

GLOSSARY OF LOCAL WATERFRONT REVITALIZATION PROGRAM (LWRP) TERMS¹

Abandoned Vessel: Any vessel not moored, anchored, or made fast to the shore, and left unattended for a period greater than 24 hours; also, any vessel left upon private property without consent from the waterfront property owner for a period greater than 24 hours.

Accessory Marine Uses: Facilities or services associated with a marina and/or boatyard and including, but not limited to: fuel supply; boating equipment sales and rental; bait and tackle sale; provision of potable water; prepared food and groceries; marine supplies; disposal of marine wastes; parking for vehicles; and administration of marina and/or boatyard functions.

Accretion: The addition of new land to the shoreline through the action of natural forces depositing waterborne or airborne material or by reason of an act of man such as the accretion formed as a result of groin or breakwater construction, or beach fill deposited by mechanical means; also defined as the process of gradual and imperceptible addition to riparian land made by the water to which the land is contiguous.

Active Recreational Uses: Recreational uses generally requiring facilities and organization for participation and/or having a more significant impact on the natural environment than passive recreational uses.

Aids to Navigation: Generally, all markers, including buoys, beacons, or other fixed objects on land or in the water, placed for the purpose of marking obstructions to navigation or to direct navigation through safe channels; defined in the state Navigation Law as buoys, beacons or other fixed objects in the water which are used to mark obstructions to navigation or to direct navigation through safe channels. Aids to navigation include: a) federal aids placed and maintained by the U.S. Coast Guard; and b) "private" aids placed and maintained by all other government and private interests.

Anchorage: A non-channel water area specifically designated for the safe anchoring of vessels.

Anchoring: To secure a vessel temporarily to the bottom of a waterbody by employing an anchor which is removed from the bottom every time the vessel is underway.

Aquaculture: Cultivation or propagation of water-dwelling organisms, including finfish and shellfish.

Aquatic Environment: Waters of the United States, including wetlands, that serve as habitat for interrelated, interacting communities and populations of plants and animals.

Aquifer: An underground geological formation, or group of formations, containing usable amounts of groundwater and capable of yielding considerable quantities of water to wells and springs.

Avulsion: The loss of lands, such as those bordering on the seashore, by sudden or violent action of the elements, perceptible while in progress.

A-Zone: That portion of the coastal floodplain, as marked on maps prepared by the Federal Emergency Management Agency, likely to be inundated by the one-percent ("100-year") flood and not subject to wave action.

¹ *The definitions included in the glossary are for the purpose of the Newburgh Local Waterfront Revitalization Program. The meaning and use of the included terms may differ in State and federal laws and regulations.*

Bathymetry: The measurement of depths of water in oceans, seas, and lakes; also information derived from such measurements.

Beach: The zone of unconsolidated material, including a foreshore and backshore, that extends landward from the low water line to the place where there is marked change in material or physiographic form, or to the line of permanent vegetation (usually the effective limit of storm waves). The seaward limit of a beach is the mean low water line.

Beach Nourishment: Natural or artificial placement of material, usually sand and sometimes including suitable dredged material, on or near a beach for the purpose of expanding an existing beach or replenishing an eroding beach.

Benthic: That portion of the marine environment inhabited by marine organisms that live permanently in or on the bottom of the sea.

Benthos: All marine plant and animal organisms living on or in the bottom of the sea.

Berth: An in-water area typically defined by floating walkways and finger floats, the purpose of which is to provide wet storage space for a vessel.

Best Management Practices (BMPs): Regulatory, structural, or nonstructural techniques applied to prevent and reduce non-point source pollution. Some examples of BMPs are buffers of streamside vegetation to keep pollutants from entering a watercourse; improved management of livestock areas to reduce polluted runoff; construction of wetlands to act as natural filters; and better maintenance of lawns and septic systems.

Bioaccumulation: The uptake of substances (metals, for example) leading to elevated concentrations of those substances within plant or animal tissue.

Bioassay: A test whereby living organisms are used to measure the effect of a substance, factor, or condition through comparison of "before and after" data; determination of the concentration of a substance in the tissues of an organ or organism in this manner is often used to test the toxicity of sediments and water that may be contaminated with toxic substances.

Biochemical Oxygen Demand (BOD): A measure of the demand on a water body's dissolved oxygen supply that will be generated, over a specified time period, by the biological decomposition of organic material.

Bioconcentration: The concentration of contaminants by an aquatic organism through its digestive tract or gill tissues.

Biotic Community: A naturally occurring assemblage of plants and animals that live in the same environment and are mutually sustaining and interdependent.

Boat Basin: A naturally or artificially enclosed or nearly enclosed harbor area for small craft.

Boatyard: A water dependent facility, the main function of which is the repair and servicing of vessels and related services, and generally including facilities for on-land boat storage. Boatyard facilities are often operated in conjunction with marina facilities.

Breakwater: A structure protecting a shore area, harbor, anchorage or boat basin from waves; defined in the state Navigation Law as a structure located within the shoreline of a body of water for the purpose of providing protection from wind and wave action.

Bulkhead: A vertical wall of wood, steel, or concrete built parallel to the shoreline; designed to control erosion and deflect waves; and which may also function as a retaining wall for fill material placed behind it.

Buoy: A float; especially a floating object moored to the bottom of a waterbody to mark a channel, mooring location, restricted speed area, or the location of something beneath the surface of the water such as a rock or shoal.

Carrying Capacity: A term generally used to refer to the level of use or extent of modification that environmental or man-made resources may bear without the occurrence of unacceptable resource deterioration or degradation.

Channel: A natural or maintained (dredged) waterway shown on navigation charts and marked in-water by aids to navigation, specifically designated for unobstructed movement of vessels, including federal navigation channels maintained by the U.S. Army Corps of Engineers (USACE).

Clean Vessel Act: Federal legislation intended to reduce overboard discharge of sewage from recreational boats and providing funds for the construction, renovation, operation, and maintenance of vessel waste pump-out stations for holding tanks and dump stations for portable toilets.

Clean Vessel Act Program: New York's program to implement the goals of the Clean Vessel Act and through which federal funds for the purpose of the Act are distributed.

