

**G. GLOSSARY**

- 1  
2  
3 **A-Weighted Decibel (dBA):** An overall frequency-weighted sound level in decibels which  
4 approximates the frequency response of the human ear.  
5  
6 **Acoustic:** Operated by or utilizing sound waves.  
7  
8 **Acute:** An effect having a sudden onset and lasting a short time.  
9  
10 **Acute Water Quality Criteria:** A water quality criteria recommendation for the highest  
11 in-water concentration of a chemical or effluent to which organisms can be exposed for a brief  
12 period of time without causing an acute effect.  
13  
14 **Algae:** Simple rootless plants that grow in bodies of water (e.g. estuaries) at rates in relative  
15 proportion to the amounts of nutrients (e.g. nitrogen and phosphorus) available in water.  
16  
17 **Ammonium:** (NH<sub>4</sub><sup>+</sup>) chemical compound that is a source of nitrogen for plants and  
18 microorganisms.  
19  
20 **Amplitude:** The maximum departure of the value of an alternating current or wave from the  
21 average value.  
22  
23 **Anadromous:** Fish that spend most of their life in salt water but migrate into freshwater  
24 tributaries to spawn (i.e. shad, sturgeon).  
25  
26 **Analyte:** A single chemical constituent.  
27  
28 **Anomaly:** Something different, abnormal, peculiar, or not easily classified; irregularity.  
29  
30 **Anthropogenic:** Influenced by the activities of humans.  
31  
32 **Anoxia/Anoxic:** Without dissolved oxygen or in oxygen deficit. Dissolved oxygen  
33 concentrations of 0 mg/l (MDE 1994).  
34  
35 **Assemblage:** A group of populations of similar organisms that co-occur and interact.  
36  
37 **Astronomical Tide:** The tidal levels and character which result from gravitational effects from  
38 the Earth, Sun, and Moon, without atmospheric influences.  
39  
40 **Bathymetry:** The physical characteristics, including depth, contour, and shape of the bottom of  
41 a body of water, such as oceans, seas, bays and lakes.  
42  
43 **Bay Bridge:** WM Preston Lane Jr. Memorial Bridge. Located between Kent Island and Cape St.  
44 Clair, Maryland.  
45  
46 **Benthic:** Living in, on, or in close association with the bottom of a body of water.

- 47  
48 **Benthic Index of Biotic Integrity:** Evaluates the ecological condition of a sample by  
49 comparing values of key benthic community attributes to reference values expected under non-  
50 degraded conditions in similar habitat types.  
51
- 52 **Benthic Macroinvertebrates:** Macroinvertebrates are large, generally soft-bodied organisms  
53 that lack backbones. Benthic macroinvertebrates live in or on the bottom sediment in aquatic  
54 environments.  
55
- 56 **Benthos:** A group of organisms, most often invertebrates, that live in or on the bottom in  
57 aquatic habitats (such as clams that live in the sediments) which are typically immotile or of  
58 limited motility or range.  
59
- 60 **Bioaccumulation:** The accumulation of chemical constituents in the tissue of organisms  
61 through any route, including respiration, ingestion, or direct contact with chemical constituents  
62 in water, sediment, pore water, or dredged material.  
63
- 64 **Bioavailable:** In a form that is readily consumed or assimilated by organisms. Some metals and  
65 chemical constituents bind to particulates and are not available for uptake by organisms.  
66
- 67 **Biodiversity:** The assemblage of different species found in any ecosystem.  
68
- 69 **Biotic:** Life and living organisms.  
70 .
- 71 **Bloom:** A large population increase of phytoplankton that remains within a defined part of the  
72 water column.  
73
- 74 **Body Burden:** The concentration of a chemical constituent that accumulates in the tissue of an  
75 organism.  
76
- 77 **Borrow Area:** Area from which material (e.g., sand, soil, etc.) is taken for use in another  
78 location.  
79
- 80 **Candela:** The basic unit of luminous intensity adopted under the Systeme International d'Unites;  
81 equal to 1/60 of the luminous intensity per square centimeter of a black body radiating at the  
82 solidification temperature of Platinum, 2,046 degrees Kelvin.  
83
- 84 **Capping:** The controlled, accurate placement of contaminated material at an open-water  
85 placement site, followed by a covering or cap of clean material to isolate contaminated sediment  
86 from the overlying aquatic environment [In this context, "contaminated" refers to material found  
87 to be unacceptable for unrestricted open-water placement because of potential contaminant  
88 effects, while the term "clean" refers to material found to be acceptable for such placement].  
89
- 90 **Catadromous:** Fish that live in freshwater and migrate to saltwater to spawn (i.e. American eel).  
91

92 **Chain of Custody:** Documentation that describes the date and time of collection for each  
93 environmental sample (sediment, water, or tissue), and the date and time of transfer of  
94 each environmental sample to the analytical or ecotoxicological laboratory.  
95

96 **Chlorophyll *a*:** A photosynthetic pigment found in plants, including phytoplankton. Frequently  
97 utilized as an estimate of plant or phytoplankton standing crop.  
98

99 **Chronic:** An effect involving a stimulus that is lingering or which continues for a long time.  
100

101 **Chronic Water Quality Criteria:** A water quality criteria recommendation for the highest  
102 in-water concentration of a chemical or effluent to which organisms can be exposed indefinitely  
103 without causing unacceptable effects.

