

# CHAPTER 19

## GLOSSARY

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<b>Accretion</b>	Enlargement of a beach area by either natural or artificial means. Natural accretion on a beach is the buildup or deposition of sand or sediments by water or wind. Artificial accretion is a similar buildup by human activity, such as from construction of a groin or breakwater or from beach fill deposited by mechanical means.
<b>Armor</b>	To fortify a topographical feature to protect it from erosion (e.g., constructing a wall to armor the base of a seacliff).
<b>Backshore</b>	The region of the shore or beach between the foreshore and the coastline and affected waves only during severe storms.
<b>Bathymetry</b>	Related to submarine contours or topography; also refers to depth measurements.
<b>Background</b>	The farthest part of the visual landscape where elements lose detailed visual distinctions.
<b>Beach</b>	The expanse of sand, gravel, cobble, or other loose material that extends landward from the low water line to the place where there is distinguishable change in physiographic form, or to the line of permanent vegetation. The seaward limit of a beach (unless otherwise specified) is the mean low water line.
<b>Bedrock</b>	Solid rock underlying soil and younger rock layers; generally the oldest exposed geological unit.
<b>Bight</b>	A bay caused by a bend in the coastline.
<b>Blowouts</b>	Circular rims or depressions formed where sand has been removed by wind; often caused by removal of vegetation.

<b>Bluff (or cliff)</b>	A scarp or steep face of rock, weathered rock, sediment, or soil resulting from erosion, faulting, folding, or excavation of the land mass. The cliff or bluff may be a simple planar or curved surface, or it may be steplike. For purposes of the Statewide Interpretive Guidelines, “cliff” or “bluff” is limited to those features having vertical relief of ten feet or more, and “seacliff” is a cliff whose toe is being eroded or is subject to marine erosion.
<b>Bluff edge (or cliff edge)</b>	The upper termination of a bluff, cliff, or seacliff. When the top edge of the cliff is rounded away from the face of the cliff as a result of erosional processes related to the presence of the steep cliff face, the edge is the point nearest the cliff beyond which the downward gradient of the land surface increases more or less continuously until it reaches the general gradient of the cliff. In a case where there is a steplike feature at the top of the cliff face, the landward edge of the topmost riser is the cliff edge. The termini of the bluff line, or the edge along the seaward face of the bluff, is a point reached by bisecting the angle formed by a line coinciding with the general trend of the bluff line along the inward facing portion of the bluff. Five hundred feet is the minimum length of bluff line or edge to be used in making these determinations (from Public Resources Code Section 13577).
<b>Blufftop retreat (or cliff top retreat)</b>	The landward migration of the bluff or cliff edge, caused by marine erosion of the bluff or cliff toe and surface erosion of the bluff or cliff face.
<b>Bore</b>	To make a hole in or through with a drill or other device. Used commonly for determining sedimentary history, to reveal information on past site conditions, and to provide some guidance on future site stability or erosion potential.
<b>Cobbles</b>	A rock particle size class, larger than gravel and smaller than a boulder, with an average diameter of 75 to 300 millimeters (about 3 to 12 inches). Cobbles are usually, but not necessarily, rounded to subangular. Cobble conglomerate is a hard or cemented sedimentary deposit in which cobbles predominate and are embedded in a matrix of finer-grained sediments.
<b>Dissipate</b>	To break up, scatter, dispel, or dispense energy. The many forms of breakwaters and revetments are dissipaters of wave energy.
<b>Downcoast</b>	In the United States usage, it is the coastal direction generally trending toward the south; also the way in which current flows.
<b>Downdrift</b>	The direction of predominant movement of shore materials.
<b>Erosion</b>	The wearing away of land by natural forces. On a beach, the carrying away of beach material by wave action, currents, or the wind.
<b>Fault</b>	A rock fracture accompanied by displacement.

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<b>Forebeach</b>	The sand area affected regularly by tides and wave action; also called wet beach.
<b>Foreground</b>	The closest part of the visual landscape where maximum detail and color intensity can be discerned.
<b>Foreshore</b>	Region of the coast extending from the berm crest (or the highest point of the wave wash at high tide) to the low water mark, which is measured at low tide; also called beach face.
<b>Form</b>	The visual mass or shape of an object, often defined by edge, outline, and surrounding space.
<b>Formation</b>	A unit of rock that is distinctive and persistent over a large area.
<b>Fossiliferous</b>	Containing fossils.
<b>Groin</b>	A shoreline protection structure, usually built (perpendicular to the shoreline to trap nearshore sediment or retard shore erosion. A series of groins acting together to protect a section of beach is known as a groin system or groin field.
<b>Gunnite (also referred to as Shotcrete)</b>	Slurry concrete that is sprayed onto forms or structures; often used as a facing material for structural seawalls or retaining walls. Almost all strength comes from the supporting material or forms.
<b>Line</b>	The visual path the eye follows when perceiving abrupt differences in form, color, or texture, usually evident as edges of shapes or masses in the landscape.
<b>Liquefaction</b>	The process of becoming liquid, especially applied to sand that loses its bearing strength due to strong shaking.
<b>Littoral</b>	Of or pertaining to a shore, especially of the sea.
<b>Mechanically Stabilized Earth</b>	MSE walls and slopes are constructed with “reinforced soil.” Reinforcing elements, such as steel strips, steel, or polymeric grids, or geotextile sheets are placed in the soil to improve tensile resistance. Tensile reinforcing elements in the soil strengthens it significantly and allows very steep slopes or even vertical walls to be constructed without support from a massive structural system at the face.
<b>Middleground</b>	The intermediate section of the visual landscape, between the foreground and background, where visual elements begin to join but where less detail is perceived.
<b>Miocene</b>	A geological epoch that began 24 million years ago and ended five million years ago.

