

San Diego
FORWARD

the 2021 regional plan

DRAFT ENVIRONMENTAL IMPACT REPORT FOR PUBLIC REVIEW

VOLUME 1: CHAPTERS 1–9

STATE CLEARINGHOUSE NUMBER: 2010041061

AUGUST 2021

SANDAG

SDForward.com |



SANDAGregion



SANDAG



SANDAGregion



SANDAGregion



SANDAG

**DRAFT ENVIRONMENTAL IMPACT REPORT
SAN DIEGO FORWARD:
THE 2021 REGIONAL PLAN**

State Clearinghouse #: 2010041061

August 2021

Lead Agency:

San Diego Association of Governments (SANDAG)
401 B Street, Suite 800
San Diego, CA 92101

Contact:

Kirsten Uchitel, Associate Planner
(619) 699-7335
Kirsten.Uchitel@sandag.org

Consultants to SANDAG:

ICF
525 B Street, Suite 1700,
San Diego, CA 92101

Contents

Executive Summary	ES-1
ES.1 Summary of the Proposed Plan	ES-1
ES.2 Project Location	ES-2
ES.3 Areas of Controversy.....	ES-3
ES.4 Issues to be Resolved	ES-3
ES.5 Summary of Environmental Impacts and Mitigation Measures	ES-3
ES.6 Alternatives to the Proposed Plan	ES-25
1 Introduction	1-1
1.1 Purpose of this EIR	1-1
1.2 Scope of this EIR.....	1-2
1.3 Organization of this EIR.....	1-3
1.4 Lead and Responsible Agencies	1-3
1.5 Public Review and Participation Process	1-3
1.5.1 Notice of Preparation	1-4
1.5.2 Public Scoping	1-4
1.5.3 Comments on the Draft EIR	1-4
2 Project Description	2-1
2.1 Project Background.....	2-1
2.1.1 Legislation Influencing Development of the Proposed Plan.....	2-1
2.2 Proposed Plan Background	2-5
2.2.1 Development of the Proposed Plan: A Data Driven Process	2-6
2.2.2 San Diego Regional Growth Forecast.....	2-6
2.2.3 SB 375 Sustainable Communities Strategy	2-31
2.2.4 GHG Reduction Targets.....	2-37
2.3 Content and Organization of the Proposed Plan	2-37
2.4 EIR Project Objectives	2-37
2.5 Project Characteristics	2-38
2.5.1 The 5 Big Moves.....	2-38
2.5.2 Airport Connectivity.....	2-66
2.5.3 Border/Ports of Entry.....	2-67
2.5.4 Supporting Policies and Programs	2-67
2.5.5 Implementation Actions	2-72
2.6 Intended Uses of the EIR.....	2-72
2.6.1 Agencies Expected to Use the EIR.....	2-73

