

# Appendix 2. Report Preparation

This section includes a list of preparers of the EIR (Section Ap.2.1), contacts with public agencies (Section Ap.2.2), the bibliography for all EIR sections (Section Ap.2.3), and a list of definitions and acronyms (Section Ap.2.4).

## Ap.2.1 EIR Preparers

A consultant team of 34 key technical and administrative personnel headed by Aspen Environmental Group prepared this document under the direction of the CPUC. Table Ap.2-1, below, presents the preparers and technical reviewers of this document and their qualifications.

**Table Ap.2-1. EIR Preparers and Persons Consulted**

Agency/Firm	Personnel by Name and Title	Education	Years Exper.	Issue Area	
<b>CPUC</b>					
California Public Utilities Commission	Billie Blanchard, Project Manager	M.S. Urban Planning B.A. Political Science	26	CPUC Project Manager	
	Pam Nataloni, Attorney	J.D.	15	CPUC CEQA Legal Support	
<b>Project Management and Document Production</b>					
Aspen Environmental Group	Hamid Rastegar, Principal	PhD Environmental Science & Engineering, M.S. Environmental Science & Engineering, B.S. Civil Engineering	24	Principal-in-Charge	
	Susan Lee, Vice President, San Francisco Operations	M.S. Applied Earth Science, B.A. Geology	19	EIR Project Manager	
	Brewster Birdsall, Senior Associate, Engineer/Physical Scientist	M.S. Civil Engineering, B.S. Mechanical Engineering	8	Noise/Air Quality	
	Matt Fagundes, Associate, Earth Scientist	B.S. Environmental Studies	6	Traffic and Transportation	
	Mark Tangard, Administrative Manager	B.A. Geography	29	Document Production	
	Hedy Born, Staff Environmental Scientist	M.S. Earth Systems, B.S. Earth Systems	1	Project Description, Alternatives, Other Report Sections	
	Phil Lowe, Senior Associate, Earth Scientist	M.S. Watershed Management, B.S. Wildlife Management	24	Hydrology/Water Quality	
	Jeff Shelton, Hydrologist	B.S.E. Civil Engineering	4	Hydrology/Water Quality	
	Negar Vahidi, Senior Associate, Social Scientist	Master of Public Administration (MPA), B.A. Political Science	10	Recreation, Socioeconomics, and Public Services	
	Jacob Hawkins, Staff Social Scientist	M.S. Environmental Science and Management, B.S. Biology	2	Recreation, Socioeconomics, and Public Services	
	Kati Simpson, Associate, Graphics	B.A. Geography	18	Graphics	
	Marc Campopiano, Staff Scientist, Environmental Planner	M.S. Environmental Science and Management, B.A. Environmental Studies	2	Recreation	
	Tom Scofield, Associate, Biology	B.S. Environmental Biology	12	Wildlife/Biological Resources	
	Andrea Erichsen, Associate, Biology	M.S. Ecology, M.S. Avian Sciences, B.S. International Environmental Studies	12	Wildlife/Biological Resources	
	William Self Associates, Inc.	William Self, Principal	M.A. Anthropology, B.A. Anthropology	33	Cultural Resources/Historic Preservation
		Kyle Brown, Senior Archaeologist	M.A. Anthropology, B.A. Anthropology	8	Cultural Resources/Historic Preservation

**Table Ap.2-1. EIR Preparers and Persons Consulted**

<b>Agency/Firm</b>	<b>Personnel by Name and Title</b>	<b>Education</b>	<b>Years Exper.</b>	<b>Issue Area</b>
R.W. Beck	Chuck Williams, P.E.	B.S. Civil Engineering	20	EMF and Transmission Engineering
	Steve Rupp, Senior Consultant	B.S. Electrical Engineering	19	Transmission Engineering
Douglas Herring & Associates	Doug Herring, Principal	M.P.P. Public Policy, B.A. Urban Geography	15	Land Use
Michael Clayton & Associates	Michael Clayton, Principal	M.S. Environmental Management, B.S. Biology	26	Visual Resources
Geotechnical Consultants	James Thurber, Associate Geologist	M.S. Geology, B.S. Geology	18	Geology and Environmental Contamination
	Aurie Patterson, Project Geologist	B.A. Geology	9	Environmental Contamination
	Janine Band, Senior Geologist	Ph.D. Geology, M.S. Geology, B.S. Geology	15	Geology/Engineering Geology
	Doug Herold, Staff Geologist	B.S. Geology	7	Geology/Engineering Geology
Cassidy, Shimko & Dawson	Anna Shimko, Principal	J.D. B.A. Urban Studies	17	CEQA Legal Support
Scheuerman Consulting	Paul Scheuerman, P.E.	B.S. Electrical Engineering	38	Transmission Planning and Project Description
Ecosystem Research Group	Mike Beltz	B.A. Geography	8	Mapping
	Gregory Kennett	B.S. Watershed Management	24	Mapping
	Melanie Smith, Environmental Scientist	B.A. Environmental Studies	3	Mapping
	Jon Schulman, Hydrologist/Environmental Engineer	M.S. Environmental Engineering, M.A. Journalism, B.S. Film and Television Production/Still Photography	12	Mapping
Wetlands Research Associates, Inc.	Shannon Lucas, Associate Botanist	B.A. Biology	7	Botany
View Point West	Christine Keller, President	M.A. Geography, Conservation of Environmental Quality, B.A. Sociology	30	Public Involvement, Executive Summary

