

City of Santa Clarita

Draft Environmental Impact Report

SCH No. 2007071039

Volume I
Introduction—Section 10.0

VISTA CANYON

Prepared for:
City of Santa Clarita
23920 Valencia Boulevard, Suite 300
Santa Clarita, California 91355
Contacts: Jeff Hogan and Patrick LeClair



Prepared By:



October 2010

City of Santa Clarita

Draft Environmental Impact Report Volume I Introduction—Section 10.0

SCH No. 2007071039

VISTA CANYON



Master Case No. 07-127: Annexation 07-002A & B
(Includes Amendments To The City's Sphere Of Influence),

Pre-Zone/Zone Change 07-001A & B,
General Plan Amendment 07-001A & B,
Specific Plan 07-001, Tentative Tract Map 69164,
Conditional Use Permit 07-009,
Oak Tree Permit 07-019

Prepared for:
City of Santa Clarita
23920 Valencia Boulevard, Suite 300
Santa Clarita, California 91355
Contacts: Jeff Hogan and Patrick LeClair

The logo for Impact Sciences, Inc. consists of a stylized 'S' and 'I' inside a triangle. Below the logo, the company name 'IMPACT SCIENCES, INC.' is printed in a bold, sans-serif font. Underneath that, smaller text reads: '803 Camarillo Springs Road, Suite A' and 'Camarillo, California 93012'.

October 2010

Vista Canyon

Draft Environmental Impact Report

Volume I

Introduction–Section 10.0

Prepared for:

City of Santa Clarita
23920 Valencia Boulevard, Suite 300
Santa Clarita, California 91355

Prepared by:

Impact Sciences, Inc.
803 Camarillo Springs Road, Suite A
Camarillo, California 93012

October 2010

TABLE OF CONTENTS

Volume I

<u>Section</u>	<u>Page</u>
Introduction.....	I-1
Executive Summary.....	ES-1
1.0 Project Description	1.0-1
2.0 Environmental Setting	2.0-1
3.0 Cumulative Impact Analysis Methodology.....	3.0-1
4.0 Environmental Impact Analysis.....	4.0-1
4.1 Geotechnical Hazards.....	4.1-1
4.2 Flood	4.2-1
4.3 Traffic and Access	4.3-1
4.4 Air Quality	4.4-1
4.5 Noise	4.5-1
4.6 Biological Resources	4.6-1
4.7 Land Use.....	4.7-1
4.8 Water Services	4.8-1
4.8.1 Water Quality	4.8.1-1
4.9 Solid Waste Disposal	4.9-1
4.10 Education	4.10-1
4.11 Library Services	4.11-1
4.12 Parks and Recreation	4.12-1
4.13 Fire Services	4.13-1
4.14 Sheriff Services	4.14-1
4.15 Human-Made Hazards.....	4.15-1
4.16 Visual Resources	4.16-1
4.17 Population, Housing, and Employment	4.17-1
4.18 Cultural Resources.....	4.18-1
4.19 Agricultural Resources.....	4.19-1
4.20 Santa Clara River Corridor Analysis	4.20-1
4.21 Wastewater Disposal	4.21-1
4.22 Global Climate Change	4.22-1
4.23 Utilities	4.23-1
4.24 Ancillary Annexation Area.....	4.24-1
5.0 Unavoidable Significant Impacts.....	5.0-1
6.0 Project Alternatives	6.0-1
7.0 Growth-Inducing Impacts	7.0-1
8.0 Significant Irreversible Environmental Changes	8.0-1
9.0 Organizations and Persons Consulted	9.0-1
10.0 References.....	10.0-1

Appendices

Volume II

- I NOPs, Scoping Meeting Material, Comment Letters and Other Input
- 4.1 Geotechnical Hazards
 - R.T. Frankian & Associates, Geotechnical Report for Tentative Tract Map No. 69194, Canyon Country, California
- 4.2 Flood
 - PACE, Drainage/Fluvial Study (2009)
 - PACE, Vista Canyon VTTM #69164 Santa Clara River Bank Protection Draft EIR Flood Technical Report (2009)
 - Alliance Land Planning and Engineering, Inc., Drainage Concept/SUSMP Vista Canyon PACE technical memorandum, Estimate of January 20, 2010, Discharge Event on Santa Clara River at the Vista Canyon Project Site (February 24, 2010)
 - FEMA letters granting the applicant's CLOMR (November 13, 2009)
- 4.3 Traffic and Access
 - Final Transportation Impact Study for Vista Canyon Transit-Oriented Development (May 2010)

Volume III

- Addendum #1 to Final Transportation Impact Study for Vista Canyon Transit-Oriented Development (November 2009)
- Parking Demand Analysis – Vista Canyon Transit-Oriented Development, Planning Areas 1 and 2 (April 2010)
- Dr. Shoup, memorandum summarizing review of the Parking Demand Analysis ITE Journal, "New Transit Cooperative Research Project Research Confirms Transit-Oriented Developments Produce Fewer Auto Trips" (June 2009)
- Hidden in Plain Site: Capturing the Demand for Housing Near Transit (September 2004)
- Travel Characteristics of Transit-Oriented Development in California (January 2004)
- Transit Cooperative Research Program, TRCP Report 128: Effects of TOD on Housing, Parking, and Travel (2008)
- Travel and the Built Environment – Synthesis
- Traffic Mitigation Agreement –Fair Share Payment
- 4.4 Air Quality
 - SCAQMD, Santa Clarita Subregional Analysis
 - URBEMIS2007 Construction Emissions
 - URBEMIS2007 Operational Emissions (Residential Overlay)
 - URBEMIS2007 Operational Emissions
 - Locomotive Idling Emissions
 - Wastewater Treatment Facility Emissions
 - Wastewater Treatment Facility Health Risk Assessment Tables
 - Localized Significance Thresholds Analysis
 - Dudek, Santa Clara River Watershed Study (2007)

Volume III (continued)

