

**ACRONYMS**

<b>Acronym/Abbreviation</b>	<b>Definition</b>
°C	Degree Celsius
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	asbestos-containing material
ACP	area contingency plan
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AF	acre-feet
afbm	artificial fill over bay mud
AF/Yr	acre-feet per year
API	American Petroleum Institute
API RP	American Petroleum Institute Recommended Practice
API SP	American Petroleum Institute Standard Practice
AQCR	Air Quality Control Region
ASD	Acceptable Separation Distance
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BARCT	Best Available Retrofit Control Technology
BART	Bay Area Rapid Transit
Basin	San Francisco Bay Air Basin
Bay	San Francisco Bay
Bay Area	San Francisco Bay Area
BBL	barrel
BCDC	Bay Conservation and Development Commission
BMP	best management practice
BNSF	BNSF Railway Company
BPH	barrel(s) per hour
BPTCP	Bay Protection and Toxic Cleanup Program
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
cal. A.D.	calibrated Anno Domini
cal. B.P.	calibrated Before Present
Cal EMA	California Emergency Management Agency

Cal-EPA	California Environmental Protection Agency
Cal OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
California Register	California Register of Historic Resources
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAP	Clean Air Plan
CAP	Climate Action Plan (City of Pittsburg)
CAT	Climate Action Team
CBC	California Building Code
CCAR	California Climate Action Registry
CCC	California Coastal Commission
CCCFCDD	Contra Costa County Flood Control District
CCCFPD	Contra Costa County Fire Protection District
CCCHS	Contra Costa County Health Services
CCCSD	Contra Costa County Sheriff's Department
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CCWD	Contra Costa Water District
CDE	California Department of Education
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife (formerly the CDFG)
CDPR	California Department of Pesticide Regulation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH <sub>4</sub>	methane
CHP	California Highway Patrol
City	City of Pittsburg
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNWS	Concord Naval Weapons Station
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide

CO <sub>2</sub> e	carbon dioxide equivalent
County	Contra Costa County
CPUC	California Public Utilities Commission
CRSB	Coast Ranges-Sierra Block
CSLC	California State Lands Commission
CUPA	Certified Unified Program Agency
CVP	Central Valley Project
CWA	Clean Water Act
CWS	Community Warning System
cy	cubic yard
CZMA	Coastal Zone Management Act
dB	decibels
dBA	decibels measured on the A-weighted scale
DDSD	Delta Diablo Sanitation District
Delta	Sacramento-San Joaquin River Delta
d/H	diameter to height ratio
Division	CCCFPD Operations Division
DMMO	Dredged Material Management Office
DOI	Department of the Interior
DOT	U.S. Department of Transportation
DPC	Delta Protection Commission
DPM	diesel particulate matter
DPS	Distinct Population Segment
DWR	Department of Water Resources
dwt	dead weight tonnage
ECA	Emission Control Area
ECCC HCP/NCCP	East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan
EEZ	exclusive economic zone
EFH	essential fish habitat
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERC	emission reduction credit
ESA	Endangered Species Act
ESU	evolutionary significant unit
FED	Functional Equivalent Document
FEMA	Federal Emergency Management Agency
FMP	fishery management plan

FRA	Federal Railroad Administration
FRP	Facility Response Plan
FTA	Federal Transit Administration
FWSS	Future Water Supply Study
g	standard gravity unit
GHG	greenhouse gas
g/kW-hr	grams per kilowatt-hour
g.r.t.	gross registered tons
HAPC	Habitat Areas of Particular Concern
HAPs	hazardous air pollutants
HARP	Hotspots Analysis and Reporting Program
HCA	High Consequence Area
HCP	Habitat Conservation Plan
HDPE	high-density polyethylene
HMBP	Hazardous Materials Business Plan
hp	horsepower
HRA	health risk assessment
HSC	Health and Safety Code
HUD	Department of Housing and Urban Development
Hz	Hertz
IBC	International Building Code
IGA	inert gas systems
IIPP	Injury and Illness Prevention Program
IM	Integrity Management [Program]
IMO	International Maritime Organization
in/sec	inches per second
kV	kilovolt
KVA	kilovolt-amperes
LAER	lowest achievable emission rate
LEPC	Local Emergency Planning Committee
LNМ	Local Notice to Mariners
LORS	laws, ordinances, regulations, and standards
LOS	Level of Service
LTMS	Long-term Management Strategy
L <sub>dn</sub>	day-night noise level
L <sub>eq</sub>	equivalent noise level over a specified period of time
L <sub>v</sub>	vibration velocity level
m	meter