104 **Clay:** A fine grained, plastic, sediment with a typical grain size less than 0.004 mm. Possesses  
105 electromagnetic properties which bind the grains together to give a bulk strength or cohesion.  
106

107 **Coast:** A strip of land of indefinite width that extends from the shoreline inland to the first  
108 major change in terrain features.  
109

110 **Coastal Plain:** The level land with generally finer and fertile soils downstream of the piedmont  
111 and fall line, where tidal influence is felt in the rivers.  
112

113 **Coastline:** Line separating the coast and the shore, or, more commonly, the boundary between  
114 land and water.  
115

116 **Cohesive Sediment:** Fine-grained sediment containing a significant proportion of clays, the  
117 electromagnetic properties of which cause the sediment to bind together. Cohesive sediments  
118 tend to have high shear strengths.  
119

120 **Community:** An ecological unit consisting of the micro-organisms, animals, and plants that  
121 inhabit a particular area.  
122

123 **Compaction:** A decrease in the volume or thickness of a sediment or soil under load through  
124 the closer packing of constituent particles; accompanied by a decrease in porosity and an  
125 increase in density.  
126

127 **Comparability:** The confidence with which one data set can be compared to others and  
128 the expression of results consistent with other organizations reporting similar data.  
129 Comparability of procedures also implies using methodologies that produce results comparable  
130 in terms of precision and bias.  
131

132 **Compatibility:** The degree to which landscape elements and characteristics are still unified  
133 within their setting.  
134

135 **Congener:** A member of a family of chemical compounds sharing similar structure and  
136 characteristics.  
137

138 **Contaminant:** A chemical or biological substance in a form that can be incorporated into, onto,  
139 or be ingested by and that harms aquatic organisms, consumers of aquatic organisms, or users of  
140 the aquatic environment.

141  
142 **Contour:** an outline especially of a curving or irregular figure; *also* : the line representing this  
143 outline producing effects by reason of quantitative differences.

144  
145 **Core sample:** Rock, sediment, or soil that is extracted by drilling and used for analysis.

146  
147 **Coriolis Force:** Force due to the Earth's rotation, capable of generating currents. It causes  
148 moving bodies to be deflected to the right in the Northern Hemisphere and to the left in the  
149 Southern Hemisphere. The "force" is proportional to the speed and latitude of the moving  
150 object. It is zero at the equator and maximum at the poles.

151  
152 **County Subdivision:** The primary legal or statistical division of a county or statistically  
153 equivalent entity, as defined by the United States Census Bureau.

154  
155 **Crustaceans:** The class of aquatic Arthropods including copepods, isopods, amphipods,  
156 barnacles, shrimp, and crabs which are characterized by having jointed appendage and gills.

157  
158 **Current:** A flow of water, typically generated by wave action, tidal fluctuations, or winds.

159  
160 **Current Rose:** Graphic representation of currents, utilizing arrows to the direction toward  
161 which the prevailing current flows and a percentage to show the frequency of any given flow.

162  
163 **Decibel:** A unitless measure of sound on a logarithmic scale, which indicates the squared ratio  
164 of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is  
165 20 micro-pascals.

166  
167 **Depth:** The vertical distance from a specified tidal datum to the sea floor.

168  
169 **Designated Use:** An element of a water quality standard, expressed as a narrative statement,  
170 describing an appropriate intended human and/or aquatic life objective for a water body.  
171 Designated uses for a water body may include: recreation, shellfishing, water supply and/or  
172 aquatic life habitat.

173  
174 **Differential:** Producing effects by reason of quantitative differences.

175  
176 **Digital:** Relating to an audio recording method in which sound waves are represented so that in  
177 the recording wow and flutter are eliminated and background noise is reduced.

178  
179 **Dike:** An embankment constructed (typically using soil and rock) to contain dredged material or  
180 to serve as a protective barrier.

181  
182 **Dioxin:** A family of carcinogenic hydrocarbons.

183

184 **Direct Economic Impact:** Amount of direct economic activity and change in local business  
185 activity occurring as a direct consequence of the project.

186  
187 **Dissolved Oxygen:** Microscopic bubbles of oxygen that are mixed in the water and occur  
188 between water molecules. Dissolved oxygen is necessary for healthy lakes, rivers, and estuaries.  
189 Most aquatic plants and animals need oxygen to survive. Fish will drown in water when the  
190 dissolved oxygen levels get too low. The absence of dissolved oxygen in water is a sign of  
191 possible pollution.

192  
193 **District:** A U.S. Army Corps of Engineers administrative area.

194  
195 **Diversity:** A measure of the number of species coexisting in a community.

196  
197 **Dredged Material:** Material that is excavated or dredged from waters of the United States.

198  
199 **Dredging:** Excavation or displacement of the bottom or shoreline of a water body with  
200 mechanical or hydraulic machines. Done to maintain channel depths or berths for navigational  
201 purposes, for shellfish harvesting, for cleanup of polluted sediments, and as a source for  
202 placement of sand on beaches.