- 4.5 Noise
Mestre-Greve Associates, One Valley One Vision Noise Element of the General Plan Technical Appendix (February 16, 2009)
Noise measurements – Existing Conditions (Long Term)
Noise measurements – Existing Conditions (Short Term)
FHWA Noise Prediction Model, Off-Site CNEL Existing Conditions
Noise measurements – Construction
FHWA Noise Prediction Model, Off-Site CNEL Interim Conditions
FHWA Noise Prediction Model, Off-Site CNEL Cumulative Conditions
Metrolink/Railroad Estimated Noise
- 4.6 Biological Resources
Rincon Consultants, Biological Resources Assessment for 80-Acre Lost Canyon Property, Santa Clarita, California (2005)
Forde Biological Consultants and Dr. E. Read, Biological Assessment, Vista Canyon Ranch, Los Angeles County, California (August 2008)
Compliance Biology, Results of Focused Western Spadefoot Toad Surveys, Backer Project, Los Angeles County, California (July 30, 2006)
Compliance Biology, Results of Focused Gnatcatcher Surveys, Backer Project, Los Angeles County, California (July 27, 2006)
Forde Biological Consultants, Silvery Legless Lizard Survey, Vista Canyon Ranch, Los Angeles County, California (August 2006)
Forde Biological Consultants, Special Status Plant Survey of Lost Canyon Property, Santa Clarita, Los Angeles County, California (June 2006)
Compliance Biology, Results of Arroyo Toad Surveys, Backer Project, Los Angeles County, California (January 23, 2007)
Forde Biological Consultants, Preliminary Oak Tree Report, Vista Canyon Ranch, Los Angeles County, California (January 2007)
Compliance Biology, Mammal Survey Summary Letter, Vista Canyon Ranch, Los Angeles County (October 2007)
Edith Read, Survey for Special Status Plant Species, JSP Property, Santa Clarita, Los Angeles County, California (November 2007)
Forde Biological Consultants, Coast Horned Lizard Survey, Vista Canyon Ranch, Los Angeles County, California (revised April 2008)
Forde Biological Consultants, Burrowing Owl Survey, Vista Canyon Ranch, Los Angeles County, California
Dudek, California Rapid Assessment Methodology Report, Vista Canyon Ranch Property, Los Angeles County (February 2009)
Edith Read, Survey for Special Status Plant Species, Vista Canyon, Santa Clarita, Los Angeles County, California (September 2009)
Bloom Biological, Inc., Report on Winter Surveys of Special-Status Bird Species on Vista Canyon Property, Los Angeles County, California (May 2009)
Compliance Biology, Western Spadefoot Toad Habitat Enhancement and Monitoring Plan, Vista Canyon Project Site, Los Angeles County, California (June 2009)
Dudek, Conceptual Wetlands Mitigation and Monitoring Plan, Vista Canyon, Los Angeles County, California (May 2009)

Volume III (continued)

- 4.6 Biological Resources (continued)
Dudek, Slender Mariposa Lily Mitigation and Monitoring Plan, Vista Canyon,
Los Angeles County, California (June 2009)
Forde Biological Consultants, Species Movement, Vista Canyon Ranch (July 2009)
Richard Johnson & Associates, City of Santa Clarita Vista Canyon Project Oak Tree
Condition Status Update Letter (February 2010)
Richard Johnson & Associates, Vista Canyon Project Off Site Oak Tree Report,
City of Santa Clarita (February 2010)
- 4.7 Land Use
City of Santa Clarita General Plan Consistency Analysis
OV OV General Plan Consistency Analysis

Volume IV

- 4.8 Water Services
Amended water supply contract between CLWA and DWR
Friends of the Santa Clara River v. Castaic Lake Water Agency (2002) 95.Cal.App.4th
Judgment Granting Peremptory Writ of Mandate, Friends of the Santa Clara River v.
Castaic Lake Water Agency, Case no. BS056954 (filed October 25, 2002)
Appellate court decision, Friends of the Santa Clara River v. Castaic Lake Water Agency,
Second Appellate District, Division Four, Appellate no. B164027
Statement of Decision, California Water Network v. Castaic Lake Water Agency, Los
Angeles County Superior Court, Case no. BS098724 (filed April 2, 2007
["Chalfant Decision"])
California Water Impact Network, Inc., v. Castaic Lake Water Agency, Second Appellate
District, Division Five, Appellate Case no. B205622
Santa Clarita Valley Water Report (2009)
Vista Canyon Water Supply Assessment (September 2010)
Urban Water Management Plan (2005)
Basin Yield Report (2005)
Basin Yield Update (2009)
Calibration Update of the Regional Groundwater Flow Model for the Santa Clarita
Valley, Santa Clarita, California (August 2005)
Castaic Lake Water Agency Litigation Settlement Agreement

Volume V

- Ordering Granting Joint Motion for Court Approval, Good Faith Settlement
Determination and Entry of Consent Order (July 16, 2007)
Stipulation to Dismiss Plaintiffs' Claims and Defendants' Counterclaim (August 20, 2007)
Memorandum of Understanding setting forth rights among water purveyors
Luhdorff & Scalmanini Consulting Engineers, Impact and Response to Perchlorate
Contamination, Valencia Water Company, Well Q2 (April 2005)
AMEC Geomatrix, Project letter report from Hassan Amini, Ph.D., to DTSC
(September 15, 2009)
AMEC Geomatrix, Letter from Hassan Amini, Ph.D., to DTSC (June 8, 2009)
CLWA news release (September 14, 2009)

Volume V (continued)

- 4.8 Water Services (continued)
CLWA memorandum from Brian J. Folsom to CLWA Board of Directors
(October 1, 2009)
U.S. EPA, "Perchlorate, and Region 9 Perchlorate Update"
Carollo Engineers, Treatment of Perchlorate Contaminated Groundwater from the
Saugus Aquifer, TM 3 Bench and Pilot Test Results (February 2004)
Bulletin 132-06, Management of the California State Water Project (December 2007)
Biological Opinion for Delta smelt (2008)

Volume VI

- Biological Opinion for Chinook salmon/sturgeon (2009)
NOAA/NMFS release summarizing the 2009 Biological Opinion (June 4, 2009)
Coalition for a Sustainable Delta/Kern County Water Agency release concerning
litigation filed challenging the 2009 Biological Opinion (August 28, 2009)
CH2MHill, Effect of Urbanization on Aquifer Recharge in the Santa Clarita Valley
(February 22, 2004)
CH2MHill, Analysis of Perchlorate Containment in Groundwater Near the Whittaker-
Bermite Property, Santa Clarita, California (December 2004)
DWR's 2009 Comprehensive Water Package, Special Session Policy Bills and Bond
Summary (November 2009)
DWR release responding to the 2009 Biological Opinion (June 4, 2009)
SWP Contractors release concerning litigation filed challenging the 2009 Biological
Opinion (August 6, 2009)
Castaic Lake Water Agency Board of Directors meeting packet (October 2010)