2.6.2 List of Permits or Other Approvals Required to Implement the Proposed Plan2-73

2.6.3 Environmental Review and Consultation Requirements2-73

3 Environmental Setting 3-1

3.1 Physical Characteristics of the San Diego Region 3-1

3.2 Rare and Unique Environmental Resources3-2

3.3 Existing Land Use and Development Patterns3-2

3.4 Existing Transportation Network3-3

3.5 Plan Consistency3-5

4 Environmental Impact Analysis Approach..... 4-1

4.1 Aesthetics and Visual Resources..... 4.1-1

4.1.1 Existing Conditions..... 4.1-1

4.1.2 Regulatory Setting 4.1-8

4.1.3 Significance Criteria 4.1-16

4.1.4 Environmental Impacts and Mitigation Measures 4.1-16

4.2 Agricultural and Forestry Resources 4.2-1

4.2.1 Existing Conditions..... 4.2-1

4.2.2 Regulatory Setting 4.2-9

4.2.3 Significance Criteria 4.2-18

4.2.4 Environmental Impacts and Mitigation Measures 4.2-18

4.3 Air Quality 4.3-1

4.3.1 Existing Conditions..... 4.3-1

4.3.2 Regulatory Setting 4.3-14

4.3.3 Significance Criteria 4.3-28

4.3.4 Environmental Impacts and Mitigation Measures 4.3-28

4.4 Biological Resources..... 4.4-1

4.4.1 Existing Conditions..... 4.4-1

4.4.2 Regulatory Setting 4.4-40

4.4.3 Significance Criteria 4.4-60

4.4.4 Environmental Impacts and Mitigation Measures 4.4-61

4.5 Cultural Resources 4.5-1

4.5.1 Existing Conditions..... 4.5-1

4.5.2 Regulatory Setting 4.5-10

4.5.3 Significance Criteria 4.5-18

4.5.4 Environmental Impacts and Mitigation Measures 4.5-18

4.6 Energy 4.6-1

4.6.1 Existing Conditions..... 4.6-1

4.6.2 Regulatory Setting4.6-4

4.6.3 Significance Criteria4.6-13

4.6.4 Environmental Impacts and Mitigation Measures4.6-13

4.7 Geology, Soils, And Paleontological Resources4.7-1

4.7.1 Existing Conditions.....4.7-1

4.7.2 Regulatory Setting4.7-21

4.7.3 Significance Criteria4.7-30

4.7.4 Environmental Impacts and Mitigation Measures4.7-31

4.8 Greenhouse Gas Emissions4.8-1

4.8.1 Existing Conditions.....4.8-1

4.8.2 Regulatory Setting4.8-6

4.8.3 Significance Criteria4.8-19

4.8.4 Environmental Impacts and Mitigation Measures4.8-19

4.9 Hazards and Hazardous Materials4.9-1

4.9.1 Existing Conditions.....4.9-1

4.9.2 Regulatory Setting4.9-11

4.9.3 Significance Criteria4.9-24

4.9.4 Environmental Impacts and Mitigation Measures4.9-25

4.10 Hydrology and Water Quality4.10-1

4.10.1 Existing Conditions.....4.10-1

4.10.2 Regulatory Setting4.10-26

4.10.3 Significance Criteria4.10-38

4.10.4 Environmental Impacts and Mitigation Measures4.10-39

4.11 Land Use.....4.11-1

4.11.1 Existing Conditions.....4.11-1

4.11.2 Regulatory Setting4.11-11

4.11.3 Significance Criteria4.11-19

4.11.4 Environmental Impacts and Mitigation Measures4.11-19

4.12 Mineral Resources4.12-1

4.12.1 Existing Conditions.....4.12-1

4.12.2 Regulatory Setting4.12-6

4.12.3 Significance Criteria4.12-9

4.12.4 Environmental Impacts and Mitigation Measures4.12-10

4.13 Noise and Vibration4.13-1

4.13.1 Existing Conditions.....4.13-1

4.13.2 Regulatory Setting4.13-17

4.13.3 Significance Criteria4.13-34

4.13.4	Environmental Impacts and Mitigation Measures	4.13-35
4.14	Population and Housing	4.14-1
4.14.1	Existing Conditions	4.14-1
4.14.2	Regulatory Setting	4.14-8
4.14.3	Significance Criteria	4.14-10
4.14.4	Environmental Impacts and Mitigation Measures	4.14-11
4.15	Public Services and Utilities	4.15-1
4.15.1	Existing Conditions	4.15-1
4.15.2	Regulatory Setting	4.15-27
4.15.3	Significance Criteria	4.15-35
4.15.4	Environmental Impacts and Mitigation Measures	4.15-36
4.16	Transportation	4.16-1
4.16.1	Existing Conditions	4.16-1
4.16.2	Regulatory Setting	4.16-20
4.16.3	Significance Criteria	4.16-29
4.16.4	Environmental Impacts and Mitigation Measures	4.16-30
4.17	Tribal Cultural Resources	4.17-1
4.17.1	Existing Conditions	4.17-1
4.17.2	Regulatory Setting	4.17-3
4.17.3	Significance Criteria	4.17-6
4.17.4	Environmental Impacts and Mitigation Measures	4.17-7
4.18	Water Supply	4.18-1
4.18.1	Existing Conditions	4.18-1
4.18.2	Regulatory Setting	4.18-16
4.18.3	Significance Criteria	4.18-22
4.18.4	Environmental Impacts and Mitigation Measures	4.18-23
4.19	Wildfire	4.19-1
4.19.1	Existing Conditions	4.19-1
4.19.2	Regulatory Setting	4.19-5
4.19.3	Significance Criteria	4.19-16
4.19.4	Environmental Impacts and Mitigation Measures	4.19-17
5	CUMULATIVE IMPACT ANALYSIS	5-1
5.1	Cumulative Impact Methodology	5-1
5.1.1	Cumulative Projects	5-2
5.1.2	Regional Planning Documents	5-6
5.1.3	Growth projections	5-7
5.1.4	Geographic scope	5-8

5.2 Cumulative Impact Analysis5-9

5.2.1 Aesthetics and Visual Resources.....5-9

5.2.2 Agriculture and Forestry Resources.....5-13

5.2.3 Air Quality5-17

5.2.4 Biological Resources5-21

5.2.5 Cultural Resources5-25

5.2.6 Energy5-29

5.2.7 Geology, Soils, and Paleontological Resources.....5-31

5.2.8 Greenhouse Gas Emissions5-36

5.2.9 Hazards and Hazardous Materials5-39

5.2.10 Hydrology and Water Quality5-43

5.2.11 Land Use and Planning.....5-46

5.2.12 Mineral Resources5-50

5.2.13 Noise and Vibration5-52

5.2.14 Population and Housing.....5-56

5.2.15 Public Services and Utilities5-59

5.2.16 Transportation5-63

5.2.17 Tribal Cultural Resources5-67

5.2.18 Water Supply5-70

5.2.19 Wildfire5-76

6 Alternatives Analysis 6-1

6.1 Rationale for Alternatives Selection6-1

6.2 Alternatives Considered in Detail6-2

6.2.1 Alternative 1: No Project6-2

6.2.2 Alternative 2: 2019 Transportation Network with New Value Pricing and User Fee Policies6-3

6.2.3 Alternative 3: All Growth Focused in Mobility Hubs and More Progressive Value Pricing and User Fee Policies6-6

6.2.4 Project Objectives6-6

6.3 Alternatives Comparison.....6-9

6.4 Environmentally Superior Alternative6-9

6.5 Alternatives Considered but Rejected6-9

6.5.1 Accelerated Plan Implementation6-10

6.5.2 2019 Federal RTP Plus Updated Department of Finance Population and Telework6-10

6.5.3 TransNET-Constrained Transit Alternative6-11

6.5.4 Coastal Protection Alternative.....6-12

6.5.5 Climate, Housing, Transit Alternative6-12

6.5.6 10 Big Moves to Transportation Justice.....6-14

7 Other Considerations Required by CEQA 7-1

7.1 Growth Inducement..... 7-1

7.1.1 Background 7-1

7.1.2 Economic Growth, Population Growth, Additional Housing 7-1

7.2 Maximum Theoretical Buildout Scenario 7-2

7.2.1 Background 7-2

7.2.2 Aesthetics and Visual Resources..... 7-3

7.2.3 Agricultural and Forestry Resources 7-3

7.2.4 Air Quality 7-3

7.2.5 Biological Resources 7-4

7.2.6 Cultural..... 7-4

7.2.7 Energy 7-5

7.2.8 Geology, Soils, and Paleontological Resources..... 7-5

7.2.9 Greenhouse Gas Emissions 7-6

7.2.10 Hazards and Hazardous Materials 7-6

7.2.11 Hydrology and Water Quality 7-7

7.2.12 Land Use..... 7-7

7.2.13 Mineral Resources 7-8

7.2.14 Noise and Vibration 7-8

7.2.15 Population and Housing..... 7-8

7.2.16 Public Services and Utilities 7-8

7.2.17 Transportation 7-9

7.2.18 Tribal Cultural Resources 7-9

7.2.19 Water Supply 7-10

7.2.20 Wildfire 7-10

7.3 Significant Irreversible Impacts..... 7-10

7.4 Significant and Unavoidable Impacts..... 7-11

8 References 8-1

8.1 Chapter 2, Project Description..... 8-1

8.2 Chapter 3, Environmental Setting..... 8-2

8.3 Section 4.1, Aesthetics and Visual Resources 8-2

8.4 Section 4.2, Agricultural and Forestry Resources 8-4

8.5 Section 4.3, Air Quality..... 8-8

8.6 Section 4.4, Biological Resources..... 8-14

8.7 Section 4.5, Cultural Resources..... 8-24

8.8 Section 4.6, Energy..... 8-27

8.9 Section 4.7, Geology, Soils, and Paleontological Resources8-29

8.10 Section 4.8, Greenhouse Gas Emissions8-33

8.11 Section 4.9, Hazards and Hazardous Materials.....8-38

8.12 Section 4.10, Hydrology and Water Quality.....8-41

8.13 Section 4.11, Land Use8-44

8.14 Section 4.12, Mineral Resources.....8-48

8.15 Section 4.13, Noise and Vibration.....8-50

8.16 Section 4.14, Population and Housing8-53

8.17 Section 4.15, Public Services and Utilities References.....8-54

8.18 Section 4.16, Transportation.....8-59

8.19 Section 4.17, Tribal Cultural Resources8-63

8.20 Section 4.18, Water Supply8-63

8.21 Section 4.19, Wildfire.....8-68

8.22 Chapter 5, Cumulative Impact Analysis8-70

9 Preparers of the Environmental Document..... 9-1

9.1 SANDAG.....9-1

9.2 ICF.....9-2

9.3 Ascent Environmental, Inc.9-4

9.4 The Bodhi Group, Inc.9-4

9.5 Intersecting Metrics9-4

9.6 Paleo Solutions, Inc.9-4

9.7 Schaefer Ecological Services9-5

9.8 TTG Environmental & Associates9-5

List of Appendices

Appendix A	Notice of Preparation (Note: A-1 is the NOP and A-2 is the NOP comments)
Appendix B	Transportation Projects and Phasing Tables
Appendix C	Climate Change Projections, Impacts, and Adaptation
Appendix D	Air Quality Technical Report
Appendix E	Biological Resources Appendix
Appendix F	Energy Appendix
Appendix G	GWP Summaries Using AR4 and AR5 Values
Appendix H	Appendix X of the proposed Plan; 2016 GHG Emissions Inventory and Projections for the San Diego Region
Appendix I	Appendix F of the proposed Plan; Regional Growth Forecasts and Sustainable Communities Strategy Land Use Pattern
Appendix J	Analysis of Potential for Conflicts Between the 2021 Regional Plan and Adopted Local Plans to Reduce Greenhouse Gas Emissions
Appendix K	Appendix B of the proposed Plan; Implementation Actions
Appendix L	Subregional Plan Consistency Analysis
Appendix M	Mineral Resources Appendix
Appendix N	Noise Contour Maps
Appendix O	Alternatives Data