## **Ap.2.2 EIR Information Contacts**

Table Ap.2-2 lists the people who were contacted and consulted during the preparation of this document and in what section their information was used.

**Table Ap.2-2. EIR Information Contacts**

<b>Agency/Organization</b>	<b>Name and Title</b>	<b>Section Information Used In</b>
City of San Bruno	Mark Sullivan, Housing and Redevelopment Manager	D.2 Land Use
Midpeninsula Regional Open Space District	Doug Vu, Open Space Planner	D.2 Land Use
San Mateo County Planning and Building Division	James Singleton, Project Planner	D.2 Land Use
San Mateo County Parks and Recreation Division	Sam Herzberg, Senior Planner	D.2 Land Use
Department of Fish and Game	Jenine Dewald, Biologist	D.4 Biological Resources
Department of Fish and Game	Dave Johnston, Biologist	D.4 Biological Resources
CH2MHill Consulting	Amy Hiss	D.4 Biological Resources
CH2MHill Consulting	Lynn Hosley	D.4 Biological Resources D.5 Cultural Resources
CH2M Hill Consulting	Katie Corosco	D.5 Cultural Resources

**Table Ap.2-2. EIR Information Contacts**

<b>Agency/Organization</b>	<b>Name and Title</b>	<b>Section Information Used In</b>
Northwest Information Center (NWIC)	Lisa Hagel, Archaeologist	D.5 Cultural Resources
Native American Heritage Commission	Debbie Pilas-Treadway, Environmental Specialist III	D.5 Cultural Resources
University of California at Berkeley	Paulo Monteiro, Professor	D.6 Geology and Soils
Caltrans	Mark Palmer, Senior Engineering Geologist	D.6 Geology and Soils
University of Missouri-Rolla	J. David Rogers, Professor	D.6 Geology and Soils
California Geological Survey	Robert H. Sydnor, Senior Engineering Geologist	D.6 Geology and Soils
Town of Colma	Kurt Edwards, Recreation Manager	D.9 Recreation
Bay Area Rapid Transit (BART)	Ron Rodriguez, BART Public Information Officer	D.12 Transportation and Traffic
Caltrain	Esther Nahoum, Caltrain Customer Service Supervisor	D.12 Transportation and Traffic
City of Brisbane	Karen Kinser, City of Brisbane Public Works Department	D.12 Transportation and Traffic
City of Burlingame	Augustiene Chou, Traffic Engineer, City of Burlingame Public Works Department	D.12 Transportation and Traffic
City of San Bruno	John Hannigan, City of San Bruno Public Works Department	D.12 Transportation and Traffic
San Mateo County	Bob Cambron, Associate Engineer, San Mateo County Public Works Traffic Section	D.12 Transportation and Traffic
Town of Colma	Ellen Ellsworth, Supervising Engineer, Town of Colma Engineering Department	D.12 Transportation and Traffic Appendix 1. Alternatives Screening Report
Bay Area Rapid Transit (BART)	Les Freligh, BART District Real Estate Surveyor	Appendix 1. Alternatives Screening Report
Bay Area Rapid Transit (BART)	Chuck Rae, BART Telecommunications	Appendix 1. Alternatives Screening Report
Bay Area Rapid Transit (BART)	Roger Avery, BART Group Manager for Electrical & Mechanical Engineering	Appendix 1. Alternatives Screening Report
Bay Conservation & Development Commission (BCDC)	Lindy Lowe, Bay Conservation & Development Commission	Appendix 1. Alternatives Screening Report
Caltrans	Paul Boix, Caltrans Utilities District Branch Chief	Appendix 1. Alternatives Screening Report
Caltrans	Lirrisa Krichevsky, Senior Transportation Encroachment Permit Exception Engineer	Appendix 1. Alternatives Screening Report
City and County of San Francisco (CCSF)	Joe Como, CCSF	Appendix 1. Alternatives Screening Report
City of San Bruno	Rick Cole, Engineering Consultant to the City of San Bruno	Appendix 1. Alternatives Screening Report
San Francisco Public Utilities Commission (SFPUC)	Tasso Mavroudis, SFPUC Crystal Springs Dam Repair Project Manager	Appendix 1. Alternatives Screening Report
San Francisco Public Utilities Commission (SFPUC)	John Chow, SFPUC Pipeline Engineer	Appendix 1. Alternatives Screening Report
San Mateo County	Anne Stillman, Public Works Department Senior Engineer	Appendix 1. Alternatives Screening Report
U.S. Army Corps of Engineers (USACE)	Clyde Davis, USACE Dredging Manager	Appendix 1. Alternatives Screening Report