- 4.8.1 Water Quality
Geosyntec Consultants, Water Quality Technical Report, May 2010

Volume VII

- 4.9 Solid Waste Disposal
Solid waste generation calculations
- 4.10 Education
Student generation calculations
Agreement for Fair Share Funding of School Facilities
- 4.11 Library Services
Library facilities calculations
County of Los Angeles Public Library response to request for library services information
- 4.12 Parks and Recreation
Parkland calculations
- 4.13 Fire Services
Dudek, Preliminary Fuel Modification Plan (2010)
Conceptual Landscape and Irrigation Plan (2010)

Volume VII (continued)

- 4.15 Human-Made Hazards
Rincon Consultants, Inc., Phase I Environmental Site Assessment, Approximately 80-Acre Property, Santa Clarita, California (November 2005)
R.T. Frankian & Associates, Inc., Phase I Environmental Site Assessment, Vista Canyon Ranch (Waldron Property), 27556 Woodfall Road, Los Angeles County, APN 2840-004-021 (June 2007)
Jacob & Hefner Associates, Inc., Phase I Environmental Site Assessment for an Approximate 13 Acres of Land in Planning Area 4 Between the Antelope Valley Freeway (SR-14) and the Santa Clara River Vista Canyon Ranch, Santa Clarita, California (August 2009)
Written correspondence from Malou Rubio, Head of the County of Los Angeles Public Library (June 28, 2004)
W&S Consultants, Phase I and II cultural resource surveys and test excavation reports (September 2008, March 2009)
- 4.18 Cultural Resources
Signed Memorandum of Agreement Between Vista Canyon Ranch and the Fernandeno Tataviam Band of Mission Indians
Tribal Administration Cultural Resources Agreement Letter (February 1, 2010)
- 4.20 Santa Clara River Corridor Analysis
Letters from FEMA to the City of Santa Clarita and County of Los Angeles (November 13, 2009)
- 4.21 Wastewater Disposal
Sewer Siphon Pre-Design Report for the Santa Clara River Crossing at Vista Canyon (2009)
Engineering Report for the Vista Canyon Factory (Municipal Wastewater Treatment Facility) (2009)
- 4.22 Global Climate Change
ENVIRON Climate Change Technical Report: Vista Canyon (January 2010)
Global Climate Change and Its Effects on California Water Supplies
Global Climate Change and Its Effects on Sensitive Biological Resources
CO₂ Sequestration/Greenhouse Gas Emissions Tables
ENVIRON, Life Cycle Greenhouse Gas Emissions from Building Materials
Energy Information Administration, Household Vehicles Energy Use: Latest Data and Trends (November 2005)
Life Cycle Greenhouse Gas (GHG) Emissions Tables, Vista Canyon, Santa Clarita, California
- 6.0 Project Alternatives
Emissions calculations
Fehr & Peers, Memorandum: Traffic Evaluation of Corridor Alternative for Vista Canyon (December 4, 2009)

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1.0-1 Regional Location.....	1.0-5
1.0-2 Site Vicinity	1.0-6
1.0-3 Project Boundary	1.0-7
1.0-4 Annexation Sub-Areas.....	1.0-14
1.0-5 Vista Canyon Tentative Tract Map No. 69164.....	1.0-21
1.0-6a Planning Area 1	1.0-22
1.0-6b Planning Area 2	1.0-25
1.0-6c Planning Area 3	1.0-26
1.0-6d Planning Area 4	1.0-27
1.0-7 Specific Plan Circulation Network.....	1.0-32
1.0-8 Vista Canyon Mobility Plan	1.0-35
1.0-9 Road Section (Lost Canyon South of Jakes Way).....	1.0-36
1.0-10 Road Section (Roundabout “A”: Lost Canyon Road at Jakes Way)	1.0-37
1.0-11 Road Section (Lost Canyon Road, Jakes Way to Vista Canyon Road)	1.0-38
1.0-12 Road Section (Lost Canyon Road to La Veda Avenue).....	1.0-39
1.0-13 Road Section (Lost Canyon Road East of La Veda Avenue)	1.0-40
1.0-14 Road Section (Vista Canyon Road/Vista Canyon Road Bridge – North).....	1.0-41
1.0-15 Road Section (Vista Canyon Road SR-14 Underpass to Soledad Canyon Road Improvements).....	1.0-44
1.0-16 Road Section (Vista Canyon Road – South).....	1.0-45
1.0-17 Road Section (Roundabout at Vista Canyon Road and Lost Canyon Road)	1.0-46
1.0-18 Road Section (Vista Square Drive – Main Street).....	1.0-47
1.0-19 Road Section (Mitchell Hill Road/Mitchell Hill Circle)	1.0-48
1.0-20 Road Section (A, B, and C Drives).....	1.0-49
1.0-21 Road Section (D Drive)	1.0-50
1.0-22 Road Section (F Drive).	1.0-51
1.0-23 Road Section (E, G, H, I, K, L, M, O, P, Q, R, and U Drives)	1.0-52
1.0-24 Road Section (J, N, S, and T Drives).....	1.0-55
1.0-25 Road Section (V Drive)	1.0-56
1.0-26 Road Section (W and X Drives)	1.0-57
1.0-27 Vista Canyon Transit Plan.....	1.0-58
1.0-28 Typical Trail Sections.....	1.0-59
1.0-29 Bank Stabilization.....	1.0-62
1.0-30 Buried Bank Stabilization Cross Section	1.0-65
1.0-31 Bank Stabilization Techniques.....	1.0-66
1.0-32 Mitigation Areas.....	1.0-67
1.0-33 Potable/Recycled Water System Infrastructure	1.0-72
1.0-34 Vista Canyon Conceptual Landscape Plan	1.0-75
1.0-35 Parks and Recreation Plan.....	1.0-78
1.0-36 Conceptual Park Concepts Design (Oak Park)	1.0-79
1.0-37 Conceptual Park Concepts Design (PA-2 Park-Lot 49)	1.0-80
1.0-38 Conceptual Park Concepts Design (Community Garden).....	1.0-81

LIST OF FIGURES (continued)