Tables

Table ES-1	Summary of Environmental Impacts and Mitigation Measures	ES-4
Table ES-2	Summary of Alternatives Considered in Detail	ES-26
Table 2-1	Series 14 San Diego Regional Growth Forecast and SCS Land Use Pattern.....	2-11
Table 2-2	Existing and Forecasted Population Growth by Jurisdiction	2-12
Table 2-3	Existing and Forecasted Housing Units by Jurisdiction	2-17
Table 2-4	Existing and Forecasted Jobs Growth by Jurisdiction	2-22
Table 2-5	Total Population by Mobility Hub	2-32
Table 2-6	Total Jobs by Mobility Hub	2-33
Table 2-7	Total Housing Units by Mobility Hub	2-33
Table 2-8	Proposed Plan Estimated SB 375 Greenhouse Gas Emissions Reductions for Cars and Light Trucks	2-37
Table 2-9	Complete Corridors.....	2-39
Table 2-10	Transit Leap Services Included in the Proposed Plan	2-53
Table 2-11	Mobility Hubs Included in the Proposed Plan	2-59
Table 2-12	Flexible Fleet Services Improvements Included in the Proposed Plan	2-64
Table 2-13	Supporting Policies and Programs (\$2020 millions) of the Proposed Plan.....	2-68
Table 4.1-1	Caltrans Designated or Eligible Scenic Highways in the San Diego Region	4.1-3
Table 4.1-2	County Scenic Highway System	4.1-4
Table 4.1-3	Visual Resource Protection Plans and Regulations Governing Scenic Quality in the San Diego Region by Local Jurisdiction.....	4.1-11
Table 4.1-4	Transportation Network Improvements Relative to Designated or Eligible Scenic Highways (2025)	4.1-27
Table 4.1-5	Transportation Network Improvements Relative to Designated or Eligible Scenic Highways (2035)	4.1-29
Table 4.1-6	Transportation Network Improvements Relative to Designated or Eligible Scenic Highways (2050)	4.1-31
Table 4.2-1	Existing Agricultural Lands in the San Diego Region.....	4.2-3
Table 4.2-2	Local Agriculture Regulations, Policies, or Programs.....	4.2-12
Table 4.2-3	Conversion of Agricultural Lands to Nonagricultural Use from Regional Growth and Land Use Change, 2016–2025	4.2-21

Table 4.2-4 Conversion of Agricultural Lands to Nonagricultural Use from Planned Transportation Network Improvements and Programs, 2016–2025 4.2-23

Table 4.2-5 Conversion of Agricultural Lands to Nonagricultural Use from Regional Growth and Land Use Change, 2026–2035 4.2-26

Table 4.2-6 Conversion of Agricultural Lands to Nonagricultural Use from Planned Transportation Network Improvements and Programs, 2026–2035 4.2-27

Table 4.2-7 Conversion of Agricultural Lands to Nonagricultural Use from Regional Growth and Land Use Change, 2036–2050 4.2-29

Table 4.2-8 Conversion of Agricultural Lands to Nonagricultural Use from Planned Transportation Network Improvements, 2036–2050..... 4.2-30

Table 4.2-9 Conflicts with Existing Zoning for Agricultural Use or Williamson Act Contracts from Regional Growth and Land Use Change, All Years..... 4.2-33

Table 4.2-10 Conflicts with Existing Zoning for Agricultural Use or Williamson Act Contracts from Planned Transportation Network Improvements, All Years..... 4.2-33

Table 4.2-11 Loss of Forest Land from Regional Growth and Land use Change, All Years..... 4.2-38

Table 4.2-12 Loss of Forest Land from Transportation Network Improvements and Programs, All Years 4.2-40

Table 4.3-1 State and Federal Attainment Air Quality Standards and Attainment Status for the San Diego Region 4.3-8

Table 4.3-2 Ambient Air Monitoring Stations in the San Diego Region..... 4.3-9

Table 4.3-3 Summary of Annual Ambient Air Quality Data (2014–2019) – San Diego Air Basin..... 4.3-10

Table 4.3-4 Criteria Pollutant Emissions Inventory for 2016 – San Diego Air Basin 4.3-12

Table 4.3-5 Recommendations on Siting New Sensitive Land Uses Such as Residences, Schools, Daycare Centers, Playgrounds, or Medical Facilities 4.3-22

Table 4.3-6 Air Quality Conformity Emissions (tons per day) 4.3-33

Table 4.3-7 Proposed Plan Emission Estimates Prior to Mitigation 4.3-41

Table 4.3-8 Proposed Plan Emission Estimates After Mitigation for 2050 4.3-46

Table 4.3-9 Summary of Incremental PM2.5 Concentrations, 2025 4.3-54

Table 4.3-10 Summary of Incremental PM10 Concentrations, 2025 4.3-54

Table 4.3-11 Summary of Incremental PM2.5 Concentrations, 2035 4.3-56

Table 4.3-12 Summary of Incremental PM10 Concentrations, 2035 4.3-56

Table 4.3-13 Summary of Incremental PM2.5 Concentrations, 2050 4.3-59

Table 4.3-14 Summary of Incremental PM10 Concentrations, 2050 4.3-59

Table 4.3-15 Summary of Cancer Health Risk, 2025..... 4.3-65

Table 4.3-16 Summary of Cumulative Health Risk, 2025..... 4.3-68

Table 4.3-17 Summary of Toxic Air Contaminants Tons per Year, 2025 4.3-69

Table 4.3-18 Summary of Noncancer Hazards, 2025..... 4.3-70

Table 4.3-19 Summary of Cancer Health Risk, 2035..... 4.3-71

Table 4.3-20 Summary of Cumulative Health Risk, 2035..... 4.3-73

Table 4.3-21 Summary of Toxic Air Contaminants Emissions per Year, 2035 4.3-74

Table 4.3-22 Summary of Noncancer Hazards, 2035..... 4.3-75

Table 4.3-23 Summary of Cancer Health Risk 2050..... 4.3-76

Table 4.3-24 Summary of Cumulative Health Risk, 2050..... 4.3-78

Table 4.3-25 Summary of Toxic Air Contaminants Tons per Year, 2050 4.3-79

Table 4.3-26 Summary of Noncancer Hazards, 2050..... 4.3-80

Table 4.4-1 Existing Vegetation Communities and Land Cover Types Within the San Diego Region 4.4-2

Table 4.4-2 Listed Plant Species Potentially Occurring Within the San Diego Region..... 4.4-13

Table 4.4-3 Listed Wildlife Species Potentially Occurring Within the San Diego Region 4.4-18

Table 4.4-4 Critical Habitat¹ Within the San Diego Region 4.4-27

Table 4.4-5 Summary of Approved or Implemented Subarea Plans Under Adopted MSCP/MHCP Subregional Plans in the San Diego Region..... 4.4-50

