

TABLE OF CONTENTS

Section	Page
LIST OF ABBREVIATIONS	VI
EXECUTIVE SUMMARY	ES-1
ES.1 Introduction.....	ES-1
ES.2 Background	ES-1
ES.3 Purpose, Need, and Objectives	ES-2
ES.4 Project Location	ES-2
ES.5 Summary of the Proposed Action and Alternatives.....	ES-2
ES.6 Environmental Impacts and Recommended Mitigation Measures.....	ES-3
ES.7 Areas of Controversy.....	ES-3
1 INTRODUCTION.....	1-1
1.1 Project Requiring Environmental Analysis	1-1
1.2 Purpose, Need, and Project Objectives.....	1-2
1.3 Intended Uses of This Draft EIS/EIS/EIR.....	1-2
1.4 Agency Roles and Responsibilities	1-3
1.5 Public Engagement and Stakeholder Process.....	1-4
1.6 Draft EIS/EIS/EIR Organization.....	1-6
1.7 Topics Dismissed from Detailed Review.....	1-7
2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES.....	2-1
2.1 Background	2-1
2.2 Location	2-1
2.3 Overview of the Alternatives	2-2
2.4 No Action Alternative.....	2-6
2.5 Elements Common to the Action Alternatives.....	2-6
2.6 Alternative 1 – Restoration with Boating Pier	2-17
2.7 Alternative 2 – Restoration with Pedestrian Pier	2-22
2.8 Alternative 3 – Restoration with No Pier	2-26
2.9 Alternative 4 – Preferred Alternative	2-29
2.10 Construction.....	2-30
2.11 Operations.....	2-35
2.12 Alternatives Considered but Not Evaluated Further	2-35
3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES	3-1
Approach to the Environmental Analysis.....	3-1
3.1 Recreation.....	3.1-1
3.2 Scenic Resources	3.2-1
3.3 Cultural and Tribal Cultural Resources.....	3.3-1
3.4 Terrestrial Biological Resources.....	3.4-1
3.5 Aquatic Biological Resources	3.5-1
3.6 Hydrology and Water Quality.....	3.6-1
3.7 Geology and Soils	3.7-1
3.8 Air Quality.....	3.8-1
3.9 Climate Change and Energy.....	3.9-1
3.10 Public Safety and Hazards.....	3.10-1

3.11	Noise.....	3.11-1
3.12	Transportation and Circulation.....	3.12-1
3.13	Land Use.....	3.13-1
4	OTHER SECTIONS REQUIRED BY STATUTE.....	4-1
4.1	Growth Inducement.....	4-1
4.2	Significant and Unavoidable Adverse Impacts.....	4-2
4.3	Short-term Uses of the Environment and Long-term Productivity.....	4-2
4.4	Irreversible and Irretrievable Commitment of Resources.....	4-3
4.5	Environmentally Superior Alternative.....	4-3
5	REPORT PREPARERS.....	5-1
6	REFERENCES.....	6-1

Appendices

- Appendix A – Resource Protection Measures
- Appendix B – Special-Status Species
- Appendix C – Emissions Modeling
- Appendix D – Noise Modeling
- Appendix E – Transportation Modeling

