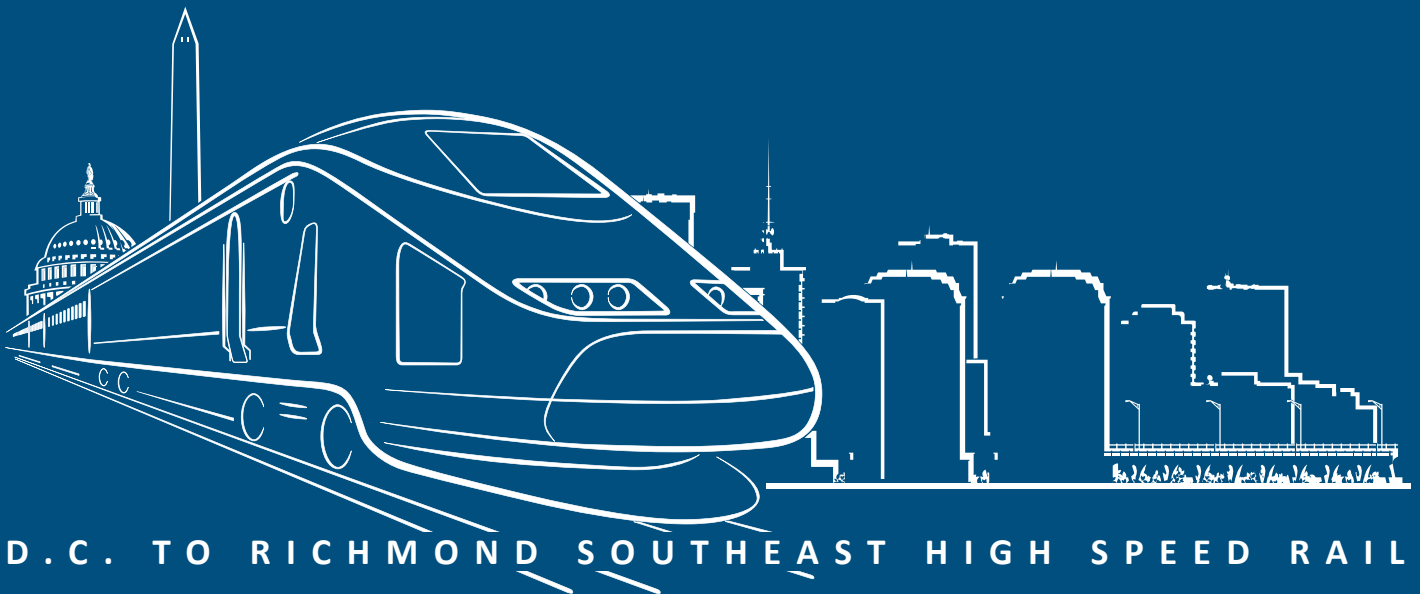


11 GLOSSARY OF COMMONLY USED TERMS



11

GLOSSARY OF COMMONLY USED TERMS

A

Abatement: Reduction; often used to describe noise mitigation.

Accessibility: The ease with which a site or facility may be reached by passengers and others necessary to the facility's intended function. Also, the extent to which a facility is usable by persons with disabilities, including wheelchair users.

Adverse: Negative or detrimental.

Affected Environment: The physical, biological, social, and economic setting potentially affected by one or more of the alternatives under consideration.

Air Pollution: A general term that refers to one or more chemical substances that degrade the quality of the atmosphere.

Alignment: The horizontal and vertical route of a transportation corridor or path.

Alluvial Communities: Habitat of variable vegetation type that has developed in an area with a stream and a well-developed floodplain. The terms "alluvial" and "riparian" are synonymous and imply overbank flooding events.

Alluvium: A term applied to sediments deposited in a streambed, on a floodplain, a delta, or at the base of a mountain during comparatively recent geologic time.

Americans with Disabilities Act of 1990 (ADA): Federal regulation establishing legal requirements for accessibility for those with disabilities.

Amplitude: The magnitude of a periodic wave; also describes the strength or intensity of a signal that travels in wave form, such as a radio signal.

Aquifer: Subsurface geologic unit (rock or sediment) that contains and transmits groundwater.

Area of Potential Effect (APE): The area along the project right-of-way potentially affected by construction and operation of the Project; for archaeological properties, considered to be the area of ground proposed to be disturbed during construction of the undertaking, including grading, cut-and-fill, easements, staging areas, utility relocation, borrow pits, and biological mitigation areas; for historic architecture, considered to be the proposed construction footprint and properties near the undertaking where the undertaking would result in a substantial change from the historic use, access, or noise and vibration levels that were present 50 years ago, or during the period of significance of a property, if different; and for paleontological resources, considered to be a zone 250 feet on both sides of the right-of-way for a given alternative and within 0.5 mile of any potential facilities, including potential stations.

Artifacts: Objects made by people, including tools such as projectile points, scrapers, and grinding implements, waste products from making flaked stone tools (debitage), and non-utilitarian artifacts (beads, ornaments, ceremonial items, and rock art).

