Chapter 25
Public Health

25.1 Summary Comparison of Proposed Project

A summary comparison of important public health impacts is provided in Figure 25-0. This figure provides information on the magnitude of the most pertinent and quantifiable public health impacts that are expected to result from all alternatives. Important impacts to consider include the increase in surface water area that could result in an increase in vector-borne diseases as a result of the construction and operation of the water conveyance facilities.

Figure 25-0. Comparison of Impacts on Public Health

Chapter 25 – Public Health	Approved Project	Proposed Project (Total)	Proposed Project (Increment)
Impact PH-1: Increase in surface water in Plan Area that could result in increase in vector-borne diseases as a result of construction and operation of the water conveyance facilities (number of lagoons/basins/forebays/inundation areas)	24	24	0
	Less than significant/ not adverse	Remains less than significant/ not adverse. No change from the approved project.	

As depicted in Figure 25-0, the proposed project would not result in new impacts or a substantial increase in the severity of previously identified public health resource impacts. This chapter contains the information necessary to make the Final EIR/EIS adequate for the approved project as revised.

25.2 Environmental Setting/Affected Environment

25.2.1 Affected Environment

The description of the Existing Conditions of public health that would be affected by construction and operation of the proposed project is the same as described in Final EIR/EIS Chapter 25, *Public Health*, Section 25.1, *Environmental Setting/Affected Environment.* The Final EIR/EIS provides a discussion of issues related to human health and safety that could potentially be affected by implementation of the proposed project, particularly with respect to water quality, the potential to cause or worsen water borne illness, the potential to create habitat for vectors that may carry diseases, and potential health-related concerns from electric transmission lines. The modifications to the approved project would be located entirely within the previously analyzed project area and, consequently, the Existing Conditions have not changed.

25.3 Environmental Consequences

This section describes the potential effects of the modifications to the approved project on potential issues related to human health and safety that could potentially be affected by implementation of the proposed project, particularly with respect to water quality, the potential to cause or worsen water borne illness, the potential to create habitat for vectors that may carry diseases; and to address potential health related concerns from any additional electric transmission lines needed.

Some impact topics addressed in the Final EIR/EIS are not addressed herein because the change in the footprint of the water conveyance facilities would not result in a changed impact. This chapter does not address impacts related to water operations under the proposed project, or implementation of Environmental Commitments 3, 4, 6–12, 15, and 16. These impacts are fully disclosed in the Final EIR/EIS and would not change if the footprint changes described for the proposed project are constructed.

The methodologies to evaluate the various mechanisms which may affect public health in the study area are the same as described in Section 25.3.1 in Chapter 25, *Public Health*, in the Final EIR/EIS.

25.3.1 Effects and Mitigation Approaches

25.3.1.1 No Action Alternative

Under the No Action Alternative, the new Byron Tract Forebay, reusable tunnel material (RTM) storage, and other footprint changes described for the proposed project would not occur. For the purposes of this Supplemental EIR/EIS, the No Action Alternative, against which this proposed project is compared, is consistent with the No Action Alternative Early Long-Term in the Final EIR/EIS. No differing effects related to public health would result along the proposed project alignment from what was previously described in the No Action Alternative Early Long-Term in the Final EIR/EIS, if the No Action Alternative were to occur.

25.3.1.2 Proposed Project

Impact PH-1: Increase in Vector-Borne Diseases as a Result of Construction and Operation of the Water Conveyance Facilities

Byron Tract Forebay and Canal

Similar to what was discussed in the Final EIR/EIS, there is a potential during construction of the water conveyance facilities of creating bodies of water suitable for mosquito breeding. Under the proposed project, there would be an increase in surface water area compared with the approved project, which would lead to a slight increase in suitable vector habitat. Byron Tract Forebay would have a surface area of 810 acres, whereas the expansion of Clifton Court Forebay under the approved project would have been approximately 590 acres more than the existing Clifton Court Forebay surface area. Although the proposed project will increase surface water within the study area, it is unlikely that these water bodies would provide suitable breeding habitat for mosquitoes given that the water in these forebays would not be stagnant and would generally be too deep to support substantial mosquito habitat.

NEPA Effects: The procedures that would be put in place to reduce the potential for creating suitable habitat for breeding mosquitos would be similar to those discussed in the approved project. As part of the regular maintenance of the new Byron Tract Forebay, floating vegetation such as pond weed would be harvested to maintain flow and forebay capacity. Further, BMPs to control mosquitoes would be implemented as part of this alternative. As such, the new Byron Tract Forebay would not likely increase mosquito breeding habitat in the Plan Area.

To minimize the potential for impacts related to increasing suitable vector habitat within the study area, DWR would consult and coordinate with San Joaquin County and Contra Costa County Mosquito Vector Control Districts (MVCDs) and prepare and implement mosquito management plans (MMPs), as necessary, to control mosquitoes and reduce the likelihood that construction and operation of the water conveyance facilities would require an increase in mosquito abatement activities by the local MVCDs (Appendix 3B, *Environmental Commitments, AMMs, and CMs*). BMPs to be implemented as part of the MMPs would help control mosquitoes during construction and operation of the new Byron Tract Forebay. BMP activities would be consistent with the California Department of Public Health's *Best Management Practices for Mosquito Control in California* (described in Section 25.2.3.4 of the Final EIR/EIS) and would include the following.

- Maintain stable water levels.
- Circulate water.
- Implement monitoring and sampling programs to detect early signs of mosquito population problems.
- Use biological agents such as mosquito fish to limit larval mosquito populations, and introduce biological agents to areas of standing water if mosquitoes are present.
- Use larvicides and adulticides, as necessary.
- Test for mosquito larvae during the high mosquito season (June through September).
- Reduce or eliminate emergent vegetation in and along the edges of water
- Introduce physical controls to areas of standing water (e.g., discharging water more frequently or increasing circulation) if mosquitoes are present.

