



# Glossary



Below is a list of terms and definitions that are used throughout the Aquatic Resources Awareness Course for Real Estate Appraisers.

Term	Definition
Algal blooms	A rapid increase or accumulation in the population of algae (typically microscopic) in a water system. Algal blooms may occur in freshwater as well as marine environments.
Aquaculture	The farming of aquatic organisms such as fish, crustaceans, mollusks, and aquatic plants.
Aquatic resources	Include wetlands, streams, lakes, rivers, springs, seeps, ponds, and groundwater.
Beach nourishment	The process of adding sand from somewhere else to an eroding shoreline to create a new beach or widen an existing beach.
Best management practices (BMP)	Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.
Biodiversity	It is a measure of the variety of organisms present in different ecosystems. This can refer to genetic variation, ecosystem variation, or species variation (number of species) within an area, biome, or planet.
Biogeochemical cycling	In Earth science, a biogeochemical cycle or substance turnover or cycling of substances is a pathway by which a chemical substance moves through both biotic (biosphere) and abiotic (lithosphere, atmosphere, and hydrosphere) compartments of Earth.
Biomass	Biological material derived from living or recently living organisms.

Term	Definition
Bog	A type of wetland characterized by spongy peat deposits, acidic waters, and a floor covered by a thick carpet of sphagnum moss. Bogs receive all or most of their water from precipitation rather than from runoff, groundwater or streams. As a result, bogs are low in the nutrients needed for plant growth, a condition that is enhanced by acid forming peat mosses.
Bottomland hardwood forests	Bottomland hardwood forests are river swamps. They are found along rivers and streams of the southeast and south central United States, generally in broad floodplains. These ecosystems are commonly found wherever streams or rivers at least occasionally cause flooding beyond their channel confines.
Carbon sink	A carbon sink is a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period. The process by which carbon sinks remove carbon dioxide (CO <sub>2</sub> ) from the atmosphere is known as carbon sequestration.
Clean Water Act	Common name for the Federal Water Pollution Control Act of 1972, which restructured and expanded the federal government's authority for water pollution control and consolidated authority in the Administrator of the Environmental Protection Agency.
Compensatory mitigation	The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.
CWA	Abbreviation for the federal Clean Water Act, also known as the Federal Water Pollution Control Act of 1972, which restructured the authority for water pollution control and consolidated authority in the Administrator of the Environmental Protection Agency.
Discharge	The term "discharge" means any discharge of dredged or fill material.

Term	Definition
Dredged material	Dredging is the removal of material from the bottom of lakes, rivers, harbors and other water bodies. Most dredging is done to maintain or deepen navigation channels, anchorages or berthing areas for the safe passage of boats and ships.
Ecosystems services	Ecosystem services are the benefits people obtain from ecosystems. These services include the production of food and water; regulating, such as the control of climate and disease; supporting, such as nutrient cycles and crop pollination; and cultural, such as spiritual and recreational benefits.
Emergent plant	A rooted herbaceous plant species that has parts extending above a water surface.
Enhancement	Wetland enhancement is the rehabilitation or reestablishment of a degraded wetland, and/or the modification of an existing wetland, which augments specific site conditions for specific species or purposes, possibly at the expense of other functions and other species.
Ephemeral stream	An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.
Establishment	The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.
Estuarine	An estuary is a body of water formed where freshwater from rivers and streams flows into the ocean, mixing with the seawater. Estuaries and the lands surrounding them are places of transition from land to sea, and from freshwater to saltwater.

Term	Definition
Fens	Fens, are peat-forming wetlands that receive nutrients from sources other than precipitation: usually from upslope sources through drainage from surrounding mineral soils and from groundwater movement. Fens differ from bogs because they are less acidic and have higher nutrient levels.
Fill material	Any material placed in an area to increase surface elevation.
General permit	General permits are permits issued to authorize similar minor activities by one or more applicants.
Groins	A wall or jetty built out over a riverbank or seashore to control erosion.
Habitat	The environment occupied by individuals of a particular species, population, or community.
Hydric soil	A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric soils that occur in areas having positive indicators of hydrophytic vegetation and wetland hydrology are wetland soils.
Hydrology	Hydrology is the scientific study of the movement, distribution, and quality of water on Earth and other planets.
Hydrophytes	A plant that grows only in water or very moist soils.
Individual permit	Individual permits are authorizations issued directly to an applicant
In-lieu fee	A type of mitigation that can be used to compensate for unavoidable impacts to wetlands. In this approach to mitigation, a permittee pays a fee to a third party instead of conducting project-specific mitigation or buying credits from a wetland mitigation bank.

Term	Definition
Intermittent stream	An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.
Invertebrates	Species of animals that do not have a spinal column. Familiar examples of invertebrates include insects, crabs, lobsters and their kin, snails, clams, octopuses and their kin, starfish, sea-urchins and their kin, and worms.
Isolated wetlands	Wetlands that are not contiguous, bordering or neighboring with respect to other Waters of the US are jurisdictionally "isolated"
Jetties	A structure such as a pier, that projects into a body of water to influence the current or tide or to protect a harbor or shoreline from storms or erosion.
Jurisdictional determination	A determination of which wetlands are regulated under section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act or under a State law.
Lakes	Usually a large body of water surrounded by land.
Mangrove swamps	A coastal marine swamp of tropical or subtropical regions dominated by mangrove trees.
Marsh	Marshes are defined as wetlands frequently or continually inundated with water, characterized by emergent soft-stemmed vegetation adapted to saturated soil conditions. There are many different kinds of marshes, ranging from the prairie potholes to the Everglades, coastal to inland, freshwater to saltwater. All types receive most of their water from surface water, and many marshes are also fed by groundwater. Nutrients are plentiful and the pH is usually neutral leading to an abundance of plant and animal life.

