Appendix 24E
Noise and Vibration 2040 Analysis

This appendix compares the No Project Alternative at 2040 to the project alternatives at 2040 using modeling tools and methods appropriate for the evaluation of impacts on Noise and Vibration. The analysis in this appendix is provided for informational purposes to help decision-makers and the public better understand whether any of the impact conclusions documented in Chapter 24, *Noise and Vibration,* would change when considered under future conditions when construction is complete, and the project is fully operational. Under year 2040 conditions, sources of noise would consist of those identified as existing noise sources in Chapter 24, *Noise and Vibration*, and sources associated with Delta Conveyance Project operations and maintenance (O&M). This analysis also supports the Draft EIS prepared by the U.S. Army Corps of Engineers. This analysis is not required by CEQA and is not used to support the CEQA conclusions provided in Chapter 24.

24E.1 No Project Alternative

The No Project Alternative considers projects, plans, and programs that would be reasonably expected to occur in the foreseeable future if the project were not approved and project objectives were not met. Many of these projects, such as construction of desalination plants or water recycling facilities, would involve construction of facilities that would require ground-disturbing activities by individual public water agencies to ensure local water supply reliability for its constituents.

A complete list and description of programs and plans identified as part of the No Project Alternative is provided in Appendix 3C, *Defining Existing Conditions, No Project Alternative, and Cumulative Impact Conditions*. However, as explained in Chapter 4, *Framework for the Environmental Analysis,* the No Project Alternative analyses in the resource chapters focuses on the projects that would happen in lieu of the Delta Conveyance Project becoming operational.

Desalination plants, water recycling facilities, groundwater management facilities and water efficiency projects would be constructed to supply water to the coastal and inland regions of California. In general, more projects would be required in the South Delta, where the additional supply would be needed to meet regional demand for water. Multiple facilities would be built and would require use of heavy equipment for construction of pumping plants, pipelines, structures, access roads and related infrastructure. The construction of each facility would result in a temporary increase in ambient noise along construction sites and haul roads as facilities are built, and would likely result in a temporary increase in noise levels above daytime thresholds. Concrete pours requiring continuous work would likely exceed nighttime noise thresholds at the nearest receptors. Road and utility work may also be required during nighttime hours in some cases. Operation would involve ongoing use of pumps and air handlers, and intermittent use of maintenance equipment. Noise attenuating features would be incorporated into facility structures to minimize noise from operations.

In addition to foreseeable projects, plans and programs that would occur in lieu of the project, existing habitat protection, levee maintenance and flood management activities would continue. Under No Project conditions, ambient traffic noise levels in the vicinity of roads would likely increase relative to existing conditions. The level of increase relative to any receptor would depend

on site-specific development, population growth, and socioeconomic factors. An average annual vehicle traffic volume increase of 2 to 3 percent from 2020 to 2040 would result in a noise level increase in the range of 2 to 3 decibels (dB). An increase of this magnitude would generally not be noticeable over this time horizon.

With regard to levees and flood control, maintenance and repair of levees would continue to periodically require use of heavy equipment for levee improvement projects. Levee failure would require the use of a considerable amount of heavy equipment for emergency flood fighting and clean-up actions, commensurate with the size of the flood. The presence of heavy equipment and associated transportation would be expected to generate a considerable amount of noise in the areas they are protecting, but these types of actions would only occur on an emergency basis.

Impacts under the No Project Alternative in 2040 would be the same as those described for the No Project Alternative in Chapter 24, *Noise and Vibration*.

24E.2 Impacts of the Project Alternatives Related to Noise and Vibration

Impact NOI-1: Generate a Substantial Temporary or Permanent Increase in Ambient Noise Levels in the Vicinity of the Project in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies

Effects of noise from construction and operation of the project alternatives is described in Impact NOI-1 in Chapter 24, *Noise and Vibration*. As described above, by 2040, the average traffic noise increase along roads in the project study area would most likely be in the range of 2 to 3 dB, relative to 2020 conditions. Dump trucks, cranes, loaders, and other heavy equipment would be required at project facilities on an occasional basis for O&M activities. The increase in traffic due to these activities would not result in a noticeable increase in ambient noise levels. When present at facilities, heavy equipment would potentially be noticeable on an intermittent basis, at the nearest receptors, but only for a short amount of time during daytime hours.

Project facilities such as intakes and pumping plants would locate sources of mechanical noise deep inside of building structures. Noise sources aboveground would consist of air-handling equipment at these facilities, which would be located inside building ductwork, with silencers and noise-reducing panels installed around exhaust outlets. Building design elements would include noise-attenuating features to ensure compliance with local noise level performance standards.

The impact of noise from operation of the project alternatives in year 2040 would be similar to Impact NOI-1 for ongoing O&M activities. Although baseline levels of traffic would increase in 2040, temporary construction of facilities would be complete. Therefore, average noise levels at sensitive receptors would be lower in 2040 compared to those described for Impact NOI-1 in Chapter 24.

Impact NOI-2: Generate Excessive Groundborne Vibration or Groundborne Noise Levels

Effects of groundborne vibration from construction and operation of the project alternatives is described in Impact NOI-2 in Chapter 24, *Noise and Vibration*. In 2040, no pile driving, high-impact activities, use of tunnel boring machines or other subsurface construction would occur. Dump trucks, cranes, loaders, and other nonvibratory equipment would be required at project facilities on

an occasional basis. These types of heavy equipment produce discernible levels of vibration up to 50 feet away and would not affect the receptors nearest to the maintenance areas. Similarly pumps and air handlers produce vibration, but at levels that would only be noticeable within a localized area, generally less than 50 feet away from equipment. In 2040, the impact of groundborne vibration from use of heavy equipment during O&M activities would be similar to Impact NOI-2. In 2040, temporary construction of facilities would be complete. Therefore, average vibration levels at sensitive receptors would be lower in 2040 compared to those described for Impact NOI-2 in Chapter 24.

Impact NOI-3: Place Project-Related Activities in the Vicinity of a Private Airstrip or an Airport Land Use Plan, or, Where Such a Plan Has Not Been Adopted, within 2 Miles of a Public Airport or Public Use Airport, Resulting in Exposure of People Residing or Working in the Project Area to Excessive Noise Levels

Effects of aircraft noise are described in Impact NOI-3 in Chapter 24. There would be no impacts related to the influence of noise from aircraft or airports for the project alternatives. Several airports are located in the area surrounding the project alternatives, including Byron Airport, Franklin Field, Sharpe AAF, Stockton Municipal Airport, Kingdon Airpark, Lodi Airpark, Franklin Field, Clarksburg Airport, Walnut Grove Airport, Lost Isle Seaplane Base, and several private airstrips. Aircraft operations from these airports would continue to contribute to ambient noise levels in the study area in year 2040. However, the project facilities would be outside the 60 day-night average sound level (L_{dn}) noise-level contour and outside the Airport Influence Area of each of these airports. The project would not add sensitive uses that potentially would be affected by aircraft noise, and O&M workers would not be exposed to excessive airport noise.