Overview

The IAN symbol libraries currently contain 3031 custom made vector symbols designed specifically for enhancing science communication skills. Download the complete set or create a custom packaged version.

Our aim is to make them a standard resource for scientists, resource managers, community groups, and environmentalists worldwide. Easily create diagrammatic representations of complex processes with minimal graphical skills. Currently downloaded by 93434 users in 245 countries and 50 U.S. states.

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Please acknowledge as: Symbols courtesy of the Integration and Application Network (ian.umces.edu/symbols/).

The Libraries Include

- 3031 science/ecology symbols
- 55 albums in 6 categories
- Vector (SVG & AI) versions
- Raster (PNG) version
Acknowledgements

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Ecosystems: Coastal/Marine

Australia QLD: Bramble Bay
Australia QLD: Deception Bay
Australia QLD: Eastern Moreton Bay
Australia QLD: Gold Coast
Australia QLD: Pumicestone Passage
Australia QLD: Southern Moreton Bay Islands
Australia QLD: Waterloo Bay

Coast to coast USA 2D
Coastline 2D: barrier island with microtidal energy
Coastline 2D: barrier island with mixed energy

Coastline 2D: catchment, river, nearshore and offshore reefs
Coastline 2D: clastic and carbonate sediment
Coastline 2D: closed estuary and nearshore reefs
Coastline 2D: coastal floodplain
Coastline 2D: dunes to open ocean
Coastline 2D: estuary to deep reef
Coastline 2D: gradual 5 degree slope
Coastline 2D: intertidal zone
Coastline 2D: nearshore reef
Coastline 2D: open estuary and nearshore reef

Coastline 2D: receding shoreline
Coastline 2D: saltwedge
Coastline 2D: sand dune system
Coastline 2D: sand dune system with lagoon
Coastline 2D: sea level rise
Coastline 2D: sea-level rise with continental shelf
Coastline 2D: sea-level rise with continental slope
Coastline 2D: sea-level rise with increased swell
Coastline 2D: sheltered vs. exposed with calcareous sediments

Coastline 2D: sheltered vs. exposed with siliceous sediments
Coastline 2D: steep 45 degree slope
Coastline 2D: steep shoreline
Coastline 2D: stepped shoreline with variable water quality
Coastline 3D: barrier island bar
Coastline 3D: barrier island lagoon system
Coastline 3D: barrier islands
Coastline 3D: bay with barrier island
Coastline 3D: beach to ocean

Coastline 3D: comparison high vs low marsh
Coastline 3D: dunes and water table
Coastline 3D: modified shoreline
Coastline 3D: mountains to open ocean
Coastline 3D: mountains to open ocean with upwelling
Coastline 3D: natural shoreline
Coastline 3D: oblique beach to ocean
Coastline 3D: river and barrier islands
Coastline 3D: river comparison
Ecosystems: Desert

Desert 3D: foothills 1
Desert 3D: foothills 2
Desert 3D: interior valley
Desert 3D: mountains with dry creek and lake
Lake 2D: desert lunette
Sedona Red Rocks
USA ID: City of Rocks National Reserve
USA OR: John Day Fossil Beds National Monument
Ecosystems: Freshwater

River 3D: mountain and lake
River 3D: mountains and plain
River 3D: navigable channel
River 3D: navigable channel with levees
River 3D: sandy bottom
River 3D: sediment layers
River 3D: two river confluence
River 3D: urban paving with low water level
River 3D: urban paving with mid water level
River 3D: watershed with mountains

River 3D: watershed with mountains and water table
River 3D: with stream
River valley 2D: steep and shallow slope
River valley 3D: gentle slope
River valley 3D: steep slope
Stream 3D: aquiclude and spring
Stream 3D: braided
Stream 3D: eroding banks
Stream 3D: healthy
Stream 3D: river valley and water table

Stream 3D: sandy banks in valley
Stream 3D: springs and perched water table
Stream 3D: unhealthy
Water table 3D
Ecosystems: Grassland

- Plain 3D: mountains and lake
- Plain 3D: simple
- Plain 3D: simple with soil layers
- Plains 3D: mountains, aquifer, and braided river system
- Plains 3D: mountains, caves, sandstone outcrop, aquifer
Ecosystems: Maps

USA WA: Port Orchard Sound
USA WA: Puget Sound
USA WA: Sequim and Discovery Bays
USA WA: Skagit Bay and Whidbey Basin
USA WA: South Puget Sound
USA WA: Willapa Bay
USA: Chesapeake Bay watershed
USA: line map
USA: states
Ecosystems: Mountains/Tundra

- Foothills: foothills
- Hill: with geologic layers
- Lake 2D: caldera with volcanic island
- Lake 3D: caldera lake with volcanic island
- Lake 3D: caldera lake
- Mountain 3D: glaciated
- Mountain 3D: glaciers and foothills
- Mountain range 3D: eroded and unwarped plateau
- Mountain range 3D: fault block