203  
204 **Ebb Current:** The movement of a tidal current away from shore or down a tidal stream. The  
205 terms of maximum ebb and minimum ebb are applied to the maximum and minimum velocities  
206 of a continuously running ebb current, the velocity alternately increasing and decreasing without  
207 coming to a slack or reversing. The expression maximum ebb is also applicable to any ebb  
208 current at the time of greatest velocity

209  
210 **Ebb Tide:** The period of tide between high water and the succeeding low water; a falling tide.

211  
212 **Effluent:** The discharge to a body of water from a defined source, generally consisting of a  
213 mixture of waste and water from industrial or municipal facilities.

214  
215 **Environmental Impact Statement (EIS):** Required by NEPA for actions that could result in  
216 significant environmental impacts or for projects that are not eligible for an Environmental  
217 Assessment and Finding of No Significant Impact (FONSI). Results in a Record of Decision  
218 from the District Commander, U.S. Army Corps of Engineers (USACE).

219  
220 **Emissions:** Refers to pollution being released or discharged into the air from natural or man-  
221 made sources. Pollutants may be released directly into the air from a structural device (i.e.,  
222 smokestack, chimney, exhaust pipe) or indirectly via volatilization or dispersal (i.e., aerosol  
223 spraying).

224  
225 **Environmental Assessment:** A document required by NEPA, which provides sufficient  
226 information to the District Commander, USACE on potential environmental effects of the  
227 proposed action and its alternatives to determine if an EIS or FONSI is required.

228

229 **Epibenthic:** The area on top of the sea floor. Epibenthic organisms may be freely moving or  
230 sessile (permanently attached to a surface).

231  
232 **Epifaunal:** Plants, animals and bacteria that are attached to the hard bottom or substrate (for  
233 example, to rocks or debris); are capable of movement; or that live on the sediment surface.

234  
235 **Essential Fish Habitat (EFH):** Those waters and substrate necessary to fish for spawning,  
236 breeding, feeding or growth to maturity.

237  
238 **Eutrophic:** Describes an aquatic system with high nutrient concentrations. These nutrient  
239 concentrations fuel algal growth. This algae eventually dies and decomposes, with reduces the  
240 amount of dissolved oxygen in the water.

241  
242 **Eutrophication:** The fertilization of surface waters by nutrients that were previously scarce.  
243 Eutrophication through nutrient and sediment inflow is a natural aging process by which warm  
244 shallow lakes evolve to dry land. Human activities are greatly accelerating the process. The most  
245 visible consequence is the proliferation of algae. The increased growth of algae and aquatic  
246 weeds can degrade water quality.

247  
248 **Evaluation:** The process of judging data in order to reach a decision.

249  
250 **Exposure:** The period of time during which an organism is exposed to a laboratory test  
251 concentration or field condition.

252  
253 **Extirpated:** A wildlife species that no longer survives in regions that were once part of its  
254 native range and is locally extinct, but still exists somewhere else.

255  
256 **Fastland:** Additional land that extends into a waterbody that is created using dredged material.

257  
258 **Fathometer:** Sonic depth finder

259  
260 **Federal Standard:** The dredged material placement alternative(s) identified by the U.S. Army  
261 Corps of Engineers that represent the least costly, environmentally acceptable alternative(s)  
262 consistent with sound engineering practices and which meet the environmental standards  
263 established by the 404(b)(1) evaluation process. [See Engle et al. (1988) and 33 CFR 335-338].  
264 The Federal standard was developed from a national perspective and considers, but is not bound  
265 by, State or local regulations.

266  
267 **Ferrous:** Objects composed of or containing iron such as fasteners, anchors, engine parts,  
268 ballasts, weaponry, cargo, tools, and miscellaneous related debris.

269  
270 **Fetch:** The horizontal distance (in the direction of the wind) over which a wind generates  
271 waves.

272  
273 **Fetch Length:** The horizontal distance (in the direction of the wind) over which a wind  
274 generates waves or creates a wind setup.

275  
276 **Fetch-limited:** Situation in which wave energy (or wave height) is limited by the size of the  
277 wave generation area (fetch).  
278  
279 **Fetch Lines:** See Fetch Length.  
280  
281 **Flood Current:** The movement of a tidal current toward the shore or up a tidal stream. The  
282 terms maximum flood and minimum flood are applied to the maximum and minimum velocities  
283 of a flood current the velocity of which alternately increases and decreases without coming to  
284 slack or reversing. The expression maximum flood is also applicable to any flood current at the  
285 time of greatest velocity.  
286  
287 **Flood Tide:** The period of tide between low water and the succeeding high water; a rising tide.  
288 **Freeboard:** The mandatory height that must be kept between the top of the dredged  
289 material/water surface and the containment structure crest to allow for the occurrence of a design  
290 rainfall without overtopping the containment structure.  
291  
292 **Glare:** Light emitted at an intensity great enough to reduce a viewer's ability to see, and in  
293 extreme cases causing momentary blindness.  
294  
295 **Grab Sampling:** The collection of surficial sediments (the top 4-8 inches) using a sampling  
296 device with a jaw that grabs a bite of sediment.  
297  
298 **Grain-size Effects:** Mortality or other effects in laboratory whole sediment bioassays due to  
299 sediment granulometry, not chemical toxicity. [It is clearly best to use test organisms which are  
300 not likely to react to grain-size, but if this is not reasonably possible, then testing must account  
301 for any grain-size effects.]  
302  
303 **Ground Truth:** The facts that are found when a location is field checked (visited on foot). Used  
304 in cartography and analysis of aerial photographs and satellite imagery.  
305  
306 **High Tide (high water):** Maximum elevation reached by each rising tide.  
307  
308 **Higher High Water:** The higher of the two high waters of any tidal day.  
309  
310  
311 **Hindcast:** See Wave Hindcasting.  
312  
313 **Hindcasting, Wave:** In wave prediction, the retrospective forecasting of waves using measured  
314 wind information.  
315  
316 **Hypoxia/Anoxia:** Deficiencies in the concentration of dissolved oxygen in aquatic systems.  
317  
318 **Hypoxic/Hypoxia:** Having dissolved oxygen concentrations less than 4 to 5 mg/L (MDE,  
319 1994).  
320

