The potential groundwater effects along the tunnel alignments are limited to the locations where there is a shaft and these effects will not be adverse due to the use of diaphragm cutoff wall construction techniques at each shaft site. (Exhibit DWR-212, Figure 3-1.)

Throughout the construction and operation of the project, DWR will implement measures to minimize effects on groundwater levels.[12] The intake sedimentation basin embankments, as well as the embankments at the Intermediate Forebay and the modified Clifton Court Forebay, will be constructed with impermeable cutoff walls to control seepage flow. In addition, toe drains would also be constructed to collect any seeped water along the embankments and pump it back into the forebays. (Exhibit DWR-212, Sections 14.1.1.1, 14.1.2.1, and 14.1.3.1.)

Based on the project features (cutoff walls and toe drains), and the mitigation measures to be implemented during construction described above, the intake facilities, as well as the shafts, pumping plants and forebays, are not expected to have significant on-going effects to groundwater during construction or operation. Before construction begins, geotechnical studies will be completed[13] and a monitoring program will be put in place to monitor groundwater effects.[14] All engineering designs and contractor activities will be conducted to minimize groundwater effects and comply with permit requirements.

B. TUNNELS

The CWF relies primarily on tunnels to convey water south from intakes along the Sacramento River to the Banks and Jones export pumping facilities near Tracy. Tunnel details, including proposed alignment, length, depth, and lining requirements, will be refined as geotechnical data becomes available during the next stages of project design.

The CWF tunnel alignment is currently divided into seven reaches: three North tunnels and four Main tunnel reaches. The size of each tunnel reach is dictated by the hydraulic requirements necessary to move the design volumes of water by gravity to the pumping plants at Clifton Court. The North tunnels (north of Intermediate Forebay) are

[12] For more detail, see RDEIR/SDEIS, Section 7.3.3, Appendix A, Mitigation Measures GW-1 and GW-5.
[13] SWRCB-3, RDEIR/SDEIS, Appendix A, Environmental Commitment 3B.2.1.
[14] SWRCB-3, RDEIR/SDEIS, Appendix A, Mitigation measure GW-5, Section 7.3.3.