<u>Figure</u>	<u>Page</u>
1.0-39 Conceptual Grading Plan	1.0-82
2.0-1 Photograph Location Map.....	2.0-5
2.0-2 Viewpoint 1 and 2	2.0-11
2.0-3 Viewpoint 3 and 4	2.0-12
2.0-4 Viewpoint 5 and 6	2.0-13
2.0-5 Viewpoint 7 and 8	2.0-14
2.0-6 Viewpoint 9 and 10	2.0-15
2.0-7 Viewpoint 11 and 12	2.0-16
3.0-1 Cumulative Impact Analysis Methodology.....	3.0-7
4.1-1 Location of Earthquake Faults	4.1-9
4.2-1a Photograph Location Map.....	4.2-3
4.2-1b Site Photos 1–3	4.2-4
4.2-1c Site Photos 4–6	4.2-5
4.2-1d Site Photos 7–9	4.2-6
4.2-1e Site Photos 10–12	4.2-7
4.2-2 Existing Conditions Drainage Sub-basins.....	4.2-22
4.2-3 Existing Conditions 2-year Event Velocity Profile.....	4.2-25
4.2-4 Existing Conditions 5-year Event Velocity Profile.....	4.2-26
4.2-5 Existing Conditions 10-year Event Velocity Profile.....	4.2-27
4.2-6 Existing Conditions 25-year Event Velocity Profile.....	4.2-28
4.2-7 Existing Conditions 50-year Event Velocity Profile.....	4.2-29
4.2-8 Existing Conditions 100-year Event Velocity Profile.....	4.2-30
4.2-9 Existing Conditions QCAP Event Velocity Profile	4.2-31
4.2-10 Typical Bank Stabilization Section	4.2-34
4.2-11 Drainage and Water Quality Plan	4.2-37
4.2-12 Proposed Conditions Drainage Sub-basins	4.2-38
4.2-13 Proposed Condition 2-year Event Velocity Profile.....	4.2-43
4.2-14 Proposed Condition 5-year Event Velocity Profile.....	4.2-44
4.2-15 Proposed Condition 10-year Event Velocity Profile.....	4.2-45
4.2-16 Proposed Condition 25-year Event Velocity Profile.....	4.2-46
4.2-17 Proposed Condition 50-year Event Velocity Profile.....	4.2-47
4.2-18 Proposed Condition 100-year Event Velocity Profile.....	4.2-48
4.2-19 Proposed Condition QCAP Event Velocity Profile	4.2-49
4.2-20 Floodplain Acreage by Velocity	4.2-58
4.2-21 Capital Flood Event Sam Results, Existing and Proposed Condition Comparison	4.2-61
4.3-1 Study Area.....	4.3-11
4.3-2 Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions	4.3-14
4.3-3 Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions	4.3-15
4.3-4 Existing Transit Facilities.....	4.3-24

LIST OF FIGURES (continued)

<u>Figure</u>	<u>Page</u>
4.3-5 Existing Bicycle Facilities and Trails.....	4.3-29
4.3-6 Project Trip Distribution – 2015.....	4.3-44
4.3-7 Peak Hour Traffic Volumes and Lane Configurations – 2012 without Project.....	4.3-45
4.3-8 Peak Hour Traffic Volumes and Lane Configurations – 2012 without Project.....	4.3-46
4.3-9 Peak Hour Traffic Volumes and Lane Configurations – 2012 with Phase 1.....	4.3-51
4.3-10 Peak Hour Traffic Volumes and Lane Configurations – 2012 with Phase 1.....	4.3-52
4.3-11 Peak Hour Traffic Volumes and Lane Configurations – 2015 without Project.....	4.3-59
4.3-12 Peak Hour Traffic Volumes and Lane Configurations – 2015 without Project.....	4.3-60
4.3-13 Peak Hour Traffic Volumes and Lane Configurations – 2015 with Project.....	4.3-61
4.3-14 Peak Hour Traffic Volumes and Lane Configurations – 2015 with Project.....	4.3-62
4.3-15 Recommended Mitigation Measures for Project Impacts – 2015	4.3-65
4.3-16 Four-Way Stop	4.3-78
4.3-16a Lost Canyon Road/Sand Canyon Road Cross-Section – Option 1	4.3-79
4.3-17 Look Ahead Signal – Option 2.....	4.3-80
4.3-18 Lost Canyon Road/Sand Canyon Road Roundabout – Option 3	4.3-81
4.3-18a Lost Canyon Road/Sand Canyon Road Cross-Section – Option 3	4.3-82
4.3-19 Lost Canyon Road/Sand Canyon Road Right-Sanitized Intersection – Option 4	4.3-83
4.3-20 Average Daily Traffic Volumes and Roadway Level of Service – Cumulative Conditions.....	4.3-86
4.4-1 South Coast Air Basin	4.4-3
4.4-2 SCAQMD MATES III Grid for the Vista Canyon Ranch Project.....	4.4-52
4.5-1 Noise Attenuation by Barriers and Elevation Differences.....	4.5-5
4.5-2 Single and Cumulative Noise Metric Definitions	4.5-8
4.5-3 Examples of Typical Outdoor CNEL Levels.....	4.5-9
4.5-4 State Land Use Compatibility Guidelines for Noise	4.5-12
4.5-5 City Land Use Compatibility Guidelines for Noise	4.5-15
4.5-6 Speech Interference and Noise Levels	4.5-20
4.5-7a Noise Measurement Locations	4.5-21
4.5-7b Noise Measurement Locations – Jan Heidt Newhall Metrolink Station.....	4.5-22
4.5-8 Noise Levels of Typical Construction Equipment	4.5-31
4.6-1 Vista Canyon Project Site	4.6-7
4.6-2 Vegetation Types on the Vista Canyon Project Site.....	4.6-8
4.6-3 Special-Status Species Locations	4.6-25
4.6-4 CDFG and USACE Jurisdictional Areas.....	4.6-62
4.6-5 Site Vegetation Types – Grading Impacts	4.6-81
4.7-1 Existing Land Use Designations.....	4.7-7
4.8-1 Castaic Lake Water Agency Service Area	4.8-9
4.8-2 Santa Clarita Water Division Service Area	4.8-14
4.8-2a Santa Clarita River Valley East Groundwater Basin – East Subbasin	4.8-15
4.8-3 Upper Santa Clara River Hydrologic Area	4.8-16
4.8-4 Municipal Alluvial Well Locations; Santa Clara River Valley, East Groundwater Subbasin ...	4.8-35

