

TABLE OF CONTENTS

Section		Page
EXECUTIVE SUMMARY		ES-1
Introduction		ES-1
Summary Description of the Project		ES-1
Potential Approvals and Permits Required		ES-2
Alternatives to the Proposed Project		ES-3
Areas of Controversy		ES-3
Issues to Be Resolved		ES-4
1 INTRODUCTION.....		1-1
1.1 Project requiring environmental analysis.....		1-1
1.2 Purpose and Intended Uses of This Draft EIR.....		1-1
1.3 Scope of This Draft EIR		1-1
1.4 Agency Roles and Responsibilities		1-2
1.5 Public Review Process.....		1-3
1.6 Draft EIR Organization.....		1-3
1.7 Standard Terminology		1-4
2 PROJECT DESCRIPTION.....		2-1
2.1 Project Location		2-1
2.2 Project Background and History		2-1
2.3 Project Objectives.....		2-1
2.4 Proposed Project		2-4
2.5 Project Construction.....		2-41
3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES		3-1
3.1 Aesthetics		3.1-1
3.2 Air Quality		3.2-1
3.3 Biological Resources.....		3.3-1
3.4 Archaeological, Historical, and Tribal Cultural Resources		3.4-1
3.5 Energy.....		3.5-1
3.6 Geology and Soils		3.6-1
3.7 Greenhouse Gas Emissions and Climate Change.....		3.7-1
3.8 Hazards and Hazardous Materials		3.8-1
3.9 Hydrology and Water Quality		3.9-1
3.10 Land Use and Planning.....		3.10-1
3.11 Noise and Vibration		3.11-1
3.12 Public Services		3.12-1
3.13 Transportation		3.13-1
3.14 Utilities and Service Systems		3.14-1
4 CUMULATIVE IMPACTS		4-1
4.1 Introduction to the Cumulative Analysis		4-1
4.2 Cumulative Impact Methodology		4-1
4.3 Cumulative Setting.....		4-2
4.4 Analysis of Cumulative Impacts.....		4-5

5	OTHER CEQA SECTIONS.....	5-1
5.1	Growth Inducement.....	5-1
5.2	Significant and Unavoidable Adverse Impacts.....	5-3
5.3	Significant and Irreversible Environmental Changes.....	5-3
6	ALTERNATIVES.....	6-1
6.1	Introduction.....	6-1
6.2	Considerations for Selection of Alternatives.....	6-2
6.3	Alternatives Considered but not evaluated further.....	6-3
6.4	Alternatives Selected for Detailed Analysis.....	6-4
6.5	Environmentally Superior Alternative.....	6-13
7	REPORT PREPARERS.....	7-1
8	REFERENCES.....	8-1
9	LIST OF ABBREVIATIONS	9-1

Appendices

Appendix A	NOP and Comments
Appendix B	Life Support System Study
Appendix C	Animal Exhibit Details
Appendix D	Air Quality and Greenhouse Gas Modeling Results
Appendix E	Health Risk Assessment
Appendix F	Energy Worksheets
Appendix G	Noise Worksheets
Appendix H	Traffic VMT Memorandum
Appendix I	Water Supply Assessment

Figures

Figure 2-1	Regional Location.....	2-2
Figure 2-2	Project Site.....	2-3
Figure 2-3	New Zoo Plans Full Buildout	2-9
Figure 2-4	New Zoo Development Phases	2-11
Figure 2-5	New Zoo Main Entrance Rendering.....	2-21
Figure 2-6	New Zoo Lodge Rendering.....	2-23
Figure 2-7	Nighttime Experience Route.....	2-25
Figure 2-8	Proposed Tent Camp Rendering	2-27
Figure 2-9	Phase 1 Landscaping	2-29
Figure 2-10	New Zoo Perimeter Gates.....	2-31
Figure 2-11	Drainage Management Areas.....	2-33
Figure 2-12	New Zoo Utility Plan.....	2-35
Figure 2-13	Proposed Site Circulation	2-37
Figure 3.1-1	Representative Aesthetic Photographs.....	3.1-6
Figure 3.1-2	Ground Level Elevation From Lotz Parkway Looking West	3.1-9
Figure 3.1-3	North Birdseye.....	3.1-11

Figure 3.1-4	North View.....	3.1-13
Figure 3.1-5	South Birdseye View.....	3.1-15
Figure 3.1-6	South View.....	3.1-17
Figure 3.1-7	Exterior Site FOH Lighting Glow Plan.....	3.1-24
Figure 3.8-1	Fire Plan Map	3.8-15
Figure 3.11-1	Sacramento Zoo Noise Measurement Locations.....	3.11-12
Figure 3.11-2	Project Site Noise Measurement Locations.....	3.11-13

