Chapter 23
SIGNIFICANT IRREVERSIBLE IMPACTS

23.1 Introduction

Pursuant to Section 15126.2(c) of the California Environmental Quality Act Guidelines, an environmental impact report must consider any significant irreversible environmental changes that would be caused by the proposed program and project should they be implemented. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

23.2 Analysis of Irreversible Changes

Alternative 4 is the recommended alternative for the Clearwater Program. Alternative 4 would require the use of non-renewable resources such as fossil fuels and non-renewable construction materials. These resources would be consumed during construction and operation. Fossil fuels in the form of diesel oil and gasoline would be used for construction equipment and vehicles. Electricity, which requires the burning of fossil fuels, would also be consumed during construction and operation. These energy resources would be irretrievable and irreversible. However, the non-recoverable materials that would be used during construction and operation activities would be accommodated by existing supplies. Although the increase in the amount of materials used would be limited, they would nevertheless be unavailable for other uses.

Construction activities that result in loss or permanent degradation of an aspect of the physical environment that is non-renewable have the most potential to result in irreversible changes. The tunnel boring utilized to construct the onshore tunnel could damage or destroy unknown, unique paleontological resources if these resources exist along the tunneling alignment as discussed in Chapter 7. Damage or destruction of these resources would be significant and irreversible. Although other significant impacts would occur during construction and operation, as described in the respective chapters, they would not be irreversible.

Consequently, implementation of Alternative 4 would result in significant irreversible changes due to the use of non-renewable construction materials, energy resources, and fossil fuels during construction and operation. Additionally, Alternative 4 (Project) could result in significant irreversible damages to paleontological resources during construction. However, these commitments and damages would occur in accordance with the Clearwater Program. The Clearwater Program supports the wastewater management needs of the Joint Outfall System through the year 2050 including improved system capacity and reliability, increased beneficial use of recycled water and biosolids, and continued regulatory

compliance. Therefore, the significant irreversible changes have been deemed acceptable in light of the Clearwater Program's overall benefits.