Coastal Area: The area defined by the State of New York in Article 42 of the New York Executive Law within which the provisions of local waterfront revitalization programs apply, and including coastal waters of the State of New York and the adjacent shorelands, to the extent such coastal waters and adjacent lands are strongly influenced by each other.

Coastal Resources: Natural and man-made resources within the coastal area of the State of New York, including, but not limited to, coastal waters, underwater lands, wetlands, estuaries, intertidal flats, fish and wildlife habitat areas, beaches, developed shorelines and historic/archaeologic sites.

Coliform Bacteria: Widely distributed microorganisms found in the intestinal tracts of humans and other warm-blooded animals and used as an indicator of the sanitary quality of water.

Combined Sewer Overflows (CSOs): Discharges from a sewerage system that carries both sanitary sewage and stormwater runoff. Normally, combined sewers carry all wastewater to a treatment facility. During storm events, however, stormwater volume may be so great as to cause overflows. When this happens, untreated mixtures of stormwater and sanitary sewage may flow into receiving waters.

Commerce Power: The federal authority, established by the commerce clause of the U.S. Constitution, whereby the Congress has exclusive powers over interstate commerce and therefore jurisdiction over all navigable waters of the United States.

Commercial Mooring: A mooring defined by the USACE for which any type of fee is charged (excepting any fee charged by a municipality for a locally-issued mooring permit) and which must be authorized by a permit from the USACE. Commercial moorings include moorings offered by marinas

for transient or seasonal rental, and moorings controlled by private clubs if the annual membership fee enables use of a club-controlled mooring.

Commercial Vessel: Any vessel, licensed or unlicensed, used or engaged for any type of commercial venture, including but not limited to the carrying of cargo and/or passengers for hire and commercial fishing.

Comprehensive Harbor Management Plan: A plan, defined in Article 42 of the New York Executive Law, to address the problems of conflict, congestion, and competition for space in the use of harbors, surface waters, and underwater lands of the state within a city, town, or village or abounding a city, town, or village to a distance of 1,500 feet from shore. A harbor management plan must consider regional needs and, where applicable, must consider the competing needs of commercial shipping and recreational boating, commercial and recreational fishing and shellfishing, aquaculture and waste management, mineral extraction, dredging, public access, recreation, habitat and other natural resource protection, water quality, open space, and aesthetic values, and common law riparian or littoral rights and the public interest in such lands underwater.

Confined Disposal Facility: A diked area, either in-water or upland, used to contain dredged material. The terms confined disposal facility, dredged material containment area, diked disposal facility and confined disposal area are used interchangeably.

Contaminant: A chemical or biological substance in a form that can be incorporated into, onto or be ingested by and that harms aquatic organisms, consumers of aquatic organisms, or users of the aquatic environment. A contaminant that causes actual harm is sometimes referred to as a pollutant. (See Pollutant.)

Controlling Depth: The least depth in the navigable parts of a waterway, governing the maximum draft of vessels that can safely use that waterway.

Corps of Engineers (USACE): The U.S. Army Corps of Engineers which is one of the principal federal agencies with responsibilities and authorities affecting the Newburgh Harbor Management Area, including authority to regulate structures and work seaward of the mean high water line as well as responsibility to maintain federal navigation and shore protection projects.

Cultural Resources: Natural and man-made resources related to open space, natural beauty, scientific study, outdoor education, archaeological and historic sites and recreation.

Cumulative Impacts: The impacts on environmental or man-made resources that result from the incremental impact of an action when added to other past, present and reasonably foreseeable actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Dissolved Oxygen (DO): The oxygen, vital to fish and other aquatic life, freely available in water. Traditionally, the level of dissolved oxygen has been accepted as the single most important indicator of a water body's ability to support beneficial aquatic life. Secondary and advanced waste treatment processes are generally designed to protect DO in waste-receiving waters.

Dock: A structure that can be used as a landing or berthing space for a vessel or vessels; defined in the state Navigation Law as a wharf or portion of a wharf extending along the shoreline and generally connected to the upland throughout its length. Docks may float upon the water or be fixed structures abutting the shoreline.

Dockminium: A marina development and operation concept whereby the user of a boat slip or berth purchases fee simple title to the use of that slip or berth.

Dolphin: A cluster of piles, bound firmly together and driven into the bottom of a harbor, to which boats may be secured.

Discharge of Dredged Material: Any addition of dredged material into waters of the United States. Dredged material discharges include: open water discharges; discharges resulting from unconfined disposal operations (such as beach nourishment or other beneficial uses); discharges (such as effluent, surface runoff, or leachate) from confined disposal facilities which enter waters of the United States; and overflow from dredge hoppers, scows, or other transport vessels.

Disposal Site: An in-water or upland location where specific dredged material disposal activities are permitted.

Dredged Material: Material that is excavated or dredged from waters of the United States.

Dredging: The excavation of sediments and other material from aquatic areas for the purpose of maintaining adequate depths in navigation channels and berthing areas, as well as for other purposes.

Dump Station: A facility designed to receive sewage from portable toilets carried on vessels; dump stations do not include lavatories or restrooms.

Ebb Current: Tidal current directed away from shore or down a tidal watercourse; usually associated with decrease in the height of the tide.

Ebb Tide: A falling tide; the period of tide between high water and the succeeding low water.

Ecosystem: The interacting system consisting of a biologic community and its nonliving environment, each influencing the properties of the other and both necessary for the maintenance of life.

Effluent: Treated or untreated wastewater that flows out of a wastewater treatment plant, sewer, industrial outfall, marine sanitation device, or other source; generally refers to wastes discharged into surface waters.

Emergency: A state of imminent or proximate danger to life and property.

Erosion: The wearing away of the shoreline by the action of natural forces such as wave action and tidal currents and as a result of man-made forces.

Estuary: A semi-confined coastal water body with an open connection to the sea and a measurable quantity of salt in its waters. Estuaries are of particular ecological value and significance because they provide important natural values concerning, for example, fish and wildlife habitat, flood protection, and maintenance of water quality.

Eutrophication: The process through which overabundant plant life, nurtured by excessive nutrients such as nitrogen and phosphorus, causes hypoxia, depriving fish and shellfish of oxygen and underwater grasses of light.