LIST OF FIGURES (continued)

<u>Figure</u>	<u>Page</u>
4.8-5 Saugus Well Locations; Santa Clara River Valley, East Groundwater Subbasin	4.8-40
4.8-6 Forecasted Two-Year Groundwater Capture Zones for Active Alluvial Production Wells Located Closest to the Whittaker-Bermite Property in Santa Clarita, California	4.8-47
4.8-7 Forecasted Two-Year Groundwater Capture Zones for Active Saugus Production Wells Located Closest to the Whittaker-Bermite Property in Santa Clarita, California	4.8-52
4.8-8 Principal State Water Program Facilities.....	4.8-59
4.8.1-1 Vista Canyon Project Vicinity	4.8.1-21
4.9-1 Landfills Serving the City of Santa Clarita.....	4.9-13
4.10-1 Sulphur Springs District School Locations	4.10-3
4.10-2 Hart District School Locations	4.10-6
4.11-1 Library Locations.....	4.11-3
4.12-1 Parks, Recreation, and Open Space Resources	4.12-7
4.12-2 Master Plan of Trails	4.12-18
4.12-3 Parks and Recreation Plan.....	4.12-19
4.13-1 Fire Station Locations.....	4.13-3
4.14-1 CHP and Sheriff Stations Locations	4.14-3
4.15-1 Location of Potentially Hazardous Materials Sites.....	4.15-11
4.16-1 Aerial Site Photo	4.16-7
4.16-2 Viewing Locations.....	4.16-12
4.16-3 Viewing Location 1	4.16-13
4.16-4 Viewing Location 2	4.16-14
4.16-5 Viewing Location 3	4.16-15
4.16-6 Viewing Location 4	4.16-16
4.16-7 Viewing Location 5	4.16-17
4.16-8 Viewing Location 6	4.16-18
4.16-9 Viewing Location 7	4.16-19
4.16-10 Viewing Location 8	4.16-20
4.16-11 Viewing Location 9	4.16-21
4.16-12 Viewing Location 10	4.16-22
4.19-1 Soil Types on the Proposed Project Site	4.19-17
4.19-2 Site Suitability for Farming under Non-Irrigated Conditions.....	4.19-20
4.19-3 DOC Important Farmland Map.....	4.19-21
4.20-1 Existing Santa Clara River Within the Project and Vicinity.....	4.20-7
4.20-2 Limits of Santa Clara River Study Reach	4.20-18
4.20-2a Corps Jurisdictional Delineation Limits Relative to Project site	4.20-19
4.20-2b CDFG Jurisdictional Delineation Limits Relative to Project site.....	4.20-20
4.20-3 Existing Conditions Drainage Sub-basins.....	4.20-21
4.20-4 Vegetation Types on the Vista Canyon Project Site	4.20-26

LIST OF FIGURES (continued)

<u>Figure</u>	<u>Page</u>
4.20-5 Photograph Location Map.....	4.20-27
4.20-5a Site Photos 1–3	4.20-28
4.20-5b Site Photos 4–6	4.20-29
4.20-5c Site Photos 7–9	4.20-30
4.20-5d Site Photos 10–12	4.20-31
4.20-5e Site Photos 13–15	4.20-32
4.20-5f Site Photos 16–18	4.20-33
4.20-6 Post-Project Conditions	4.20-60
4.21-1 Existing Water Reclamation Plants and Sanitation Districts	4.21-3
4.21-2 Existing and Proposed Sewer System.....	4.21-4
4.22-1 Carbon Dioxide and Methane concentrations have increased dramatically since the industrial revolution	4.22-5
4.22-2 Global warming trends and associated sea level rise and snow cover decrease	4.22-8
4.24-1 Existing Land Use for Each Sub-Area.....	4.24-3
4.24-2 Existing County General Plan Land Use Designations	4.24-4
4.24-3 Proposed City General Plan Land Use Designations	4.24-5
4.24-4 Annexation Sub-Areas Blueline Drainages.....	4.24-12
4.24-5 Ancillary Annexation Area Photographs Key Map.....	4.24-13
4.24-6 Ancillary Annexation Area Photographs 1 – 3.....	4.24-14
4.24-7 Ancillary Annexation Area Photographs 4 – 6.....	4.24-15
4.24-8 Ancillary Annexation Area Photographs 7 – 9	4.24-56
6.0-1 Alternative 2 – Proposed County Land Use Designation (OV OV) Alternative.....	6.0-5
6.0-2 Alternative 3 – Existing City General Plan Designation Alternative	6.0-16
6.0-3 Alternative 4 – Reduced Development Footprint	6.0-27
6.0-4 Alternative 5 – Open Space Corridor Alternative.....	6.0-36
6.0-5 Alternative 6 – Lost Canyon Road Alternative	6.0-49