MARPOL	International Convention for the Prevention of Pollution from Ships (marine pollution)
MBTA	Migratory Bird Treaty Act
MFD	Marine Facilities Division of the California State Lands Commission
mg/kg	milligram/kilogram
mg/L	milligrams per liter
Mgd	million gallons per day
MGO	marine gas oil
MHHW	mean higher high water
MHW	mean high water
mi <sup>2</sup>	square mile
MISA	Marine Invasive Species Act
MLLW	mean lower low water level
MLW	mean low water
mm/yr	millimeters per year
MMbtu/hr	British thermal units per hour
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MOTEMS	Marine Oil Terminal Engineering and Maintenance Standards
MP	milepost
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MSDS	Material Data Safety Sheet
MT	metric ton
MTL	mean tide level
M <sub>w</sub>	moment magnitude
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NANPCA	Nonindigenous Aquatic Nuisance Prevention and Control Act
National Register	National Register of Historic Places
NCCPA	California Natural Community Conservation Planning Act
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NESHAPs	National Emission Standard for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
nm	nautical miles

NMFS	National Marine Fisheries Service
N <sub>2</sub> O	nitrous oxide
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	mono nitrogen oxides (nitrogen oxide)
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	National Resources Conservation Service
NRDA	Natural Resource Damage Assessment
NRG	NRG Energy, Inc.
NSPS	new source performance standards
NSR	new source review
NWI	National Wetlands Inventory
O <sub>3</sub>	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OHP	California Office of Historic Preservation
OPA	Oil Pollution Act
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration
OSPR	Office of Oil Spill Prevention and Response
OSRO	oil spill response organization
OVP	Old Valley Pipeline
OWS	oil water separator
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	primary constituent element
PERP	Portable Equipment Registration Program
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM <sub>2.5</sub>	particulate matter less than 2.5 micrometers in diameter
PM <sub>10</sub>	particulate matter less than 10 micrometers in diameter
PMAO	Petro-Chemical Mutual Aid Organization
PMC	Pittsburg Municipal Code
POC	precursor organic compound
POD	Pelagic Organism Decline
PORTS	Physical Oceanographic Real Time System

ppm	parts per million
ppt	parts per thousand
PPV	peak particle velocity
PREP	Preparedness for Response Exercise Program
project	WesPac Pittsburg Energy Infrastructure Project
PSD	prevention of significant deterioration
psi	per square inch
PSR	Planning Survey Report
PWTP	Pittsburg Water Treatment Plant
QA/QC	quality assurance/quality control
RCRA	Resource Conservation and Recovery Act
REA	Resource Equivalency Analysis
RHNA	Regional Housing Needs Allocation
RMP	San Francisco Estuary Institute Regional Monitoring Program for Trace Substances
RMS	root mean square
RNA	Regulated Navigation Area
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
Scfm	standard cubic feet per minute
SCS	Sustainable Community Strategies
SEL	Sound Exposure Level
SFM	State Fire Marshal
SFRWQCB	San Francisco Regional Water Quality Control Board
SHMA	Seismic Hazards Mapping Act
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act
SMP	stormwater management plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	oxides of sulfur
SPBPC	San Pablo Bay Pipeline Company
SPCC	Spill Prevention Control and Countermeasure
SPL	sound pressure wave
SQO	sediment quality objective
SSC	suspended sediment concentration
SSURGO	Soil Survey Geographic Database

SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAOC	Tidewater Association Oil Company
Terminal	WesPac Energy-Pittsburg Terminal
TMDL	total maximum daily load
TRC	TRC Solutions, Inc.
TSS	Traffic Separation Scheme
UBC	Uniform Building Code
UDA	Urban Development Area
UFC	Uniform Fire Code
UPRR	Union Pacific Railroad
USA	Underground Service Alert
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USC	United States Code
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UWMP	Urban Water Management Plan
V/C	volume to capacity ratio
VCS	vapor control system
VdB	vibration velocity level in decibels
VOC	volatile organic compound
VTs	Vessel Traffic Service
WEAP	Worker Environmental Awareness Program
WesPac	WesPac Energy-Pittsburg LLC
WCD	worst-case discharge
WGCEP	Working Group on California Earthquake Probabilities
WPGS	Willow Pass Generating Station
WQO	water quality objective
WSA	water supply assessment
WSPA	Western States Petroleum Association



## GLOSSARY

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**Access trestle:** a platform made of trestles that provides vehicular and pedestrian access from the shore to a platform over water.

**Aesthetic value:** the overall aesthetic value of an area is a measure of its visual character and visual quality, factored with the viewer response to the area.

**Alluvium:** a deposit of clay, silt, sand, and gravel left by flowing streams in a river valley or delta.

**Annular space:** the area between the aboveground storage tank and secondary containment wall, berm or containment feature.

**Anticlines:** a rock formation that has a convex up fold formation that has its oldest beds at its core.

**Aquifer:** A geologic formation that is saturated and is capable of providing a significant quantity of water.

**Attainment:** applies to specific criteria pollutants of air quality, if air quality standards are achieved.

**Backfill:** To refill an excavation and restore the former ground surface and/or to preserve the environment to make it unrecognizable as having been excavated.

**Background noise level:** L<sub>90</sub> or the sound level exceeded 90 percent of the time.

**Backthrust:** a thrust in which displacement is in an opposite direction to that of the main thrust propagation.

**Basement rock:** the oldest igneous and metamorphic rocks recognized in a given area that underlie all the sedimentary formations.

**Beneficial use:** the use of water for the benefit of the public or wildlife

**Berth:** a location in a port or harbor used specifically for mooring vessels while not at sea.

**Best management practice:** a technique, process, activity, or structure used to reduce a potential impact, such as the pollutant content of a discharge.

**Breasting dolphins:** dolphins designed to carry the lateral load during vessel impact, transferred through a fender system that absorbs the energy generated by impact.

**British thermal unit:** traditional unit of energy equal to about 1055 joules. It is approximately the amount of energy needed to heat 1 pound of water from 39 degrees (°) Fahrenheit (F) to 40°F.

**Caretaker status:** A non-operating condition in which the installations, materiel, and facilities are in a care and limited preservation status. Only a minimum of personnel is required to safeguard against fire, theft, and damage from the elements.

**Cenozoic era:** an era of geologic time that spans from approximately 65 million years ago and continues to the present.

**CNEL:** or Community Noise Equivalent Level, is similar to  $L_{dn}$  and is the A-weighted sound level over a 24-hour period with an additional 10 dB penalty imposed on sounds that occur between 10 p.m. and 7 a.m., and 5 dB penalty imposed on sounds that occur between 7 p.m. and 10 p.m. CNEL was developed in California for evaluating noise levels in residential communities.

**Common-carrier:** a company that transports goods (such as crude oil, or partially refined crude oil products) for any person or company and that is responsible for any possible loss of good during transport. A common carrier offers its services to the general public under license or authority provided by a regulatory body.

**Cretaceous:** a geologic period and system from approximately 135 million to 65 million years ago.

**Criteria pollutants:** air pollutants pervasive in urban environments and closely monitored due to immediate public health issues. Permissible levels of these pollutants are standardized through health-based criteria (science based guidelines). National and State ambient air quality standards have been established for such pollutants.

**Critical volume:** a volume of traffic that causes a significant conflict with opposing traffic. This occurs where left-turning traffic obstructs through traffic at an intersection. The critical volume for an intersection is calculated as the number of vehicles turning left plus the number of through vehicles at a given intersection for each flow direction possible at that intersection.