## Ap.2.3 Bibliography

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- \_\_\_\_\_. 2003f. Response of Pacific Gas & Electric Company to CPUC Data Request No. 4. May 2.
- \_\_\_\_\_. 2003g. Response of Pacific Gas & Electric Company to CPUC Data Request No. 5. May 12 and May 23.
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### References for Section D.2: Land Use

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### **References for Section D.3: Visual Resources**

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## Ap.2.4 List of Definitions and Acronyms

**100-Year Flood** A stream flow caused by a discharge that is exceeded, on the average, only once in 100 years. A 100-year flood has a 1% chance of occurrence in any given year.

**AAQS** Ambient Air Quality Standard; a federal and state measure of the level of air contamination that is not to be exceeded in order to protect human health.

**ABAG** Association of Bay Area Governments.

**AAC** All-aluminum conductor.

**ac** Auxiliary alternating current.

**ACE** Assessment of Chemical Exposure.

**ac-ft** Acre foot; a unit of measure for water demand and supply. The volume of 1 acre foot would cover 1 acre to a depth of 1 foot and is equal to 325,851 gallons.

**ACHP** U.S. Advisory Council on Historic Preservation.

**ACSR** Aluminum Conductor, Steel Reinforced.

**ADT** Average Daily Trip; number of vehicles traveling per normal day on a roadway.

**Aerosol** Wet or dry small particles in the atmosphere. Also called "particulate matter."

**Aggradation (Of a Stream Channel Bed)** Raising of stream bed elevation, caused by sediment supply in excess of sediment-transport capacity.

**Air Quality Standard** The specified average concentration of an air pollutant in ambient air during a specified time period, at or above which level the public health may be at risk; equivalent to AAQS.

**Algae** A collective term for several taxonomic groups of primitive chlorophyll-bearing plants which are widely distributed in fresh and salt water and moist lands. This term includes the seaweeds, kelps, diatoms, pond scums, and stoneworts.

**Ambient Air** Any unconfined portion of the atmosphere; the outside air.

**Ambient Noise Level** Noise from all sources, near and far. ANL constitutes the normal or existing level of environmental noise at a given location.

**ANL** Ambient Noise Level.

**ANSI** American National Standards Institute.

**APCD** Air Pollution Control District; a regional government bureau responsible for attainment and management of air quality standards through permitting and regulating of the emission sources.

**APEFZ** Alquist-Priolo Earthquake Fault Zone.

**APM** Applicant proposed measure.

**APN** Assessor Parcel Number, given to a parcel, or a specified area, of land by County tax assessors.

**AQAP** Air Quality Attainment Plan; equivalent to Air Quality Management Plan (AQMP), which outlines rules and regulations for improving and maintaining the quality of air in the region.

**ARB** Air Resources Board.

**ASME** American Society of Mechanical Engineers.

**ASTM** American Society for Testing Materials.

**ATC** Authority to Construct. A permit required by local air quality regulatory agencies before construction of a major emission source is started.

**Atmospheric Stability** The resistance to or enhancement of vertical and horizontal air movement, which regulates the amount of air exchange and affects pollution concentration or dispersion.

**Average** As a measure, the sum of the measurements (over a specified period) divided by the number of measurements.

**Avifauna** Birds.

**A-Weighting** A frequency measure of noise which simulates human perception.

**B.P.** Before Present.

**BAAQMD** Bay Area Air Quality Management District.

**Backfill** Earth that is replaced after a construction excavation.

**Backhoe** A self propelled machine with an arm equipped with a toothed shovel that scoops earth as the shovel is pulled toward the machine.

**BACT** Best Available Control Technology; the most improved devices or air emission reduction technology currently available for controlling pollutant emissions.

**BART** Bay Area Rapid Transit District.

**Baseline** A set of existing conditions against which change is to be described and measured.

**BCDC** Bay Conservation and Development Commission.

**Berm** A narrow shelf, path, or ledge typically at the top or bottom of a slope; also, an earthen, mounded wall.

**Biota** Living organisms.

**BMP** Best Management Practice.

**BOD** Biological Oxygen Demand; the free oxygen-removing capability of biologically derived materials in the environment.

**Brackish** Pertaining to water, generally estuarine, in which the salinity ranges from 0.5 to 17 parts per thousand by weight.

**Btu** British thermal unit, a measurement of energy, the amount of energy that can be obtained as heat by combusting approximately 1/1000 cubic feet of natural gas.