At-Grade: At ground surface level; used to describe roadways, river crossings, and track alignments.

Attainment: A condition where a pollutant conforms to or shows levels at or below one or more of the National Ambient Air Quality Standards (NAAQS).

A-Weighted Sound Level: A measure of sound intensity that is weighted to approximate the response of the human ear so it describes the way sound will affect people in the vicinity of a noise source.

B

Ballasted Track: Railways installed over a specific type of crushed rock that is graded to support heavily loaded rolling stock.

Ballastless Track: Railways installed on concrete slabs for support.

Barrier Offset Distance: The lateral distance from the centerline of the track to the face of the barrier, trackside, or other roadside feature.

Barrier: A device intended to contain or redirect an errant vehicle by providing a physical limitation through which a vehicle would not typically pass.

Benthic: Located on the bottom of a body of water or in the bottom sediments, or pertaining to bottom-dwelling organisms.

Best Management Practices (BMPs): Methods designed to minimize adverse effects to the environment. Examples of BMPs include practices for erosion and sedimentation controls, watering for dust control, perimeter silt fences, rice straw bales, and sediment basins.

Biochemical Oxygen Demand (BOD): The quantity of oxygen used by a mixed population of microorganisms in the oxidation of organic matter.

Biodiversity: The variety and abundance of species, their genetic composition, and the communities, ecosystems, and landscapes in which they occur.

Biological Resources: Plant and wildlife species, terrestrial and aquatic habitats (including jurisdictional waters), and habitats of concern (including sensitive plant communities, critical habitat, core recovery areas, mitigation banks, and wildlife corridors).

Biotic Integrity: Condition of the living things in the natural community.

British Thermal Unit: See BTU.

BTU: British thermal unit, equal to the amount of heat required to raise 1 pound of water 1 degree Fahrenheit at 1 atmosphere of pressure.

Buttressing: An action or structure that provides support or stability.

C

Capacity: (1) The maximum number of trains that can be moved in each direction over a specified section of track in a 24-hour period. (2) The maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions. Expressed as vehicles per hour or persons per hour.

Carbon Dioxide (CO₂): A colorless, odorless gas that occurs naturally in the atmosphere; fossil fuel combustion emits significant quantities of CO₂.

Carbon Monoxide (CO): A colorless, odorless, poisonous gas that is formed as a product of the incomplete combustion of carbon and is emitted directly by automobiles and trucks.

Catenary Wire: A suspended (overhead) wire system that supplies power from a central power source to an electric vehicle such as a train.

Choice Passenger: A traveler that has more than one modal option and is making an informed choice to use the passenger rail service.

Clean Air Act of 1970 (CAA): The law that defines the United States Environmental Protection Agency's (EPA) responsibilities for protecting and improving the nation's air quality and the stratospheric ozone (O₃) layer. The CAA protects the general public from exposure to airborne contaminants that are known to be hazardous to human health.

Clean Water Act of 1972 (CWA): The primary federal law protecting the quality of the nation's surface waters, including wetlands. The CWA regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.

Code of Federal Regulations (CFR): A compilation of the general and permanent rules of the executive departments and agencies of the federal government as published in the *Federal Register*. The code is divided into 50 titles that represent broad areas subject to federal regulation.

Cofferdam: Watertight enclosure from which water is pumped to expose the bottom of a body of water and allow construction.

Community Cohesion: The degree to which residents have a sense of belonging to their neighborhood, a level of commitment to the community, or an association with neighbors, groups, and institutions, usually as a result of continued association over time.

Concourse: Area for accommodating patrons at a high-speed rail station.

Congestion Management Plan: A planning document that addresses strategies for reducing traffic congestion.

Connectivity: The degree of "connectedness" of a transportation system, such as a transit network, and the ease with which passengers can move from one point to another within the network or points outside the network.

Conservation Easement: An easement that transfers property development rights to another entity, such as the local jurisdiction or an agricultural protection organization; the land remains in private ownership and may be farmed, but it may not be developed with urban uses. See also Easement.

Construction: Any activity that directly alters the environment, excluding surveying or mapping.

Cooperating Agency: Any agency invited by the lead federal agency that has agreed to participate in the *National Environmental Policy Act of 1969* (NEPA) process and has legal jurisdiction over, or technical expertise regarding, environmental impacts associated with a proposed action.

Corridor: A broad geographical band that follows a general directional flow connecting major sources of trips that may contain several streets, highways, railroads, and transit route alignments.

Cowardin Classification System: A comprehensive classification system of wetlands and deepwater habitats developed for the United States Fish and Wildlife Service (USFWS) in 1979. Under this system, wetlands are of two basic types: coastal (also known as tidal or estuarine wetlands) and inland (also known as non-tidal, freshwater, or palustrine wetlands).

Criteria Pollutants: Pollutants for which federal and state air quality standards have been established: CO, sulfur oxides (SO_x), nitrogen oxides (NO_x), O₃, particulate matter with a diameter of 10 microns or less (PM₁₀), particulate matter with a diameter of 2.5 microns or less (PM_{2.5}), and lead (Pb).