Figures

Figure 2-1	Meeks Bay Restoration Project Area.....	2-5
Figure 2-2	No Action Alternative Conceptual Plan.....	2-7
Figure 2-3	Meeks Bay Conceptual Restoration Design	2-9
Figure 2-4	Gabion Wall Proposed for Removal	2-13
Figure 2-5	Tahoe Yellow Cress.....	2-14
Figure 2-6	Representative Photographs of Paddlecraft Storage	2-15
Figure 2-7	Existing Day-Use Area at Meeks Bay Resort.....	2-16
Figure 2-8	Alternative 1 – Restoration with Boating Pier Conceptual Plan.....	2-19
Figure 2-9	Diagram of Alternative 1 Boating Pier.....	2-21
Figure 2-10	Alternative 2 – Restoration with Pedestrian Pier Conceptual Plan.....	2-23
Figure 2-11	Diagram of Alternative 2 Pedestrian Pier.....	2-25
Figure 2-13	Representative Photographs of Paddlecraft Launch Facilities.....	2-26
Figure 2-12	Alternative 3 – Restoration with No Pier Conceptual Plan	2-27
Figure 2-14	Alternative 4 – Preferred Alternative	2-31
Figure 3.1-1	Recreation Facilities near the Project Area: Tahoe City to Meeks Bay.....	3.1-7
Figure 3.1-2	Recreation Facilities near the Project Area: Meeks Bay to Tahoe Keys	3.1-8
Figure 3.1-3	Swim Area, No-Wake Zone, and Boat Traffic Under Existing Conditions	3.1-26
Figure 3.1-4	Alternative 1 Boating Pier, Designated Swim Areas, and No-Wake Zone.....	3.1-28
Figure 3.1-5	Alternative 2 Pedestrian Pier, Designated Swim Areas, and No-Wake Zone.....	3.1-31
Figure 3.1-6	Alternative 3 and Alternative 4 Paddlecraft Launch, Designated Swim Areas, and No-Wake Zone.....	3.1-32

Figure 3.2-1	Existing Development and Structures	3.2-7
Figure 3.2-2	Natural Project Area Views	3.2-8
Figure 3.2-3	Lake Tahoe Views	3.2-9
Figure 3.2-4	View of the project area from Roadway Scenic Resource 7.4	3.2-11
Figure 3.2-6	View from Shoreline Scenic Resource 10.4.....	3.2-12
Figure 3.2-5	View of project area from Shoreline Scenic Resource 10.3.....	3.2-13
Figure 3.2-7	View from Shoreline Scenic Resource 10.1.....	3.2-13
Figure 3.2-8	Viewpoint Locations	3.2-17
Figure 3.2-9	View of Meeks Bay from Viewpoint 1 under Existing Conditions/No Action Alternative and Alternative 1.....	3.2-19
Figure 3.2-10	View of Meeks Bay from Viewpoint 1 under Existing Conditions/No Action Alternative and Alternative 2	3.2-23
Figure 3.2-11	View of Meeks Bay from Viewpoint 2 under Existing Conditions/No Action Alternative and Alternative 1.....	3.2-29
Figure 3.2-12	View of Meeks Bay from Viewpoint 2 under Existing Conditions/No Action Alternative and Alternative 2	3.2-31
Figure 3.2-13	Bridge Photographs.....	3.2-33
Figure 3.3-1	Meeks Bay Resort Historic District.....	3.3-13
Figure 3.4-1	Land Cover.....	3.4-7
Figure 3.4-2	Tahoe Yellow Cress Occurrences in the Vicinity of the Project Area	3.4-12
Figure 3.4-3	TRPA Osprey and Bald Eagle Disturbance Zones and Waterfowl Population Sites.....	3.4-14
Figure 3.4-4	Disturbance Area	3.4-19
Figure 3.6-1	Meeks Creek Watershed.....	3.6-6
Figure 3.6-2	100-Year Floodplain.....	3.6-8
Figure 3.7-1	Soils in the Project Area	3.7-6
Figure 3.7-2	Model of Lake Tahoe Basin Half-Graben.....	3.7-7
Figure 3.7-3	Mapped Land Capability Districts in the Project Area.....	3.7-10
Figure 3.11-1	Construction Sites and Sensitive Receptor Locations.....	3.11-9