Excursion Vessel: A vessel providing sight-seeing tours available to the general public.

Fairway: A specific water area, kept free of obstructions, to ensure safe passage of recreational and commercial vessels to, from, through, and alongside navigation channels, mooring areas, anchorages and berthing areas.

Fecal Coliform Bacteria: Specific coliform bacteria associated with the digestive tract of warm-blooded animals.

Federal Navigation Project: Authorized by Acts of Congress (or by the Secretary of the Army in accordance with Section 107 of the River and Harbor Act of 1960) and maintained by the USACE, federal navigation projects may consist of designated channels and anchorages as well as dikes, breakwaters and jetties designed to maintain ease and safety of navigation.

Filling: The act of adding or depositing material to replace a wetland or aquatic area with dry land or to change the bottom elevation of a water body.

Fill Material: Any material used for the primary purpose of replacing an aquatic area with dry land or changing the bottom elevation of a water body for any purpose. The term does not include any pollutant discharged into the water primarily to dispose of waste. Dredged material can be used as fill material.

Finfish: Term used to distinguish fish with fins from shellfish.

Float: Any structure, buoyant on the water surface, extending seaward, and affixed and secured in place to the shore, a bulkhead, or a dock, whose purpose is to berth and secure vessels and provide a means of access to and from the shore; a floating dock.

Floatable Debris: Trash floating in coastal waters or washed upon the shore and which may reduce beneficial use and enjoyment of a waterbody, present a nuisance or hazard for boaters and harm wildlife.

Floating Home: Any structure constructed on a raft, barge or hull, moored or docked, and that is used primarily for single or multiple-family habitation or as the domicile of any individual(s), and is therefore not water dependent as defined in the New York Executive Law.

Floating Objects: Defined in the state Navigation Law as any anchored marker or platform floating on the surface of the water other than aids to navigation and including but not limited to bathing beach markers, speed zone markers, information markers, swimming or diving floats, mooring buoys, fishing buoys and ski jumps.

Flood/Flooding: A general and temporary condition of: 1) partial or complete inundation of normally dry land resulting from the overflow of inland and/or coastal waters; and/or 2) the unusual accumulation of waters from any source.

Flood Current: The tidal current toward shore or up a tidal water body and associated with the increase in the height of a tide.

Flood Insurance Rate Map (FIRM): An official map of a community prepared by the Federal Emergency Management Agency identifying the elevation of the "100-year" flood and the areas that would be inundated by that level of flooding, and used to determine flood insurance rates.

Flood Insurance Study (FIS): An examination, evaluation, and determination of flood hazards and, if appropriate, corresponding water surface elevations.

Floodplain: Land of low elevation adjoining the channel of a river, stream, watercourse, or other body of water, which has been or may be inundated by flood water, and those other areas, including coastal areas, subject to flooding.

Flood Risk: The probability of being flooded.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. The floodway is intended to carry the deep and fast-moving flood water. Normally the base flood is defined as the "100-year" flood, and the designated height is one foot above the prefloodway condition.

Food Chain: A sequence of organisms in any natural community through which energy is transferred, each of which uses the lower member of the sequence as a food source, with plants being the ultimate basis of the sequence.

Food Web: The inter-related food relationships in an ecosystem including its production, consumption, and decomposition and the energy relationships among the organisms involved in the energy transfer cycle.

Freshwater: Inland waters, including runoff from precipitation and melting snow; waters that contain little or no salt; a term technically applied to water with salinity less than 0.5 parts per thousand.

Freshwater Wetlands: Wetlands subject to regulatory authority of the State of New York pursuant to Article 24 of the Environmental Conservation Law (The Freshwater Wetlands Act) and shown on maps prepared by the New York State Department of Environmental Conservation. Freshwater wetlands perform a variety of ecologically important functions, including functions related to maintaining and improving water quality, as well as providing important fish and wildlife habitat.

General Permit: A type of permit issued by the USACE for structures and work subject to the Section 10 and 404 regulatory programs. A general permit is an authorization issued on a nationwide or regional basis for categories of activities judged to be substantially similar in nature and to cause only minimal individual and cumulative adverse environmental impacts.

Geographic Information System (GIS): A computerized data base of land use, land cover and other types of information referenced to a location; enabling statistical analysis, comparison, and display of large quantities of data for planning purposes, including analysis of the relationship of land use to water quality.

Geomorphology: The science that applies the principles of physiography and geology to address the form and configuration of the land and submarine features of the earth's surface and the changes that take place in the evolution of landform.

Gray Water: Defined in the state Navigation Law as wastewater generated by water-using fixtures other than toilets, including but not limited to baths, sinks and laundry facilities used on residential vessels.

Greenbelt: A linked system of natural areas along the shoreline of a watercourse or body of water, often including public easements, open space land and public access walkways. A greenbelt typically provides a natural, protective buffer area between the upland and aquatic area, conserves valuable natural resources and may provide opportunities for passive recreational use.

Groin: A shore protection structure usually built perpendicular to the shoreline and intended to trap littoral drift or reduce erosion of the shore.

Groundwater: The supply of freshwater found beneath the earth's surface (usually in aquifers) which is often used for supplying wells and springs.

Habitat: The place where a human, animal, plant, or microorganism population lives, and the living and nonliving characteristics, conditions, and surroundings of that place.

Harbor: Any protected water area affording a place of safety for vessels.

Harbor Commission: A local commission that may be established, pursuant to authority provided by the New York Home Rule Law, and charged with specific responsibilities for managing a municipality's harbor facilities and resources, subject to the direction of the local legislative body.

Harbor Management Law: A local law to regulate the use and operation of vessels and the conduct of water-based activities within municipal jurisdiction for the purpose of protecting and promoting the public health, safety, and general welfare. A municipality may adopt a harbor management law pursuant to authority provided by the Home Rule Law, Section 46a of the state Navigation Law, and Article 42 of the New York Executive Law. A harbor management law may establish a "vessel regulation zone" within which a municipality may regulate certain activities on any waters within or bounding the municipality to a distance of 1,500 feet from the shore.