**CAAQS** California Ambient Air Quality Standard; see AAQS.

**CAISO** California Independent System Operator

**CAL OSHA** California Occupational Safety and Health Administration.

**Caltrans** California Department of Transportation.

**CAPCOA** California Air Pollution Control Officers Association.

**CARB** California Air Resources Board, sometimes abbreviated as ARB.

**Cargill** Cargill Salt Company.

**Cathodic protection** An anticorrosion technique for metal installations; pipelines, tanks, and buildings in which weak electric currents are established to offset the current associated with metal corrosion.

**Cathodic protection rectifier** The rectifier converts alternating current power supply into direct current output. This output is connected to a buried anode which produces an electrical current through the soil and into the pipeline, which is thus placed under cathodic protection.

**CCAA** California Clean Air Act.

**CCD** Census County Division.

**CCR** California Code of Regulations.

**CCSF** City and County of San Francisco

**CCN** Contra Costa-Network.

**CDF** California Department of Forestry and Fire Prevention.

**CDFG** California Department of Fish and Game.

**CDMG** California Division of Mines and Geology.

**CEC** California Energy Commission.

**CEE** Customer Energy Efficiency.

**CEQA** California Environmental Quality Act.

**CFR** U.S. Code of Federal Regulations.

**cfs** cubic feet per second.

**Channel Lining** Artificial hardening of the sides and/or bed of a stream channel to prevent erosion. Concrete, soil cement and rock riprap are typical channel linings.

**Class I** Significant; cannot be mitigated to a level that is not significant (in regards to environmental impacts).

**Class II** Significant; can be mitigated to a level that is not significant (in regards to environmental impacts).

**Class III** Adverse, but not significant (impact).

**Class IV** Beneficial impacts.

**CNDDDB** California Natural Diversity Data Base

**CNEL** Community Noise Equivalent Level; the averaging of noise levels on a measurement scale of decibels that increases the actual noise measurement, to account for an increased sensitivity to noise during late evening, nighttime, and morning hours (the increments are 5 dB from 7 to 10 p.m. and 10 dB from 10 p.m. to 7 a.m.).

**CNPS** California Native Plant Society.

**CO** Carbon Monoxide; a colorless, odorless, toxic gas produced by incomplete combustion of carbon in fossil fuels.

**COD** Chemical Oxygen Demand; the free oxygen-removing (combining) capability of chemical substances in liquid.

**Concentration** The relative content of a component (as dissolved or dispersed material) and measured by weight or volume of material per unit of volume of the medium.

**Concentration, average** The average of a series of measurements of concentration.

**Concentration, maximum** The highest individual or average measurement of concentration.

**Control Area** A portion of the interconnected electricity system grid whose operations and procedures are controlled and managed by a single utility. This utility typically owns most of the facilities in its control area and is responsible for the physical interaction with neighboring control areas.

**Control panel** An assembly of indicators and recording instrument; pressure gauges, warning lamps, and other visual or audible signals for monitoring and controlling a system.

**Corrosivity** Is an estimate of the potential for soil-induced chemical action that dissolves or weakens uncoated shell.

**CPCN** Certificate of Public Convenience and Necessity.

**CPR** Cardiac/pulmonary resuscitation.

**CPUC** California Public Utilities Commission.

**CRHR** California Register of Historical Resources.

**CRMP** Cultural Resource Management Plan.

**CSC** California Species of Concern.

**CSLC** State Lands Commission; the California agency that manages state-owned lands, such as the zone between mean high tide and the land lying offshore within the three-mile limit.

**Cultural Resource** Places or objects important for scientific, historical, and religious reasons to cultures, communities, and individuals.

**CWA** Clean Water Act.

**Cyclonic** A large air mass circulating counterclockwise, in northern hemisphere.

**dB** The A-weighted decibel scale representing the relative insensitivity of the human ear to low-pitched sounds; decibels are logarithmic units that compare the wide range of sound intensives to which the human ear is sensitive.

**dc** Direct current.

**Dead-end towers** The structures at the termination point of a transmission line, or at the overhead/underground transition point.

**Decibel (Db)** A logarithmic unit which measures the pressure levels of sounds.

**DEIR** Draft Environmental Impact Report (see EIR).

**Diffusion model** A model, calculated by formula, graphs, or computer, that estimates the dilution of an air pollutant as it is carried downwind. The models are based on physical principles with various simplifications to aid solvability.

**DOI** U.S. Department of the Interior; a federal Department that includes the following agencies: BLM, USFWS, Bureau of Mines, Bureau of Reclamation, etc.

**DOT** U.S. Department of Transportation.

**DRA** (CPUC's) Division of Rate Payers Advocates; now Office of Rate Payers Advocates (ORA).

**DSM** Demand Side Management, for example, home insulation, energy efficient appliances, etc.

**DWR** California Department of Water Resources.

**EBRPD** East Bay Regional Park District.

**ECP** Erosion Control Plan.

**EDD** (California) Employment Development Department.

**EIR** Environmental Impact Report; an environmental impact assessment document prepared in accordance with the California Environmental Quality Act (CEQA).