Table 4.4-6 Relevant General Plan Policies and Biological Resource Protection Ordinances in the San Diego Region by Local Jurisdiction..... 4.4-54

Table 4.4-7 Estimated Direct Impacts on Vegetation Communities and Regulated Aquatic Resources Within the San Diego Region (acres) up to Year 2025 4.4-63

Table 4.4-8 Estimated Direct Impacts on Vegetation Communities and Regulated Aquatic Resources Within the San Diego Region (acres) up to Year 2035 4.4-69

Table 4.4-9 Estimated Direct Impacts on Vegetation Communities and Regulated Aquatic Resources Within the San Diego Region (acres) up to Year 2050 4.4-72

Table 4.4-10 Forecasted Direct Impacts on Areas Designated as Final Critical Habitat Within the San Diego Region (acres) up to the Year 2025 4.4-83

Table 4.4-11 Forecasted Direct Impacts on Areas Designated as Final Critical Habitat Within the San Diego Region (acres) Between 2026 and 2035 4.4-86

Table 4.4-12 Forecasted Direct Impacts on Areas Designated as Final Critical Habitat Within the San Diego Region (acres) Between 2036 and 2050 4.4-88

Table 4.4-13 Forecasted Encroachments Into Wildlife Movement Corridors and Linkages Within the San Diego Region (acres) up to the Year 2025 4.4-100

Table 4.4-14 Forecasted Encroachments Into Wildlife Movement Corridors and Linkages Within the San Diego Region (acres) 2026-2035 4.4-102

Table 4.4-15 Forecasted Encroachments Into Wildlife Movement Corridors and Linkages Within the San Diego Region (acres), 2036-2050 4.4-103

Table 4.4-16 Forecasted Encroachments Into Conservation Areas and Lands Designated for Conservation by Regional Conservation Plans Within the San Diego Region (acres) up to the Year 2025..... 4.4-108

Table 4.4-17 Forecasted Encroachments Into Conservation Areas and Lands Designated for Conservation by Regional Conservation Plans Within the San Diego Region (acres), 2026–2035 4.4-110

Table 4.4-18 Forecasted Encroachments Into Conservation Areas and Lands Designated for Conservation by Regional Conservation Plans Within the San Diego Region (acres), 2036–2050 4.4-112

Table 4.5-1 Nationally Designated Historic Districts in the San Diego Region 4.5-8

Table 4.5-2 City and County Cultural Resources Preservation Ordinances 4.5-17

Table 4.6-1 Total and per Capita Energy Use Under the Proposed Plan: 2016 and 2025, 2035, 2050 4.6-17

Table 4.7-1 Paleontological Resources 4.7-10

Table 4.7-2 Unique Geologic Features..... 4.7-15

Table 4.7-3 Local Policies Concerning Geologic and Seismic Hazards 4.7-27

Table 4.7-4 Local Policies Concerning Unique Geological and Paleontological Features..... 4.7-29

Table 4.8-1 Greenhouse Gas Global Warming Potentials (AR4)..... 4.8-3

Table 4.8-2 Global, National, State, and San Diego Region Greenhouse Gas Emissions Inventories 4.8-4

Table 4.8-3 2018 Statewide Greenhouse Gas Emissions by Economic Sector, 2018 4.8-4

Table 4.8-4 Total Greenhouse Gas Emissions in the San Diego Region, 2016..... 4.8-5

Table 4.8-5 Summary of Local Plans to Reduce GHG Emissions (as of June 2021) 4.8-17

Table 4.8-6 Total Greenhouse Gas Emissions in the San Diego Region, 2016 to 2025 4.8-21

Table 4.8-7 Total Greenhouse Gas Emissions in the San Diego Region, 2016 to 2035 4.8-23

Table 4.8-8 Total Greenhouse Gas Emissions in the San Diego Region, 2016 to 2050 4.8-25

Table 4.8-9 SB 375 GHG Reduction Targets and GHG Emissions under the Proposed Plan from Passenger Vehicles and Light-Duty Trucks, 2035 4.8-27

Table 4.8-10 Calculation to Estimate Per-Capita GHG Emissions from the Entire On-Road Transportation Sector, 2035 compared to 2016 4.8-29

Table 4.8-11 Reference Point and GHG Emissions under the Proposed Plan, 2030 4.8-33

Table 4.8-12 Reference Points and GHG Emissions under the Proposed Plan, 2045 and 2050 4.8-34

Table 4.8-13 2017 Scoping Plan Strategies to Achieve the Statewide 2030 Target 4.8-37

Table 4.9-1 Major EnviroStor Hazardous Waste and Substances Sites in the San Diego Region 4.9-5

Table 4.10-1 2018 CWA Section 303(d) Impaired Waters in the San Diego Region 4.10-15

Table 4.10-2 Reservoirs with Dams in San Diego Region 4.10-22

Table 4.10-3 Water Quality Constituents 4.10-34

Table 4.10-4 Planned Transportation Network Improvements Crossing 303(d)-listed Water Bodies by 2025 4.10-43

Table 4.10-5 Planned Transportation Network Improvements Crossing 303(d)-listed Water Bodies by 2035 4.10-48

Table 4.10-6 Planned Transportation Network Improvements Crossing 303(d)-listed Water Bodies by 2050 4.10-52

Table 4.10-7 2025 Land Use Types in the 100-year Floodplain 4.10-67

Table 4.10-8 2025 Transportation Network Improvements in the 100-year Floodplain 4.10-70

Table 4.10-9 2035 Land Use Types in the 100-year Floodplain 4.10-72

Table 4.10-10 2035 Transportation Network Improvements in the 100-year Floodplain 4.10-78

Table 4.10-11 2050 Land Use Types in the 100-year Floodplain 4.10-80

Table 4.10-12 2050 Transportation Network Improvements in the 100-year Floodplain 4.10-85

Table 4.11-1 Existing Land Use in the San Diego Region (2016) 4.11-3

Table 4.11-2 Jurisdictional Information 4.11-4

Table 4.11-3 Tribal Nations in the San Diego Region 4.11-5

Table 4.11-4 San Diego Region’s Public and Private Airports..... 4.11-10

Table 4.11-5 General Plans 4.11-15

Table 4.11-6 Cities and County with Coastal Zone Jurisdiction 4.11-17

Table 4.12-1 Description of Mineral Zones..... 4.12-2

Table 4.12-2 Policies or Regulations by Jurisdiction 4.12-7

Table 4.13-1 Typical Noise Levels in the Environment 4.13-2

Table 4.13-2 Estimating Railway Noise Exposure for General Assessment..... 4.13-10

Table 4.13-3 Example FTA Screening Distances for Rail and Other Transportation Facility
Noise 4.13-10

Table 4.13-4 Construction Equipment Noise Levels 4.13-12

Table 4.13-5 Example FTA Screening Distances for Rail Vibration 4.13-16

Table 4.13-6 Construction Equipment Vibration Levels (PPV) 4.13-17

Table 4.13-7 FHWA Noise Abatement Criteria¹ 4.13-19

Table 4.13-8 Groundborne Vibration and Groundborne Noise Impact Criteria for FTA
General Assessment..... 4.13-23