Critical Habitat: Designated areas that provide suitable habitat for federally listed threatened or endangered species, and in which are the geographical locations and physical features essential to conservation of a particular species

Crossover: Two turnouts with track between, connecting two nearby and usually parallel tracks, allowing a train on one track to cross over to the other.

Cultural Resources: Resources related to the tangible and intangible aspects of cultural systems, living and dead, that are valued by a given culture or contain information about the culture. Cultural resources include, but are not limited to, sites, structures, buildings, districts, and objects associated with or representative of people, cultures, and human activities and events.

Cumulative Effects: The incremental consequences of a proposed action in addition to other past and reasonably foreseeable future actions that affect the same resources. Other actions in the project area include other highway projects and residential, commercial, and institutional development.

Cumulative Impact: An impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

Cut and Fill: Construction technique involving excavation or grading followed by placement and compaction of fill material.

Cut Slope: A slope that is shaped by excavation or grading. See also Fill Slope.

D

Datum: A reference from which measurements are made for establishing horizontal and vertical control.

Decibel (dB): A logarithmic measurement of noise intensity.

Detention Pond: A pond designed to temporarily store and slowly release the runoff that it receives.

Dewatering: The process of removing water from an area or substance, such as fill material.

Digital Terrain Model: A three-dimensional model of digital surfaces of topographic features.

Disturbance: A discrete natural or human-induced event that causes a change in the condition of an ecological system.

Dry Utility: A wire, cable, pipeline, and support facility used to convey electricity, natural gas, gaseous chemicals, telecommunications, cable television, or other non-liquid products.

E

Easement: An interest in land owned by another individual or organization that entitles its holder to a specific limited use.

Ecosystem: An interconnected network of living organisms, including people, and their local physical environment; often viewed as an ecological unit.

Effect: A change in the condition or function of an environmental resource or environmental value as a result of human activity.

Emergent: (1) Arising naturally; (2) Vegetation rooted in periodically or continuously inundated substrate but with a portion of the plant extending above the water.

Eminent Domain: A jurisdiction or agency's legal right to take private property for public use in exchange for fair compensation.

Emissions Budget: The part of the State Implementation Plan (SIP) that identifies the allowable emissions levels, mandated by the NAAQS, for certain pollutants emitted from mobile, stationary, and area sources. The emissions levels are used for meeting emission reduction milestones, attainment, or maintenance demonstrations.

Endangered Species: Any species listed under the federal *Endangered Species Act of 1973* (ESA) as being in danger of or threatened with extinction throughout all or most of its range.

Environmental Impact Statement (EIS): Documentation required by NEPA for certain actions "significantly affecting the quality of the human environment." An EIS is a decision-making tool that presents detailed analysis of a proposed action and alternatives to the proposed action. The EIS presents the project's potential effects—both beneficial and adverse—and any mitigation measures to reduce adverse effects.

Environmental Justice: Presidential Executive Order (EO) 12898 requires federal agencies to ensure that their actions (or actions they oversee) do not disproportionately discriminate against (impact) minority populations and low-income populations.

Erosion: Process by which earth materials are worn down by the action of flowing water, ice, or wind.

Ethnicity: A grouping or categorization of people based on shared cultural traits such as ancestral origin, language, custom, or social attitude.

Eutrophication: The process by which lakes gradually age and become more productive. It normally takes thousands of years to progress; however, humans, through their various cultural activities, have greatly accelerated this process in many lakes. Cultural or anthropogenic "eutrophication" is water pollution caused by excessive plant nutrients.

F

Farmland of Local Importance: Farmlands important to the local agricultural community, as determined by each county's board of supervisors and local advisory committee. See also Farmland of Statewide Importance and Prime Farmland.

Farmland of Statewide Importance: Farmlands that are similar to prime farmlands but are less valuable because they have steeper slopes, less ability to retain moisture in the soil, or other characteristics that limit their use. To qualify as Farmland of Statewide Importance, a property must have been used for production of irrigated crops at some time during the previous 4 years.

Fauna: Animals characteristic of a region, period, or special environment.

Feasible: Capable of being implemented.

Fecundity: Fertility; the potential to be fruitful in offspring or vegetation.

Federal Endangered Species Act of 1973 (Federal ESA): The federal ESA and subsequent amendments (Sections 7, 9, and 10) provide guidance for conserving federally listed species and the ecosystems upon which they depend.

Federal Railroad Administration (FRA): An agency within the United States Department of Transportation (U.S. DOT) that administers financial assistance programs and regulates the operation and safety of freight and passenger rail throughout the United States.

Feeder Route: Branch routes that feed into main (arterial) routes.

Fill Slope: A slope shaped by the placement and compaction of loose fill material, which may be reused from elsewhere on the construction site or imported.

Fiscally or Financially Constrained Plans: Plans that are limited by the foreseen availability of project funding in a region.