321 **Indirect Economic Impact:** The economic activity felt by businesses that supply goods and  
322 services to support the project, such as meals bought in local restaurants.

323  
324 **Induced Economic Impact:** The impact generated when surrounding businesses purchase  
325 additional products and services, and hire more employees to meet the demand brought on by the  
326 direct and indirect impacts of the project.

327  
328 **Infauna:** Aquatic organisms that live in the substrate of a body of water, especially in a soft  
329 bottom or reef.

330  
331 **In-situ:** Latin term meaning ‘in place’, especially in natural or original position. In research,  
332 this typically refers to data collection or analysis that occurs at the location where sampling  
333 occurs , in contrast to measurements conducted in a laboratory.

334  
335 **Intertidal:** The area of shore located between high and low tides.

336  
337 **Invertebrates:** Animals which lack a backbone and include such as squids, octopuses, lobsters,  
338 or shrimps, crabs, shellfishes, sea urchins and starfishes.

339  
340 **Juvenile:** Strictly speaking, a juvenile is any of a species which is not yet sexually mature. In  
341 the context of many surveys, however, it is most often used interchangeably with young-of-year  
342 (YOY).

343  
344 **Land Use:** The way land is developed and used in terms of the kinds of anthropogenic activities  
345 that occur (e.g. agriculture, residential areas, industrial areas).

346  
347 **Lethal:** Causing death.

348  
349 **Lift:** The layer of dredged material placed in a wetland or upland cell in each year.

350  
351 **Light Attenuation:** Absorption, scattering, or reflection of light by water, chlorophyll a,  
352 dissolved substances, or particulate matter. Light attenuation reduces the amount of light  
353 available to submerged aquatic vegetation.

354  
355 **Light Trespass:** Light that shines beyond the boundaries of the property on which it is located  
356 and onto areas where it is unwanted or interferes with land use.

357  
358 **Linear:** Of, relating to, resembling, or having a graph that is a line and especially a straight line;  
359 involving a single dimension; of the first degree with respect to one or more variables; of,  
360 relating to, based on, or being linear equations, linear differential equations, linear functions,  
361 linear transformations, or linear algebra; characterized by an emphasis on line.

362  
363 **Loci:** Plural of locus.

364  
365 **Locus:** The location where the set of points occurs.

366

- 367 **Low Tide (low water):** Minimum elevation reached by each falling tide.  
368
- 369 **Lower Low Water:** The lower of the two low waters of any tidal day.  
370
- 371 **Macroinvertebrate:** Organisms greater than 0.5 mm, possessing no internal skeleton.  
372
- 373 **Macroplankton:** Planktonic organisms that are 200-2,000 micrometers in size.  
374
- 375 **Macrotidal:** An estuary with a tidal range greater than 4 meters.  
376
- 377 **Magnetic:** Pertaining to a field or object that has qualities of polarity and attraction; pertaining  
378 to a body having the property of attracting iron and producing a field external to itself.  
379
- 380 **Magnetometer:** An instrument used to detect the presence of a metallic object or to measure the  
381 intensity of a magnetic field.  
382
- 383 **Maintenance Dredging:** Dredging necessary to keep the channels serving the Port at their  
384 nominal authorized depth and width.  
385
- 386 **Mean Abundance:** Number of organisms per square meter.  
387
- 388 **Mean High Water (MHW):** The average height of the high waters over a 19-year period. For  
389 shorter periods of observations, corrections are applied to eliminate known variations and reduce  
390 the results to the equivalent of a mean 19-year value. All high water heights are included in the  
391 average where the type of tide is either semidiurnal or mixed. Only the higher high water heights  
392 are included in the average where the type of tide is diurnal. So determined, mean high water in  
393 the latter case is the same as mean higher high water.  
394
- 395 **Mean Higher High Water (MHHW):** The average height of the higher high waters over a 19-  
396 year period. For shorter periods of observation, corrections are applied to eliminate known  
397 variations and reduce the result to the equivalent of a mean 19-year value.  
398
- 399 **Mean Low Water (MLW):** The average height of the low waters over a 19-year period. For  
400 shorter periods of observations, corrections are applied to eliminate known variations and reduce  
401 the results to the equivalent of a mean 19-year value. All low water heights are included in the  
402 average where the type of tide is either semidiurnal or mixed. Only lower low water heights are  
403 included in the average where the type of tide is diurnal. So determined, mean low water in the  
404 latter case is the same as mean lower low water.  
405
- 406 **Mean Lower Low Water (MLLW):** The average height of the lower low waters over a 19-year  
407 period. For shorter periods of observations, corrections are applied to eliminate known  
408 variations and reduce the results to the equivalent of a mean 19-year value. Frequently  
409 abbreviated to **Lower Low Water**.  
410

411 **Mean Sea Level:** The average height of the surface of the sea for all stages of the tide over a  
412 19-year period, usually determined from hourly height readings. Not necessarily equal to Mean  
413 Tide Level.