Tables

Table ES-1	Summary of Impacts and Mitigation Measures.....	ES-5
Table 2-1	Key Features of Each of the Alternatives.....	2-3
Table 3-1	Geographic Scope of Cumulative Impacts.....	3-5
Table 3-2	Cumulative Projects List.....	3-5
Table 3.1-1	PAOT Allocations in the Tahoe Basin.....	3.1-2
Table 3.1-2	Applicable TRPA Code Requirements Related to Recreation	3.1-3
Table 3.1-3	Publicly Accessible Motorized Boating Facilities	3.1-9
Table 3.1-4	Annual Average Boat Launches on Lake Tahoe	3.1-11
Table 3.1-5	Campgrounds on the West Shore of Lake Tahoe.....	3.1-12

Table 3.1-6	Parking Capacity in the Meeks Bay Area.....	3.1-13
Table 3.1-7	Estimated Visitation to the Meeks Bay Campground and Meeks Bay Resort in 2020.....	3.1-14
Table 3.1-8	Visitor Density in the Beach and Day-Use Areas (sq. ft./person).....	3.1-17
Table 3.1-9	Estimate of Additional Visitors from Alternative 3.....	3.1-22
Table 3.1-10	Estimate of Additional Visitors from Alternative 4.....	3.1-24
Table 3.2-1	Visible Mass of the Boating Pier under Alternative 1.....	3.2-21
Table 3.2-2	Visible Mass of Other Shoreline Structures under Alternative 1.....	3.2-22
Table 3.2-3	Visible Mass of the Pedestrian Pier under Alternative 2.....	3.2-25
Table 3.2-4	Visible Mass Removed under Alternative 2.....	3.2-25
Table 3.2-5	Visible Mass of Shoreline Structures under Alternative 3.....	3.2-26
Table 3.2-6	Visible Mass of Shoreline Structures under Alternative 4.....	3.2-27
Table 3.2-7	Existing Scenic Ratings for TRPA-Designated Scenic Recreation Areas in the Project Area.....	3.2-28
Table 3.4-1	Relevant TRPA Vegetation, Wildlife, and Fisheries Resource Threshold Indicators and Their Attainment Status.....	3.4-2
Table 3.4-2	Total Acres of Habitat Types in the Project Area.....	3.4-8
Table 3.4-3	Invasive Plant Species within the Project Area.....	3.4-9
Table 3.5-1	Native and Introduced Fish Species Found in Lake Tahoe and Documented in the Project Study Area.....	3.5-7
Table 3.5-2	Life History of Native Fishes of the Tahoe Basin and Potential for Occurrence in Project Area.....	3.5-9
Table 3.6-1	Code Requirements Related to Water Quality Protection and Shorezone Structures.....	3.6-3
Table 3.7-1	Description, Allowable Cover, and Status of Bailey Land Capability Districts.....	3.7-1
Table 3.7-2	Shorezone Tolerance Districts.....	3.7-3
Table 3.7-3	Properties of Project Area Soils.....	3.7-5
Table 3.7-4	Existing Approximate Land Capability and Coverage within the Project Area.....	3.7-9
Table 3.7-5	Summary of Land Coverage for the No Action Alternative.....	3.7-12
Table 3.7-6	Land Coverage Changes for Alternative 1.....	3.7-13
Table 3.7-7	Land Coverage Changes for Alternative 2.....	3.7-13
Table 3.7-8	Land Coverage Changes for Alternative 3.....	3.7-14
Table 3.7-9	Land Coverage Changes for Alternative 4.....	3.7-14
Table 3.8-1	National, TRPA, and California Ambient Air Quality Standards.....	3.8-2
Table 3.8-2	Sources and Health Effects of Criteria Air Pollutants.....	3.8-10
Table 3.8-3	Attainment Status Designations for El Dorado County1.....	3.8-11
Table 3.8-4	Summary of Modeled Emissions of Criteria Air Pollutants and Precursors from Alternative 1.....	3.8-16
Table 3.8-5	Summary of Modeled Emissions of Criteria Air Pollutants and Precursors from Alternative 2.....	3.8-16
Table 3.8-6	Summary of Modeled Emissions of Criteria Air Pollutants and Precursors from Alternative 3.....	3.8-17
Table 3.8-7	Summary of Modeled Emissions of Criteria Air Pollutants and Precursors from Alternative 4.....	3.8-18
Table 3.9-1	Statewide GHG Emissions by Economic Sector.....	3.9-5
Table 3.9-2	Lake Tahoe GHG Emissions by Sector.....	3.9-6