Floodplain: The portion of a river or stream valley, adjacent to the channel, which is covered with water when the river or stream overflows its banks at flood stage.

Floodway: A large-capacity channel constructed to divert floodwaters safely through or around population areas.

Flyover: A bridge that carries one road or rail alignment aurally over another.

Footprint: The area covered by a facility or affected by construction activities.

Full Parcel Acquisition: A permanent taking of a parcel of land as part of land acquisition for a project.

G

General Conformity Rule: Federal, state, tribal, and local governments work in air quality nonattainment or maintenance areas to ensure that federal actions conform to the initiatives established in the applicable SIP or tribal implementation plan.

Geographic Information System (GIS): An information management system designed to store and analyze data referenced by spatial or geographic coordinates.

Grade Crossing: The intersection of a railroad and a highway at the same elevation (grade); an intersection of two or more highways; an intersection of two railroads.

Grade, Gradient: Slope changes in elevation, defined in percentage, as feet of rise in 100 feet.

Grade-Separated: At different elevations; on separate levels.

Greenhouse Gases (GHG): A class of air pollutants believed to contribute to the greenhouse global warming effect, including nitrogen oxides (NO_x), hydrocarbons (HC), and carbon dioxide (CO₂).

Groundwater: Naturally occurring water that moves through the ground and underlying rock at a depth of several feet to several hundred feet.

Growth Inducement: Contribution to the rate or extent of development in an area.

Guideway: A track or riding surface that supports and physically guides transit vehicles specially designed to travel exclusively on it.

H

Habitat: An environment where plants or animals naturally occur; an ecological setting used by animals for a particular purpose (e.g., roosting habitat or breeding habitat).

Hazardous Materials: Any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or the environment, if released.

Hazardous Waste: A hazardous material that is no longer of use and will be disposed of. Hazardous waste is regulated by EPA under the *Resource Conservation and Recovery Act of 1976*.

Headway: The time between buses, trains, or other transit vehicles at a given point. For example, a 15-minute headway means that one bus arrives every 15 minutes.

Herbaceous: Plants that have little or no woody tissue. Herbaceous plants typically survive for only a single growing season.

Heritage Resources: An alternate term for cultural resources used in some planning documents. See Cultural Resources.

High-Occupancy Toll Lanes (HOT): Designated travel lanes that are utilized by high-occupancy vehicles (HOVs), buses, and tolled vehicles carrying less than noted high-occupancy levels.

High-Occupancy Vehicle Lanes (HOV): Designated travel lanes that require two or more occupants per vehicle. Future regional plans anticipate occupancy requirement to be three (HOV-3+).

Hydrocarbons: Various organic compounds, including methane, emitted principally from the storage, handling, and combustion of fossil fuels.

I

Impact: A change in the condition or function of an environmental resource or environmental value as a result of human activity.

Impervious Surface: Surface covered by impenetrable materials, such as parking lots and buildings, which increases the potential for water runoff and reduces the potential for groundwater recharge.

Independent Utility: A project is said to have independent utility if it will provide functional improvements that can stand alone and serve a major purpose, even if no other improvements are made in the region.

Indigenous Species: A native species; any plant or animal species that occurs naturally in a wilderness area.

Indirect Effects: Impacts on the environment resulting from the primary impact of the proposed action but occurring later in time or farther removed in distance, although still reasonably foreseeable.

Infrastructure: The facilities required for a societal function or service (e.g., transportation and utility infrastructure).

Insertion Loss: The actual noise-level reduction at a specific receiver due to construction of a noise barrier or some other intervention between the noise source (e.g., traffic) and the receiver.

In-situ: In the original or natural position.

Intelligent Transportation System (ITS): The application of advanced technologies to improve the efficiency and safety of transportation systems.

Intermittent Stream: A stream that flows only during part of the year.

Intermodal Relationships: Relationships between transportation modes. An example of a mode is bus mass transit.

Intermodal Station: A transit station for more than one mode of transportation.

Intermodal: Transportation that involves more than one mode (e.g., walk, bike, auto, transit, taxi, train, bus, and air) during a single journey.

Invasive Species: A plant, animal, or other organism (1) that is non-native (or alien) to the ecosystem under consideration and (2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Inversion: A region where atmospheric temperature increases rather than decreases with height, suppressing atmospheric mixing and tending to trap pollutants near the ground surface where their effects on health and materials are greater.

Investment-Grade Ridership Forecast: Ridership forecast that is sufficiently detailed and reliable to permit responsible decision making about capital expenditures.

Isolated Wetlands: Non-jurisdictional wetlands. Wetlands that are not subject to CWA regulation.

J

Jurisdictional Determination: A written statement issued by the United States Army Corps of Engineers (USACE) that identifies areas within a discrete project area that are subject to CWA regulation.

Jurisdictional Wetlands: Wetlands that are subject to CWA regulation.

K

Key Viewpoints: Viewpoints that represent the range of visual character and visual quality in the project viewshed, which is the portion of the surrounding landscape within which a project is potentially visible.

Kilovolt: A unit of potential equal to a thousand volts.