414  
415 **Mean Tidal Range:** Difference in height between **mean high water** and **mean low water**.  
416

417 **Mean Tide Level:** The average (mean) The [arithmetic mean](#) of [mean high water](#) and [mean low water](#).  
418

419 **Mean (Higher High, High, Low, Lower Low) Water:** Average height of the (higher high,  
420 high, low, lower low) waters over a 19-year period.

421  
422 **Mesohaline:** Moderately brackish water with low range salinities (from 5-18 parts per  
423 thousand).

424  
425 **Mesotidal:** An estuary with a tidal range between 2 and 4 meters.  
426

427 **Microtidal:** An estuary with a tidal range less than 2 meters. The Chesapeake Bay is a good  
428 example of a microtidal estuary.

429  
430 **Migratory:** Describing groups of organisms which move from one habitat to another on a  
431 regular or seasonal basis.

432 **Mooring:** A place where or an object (as a craft) can be secured with lines or anchors.  
433

434 **Neap Tide:** Tides of decreased range occurring semimonthly as the result of the moon being in  
435 quadrature. The neap range of the tide is the average semidiurnal range occurring at the time of  
436 the neap tides and is usually computed from harmonic constants.

437  
438 **New Work Dredging:** Dredging needed to widen and deepen channels below existing  
439 conditions.

440  
441 **Nitrate:** Salt or ester of nitric acid (NO<sub>3</sub><sup>-</sup>). It is an essential nutrient for phytoplankton growth,  
442 and its low surface water concentrations typically limit phytoplankton productivity.

443  
444 **Nitrite:** Salt or ester of nitrous acid (NO<sub>2</sub><sup>-</sup>).  
445

446 **Noise:** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.  
447

448 **Noise Attenuation:** The reduction in the strength or energy of noise with increasing distance.  
449

450 **Non-cohesive Sediment:** Sediments, such as coarse grained sediment (sand), that have low  
451 shear strengths.

452  
453 **Non-detect:** A chemical constituent that is not detected or measured above the method detection  
454 limit in an analytical test.  
455

456 **Non-point Sources:** A diffuse source of pollution that cannot be attributed to a clearly  
457 identifiable, specific physical location or a defined discharge channel. This includes the nutrients  
458 that runoff the ground from any land use - croplands, feedlots, lawns, parking lots, streets,  
459 forests, etc. - and enter waterways. It also includes nutrients that enter through air pollution,  
460 through the groundwater, or from septic systems.

461  
462 **Northeaster:** A storm or strong wind from the northeast.

463  
464 **Nutrients:** Compounds of nitrogen and phosphorus dissolved in water which are essential to  
465 both plants and animals. Too much nitrogen and phosphorus act as pollutants and can lead to  
466 unwanted consequences - primarily algae blooms that cloud the water and rob it of oxygen  
467 critical to most forms of aquatic life. Sewage treatment plants, industries, vehicle exhaust, acid  
468 rain, and runoff from agricultural, residential and urban areas are sources of nutrients entering  
469 the Bay.

470  
471 **Open Water Placement:** Placement of dredged material in rivers, lakes, or estuaries via  
472 pipeline or release from hopper dredges or barges.

473  
474 **Overloading (cells):** Placement of large quantities of dredged material in a cell during a given  
475 placement year and exceeding the optimal lift thickness.

476  
477 **Organophosphorus Pesticide:** Similar in structure to some compounds acting as nerve gases.  
478 These were developed as more selective and less persistent alternatives to organochlorine  
479 pesticides such as DDT.

480  
481 **Overburden:** Material not geotechnically suitable for use as foundation or borrow material in  
482 the construction of the containment structure designed for the Masonville DMCF. This material  
483 overlies material which is geotechnically suitable for either foundation or borrow material in the  
484 construction slated for the Masonville DMCF.

485  
486 **Overloading:** Occurs when the annual placement capacity of a dredged material containment  
487 facility is exceeded. The annual placement capacity is determined by the site's surface area for  
488 dredged material placement and a 3 ft lift of hydraulically placed dredged material. Overloading  
489 can result in a loss of total site capacity by not allowing full normal consolidation to take place at  
490 the site.

491  
492 **Overtopping:** Water carried over the top of a coastal structure because of wave run-up  
493 exceeding the crest height.

494  
495 **Particulate matter:** Matter composed of particles that are not bound together (e.g., sand or  
496 dust).

497  
498 **pH:** A measure of acidity or alkalinity on a scale of 0 (acidic) to 14 (basic), with 7 being neutral.

