation of the Draft EIS/EIR indicated that over 99 percent of the area within the Master Plan boundaries was located in Zone C, which is an area of "minimal flooding" outside the Special Flood Hazard Area (SFHA).<sup>630</sup> (The SFHA designation is used by FEMA in its flood hazard mapping (i.e., Flood Insurance Rate Maps, Flood Hazard Boundary Maps, and Flood Boundary and Floodway Maps) to identify areas of land that would be inundated by a flood having a 1 percent chance of occurring in any given year, also called the base flood or 100-year flood.) However, a small, 13-acre area in an undeveloped portion of LAX, located directly north of Imperial Highway, was designated as 100-year floodplain on the 1987 map. This area is also identified as within the 100-year floodplain in the Safety Element of the Los Angeles City General Plan. The 13-acre area was given its designation as 100-year floodplain in the 1970s based on the topographic and drainage conditions at that time. However, conditions of the 13-acre parcel have changed substantially due to grading and placement of fill in this area that occurred after the parcel was designated as a floodplain, and the parcel no longer has the typical characteristics of a floodplain. For these reasons, LAWA submitted an application for a "Letter of Map Revision" to FEMA to remove the 100-year floodplain designation for the 13-acre area (see Appendix F-C, *Errata to the Draft EIS/EIR and the Supplement to the Draft EIS/EIR*). On September 6, 2002, FEMA issued a Letter of Map Revision which revised the applicable National Flood Insurance Program map to remove the 13-acre parcel at LAX from the SFHA (see Appendix S-A, *Agency Consultation Letters*). The 13-acre parcel is now in Zone C. Therefore, no 100-year floodplain areas are located within the Master Plan boundaries.

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<sup>627</sup> Federal Aviation Administration, "Airport Environmental Handbook", FAA Order 5050.4A, October 8, 1985.

<sup>628</sup> City of Los Angeles, Department of City Planning, Safety Element of the Los Angeles City General Plan, November 26, 1996.

<sup>629</sup> Envicom Corporation, et al., Draft City of Los Angeles General Plan Framework, prepared for the City of Los Angeles, Department of City Planning, January 1995.

<sup>630</sup> Federal Emergency Management Agency, Flood Insurance Rate Map, Panel 89 of 112, Community-Panel Number 060137 0089 D, February 4, 1987.

## **4.13.4 Thresholds of Significance**

### **4.13.4.1 CEQA Thresholds of Significance**

A significant impact to floodplains or floodplains management would occur if the direct and indirect changes in the environment that may be caused by the particular build alternative would potentially result in one or more of the following future conditions:

- ◆ Significant encroachment within a base floodplain, as defined by USDOT Order 5650.2.
- ◆ Placement of structures within a 100-year flood hazard area that would impede or redirect flood flows.
- ◆ Exposure of people or structures to a significant risk of loss, injury, or death involving flooding.

These thresholds of significance are utilized because they address the potential adverse impacts normally associated with development within a floodplain, namely increased potential for flooding and the resulting adverse effects on people or property. These thresholds were derived from USDOT Order 5650.2, FAA Order 5050.4A, and the suggested Initial Study Checklist contained in the State CEQA Guidelines. Other CEQA thresholds relative to drainage and localized flooding are included in Section 4.7, *Hydrology and Water Quality*.

### **4.13.4.2 Federal Standards**

Under USDOT Order 5650.2, a significant floodplain encroachment would occur if a proposed action would likely result in one or more of the following conditions:

- ◆ A considerable probability of loss of human life.
- ◆ Likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service, or loss of a vital transportation facility.
- ◆ A notable adverse impact on natural and beneficial floodplain values.

## **4.13.5 Master Plan Commitments**

No Master Plan commitments for floodplains are proposed.

## **4.13.6 Environmental Consequences**

### **4.13.6.1 No Action/No Project Alternative**

Under the No Action/No Project Alternative, no development would occur within the limits of a base floodplain (i.e., 100-year floodplain) and no impacts to floodplains would occur.

### **4.13.6.2 Alternatives A, B, and C**

Under Alternative A, B, and C, no development would occur within the limits of a base floodplain and no impacts to floodplains would occur.

### **4.13.6.3 Alternative D - Enhanced Safety and Security Plan**

Under Alternative D, no development would occur within the limits of a base floodplain and no impacts to floodplains would occur.

## **4.13.7 Cumulative Impacts**

As indicated in subsection 4.13.3, *Affected Environment/Environmental Baseline*, no 100-year floodplain areas are located within the Master Plan boundaries.

### **4.13.7.1 No Action/No Project Alternative**

The No Action/No Project Alternative would not have any impacts on floodplains. Therefore, this alternative would not contribute to any cumulative impacts on floodplains.

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### **4.13.7.2 Alternatives A, B, and C**

Alternatives A, B, and C would not have any impacts on floodplains. Therefore, these alternatives would not contribute to any cumulative impacts on floodplains.

### **4.13.7.3 Alternative D - Enhanced Safety and Security Plan**

Alternative D would not have any impacts on floodplains. Therefore, this alternative would not contribute to any cumulative impacts on floodplains.

### **4.13.8 Mitigation Measures**

The build-out of Alternatives A, B, C, or D would not have any impact on floodplains; therefore, no mitigation is required.