- Mountain range 3D: folded
- Mountain range 3D: foothills 1
- Mountain range 3D: foothills 2
- Mountain range 3D: foothills and stream
- Mountain range 3D: plain (Great Sand Dunes)
- Mountain range 3D: plain and water table (Great Sand Dunes)
- Mountain range 3D: plains and road
- Mountain range 3D: river canyon, mesas, craters, and sand plain

- Mountain range 3D: stream
- Mountains 3D: glacier with braided stream and varve lake
- Mountains 3D: high gradient stream to basalt lake
- Mountains 3D: high gradient stream to sandstone lake
- Mountains 3D: laminated lake
- Mountains 3D: modified valley and granite outcrop
- Mountains 3D: river, tinajas, and marsh
- Mountains 3D: rocky outcrop and stream

- USA VA: Shenandoah National Park
Ecosystems: Other

Meteorite 3D: crater
Meteorite 3D: crater lake
Plate tectonics: subduction zone and mid-ocean ridge
Volcano 3D: caldera
Volcano 3D: cinder cone
Volcano 3D: composite
Volcano 3D: dome
Volcano 3D: fissure
Volcano 3D: shield
Fauna: Amphibians

- **Ambystoma maculatum** (Spotted Salamander)
- Anura (Frog) lifecycle: day 01 egg
- Anura (Frog) lifecycle: day 03-04 tailbud
- Anura (Frog) lifecycle: day 06 tadpole with external gills
- Anura (Frog) lifecycle: day 09 tadpole with internal gills
- Anura (Frog) lifecycle: day 12 tadpole with operculum
- Anura (Frog) lifecycle: day 70 tadpole with hindlimbs
- Anura (Frog) lifecycle: day 84+ tadpole metamorphosis
- Anura (Frog) lifecycle: day 84+ young frog

- **Bufo americanus** (American Toad): adult
- **Dendrobates pumilio** (Dart-poison Frog): adult
- **Eleutherodactylus coqui** (Coqui Frog)
- **Eurycea bislineata** (Northern Two-lined Salamander)
- **Hyla cinerea** (American Green Tree Frog): adult
- **Litoria caerulea** (Australian Green Tree Frog): adult
- **Plethodon shenandoah** (Shenandoah Salamander)
- **Pseudotriton ruber** (Northern Red Salamander)
- **Rana clamitans melanota** (Northern Green Frog): adult
- **Rana palustris** (Pickerel Frog): adult
Fauna: Birds

- **Duck**
- **Ducula bicolor** (Pied Imperial Pigeon)
- **Elanus leucurus** (White-tailed Kite)
- **Elepaio** (chasiempis sandwichensis)
- **Empidonax traillii extimus** (Southwestern Willow Flycatcher)
- **Empidonax virens** (Acadian Flycatcher)
- **Eolophus roseicapilla** (Galah)
- **Falco mexicanus** (Prairie Falcon)
- **Falco peregrinus** (Peregrine Falcon)
- **Flying geese**
- **Fregata minor** (Great Frigatebird)
- **Gallus gallus domesticus** (Chicken)
- **Geococcyx californianus** (Greater Roadrunner)
- **Grus americana** (Whooping Crane)
- **Haliaeetus leucocephalus** (Bald Eagle)
- **Haliaeetus leucogaster** (White-bellied Sea Eagle)
- **Hawai'i akepa** (loxops coccineus)
- **Hawai'i creeper** (oreomystis mana)
- **Hawaiian Crow or alala** (Corvus hawaiiensis)
- **Himantopus himantopus** (Black-winged Stilt)
- **Himantopus mexicanus** (Black-necked Stilt)
- **Himantopus mexicanus** (Black-necked Stilt) : eggs
- **House finch** (carpodacus mexicanus)
- **Hylocichla mustelina** (Wood Thrush)
- **Icterus gABIa** (Baltimore Oriole)
- **Irediparra gallinacea** (Comb-crested Jacana)
- **Japanese bush warbler** (cettia diphone)
- **Japanese white-eye** (zosterops japonicus)
- **Larus spp.** (Seagull)
- **Melanerpes erythrocephalus** (Red-headed Woodpecker)
- **Meleagris gallopavo** (Wild turkey)
- **Molothrus spp.** (Cowbird)
- **Molothrus spp.** (Cowbird) : nest
- **Nycticorax nycticorax** (Black-crowned Night Heron)
- **Oporonis formosus** (Kentucky Warbler)
- **Pandion haliaetus** (Osprey) adult
- **Passerculus sandwichensis** (Savannah Sparrow)
- **Passerina ciris** (Painted Bunting)
- **Pelecanus occidentalis** (Brown Pelican)
- **Pelecanus spp.** (Pelican)
- **Phaethon aethereus** (Red-billed Tropicbird)
- **Phalacrocorax auritus** (Double-crested Cormorant)
- **Phalacrocorax varius** (Australian Pied Cormorant)
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<td>Picoides pubescens (Downy Woodpecker)</td>
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<td>Vermivora chrysoptera (Golden-winged Warbler)</td>
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<td>Vireo altilogus (Black-whiskered Vireo)</td>
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Fauna: Crustaceans

