are so diffuse, substantial effects on local populations, either low-income or minority, would not occur

The construction and operation of the proposed project would be localized in an uninhabited area. Therefore, the proposed project would not cause disproportionately high and adverse human health or environmental effects to any low-income populations or minority populations within the wider local area where such populations are present.

No displacements of populations, residences, or businesses are anticipated with regard to either the construction or operation of the proposed project. Further, there is no indication that either the construction or operation of the proposed project would impact a higher minority population component or low-income population component than the general population of the surrounding area. Operation, as explained in Section 4.9.1, would not affect local employment conditions.

All best management practices related to health and safety issues would be adhered to during the period of construction. Children would not be allowed in the construction zone, which is isolated from residential areas, schools, and other areas where children would normally be expected.

There are no unique exposure pathways or cultural practices by which the minority or low-income populations could receive a disproportionately high and adverse impact.

4.10 Water Quality

4.10.1 Impacts from Transmission Line Construction

There will be minimal water usage during construction of the project, consisting mainly of the potential use of water to minimize the production of dust resulting from construction activities. As discussed, however, such water usage encourages the growth of non-native plant species and will be minimized to the extent feasible.

There will also be the potential for sediment to be carried off the construction area as a result of storm water runoff. Under the requirements of the federal Clean Water Act, a National Pollutant Discharge Elimination System (NPDES) permit will have to be obtained from the State Water Resources Control Board for construction of the project. The NPDES permit will require the use of Best Management Practices (BMPs) to minimize sedimentation runoff. Such measures typically include the use of physical barriers such as sedimentation fabric, sandbags, and other measures deemed necessary and feasible.

4.10.2 Impacts from Transmission Line Operation

During the operation of the transmission line, there will be no water consumed and no water discharges.

4.10.3 Impacts from Power Plant Operation

Operation of the power plants will require water for purposes of recondensing steam vapor (steam is created and used to generate electricity in each of the TDM and LRPC facility's steam turbines) and for "makeup" of water that is evaporated during the cooling process.

The LRPC facility will obtain, treat, and recycle raw sewer water. The LRPC has begun construction of a sewage treatment plant (STP) to process the quantities of water needed for the power generation process. LRPC has contracted with the local Mexican municipal water authority, CESPM, to provide untreated, municipal wastewater. Raw sewer water will be routed directly to the LRPC facility. The wastewater will be obtained at the inlet of the Zaragoza lagoons and piped to the LRPC STP, adjacent to the lagoons. The STP will treat the raw sewage via screening, degritting, degreasing, biological treatment by way of an extended aeration activated sludge process, nitrification-denitrification, final clarification, and disinfection. The product of this initial treatment is termed gray water, which is piped approximately 5.2 miles to the LRPC. At the LRPC, the gray water is further treated to reduce phosphates, organics, and heavy metals. Depending on the water requirements of the LRPC at any given time, some gray water (typically one cubic foot per second) will be discharged from the STP into an adjacent drainage channel that eventually combines with the lagoon effluent.

After the water is treated, it will be used as makeup water (both cooling and steam cycle) or filtered for service water use. Once used at the facility, the water is discharged to drainage channels managed by CNA. These drains ultimately discharge to the New River.

TDM has contracted with CESPM to obtain, treat, and recycle sewer water that has first received treatment (i.e., settling of solids) at the Zaragoza facility. This water will be routed via enclosed, buried pipe to the TDM facility. TDM is also constructing a sewage treatment plant which will treat the water prior to its use at the facility, in a fashion similar to LRPC's, except that the water will have already received primary treatment (settling of solids) at the Zaragoza lagoons. TDM's sewage treatment plant will include secondary and tertiary treatment of the water. After the water is treated, it will be used as makeup water (both cooling and steam cycle) or filtered for service water use. Once used at the facility, the water is discharged to drainage channels managed by CNA. This drain ultimately discharges to the New River. TDM has received all of its water discharge permits from CNA.

Both the LRPC and TDM facilities will improve water quality in the New River. The LRPC facility will remove contaminant load from the water that is diverted from the Zaragoza sewage lagoons and treated at its facility. The plant's discharge will be disinfected (i.e., treated to contain very low levels of biological pathogens—bacteria or viruses). In addition, nutrients (nitrogen species and phosphorus) and heavy metals will be reduced, and agricultural/industrial chemicals (VOCs and pesticides) will be substantially removed by the treatment process.