**Crude oil (virgin crude oil):** oil that is minimally treated to reduce water content to merchantable grade, which is typically less than 3 percent water.

**Cumulative effects:** According to Section 15355 of the California Environmental Quality Act (CEQA) Guidelines, “two or more individual effects, which, when considered together, are considerable or which compound or increase other environmental impacts.”

**Depression:** a low, roughly concave topographic feature in a landscape

**Derrick:** a lifting device composed of one tower, or guyed mast such as a pole which is hinged freely at the bottom. It is controlled by lines (usually four of them) powered by some means such as man-hauling or motors, so that the pole can move in all four directions. It is commonly used in docks and onboard ships.

**Direct greenhouse gas emissions:** greenhouse gas emissions resulting from sources owned or operated by WesPac Energy–Pittsburg LLC as part of the WesPac Energy-Pittsburg Terminal.

**Dolphin:** a manmade, fixed structure not connected to shore that consists of piles driven into the seabed in a circular pattern and drawn together with a wire rope. These structures are used to guide and secure ships to a fixed location for loading, unloading, or storage. Dolphins are typically used when it would be impractical to extend the shore to provide a dry access facility, for example, when ships (or the number of ships expected) are longer than the length of the berth/pier.

**Draft:** the depth of a vessel's keel below the water line.

**En echelon:** closely-spaced, parallel or subparallel, overlapping or step-like minor structural features in rock (faults, tension fractures), which lie oblique to the overall structural trend.

**Endangered:** a species is considered *endangered* when its survival and reproduction in the wild are in immediate jeopardy.

**Environmental noise:** Environmental noise is defined as unwanted sound resulting from vibrations in the air. Excessive noise can cause annoyance and adverse health effects. Annoyance can include sleep disturbance and speech interference. It can also distract attention and make activities more difficult to perform.

**External floating roof:** a tank roof with an open top (i.e., there is no fixed roof above it.)

**Fender:** a fender is a bumper used to absorb the kinetic energy of a berthing boat or vessel against a jetty, quay wall or other vessel. Fenders are used to prevent damage to boats, vessels and berthing structures. Fenders are constructed in several ways, typically of rubber, foam elastomer, or plastic.

**Folds:** when one or a stack of originally flat and planar surfaces, such as sedimentary strata, are bent or curved as a result of permanent deformation.

**Freeboard:** the vertical distance between the design water surface elevation and the elevation of the structure or facility that contains the water.

**Gangway tower:** provides access between the berth and vessels for boarding and disembarking safely.

**Geologic sequestration:** the process of injecting carbon dioxide, captured from an industrial or energy-related source, into deep subsurface rock formations for long-term storage.

**Ground-borne noise:** the rumbling sound caused by the vibration of surfaces.

**Harm:** defined by U.S. Fish and Wildlife Service as “an act that kills or injures wildlife.”

**Hazard Index:** a summation of the hazard quotients for all chemicals to which an individual is exposed. A hazard index value of 1.0 or less than 1.0 indicates that no adverse human health effects are expected to occur, and a higher hazard index value indicates that adverse human health effects are more likely to occur. *Chronic* hazards are health effects associated with relatively long period of continuous or repeated exposure. *Acute* hazards are health effects that could occur rapidly after short-term exposure.

**Historic properties:** defined by the National Historic Preservation Act as any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property.

**Historical resource:** a CEQA term that includes buildings, sites, structures, objects, records, or manuscripts that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, and is eligible for listing or is listed on the California Register of Historic Resources.

**Holocene:** a geological epoch of the Cenozoic Era that began at the end of the Pleistocene approximately 10,000 years ago and continues to the present.

**Hose mast system:** a system of hoses and connectors used to offload product from vessels onto shore.

**Hydric soil:** a soil that is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

**Impervious surface:** a hard surface area which either prevents or retards the entry of water into the soil; and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development.

**Indirect greenhouse gas emissions:** greenhouse gas emissions that result as a consequence of project operation activities, but occur at sources owned or controlled by other entities.