Table 4.13-9 FTA Construction Vibration Damage Criteria..... 4.13-23

Table 4.13-10 Caltrans Guideline Vibration Building Damage Criteria..... 4.13-26

Table 4.13-11 Caltrans Guideline Vibration Human Annoyance Criteria 4.13-26

Table 4.13-12 OPR Noise/Land Use Compatibility Guidelines..... 4.13-27

Table 4.13-13 Summary of Applicable Property Line Noise Level Limits..... 4.13-30

Table 4.13-14 Summary of Local Construction Noise Standards..... 4.13-31

Table 4.13-15 Summary of Local Vibration Standards 4.13-33

Table 4.14-1 Existing Population, Housing Units, and Employment by Jurisdiction 4.14-1

Table 4.14-2 Existing and Forecasted Population Growth by Jurisdiction 4.14-4

Table 4.14-3 Existing and Forecasted Housing Growth by Jurisdiction (Units) 4.14-5

Table 4.14-4 Existing and Forecasted Job Growth by Jurisdiction..... 4.14-6

Table 4.14-5 Housing Unit Needs in the San Diego Region-Sixth Housing Element Cycle
(2021-2029)..... 4.14-9

Table 4.14-6 Potential Displacement of Existing Residential and Commercial Land Uses (in
acres)..... 4.14-18

Table 4.15-1 Fire Service Providers in the San Diego Region 4.15-2

Table 4.15-2 Fire Service Providers in Unincorporated and Federal Lands in the San Diego Region 4.15-2

Table 4.15-3 Sworn Police Protection Personnel by Jurisdiction in the San Diego Region 4.15-4

Table 4.15-4 2018-2019 Student Enrollment and Staffing by District in the San Diego Region 4.15-6

Table 4.15-5 Municipal and County Public Library Systems in the San Diego Region 4.15-9

Table 4.15-6 Wastewater Collection Systems in the San Diego Region by Responsible Agency 4.15-12

Table 4.15-7 Wastewater Treatment and Water Recycling Facilities in the San Diego Region 4.15-14

Table 4.15-8 Operators of Municipal Separate Storm Sewer Systems in the San Diego Region 4.15-17

Table 4.15-9 Electricity and Natural Gas Consumption in the SDG&E Service Area in 2019 4.15-18

Table 4.15-10 Fixed Broadband Providers in the San Diego Region 4.15-19

Table 4.15-11 Total Waste Generation Rates and Annual Disposal Rates by Jurisdiction in the San Diego Region 4.15-20

Table 4.15-12 Landfills Located in the San Diego Region and Estimated Capacity 4.15-21

Table 4.15-13 Transfer/Processing Facilities in the San Diego Region 4.15-22

Table 4.16-1 Existing Roadway Facilities in the Region 4.16-2

Table 4.16-2 Year 2016 Transit Services in the Region 4.16-8

Table 4.16-3 Year 2019 Transit Services in the Region 4.16-9

Table 4.16-4 Existing Bicycle Facilities in the Region 4.16-11

Table 4.16-5 Transit System Analysis – Year 2025 4.16-31

Table 4.16-6 Roadway Network Analysis – Year 2025 4.16-32

Table 4.16-7 Bicycle Network Analysis – Year 2025 4.16-33

Table 4.16-8 Pedestrian Analysis – Year 2025 4.16-34

Table 4.16-9 Transit System Analysis – Year 2035 4.16-35

Table 4.16-10 Roadway Network Analysis – Year 2035 4.16-36

Table 4.16-11 Bicycle Network Analysis – Year 2035 4.16-37

Table 4.16-12 Pedestrian Analysis – Year 2035 4.16-38

Table 4.16-13 Transit System Analysis – Year 2050..... 4.16-39

Table 4.16-14 Roadway Network Analysis – Year 2050..... 4.16-40

Table 4.16-15 Bicycle Network Analysis – Year 2050 4.16-41

Table 4.16-16 Pedestrian Analysis – Year 2050 4.16-42

Table 4.16-17 VMT Analysis – Year 2025 4.16-47

Table 4.16-18 VMT Analysis – Year 2035 4.16-49

Table 4.16-19 VMT Analysis – Year 2050 4.16-51

Table 4.18-1 SDCWA Service Area Regional Water Use (acre-feet) 4.18-2

Table 4.18-2 Existing and Projected SDCWA-IID Transfer Supplies – Normal Year (acre-foot/year) 4.18-3

Table 4.18-3 Projected Supply from Canal Lining Projects – Normal Year (acre-feet per year) 4.18-4

Table 4.18-4 Projected Supply from Carlsbad Desalination Plant – Normal Year (acre-feet per year) 4.18-5

Table 4.18-5 SDCWA Member Agency Projected Surface Water Supply 4.18-7

Table 4.18-6 Projected Recycled Water Use – Normal Year (acre-feet per year) 4.18-8

Table 4.18-7 Projected Groundwater Supply – Normal Year (acre-feet per year) 4.18-9

Table 4.18-8 Reservoirs in the San Diego Region 4.18-10

Table 4.18-9 Water Treatment Facilities within the SDCWA Service Area 4.18-11

Table 4.18-10 Water Supply Agencies Outside the SDCWA Service Area 4.18-12

Table 4.18-11 2020 UWMP Normal Water Year Supply and Demand Assessment (acre-foot/year) 4.18-24

Table 4.18-12 Single Dry-Year Supply and Demand Assessment in 5-Year Increments (acre-foot per year) 4.18-25

Table 4.18-13 2021–2025 Multiple Dry Water Year Supply and Demand Assessment (acre-foot per year) 4.18-27

Table 4.18-14 2026–2030 Multiple Dry Water Year Supply and Demand Assessment (acre-foot per year) 4.18-28

Table 4.18-15 2031–2035 Multiple Dry Water Year Supply and Demand Assessment (acre-foot per year) 4.18-29

Table 4.18-16 2036–2040 Multiple Dry Water Year Supply and Demand Assessment (acre-feet per year) 4.18-31

Table 4.18-17 2041–2045 Multiple Dry Water Year Supply and Demand Assessment (acre-feet per year) 4.18-31

Table 4.18-18 Potential Environmental Impacts Associated with Water Supply Projects 4.18-43

Table 4.19-1 Fire Risk in the San Diego Region..... 4.19-2

Table 4.19-2 Local General Plan Wildfire Policies..... 4.19-10

Table 5-1 Growth Projections Considered in the Cumulative Impacts Analysis..... 5-8

Table 5-2 Topic Specific Geographic Scope of Cumulative Impacts 5-8

Table 6-1 Summary of Alternatives Considered in Detail..... 6-4

Table 6-2 Ability of Alternatives Considered in Detail in this EIR to Meet Basic Project Objectives 6-7

