4.0 INTRODUCTION TO THE ANALYSIS

4.0.1 INTRODUCTION TO ENVIRONMENTAL ANALYSIS

The impact analysis technical chapters of the EIR analyze the potential impacts of implementation of the proposed project in a range of environmental issue areas. The format of each of the technical chapters is described below. The technical reports that substantiate this EIR are in the referenced appendices or available through Yolo County by request.

4.0.2 ENVIRONMENTAL ISSUES ADDRESSED IN THIS EIR

This EIR provides the analysis necessary to understand, disclose, and mitigate where feasible, the environmental impacts of the proposed project. The following environmental issues are addressed in the technical chapters included of this EIR. Other environmental issues areas required under CEQA are addressed in the Initial Study prepared for the proposed project (Appendix A):

- Aesthetics;
- Agricultural Resources;
- Air Quality, Greenhouse Gas Emissions, and Energy;
- Biological Resources;
- Cultural and Tribal Cultural Resources;
- Geology and Soils, Mineral Resources, and Paleontological Resources;
- Hazards and Hazardous Materials;
- Hydrology and Water Quality;
- Land Use and Planning;
- Noise;
- Public Services, Utilities, and Service Systems; and
- Transportation and Circulation.

4.0.3 PROJECT-SPECIFIC TECHNICAL REPORTS

The technical reports prepared for the proposed project that substantiate this EIR include the following:

- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey
- Biological Resource Assessment, Peer Review, and Bat Survey (Appendix E)
- Wetland Delineations (Appendix F)
- Cultural Resource Assessment and Yocha Dehe Wintun Nation Consultation (Appendix G)
- Slope Stability Evaluation, Geology and Dewatering Memoranda (Appendix H)
- USDA NRCS Custom Soil Resource Report
- Phase I and Limited Phase II Environmental Site Assessment (Appendix I)
- Cache Creek Hydraulics Study and Channel Stability Analysis (Appendix J)
- Groundwater Study and Supplemental Groundwater Memo (Appendix K)

- Environmental Noise Assessment (Appendix L)
- Transportation Impact Study and Vehicle Miles Travelled Impact Evaluation (Appendix M)
- Moore Canal Avoidance Alternative Tech Memos (Appendix O)
- Moore Canal Southern Alignment Alternative Tech Memos (Appendix Q)
- Cache Creek TAC Review of Teichert Mining and Reclamation Project Technical Memorandum (Appendix R)

A complete list of bibliographic information for all references and resources cited throughout the EIR is provided in Chapter 8. In addition, Chapter 7 lists all EIR and technical report authors that provided technical assistance in preparation and review of the EIR.

4.0.4 FORMAT OF ISSUE SECTIONS

Each technical chapter begins with an **introduction** describing the purpose of the chapter. The introduction is followed by a description of the project's **existing environmental setting** as the setting pertains to that particular issue. The setting description is followed by the **regulatory context** and the **impacts and mitigation measures** discussion, which contains the **standards of significance**, followed by the **method of analysis** and **impacts found less than significant in Initial Study**. The analyses of **impacts and mitigation measures** include impact statements prefaced by a number in bold-faced type (for both project-level and cumulative analyses). An explanation of each impact and an analysis of the impact's significance follow each impact statement.

Each technical chapter of this EIR includes an analysis of the consistency of the proposed project with applicable policies and regulations that have been adopted for the purpose of avoiding or mitigating environmental effects related to the specific environmental issue area being analyzed. Applicable documents analyzed for consistency include the Yolo County General Plan and the Cache Creek Area Plan, including the Off-Channel Surface Mining Ordinance and the Surface Mining Reclamation Ordinance.

4.0.5 DETERMINATION OF SIGNIFICANCE

Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse physical change in the environment (Public Resources Code § 21068). The Guidelines implementing CEQA direct that this determination be based on scientific and factual data to the extent possible. The specific criteria for determining the significance of a particular impact are identified within the impact discussion in each chapter, and are consistent with significance criteria set forth in Appendix G of the CEQA Guidelines.