Harbormaster: A local official who may be appointed in accordance with authority provided by the New York Home Rule Law, and charged with responsibilities for overseeing the safe and efficient operation of the harbor and/or waterways within the local jurisdiction. Harbormaster responsibilities in New York communities generally include administration of mooring placement, management of public boating facilities, and assistance to local law enforcement agencies in the identification of violations and enforcement of State and local boating laws at the direction of a local board or commission.

Hazard to Navigation: Any obstruction, usually sunken, that presents a sufficient danger to navigation so as to require expeditious, affirmative action such as marking, removal or redefinition of a designated waterway to provide for navigation safety.

Head Boat: A commercial excursion vessel that may be chartered for group events but more commonly serves individuals or small groups, and typically having a draft ranging from three to seven feet and a maximum capacity of 30 to 85 persons.

Heavy Metals: Metallic elements of high molecular weight, including mercury, chromium, cadmium, arsenic, and lead, and generally toxic to plant and animal life in low concentrations. Such metals are often residual in the environment and exhibit bioaccumulation.

High Tide Line: The line or mark left upon tide flats, beaches, or along shore objects that indicates the intersection of the land with the water's surface at the maximum height reached by a rising tide. The term includes spring high tides and other high tides that occur with periodic frequency, but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm. The high tide line is a higher elevation than the mean high water line.

High Water Line: The intersection of the plane of mean high water with the shore; the shoreline delineated on nautical charts prepared by the National Ocean Service is an approximation of the high water line.

Houseboat: A boat, barge or other craft equipped for use primarily as a dwelling, as opposed for use primarily for transportation over water.

Hydraulic Dredging: One of the two primary dredging techniques (distinguished from mechanical dredging) utilizing suction dredging of sediments; the two primary types of hydraulic dredges are the cutterhead pipeline dredge and the self-propelled hopper dredge. The cutterhead dredge has a powerful pumping system that vacuums up the sediment and pumps it through discharge pipes either directly to the disposal site or onto barges for disposal at designated sites. This dredging method is used quite often in areas requiring constant maintenance. The self-propelled hopper dredge also uses a vacuum suction technique and deposits the material directly into the hoppers on board a self-propelled vessel which can then move to the disposal site for discharge.

Hydraulics: The science dealing with the practical applications (such as the effects of flow and the transfer of energy) of water or other liquids in motion.

Hydrocarbons: An organic compound consisting solely of hydrogen and carbon. Petroleum is a mixture of many hydrocarbon compounds.

Hydrology: The science dealing with the properties, distribution, and circulation of water on the surface of the land, below the surface, and in the atmosphere, particularly with respect to precipitation and evaporation.

Hypoxia: A condition of degraded water quality characterized by reduced oxygen concentrations.

Individual Permit: A type of permit issued by the USACE for structures and work subject to the Section 10 and 404 regulatory programs. An individual permit is issued following evaluation of a specific proposal and involves public notice of the proposed activity, review of comments and, if necessary, a public hearing. In general, an individual permit must be received from the Corps for most activities that involve: a) filling of wetlands and navigable waters; b) placement of structures in navigable waters; and c) dredging and disposal of dredged material.

Individual-Private Mooring: A mooring belonging to an individual, as distinguished from a commercial mooring rented from a marina, controlled by a private club or used for commercial purposes. An individual-private mooring does not require an individual permit from the USACE.

Knot: The unit of speed used in navigation equal to one nautical mile (6,076.115 feet or 1,852 meters) per hour.

Land-Use: The character and condition of the use of land and which may be described in terms of general categories, such as "residential," "commercial," "industrial," and "open space," or with reference to the specific use or development of a specific site; also, a reference to the ways in which a community or area makes use of its natural resources.

Launching Ramp: A man-made or natural facility used for the launching and retrieval of boats; primarily providing facilities for boaters to launch trailered boats and park their vehicles and trailers while engaging in boating activities.

Live-Aboard Vessel: Any berthed, anchored, or moored vessel that is used as a temporary or permanent residence, secondary to the principal water dependent recreational or commercial use of that vessel.

Local Waterfront Revitalization Program (LWRP): Authorized by the Waterfront Revitalization of Coastal Areas and Inland Waterways Act, a local program prepared by a municipality and intended to: a) promote beneficial development enhanced by or dependent on waterfront resources; and b) balance this development with the protection of important coastal resources.

Maintenance Dredging: The generally periodic and repetitive removal of recurring, naturally deposited bottom sediment from an existing navigation channel or berthing area.

Mariculture: The cultivation of marine organisms in their natural habitats, usually for commercial purposes.

Marina: A water dependent facility, the main function of which is to provide boat dockage and related services for recreational vessels as a commercial enterprise or in association with a private club. Marina facilities are often operated in conjunction with boatyard facilities.

Marine-Commercial Use: A water-dependent use that serves as a marina, fuel dock, yacht club, barge or tanker terminal, boat rental or leasing facility, commercial fishing loading/off-loading facility, or as a structure designed to secure or make fast a vessel commercially operated.

Marine Facility: Any facility (including but not limited to docks, floats, piers, ramps, hoists, parking areas, concessions, and service facilities), either publicly or privately owned, intended primarily to be used by or for the service of vessels, and located in and adjacent to marine or tidal waters.

Marine Sanitation Device (MSD): Any equipment installed on board a vessel to receive, retain, treat, or discharge sewage, including: a Type I MSD which is a device where sewage is treated with disinfectant chemicals before it is discharged (the treated discharge must meet certain health standards for bacteria content and must not show visible floating solids); a Type II MSD which is similar to Type I but is required to produce an effluent with lower fecal coliform bacteria counts and suspended solids (usually installed only in larger recreational vessels greater than 65 feet due to size and power requirements); and a Type III MSD which is any equipment for installation on board a vessel which is specifically designed to receive, retain, and discharge sewage. Type III MSDs are certified to a no-discharge standard, and include re-circulating and incinerating MSDs and holding tanks. Sewage is stored in the holding tank (the most common Type III MSD) until it can be discharged to a vessel waste pump-out facility or at sea beyond the territorial waters of the U.S.

Marine Toilet: Defined in the state Navigation Law as any toilet on or within any watercraft, excepting those toilets that have been permanently sealed and made inoperative.