Table 3.9-3	Construction- and Operation-Generated GHG Emissions for Alternative 1.....	3.9-10
Table 3.9-4	Construction- and Operation-Generated GHG Emissions for Alternative 2.....	3.9-11
Table 3.9-5	Construction-Generated GHG Emissions for Alternative 3.....	3.9-12
Table 3.9-6	Construction-Generated GHG Emissions for Alternative 4.....	3.9-13
Table 3.10-1	Applicable TRPA Code Requirements Related to Public Safety and Hazards.....	3.10-3
Table 3.10-2	General Locations of Emergencies near the Shoreline Area1 from Emerald Bay to Kings Beach (2017-2020).....	3.10-9
Table 3.10-3	Emergency Response Data for Shoreline Area1 from Emerald Bay to Kings Beach (2017-2020).....	3.10-10
Table 3.11-1	Ground-Borne Vibration Impact Criteria for General Assessment.....	3.11-2
Table 3.11-2	TRPA Regional Plan Cumulative Noise Levels.....	3.11-4
Table 3.11-3	Caltrans Recommendations Regarding Levels of Vibration Exposure.....	3.11-5
Table 3.11-4	Typical A-Weighted Noise Levels.....	3.11-6
Table 3.11-5	Human Response to Different Levels of Ground Noise and Vibration.....	3.11-7
Table 3.11-6	Summary of Modeled Existing Traffic Noise Levels.....	3.11-8
Table 3.11-7	Typical Equipment Noise Levels.....	3.11-12
Table 3.11-8	Representative Ground Vibration and Noise Levels for Construction Equipment.....	3.11-15
Table 3.12-1	Alternatives 1, 2, and 4 VMT Screening Analysis.....	3.12-13
Table 3.12-2	Alternative 3 VMT Screening Analysis.....	3.12-14

LIST OF ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
2020 RTP	2020 Regional Transportation Plan
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ADA	Americans With Disabilities Act
AIS	aquatic invasive species
AMWG	adaptive management working group
ASCE	American Society of Civil Engineers
ATP	Active Transportation Plan
Basin Plan	Water Quality Control Plan for the Lahontan Region
BMI	Benthic Macroinvertebrates
BMP	best management practices
CA MUTCD	California Manual of Uniform Traffic Control Devices
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	corporate average fuel economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulation
CHRIS	California Historical Resources Information System
CI	carbon intensity
CMP	Corridor Management Plan
CNDDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO ₂	carbon dioxide
Code	TRPA Code of Ordinances
Compact	Tahoe Regional Planning Compact
Conservation Strategy	Tahoe Yellow Cress Conservation Strategy
County	El Dorado County
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationship

dB	decibel
dbh	diameter at breast height
dBpeak	peak
dBSEL	sound exposure level
diesel PM	particulate matter exhaust from diesel engines
DO	dissolved oxygen
DOC	dissolved organic carbon
Draft EIS/EIS/EIR	draft environmental impact statement/environmental impact statement/environmental impact report
DTSC	California Department of Toxic Substances Control
DVTE	daily vehicle trip ends
EDCAQMD	El Dorado County Air Quality Management District
EDCEMD	El Dorado County Environmental Management Department
EIP	Environmental Improvement Program
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
ESA	Endangered Species Act
EV	electric vehicles
FEMA	Federal Emergency Management Agency
FHSZ	fire hazard severity zones
FHWA	Federal Highway Administration
Forest Plan	Land Management Plan for LTBMU
Forest Service	U.S. Department of Agriculture, Forest Service
FR	Federal Register
FRAP	California Department of Forestry and Fire Protection Fire and Resources Assessment Program
FTA	Federal Transit Administration
GHG	greenhouse gas
HAP	hazardous air pollutant
Hz	hertz
I-80	Interstate 80
in/sec	inches per second
ITE	Institute of Transportation Engineers
km	kilometers
Lahontan RWQCB	Lahontan Regional Water Quality Control Board
LCD	Land capability districts
LCFS	Low Carbon Fuel Standard
LCT	Lahontan cutthroat trout
L _{dn}	Day-Night Level
L _{eq}	Equivalent Continuous Sound Level
LHMP	<i>Local Hazard Mitigation Plan</i>
LiDAR	Light Detection and Ranging
L _{max}	Maximum Sound Level
LOS	Level of service