Three categories of impacts are used for the project-specific impacts within this EIR: less than significant, significant, and significant and unavoidable. The description of each determination is as follows:

Less than Significant. The impact would not cause significant adverse physical changes in the existing or projected future environment; therefore mitigation is not required. Or, while some impact may be associated with the project, it is not significant or is acceptable based on the applicable thresholds of significance.

Significant. Under CEQA, a significant impact is defined as a substantial, or potentially substantial, adverse physical change in the environment. CEQA Guidelines Section 15064 states

that the determination is to be made by the lead agency based on scientific and factual data, to the extent possible.

Significant and Unavoidable. An impact is considered significant and unavoidable when the result is a substantial effect on the environment for which mitigation has not been identified as feasible to reduce the impact to a less-than-significant level, or mitigation is identified but would not fully mitigate the impact to acceptable levels. Mitigation may be required to reduce the impact as much as possible, even if the impact would remain significant and unavoidable.

A cumulative discussion of the impacts of the proposed project in conjunction with other development in the region is included in Section 5.4 of Chapter 5, Cumulative Impacts and Other CEQA Sections, of this EIR. As noted therein, issues related to air quality, greenhouse gas emissions, and energy are, by nature, cumulative. Thus, the proposed project's cumulative impacts related to those environmental issue areas are addressed in Chapter 4.3, Air Quality, Greenhouse Gas Emissions, and Energy, of this EIR. Furthermore, cumulative impacts related to noise and traffic are provided in Chapters 4.10 and 4.12, respectively, as both impact analyses rely extensively on project-specific cumulative assumptions that are discussed in those chapters. Cumulative impacts are determined to be less than cumulatively considerable, cumulatively considerable, or significant and unavoidable. The description of each determination is as follows:

Less than Cumulatively Considerable. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency must identify facts and analysis supporting the conclusion.

Cumulatively Considerable. The project is cumulatively considerable if the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Significant and Unavoidable. Significant and unavoidable cumulative impacts are impacts on the environment that result from the incremental impacts of a proposed project when added to other past, current, and future projects and cannot be alleviated to a less than cumulatively considerable level. Such impacts can result from individually minor but collectively significant actions that occur over time.

All mitigation measures pertinent to each individual impact follow directly after the statement of level of significance of the impact (see below). The effectiveness of identified mitigation measures in reducing impacts is also evaluated.

4.0.6 EXAMPLE IMPACT STATEMENT AND DISCUSSION

An example of the format of impact statements and mitigation measures in the technical chapters and in Section 5.3 of this EIR is shown below.

Project-Specific Impacts and Mitigation Measures

The following discussion of impacts is based on the implementation of the proposed project under existing conditions, based on the identified standards of significance.

4.X-1 Statement of impact and pre-mitigation level of impact.

Discussion and analysis of impact for the proposed project.

A statement of the ***level of significance*** of impact prior to mitigation is included at the end of each impact discussion. If an impact is determined to be significant, mitigation is included in order to reduce the specific impact to the extent feasible.

Mitigation Measure(s)

Statement of *level of significance* after the mitigation is implemented.

4.x-1(a) *Identified mitigation measure.*

4.x-1(b) *Additional identified mitigation measure.*

Etc.

Cumulative Impacts and Mitigation Measures

The following discussion of cumulative impacts is based on implementation of the proposed project in combination with cumulative development within the applicable area or region.

4.X-2 Statement of cumulative impact and pre-mitigation level of impact.

Discussion of and analysis cumulative impacts for the proposed project.

A statement of the ***level of significance*** of cumulative impact prior to mitigation is included at the end of each impact discussion. If an impact is determined to be cumulatively considerable, mitigation is included in order to reduce the specific impact to the extent feasible.

Mitigation Measure(s)

Statement of *level of significance* after the mitigation is implemented.

4.x-2(a) *Identified mitigation measure.*

4.x-2(b) *Additional identified mitigation measure.*

Etc.