Table 6-3 Comparison of Alternatives 1, 2, and 3 to the Proposed Plan..... 6-17

Table 7-1 Existing and Forecasted Job Growth by Jurisdiction..... 7-2

Table 7-2 Significant and Unavoidable Impacts..... 7-12

Figures

	Page
Figure 2-1	Regional Setting 2-2
Figure 2-2	Corridor Geographies..... 2-7
Figure 2-3	Components of Population Change, San Diego Region 2010–2050 2-9
Figure 2-4	Population by Age and Sex, San Diego Region 2016 and 2050 2-10
Figure 2-5	Population Density 2016..... 2-13
Figure 2-6	Population Density 2015..... 2-14
Figure 2-7	Population Density 2035..... 2-15
Figure 2-8	Population Density 2050..... 2-16
Figure 2-9	Housing Density 2016 2-18
Figure 2-10	Housing Density 2025 2-19
Figure 2-11	Housing Density 2035 2-20
Figure 2-12	Housing Density 2050 2-21
Figure 2-13	Employment Density 2016..... 2-23
Figure 2-14	Employment Density 2025..... 2-24
Figure 2-15	Employment Density 2035..... 2-25
Figure 2-16	Employment Density 2050..... 2-26
Figure 2-17	2025 Sustainable Communities Strategy and Land Use Pattern 2-28
Figure 2-18	2035 Sustainable Communities Strategy and Land Use Pattern 2-29
Figure 2-19	2050 Sustainable Communities Strategy and Land Use Pattern 2-30
Figure 2-20	2025 Housing and Employment Density and Regional Mobility Hub Network 2-34
Figure 2-21	2035 Housing and Employment Density and Regional Mobility Hub Network 2-35
Figure 2-22	2050 Housing and Employment Density and Regional Mobility Hub Network 2-36
Figure 2-23	2025 Complete Corridors..... 2-40
Figure 2-24	2035 Complete Corridors..... 2-41
Figure 2-25	2050 Complete Corridors..... 2-42

Figure 2-26 Adopted Regional Bike Network..... 2-45

Figure 2-27 2025 Regional Bike Network..... 2-46

Figure 2-28 2035 Regional Bike Network..... 2-47

Figure 2-29 2050 Regional Bike Network..... 2-48

Figure 2-30 Rural Corridors 2-50

Figure 2-31 Regional Arterial System 2-51

Figure 2-32 2025 Transit Network 2-55

Figure 2-33 2035 Transit Network 2-56

Figure 2-34 2050 Transit Network 2-57

Figure 2-35 Regional Mobility Hub Network 2-62

Figure 2-36 Regional Mobility Hub Areas and Flexible Fleet Coverage 2-65

Figure 4.1-1 Designated State and Eligible California Scenic Highways..... 4.1-6

Figure 4.2-1 Existing Agriculture 4.2-2

Figure 4.2-2 Zoned Agriculture and Williamson Act Land 4.2-4

Figure 4.2-3 Forest Land 4.2-6

Figure 4.2-4 Conversion of Agricultural Land to Nonagricultural Use from Regional Growth and Land Use Change 4.2-22

Figure 4.2-5 Conversion of Agricultural Land to Nonagricultural Use from Transportation Network Improvements..... 4.2-24

Figure 4.2-6 Conflicts with Agricultural Zoning and Williamson Act Contracts from Regional Growth and Land Use Change or Transportation Network Improvements..... 4.2-35

Figure 4.2-7 Loss of Forest Land due to Regional Growth and Land Use Change or Transportation Network Improvements..... 4.2-39

Figure 4.3-1 Comparison of Regional Population Projections 4.3-32

Figure 4.3-2 Location of PM10 Exceedances in 2025 4.3-55

Figure 4.3-3 Location of PM10 Exceedances in 2035 4.3-58

Figure 4.3-4 Location of PM10 Exceedances in 2050 4.3-60

Figure 4.3-5 Sensitive Receptors with Incremental Increase in Cancer Risk above Threshold in 2025 4.3-67

Figure 4.3-6 Sensitive Receptors with Incremental Increase in Cancer Risk above Threshold in 2035 4.3-72

Figure 4.3-7 Sensitive Receptors with Incremental Increase in Cancer Risk above Threshold in 2050 4.3-77