499  
500 **Phaeophytin:** Degraded product of chlorophyll *a*. The amount of this compound in the water is  
501 an important estimate of the amount of phytoplankton in the surface water.

502  
503 **Phosphate:** The anion (PO<sub>4</sub><sup>-</sup>) or a salt of phosphoric acid. Essential to the metabolism of living  
504 organisms because inorganic phosphate is required for the synthesis of ATP. Plants and  
505 microorganisms take up phosphorus mainly in the form of phosphates, and various phosphates  
506 are used as fertilizers. Excess phosphate washed into streams and lakes contributes to  
507 eutrophication and formation of algal blooms.  
508  
509 **Photic Zone:** Layer of a body of water that receives ample sunlight for photosynthesis (usually  
510 less than 100m).  
511  
512 **Phytoplankton:** Microscopic plants (primary producers) found throughout aquatic systems.  
513 Plankton are usually very small organisms that cannot move independently of water currents.  
514 Phytoplankton are any plankton that are capable of making food via photosynthesis.  
515  
516 **Piscivorous:** Animals that primarily eat fish.  
517  
518 **Planktivorous:** Animals that primarily eat plankton.  
519  
520 **Plankton:** Passively drifting or weakly swimming small or microscopic algae and organisms  
521 associated with surface water and the water column.  
522  
523 **Plankton bloom:** Unusually high concentration of plankton (usually phytoplankton) in an area,  
524 caused either by an explosive or gradual multiplication of organisms.  
525  
526 **Plume:** A space containing a substance or characteristic released from a point source.  
527  
528 **Polynuclear Aromatic Hydrocarbons (PAH):** A group of over 100 different chemicals that  
529 are formed during the incomplete burning of coal, oil and gas, garbage, or other organic  
530 substances like tobacco or charbroiled meat. Some PAHs are manufactured. These pure PAHs  
531 usually exist as colorless, white, or pale yellow-green solids.  
532  
533 **Polychlorinated Biphenyl (PCB):** A large group of toxic synthetic lipid-soluble chlorinated  
534 hydrocarbons that are used in various industrial processes and that have become persistent  
535 environmental contaminants that can be concentrated in food chains.  
536  
537 **Pound Net:** A net used for entrapping and catching fish, that is attached to stakes and has a  
538 large enclosure and narrow entrance into which fish are directed.  
539  
540 **Primary Producers:** Organisms, such as algae, that convert solar energy to organic substances  
541 through the molecule, chlorophyll. Primary producers serve as a food source for higher  
542 organisms.  
543  
544 **Primary Productivity:** The amount of organic matter fixed by the autotrophic organisms in an  
545 ecosystem per unit time.  
546

547 **Probable Effects Level (PEL):** An estimate of the concentration of a potentially toxic  
548 substance in the sediment above which the substance is likely to cause adverse effects to aquatic  
549 organisms.

550

551 **Pycnocline:** A layer of rapid change in water density with depth. In oceans this is mainly caused  
552 by changes in water temperature and salinity.

553

554 **Quality Assurance (QA):** The total integrated program for assuring the reliability of data. A  
555 system for integrating the quality planning, quality control, quality assessment, and quality  
556 improvement efforts to meet user requirements and defined standards of quality with a stated  
557 level of confidence.

558

559 **Quality Control (QC):** The overall system of technical activities for obtaining prescribed  
560 standards of performance in the monitoring and measurement process to meet user requirements.

561

562 **Radially Averaged Fetch Distance:** The average length of multiple fetch lines, which radiate  
563 from one point over a range (direction) with a relatively constant wind speed.

564

565 **Recruitment:** The residue of those larvae that have: (1) dispersed; (2) settled at the adult site;  
566 (3) made some final movements toward the adult habitat; (4) metamorphosed successfully, and  
567 (5) survived to be detected by the observer.

568

569 **Reference Sediment:** A whole sediment, collected near an area of concern, that is used as a  
570 point of comparison to assess sediment conditions exclusive of the material(s) or activities of  
571 interest. The reference sediment may be used as an indicator of localized sediment conditions  
572 exclusive of the specific pollutant of concern. Such sediment would be collected near the site of  
573 concern and would represent background concentrations.

574

575 **Reference Site:** The location from which reference sediment is obtained.

576

577 **Region:** U.S. Environmental Protection Agency administrative area.

578

579 **Regulations:** Administrative rules published in the Code of Federal Regulations (CFR) or Code  
580 of Maryland Regulations (COMAR).

581

582 **Residence Time:** Time required for the flow of water to replace the amount of water originally  
583 present in a given volume.

584

585 **Rolling Surcharge:** A rolling surcharge is used in conjunction with wick drains. The surcharge  
586 applies a load to the soil, creating excess pore pressure, which is relieved by the wick drains.  
587 The surcharge speeds up the consolidation process. The rolling portion of the term refers to the  
588 fact that the surcharge moves around the area of soil being consolidated. This is typically done  
589 when the area being surcharged is large and it is more economical to move a smaller surcharge  
590 over the site that provide a surcharge to the entire site at once.