Kiss-and-Ride: Facility for private vehicles to drop off or pick up rail patrons.

L

Lead (Pb): A stable element that can have toxic effects and that persists and accumulates in the environment, humans, or animals.

Lead Agency: The public agency that has the principal responsibility for carrying out or approving a project or action and is responsible for preparing environmental review documents in compliance with NEPA.

L_{eq} : The equivalent sound level, containing the same amount of sound energy as the varying sound level measured over a specified time period.

$L_{eq}(h)$, dBA: Equivalent or average noise level for the noisiest hour, expressed in A-weighted decibels.

Level of Service (LOS): Operating conditions within a stream of traffic describing safety, traffic interruptions, speed, freedom to maneuver, comfort, and convenience. Six levels of service are defined, designated A through F, with A representing the best conditions and F the worst.

Link: Traffic term referring to one portion of a longer trip in the transportation system.

Lithic: Pertaining to or describing a stone tool or artifact.

Logarithmic Scale: A measurement in which the ratio of successive intervals is not equal to 1 (which is typical for linear scales) but is some common factor larger than the previous interval (a typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc). Logarithmic scales are useful for graphing values that have a very large range.

Logical Termini: Rational endpoints for consideration of transportation improvements and for review of environmental impacts.

Long Range Transportation Plan (LRTP): A document resulting from regional or statewide collaboration and consensus on a region or state's transportation system, and serving as the defining vision for the region's or state's transportation systems and services. In metropolitan areas, the plan indicates all of the transportation improvements scheduled for funding over the next 20 years.

Longitudinal: A facility located parallel to and within highway or railway right-of-way.

Low-Income Population: A low-income household is one where the median household income is below the United States Department of Health and Human Services (HHS) poverty guidelines.

M

Maintenance-of-Way: A repair and maintenance activity for a railway right-of-way and track, including tracks, roadways, buildings, signals, and communication and power facilities.

Maintenance Siding: A dead-end track dedicated to park maintenance trains and connected to a passing track, never to the main line.

Maintenance: An air basin that was formerly in nonattainment but now meets the established standards for that pollutant. See also Attainment and Nonattainment.

Maintenance-of-Way Facility: A facility co-located with the heavy-maintenance facility with offices for inspection and maintenance staff and storage areas for essential equipment and materials, such as rail ballast, ties, sections of rail, overhead catenary system poles, and diesel-powered maintenance trains.

Master Plan: A comprehensive planning document intended to guide the long-range growth and development of a community or region, or the long-term management and use of a parkland.

Mean High-Water Mark: The elevation reached by the water surface at the mean (average) high water level (average high tide elevation or average flood elevation), often indicated by physical characteristics such as erosion, lines of vegetation, or changes in type of vegetation.

Mesoscale: Describes regional air quality analysis.

Metropolitan Planning Organization (MPO): An agency created and designated to carry out the transportation planning process on behalf of localities in urbanized areas with populations over 50,000, comprising elected and appointed officials with an interest in or responsibility for transportation planning and programming in the metropolitan planning area. An MPO is responsible for the development of a Long Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP), and other planning documents required to obtain federal funding for transportation projects within its metropolitan planning area.

Microscale: Describes local air quality analysis.

Minority Individuals: Members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), and Hispanic.

Mitigation Bank: A large block of land that is preserved, restored, and enhanced for the purpose of mitigating for projects that take (disturb, injure, or kill) special-status species, wetlands, or otherwise vegetated biological communities.

Mitigation: Action or measure undertaken to minimize, reduce, eliminate, or rectify the adverse impacts of a project, practice, action, or activity.

Mixed-Use Development: Development that incorporates residential and nonresidential uses.

Mobile Source: (1) The mobile source-related pollutants are CO, HC, NO_x, and particulate matter (PM₁₀ and PM_{2.5}). (2) Mobile sources include motor vehicles, aircraft, seagoing vessels, and other transportation modes. The mobile source related pollutants are CO, HC or volatile organic compounds (VOCs), NO_x, and small particulate matter (PM₁₀).

Modal: A transportation system defined on the basis of specific rights-of-way, technologies, and operational features.

Monitoring: The collection of information to determine the effects of resource management and to identify changing resource conditions or needs.

Monoculture: The cultivation of a single product to the exclusion of other uses of land.

N

National Ambient Air Quality Standards of 1990 (NAAQS): Federal standards that set allowable concentrations and exposure limits for various pollutants. EPA developed the standards in response to a requirement of the CAA. Air quality standards have been established for the following six criteria pollutants: O₃ (or smog), CO, particulate matter, nitrogen dioxide (NO₂), Pb, and sulfur dioxide (SO₂).