LIST OF TABLES

<u>Table</u>		<u>Page</u>
ES-1	Summary of Significant Impacts and Mitigation Measures	ES-7
1.0-1	Future Agency Actions.....	1.0-17
1.0-2	Vista Canyon Statistical Summary By Planning Area	1.0-28
3.0-1	Santa Clarita Valley Cumulative Build-Out Scenario	3.0-4
3.0-2	OVOV General Plan Build-Out Scenario	3.0-5
4.2-1	Percent Imperviousness for Selected Land Uses.....	4.2-16
4.2-2	Existing River Flows at Upstream Limit of Study	4.2-21
4.2-3	Existing On-site Drainages and Runoff Quantities.....	4.2-21
4.2-4	Existing Floodplain/Stream Area Within the Project Tributary Watershed.....	4.2-24
4.2-5	Facility-Related Changes in Discharge at Downstream Limit of Study.....	4.2-41
4.2-6	Floodplain Area (acres) with Velocities Greater than 4 fps.....	4.2-42
4.2-7	Existing and Proposed Project QCAP Water Surface Elevation Changes.....	4.2-51
4.2-8	Existing vs. Proposed Condition On-Site Hydrology Comparison - Capital Event	4.2-53
4.2-9	Pre-Improvement and Post-Improvement Floodplain/River Area	4.2-56
4.2-10	Existing Condition vs. Proposed Condition Bed Stability	4.2-62
4.3-1	Level of Service Criteria – Roadways and Intersections	4.3-7
4.3-2	Arterial Roadway LOS Criteria	4.3-8
4.3-3	Intersection Operations – Existing Conditions.....	4.3-16
4.3-4	SR-14 Operations – Existing Conditions	4.3-18
4.3-5	Project Trip Generation – Phase 1 (Year 2012).....	4.3-37
4.3-6	Project Trip Generation – Buildout of the Vista Canyon Project (Year 2015).....	4.3-38
4.3-7	Project Trip Generation – Cumulative Conditions (Year 2030)	4.3-41
4.3-8	Intersection Operations – 2012 Conditions	4.3-47
4.3-9	Intersection Operations – 2012 Conditions with Mitigation	4.3-50
4.3-10	SR-14 Operations – 2012 Conditions.....	4.3-53
4.3-11	Intersection Operations – 2015 Conditions	4.3-55
4.3-12	Operations of Two-Lane Roadways in Los Angeles County – 2015 Conditions.....	4.3-58
4.3-13	Intersection Operations – 2015 Conditions with Mitigation	4.3-63
4.3-14	SR-14 Volume Forecasts – 2015 Conditions.....	4.3-66
4.3-15	SR-14 Operations – 2015 Conditions.....	4.3-66
4.3-16	SR-14 Freeway Traffic Forecasts – Interim (No Project) Conditions	4.3-67
4.3-17	CMP Analysis – 2015 Conditions	4.3-69
4.3-18	Planning Areas 1 and 2 Land Uses.....	4.3-71
4.3-19	Comparison of Parking Levels	4.3-73
4.3-20	SR-14 Fair Share Calculations – Year 2030.....	4.3-89
4.3-21	CMP Analysis – Cumulative Conditions (Year 2030)	4.3-90
4.4-1	Average Monthly Temperatures and Precipitation for Dry Canyon Reservoir, California, 1921–1990.....	4.4-5
4.4-2	Ambient Air Quality Standards	4.4-12
4.4-3	2005 Annual Average Day Toxic Emissions for the South Coast Air Basin	4.4-14
4.4-4	Ambient Pollutant Concentrations, Santa Clarita/Placerita Monitoring Station and Nearest Monitoring Stations	4.4-17
4.4-5	NAAQS Designations – South Coast Air Basin (Los Angeles County)	4.4-20
4.4-6	CAAQS Designations – South Coast Air Basin (Los Angeles County).....	4.4-21

LIST OF TABLES (continued)

Table	Page
4.4-7 SCAQMD Daily Construction Emission Thresholds.....	4.4-30
4.4-8 Localized Significance Thresholds for Proposed Project in Source Receptor Area 13.....	4.4-31
4.4-9 SCAQMD Daily Operation Emission Thresholds.....	4.4-32
4.4-10 Construction Phase Detail	4.4-36
4.4-11 Estimated Unmitigated Construction Emissions	4.4-37
4.4-12 Localized Significance Threshold Analysis – Maximum Unmitigated Impacts	4.4-40
4.4-13 Estimated Unmitigated Operational Emissions	4.4-42
4.4-14 Carbon Monoxide Concentrations – 2012 with Phase 1	4.4-46
4.4-15 Carbon Monoxide Concentrations – 2015 with Project.....	4.4-47
4.4-16 Estimated WRP Toxic Air Contaminant Emissions.....	4.4-51
4.4-17 Screening WRP Health Impacts.....	4.4-53
4.4-18 Comparison of ADT to Population Growth at Project Buildout.....	4.4-59
4.5-1 Outside-to-Inside Noise Attenuation (dB(A))	4.5-4
4.5-2 City Ordinance Noise Limits	4.5-16
4.5-3 24-Hour Monitored Noise Levels.....	4.5-24
4.5-4 Short-Term Monitored Noise Levels	4.5-25
4.5-5 Existing Roadway Noise Levels	4.5-27
4.5-6 Existing SR-14 Noise Levels.....	4.5-28
4.5-7 Vibration Levels for Construction Equipment	4.5-35
4.5-8 Interim Year (2015) Mobile Source Noise Impacts.....	4.5-38
4.5-9 Cumulative Year (2030) Mobile Source Noise Impacts.....	4.5-45
4.5-10 Cumulative Year 2030 SR-14 Noise Levels	4.5-48
4.6-1 Surveys Conducted on the Vista Canyon Project Site	4.6-5
4.6-2 Special-Status Plant Species Known From or With Potential to be Present in the Vista Canyon Project Area	4.6-27
4.6-3 Special-Status Animal Species Known From or With Potential to be Present in the Vista Canyon Area	4.6-41
4.6-4 Existing Vegetation Communities, Floristic Alliances, and Associations and Land Cover Types in Project Area	4.6-58
4.6-5 Vista Canyon Habitat Acreages and Impacts	4.6-66
4.6-6 City of Santa Clarita Cumulative Projects.....	4.6-93
4.6-7 Los Angeles County Cumulative Projects.....	4.6-97
4.6-8 Summary of Total City/County Cumulative Projects.....	4.6-106
4.7-1 SCAG Regional Transportation Plan Goals and Compass Growth Visioning Principles	4.7-13
4.8-1 Retail Water Service Connections	4.8-12
4.8-2 Groundwater Operating Plan for the Santa Clarita Valley	4.8-23
4.8-3 Historical Groundwater Production by the Retail Water Purveyors	4.8-25
4.8-4 Projected Groundwater Production (Normal Year)	4.8-26
4.8-5 Pumping Rates Simulated for Individual Alluvial Aquifer Wells under the 2008 Groundwater Operating Plan	4.8-30
4.8-6 Pumping Rates Simulated for Individual Saugus Formation Wells under the 2008 Groundwater Operating Plan	4.8-33
4.8-7 Perchlorate Treatment Summary	4.8-53