**EIS** Environmental Impact Statement; an environmental impact in accordance with the National Environmental Policy Act (NEPA).

**EIR/S** Environmental Impact Report and Statement, prepared as a single document for submission to both the state and federal governments and for public review. See EIR and EIS.

**EMF** Electric and Magnetic Field.

**Emission** Unwanted substances released by human activity into air or water.

**Emission, primary** An emission that is treated as inert (non-reactive).

**Emission, secondary** Unwanted substances that are chemical byproducts of reactive primary emissions.

**Emission Control Device** Any piece of equipment that reduces the release of any air pollutant into the atmosphere; see BACT..

**Emission Limit** A regulatory standard that restricts the discharge of an air pollutant into atmosphere.

**EMT** Emergency Medical Training.

**EPA** U.S. Environmental Protection Agency; a federal agency that works to protect the environment.

**EPRI** Electric Power Research Institute.

**EQAP** Environmental Quality Assurance Program; a generic term for mitigation monitoring.

**ERP** Electric Resource Plan, required by the Public Service Commission of Nevada every three years.

**ESH** Environmentally Sensitive Habitat; an area designated by governmental agencies as requiring special administration or protection.

**ESHA** Environmentally Sensitive Habitat Area; an area designated by governmental agencies as requiring special administration or protection.

**Estuary** Widening area at seaward end of river where its current is met and influenced by ocean tides.

**Ethnohistoric** Ethnological information collected during historic times, for instance, that from the Spanish mission registers.

**Export Capability** The capacity or extent to which a utility or electric control area can sell electric power outside its electric system at a given time or during a given set of conditions using all available facilities.

**FAA** Federal Aviation Administration.

**Fault** A fracture or zone of fractures in rock strata which have undergone movement that displaces the sides relative to each other, usually in a direction parallel to the fracture. Abrupt movement on faults is a cause of most earthquakes.

**fbg** Feet below grade.

**FCC** Federal Communication Commission.

**FEIR** Final Environmental Impact Report. The Final EIR includes all comments made to the Draft EIR as well as the responses of the proposer to those comments and is submitted to the state government and the public for review of a proposed project.

**FEIR/S** Final Environmental Impact Report/Statement; last version of document submitted to both state and federal governments. See FEIR.

**FEMA** Federal Emergency Management Agency.

**FERC** Federal Energy Regulatory Commission.

**Firm Purchases** Contractual procurement of electric energy which is intended to have assured availability to the customer.

**Flora** Plants or plant life.

**FRA** Federal Railway Administration.

**Fugitive dust** Airborne pulverized soil particles.

**FTE** Full-time equivalent.

**g** (a) gram; (b) gravities, a unit of acceleration equal to that produced on free falling bodies at the earth's equator.

**General Scour** Degradation of a channel bed as a result of imbalance of channel sediment-transport capacity and supply during a single stream flow.

**Generation** The production of electricity from other forms of energy such as combustion, falling water or thermal transfer.

**Generation Capacity** Maximum electric production limit for which a generator is rated. The maximum limit fluctuates with changes in temperature or other environmental circumstances, depending on the type of machine.

**GIS** Geographic Information System.

**gpd** Gallons per day; a measure of flow rate.

**gWh** Gigawatt-hour; A measure of electric energy. One million kilowatt-hours.

**Hazard Index** The estimated exposure to a given substance being discharged from a facility divided by the acceptable exposure level for that substance summed over all pollutants.

**HC** Hydrocarbons; a mixture of hydrocarbon compounds usually referred to in the vapor state.

**Herpetofauna** Biological term for reptiles.

**Herpetologist** Person who studies reptiles.

**HF** High frequency.

**High flow** High volumes of water, as into an estuary, produced by copious runoff after period of heavy rainfall.

**HMA** Housing Market Area; see Socioeconomics.

**Horsepower** A unit of power equivalent to 33,000 foot-pounds per minute or 745.7 watts of electricity.

**Hydrocarbons, nonmethane** Mixture or concentration of hydrocarbons with the methane fraction ignored. One of many formulations for reactive hydrocarbons.

**Hydrocarbons, reactive** Mixture or concentration of hydrocarbons with fraction assumed to be non-reactive removed from consideration. See VOC.

**Hz** Hertz.

**IEEE** Institute of Electrical and Electronic Engineers.

**Import Capability** The capacity or extent to which a utility or electric control area can purchase electric power from outside its electric system at a given time or during a given set of conditions using all available facilities.

**Imports** The purchase of electricity by a utility from another utility outside its electric system.

**INIRC** International Non-Ionizing Radiation Committee.

**Inventory, emission** A list of daily or annual emissions, listed by pollution source category (e.g., trains, refineries, agriculture, etc.).

**Inversion** A layer of air in the atmosphere in which the temperature increases with altitude at a rate greater than normal (adiabatic). Pollutants tend to be trapped below the inversion.