National Environmental Policy Act of 1969 (NEPA): Federal legislation that establishes national policies and goals for the protection of the environment and requires federal agencies to consider the environmental impacts of major federal projects or decisions, to share information with the public, to identify and assess reasonable alternatives, to identify appropriate measures to mitigate potential impacts, and to coordinate efforts with other planning and environmental reviews taking place. Codified at: 42 United States Code (U.S.C.) § 4331 *et seq.*

National Priorities List (NPL): Also known as EPA's Superfund program. The NPL is a comprehensive list of the sites/facilities that have been evaluated using the Hazard Ranking System and have been found to pose a sufficient threat to human health and/or the environment to warrant cleanup under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (CERCLA). EPA is responsible for updating and maintaining the NPL.

Nitrogen Oxides (NO_x): A class of pollutant compounds that include NO₂ and nitric oxide (NO), both of which are emitted by motor vehicles. See Criteria Pollutants.

Noise Abatement Criteria (NAC): In accordance with Section 772 of the Federal Aid Policy Guide, the Federal Highway Administration (FHWA) has established noise standards. These standards include NAC, which are noise levels that represent a balancing of desired levels of noise with achievable levels.

Nonattainment: A condition where one or more of the NAAQS for a pollutant have been violated.

Nonpoint Source Pollution: Pollution that collects from a wide area and cannot be traced to a single source. Examples include pesticides or fertilizers that wash into rivers or percolate through the soil into groundwater.

Notice of Intent (NOI): The Council on Environmental Quality (CEQ) regulations and Title 23, CFR, Part 771, Environmental Impact and Related Procedures, require the sponsoring agency to publish an NOI in the *Federal Register* as soon as practicable after the decision is made to prepare an EIS and before the scoping process for a proposed action.

Noxious Weed: A plant that has been defined as a pest by law or regulation.

NPL/Superfund List: A federal list of sites that have been identified as posing an immediate public health hazard and where an immediate response is necessary.

O

Ordinary High-Water Mark: The line on the shore of a body of water established by the fluctuation of water levels.

Ozone (O₃): Unstable blue gas with a pungent odor, formed principally in secondary reactions involving VOCs, nitrogen oxides, and sunlight.

P

Palustrine Emergent Wetlands (PEM): Wetlands characterized by erect, herbaceous vegetation present for most of the growing season (e.g., marshes, wet meadows, fens, sloughs, or potholes).

Palustrine Forested Wetlands (PFO): Wetlands characterized by woody vegetation greater than 6 meters (20 feet) in height (e.g., swamps or bottomlands).

Palustrine Scrub-Shrub Wetlands (PSS): Wetlands characterized by the dominance of small trees, saplings, and shrubs. These wetlands generally have higher value than emergent systems, but not as much as forested systems.

Parcel: A distinct, continuous portion or tract of land.

Park-and-Ride: Facility where rail patrons can leave personal vehicles.

Partial Parcel Acquisition: A temporary taking of a parcel of land close to construction areas that requires that the occupants be moved during the construction period.

Particulate Matter: Liquid and solid particles of a wide range of sizes and compositions; of particular concern for air quality are PM₁₀ and PM_{2.5}. PM₁₀ is particulate matter 10 micrometers or less in diameter; PM_{2.5} is particulate matter 2.5 micrometers or less in diameter.

Particulate Pollution: Air pollution, such as dust, soot, and smoke, that is irritating but usually not poisonous. Particulate pollution also can include bits of highly toxic solid or liquid substances. Of particular concern are PM₁₀ or PM_{2.5}.

Passenger Rail Investment and Improvement Act of 2008 (PRIIA): Federal act that reauthorizes the National Railroad Passenger Corporation, better known as Amtrak, and strengthens the United States passenger rail network by tasking Amtrak, U.S. DOT, FRA, states, and other stakeholders in improving service, operations, and facilities. PRIIA focuses on intercity passenger rail, including Amtrak's long-distance routes and the Northeast Corridor (NEC), state-sponsored corridors throughout the Nation, and development of high-speed rail corridors.

Passing Track: A track connected to the main line on both ends that allows a train to stop for commercial reasons (e.g., in a station) or operating purposes (e.g., to deal with a delayed train or a train with technical issues) and that allows other trains to pass.

Perennial Stream: A stream that flows continually throughout the year.

Pesticide: Any substance intended to prevent the presence of, destroy, repel, or mitigate any pest. The term pesticide applies to insecticides and various other substances used to control pests, including herbicides.

Photogrammetry: The art, science, and technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring, and interpreting images and patterns of electromagnetic radiant energy and other phenomena.

Physiographic Province: A region that is generally consistent in geologic structure and climate and that has had a unified geomorphic history.

Plat: A plan or map of a plot of ground.

Platform: Station area adjacent to tracks where trains stop to allow passengers to board and alight.

Point Source Pollution: Pollution that can be traced to a single source (e.g., a smokestack at a factory).

Polychlorinated Biphenyls (PCBs): Chemicals used in electrical transformers, hydraulic equipment, capacitors, and similar equipment.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Preferred Alternative: The alternative identified as preferred by the lead agencies.

Prime Farmland: Rural land that has the best combination of physical and soil chemistry characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.

Program-Level/Programmatic: Refers to a NEPA environmental review that covers the broad spectrum of a large, complex, regionally extensive effort comprised of many smaller, regionally focused projects or phases.