- Acartia spp. (Copepod)
- Amphipod
- Aratus pisonii (Mangrove Tree Crab)
- Barnacle: closed
- Barnacle: open
- Calcinus verrilli (Verrilli's Hermit Crab)
- Callianassa spp. (Burrowing Mud Shrimp)
- Callinectes sapidus (Blue Crab): adult 1
- Callinectes sapidus (Blue Crab): adult 2
- Callinectes sapidus (Blue Crab): coupling
- Callinectes sapidus (Blue Crab): egg-bearing female
- Callinectes sapidus (Blue Crab): eggs
- Callinectes sapidus (Blue Crab): female ventral view
- Callinectes sapidus (Blue Crab): first crab
- Callinectes sapidus (Blue Crab): juvenile
- Callinectes sapidus (Blue Crab): male dorsal view
- Callinectes sapidus (Blue Crab): male ventral view
- Callinectes sapidus (Blue Crab): megalopa 1
- Callinectes sapidus (Blue Crab): megalopa 2
- Callinectes sapidus (Blue Crab): ventral view adolescent female
- Callinectes sapidus (Blue Crab): zoea 1
- Callinectes sapidus (Blue Crab): zoea 2
- Copepod 1
- Crab zoea
- Crayfish
- Crustacean: juvenile
- Crustacean: nauplius
- Daphnia pulex (Water Flea)
- Gammarus spp. (Amphipod)
- Goniopsis cruentata
- Grapsus tenuicrustatus (Thin-shelled Rock Crab)
- Hermit Crab
- Homarus gammarus (European Lobster)
- Macrobrachium jelskii (Agar River Prawn)
- Menippe mercenaria (Florida Stone Crab)
- Mictyris spp. (Soldier Crab) 1
- Mictyris spp. (Soldier Crab) 2
- Mysid spp
- Oithona spp
- Pachygrapsus marmoratus (Marbled Rock Crab)
- Panulirus argus (Spiny Lobster) : phyllosoma
- Panulirus argus (Spiny Lobster) : puerulus
- Panulirus argus (Spiny Lobster) eggs
- Panulirus argus (spiny lobster) : frontal view
- Panulirus argus (spiny lobster) : side view
- Paracalanus spp
- Penaeus monodon (Tiger Prawn) : adult
- Prawn shrimp
- Rock Lobster
- Stomatopod
Fauna: Crustaceans

- *Uca annulipes* (Mangrove Fiddler Crab)
- *Uca spp.* (Fiddler Crab)
- *Uca spp.* (Fiddler Crab): anterior view
- *Uca thayeri* (Mangrove Fiddler Crab)
- copepod2
Fauna: Echinoderms

- Acanthaster planci (Crown-of-Thorns starfish)
- Diadema antillarum (black sea urchin)
- Echinothrix diadema (Long Spined Urchin)
- Holothurian 1
- Holothurian 2
- Linckia laevigata (Blue Linckia)
- Lytechinus variegatus (Variegated Sea Urchin)
- Ophiopholis aculeata (Daisy Brittle Star)
- Pteraster tessalatus (Cushion Star)
- Pycnopodia helianthoides (Sunflower Seastar)

Seastar 1
Seastar 2
Seastar 3
Fauna: Fish

Scorpaenichthys marmoratus (Cabezon)
Sebastes carnatus (Gopher Rockfish)
Sebastes crameri (Darkblotched Rockfish)
Serranus cabrilla (Comber)
Serranus scriba (Painted Comber)
Shark
Sicydium plumieri (Sirajo Goby)
Siganus spinus (Scribbled Rabbit Fish)
Siganus spp. (Rabbitfish)
Sillaginodes punctata (King George Whiting)
Sillago ciliata (Sand Whiting)
Sphoeroides maculatus (Northern Puffer)
Sphyraena spp. (Hammerhead Shark)
Spondylosoma cantharus (Black Seabream)
Stolephorus commersonnii (Commerson's Anchovy)
Symphodus rostratus
Tandanus tandanus (Eel-tailed Catfish)
Thunnus albacares (Yellowfin Tuna)
Triaenodon obesus (Whitetip Reef Shark)
Trinectes maculatus (Hogchoker)
Urophycis regia (Spotted Hake)
Zanclus cornutus (Moorish Idol)
Zebrasoma flavescens (Yellow Tang)
Zebrasoma scopas (Brown Scopas Tang)
Zeus faber (John Dory)
generic fish
Fauna: Insects/Arachnids