<b>Nearshore zone</b>	An indefinite zone extending seaward from the shoreline, well beyond the breaker zone; it defines the area of nearshore currents.
<b>Outflanking</b>	Process where material to either side of a seawall or protection structure erodes to a point where it threatens or damages the wall itself, or property behind it.
<b>Pholad</b>	A kind of mollusk. Any one of numerous species of marine bivalve mollusks of the genus <i>Pholas</i> , or family <i>Pholadidae</i> . They bore holes for themselves in clay, peat, and soft rocks.
<b>Piezometer</b>	A perforated hollow pipe (usually PVC) that is inserted into a gravel filled hole in the ground and used to measure the level of the ground water table over time. An array of piezometers can be used to determine the three-dimensional path of ground water flow in an aquifer.
<b>Pleistocene</b>	A geological epoch that began 1.8 million years ago and ended 10,000 years ago; a period of geologic time spanning two million to 11,000 years ago.
<b>Pliocene</b>	a geological epoch that began five million years ago and ended 1.8 million years ago; a period of geologic time seven to two million years ago.
<b>Refraction</b>	(1) Process that changes the direction of a wave moving into shallow water at an angle to the contours; the part of the wave advancing in shallower water moves more slowly than the part in deeper water, causing the wave crest to bend toward alignment with the underwater contours. (2) Bending of wave crests by currents.
<b>Retaining wall</b>	Low wall used to support or retain an earth embankment or area of fill.
<b>Revetment</b>	A sloped retaining wall; a facing of stone, concrete, blocks, riprap, built to protect an embankment, bluff, or development against erosion by wave action and currents.
<b>Riprap</b>	A protective layer or facing of rock, concrete blocks, or quarrystone, placed to prevent erosion, scour, or sloughing of an embankment or bluff.
<b>Sand source</b>	Resource of sand that can be economically used for beach nourishment. The sand must meet the requirements for size distribution and cleanliness and its removal and transfer must not create unacceptable environmental effects. The source may be on land, offshore, in a nearby inlet, or in a navigational channel, a shoal, or other area in which sand accumulates.
<b>Sandstone</b>	A rock composed predominantly of sand grains that have undergone cementation.

<b>Scour</b>	Removal of material by waves and currents, especially at the back, base, toe, or edges of a shore structure.
<b>Seawall</b>	A structure separating land and water areas, primarily designed to prevent erosion and other damage due to wave action. It is usually a vertical wood or concrete wall, as opposed to a sloped revetment.
<b>Shoreline</b>	Intersection of the ocean or sea with land; the line delineation of the shoreline on National Ocean Service nautical charts and surveys approximates the mean low water line from the time the chart was prepared.
<b>Shore protection</b>	Structures or sand placed at or on the shore to reduce or eliminate upland damage from wave action or flooding during storms.
<b>Shotcrete (also referred to as gunnite)</b>	Shotcrete concrete projected or “shot” under pressure using a feeder or gun onto a surface to form structural shapes, including walls, floors, and roofs. Shotcrete has high strength, durability, low permeability, excellent bond, and limitless shape possibilities. These properties allow shotcrete to be used in most cases as a structural material. Although the hardened properties of shotcrete are similar to conventional cast-in-place concrete, the nature of the placement process provides additional benefits, such as excellent bond with most substrates and instant or rapid capabilities, particularly on complex forms or shapes.
<b>Subaerial</b>	Formed, existing, or taking place on the land surface; contrasted with subaqueous or underwater.
<b>Subaerial erosion</b>	Erosion that occurs on the land surface due to surface material being removed by wind, water, weathering, and gravity. (See <b>erosion</b> .)
<b>Surf zone</b>	Area between the outermost breaking waves and the limit of wave uprush.
<b>Terrace</b>	A gently sloping platform cut by wave action.
<b>Texture</b>	The visual or tactile surface characteristics of or appearance of an object.
<b>Tie-back walls</b>	vertical walls that are braced into the material behind them by tie rods or cables connecting to anchors or “deaden.”
<b>Undertow</b>	A seaward current near the bottom on a sloping inshore zone, caused by the return, under the action of gravity, of the water carried up on the shore by waves. Commonly misnamed a rip current.
<b>Updrift</b>	The direction opposite that of the predominant movement of littoral materials.

<b>Wave</b>	a ridge, deformation, or undulation of the surface of a liquid. On the ocean, most waves are generated by wind and are often referred to as wind waves.
<b>Wave climate</b>	The range of wave parameters (height, period, and direction) characteristic of a coastal location.
<b>Wave-cut platform</b>	The near-horizontal plane cut by wave action into a bedrock formation at the shoreline.
<b>Wave run-up</b>	The distance or extent that water from a breaking wave will extend up a beach or structure.