Term	Definition
Mitigation	Compensatory mitigation is required to replace the loss of wetland and aquatic resource functions in the watershed. Compensatory mitigation refers to the restoration, establishment, enhancement, or in certain circumstances preservation of wetlands, streams or other aquatic resources for the purpose of offsetting unavoidable adverse impacts.
Mitigation banking	A wetlands mitigation bank is a wetland area that has been restored, established, enhanced or reserved, which is then set aside to compensate for future conversions of wetlands for development activities. Permittees, upon approval of regulatory agencies, can purchase credits from a mitigation bank to meet their requirements for compensatory mitigation. The value of these "credits" is determined by quantifying the wetland functions or acres restored or created. The bank sponsor is ultimately responsible for the success of the project. Mitigation banking is performed "off-site," meaning it is at a location not on or immediately adjacent to the site of impacts, but within the same watershed.
Nationwide permit	Nationwide permit is a general permit that authorizes activities across the country, unless a district or division commander revokes the nationwide permit in a state or other geographic region.
Navigable	Navigable waters of the United States are 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. A determination of navigability, once made, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which impede or destroy navigable capacity.
Non-tidal wetland	A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Term	Definition
Ordinary High Water Mark (or Cyclical High Tide Mark)	An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.
Palustrine	Palustrine systems include any inland wetland dominated by trees, shrubs, or persistent emergent vegetation, which lacks flowing water, contains ocean-derived salts in concentrations of less than 0.05%, and is non-tidal.
Perennial stream	A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.
Physiographic region	Geographic region in which climate and geology have given rise to an array of landforms different from those of the surrounding regions.
Pine savannahs	A type of ecosystem dominated by a canopy of tall, longleaf pines. The terrain is flat to gently rolling with a sandy soil and high water table. Commonly found along the south eastern coastal plains.
Playa lakes	Playa lakes are round hollows in the ground in the Southern High Plains of the United States. They are ephemeral, meaning that they are only present at certain times of the year.
Pocosins	A type of palustrine wetland with deep, acidic, sandy, peat soils. Groundwater saturates the soil except during brief seasonal dry spells and during prolonged droughts.
Pollutant	A substance that makes land, water, and air dirty and not safe or suitable use...something that causes pollution.
Pollution	The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.

Term	Definition
Ponds	A small body of still water formed naturally or by hallowing or by embankment.
Prairie potholes	Prairie potholes are depressional wetlands (primarily freshwater marshes) found most often in the Upper Midwest region of the US.
Preservation	The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.
Re-establishment	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.
Rehabilitation	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.
Restoration	The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.



Term	Definition
Riffle and pool complexes	Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.
Riparian	Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects water bodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality.
Rivers	A large natural stream of water flowing in a channel to the sea, a lake, or another such stream.
Root zone	The part of the plant that is below the soil and the area surrounding it.
Salt marsh	Saltwater wetlands that occur along many coasts.
Scrub/shrub wetland	Wetland type that includes areas dominated by woody vegetation less than 6 m (20 feet) tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of the environmental conditions.
Silviculture	Silviculture is the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values.

Term	Definition
Stream bed	The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.
Streams	A small narrow river.
Swamps	A swamp is any wetland dominated by woody plants.
Territorial seas	The belt of the seas measured from the line of ordinary low water along that portion of the coast that is in direct contact with the open sea and extending seaward a distance of 3 miles.
Tidal wetland	Tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line.
Traditional navigable waters	Waters defined as navigable before passage of the CWA and their tributaries, including interstate waters, intrastate lakes, rivers, and streams used for recreational or other purposes; and intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce.
Treatment as state	Several federal environmental laws authorize EPA to treat eligible federally-recognized Indian tribe in the same manner as a state for implementing and managing certain environmental programs.

Term	Definition
Upland	As used herein, any area that does not qualify as a wetland because the associated hydrologic regime is not sufficiently wet to elicit development of vegetation, soils, and/or hydrologic characteristics associated with wetlands. Such areas occurring within floodplains are more appropriately termed nonwetlands.
Vegetated shallows	Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.
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Vernal pools	Vernal pools are seasonal depressional wetlands that occur under the Mediterranean climate conditions of the West Coast and in glaciated areas of northeastern and midwestern states. They are covered by shallow water for variable periods from winter to spring, but may be completely dry for most of the summer and fall. These wetlands range in size from small puddles to shallow lakes and are usually found in a gently sloping plain of grassland.
Water quality standards	Water Quality Standards are the foundation of the water quality-based pollution control program mandated by the Clean Water Act. Water Quality Standards define the goals for a water body by designating its uses, setting criteria to protect those uses, and establishing provisions such as antidegradation policies to protect water bodies from pollutants.

<b>Term</b>	<b>Definition</b>
Waters of the United States	Waters used in or supporting interstate or foreign commerce or recreation, waters used for interstate or foreign industrial purposes, interstate waters and wetlands, the territorial sea, and the tributaries of and wetlands adjacent to those waters. This term is often used to describe those waters falling under the jurisdiction of the CWA.
Wet meadow	Wet meadows are a type of marsh that commonly occurs in poorly drained areas such as shallow lake basins, low-lying farmland, and the land between shallow marshes and upland areas. Some wet meadows are found high in the mountains on poorly drained soil.
Wetland	Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
Wetland delineation	The procedure used to identify and delineate wetlands.