Actias luna (Luna Moth)  
Ant  
Anthonomus grandis (Boll Weevil)  
Bee  
Beetle  
Caddisfly: adult  
Caddisfly: larva  
Caddisfly: larva in case  
Caterpillar  
Centipede  
Cicindela dorsalis media (Eastern Beach Tiger Beetle)  
Cicindela thestina (Tiger Beetle)  
Coccinella transversalis (Ladybird Beetle)  
Dalhinibaenetes giganteus (Giant Sand Treader Camel Cricket)  
Danaus plexippus (Monarch Butterfly)  
Dendroctonus ponderosae (Mountain Pine Beetle) 1  
Dendroctonus ponderosae (Mountain Pine Beetle) 2  
Dermatophagoides pteronyssinus (House Dust Mite)  
Dragonfly: adult  
Dragonfly: nymph  
Eotetranychus sexmaculatus (Mite)  
Firefly  
Fly  
Fossil: bee  
Fossil: moth  
Galerucella pusilla (Golden Loosestrife Beetle)  
Grasshopper  
Latrodectus hasselti (Redback Spider)  
Lymantria dispar (Gypsy Moth)  
Lymantria dispar (Gypsy Moth): caterpillar  
Mayfly: adult  
Mayfly: larva  
Mosquito 1  
Mosquito 2  
Ornhthoptera priamus (King Priamo's Birdwing)  
Papilio glaucus (Eastern Tiger Swallowtail Butterfly)  
Papilio ulysses (Ulysses Butterfly)  
Praying mantis  
Problema bulenta (Rare Skipper)  
Rhyothemis graphiptera (Banded Flutterer)  
Scorpion  
Solenopsis invicta (Red Imported Fire Ant)  
Solenopsis spp. (Red Ant)  
Spider web  
Stonefly: adult  
Stonefly: larva  
Strymon melinus (Grey Hairstreak)
Fauna: Mammals

- Ailuropoda melanoleuca (Panda)
- Alces alces (Moose)
- Antilocapra americana (Pronghorn deer)
- Antilope cervicapra (Blackbuck Antelope)
- Arctocephalus pusillus (Brown Fur Seal)
- Balaena mysticetus (Bowhead Whale)
- Balaenoptera borealis (Sei Whale)
- Bison bison (American Bison)
- Bos taurus (Bull)
- Bos taurus (Cow 1)
- Bos taurus (Cow 2)
- Bos taurus (Cow 3)
- Bos taurus (Cow 4)
- Bos taurus (Cow 5)
- Bos taurus (Cow 6)
- Bos taurus (Cow 7)
- Bos taurus (Cow)
- Bos taurus (Cow) : from above 1
- Bos taurus (Cow) : from above 2
- Bos taurus (Cow) : from above 3
- Bos taurus (Hereford Steer)
- Bos taurus (Longhorn Steer)
- Camelus dromedarius (Arabian Camel)
- Canis latrans (Coyote)
- Canis lupis familiaris (Dog)
- Canis lupis familiaris (Dog) : feces
- Capra aegagrus hircus (Goat)
- Castor canadensis (North American Beaver)
- Castor canadensis (North American Beaver) : dam
- Castor canadensis (North American Beaver) : hut
- Cervus elaphus (Red Deer)
- Cervus nippon (Sika Deer)
- Cervus nippon (Sika Deer) : buck
- Cervus nippon (Sika Deer) : doe
- Chaetodipus hispidus (Hispid Pocket Mouse)
- Cynomys spp. (Prairie Dog)
- Cynomys spp. (Prairie Dog) : feces
- Dipodomys ordii (Kangaroo Rat)
- Dugong dugon (Dugong)
- Dugong dugon (Dugong) 1
- Dugong dugon (Dugong) 2
- Enhydra lutris (Sea Otter)
- Enhydra lutris (Sea Otter) 1
- Enhydra lutris (Sea Otter) 2
- Equus ferus caballus (Horse 1)
- Equus ferus caballus (Horse)
- Equus ferus caballus (Horse) : feces
- Equus ferus caballus (Pony)
- Equus ferus caballus (Pony) 1
- Equus ferus caballus (Pony) 2
- Equus quagga (Plains Zebra)
- Eschrichtius robustus (Gray Whale)
- Eubalaena glacialis (Right Whale)
- Euderma maculatum (Spotted Bat)
- Felis catus (Cat)
- Felis catus (Cat) : domestic
Fauna: Mammals

- Sus scrofa (wild boar)
- Sus scrofa domestica (domestic pig)
- Sylvilagus spp. (Cottontail Rabbit)
- Trichechus spp. (Manatee)
- Tursiops spp. (Bottlenose Dolphin)
- Ursus americanus (American Black Bear)
- Ursus arctos horribilis (Grizzly Bear)
- Ursus maritimus (Polar Bear)
- Vulpes velox (Swift Fox)
- Vulpes vulpes (Red Fox)
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<td>Isognomon alatus (Flat Tree Oyster)</td>
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<tr>
<td>Littoraria spp. (Mangrove Periwinkle)</td>
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<tr>
<td>Mercenaria mercenaria (Hard Clam)</td>
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<tr>
<td>Mussels 1</td>
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<td>Mussels 2</td>
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<tr>
<td>Mytilus galloprovincialis (Chambered Nautilus)</td>
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<td>Nautilus pompilius (Chambered Nautilus)</td>
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<td>Octopus</td>
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<td>Octopus vulgaris (Common Octopus)</td>
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<tr>
<td>Oxynoe olivacea (Sacoglossan)</td>
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<td>Oyster</td>
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<td>Oyster 2D reef</td>
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<td>Oyster 3D reef</td>
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<tr>
<td>Pinna nobilis (Penn Shell)</td>
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<tr>
<td>Plebidonax deltoides (Surf Clam)</td>
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<td>Pomacea bridgesii (Apple Snail)</td>
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<td>Rangia cuneata (Atlantic Rangia)</td>
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<td>Razor clam</td>
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<td>Scallops</td>
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<tr>
<td>Sea Snail</td>
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<tr>
<td>Sepia officinalis (Common Cuttlefish)</td>
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<td>Squid</td>
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<td>Strombus gigas (Queen Conch)</td>
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<td>Tridacna gigas (Giant Clam)</td>
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<tr>
<td>Trochomorpha apia (Sea Snail)</td>
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<td>Trochus spp. (Sea Snail)</td>
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<tr>
<td>Umbonium vestiarum (Button Snail)</td>
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<td>Urosalpinx cinerea (Oyster Drill)</td>
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<td>Fauna: Other</td>
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<tr>
<td><strong>Ascidian</strong></td>
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<td><strong>Bryozoan colony</strong></td>
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<td><strong>Ctenophore (Comb Jelly)</strong></td>
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<td><strong>Doliolid (Tunicate)</strong></td>
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<td><strong>Fossil trilobite</strong></td>
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<td><strong>Limulus polyphemus</strong></td>
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<td><strong>(Horseshoe Crab)</strong></td>
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<td><strong>Mnemiopsis leidyi</strong></td>
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<tr>
<td><strong>(Comb Jelly)</strong></td>
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<tr>
<td><strong>Neoesperiopsis rigida</strong></td>
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Fauna: Protozoans