Mean High Water (MHW) Line: A tidal datum; the arithmetic mean of the high water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Proposed work and structures seaward of the mean high water line are subject to federal regulatory authorities carried out by the USACE and to state and local regulatory authorities as well. In general, most land and water areas seaward of the mean high water line are subject to the Public Trust Doctrine. The mean high water line also marks the seaward boundary of the jurisdiction of a municipality's planning and zoning authorities.

Mean Low Water (MLW) Line: A tidal datum; the arithmetic mean of the low water heights observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch).

Mean Lower Low Water: A tidal datum; the arithmetic mean of lower low water heights of a mixed tide observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Only the lower low water of each pair of low waters, or the only low water of a tidal day is included in the mean. Federal navigation projects now reference the Mean Lower Low Water.

Mean Sea Level: A tidal datum; the arithmetic mean of hourly water elevations observed over a specific 19-year Metonic cycle (the National Tidal Datum Epoch). Shorter series, such as monthly sea level and yearly mean sea level, may be specified.

Mechanical Dredging: One of the two primary dredging techniques (distinguished from hydraulic dredging) which utilizes mechanical methods of excavating dredged material such as buckets (clam-shell) and backhoes. Material removed by mechanical dredging may be deposited on barges that are towed to designated disposal sites. Advantages of this process include the ability to remove a wide range of materials, work in tight areas, and more efficiently excavate contaminated material.

Metals: Metallic elements that can cause harm to living organisms and can accumulate in the food chain. Often divided into common metals (e.g., zinc, iron, copper) and trace metals (e.g., chromium, cadmium, arsenic).

Mitigation: An action to lessen the severity of impact of another action, either natural or human. Mitigation may refer to an action taken to reduce or eliminate the risk to human life and property and the negative impacts that can be caused by flooding and other natural and technological hazards. Mitigation may also refer to actions designed to lessen the adverse impacts of proposed development activities on natural and cultural resources, including wetlands and water resources.

Modeling: An investigative technique using a mathematical or physical representation of a system or theory, often to test the effect of changes of system components on the overall performance of the system, and often applied to address water quality and shoreline change questions.

Monitoring: Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, animals, and other living things.

Moor: To secure a vessel to the bottom of a waterbody by the use of mooring tackle which includes an anchor that remains in position on the bottom while the vessel is underway.

Moorings: The place where, or the object to which, a vessel can be made fast by means of mooring tackle so designed that, when such attachment is terminated, some portion of the tackle remains below the surface of the water and is not under the control of the vessel or its operator. Vessels may be secured at or with "fore and aft" moorings or a single, "free-swinging" mooring. Moorings are sometimes referred to locally as "permanent moorings."

Moorings Area: A designated water area within which vessels may moor.

Moorings Pile: A pole or post secured to the underwater lands, protruding above the water surface, the sole purpose of which is to secure a vessel.

Moorings Tackle: The ground tackle/hardware (e.g., anchor, chain, cable) used to secure a vessel at a mooring.

National Estuary Program: The program established by the Federal Clean Water Act to identify nationally significant estuaries and to establish and oversee a process for improving and protecting their water quality and enhancing their living resources.

National Geodetic Vertical Datum (NGVD): A fixed reference adopted as the standard datum of elevations throughout the U.S. For land-based vertical measurements, NGVD is usually given a value

of 0.0 and all other points are measured according to their distance above or below. For navigation-related purposes, NGVD is not the most desirable datum, and MLW and MHW are usually assigned a value of 0.0 while still being measured in relation to NGVD.

National Flood Insurance Program (NFIP): A program established by the National Flood Insurance Act of 1968 to provide relief from the impacts of flood damages in the form of federally subsidized flood insurance available to participating communities; such insurance is contingent on the incorporation of nonstructural flood loss reduction measures into local floodplain management regulations.

National Pollution Discharge Elimination System (NPDES): The federal program established by the Federal Clean Water Act and implemented by the U.S. Environmental Protection Agency for limiting, through the issuance of permits, the amounts of listed point source pollutants that can be discharged into waters of the United States. In New York, responsibilities for administration and enforcement of the NPDES, in accordance with the provisions of the Clean Water Act, have been turned over to the Department of Environmental Conservation.

Natural Resource Values: The qualities of, or functions served by, natural resources such as wetlands, floodplains, and water resources. Natural resources values include but are not limited to: a) water resources values (including water quality maintenance and natural moderation of floods); b) living resource values (fish, wildlife, and plant habitats); and c) cultural resource values (including values related to open space, natural beauty, scientific study, outdoor education, archaeological and historic sites, and recreation).

Nautical Mile: A unit of nautical measurement accepted as 6,076.115 feet, approximately 1.15 times as long as the U.S. statute mile of 5,280 feet.

Navigable: Capable of being navigated or passed over by ships or vessels.

Navigable In Fact: A body of water navigable in its natural or unimproved condition, affording a channel for useful commerce of a substantial and permanent character conducted in the customary mode of trade and travel on water.

Navigable Waters of the State: Defined in the State Navigation Law as all lakes, rivers, streams and waters within the boundaries of the State of New York and not privately owned, which are navigable in fact or upon which vessels are operated, except all tidewaters bordering on and lying within the boundaries of Nassau and Suffolk counties.

Navigable Waters of the United States: Those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

Navigate: To go from one place to another by water by sailing or managing a boat; to use a waterbody as a highway for commercial, recreational, educational, or other purposes.

Navigation: The act, science, or business of traversing the sea or other navigable waters in ships or vessels.

Navigation Servitude: The public right of navigation for the use of the people at large. Any property right dependent for its exercise or value on the presence of navigable waters is subject to a defect of title, called a servitude, originating from an ancient common law principle whereby there is a right of way of the public to use a stream or other water body for navigation despite the private ownership of

the bed or bank. Hence, in exercise of Congress' power over navigation stemming from the Commerce clause of the Constitution, no further federal real estate interest is required for navigation projects in navigable waters below the ordinary high water mark.

Neap Tide: A tide of minimum extent occurring at the first and third quarters of the moon (compare with Spring Tide).