**Inert gas system:** a system on a tank vessel designed to prevent an explosion in the cargo tanks by replacing the cargo, as it is pumped out, by an inert gas, often the exhaust of the ship's engine.

**Injury:** a measurable adverse change, either long- or short-term, in the chemical or physical quality of the viability of a natural resource.

**Interagency Cooperation:** Section 7 of the Endangered Species Act and the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species. Consultation with the U.S. Fish and Wildlife Service would be undertaken by the U.S. Army Corps of Engineers (USACE) during their permit approval process.

**Internal floating roof:** a tank roof that floats on the liquid stored in the tank, with the objective to minimize or eliminate the potential gasses above the liquid.

**Kilovolt:** the electrical unit of potential difference equal to 1,000 volts.

**L<sub>90</sub>, L<sub>50</sub>, and L<sub>10</sub>:** the A-weighted sound levels that are exceeded at the specified percentage of time. For example, L<sub>90</sub> is the sound level exceeded 90 percent of the time and is often considered the background, or residual, noise level. Similarly, L<sub>10</sub> is the sound level exceeded 10 percent of the time and is commonly used as a measurement of intrusive sounds such as aircraft overflight.

**Lateral fault:** when one fault surface is usually near vertical and the footwall moves either left or right or laterally with very little vertical motion. This is also known as strike-slip fault. Lateral faults can be either right or left-lateral faults depending on the motion of one block in relation to the other.

**L<sub>dn</sub>:** or day-night noise level, is the A-weighted sound level over a 24-hour period with an additional 10 dB penalty imposed on sounds that occur between 10 p.m. and 7 a.m.

**L<sub>eq</sub>:** the equivalent noise level over a specified period of time (i.e., one hour). It is a single value of sound that includes all of the varying sound energy in a given duration.

**Level of Service:** a measure of traffic conditions on a road or intersection, expressed in ratings from "A" to "F," with "A" representing free-flow traffic conditions and "F" signifying long delays and stop-and-go conditions. LOS is measured as a comparison between the amount of traffic on a road and the capacity for which the road or intersection was designed.

**Lightering:** the process of transferring cargo between vessels of different sizes, usually between a large tanker and a smaller tanker or tank barge. Lightering is undertaken to reduce a vessel's draft in order to enter port facilities which cannot accept very large ocean-going vessels.

**Lineation:** any linear arrangement of features found in a rock.

**Liquefaction:** phenomenon during which loose, saturated, cohesionless soils (i.e., sandy) temporarily lose shear strength during strong ground shaking.

**Lmax:** the maximum noise level generated by a source at a specified distance, usually taken to be 50 feet.

**Loading and unloading platforms:** loading and unloading platforms allows for the loading and unloading operations and provides the access to the ships berth. For this reason, a loading and unloading platform may be provided with cranes, loading arms, and a gangway tower. The loading platform can also support firefighting, and operational system devices.

**Local magnitude:** the older measurement of earthquake magnitude that has been replaced by the more modern Moment Magnitude. Also known as "The Richter Scale."

**Marine Oil Terminal Engineering and Maintenance Standards (MOTEMS):** Chapter 31F, Title 24, Part 2 of the California Code of Regulations, MOTEMS apply to all existing and new marine oil transfer and storage terminals in California, and include rigorous criteria for inspection, structural analysis and design, mooring and berthing, geotechnical considerations, and mechanical and electrical systems. Conformance to MOTEMS is regulated by the Marine Facilities Division of the California State Lands Commission.

**Marine operations manual:** a document that must be prepared by any marine terminal that transfers crude oil or other petroleum product between a marine vessel and the terminal. Such a document is required by both the U.S. Coast Guard (USCG) and, in California, the California State Lands Commission.

**Mean lower low water level:** the average daily low tide whereby the lowest low tide is averaged.

**Moor:** to fasten a vessel to a fixed object, such as a bollard, pier, quay, or the seabed, or to a floating object (e.g., an anchor buoy).