591

592 **Rotifers:** Microscopic members of the Phylum Rotifera, many of which are planktonic.  
593

594 **Salinity Regime:** A portion of an estuary distinguished by the amount of tidal influence and  
595 salinity of the water. The major salinity regimes are, from least saline to most saline:

- 596 ○ **Tidal Fresh** – Describes waters with salinity between 0 and 0.5 parts per  
597 thousand (ppt). These areas are at the extreme reach of tidal influence.
- 598 ○ **Oligohaline** – Describes waters with salinity between 0.5 and 5 ppt. These areas  
599 are typically in the upper portion of an estuary.
- 600 ○ **Mesohaline** – Describes waters with salinity between 5 and 18 ppt. These areas  
601 are typically in the middle portion of an estuary.
- 602 ○ **Polyhaline** – Describes waters with salinity between 18 and 30 ppt. These areas  
603 are typically in the lower portion of an estuary, where the ocean and estuary meet.  
604

605 **Sediment:** Particulate organic and inorganic matter that settles and accumulates in a loose form  
606 on the bottom of a body of water or waterway. It may be chemically precipitated from solution,  
607 secreted by organisms, or transported from land by air, ice, or water, and deposited. Inorganic  
608 sediments on the bottom of the Bay include cobble, gravel, sand, silt, and clay. These materials  
609 are classified by grain-size.  
610

611 **Sediment Transport:** The main natural or non-anthropogenic agencies by which sedimentary  
612 materials are moved are: gravity (gravity transport); running water (rivers and streams); ice  
613 (glaciers); wind; the sea (currents). Running water and wind are the most common transporting  
614 agents.  
615

616 **Sedimentation:** The deposition of suspended sediment.  
617

618 **Sediment Quality Guidelines (SQG):** Concentrations of chemical constituents in sediments  
619 that are used in order to differentiate sediments of little concern from those predicted to have  
620 adverse biological effects.  
621

622 **Semidiurnal Tide:** Tides that occur twice daily; two high tides and two low tides occur each  
623 day.  
624

625 **Shallow Water:** Water of such depth that surface waves are noticeably affected by bottom  
626 topography.  
627

628 **Shallow Water Habitat (SWH):** Areas generally less than six ft in depth where light  
629 penetration is sufficient to support SAV.

630 **Shoal:** An area of submerged accumulation of sediments in shallow or deep water.  
631

632 **Shore:** The narrow strip of land in immediate contact with the sea.  
633

634 **Shoreline:** The intersection of a specified plane of water with the shore or beach (typically  
635 taken as mean high water or mean higher high water).  
636

637 **Side-scan Sonar:** A sonar that scans the ocean floor to the side of a ship's track and is used  
638 especially for mapping the ocean bottom.

639  
640 **Silt:** Sediment particles with a grain size between 0.004 mm and 0.062 mm, i.e. coarser than  
641 clay particles but finer than sand.

642  
643 **Single Dipolar Anomaly:** An irregularity from one source with a distinctive magnetic signature  
644 that displays both a rise and fall above and below the ambient field. The dipole in the dipolar  
645 signature is usually aligned along the axis of the magnetic field and the negative peak of the  
646 anomaly falls nearest the North Pole. In comparison, multi-component anomalies, or those  
647 composed of both dipolar and monopolar magnetic perturbations are typically more consistent  
648 with the multiple individual iron materials comprising the debris patterns associated with  
649 shipwrecks.

650  
651 **Soil Classification:** The systematic arrangement of soils into groups or categories on the basis  
652 of their characteristics.

653  
654 **Sonar:** A method or device for detecting and locating objects especially underwater by means of  
655 sound waves sent out to be reflected by the objects; *also:* a device for detecting the presence of a  
656 vessel (as a submarine) by the sound it emits in water.

657  
658 **Sound:** A vibratory disturbance created by a vibrating object, which, when transmitted by  
659 longitudinal pressure waves through a medium such as air, is capable of being detected by a  
660 receiving mechanism, such as the human ear or a microphone.

661  
662 **Spatial Dominance:** The prevalent occupation of a space in a landscape by an object(s) or  
663 landscape element.

664  
665 **Spring Bloom:** Sudden proliferation of phytoplankton that occurs when the critical depth (as  
666 determined by the penetration of sunlight) exceeds the depth of the mixed, stable surface layer  
667 (as determined by the pycnocline).

668  
669 **Spring Tidal Range:** Has the maximum range and occurs during the full moon when the earth  
670 is between the moon and the sun, and new moon when the moon is between the earth and the  
671 sun.

672  
673 **Spring Tide:** A tide that occurs at or near the time of new or full moon and which rises highest  
674 and falls lowest from the mean sea level.

675  
676 **Standard Operating Procedure (SOP):** A written document which details an operation,  
677 analysis, or action whose mechanisms are thoroughly prescribed and which is commonly  
678 accepted as the method for performing certain routine or repetitive tasks.

679  
680 **Storm Surge:** A rise above normal water level on the open coast due to the action of wind stress  
681 on the water surface or atmospheric pressure differentials associated with storm events.

682

683 **Stratification:** Vertical arrangement in layers, e.g. distinct temperature bands within a water  
684 body.

685  
686 **Sub-bottom Profiler:** A sub-bottom profiler is a piece of equipment that emits lower frequency  
687 sound waves that can penetrate up to 50 meters into the seafloor, depending on seafloor type and  
688 water conditions (e.g., turbidity, salinity).