As a result of the sewage treatment plant and power plant water treatment operations of the LRPC, there will be a net reduction of pollutants currently being discharged into the New River of approximately 1,230,000 pounds per year of BOD, 4,230,000 pounds per year of COD, 1,590,000 pounds per year of total suspended solids (TSS), 4,400 pounds per year of iron, and 3,500,000 pounds per year of total dissolved solids. After undergoing five cycles of concentration (i.e., being recycled in the cooling cycle five times), the TDS concentration of the water being discharged will be approximately 4,800 mg/l. The amount of water evaporated will be 7,170 acre-feet per year.

The water treatment process at the TDM facility will similarly eliminate biological contaminants and reduce other contaminants in the water such as nitrogen, phosphorus, heavy metals, and agricultural and industrial chemicals in the water received from CESPM. This reduction will result in a net benefit to water quality in the New River. The net reduction in contaminants from TDM's processing will be approximately 1,500,000 pounds per year of BOD, 1,760,000 pounds per year of COD, 850,000 pounds per year of TSS, 225 pounds per year of iron, and 2,600,000 pounds per year of total dissolved solids. The treated water will undergo three cycles of concentration within the cooling tower. The TDS concentration of the TDM discharge will be 3,430 mg/L and the total amount of water evaporated will be 3,400 acre-feet per year.

4.10.4 Impacts on the Salton Sea

The LRPC facility will evaporate approximately 7,170 acre-feet per year. This represents a net reduction of water flows into the Salton Sea of 0.53 percent (7,170 acre-feet per year/1,363,000 acre-feet per year). This reduction in volume is essentially undetectable since it is not within the sensitivity of most water meters.

The salinity of the New River, upon combining with the water discharge from the LRPC, will increase slightly. The amount of TDS removed by the LRPC treatment facility will be 3,520,000 pounds per year, while discharging 1,845 acre-feet per year at 4,800 mg/L. This amounts to an increase in salinity to the Salton Sea of 0.097 percent. This increase will be essentially undetectable, since the salinity within the Salton Sea can vary beyond this amount.

The TDM facility will evaporate approximately 3,400 acre-feet per year. This represents a net reduction in water flows into the Salton Sea of 0.25 percent (3,400 acre-feet per year/1,363,000 acre-feet per year). This reduction in volume also is undetectable.

The TDM facility will remove approximately 2,600,000 pounds per year of TDS, while discharging 1,400 acre-feet per year at a TDS concentration of 3,430 mg/L. This amounts to an increase in salinity to the Salton Sea of 0.046 percent. Similarly, this increase is undetectable.

4.10.5 Combined Impacts on the Salton Sea

The LRPC and TDM facilities combined will evaporate approximately 10,570 acre-feet per year. This represents a net reduction in water flows to the Salton Sea of 0.78 percent (10,570 acre-feet per year/1,363,000 acre-feet per year).

The LRPC and TDM facilities combined will remove 6,120,000 pounds of TDS per year. The combined discharge to the New River from the facilities will be 3,245 acre-feet per year. This amounts to an increase in salinity to the Salton Sea of 0.142 percent.

These combined impacts in reduction of flows to the Salton Sea, as well as the TDS increase to the Salton Sea, are negligible and well within the error range of the recorded data and measurement instruments. Further, the improvement in water quality from a biological standpoint will greatly help achieve the bi-national water quality treaty standards as contained in IBWC Minute 264 for the New River.

Ultimately, the reduction of certain contaminants from Mexico that currently go into the Salton Sea will be a positive impact on its ecosystem. The potentially small increase in the salinity level and reduction in water quantity will be negligible; hence, the project will have no measurable impact.

4.11 Operational Impacts

4.11.1 Radio and Television Interference

The electric field at the surface of the conductors (transmission lines) causes the phenomenon of corona. Corona is the electrical breakdown or ionization of air in very strong electric fields and, depending upon weather conditions, it is the source of audible noise, electromagnetic interference, and visible light. Radio interference (RI) from transmission lines is primarily caused by corona. The level of corona activity on the proposed line would be minimal because of the use of two relatively large conductors on each phase of each of the proposed transmission lines. In addition, corona is not recognized as a concern for voltages below 345 kV. Consequently, the level of corona-