- Actinophrys sol (Amoeba)
- Chaos diffluens (Amoeba)
- Didinium gargantua (Ciliate)
- Didinium nasutum (Ciliate)
- Favella species
- Flagellates 1
- Flagellates 2
- Gyrodinium species
- Laboea strobila (Ciliate)
- Paramecium aurelia (Ciliate)

- Scuticociliate (Ciliate)
- Strombidium (Ciliate)
- Tintinnid (Ciliate)
- Tintinnopsis species
Fauna: Reptiles

- Alligator mississippiensis (American Alligator)
- Caretta caretta (Loggerhead Turtle)
- Chelodina oblonga (Oblong Turtle)
- Chelonia mydas (Green Sea Turtle)
- Chelydra serpentina (Snapping Turtle)
- Chrysemys picta (Painted Turtle)
- Crocodylus acutus (American Crocodile)
- Crotalus spp. (Rattle Snake)
- Dermochelys coriacea (Leatherback Turtle)
- Eretmochelys imbricata (Hawksbill Turtle)
- Eremes fasciatus (American Five-lined Skink)
- Eunectes murinus (Green Anaconda)
- Geochelone nigra (Galapagos Giant Tortoise)
- Geochelone nigra (Galapagos Giant Tortoise) 
- Geochelone nigra (Galapagos Giant Tortoise) hatchling
- Lepidochelys kempii (Kemp's Ridley Turtle)
- Lepidochelys olivacea (Olive Ridley Turtle)
- Malaclemys terrapin (Diamondback Terrapin)
- Malaclemys terrapin (Diamondback Terrapin) hatchling
- Natator depressa (Flatback Sea Turtle)
- Natator depressa (Flatback Sea Turtle) adult
- Natator depressa (Flatback Sea Turtle) hatchling
- Nerodia fasciata (Mangrove Water Snake)
- Python bivittatus (Burmese python)
- Turtle 1
- Turtle eggs
- Varanus komodoensis (Komodo Dragon)
Fauna: Worms

- Anguillicola crassus (Nematode Worm)
- Ascaris spp. (Roundworm)
- Feather duster worm
- Flatworm
- Gordian worm
- Gordius spp. (Horsehair Worm)
- Lumbricus spp. (Earthworm) 1
- Lumbricus spp. (Earthworm) 2
- Nematode
- Palolo virdis (Samoan Palolo Worm)
- Polychaete 1
- Polychaete 2
- Polychaete with white bristles
- Pseudoceros dimidiatus (Divided Flatworm)
- Segmented worm
- Spirobranchus giganteus (Christmas Tree Worms) 1
- Spirobranchus giganteus (Christmas Tree Worms) 2
- Stylochus ellipticus (Flat Worm)
- Worms
Flora: Fungi/Lichen/Moss

Cantharellus cibarius  Lobaria pulmonaria  Moss 1  Moss 2
Flora: Grasses/Herbaceous Plants

