Chapter 6.0

Commitment of Resources, Unavoidable Impacts, and Relationship between Short-term Uses and Long-term Productivity

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6.1 Irreversible and Irretrievable Commitment of Resources

A commitment of resources is irreversible when its primary or secondary impacts limit the future option for a resource. An irretrievable commitment refers to the use or consumption of resources neither renewable nor recoverable for later use by future generations. Implementation of any of the alternatives involving construction would require a commitment of natural, physical, human, and fiscal resources. Construction and operation of any of the construction alternatives would require similar commitment of these resources. This discussion focuses on:

- The project's use of nonrenewable resources during construction and operation, which includes fossil fuels, electricity, water, and labor; and
- The changes expected to occur as a result of the proposed project including the commitment of land for the proposed project, physical changes in the environment, effects on human populations, and fiscal changes.

Construction of the proposed project would require the use of fossil fuels for construction vehicles, equipment, and construction-worker vehicles. Electricity would also be used at construction trailers or by portable generators during project construction.

Construction of the proposed project would require the use of various types of raw building materials, including cement, aggregate, steel and asphalt, electrical supplies, piping, and other building materials such as metal, stone, sand, and fill material. Additionally, the fabrication and preparation of these construction materials would require labor and natural resources. Utilization of these resources would be irretrievable. However, these resources are readily available at this time, and adverse effects on their continued availability are not expected.

Construction and operation of the proposed facilities would require labor, which would be otherwise unavailable for other projects. The commitment of labor is considered irretrievable. Furthermore, fiscal resources would be irretrievably committed to construction and operation of the proposed project. These funds would then not be available for other projects and activities.

In addition to the resources utilized in construction and operation of the proposed project, there would be irreversible and irretrievable loss of existing resources in the impact areas. These resources would include the loss of biological habitat as discussed in Section 4.2. Negative effects have been minimized to the extent possible, but some effects remain.

The three action alternatives considered for the proposed project vary in their routes to Lake Mead. However, each alternative would require similar commitments of natural, physical, human, and fiscal resources. Benefits from the proposed project, in terms of flexible management of wastewater flows in the Valley, are considered to outweigh the irreversible and irretrievable commitment of these resources.

6.2 Unavoidable Impacts

Unavoidable impacts constitute a substantial adverse change to existing environmental conditions that cannot be fully mitigated by implementing mitigation measures. The potential unavoidable adverse impacts that could arise from implementing the alternatives discussed in Chapter 2 are presented in this section.

- Water Resources - Adaptation and implementation of the SCOP Adaptive Management Plan would ensure that no unavoidable impacts to water resources would occur.
- Biological Resources - Temporary displacement of wildlife species; disturbance, loss, or damage to individual plants and the seed bank. Reduction of habitat for aquatic fauna.
- Cultural Resources - Potential removal of eligible cultural sites from the landscape.
- Recreation - Some recreation areas would be inaccessible to the public during construction.
- Hazardous Materials - Possible encounter with perchlorate contaminated groundwater.
- Noise and Vibration - No unavoidable adverse impacts were identified.
- Air Quality - Fugitive dust and exhaust emissions from construction activities.
- Earth Resources - No unavoidable adverse impacts identified.
- Land Use - No unavoidable adverse impacts identified.
- Visual Resources - Visual scarring of landscape through placement of pipeline.
- Socioeconomics - No unavoidable adverse impacts identified.
- Environmental Justice - No unavoidable adverse impacts identified.
- Transportation and Traffic - Potential short term impacts to LOS traffic conditions on Boulder Highway.
- Paleontological Resources - Potential to damage or destroy any fossils that may be present.

6.3 Relationship Between Short-Term Uses and Long-Term Productivity

Short-term uses are defined as those that take place during the 30-year timeframe covered in this EIS analysis. Long-term is defined as the time period beyond the 30-year timeframe of this EIS. If the resource cannot be rehabilitated to its most productive long-term use within a 30-year timeframe, then it is considered in this analysis to be impaired for the long term.

Surface disturbance would produce short-term disruption of the ecosystem and soils. Ecological productivity would be reduced temporarily during construction activities, but would not continue long term. There would be some short-term alteration of surface-water drainage patterns, but natural drainage patterns would be restored following construction. Some PM_{10} and temporary mobile-source emissions would be produced in the short term from construction activities, but there would be no long-term effects.

Although it is not expected that cultural or paleontological resources would be encountered during construction, these resources would be subject to data recovery in order to mitigate the impact of the activity on their values. While this enhances the short-term knowledge base, it also removes some of the potential for an even greater recovery of information to be gained through future studies using improved technology. Vandalism and illicit artifact collecting within

archaeologically and paleontologically sensitive areas are likely to cause a negative impact to cultural resources over the long term.

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