Project Corridor: An undefined width of land uses along the rail alignments used to define the general features and context of the area.

Project-Level: Refers to more detailed site-specific environmental analysis focusing on a single project that is part of a larger program.

Purpose and Need: The reason(s) why a project or action is undertaken, and the need(s) it is intended to meet or fulfill.

R

Rail Guideway: A track that supports and physically guides high-speed trains.

Relocations: The removal, rearrangement, reinstallation, or adjustment of a utility facility required by a transportation improvement project.

Resource Management Areas: As designated by Counties, these areas include floodplains, highly erodible soils, steep slopes, highly permeable soils, and non-tidal wetlands not designated in Resource Protection Area (RPA) zones.

Resource Protection Areas (RPAs): Lands at or near the shoreline that have intrinsic water quality value for ecological and biological processes, or are sensitive to significant water quality degradation impacts. The RPA designation includes tidal wetlands, tidal shores, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, and a

minimum 100-foot (30.5-meter) buffer landward along both sides of any tributary stream and all other components of RPAs.

Retention Pond: A pond designed to hold and infiltrate most or all of the runoff that it receives.

Ridership: The number of people who ride a transportation system.

Right-of-Way: A legal right of passage over a defined area of real property. In transit usage, the corridor along a roadway or railway that is controlled by a transit or transportation agency/authority.

Riparian: Pertaining to anything connected with or immediately adjacent to the banks of a stream.

Riparian: Relating to, living, or located on the bank of a natural water course, lake, or tidewater.

Riprap: Randomly placed rock or concrete used to strengthen an embankment or protect it from erosion.

Rolling Stock: Wheeled railway vehicles.

Ruderal: Weedy vegetation, commonly including or dominated by introduced species, characteristic of areas where native vegetation has been disturbed or removed.

S

Scale: A graduated line representing a proportionate size.

Scenic Corridor: A corridor with landscapes and vistas of high scenic quality.

Scoping: A process used under NEPA to determine the scope of issues to be addressed and for identifying the significant issues related to the proposed action or project to be addressed in an EIS.

Scour: Erosion caused by fast-flowing water.

Screenline: An imaginary line across parallel roadways that defines a zone of analysis.

Section 4(f): Provisions originally enacted as Section 4(f) of the *U.S. DOT Act of 1966* codified in 49 U.S.C., Subtitle I, Section 303(c). Section 4(f) addresses the potential for conflicts between transportation needs and the protection of land for recreational use and resource conservation by providing protection for publicly owned parkland, recreation areas, and historic sites from use. Specifically, the provisions prohibit the Secretary of Transportation from approving any program or project that would require the use of any publicly owned land from a public park, recreation area, wildlife or waterfowl refuge, or land of an historic site of national significance as determined by the officials having jurisdiction over these lands unless there are no feasible and prudent alternatives to the use of these lands. In addition, a proposed program or project must include all possible planning to minimize harm resulting from the proposed use.

Section 6(f): Section 6(f) of the *Land and Water Conservation Fund (LWCF) Act of 1964* prohibits the conversion of property acquired or developed with funds granted through the act to a non-recreational purpose without approval of the National Park Service (NPS). Section 6(f) directs the United States Department of the Interior (DOI) to ensure that replacement lands of equal value (monetary), location, and usefulness are provided as conditions to such conversions. State and local governments often obtain grants to acquire or make improvements to parks and recreation

areas (16 U.S.C. § 460-4 through 460-11, September 3, 1964, as amended 1965, 1968, 1970, 1972–1974, 1976–1981, 1983, 1986, 1987, 1990, 1991, 1993–1996). Consequently, where such conversions of Section 6(f) lands are proposed, replacement land must be provided.

Sediments: Fragments of material originating either from the physical or chemical weathering of rocks and minerals, from decomposition of organic matter, and from atmospheric fallout. Clay, mud, and sand are all types of sediment.

Sensitive Receiver: Noise-sensitive locations where increased annoyance can occur, such as residences, schools, hotels/motels, medical facilities, or other vibration-sensitive receivers.

Sensitive Receptors: Locations considered more sensitive to adverse effects from air pollution (e.g., residences; preschools and kindergarten through grade 12 schools; daycare centers; health-care facilities such as hospitals, retirement homes, and nursing homes; and parks and/or playgrounds).

Shared Use Corridor: Rail corridors or rights-of-way where conventional passenger and freight railroads operate.

State Implementation Plan (SIP): A plan mandated by the CAA and produced by the state environmental agency that contains procedures to monitor, control, maintain, and enforce compliance with the NAAQS. Must be taken into account in the transportation planning process.

Statewide Transportation Improvement Program (STIP): A multi-year capital improvement program of transportation projects on and off the state highway system, funded with revenues from the State Accounts and other funding sources.

Station: Area that would provide intermodal connectivity, drop-off facilities, an entry plaza, a station house area for ticketing and support services, a station box where passengers wait and access the train, and parking facilities.