New York Coastal Management Program (CMP): The program administered by the New York Department of State and authorized by the New York Waterfront Revitalization of Coastal Areas and Inland Waterways Act which enables the state to manage its coastal resources pursuant to the provisions of the Federal Coastal Zone Management Act. The CMP covers the shores of lakes Erie and Ontario, the Niagara and St. Lawrence rivers, the tidal portion of the Hudson River, New York City, Long Island and Long Island Sound. The CMP establishes 44 management policies to carry out the legislative intent that a balance be established between economic development and coastal resource protection in the state's coastal area.

New York State Department of State (DOS), Division of Coastal Resources: The State agency responsible for administration of the New York Coastal Management Program (CMP), and which coordinates a number of programs essential to implementation of the Coastal Program. Major responsibilities and interests of the DOS Division of Coastal Resources include review of proposed development activities for consistency with the CMP, designation of Significant Coastal Fish and Wildlife Habitat Areas, assistance to municipalities for preparation of LWRPs and provision of planning and funding assistance for special projects.

Nitrate: A compound containing nitrogen and oxygen (NO_3) that can exist in the atmosphere or in water and that can have harmful effects on humans and animals.

Nitrification: The biochemical process in which specific bacteria convert ammonia and organic nitrogen to nitrate. In wastewater treatment plants, ammonia and organic nitrogen come from human wastes and dead plant and animal matter. The nitrifying bacteria are cultured for use at the plants to convert ammonia to nitrite and nitrate. Nitrification occurs naturally in wetland ecosystems and can be established in wastewater treatment plants to remove ammonia and nitrogen from wastewater.

Nitrogen: An element present as organic nitrogen or in inorganic forms of ammonia, nitrite, and nitrate. The inorganic forms are preferentially used by phytoplankton to support their growth. Organic nitrogen is bound with organic material and is not available for plant growth until released in a usable inorganic form by decay processes.

No Discharge Zone: An area designated by the U.S. Environmental Protection Agency within which no sewage, untreated or treated, may be discharged from any vessel. An area particularly sensitive to contamination and that will benefit from a complete prohibition of all vessel sewage discharges may be designated by the EPA upon application by a state, contingent upon the certification by the state that adequate and reasonably available vessel waste pump-out facilities exist for boaters to use.

Non-point Source (NPS) Pollution: Pollution that does not originate from a single, easy-to-identify "point" source such as a sewage treatment plant or industrial discharge pipe. Types of NPS pollution include stormwater runoff from roads, parking lots and backyards, as well as wet and dry atmospheric deposition. Precipitation can carry pollutants from the air to the ground and then gather more pollutants as the water runs off pavement and land to the nearest waterway.

Nonstructural Flood Protection Measures: Planning, regulatory, and other techniques intended to discourage or avoid dangerous, uneconomic, or unwise use of floodplains and erosion-prone areas.

Nonstructural flood protection measures are distinguished from the more traditional “structural” measures (such as dams, dikes, and seawalls) used to control flooding and erosion.

Nutrient: Any substance assimilated by living things that promotes growth, including any number of organic or inorganic compounds (nitrogen and phosphorous are important examples) used by plants in primary production.

Obstruction to Navigation: Anything that restricts, endangers, or interferes with navigation.

“100-Year” Flood: A term commonly used to refer to a flood of the magnitude that has a one-percent chance of being equaled or exceeded in any given year. The “100-year” flood is the flood that is equaled or exceeded once in 100 years on the average, but the term should not be taken literally as there is no guarantee that the “100-year” flood will occur at all within the 100-year period or that it will not recur several times. The “100-year” flood is the standard most commonly used for floodplain management and regulatory purposes in the United States, and is therefore often referred to as the “base flood” for floodplain management purposes.

Open To All On Equal Terms: A policy of the USACE whereby federal navigation projects, which must be managed in the general public interest, must be accessible and available to all on equal terms, and all citizens desiring mooring or other access to projects must be treated impartially.

Open Water Disposal: Placement of dredged material in rivers, lakes or estuaries via pipeline or surface release from hopper dredges or barges; distinguished from upland and ocean disposal.

Ordinary High Water Mark: The line on shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris or other appropriate means that consider the characteristics of the surrounding areas.

Outfall: A structure (e.g., pipe) extending into a body of water for the purpose of discharging wastewater, stormwater runoff or cooling water.

Passive Recreational Use: Recreational activities, such as hiking, walking, picnicking, canoeing, and fishing, generally not requiring facilities and organization for participation and/or having little significant impact on the natural environment.

Pathogen: Microorganisms that can cause disease in other organisms or in humans, animals, and plants. Pathogens may be bacteria, viruses, or parasites transported in sewage and runoff from agricultural and other areas.

Personal Watercraft: A vessel propelled by machinery and that satisfies one or both of the following criteria: a) has a width not greater than 24 inches; 2) is capable of carrying at least one individual who while operating the vessel has no means of steerage other than shifting his or her body weight.

Pier: Generally, a structure, usually of open construction, extending out into the water from the shore to serve as a vessel landing place or recreational facility rather than to afford coastal protection; defined in the state Navigation Law as a wharf or portion of a wharf extending from the shoreline with water on both sides.

Pile: A long, heavy timber or section of concrete or metal to be driven or jetted into the earth or seabed to serve as a support or protection.

Plane Datum: Also called vertical datum, the horizontal plane to which soundings, ground elevations, or water surface elevations are referred. The plane is called a tidal datum when defined by a certain phase of the tide. A common datum used on topographic maps is based on mean sea level. To provide a safety factor for navigation, some level lower than mean sea level (such as mean low water or mean lower low water) is generally selected for use on hydrographic charts.

Point Source Pollution: Any discernible confined or discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, vessel or other floating craft, from which pollutants are or may be discharged.

Pollutant: Generally, any substance introduced into the environment that adversely affects the health of plants and animals or the usefulness of a resource, and including toxic substances, nutrients and pathogens which adversely affect water quality.

Pollution: The man-made or man-induced alteration of the chemical, physical, biological, or radiological integrity of an aquatic ecosystem. (See Contaminant.)

Polynuclear Aromatic Hydrocarbons (PAHs): A group of petroleum-derived hydrocarbon compounds that are found in the water and in the tissue of aquatic organisms. PAHs have a tendency to bioaccumulate and many are known or suspected carcinogens; PAH loadings to a waterbody result from oil spills and other uncontrolled discharges of petroleum products.