These measures, as written in the Final EIR/EIS, remain adequate without change for dealing with the impacts of the proposed project. Accordingly, the proposed project would not substantially increase vector-borne diseases and in turn would have no adverse effects on public health.

CEQA Conclusion: The potential for construction and operation of conveyance facilities under the proposed project to result in an increase in exposure of people to vector-borne diseases would be slightly greater than the potential described for the approved project. The proposed project would create a new water body at the Byron Tract Forebay, which would have the potential to provide habitat for vectors that transmit diseases (e.g., mosquitoes) because of the large volume of water that would be held within this area. However, during operations, the depth, design, and operation of conveyance facilities would prevent the development of suitable mosquito habitat. Specifically, the water body would be too deep and the constant movement of water would prevent mosquitoes from breeding. To minimize the potential for impacts related to increasing suitable vector habitat within the study area, DWR would consult and coordinate with San Joaquin County and Contra Costa County MVCD and prepare and implement MMPs. BMPs to be implemented as part of the MMPs would help control mosquitoes during construction and operation of the proposed project. These

BMPs would be consistent with practices presented in *Best Management Practices for Mosquito Control in California* (California Department of Public Health 2012). As described in Appendix 3B, *Environmental Commitments, AMMs, and CMs*, these BMPs can effectively reduce mosquito populations through source reduction, habitat modification, and biological and chemical control. Implementation of these BMPs would reduce the risk of increasing vector-borne diseases in the Plan Area and would, therefore, reduce this impact to a less-than-significant level.

Therefore, as with the approved project, construction and operation of the proposed project would not result in a substantial increase in vector-borne diseases, and the impact on public health would be less than significant. No mitigation is required.

Incremental Impact: The proposed project would slightly increase surface water area associated with the construction of the Byron Tract Forebay compared with the approved project. As with the approved project, this potential public health effect associate with mosquito vectors would be less than significant.

Impact PH-4: Expose Substantially More People to Transmission Lines Generating New Sources of EMFs as a Result of the Construction and Operation of the Water Conveyance Facilities

NEPA Effects: The potential for the proposed project transmission line construction and operation to expose people to new sources of electromagnetic fields (EMFs) would be slightly less than impacts described in the Final EIR/EIS. Under the proposed project there would be 43.16 miles of total temporary transmission lines and 8.75 miles of permanent transmission lines constructed, compared with the 39.76 miles of temporary and 13.47 miles of permanent transmission lines called for under the approved project. This decrease in total transmission line length would lessen the impacts of EMFs under the proposed project compared with the approved project.

There are two sensitive receptors (Cosumnes River Preserve and Stone Lakes National Wildlife Refuge) within 300 feet of a new temporary transmission line. However, as described in the Final EIR/EIS, visitors to these areas generally come for walks, water recreation, fishing and hunting, and as such, it is unlikely that large groups of people will be staying in proximity of the transmission line long enough for any EMF impacts to be significant. California Public Utilities Commission's (CPUC's) EMF design guidelines would be implemented for any new temporary or new permanent transmission lines constructed and operated under the proposed project.

CEQA Conclusion: The potential for the proposed project transmission line construction and operation to expose people to new sources of EMFs would be similar to the potential described for the approved project in the Final EIR/EIS. Under the proposed project, the majority of proposed new temporary (69 kV and 230 kV) and new permanent (230 kV and 230 kV/34.5 kV) transmission lines, and the permanent relocation of an existing 500 kV transmission line would be located within the rights-of-way of existing transmission lines; any new temporary or permanent transmission lines not within the right-of-way of existing transmission lines would, for the most part, be located in sparsely populated areas generally away from existing sensitive receptors. There are two potential new sensitive receptors (Stone Lakes National Wildlife Refuge and Cosumnes River Ecological Reserve) that are not currently within 300 feet of an existing transmission line that would be placed within 300 feet of a new temporary transmission line as a result of constructing the proposed project, which is two fewer sensitive receptors than under the approved project. Accordingly, new temporary or new permanent transmission lines would not expose substantially more potential sensitive receptors or substantially more people to EMFs that they are not already experiencing.

Stone Lakes National Wildlife Refuge and Cosumnes River Ecological Reserve would be within 300 feet of a proposed temporary 230 kV transmission line. Visitors to these areas generally come for walks, water recreation, and hunting, and as such, it is unlikely that large groups of people would be staying in the area within 300 feet of this proposed transmission line, so any EMF exposure would be limited. These temporary transmission lines would be removed following completion of construction of the water conveyance facility features near this area so there would be no potential permanent effects. Therefore, these transmission lines would not substantially increase people's exposure to EMFs. This impact is considered to be less than significant because transmission lines would generally not be located in populated areas or within 300 feet of sensitive receptors and CPUC's EMF design guidelines would be implemented for any new temporary or permanent transmission lines constructed and operated under the proposed project. No mitigation is required.

Incremental Impact: The proposed project would create slightly less exposure to EMFs compared with the approved project. This impact would less than significant, as indicated for the approved project.

25.3.2 Cumulative Analysis

The Final EIR/EIS found that there was a less than significant potential for the approved project to have a cumulative effect on public health both from construction and operation of the water conveyance facilities, as well as implementation of the Environmental Commitments. The analysis for cumulative effects for public health remains the same as described in the Final EIR/EIS with consideration of the proposed project modifications. The cumulative impacts would remain less than significant.

25.4 References Cited

California Department of Public Health. 2012. *Best Management Practices for Mosquito Control in California*. Vector-Borne Disease Section.