- **Acrostichum speciosum** (Mangrove Fern)
- **Agropyron pectiniforme** (Crested Wheatgrass)
- **Agrostis spp.** (Tickle Grass)
- **Alliaria petiolata** (Garlic Mustard)
- **Amaranthus pumilus** (Seabeach Amaranth)
- **Ammophila breviligulata** (American Beachgrass)
- **Andropogon gerardii** (Big Bluestem)
- **Bamboo 1**
- **Bamboo 2**
- **Bidens spp.** (Burmarigold)
- **Bouteloua dactyloides** (Buffalo Grass)
- **Bouteloua gracilis** (Blue Grama)
- **Bromus spp.** (Brome Grass)
- **Calocephalus platycephalus** (Billybuttons)
- **Capparis sandwichiana** (Pua Pilo)
- **Centaurea solstitialis** (Yellow Starthistle)
- **Centaurea spp.** (Knapweed)
- **Chelone glabra** (White Turtlehead)
- **Cirsium arvense** (Creeping Thistle)
- **Cleome multicaulis** (Slender Spiderflower)
- **Cypripedium spp.** (Lady's Slipper)
- **Dactylis glomerata** (Orchard Grass)
- **Danthonia spicata** (Poverty Oatgrass)
- **Distichlis spicata** (Coastal Salt Grass)
- **Echinacea purpurea** (Purple Coneflower)
- **Euphorbia esula** (Leafy Spurge)
- **Festuca spp.** (Fescue)
- **Gaillardia aristata** (Blanketflower)
- **Gaillardia pulchella** (Indian Blanket)
- **Generic fern**
- **Heteropogon contortus** (Pili Grass)
- **Hudsonia tomentosa** (Beach Heath)
- **Lilium longiflorum** (Easter Lily)
- **Lobelia cardinalis** (Cardinal Flower)
- **Lomandra spp.** (Lomandra)
- **Lythrum salicaria** (Purple Loosestrife)
- **Microstegium vimineum** (Japanese Stilt Grass)
- **Microstegium vimineum 2** (Japanese Stiltgrass)
- **Monarda spp.** (Bee Balm)
- **Muhlenbergia sobolifera** (Rock Muhly)
- **Oryza meridionalis** (Wild rice)
- **Osmunda cinnamomea** (Cinnamon Fern)
- **Oxalis stricta** (Common Yellow Woodsorrel)
- **Panicum virgatum** (Switchgrass)
- **Pascopyrum smithii** (Western Wheatgrass)
- **Pennisetum ciliare** (Buffelgrass)
- **Penstemon barbatus** (Golden-beard Penstemon)
Flora: Grasses/Herbaceous Plants

- Peperomia spp. ('ala 'ala Wai Nui)
- Phlox buckleyi wherry (Sword Leaf Phlox)
- Poa pratensis (Kentucky Bluegrass)
- Poaceae (Grass)
- Polygonum cespitosum (Oriental Lady's Thumb)
- Polypodium virginianum (Rock Cap Fern) 1
- Polypodium virginianum (Rock Cap Fern) 2
- Polypodium virginianum (Rock Cap Fern) 3
- Polystichum acrostichoides (Christmas Fern)
- Pseudoroegneria spicata (Bluebunch Wheatgrass)
- Sanguisorba canadensis (Canadian Burnet)
- Scaevola coriacea (Dwarf Naupaka)
- Schizachyrium scoparium (Little Bluestem)
- Seed parachute
- Sibbaldopsis tridentata (Three-toothed Cinquefoil)
- Sida fallax (Ilima)
- Sideoats grama (Bouteloua curtipendula)
- Sorghastrum nutans (Indian Grass)
- Spartina pectinata (Prairie Cordgrass)
- Stipa virdula (Green Needlegrass)
- Tridens flavus cupreus (Purpletop)
- Triodia spp. (Spinifex)
- Typha x glauca (White Cattail)
- Verbascum thapsus (Common Mullein)
- Wilted plant
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<td>Acanthophora spicifera (Spiny</td>
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<td>Asparagopsis spp</td>
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<tr>
<td>Catanella spp</td>
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<td>Caulerpa filiformis</td>
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<td>Caulerpa racemosa 1</td>
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<td>Chaetomorpha linum</td>
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Flora: Mangroves

Aegiceras corniculatum
Aegiceras corniculatum flower
Aegiceras corniculatum fruit
Aegiceras corniculatum leaf
Avicennia germinans (Black Mangrove)
Avicennia germinans flower
Avicennia germinans fruit
Avicennia germinans leaf
Avicennia marina (Grey Mangrove)
Avicennia marina flower
Avicennia marina fruit
Avicennia marina leaf
Avicennia marina (Grey Mangrove) albino
Avicennia marina (Grey Mangrove) flower

Avicennia marina (Grey Mangrove) fruit
Avicennia marina (Grey Mangrove) leaf
Bruguiera gymnorrhiza 1
Bruguiera gymnorrhiza 2
Bruguiera gymnorrhiza flower
Bruguiera gymnorrhiza leaf
Bruguiera gymnorrhiza mature hypocotyl

Ceriops australis
Ceriops australis flower
Ceriops australis leaf
Ceriops australis mature hypocotyl
Dead Avicennia
Dead Rhizophora
Excoecaria agallocha
Excoecaria agallocha female flower
Excoecaria agallocha leaf
Excoecaria agallocha male flower
Excoecaria agallocha seed capsule
Lumnitzera racemosa
Lumnitzera racemosa flower
Lumnitzera racemosa fruit 1
Lumnitzera racemosa fruit 2
Lumnitzera racemosa leaf

Mangrove direct damage effects
Mangrove ecotone shift effects
Mangrove gain effects
Mangrove growth
Mangrove insect damage effects
Mangrove loss effects
Mangrove nutrient excess effects