Tables

Table ES-1	Summary of Impacts and Mitigation Measures.....	ES-5
Table 2-1	Project Summary	2-6
Table 3.2-1	National and California Ambient Air Quality Standards	3.2-2
Table 3.2-2	Sources and Health Effects of Criteria Air Pollutants	3.2-9
Table 3.2-3	Attainment Status Designations for Sacramento County.....	3.2-10
Table 3.2-4	Maximum Emissions of Criteria Pollutants and Precursors Associated with Construction of the Project.....	3.2-17
Table 3.2-5	Maximum Annual Emissions of Criteria Pollutants and Precursors Associated with Operation of the Project at the Initial Opening (2029).....	3.2-19
Table 3.2-6	Maximum Annual Emissions of Criteria Pollutants and Precursors Associated with Operation of the Project at full buildout (2043)	3.2-19
Table 3.2-7	Potential Annual Incremental Health Incidences for the Project.....	3.2-20
Table 3.2-8	Maximum Cancer Risk under an Unmitigated Project Scenario	3.2-22
Table 3.2-9	Maximum Cancer Risk under a Mitigated Project Scenario	3.2-22
Table 3.2-10	Sacramento Metropolitan Air Quality Management District Screening Levels for Potential Odors Sources	3.2-23
Table 3.3-1	Special–Status Wildlife Species Known or Expected to Occur in the Vicinity of the Project Area and Their Potential for Occurrence in the Project Area	3.3-7
Table 3.5-1	Construction-Related Fuel Consumption.....	3.5-8
Table 3.5-2	Operation-Related Building Energy Consumption (2043)	3.5-9
Table 3.6-1	City of Elk Grove Hazard Identification Assessment	3.6-5
Table 3.7-1	City of Elk Grove’s Greenhouse Gas Emissions Inventory for 2013 and Business-as-Usual Forecast Years (MTCO ₂ e).....	3.7-6
Table 3.7-2	Summary of Maximum Construction-Generated Emissions of Greenhouse Gas Emissions from the Project (2025–2042)	3.7-10
Table 3.7-3	Project-Generated Greenhouse Gas Emissions in 2029.....	3.7-12

Table 3.7-4	Project-Generated Greenhouse Gas Emissions in 2043	3.7-12
Table 3.8-1	Acceptable Probability of Reasonably Foreseeable Risks to Individuals by Land Use	3.8-5
Table 3.8-2	Policy Threshold of Exposure Criteria for Agricultural, Residential, and Nonresidential Land Uses	3.8-6
Table 3.11-1	Ground-Borne Vibration (GBV) Impact Criteria for General Assessment	3.11-2
Table 3.11-2	Caltrans Recommendations Regarding Levels of Vibration Exposure.....	3.11-2
Table 3.11-3	Maximum Allowable Noise Exposure, Transportation Noise Sources	3.11-4
Table 3.11-4	Noise Level Performance Standards for New Projects Affected by or Including Nontransportation Noise Sources*	3.11-4
Table 3.11-5	Exterior Noise Standards for Sensitive Receivers ¹	3.11-5
Table 3.11-6	Typical A-Weighted Noise Levels	3.11-8
Table 3.11-7	Human Response to Different Levels of Ground Noise and Vibration.....	3.11-9
Table 3.11-8	Summary of Existing Ambient Noise Measurements.....	3.11-11
Table 3.11-9	Noise Emission Levels from Construction Equipment.....	3.11-16
Table 3.11-10	Construction Noise Estimates	3.11-17
Table 3.11-11	Vibration Reference Levels for Construction Equipment.....	3.11-21
Table 3.11-12	Summary of Modeled Traffic Noise Levels – Phase 1	3.11-22
Table 3.11-13	Summary of Modeled Traffic Noise Levels – Full Buildout	3.11-23
Table 3.13-1	Vehicle Miles Traveled by Land Use Designation	3.13-3
Table 3.13-2	Study Area Total Vehicle Miles Traveled Daily Limits	3.13-5
Table 3.13-3	Existing Zoo and Project Future Phases Daily VMT	3.13-17
Table 3.13-4	Transportation Sector Measures to Reduce VMT	3.13-18
Table 3.14-1	Water Demands for SCWA Service Areas in Five-Year Increments – Normal Year (afy).....	3.14-9
Table 3.14-2	SCWA Zone 40 Water Demands in Five-Year Increments in Normal, Single Dry, and Multiple Dry Years (afy)	3.14-10
Table 3.14-3	SCWA Projected Groundwater Supply Availability (afy)	3.14-10
Table 3.14-4	Surface Water Supply Entitlements, Water Rights, and Water Service Contracts to Meet SCWA Buildout Water Demand	3.14-12
Table 3.14-5	Projected Reasonably Available Surface Water Supply in Five-Year Increments (afy)	3.14-12
Table 3.14-6	Disposal Facilities and Remaining Capacities	3.14-14
Table 3.14-7	Zone 40 Water Supply Sufficiency Analysis in Five-Year Increments (afy)	3.14-17
Table 3.14-8	Projected Solid Waste Generation	3.14-19
Table 4-1	Geographic Scope of Cumulative Impacts	4-2
Table 4-2	Related Projects	4-3
Table 4-3	Summary of Modeled Traffic Noise Levels.....	4-17
Table 6-1	Summary of Environmental Effects of the Alternatives Relative to the New Zoo Project.....	6-14