**Invertebrate** Animals that lack a spinal column.

**IPP** Intermountain Power Project.

**IPPs** Independent Power Producers.



**IRPA** International Radiation Protection Association.

**ISCST** Industrial Source Complex (short term); an EPA-approved computer air quality module.

**ISO** Independent System Operator.

**Isobath** Contour line that is at equal depth along its length.

**kcil** Thousand circle mils; refers to wire size.

**km<sup>2</sup>** Square kilometer.

**KOP** Key Observation Point; one or a series of points on a travel route or at a use area where the view of the proposed project would be most revealing.

**kV** Kilovolt. A measure of electric voltage, one thousand volts.

**kV/m** Kilovolts per meter (see kV).

**KVPs** Key viewpoints.

**Kwh** Kilowatt hour.

**L<sub>10</sub>** An average of noise levels that are exceeded 10 percent of the time during the measurement period.

**L<sub>eq</sub>** Average level of sound determined over a specific period of time.

**L<sub>dn</sub>** The average ambient noise level in dBA with levels between 10 p.m. and 7 a.m. increased by 10 dBA.

**Lateral Erosion** Horizontal movement of a channel bank, or channel widening, caused by water-transport of bank material.

**Lead Agency** For the proposed Jefferson-Martin 230 kV Transmission Line Project, the CPUC is the State Agency.

**Liquefaction** The process of making or becoming liquid (soils).

**LFZ** Likely Fault Zone.

**Load Centers** Major areas of electricity consumption such as large cities or large industrial facilities.

**LIRP** Local Integrated Resource Plan.

**Local Scour** Lowering of a channel bed as a result of a local disturbance to flow, such as bridge piers, a sudden drop or a sharp channel bend.

**LOS** Level of Service; a measure of roadway congestion, ranging from A (free flowing) to F (highly congested).

**Low flow** Low rate of water flow due to scant rainfall and low runoff.

**Low-Flow Incisement** Formation of a local, small channel inside a larger stream channel as a result of low-discharge flows.

**LUST** Leaking underground storage tank.

**m** Meter, length equal to 30.48 inches.

**Macroinvertebrate** Pertaining to invertebrates that are visible to the naked eye.

**Macroalgae** Pertaining to large algae, such as kelp, as distinguished from microscopic algae.

**Median** The mid-value is a series of values, with half having greater value and half lower value. To be distinguished from "average."

**MEI** Maximum Exposed Individual; see Air Quality.

**mG** Milligauss. A measure of magnetic field strength.

**MGD** Million gallons per day.

**Microclimate** Distinctive climate within a small geographic area.

**Micron** One millionth of a meter.

**Microwave** Radio communications which are of sufficiently short wavelength (or high frequency) as to be focused on a line-of-sight between sending and receiving equipment. These radio signals carry information for control purposes.

**Milligauss (mG)** Measurement of magnetic field strength.

**Mixing height** The distance from the ground to a daytime (temperature) inversion layer.

**MMI** Modified Mercalli Intensity (scale); subjective numerical index describing the severity of an earthquake in terms of its observed effects on humans, man-made structures, and the earth's surface.

**Monitoring station** A mobile or fixed site equipped to measure instantaneous or average ambient air pollutant concentrations.

**MP** Milepost.

**Multipathway Pollutants** Pollutants that pose a risk to public health through individual inhalation, ingestion (from food, water, or soil) or dermal absorption.

**MVA** Megavoltamperes, is defined as the apparent power of the line. MVA is composed of both real power (measured in megawatts or MW) and reactive power (measured in megavoltamperes reactive or MVAR). The cable circuit rating (expressed in MVA) is the apparent power rating.

**MVAR** Megavoltamperes reactive.

**MW** Megawatt; a measure of electric power. One thousand kilowatts or one million watts.

**Mw** Moment magnitude; measurement by which earthquakes are measured.

**NAAQS** National Ambient Air Quality Standards; see AAQS.

**NACE** National Association of Civil Engineers.

**NAHC** Native American Heritage Commission.

**Native Generation** Electricity generation within a utilities service area.

**NDOT** Nevada Department of Transportation.

**NEPA** National Environmental Policy Act.

**NERC** National Electric Reliability Council.

**NESC** National Electrical Safety Code.

**NHPA** National Historic Preservation Act.

**NIEHS** National Institute of Environmental Health Sciences.

**Nitrogen oxides** A gaseous mixture of nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>) and symbolically represented as NO<sub>x</sub>.

**NO** Nitric oxide. A molecule of one nitrogen and one oxygen atom. Results usually from combustion of organic substances containing nitrogen and from recombination of nitrogen decomposed in air during high temperature combustion.

**NO<sub>2</sub>** Nitrogen Dioxide. A molecule of one nitrogen and two oxygen atoms. Result usually from further oxidation of nitric oxide (NO) in the atmosphere. Ozone accelerates the conversion.