Port: A place where vessels may discharge or receive cargo; it may be the entire harbor including its approaches and anchorages, or only the commercial part of a harbor where marine service facilities and docks, wharves and facilities for transfer of cargo are located.

Private Club: A water-dependent facility supporting recreational boating activities; restricted to the use of members and guests and therefore not open to the general public.

Public Access: Physical and/or visual access to marine or tidal waters that is available to all members of the general public and therefore not limited to any particular groups or individuals.

Public Trust Doctrine: The doctrine based on the common law principle that certain lands and waters are so important to the public that private ownership or other impediments to public uses should not be permitted.

Pump-out Station: A marine facility for pumping or receiving sewage from a Type III marine sanitation device installed on a vessel and then containing that waste before proper disposal into a sewage disposal system.

Ramp: A structure used to gain access from a bulkhead, fixed dock, or platform to a float; also, a uniformly sloping surface used for launching small craft.

Recreational Boating Facilities: Facilities for the support of recreational boating activities, including marina and boatyard facilities and private clubs providing docks, slips, moorings and launching ramps as well as sales, repair, service, and storage facilities, and private docking facilities constructed by waterfront property owners.

Reliction: A gradual increase of land as a result of the permanent recession of a body of water.

Revetment: A facing of stone, concrete, or other hard material, built to protect a scarp, embankment or shore structure against erosion by wave action or currents.

Riparian: Of or relating to or living or located on the bank of a watercourse.

Riparian Ecosystems: Distinct associations of soil, flora, and fauna occurring along a river, stream, or other body of water and dependent for survival on a periodically high water table.

Riparian/Littoral Rights: The rights of an owner of land contiguous to a body of water. If the water in question is flowing (e.g., river or stream) the rights are said to be riparian. If the property is subject to the ebb and flow of the tide, the rights are said to be littoral rights. The terms “riparian” and “littoral” are commonly used interchangeably. Riparian rights may be defined as principally the right of access to the water, the right of accretions and relictions and the right to all useful purposes to which the watercourse may be applied.

Riprap: A protective layer or facing of stone, usually well-graded and randomly placed to prevent erosion, scour, or sloughing of the shoreline; also the stone so used.

Rubble-mound Structure: A shore protection structure of random-shaped and random-placed stones protected with a cover layer of selected stones or specially shaped concrete armor units.

Runoff: That part of precipitation, snow melt, or irrigation water that runs off the land into streams or other surface water and can carry pollutants from the air and land into the receiving body of water.

Salinity: The measure of the quantity of dissolved salts in seawater; defined as the total amount of dissolved solids in seawater once the organic matter has been completely oxidized.

Sand: Material, larger than silt, consisting of particles with a grain size between 1/16 mm and 2 mm.

Sanitary Sewer: A system of pipes, usually underground, that carry only wastewater, not stormwater.

Seawall: A wall built parallel to the shore, and designed to halt shoreline erosion by absorbing the impact of waves.

Section 10 and 404 Regulatory Programs: The principal federal regulatory programs, carried out by the USACE, affecting structures and other work below the mean high water line. The USACE, under Section 10 of the River and Harbor Act of 1899, regulates structures in, or affecting, navigable waters of the United States, as well as excavation or deposition of materials (e.g., dredging or filling) in navigable waters. Under Section 404 of the Federal Water Pollution Control Act Amendments (Clean Water Act of 1977), the USACE is also responsible for evaluating applications for Department of the Army permits for any activities that involve the placement of dredged or fill material into waters of the U.S., including adjacent wetlands.

Sediment: Particulate material, both mineral and organic, that is in suspension, being transported, or has been moved from its site of origin by the forces of air, water, gravity or ice, including material deposited in a loose, unconsolidated form on the bottom of a water body. The term dredged material refers to material that has been dredged from a water body, while the term sediment refers to material in a water body prior to dredging.

Sedimentation: The process of transportation and deposition of particles onto the bottom of a body of water.

Semidiurnal Tide: A tide with two high and two low waters in a tidal day with comparatively little diurnal inequality.

Septic Tank: A watertight chamber used for the settling, stabilizing and anaerobic decomposition of sewage.

Sewage: The combination of human and household waste with water which is discharged to the home plumbing system including the waste from a flush toilet, bath, sink, lavatory, dishwashing or laundry machine, or the water-carried waste from any other fixture, equipment, or machine, together with such groundwater infiltration and surface water as may be present.

Sewer: A system of pipes, usually underground, that carries wastewater and/or stormwater runoff from the source to a treatment plant or receiving body of water. Sanitary sewers carry household, industrial, and commercial waste; storm sewers carry runoff from rain and melting snow; combined sewers are used for both purposes.

Sheet Pile: A pile with a generally slender, flat cross section to be driven into the ground or seabed and meshed or interlocked with like members to form a bulkhead or seawall.

Shellfish: An invertebrate having a rigid outer covering, such as a shell or exoskeleton; includes oysters, scallops, hard clams, soft clams, razor clams, crabs, shrimp, all kinds of mussels, skimmer or surf clams, periwinkles and conch.

Significant Coastal Fish and Wildlife Habitat Area: An area designated by the New York State Department of State to help protect especially valuable fish and wildlife habitat. Any future proposal that would affect a designated area will require careful review and be subject to specific requirements designed to reduce adverse impacts on fish and wildlife habitat.

Shoal: A detached elevation of the bottom of a waterbody, comprised of material that is not rock, that may endanger surface navigation. Also, to become shallow gradually; to cause to become shallow; to proceed from a greater to a lesser depth.

Silt: Material of intermediate size between clay and sand material, and consisting of particles with a grain size between 1/16 mm and 1/128 mm.

Slack Tide: The state of a tidal current when its velocity is near zero, especially the moment when a reversing current changes direction and its velocity is zero; sometimes considered the intermediate period between ebb and flood currents.

Slip: The water area occupied by a vessel when secured to a shoreside or structural installation; also defined as a berthing space for a single vessel alongside a pier, finger float or walkway.

Spring Tide: A tide that occurs at or near the time of new or full moon and which rises highest and falls lowest from the mean sea level (compare with Neap Tide).