Mangrove oil spill effects
Mangrove reclamation effects
Mangrove restricted tidal exchange effects
Mangrove species specific effects
Mangrove storm damage effects
Mangrove wrack accumulation effects
Mangrove zonal shift effects
Rhizophora mangle (Red Mangrove)
Rhizophora mangle (Red Mangrove) seedling
Rhizophora mucronata
Flora: Mangroves

- Rhizophora stylosa
  - flower
  - fruit
  - leaf
  - propagule

- Sonneratia alba (Mangrove Apple)
Flora: Marsh/Wetlands

Ceratopteris spp

Cladium procerum (Leafy Twig-sedge)

Eichhornia crassipes (Water Hyacinth)

Eleocharis dulcis (Chinese Water Chestnut)

Eleocharis spp. (Spike Rush)

Fimbristylis dichotoma (Tall Fringe-rush)

Hymenachne amplexicaulis (Olive hymenachne)

Impatiens capensis (Spotted Jewelweed)

Kosteletzkya virginica (Seashore Mallow)

Lepironia articulata (Blue Rush)

Miscanthus sinensis (Chinese Silvergrass)

Nelumbo lutea (American Water Lotus): bud

Nelumbo lutea (American Water Lotus): flower 1

Nelumbo lutea (American Water Lotus): flower 2

Nelumbo lutea (American Water Lotus): pad

Nelumbo lutea (American Water Lotus): seed pod

Nymphaea odorata (White Water Lily): flower

Nymphaea odorata (White Water Lily): pad

Oryza spp. (Rice)

Peltandra virginica (Green Arrow Alum)

Phragmites australis (Common Reed)

Phragmites australis (Common Reed) singular

Reeds

Sagittaria spp. (Arrowhead)

Salvinia molesta (Giant Salvinia)

Sarcocornia spp. (Samphire)

Scirpus americanus (Bulrush)

Scirpus spp. (Bulrush)

Spartina alterniflora (Smooth Cordgrass)

Spartina patens (Saltmeadow Cordgrass)

Spartina spp. (Salt Marsh Grass)

Sporobolus spp. (Dropseed)

Suada australis (Austral Seablite)

Tecticornia flabelliformis (Bead Samphire)

Tecticornia spp. (Samphire)

Typha orientalis (Bulrush)

Typha spp. (Cattail)

Wetland

Zizania spp. (Wild Rice)
Flora: Microalgae

Akashiwo sanguinea (Dinoflagellate)
Amphidinium crassum (Dinoflagellate)
Amphidinium operculatum (Dinoflagellate)
Asterionellopsis glacialis (Diatom)
Benthic microalgae 1
Benthic microalgae 2
Centric diatom
Ceratium furca (Dinoflagellate)
Ceratium spp. (Dinoflagellate)
Chaetoceros affinis (Diatom)
Chattonella spp
Chlamydomonas
Coccolithophore
Cyclotella
Cyclotella: single
Diatoms
Dinoflagellate 1
Dinoflagellate 2
Dinoflagellate 3
Dinoflagellates
Dinoflagellate cyst 1
Dinoflagellate cyst 2
Dinoflagellate cyst 3
Dinophysis acuminata (Dinoflagellate)
Fibrocapsa japonica
Gymnodinium catenatum
Karldinium micrum
Mixed Phytoplankton Community Coloured
Pennate Diatom 1
Pennate Diatom 2
Pfiesteria piscicida (Dinoflagellate)
Pfiesteria shumwayae (Dinoflagellate)
Phytoplankton bloom
Prorocentrum micans (Dinoflagellate)
Prorocentrum minimum (Dinoflagellate)
Pseudo-nitzschia australis (Diatom)
Pyrodinium bahamense
Thalassiosira nordenskioeldii (Diatom)
Thalassiothrix nitzschioides (Diatom)
flagellated Dinoflagellate
Flora: Seagrass/SAV

- **Amphibolis antarctica**
- **Amphibolis griffithii**
- **Amphibolis with epiphytes**
- **Callitriche spp. (Water Starwort)**
- **Ceratophyllum demersum (Coontail)**
- **Cymodocea nodosa**
- **Cymodocea rotundata**
- **Cymodocea serrulata** (seeds)
- **Cymodocea serrulata**
- **Cymodocea vermiformis**
- **Cymodocea serrulata**
- **Cymodocea rotundata**
- **Cymodocea rotundata**
- **Heteranthera dubia (Water Stargrass)**
- **Heterozostera tasmanica**
- **Hydrilla verticillata (Waterthyme)**
- **Hydrilla verticillata (Waterthyme)**
- **Marsilea spp. (Water Clover)**
- **Myriophyllum spicatum (Eurasian Watermilfoil)**
Flora: Seagrass/SAV

Thalassia hemprichii 1
Thalassia hemprichii 2
Thalassia hemprichii seeds
Thalassia testudinum (Turtlegrass)
Thalassodendron ciliatum 1
Thalassodendron ciliatum 2
Thalassodendron pachyrhizon
Trapa natans (Water Chestnut)
Vallisneria americana (Wild Celery)
Water lily 1

Water lily 2
Zannichellia palustris (Horned Pondweed)
Zostera asiatica
Zostera caespitosa
Zostera capensis
Zostera capensis seeds
Zostera capricornii
Zostera capricornii seeds
Zostera noltii
Flora: Trees/Shrubs/Vines