**NO<sub>x</sub>** Nitrogen Oxides; poisonous and highly reactive gases produced when fuel is burned at high temperatures, causing nitrogen in the air to combine with oxygen.

**Noise level, median** The level of noise exceeded 50 percent of the time. Usually specified as either the daytime or the nighttime median noise level. Also given the designation L<sub>50</sub>.

**Non-firm Purchases** Electric energy purchases having limited or no assured availability.

**Non-utility Owned Generation** Generation which is possessed by a entity not in the business for the sale of electricity at retail.

**NOP** Notice of Preparation.

**NPDES** National Pollutant Discharge Elimination System.

**NPP** Northwest Power Pool.

**NPPA** Native Plant Protection Act.

**NPS** National Parks Service

**NRHP** National Register of Historic Places.

**NRS** Northern Receiving Station.

**NSR** New Source Review; see Air Quality.

**NWR** National Wildlife Refuge.

**O<sub>3</sub>** Ozone; a colorless gas formed by a complex series of chemical and photochemical reaction of reactive organic gases, principally hydrocarbons, with the oxides of nitrogen, which is harmful to the public health, the biota and some materials.

**OES** Office of Emergency Services.

**OHV** Off-Highway Vehicle.

**ORV** Off-Road Vehicles.

**OSF&G** Open Space, Forestry, and Grazing.

**OSHA** U.S. Occupational Safety and Health Administration, a federal agency regulating the health safety of the work place.

**Oxidant** A mixture of chemically oxidizing compounds formed from ultraviolet stimulated reactions in the atmosphere, with ozone a principal fraction.

**Ozone** A molecule of three oxygen atoms — O<sub>3</sub>. A principal component of "oxidant" in photochemically polluted atmospheres.

**PA** Programmatic Agreement.

**PAH** Polyaromatic hydrocarbons; hazardous air pollutants.

**Particulate matter (particulates)** Very fine sized solid matter or droplets, typically averaging one micron or smaller in diameter. Also called "aerosol."

**PCBs** Polychlorinated biphenyls.

**PEA** Proponent's Environmental Assessment; required by CPUC when filing application for CPCN.

**PG&E** Pacific Gas and Electric Company. The Applicant for the Jefferson-Martin 230 kV Transmission Line Project.

**pH** A measure of acidity or alkalinity.

**Photochemical Pollutant** Reactive organic compounds (ROC) and nitrogen oxides (NO<sub>x</sub>), photochemical pollutants that absorb energy from the sun and react chemically to form ozone (O<sub>3</sub>).

**Phytoplankton** Microscopic plants that form the base of the marine/aquatic food chain.

**Planning Reserves** As required by WSCC Operating Criteria, WSCC member utilities must have standby generation capacity, in addition to existing demand requirements, to insure an adequate level of service.

**PM<sub>10</sub>** Particulate matter less than 10 micron in size, which is small enough to be inhaled deeply into the lungs and cause disease.

**ppb** Parts per billion, a measure of the amount of one substance in a second, which is the carrier.

**ppm** Parts per million, a measure of the amount of one substance found in a carrier.

**ppt** Parts per thousand, a measure of the amount of one substance found in a carrier.

**PSD** Prevention of Significant Deterioration; a federal set of limits on emissions of sulfur oxide and particulates to protect air quality in non-urban area.

**psi** Pounds per square inch.

**Psig** The gauge value of pressure in pounds per square inch.

**PTO** Permit to Operate; Granted by the APCD after source testing and validation of permits.

**Rating** Maximum operation limit of transmission or generation facilities, as established by WSCC and/or NPP operating and reliability criteria guidelines. Utility facilities and interconnections can be rated either for individual or simultaneous operation, where simultaneous operations take into consideration collective WSCC or NPP utilities.

**Reactive Power** A component of power production that is not sold.

**Riparian** Area along the banks of a river or lake supporting specialized plant and animal species.

**Riprap** A foundation constructed of broken stones or boulders loosely placed or thrown together, as in deepwater, on a soft bottom, or as a seawall to protect against erosion.

**RMP** Resource Management Plan.

**RNA** Research Natural Area.

**ROC** Reactive Organic Compounds (see Air Quality) that are chemically sensitive to the ultraviolet light in sunlight.

**ROW** Right of way; an easement, lease, permit, or license across an area or strip of land to allow access or to allow a utility to pass through public or private lands.

**RTU** Remote Terminal Units; a device that takes data from field transmitters that detect pressure, temperature and other parameters.

**Ruderal** Growing where the natural vegetation cover has been disturbed.

**RWQCB** Regional Water Quality Control Board.

**SCF** Standard cubic foot; a measure of volume or rate of flow of liquid.

**SCS** Soil Conservation Service.

**SEA** Significant Ecological Area; an area containing an ecosystem of value and requiring government protection.

**Seedbank** The layer of topsoil containing native plant seed material, which is frequently used as a "seed bank" for revegetation of native plants.