**Mooring dolphins:** a cluster of piles to which a ship is tied.

**Mesozoic:** an era of geologic time that spans from approximately 250 million years ago to about 65 million years ago.

**Moment magnitude:** measure of the size of earthquakes in terms of the total energy released during an earthquake. The moment magnitude is calculated by the rigidity of the Earth multiplied by the average amount of slip on the fault and the size of the area that slipped. The moment magnitude scale was developed in the 1970s to replace the older Richter Magnitude Scale.

**Non-attainment:** applies to specific criteria pollutants of air quality, if air quality standards are violated.

**Non-point source:** a dispersed source of pollutants not discharged from an explicit origin.

**Normal fault:** A geologic fault in which the hanging wall has moved downward relative to the footwall. Normal faults occur where two blocks of rock are pulled apart, as by tension.

**Oil spill response organization:** An organization established to respond to oil spills. The equipment and capabilities of such organizations are reviewed by the USCG and they are classified as being able to supply a specified level of response capability.

**Ophiolites:** distinctive assemblages of mafic, ultramafic, and felsic igneous rocks from the oceanic crust and mantle that have been uplifted, exposed above sea level, and emplaced onto continental crustal rocks.

**Orogeny:** refers to forces and events leading to a severe structural deformation of the Earth's crust due to the engagement of tectonic plates.

**Paleocene:** a geological epoch of the Cenozoic Era that began at the end of the Mesozoic Era approximately 65 million years ago and ended 56 million years ago.

**Partially refined crude oil:** crude oil which has been processed in an oil refinery by heating the crude oil and running it through a distillation tower. The specific partially refined crude oil products considered in the proposed project are commercially known as: fuel oil, gas oil, and vacuum gas oil. These are the products that remain after distillation, where lighter products, such as gasoline components, have been removed.

**Permeability:** the ability of a substance to allow gases or liquids to pass through it.

**Permissive phasing:** an intersection where vehicles make left turns at a signal

**Phase:** the portion of a signal cycle allocated to any single combination of one or more traffic movements simultaneously receiving the right-of-way.

**Pig launcher:** launching equipment used for “pigging,” the practice of using pipeline inspection gauges or ‘smart pigs’ to perform various maintenance operations on a pipeline. This can be done without stopping the flow of product within the pipeline.

**Pile:** a strong pole driven into the ground and used to support a structure above water.

**Pilotage:** the use of a special mariner that guides ships through dangerous or congested waters, such as harbors or river mouths. However, the pilot is only an advisor, as the captain remains in legal, overriding command of the vessel.

**Planning Method:** a general discussion of intersection operations that is used to define the existing LOS at a signalized intersection given existing traffic volumes, and the projected project-related traffic.

**Pleistocene:** a geological epoch of the Cenozoic Era that began at the end of the Pliocene epoch, approximately 2.6 million years ago, and ended 11,700 years ago.

**Point source:** any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel or other floating craft, from which pollutants are or may be discharged.

**Quaternary:** the most recent geologic period within the Cenozoic Era that began at the end of the Mesozoic Era approximately 65 million years ago and continues to the present.

**Rare:** a species is *rare* when, though not immediately endangered, it exists in such small numbers that it may become endangered if its environment worsens or it is likely to become endangered within the foreseeable future throughout all or a significant portion of its habitat range and may be considered “threatened” as that term is used in the Federal ESA.

**Refinery:** a production facility composed of a group of chemical engineering unit processes and unit operations refining crude oil into high-octane motor fuel (gasoline/petrol), diesel oil, liquefied petroleum gases, jet aircraft fuel, kerosene, heating fuel oils, lubricating oils, asphalt and petroleum coke.

**Reverse fault:** a geologic fault in which the hanging wall has moved upward relative to the footwall. Reverse faults occur where two blocks of rock are forced together by compression.



**Right-of-way:** a strip of land that is granted, through an easement or other mechanism, for transportation purposes. A right-of-way is reserved for the purposes of maintenance or expansion of existing services with the right-of-way. In the case of an easement, it may revert to its original owners if the facility is abandoned.

**Right step:** consists of parallel faults where down throw of all are in the same direction and it gives a step like arrangement.

