

## **Physical Environment**

### **2.2.1 Hydrology and Floodplain**

#### **2.2.1.1 Regulatory Setting**

The 100-year floodplain is defined as “the area subject to flooding by the flood or tide having one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the 100-year floodplain.”

The Orange County Flood Control District (OCFCD) is empowered to construct and maintain flood control works to prevent or minimize loss of life and property caused by flooding, and for water conservation.

#### **2.2.1.2 Affected Environment**

This section is based on the *Hydraulics Study for Lower SR-74 Widening* (August 2006).

The Federal Emergency Management Agency (FEMA) determines the presence or absence of the 100-year and 500-year flood zones within the Project Limits. According to FEMA Map No. 06059C0444H (February 2004) and FEMA Map No. 06059C0465H (February 2004), the project limits are outside the 100-year and 500-year floodplains.

#### **2.2.1.3 Environmental Consequences**

##### ***Temporary Impacts***

##### ***No Build Alternative***

The No Build Alternative does not involve any construction. Therefore, there would be no temporary hydrology and floodplain impacts associated with the No Build Alternative.

##### ***Build Alternatives 1 and 2***

Build Alternatives 1 and 2 would not include construction involving any water bodies. Therefore, there will be no significant temporary hydrology impacts. SR-74 within the project limits is not located within a 100-year or 500-year floodplain and is not subject to flooding due to a storm of the 100-year or 500-year frequency. The Build Alternatives would not result in temporary floodplains impacts.

## **Permanent Impacts**

### ***No Build Alternative***

The project limits are not within the 100 or 500-year floodplains, and the No Build Alternative does not involve any changes to existing drainage patterns. Therefore, there would be no impact to hydrology or the floodplain.

### ***Build Alternatives 1 and 2***

Neither Build Alternative 1 nor 2 would substantially alter the existing drainage pattern of the area. Runoff would increase due to the construction of 2.3 ac of additional paved area for Alternative 1 and 2.4 ac for Alternative 2. As a part of the widening project, both Build Alternatives 1 and 2 propose to construct additional drainage systems consisting of new inlets with bicycle-proof grates and pipes and to replace an existing trapezoidal channel with a reinforced concrete box culvert. The additional flow would travel via a new underground storm drain system that outfalls to San Juan Creek outside the project limits. These improvements do not alter the existing drainage patterns in the project area, and potential hydrological impacts are considered less than significant.

Build Alternatives 1 and 2 would not introduce any new risks or increase risk associated with flooding. As described, the project area is not located within a 100-year or 500-year floodplain, and the Build Alternatives would not permanently impact designated 100- or 500-year floodplains.

#### **2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures**

The completed project plans would incorporate all necessary Maintenance BMPs (Category IA), Design Pollution BMPs (Category IB), and Treatment BMPs (Category III) to meet the Maximum Extent Practical (MEP) requirements as discussed in Section 2.2.2.4.

Since the Build Alternatives would not permanently alter the hydrology of the project area and would not introduce new risk or increase risk associated with flooding, no avoidance, minimization, and/or mitigation measures are proposed other than those mentioned above.

#### **2.2.1.5 Level of Significance**

The No Build Alternative would not result in impacts to hydrology and floodplains.

The Build Alternatives are not expected to result in temporary, direct or indirect impacts to hydrology and floodplains. The hydrology and floodplain permanent direct or indirect impacts of the Build Alternatives are considered less than significant.