**Self-Owned or Utility-Owned Generation** Generation which is possessed by a utility.

**Sensitive Receptor** Land uses adjacent to or within proximity to the Proposed Project that could be impacted by construction, operation, and maintenance activities.

**SFPUC** San Francisco Public Utilities Commission

**Shrink-swell potential** The expansion or contraction of primarily clay-rich soils during alternating wetting and drying cycles.

**SHPO** State Historic Preservation Office.

**SIP** State Implementation Plan (see Air Quality); a document required periodically from each county by EPA that indicates the progress and the planning of the county for improving the quality of its air.

**Skylining** Extending above the horizon line.

**SO<sub>x</sub>** Sulfur oxides. The group of compounds formed during combustion or thereafter in the atmosphere of sulfur compounds in the fuel, each having various levels of oxidation, ranging from two oxygen atoms for each sulfur atom to four oxygen atoms.

**SO<sub>2</sub>** Sulfur Dioxide; a corrosive and poisonous gas produced from the complete combustion of sulfur in fuels.

**SPCC** Spill prevention containment and counter measure.

**SR** State Route.

**SSZ** Special studies zone.

**Stream Scour** Lowering of a stream bed during the passage of a single stream flow. Stream scour can be local in nature (see Local Scour) or more wide-spread (see General Scour).

**Substrate** Geologic term describing soil or geologic layers underlying the ground surface.

**Sulfates** Compounds in air or water that contain four oxygen atoms for each sulfur atom. See SO<sub>x</sub>.

**Sulfur oxides** A gaseous mixture of sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide (SO<sub>3</sub>) and symbolically represented as SO<sub>x</sub>. Can include particulate species such as sulfate compounds (-SO<sub>4</sub>).

**SWPPP** Storm Water Pollution Prevention Plan.

**TAC** Toxic Air Contaminants.

**TC** Transportation corridor.

**TCM** Transportation Control Measures.

**TCP** Traffic Control Plans.

**TDM** Transportation Demand Management; a system of analysis designed to reduce traffic levels and thereby reduce air pollution.

**TDS** Total Dissolved Solids.

**Terrestrial** Related to or living on land. Terrestrial biology deals with upland areas as opposed to shorelines or coastal habitats.

**tpd** Tons per day.

**Transmission Service Customers** Wholesale electricity utilities or other entities which pay for the use of another utility's facilities to transmit electric power from one point to another.

**TSP** Total Suspended Particulates; solid or liquid particles small enough to remain suspended in air.  $PM_{10}$  is the portion of TSP that can be inhaled.

**Turbidity** Cloudiness or muddiness of water, resulting from suspended or stirred up particles.

**ug/m<sup>3</sup>** Millionths of a gram per cubic meter, a unit of concentration in liquids or gases.

**UBC** Uniform Building Code.

**UPRR** Union Pacific Railroad.

**UPRS** Union Pacific Railroad System.

**USA** Underground Service Alert.

**USACE** U.S. Army Corps of Engineers.

**USCS** Unified Soils Classification System.

**USDA** U.S. Department of Agriculture.

**USFS** U.S. Forest Service.

**USFWS** U.S. Fish and Wildlife Service.

**UTBP** Underground Through Business Park.

**Utility Corridor** A strip of land, or an easement, on which utility facilities such as power lines and pipelines are constructed.

**V/C** Volume to Capacity ratio; a measure of the capacity of a roadway. When V/C is 100 percent, no more traffic can be accommodated.

**VAC** Visual absorption capacity.

**Viscosity** Term applied to a fluid indicating its resistance to shear. In common terms, how "sticky" the fluid.

**Visual sensitivity** Consideration of people's uses of various environments and their concerns for maintenance of scenic quality and open-space values; examples of areas of high visual sensitivity would be areas visible from scenic highways, wilderness areas, parks, recreational water bodies, etc.

**VMT** Vehicle miles traveled, usually per day.

**vpd** Vehicles per day; see Transportation.

**VRM** Visual Resource Management.

**WATCH** Work Area Traffic Control Handbook.

**Watershed** The area contained within a drainage divide above a specified point on a stream.

**Wetland** Lands transitional between obviously upland and aquatic environments. Wetlands are generally highly productive environments with abundant fish, wildlife, aesthetic, and natural resource values. For this reason, coupled with the alarming rate of their destruction, they are considered valuable resources, and several regulations and laws have been implemented to protect them.

**Wheeling** An electric operation wherein transmission facilities of one system are utilized to transmit power of another system.

**WHO** World Health Organization.

**WPCP** Water Pollution Control Plant.

**WSCC** Western System Coordinating Council.

**WSF** Water Soluble Fraction.

**WUG** Western Utility Group.

**Zooplankton** Microscopic marine/aquatic animals generally carried within a water mass.