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
4.8-8 Comparison of Basin Plan Mineral Groundwater Objectives with Mean Measured Values in Los Angeles County and SWP Water Quality at Castaic Lake	4.8-55
4.8-9 Average and Dry Period SWP Table A Deliveries from The Delta Under Current Conditions	4.8-62
4.8-10 Average and Dry Period SWP Table A Deliveries From The Delta Under Future Conditions	4.8-62
4.8-11 Summary of Current and Planned Water Supplies and Banking Programs.....	4.8-83
4.8-12 Projected Average/Normal Year Supplies and Demands.....	4.8-85
4.8-13 Projected Single-Dry Year Supplies and Demands.....	4.8-86
4.8-14 Projected Multiple-Dry Year Supplies and Demands	4.8-89
4.8-15 CLWA's Projected Water Demands	4.8-94
4.8-16 Summary of Project Water Demand	4.8-114
4.8-17 Existing Plus Project Demand and Supply for the Santa Clarita Valley	4.8-115
4.8-18 Projected Average/Normal Year Supplies and Demands.....	4.8-117
4.8-19 Projected Single-Dry Year Supplies and Demands.....	4.8-119
4.8-20 Projected Multiple-Dry Year Supplies and Demands	4.8-121
4.8-21 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Supplies	4.8-123
4.8-22 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply	4.8-124
4.8-20 Projected Multiple-Dry Year Supplies and Demands	4.8-110
4.8-21 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Supplies	4.8-112
4.8-22 Scenario 2: Santa Clarita Valley 2030 Build-Out Scenario Water Demand and Supply	4.8-113
4.8.1-1 Beneficial Uses of Surface Receiving Waters	4.8.1-28
4.8.1-2 USGS Water Quality Data for Selected General Constituents in the Santa Clara River at the Lang, Ravenna, and Bouquet Junction Gauges, 1974–1976.....	4.8.1-30
4.8.1-3 USGS Water Quality Data for Selected Nutrients in the Santa Clara River at the Lang, Ravenna, and Bouquet Junction Gauges, 1974–1976	4.8.1-31
4.8.1-4 USGS Water Quality Data for Selected Metals and Pesticides in the Santa Clara River at the Lang, Ravenna, and Bouquet Junction Gauges, 1974–1976.....	4.8.1-33
4.8.1-5 Beneficial Uses of Groundwaters	4.8.1-35
4.8.1-6 2006 CWA Section 303(d) List of Water Quality Limited Segments – Santa Clara River.....	4.8.1-37
4.8.1-7 TMDL Waste Load Allocations for MS4 and Stormwater Sources to Reaches 3, 5, and 6	4.8.1-39
4.8.1-8 Proposed 2008 CWA Section 303(d) List of Water Quality Limited Segments – Santa Clara River.....	4.8.1-40
4.8.1-9 Vista Canyon Proposed Land Uses.....	4.8.1-64
4.8.1-10 Summary of Off-Site Impact Areas	4.8.1-65
4.8.1-11 SUSMP Requirement and Corresponding Project Design Features	4.8.1-66
4.8.1-12 Vista Canyon Site Design/Low Impact Development BMPs.....	4.8.1-76
4.8.1-13 Treatment Control BMP Selection Matrix	4.8.1-79
4.8.1-14 Predicted Average Annual Stormwater Runoff Volumes and Pollutant Loads	4.8.1-92
4.8.1-15 Predicted Average Annual Stormwater Pollutant Concentration	4.8.1-93
4.8.1-16 Comparison of Predicted TSS Concentration with Water Quality Criteria	4.8.1-95
4.8.1-17 Comparison of Predicted Total Phosphorus Concentration with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 7	4.8.1-96

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
4.8.1-18 Comparison of Predicted Nitrogen Compound Concentrations with Water Quality Objectives, TMDLs, and Observed Concentrations in Santa Clara River Reach 7	4.8.1-97
4.8.1-19 Comparison of Predicted Trace Metal Concentrations with Water Quality Criteria.....	4.8.1-99
4.8.1-20 Comparison of Predicted Chloride Concentrations with Water Quality Criteria and Observed Concentrations in Santa Clara River Reach 7.....	4.8.1-100
4.8.1-21 Spatial Application of Treatment and Volume Control Performance Standards.....	4.8.1-113
4.8.1-22 Estimated Excess Reclaimed Water without CLWA Demand	4.8.1-117
4.8.1-23 Estimated WRP Effluent Concentration.....	4.8.1-118
4.8.1-24 Average Groundwater Quality of the Sierra Well	4.8.1-118
4.8.1-25 Summary of Production Rates at Sierra Well	4.8.1-119
4.8.1-26 Comparison to Water Quality Benchmarks for Water Supply.....	4.8.1-120
4.8.1-27 Estimated Average Annual Volume and Concentration of Percolated Water.....	4.8.1-122
4.9-1 Existing Landfills Statistics that Serve the City of Santa Clarita.....	4.9-12
4.9-2 Existing Landfill Capacity and Regional Needs Analysis for Los Angeles County.....	4.9-16
4.9-3 Proposed Major Landfill Expansion Plans in Los Angeles County.....	4.9-18
4.9-4 Daily Project Solid Waste Generation for the Proposed Project (No Recycling)	4.9-22
4.9-5 Daily Project Solid Waste Generation for Proposed Project with the Residential Overlay Option (No Recycling)	4.9-23
4.9-6 Cumulative Development Activity – Santa Clarita Valley Cumulative Buildout Scenario with the Proposed Project	4.9-26
4.9-7 Cumulative Development Activity – Santa Clarita Valley Cumulative Buildout Scenario with Proposed Project with the Residential Overlay Option	4.9-28
4.9-8 OVOV General Plan Buildout Land Uses	4.9-30
4.10-1 Current Enrollment of Sulphur Springs Union School District	4.10-4
4.10-2 Current Enrollment of William S. Hart Union High School District	4.10-5
4.10-3 Student Generation Rates for Sulphur Springs District and Hart District	4.10-8
4.10-4 Santa Clarita Valley Cumulative Build-Out Scenario	4.10-11
4.10-5 Student Generation as a Result of Cumulative Projects.....	4.10-12
4.10-6 OVOV General Plan Build-Out Land Uses	4.10-14
4.11-1 Existing Library Resources Within the City of Santa Clarita.....	4.11-2
4.11-2 Santa Clarita Valley Cumulative Build-Out Scenario	4.11-11
4.11-3 OVOV General Plan Build-Out Scenario	4.11-12
4.12-1 Parks, Recreation, and Open Space Resources	4.12-3
4.12-2 Planned Park Lands	4.12-10
4.12-3 Planned Trails and Trailheads	4.12-16
4.12-4 Vista Canyon Parkland and Private Recreation	4.12-17
4.12-5 Parkland Dedication Requirements for the Vista Canyon Project.....	4.12-23
4.12-6 Parkland Dedication Requirements for the Vista Canyon Project-Residential Overlay.....	4.12-23
4.12-7 Santa Clarita Valley Cumulative Build-Out Scenario	4.12-26
4.12-8 OVOV General Plan Build-Out Scenario	4.12-28
4.13-1 Los Angeles County Fire Stations Serving the Santa Clarita Valley Area.....	4.13-4
4.13-2 Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project.....	4.13-15