Stormwater Pollution Prevention Plan (SWPPP): A plan that specifies site management activities to be implemented during site development, including construction stormwater BMPs, erosion and sedimentation controls, dewatering (nuisance water removal), runoff controls, and construction equipment maintenance

Straddle Bents: A pier structure that spans the functional/operational right-of-way limit of a roadway, highway, or railway.

Strata: Geologic units composed of sedimentary rocks usually thought of as overlying one another in layer-cake fashion.

Stub End: A track that terminates at one end.

Study Area: A defined area or distance that is established to determine potential area of effects associated with the proposed project. Study areas vary in size and distance depending on the type of effects being considered.

Subsidence: Sinking or lowering of the ground surface.

Sulfur Oxides (SO_x): Sulfur-oxygen compounds that include the important criteria pollutants SO₂ and sulfur trioxide (SO₃).

Superelevation: The difference in elevation between the outside rail of the curve and the inside rail of the curve measured between the highest point on each rail head.

Switch Frog: The point in the switch where two rails cross. The frog is designed to ensure the wheel crosses the gap in the rail without dropping into the gap; the wheel and rail profile ensures that the wheel is always supported by at least one rail.

Switch: A mechanical installation enabling trains to be guided from one track to another at a railway junction.

Switching Station: A station that would work with the paralleling station to balance the electrical load between tracks and to switch power off or on to either track in an emergency.

T

Tiering: Refers to the practice of addressing general issues in broader environmental impact reports or statements, such as Program-Level documents, and providing more detailed site-specific analyses in subsequent (typically Project) documents that incorporate the initial broad analysis by reference.

Topographic Map: A map of the surface features of the earth.

Trackway: The route of a train.

Traction Power Supply Station (TPSS): An electrical substation that supplies power to the rail system.

Transportation Demand Management (TDM): The operation and coordination of various transportation system policies and programs to manage travel demand to make the most efficient and effective use of existing transportation services and facilities.

Transportation Improvement Program (TIP): A document prepared by a metropolitan planning organization (MPO) that lists projects to be funded with FHWA/Federal Transit Administration (FTA) funds for the next 1- to 3-year period.

Transportation Investment Generating Economic Recovery (TIGER): A U.S. DOT-wide discretionary grant program investing in critical road, rail, transit, and port projects across the nation, managed by the U.S. DOT's Office of the Secretary. FRA administers several of these grants that are rail-specific.

Transportation System Management (TSM): Actions that improve the operation and coordination of transportation services and facilities to realize the most efficient use of the existing transportation system.

Transverse: A facility passing from one side of the right-of-way to the other side of the right-of-way.

Travel Demand Forecast: A forecast for travel demand on future or modified transportation system alternatives using existing or projected land use, socioeconomic, and transportation services data.

Travel Time: The time spent traveling from a place of origin to a place of destination. Total travel time includes the time required to reach a station or an airport, time spent waiting for the next scheduled train or flight, time spent getting to the boarding area, time spent checking and retrieving luggage, time spent getting a rental car or taxi, and time spent to reach the final destination.

Tributary Watercourse: A stream feeding a larger stream or lake.

U

Unavoidable: An impact that cannot be entirely avoided, reduced, or compensated for.

Unique Farmland: Farmland with soils of lower quality than either Prime Farmland or Farmland of Statewide Importance, but still used for the production of crops.

V

Volume-to-Capacity Ratio (V/C): Describes the relationship between the amount of traffic a roadway was designed to carry and the amount of traffic it actually carries. Related to the LOS the roadway can provide.

Viewshed: The total area visible from a single observer position, or the total area visible from multiple observer positions. Viewsheds include scenes from highways, trails, campgrounds, towns, cities, or other viewer locations. Viewshed types include corridor, feature, or basin viewsheds.

Visual Quality: The character or inherent features of a viewshed.

Visual Resources: The natural and artificial features of a landscape that characterize its form, line, texture, and color.

W

Waters of the United States: The federal CWA defines waters of the United States as (1) all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; and (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce (33 CFR 328.3[a]).

Watershed: A specific geographic area drained by a major stream or river.

Weir: A small dam that restricts flow in a stream to raise the water level or diverts flow into a desired course.

Wet Utility: A pipeline that conveys liquid through gravity or pressured systems for public purposes (i.e., water and wastewater).

Wetland: An area of land with soil that is saturated with moisture, either permanently or seasonally. According to the USACE Wetland Delineation Manual, three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation), (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils), and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

Wildlife Corridor: A belt of habitat that is essentially free of physical barriers such as fences, walls, and development and connects two or more larger areas of habitat, allowing wildlife to move between physically separate areas.

Wingwall: A wall at the abutment of a bridge that extends beyond the bridge to retain the earth behind the abutment.

Wye Connection: A railway that connects different sections of track. The transition to a wye requires splitting two guideways into four guideways crossing over one another before the wye legs diverge in opposite directions to allow bidirectional travel.

Y

Yard Track: Dead-end track dedicated to operation needs and connected to a passing track, never to the main railway.