Figure 4.4-1 Existing Vegetation Communities and Cover Types 4.4-6

Figure 4.4-2 Regulated Waters including Wetlands 4.4-12

Figure 4.4-3 Federally and/or State-Listed Plant Species 4.4-17

Figure 4.4-4 Listed Invertebrates 4.4-22

Figure 4.4-5 Federally and/or and State-Listed Fish Species 4.4-23

Figure 4.4-6 Federally and/or State-Listed Reptile and Amphibian Species 4.4-24

Figure 4.4-7 Listed Bird Species 4.4-25

Figure 4.4-8 Federally and/or State-Listed Mammal Species 4.4-26

Figure 4.4-9 Critical Habitat – Plants 4.4-29

Figure 4.4-10 Critical Habitat – Invertebrates 4.4-30

Figure 4.4-11 Critical Habitat – Fish and Essential Fish Habitat 4.4-31

Figure 4.4-12 Critical Habitat –Amphibians 4.4-32

Figure 4.4-13 Critical Habitat – Birds 4.4-33

Figure 4.4-14 Critical Habitat – Mammals 4.4-34

Figure 4.4-15 Regional Wildlife Movement Corridors 4.4-52

Figure 4.4-16 San Diego Conservation Planning Areas and Conserved Lands 4.4-52

Figure 4.4-17 Undeveloped to Developed Land Use Conversions 4.4-66

Figure 4.6-1 California Energy Consumption Estimates for 2019 4.6-2

Figure 4.6-2 California Energy Consumption by End-Use Sector for 2019 4.6-3

Figure 4.7-1 Generalized Geologic Map of the Region 4.7-2

Figure 4.7-2 Earthquake Fault Zones and Seismic Conditions 4.7-4

Figure 4.7-3 Potential Liquefaction Areas 4.7-8

Figure 4.7-4 Cliff Retreat Forecasts in Southern California 4.7-20

Figure 4.9-1 San Diego Region Airports 4.9-9

Figure 4.9-2 San Diego Region Primary Evacuation Routes 4.9-10

Figure 4.10-1 Major Surface Waters 4.10-2

Figure 4.10-2 Watersheds 4.10-3

Figure 4.10-3 Floodplains 4.10-24

Figure 4.11-1 2016 Land Use Map 4.11-2

Figure 4.11-2 Tribal Lands in the San Diego Region 4.11-7

Figure 4.11-3 Military Installations in the San Diego Region 4.11-9

Figure 4.11-4 Coastal Zones 4.11-18

Figure 4.12-1 Mineral Resource Zones 4.12-3

Figure 4.12-2 Potential Aggregate Supply Sites 4.12-5

Figure 4.13-1 Typical Levels of Groundborne Vibration 4.13-15

Figure 4.13-2 FTA Noise Impact Criteria for Noise-Sensitive Uses (dBA) 4.13-22

Figure 4.15-1 Open Space Parks and Recreation 4.15-11

Figure 4.15-2 Impacts to Recreational Facilities 4.15-44

Figure 4.16-1 Roadway Network 4.16-3

Figure 4.16-2 Existing Transit Network 4.16-6

Figure 4.16-3 Existing Bicycle Network 4.16-12

Figure 4.16-4 Freight Rail Network 4.16-17

Figure 4.18-1 Regional Water Supply Infrastructure 4.18-6

Figure 4.19-1 San Diego Region Fire Hazard Severity Zones 4.19-3

Figure 4.19-2 San Diego Region Wildland Urban Interface Zones 4.19-4

Figure 4.19-3 Regional Growth and Land Use Change Fire Risk 4.19-19

Figure 4.19-4 Transportation Network Improvements Fire Risk 4.19-22

Figure 5-1 Planned California High-Speed Train Overview 5-4

Acronyms and Abbreviations

Acronym	Definition
μPa	microPascals
2013 Master Plan Update	2013 Regional Water Facilities Optimization and Master Plan Update
2016 SIP	2016 Eight-Hour O3 Attainment Plan
2020 SIP	2020 Plan for Attaining the National Ozone Standards
2050 RTP/SCS	2050 Regional Transportation Plan/Sustainable Communities Strategy
AB	Assembly Bill
ABM2+	second generation Activity Based Model
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
ADAM	Aerometric Data Analysis and Management
ADP	Airport Development Plan
ADRP	Archaeological Data Recovery Program
AFVs	alternative fuel vehicles
AIA	Airport Influence Area
AICUZ	Air Installations Compatible Use Zones
Airport Authority	San Diego County Regional Airport Authority
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plans
AMI	Area Median Income
AMSL	above mean sea level
APZ	Accident Potential Zones
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
AR4	IPCC Fourth Assessment Report
ASBS	Areas of Special Biological Significance
ATDM	Active Transportation and Demand Management
ATP	Active Transportation Program
Basin Plan	Water Quality Control Plan for the San Diego Basin
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
Bike Plan EAP	Regional Bike Plan Early Action Program
BLM	Bureau of Land Management
BMO	Biological Mitigation Ordinance
BMPs	best management practices
BNSF	Burlington Northern Santa Fe

Acronym	Definition
BTU	British thermal unit
BWD	Borrego Water District
C&D	Construction and demolition
CAA	Clean Air Act
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy Standards
CAFÉ	Corporate Average Fuel Economy Standards
Cal EMA	California Emergency Management Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPP	Community Air Protection Program
CAPs	Climate Action Plans
CARB	California Air Resources Board
CBC	California Building Code
CCA	California Coastal Act
CCA	Clean Air Act
CCAA	California CAA
CCC	California Coastal Commission
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CDP	Coastal Development Permit
CEC	California Energy Commission
CEPAM	California Emissions Projection Analysis Model
CEQA	California Environmental Quality Act
CERP	Community Emissions Reduction Program
CESA	California Endangered Species Act
CFA	County Fire Authority
CFCP	California Farmland Conservancy Program
CFGC	California Fish and Game Code
CFLA	California Forest Legacy Act

Acronym	Definition
CFR	Code of Federal Regulations
CH ₄	methane
CHHSLs	California Human Health Screening Levels
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CMCPs	Comprehensive Multimodal Corridor Plans
CMH	Central Mobility Hub
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
COCs	contaminates of concern
COG	Council of Governments
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank Species:
CSP	carryover storage component
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CVEG	Commercial Vehicle Enforcement Facility
CWA	Clean Water Act
CWP	California Water Plan
CZMA	Coastal Zone Management Act
DAA	Disaster Assistance Act
DARs	Direct Access Ramps
dB	decibel
dBA	A-weighted decibels
DEH	Department of Environmental Health
DMA 2000	Disaster Mitigation Act of 2000
DMG	Division of Mines and Geology
DMU	diesel-multiple unit
DOC	State of California Department of Conservation
DOD	Department of Defense
DOF	Department of Finance
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DPR	Department of Pesticide Regulation

Acronym	Definition
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EAP	Regional Bike Plan Early Action Plan
ECCs	emerging chemicals of concern
EDD	Economic Development Department
EDF	Environmental Defense Fund
EFH	Essential Fish Habitat
EHRA	Earthquake Hazards Reduction Act
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
Emergency Plan	Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan
EMFAC	Emission Factor
EMP	Environmental Mitigation Program
Enforcement Program	DTSC Enforcement and Emergency Response Program
EO	Executive Order
EOs	Executive Orders
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Environmental Site Assessment
ESHA	Environmentally Sensitive Habitat Area
ESL	Environmentally Sensitive Lands
ESP	Emergency Storage Project
EV	electric vehicle
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zones
FHWA	Federal Highway Administration
FIRM	Federal Insurance Rate Map
FMCSA	Federal Motor Carrier Safety Administration
FMMP	Farmland Mapping and Monitoring Program
FMP	Floodplain Management Plan
FMP	Fisheries Management Plan
FPDs	Fire Protection Districts
FPPA	Farmland Protection Policy Act
FR	Federal Register

Acronym	Definition
FRA	Federal Railroad Administration
FRAP	Fire and Resource Assessment Program
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FTIPs	Federal Transportation Improvement Programs
FUDS	Formerly Used Defense Sites
GHG	greenhouse gas
GIS	geographic information system
GSAs	groundwater sustainability agencies
GSP	Groundwater Sustainability Plan
GVWR	gross vehicle weight rating
GWP	global warming potential
HAPCs	Habitat Areas of Particular Concern
HAPs	hazardous air pollutants
HAs	hydrologic areas
HCD	Housing and Community Development
HCPs	Habitat Conservation Plans
HFCs	hydrofluorocarbons
HLP	Habitat Loss Permit
HMD	Hazardous Materials Division
HMGP	Hazard Mitigation Grant Program
HMMP	Habitat Mitigation and Monitoring Plan
HMP	Hydromodification Management Plan
HMP	Habitat Management Plan
HOV	high-occupancy vehicle
hp	horsepower
HSAs	hydrologic subareas
HSC	Health and Safety Code
HSRA	High-Speed Rail Authority
HST	High Speed Rail Train
HUs	hydrologic units
HVAC	heating, ventilation and air conditioning
Hz	hertz
I-15	Interstate 15
I-5	Interstate 5
I-8	Interstate 8
ICAPCD	Imperial County Air Pollution Control District
ICM	Integrated Corridor Management
IID	Imperial Irrigation District

Acronym	Definition
in/s	inches per second
in/s ²	inches per second per second
INRMPs	Integrated Natural Resource Management Plans
IPCC	Intergovernmental Panel on Climate Change
IRWM	Integrated Regional Water Management
IRWMP	Integrated Regional Water Management Plan
ITS	Intelligent Transportation Systems
IWMP	Integrated Waste Management Plan
JURMP	Jurisdictional Urban Runoff Management Program
kHz	kilohertz
kW	kilowatts
LAFCO	Local Agency Formation Commission
LAMP	Local Agency Management Program
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard
LCP	Local Coastal Program
LDV	light-duty vehicles
LEA	Local Enforcement Agency
LEED	Leadership in Energy and Environmental Design
L _{eq}	equivalent sound level
LFPZ	Levee Flood Protection Zone
LHP	Landslide Hazard Program
LID	Low Impact Development
L _{max}	Maximum Sound Level
L _{min}	Minimum Sound Level
Local Register	San Diego County Local Register of Historical Resources
LOS	Level of Service
LOSSAN	Los Angeles–San Diego–San Luis Obispo
LQGs	large-quantity generators
LRA	Local Responsibility Areas
LRT	Light Rail Transit
LTMP	Long-Term Management Plan
LUST	leaking underground storage tank
LV	Vibration Velocity Level
L _{xx}	Percentile-Exceeded Sound Level
M&I	municipal and industrial
MAP	Mitigation Action Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBTA	Migratory Bird Treaty Act