689  
690 **Submerged Aquatic Vegetation (SAV):** Vascular plants that grow completely underwater are  
691 referred to as SAV. Light penetration, turbidity, water depth, salinity (mesohaline species  
692 require 5 to 18 ppt), and nutrient availability influence the distribution, growth and viability of  
693 SAV. SAV normally occurs in water depths to 10 feet, although SAV is more likely to be found  
694 in depths of three to five feet or less in the Bay because of increased turbidity levels (Batiuk et.  
695 al, 1992).

696  
697 **Substrate:** Surface on which a sessile organism lives and grows. The substrate may simply  
698 provide structural support, or may provide water and nutrients. A substrate may be inorganic,  
699 such as rock or soil, or it may be organic, such as wood.

700  
701 **Threshold Effects Level (TEL):** Concentrations below which a contaminant will rarely induce  
702 adverse biological effects.

703  
704 **Tidal Datum:** The plane or level to which soundings, elevations, or tide heights are referred.

705  
706 **Tidal Day:** The time of the rotation of the Earth with respect to the Moon, or the interval  
707 between two successive upper transits of the Moon over the meridian of a place, approximately  
708 24.84 solar days.

709  
710 **Tidal Range:** The difference in height between consecutive high and low (or higher high and  
711 lower low) waters.

712  
713 **Tide:** Periodic rise and fall of the ocean and atmosphere, caused by the gravitational attraction  
714 of the moon and sun acting on the earth.

715  
716 **TMDLs:** "Total Maximum Daily Load" or TMDL. A TMDL defines the pollutant load that a  
717 water body can assimilate without causing violations of water quality standards, and allocates the  
718 loading between contributing point sources and non-point source categories.

719  
720 **Toe Dike:** A trapezoidal rock section that extends outward from the armored dike slopes (at  
721 3H:1V) from the Bay bottom to approximately MLLW.

722 **Topography:** The configuration of a surface, including its relief and the positions of its streams,  
723 roads, buildings, etc.

724  
725 **Total Organic Carbon (TOC):** The sum of all organic carbon compounds in water.

726  
727 **Total Suspended Solids (TSS):** Organic or inorganic particles that are suspended in water;  
728 includes sand, silt, and clay particles as well as biological material.

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**Tributyltin:** Compounds that belong to a group known as the organotins. TBT's are manufactured compounds that have no counterparts in nature. They are extremely toxic over a broad spectrum.

**Trophic Level:** Layer in the food chain in where one group of organisms serves as the source of nutrition of another group of animals. Primary produces constituent the first trophic level, herbivores the second, and carnivores the third, and highest, trophic level.

**Trot Lining:** A method of catching fish that involves a long line, resting on the bottom and anchored at both ends, to which a series of baits are attached at intervals of two to six feet. The baits are attached to the main line by simple slipknots or by shorter lines called dropper lines.

**Turbidity:** Cloudiness in the water column created by suspended particles, algae, or other materials; high turbidity reduces the amount of light that penetrates into the water column and, therefore, high turbidity can be harmful to aquatic life.

**Vertical Stratification:** Showing distinct vertical layers.

**Volatile Organic Compound:** An organic compound that evaporates readily at atmospheric temperatures.

**Water Quality Certification:** A state certification, pursuant to Section 401 of the Clean Water Act, that the proposed discharge of dredged material will comply with the applicable provisions of Sections 301, 303, 306, and 307 of the Federal Clean Water Act and relevant State laws.

**Water Quality Criteria:** A constituent concentration or narrative statement representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated area. See **acute water quality criteria, chronic water quality criteria.**

**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.

**Wave Climate:** The combination of waves of different heights, periods, and directions.

**Wave Crest:** The highest point on a wave.

**Wave Direction:** The direction from which a wave approaches.

**Wave Height:** The vertical distance between a crest and the preceding trough.

**Wave Length:** The horizontal distance between similar points on two successive waves measured perpendicular to the wave crests.

775 **Wave Period:** The time for a wave crest to traverse a distance equal to one wavelength.  
776

777 **Wave Spectrum:** The range of waves that comprise a sea state, which have varying heights and  
778 periods ranging from relatively long waves to short ripples.

779  
780 **Wick Drains:** A wick drain is a series of plastic tubes surrounded by a permeable membrane.  
781 They are inserted into a soil medium to relieve pore pressures and provide a path for water to  
782 escape. This release of water allows the soil medium to consolidate. Wick drains are typically  
783 used to consolidate soils to create geotechnically suitable foundations.  
784

785 **Wind Rose:** Diagram showing the long-term distribution of wind speed and direction.  
786

787 **Young-of-the-year:** All of the fish of a species younger than one year of age. Usually scientists  
788 assign an arbitrary "birth date" to all fish of a species hatched over a two or three month period in  
789 one year. The fish are then assigned to Age 1 status on that birth date. By convention, this is  
790 usually January 1.  
791

792 **Zooplankton:** A community of floating, often microscopic animals that inhabit aquatic  
793 environments. Unlike phytoplankton, zooplankton cannot produce their own food, and so are  
794 consumers.  
795