State Pollution Discharge Elimination System (SPDES): The program whereby the Department of Environmental Conservation regulates, with authority delegated by the U.S. Environmental Protection Agency pursuant to the Clean Water Act, all industrial, commercial and municipal discharges as well as discharges from residential subdivisions of five or more lots into surface and ground waters.

Storm Sewer: A system of pipes, generally underground, carrying only stormwater runoff from building and land surfaces; as distinguished from a sanitary sewer.

Storm Surge: A rise above normal water level on the open coast due to the action of wind stress on the water surface. Storm surge resulting from a hurricane also includes that rise in water level due to atmospheric pressure reduction and wind stress.

Stormwater Runoff: The rainwater, melting snow, and associated material draining from natural and developed surfaces in a watershed into storm drains and water courses.

Structural Flood Protection Measures: Engineered measures such as dams, dikes, levees, seawalls, and channel alterations designed to modify the volume and location of flooding and extent of erosion, intended to help protect lives and properties from the impacts of floods and erosion.

Sub-tidal Area: The coastal waters and submerged land seaward of the mean low water line.

Submerged Lands: Lands covered by water at any stage of the tide, as distinguished from tidelands which are attached to the mainland or an island and are covered and uncovered by the tide.

Subsurface Sewage Disposal System: A sewage disposal system designed to treat and dispose of septic tank or other treatment facility effluent by application of the effluent to a soil surface at a depth below the surface of the ground.

Tidal Cycle: Elapsed time between successive high and low waters.

Tidal Current: The alternating horizontal movement of water associated with the rise and fall of the tide caused by the astronomical tide-producing forces.

Tidal Prism: The volume of water entering an estuary during an incoming tide; in other words, the difference between the volume of water in an estuary at high tide and the volume of water at low tide.

Tidal Range: The difference between successive high and low waters; the period of comparison can range over a week, month, year, or other time period.

Tide: Periodic rise and fall of the ocean surface and connecting bodies of water resulting from the gravitational attraction of the moon and sun acting upon the rotating earth.

Tide Lands: Land between the lines of the ordinary high and low tides, covered and uncovered successively by the ebb and flood thereof; land covered and uncovered by the ordinary tides.

Tidewater: Waters, whether salt or fresh and usually of coves, bays and rivers and not the open sea, wherever the ebb and flood of the tide from the sea is felt.

Toxic Substances: Substances, both naturally occurring and derived from human sources, that cause adverse biological effects or health risks when their concentrations exceed a certain level in the environment. Toxic substances include heavy metals and organic chemicals such as chlorine, polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs) and pesticides.

Transient Boaters: Persons traveling to a harbor or marine facility by boat and staying for a temporary period of time.

Turbidity: A state of reduced clarity in a fluid caused by the presence of suspended matter.

Turning Basin: An area within or adjacent to a designated fairway, channel or anchorage which is used and reserved for the purpose of unobstructed passage and turning of vessels.

Unauthorized Encroachment: Any structure (including docks, piers, floats, piles, moorings, and other structures) and any other work (including dredging and filling) extending into navigable waters or into any other areas below the mean high water line without necessary local, State and federal approvals.

Underwater Lands: Land seaward of the last known location (prior to the placement of any fill) of the mean high water line and administered in the public interest in accordance with the Public Trust Doctrine.

Underway: The condition of a vessel not at anchor and not made fast to the shore or aground.

Undocumented Vessel: Defined in the state Navigation Law as any vessel that is not required to have, and does not have, a valid marine document issued by the Federal Bureau of Customs.

Upland: Land lying above the ordinary high water mark.

Upland Disposal: Disposal of dredged material on upland sites where the material is contained in a manner such that it is isolated from the environment.

Vessel: Generally, every description of watercraft used or capable of being used as a means of transportation on water and specifically excluding floating homes. Defined in the state Navigation Law as any floating craft, excluding crew racing shells, and which shall be classified as either a public vessel or pleasure vessel.

Vessel Regulation Zone: Waters within or bounding a municipality to a distance of 1,500 feet from the shore and within which a municipality may regulate certain activities in accordance with authority provided by Section 46a of the state Navigation Law and Article 42 of the New York Executive Law. The governing body of a municipality may establish a vessel regulation zone and adopt, amend, and enforce local laws with respect to: a) regulating the speed and operation of vessels; b) restricting and regulating the anchoring or mooring of vessels; c) restricting and regulating garbage removal from vessels; and d) designating and regulating the use of public anchorage areas within the vessel regulation zone.

Vulnerability: Characterization of the nature and extent of damage that may occur during flooding.

Wastewater: Water that carries treated or untreated wastes, including dissolved or suspended solids, from homes, businesses, and industries.

Water Column: The water located vertically over a specific location on the sea floor.

Water-Dependent Use: An activity, defined in Article 42 of the New York State Executive Law, which can only be conducted on, in, over, or adjacent to a waterbody because such activity requires direct access to that water body, and which involves, as an integral part of such activity, the use of the water.

Water-Enhanced Use: An activity, as defined by the New York State Department of State, which has no critical dependence on the waterfront, but the profitability of the use and/or the enjoyment level of the users are increased significantly because the use is adjacent to or has visual access to the waterfront.

Water Quality Certification: A State certification, pursuant to Section 401 of the Clean Water Act, that a proposed action, including an action to discharge dredged material, will comply with the applicable provisions of the Clean Water Act and relevant state laws.

Water Quality Standard: A law or regulation that consists of the beneficial designated use or uses of a water body, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular water body, and an anti-degradation statement.

Water Resources Values: Natural values including those related to natural storage and conveyance of flood water, maintenance of water quality, and recharge of groundwater.

Waters of the United States: This term, as it applies to the jurisdictional limits of the authority of the USACE under the Clean Water Act, includes all navigable and interstate waters, their tributaries and adjacent wetlands, as well as isolated wetlands and lakes, and intermittent streams.

Watershed: A drainage area; the region or area contributing ultimately to the water supply of a particular watercourse or water body;

Wharf: A structure built on the shore of a harbor, channel or canal so that vessels may be secured alongside to receive and discharge cargo or passengers.