LTAB	Lake Tahoe Air Basin
LTBMU	Lake Tahoe Basin Management Unit
LTD	Lake Tahoe Datum
MBFPD	Meeks Bay Fire Protection District
MBTA	Migratory Bird Treaty Act
mi	miles
Mm ⁻¹	inverse mega meters
MMTCO ₂ e	metric tons of carbon dioxide equivalent
mPa	micro-Pascals
mph	miles per hour
MSI	Minimum Scenic Integrity
MSS	Minimum Scenic Stability
MTCO ₂ e	metric tons of carbon dioxide equivalent
MTCO ₂ e/year	metric tons of carbon dioxide equivalent per year
MY	Model Year
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCP	natural community conservation plan
NEHRP	National Earthquake Hazards Reduction Program
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFS	National Forest System
NHPA	National Historic Preservation Act
NO	nitric oxide
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NTFPD	North Tahoe Fire Protection District
NTU	Nephelometric Turbidity Units
ONRW	Outstanding National Resource Water
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
PAOT	persons at one time
PAS	plan area statement
PCAPCD	Placer County Air Pollution Control District
PIA	Project Impact Assessment Guidelines
PM	particulate matter
PM ₁₀	respirable particulate matter with an aerodynamic diameter of 10 microns or less
PM _{2.5}	fine particulate matter with an aerodynamic diameter of 2.5 or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1970
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code

project	Meeks Bay Restoration Project
PSAP	public safety answer point
RHNA	Regional Housing Needs Assessment
ROG	reactive organic gases
RPM	resource protection measure
rpm	revolutions per minute
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Boards
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Rule
SAP	Sustainability Action Plan
SB	Senate Bill
SCS	Sustainable Communities Strategy
SEZ	Stream Environment Zone
SIP	State implementation plan
SLF	sacred land file
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMS	Scenery Management System
SPCC	Spill Prevention, Control, and Countermeasure
SPL	sound pressure level
SQIP	scenic quality improvement program
SR 89 Corridor Plan	Corridor Management Plan
SR	sensitive receptors
State Water Board	State Water Resources Control Board
Superfund Act or CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
SWPPP	storm water pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAG	technical advisory group
TART	Truckee Area Regional Transit
TCPUD	Tahoe City Public Utility District
TDFPD	Tahoe Douglas Fire Protection District
TFFT	Tahoe Fire and Fuels Team
TMDL	total maximum daily load
TMPO	Tahoe Metropolitan Planning Organization
TOC	Total organic carbon
TRPA Code	TRPA Code of Ordinances
TRPA	Tahoe Regional Planning Agency
TTC	temporary traffic control
TTD	Tahoe Transportation District
TYC	Tahoe yellow cress
UAIC	United Auburn Indian Community of the Auburn Rancheria
US	U.S. Route
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USCG	U.S. Coast Guard

USDOT	U.S. Department of Transportation
USFS	U.S. Department of Agriculture, Forest Service
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tanks
VdB	vibration decibels
VMS	Visual Management System
VMT	vehicle miles traveled
WEAP	Worker Environmental Awareness Program
WUI	West Shore Wildland Urban Interface
ZEV Aerially deposited lead	zero-emission vehicle