LIST OF TABLES (continued)

Table		Page
4.13-3	Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project with Residential Overlay Component	4.13-16
4.13-4	OVOV General Plan Build-Out Land Uses.....	4.13-18
4.14-1	Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project.....	4.14-15
4.14-2	Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project with Residential Overlay	4.14-16
4.14-3	OVOV General Plan Build-Out Land Uses.....	4.14-18
4.15-1	Magnetic Field Levels for Common Household Appliances	4.15-12
4.15-2	Typical Magnetic Field Levels for Electrical Power Lines.....	4.15-13
4.17-1	Population Forecasts – 2010 to 2035.....	4.17-3
4.17-2	Housing Forecasts – 2010 to 2035.....	4.17-4
4.17-3	Citywide Housing Needs – Year 2006 to 2014	4.17-5
4.17-4	Employment Forecasts – 2010 to 2030	4.17-6
4.17-5	Cumulative Development Activity – Santa Clarita Valley Cumulative Build-Out Scenario..	4.17-10
4.17-6	Employment Generation Profile – Santa Clarita Valley Cumulative Build-Out Scenario: Project.....	4.17-11
4.17-7	Employment Generation Profile – Santa Clarita Valley Cumulative Build-Out Scenario: Project with Residential Overlay	4.17-12
4.17-8	Comparison of Adopted Santa Clarita Valley Growth Projections	4.17-14
4.17-9	OVOV General Plan Build-Out Land Uses	4.17-15
4.19-1	Soil Capability Classification System	4.19-2
4.19-2	Storie Index Rating System	4.19-3
4.19-3	Los Angeles County Agricultural Production 1965 through 2007	4.19-12
4.19-4	Soil Types on the Proposed Project Site	4.19-16
4.19-5	Storie Index Rating for Soils on the Proposed Project Site	4.19-18
4.19-6	Conversion of Important Farmland – Los Angeles County (2004 to 2006)	4.19-19
4.20-1	Existing River Flows at Upstream Limit of Study Area	4.20-17
4.20-2	Existing On-site Drainages and Runoff Quantities.....	4.20-17
4.20-3	CRAM Attributes and Metrics.....	4.20-35
4.20-4	Jurisdictional Habitat and Impacts	4.20-51
4.20-5	Mitigation Acreage.....	4.20-52
4.20-6	Comparison of CRAM Results Based on Post-Project Conditions – RIV-1	4.20-62
4.20-7	Comparison of CRAM Results Based on Post-Project Conditions – RIV-2	4.20-63
4.20-8	Comparison of CRAM Results Based on Post-Project Conditions – RIV-3	4.20-64
4.20-9	Facility-Related Changes in Discharge at Downstream Limit of Study.....	4.20-68
4.20-10	Existing and Proposed Project Q _{CAP} Water Surface Elevation Changes.....	4.20-69
4.21-1	Vista Canyon Estimated Wastewater Generation: Average Daily Flow	4.21-7
4.21-2	Vista Canyon Water Duty Factors and Demands	4.21-8
4.21-3	Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project.....	4.21-10
4.21-4	Santa Clarita Valley Cumulative Build-Out Scenario with Proposed Project with Residential Overlay	4.21-11
4.21-5	OVOV General Plan Build-Out Land Uses	4.21-13
4.22-1	Effects if Breaching Tipping Elements.....	4.22-11
4.22-2	Summary of GHG Emissions from Project Approval	4.22-44

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
4.22-3 Analysis of Proposed Project under CARB 2020 NAT Scenario.....	4.22-46
4.22-4 Summary of GHG Emissions from Project Approval with Residential Overlay Option	4.22-49
4.22-5 Analysis of Proposed Project with Residential Overlay Option under CARB 2020 NAT Scenario.....	4.22-50
4.22-6 Compatibility with California Attorney General GHG Emission Reduction Strategies	4.22-57
4.22-7 Compatibility with Climate Action Team GHG Emission Reduction Strategies	4.22-65
4.23-1 Total Electricity Usage	4.23-7
4.23-2 Total Natural Gas Usage.....	4.23-8
4.24-1 Ancillary Annexation Area Summary	4.24-6
4.24-2 NAAQS Designations – South Coast Air Basin (Los Angeles County)	4.24-23
4.24-3 CAAQS Designations – South Coast Air Basin (Los Angeles County).....	4.24-24
4.24-4 Twenty-Four-Hour Monitored Noise Levels.....	4.24-25
4.24-5 AAA-Pending Development Cases.....	4.24-56
4.24-6 Estimated Solid Waste Generation For The Ancillary Annexation Area.....	4.24-60
4.24-7 Student Generation from Ancillary Annexation Area	4.24-62
4.24-8 Wastewater Generation of Ancillary Annexation Area	4.24-81
6.0-1 Proposed County OVOV Land Use Alternative – Estimated Unmitigated Operational Emissions.....	6.0-7
6.0-2 Comparison of Alternative 2 and Certain Project Objectives.....	6.0-14
6.0-3 Existing General Plan Land Use Alternative – Estimated Unmitigated Operational Emissions.....	6.0-18
6.0-4 Comparison of Alternative 3 and Certain Project Objectives.....	6.0-24
6.0-5 Reduced Development Footprint Alternative Estimated Unmitigated Operational Emissions.....	6.0-28
6.0-6 Comparison of Alternative 4 and Certain Project Objectives.....	6.0-35
6.0-7 Intersection Operations – Interim Plus Alternative 5 Conditions	6.0-38
6.0-8 Alternative 5 – Estimated Unmitigated Operational Emissions	6.0-40
6.0-9 Comparison of Alternative 5 and Certain Project Objectives.....	6.0-47
6.0-10 Comparison of Alternative 6 and Certain Project Objectives.....	6.0-54
6.0-11 Alternatives Impact Comparison Matrix	6.0-56