**Scarps:** a steep cliff formed by movement along one side of a fault. Also known as cliff of displacement, fault cliff, fault escarpment, and fault ledge.

**Scraper trap:** equipment placed in a pipeline for inserting or retrieving a pipeline scraper (pig).

**Seiche:** a standing wave that oscillates in an enclosed or partially enclosed body of water as a result of seismic or atmospheric disturbances creating huge fluctuations of water levels.

**Sump:** a low space that collects any, often-undesirable, liquids, such as stormwater or chemicals. A sump can be an infiltration basin used to manage surface runoff water. A sump pump can be used to remove liquid from the sump.

**Supervisory Control and Data Acquisition:** generally refers to industrial control systems, computer systems that monitor and control industrial, infrastructure, or facility-based processes.

**Surge tank:** (cutter stock) a storage tank at the downstream of a feeder pipe used to absorb sudden rises of pressure as well as quickly provide extra oil during a brief drop in pressure.

**Syncline:** a rock formation that has a convex up fold formation that has its youngest strata in the center.

**Take:** defined under the U.S. Environmental Species Act as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.”

**Tertiary:** a geologic period from 65 million to 2.6 million years ago.

**Throughput:** the quantity or amount of raw material (in this case, virgin crude oil or partially refined crude oil) processed within a given time (e.g., annual throughput or daily throughput).

**Thrust belt:** a series of mountainous foothills, adjacent to an orogenic belt, which form due to contractional tectonics. Fold and thrust belts commonly form in the forelands adjacent to major orogens as deformation propagates outwards.

**Thrust fault:** a dip-slip fault in which the upper block above the fault plane moves up and over the lower block, so that older strata are placed over younger strata.

**Tonal lineations:** a straight topographic feature of regional extent which is thought to represent crustal structure.

**Traffic Separation Scheme (TSS):** A traffic-management route-system ruled by the International Maritime Organization. The traffic lanes (or clearways) indicate the general direction of the ships in that zone; ships navigating within a TSS all sail in the same direction, or they cross the lane at an angle as close to 90 degrees as possible.

**Trestle:** a braced framework of strong posts or piles and splayed crossbeams used to support a road over a depression or water. The splayed vertical elements are known as trestles (i.e., a bridge made of trestles).

**Unique archaeological resource:** a CEQA term defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that it contains information needed to answer important scientific research questions, has a particular quality such as being the oldest of its type or the best available example, or is directly associated with a recognized important prehistoric or historic event or person.

**Vessel traffic service:** a marine traffic monitoring system established by harbor or port authorities.

**Vibration:** an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. For a vibrating floor, the displacement is simply the distance that a point on the floor moves from its static position. The velocity represents the instantaneous speed of the floor movement, and acceleration is the rate of change of the speed.

**Viewer exposure:** viewer exposure is a function of the number of viewers, the number of views seen, the distance of the viewers from the views, and the viewing duration.

**Viewer response:** viewer response is the combination of viewer exposure and viewer sensitivity.

**Viewer sensitivity:** viewer sensitivity relates to the extent of the public's concern for a particular viewshed and change in the viewshed.

**Viscous:** having a thick or sticky consistency with a high resistance to flow.

**Visual character:** Visual character is the combination of the physical components that comprise a particular area or view. Both natural and artificial landscape features contribute to visual character. Character is influenced by geologic, hydrologic, botanical, wildlife, recreational, and urban features. Urban features include those associated with landscape settlements and development, among them roads, utilities, structures, earthworks, and the results of other human activities.

**Visual quality:** Visual quality is the character and condition of a scenic landscape or other visual resource and how it is perceived, preferred, or otherwise valued by the public. It can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area.

**Waters of the United States:** waters which are subject to jurisdiction of the USACE, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899). These waters may include all waters “used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States, the territorial seas, and wetlands adjacent to waters of the United States” (33 Code of Federal Regulations, Part 328, Section 328.3).

**Watershed:** an area or region drained by a river, river system, or other body of water.

**Winnow:** refers to the process of sediments being removed by river or stream currents.