Acronym	Definition
MC	Municipal Code
MCAS	Marine Corps Air Station
MCB	Marine Corps Base
MCRD	Marine Corps Recruit Depot
MDPV	medium-duty passenger vehicles
MEIR	maximally exposed individual receptor
MGD	million gallons per day
mgd	million gallons per day
MHCP	Multiple Habitat Conservation Program
MHPA	Multi-Habitat Planning Area
ML	Managed Lanes
MLDs	Most Likely Descendants
MLs	Managed Lanes
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MOU	Memorandum of Understanding
MP	Mile Post
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MPOs	Metropolitan Planning Organizations
MPRSA	Marine Protection, Research, and Sanctuaries Act
MRFs	material recovery facilities
MSATs	Mobile Source Air Toxics
MSCP	Multiple Species Conservation Program
MSHCP	Multi-Species Habitat Conservation Plan
MSP	Management Strategic Plan
MTCO _{2e}	metric tons of CO _{2e}
MTS	Metropolitan Transit System
MWD	Water District
MWh	megawatt hours
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NAS	Naval Air Station
NATA	National Air Toxics Assessment
NAVWAR	Naval Information Warfare Systems Command

Acronym	Definition
Navy	U.S. Department of the Navy
NBC	Naval Base Coronado
NCCP	Natural Community Conservation Planning
NCTD	North County Transit District
NCWRP	North City Water Reclamation Plant
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NEV	Neighborhood Electric Vehicle
NFIP	National Flood Insurance Program
NHD	National Hydrography Dataset
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NNL	National Natural Landmarks
NO	nitric oxide
NO ₂	nitrogen dioxide
NOA	Notice of Availability
NOAA	National Oceanographic and Atmospheric Administration
NOC	Notice of Completion
NOLF	Naval Outlying Landing Field
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulations
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NSDWR	National Secondary Drinking Water Regulations
NSF	National Science Foundation
NWI	National Wetlands Inventory
O ₃	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OTC	Old Town Campus
OWTS	Onsite Wastewater Treatment Systems
PAMA	Pre-Approved Mitigation Area
Pb	lead
PCBs	polychlorinated biphenyls

Acronym	Definition
PDPs	Priority Development Projects
PEV	Plug-In Electric Vehicle
PIP	Public Involvement Plan
PIR	Pacific Imperial Railroad, Inc.
PM	particulate matter
PM ₁₀	PM smaller than or equal to 10 microns in diameter
PM _{2.5}	PM smaller than or equal than 2.5 microns in diameter
PMPU	Port Master Plan Update
POE	Port of Entry
POM	polycyclic organic matter
Port	Unified Port District of San Diego
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppb	parts per billion
ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PRPA	Paleontological Resources Preservation Act
psi	pounds per square inch
PUC	Public Utilities Code
Pure Water Program	Pure Water San Diego Program
Rapid	Bus Rapid Transit
RAQS	Regional Air Quality Strategy
RAS	Regional Arterial System
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
ReCAP	Climate Action Planning Framework
REL	recommended exposure limit
RES	Regional Energy Strategy
REVI	Regional Electric Vehicle Infrastructure Working Group
RHA	Rivers and Harbors Act of 1899
RHNA	Regional Housing Needs Assessment
RMP	Risk Management Plan
RMP	Resource Management Plan
rms	root-mean-square
ROW	right-of-way
ROWD	Report of Waste Discharge
RPO	Resource Protection Ordinance
RPS	Renewables Portfolio Standard
RTIP	Regional Transportation Improvement Program

Acronym	Definition
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	State Aeronautics Act
SAA	Streambed Alteration Agreement
SAFE	Safer Affordable Fuel-Efficient
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SAM	Site and Mitigation
SANDAG	San Diego Association of Governments
SB	Senate Bill
SBIWTP	South Bay International Wastewater Treatment Plant
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCIC	South Coastal Information Center
Scoping Plan	Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
SD&AE	San Diego and Arizona Eastern Railway Company
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCRAA	San Diego County Regional Airport Authority
SDCSD	San Diego County Sheriff's Department
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric
SDIA	San Diego International Airport
SDIV	San Diego and Imperial Valley Railroad
SDMMP	San Diego Management and Monitoring Program
SDSU	San Diego State University
SF6	sulfur hexafluoride
SFAP	Sustainable Freight Action Plan
SFHAs	Special Flood Hazard Areas
SFP	School Facilities Program
SGMA	Sustainable Groundwater Management Act
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SHSP	Strategic Highway Safety Plan
SIL	Significant Impact Levels
SIP	State Implementation Plan
SIS	Smart Intersection Systems
SIS	Smart Intersection Systems

Acronym	Definition
SLCP	Short-Lived Climate Pollutant
SLF	Sacred Lands File
SLIC	Spills-Leaks-Investigations-Cleanups
SLT	screening-level threshold
SMARA	State Surface Mining and Reclamation Act of 1975
SMGB	State Mining and Geology Board
SO ₂	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SPL	sound pressure level
SQGs	small-quantity generators
SR 125	State Route 125
SR 56	State Route 56
SR 94	State Route 94
SRA	State Responsibility Areas
SSMP	Sewer System Management Plan
SSOs	sanitary sewer overflows
SUSMP	Standard Urban Stormwater Mitigation Plan
SVP	Society of Vertebrate Paleontology
SWIS	Solid Waste Inventory System
SWMP	Stormwater Management Plan
SWP	State Water Project
SWPPP	Storm Water Prevention Pollution Plan
SWRCB	State Water Resource Control Board
SYMH	San Ysidro Mobility Hub
TAC	toxic air contaminant
TCMs	traffic control measures
TCRs	tribal cultural resources
TDM	Transportation Demand Management
TDS	total dissolved solids
THI	total health hazard index
TIA	Tijuana International Airport
TMDL	Total Maximum Daily Load
TPAs	Transit Priority Areas
TPZ	Timberland Production Zone
Transfer Agreement	Water Authority–IID Water Conservation and Transfer Agreement
TRUs	Transportation Refrigeration Units
TSM	Transportation System Management
TSMO	Transportation System Management and Operations
UCSD	University of California San Diego

Acronym	Definition
UDC	Unified Disaster Council
UFP	ultrafine particulate matter
Unified Program	Unified Hazardous Waste and Hazardous Materials Program
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey's
UST	underground storage tank
UWMP	Urban Water Management Plan
UXO	unexploded ordinance
VAP	Voluntary Assistance Program
VdB	vibration decibels
VHFHSZs	Very High Fire Hazard Severity Zones
VMT	vehicle miles traveled
VMT	vehicles miles traveled
VOC	volatile organic compounds
VPHCP	Vernal Pool Habitat Conservation Plan
VSQGs	very small-quantity generators
WDR	Waste Discharge Requirements
WQOs	water quality objectives
WRP	Water Reclamation Plant
WSA	Water Supply Assessment
WSCP	Water Shortage and Drought Response Plan
WTP	Water Treatment Plant
WUI	Wildland Urban Interface
WWTP	wastewater treatment plant
ZEV	zero-emission vehicle