Acacia koa (Koa tree)
Acacia spp. (Acacia)
Acer pensylvanicum (Striped Maple)
Acer platanoides (Norway Maple)
Acer pseudoplatanus (Sycamore Maple)
Acer rubrum (Red Maple)
Acer rubrum (Red Maple) leaf
Acacia spp. (Agave) with stalk

American Beech (Fagus grandifolia) with gray bark
American Sycamore (Platanus occidentalis) alternate
American Sycamore (Platanus occidentalis) with overhanging branch
Arctostaphylos spp. (Manzanita)
Arecaceae (Palm Tree) 1
Arecaceae (Palm Tree) 2
Arecaceae (Palm tree) 3
Banksia spp. (Banksia)
Banksia spp. (Banksia) with proteoid roots
Banksia spp. (Banksia) with resprouting lignotuber

Batis maritima (Pickleweed)
Berberis thunbergii (Japanese Barberry)
Betula spp. (Birch)
Calliandra spp. (Fairy Duster)
Carnegiea gigantea (Saguaro Cactus)
Carya glabra (Pignut Hickory)
Carya ovata (Shagbark Hickory)
Carya ovata (Shagbark Hickory) fruit
Carya ovata (Shagbark Hickory) leaves
Casuarina spp. (Casuarina)

Cercis canadensis (Eastern Redbud): flowering
Cercis canadensis (Eastern Redbud): foliage
Chenopodium oahuense (Aweoweo)
Chuquiraga avellanedae (Quilembay)
Chuquiraga hystrix
Clethra alnifolia (Coastal Sweetpepperbush)
Cocos nucifera (Coconut Palm) 1
Cocos nucifera (Coconut Palm) 2
Corymbia spp. (Ghost Gum)
Damaged tree

Dead tree 1
Dead tree 2
Dead tree 3
Dead tree 4
Deer overbrowse: shrub
Deer overbrowse: tree
Elaegnus angustifolia (Russian Olive)
Elaegnus angustifolia (Russian Olive) leaves
Erythrina sandwicensis (Wiliwili)
Erythrina spp. (Coral Tree)
Flora: Trees/Shrubs/Vines

- Morinda Citrifolia (Indian Mulberry)
- Myrica cerifera (wax myrtle)
- Nyssa biflora (Swamp Black Gum)
- Nyssa sylvatica (tupelo or black gum)
- Pandanus spp
- Parthenocissus quinquefolia (Virginia creeper) 2
- Picea glauca (White Spruce)
- Pinus palustris (Longleaf Pine)
- Pinus ponderosa (Ponderosa pine)
- Pinus rigidus (Pitch Pine)
- Pinus spp. (Pine)
- Pinus strobus (Eastern White Pine)
- Pinus taeda (Loblolly Pine)
- Pinus virginiana (Virginia Pine)
- Pisonia spp (Pisonia)
- Populus balsamifera (Balsam poplar)
- Populus deltoides (Eastern Cottonwood)
- Populus tremula (Aspen)
- Pritchardia minor (Loulu Palm)
- Quercus alba (White Oak)
- Quercus bicolor (Swamp White Oak)
- Quercus falcata (Southern Red Oak)
- Quercus macrocarpa (Bur Oak)
- Quercus montana (Chesnut Oak)
- Quercus montana (Chesnut Oak) leaves
- Quercus muehlenbergii (Chinkapin Oak)
- Quercus palustris (Swamp Spanish Oak)
- Quercus rubra (Northern Red Oak)
- Quercus spp. (Oak) seedling
- Rhus radicans (Poison Ivy)
- Rhus radicans (Poison Ivy) leaf
- River Birch (Betula nigra)
- Robinia pseudoacacia (Black Locust)
- Rosa multiflora (Multiflora Rose)
- Salix x sepulcralis (Weeping Willow)
- Santalum freycinetianum (Freycinet Sandalwood)
- Scarlet Oak (Quercus cocinea)
- Shepherdia argentea (Silver Buffaloberry)
- Shortleaf pine (Pinus echinata)
- Silver Maple (Acer Saccharinum)
- Spathodea campanulata (African Tulip)
- Sweet Birch (Betula lenta)
- Taxodium distichum (Bald Cypress)
- Taxodium distichum (Bald Cypress) with knees
- Tilia americana (Basswood)
- Tsuga canadensis (Eastern Hemlock)
- Tsuga canadensis (Eastern Hemlock) branch
Flora: Trees/Shrubs/Vines

- Vaccinium corymbosum (Highbush blueberry)
- Viburnum dentatum (Arrowwood Viburnum)
- Xanthorrhoea spp. (Grass Tree)
- Yucca brevifolia (Joshua Tree)
- Yucca spp. (Yucca)
Human: Aquaculture
Climate change:
- above average temperatures
- below average temperatures
- drought
- ghost forest
- heat wave
- sea-level rise
- wildfire
- flooding
- increased CO2 emissions map
Human: Culture/Archaeology

- American cowboy
- Archaeological site
- Archaeologist: female
- Archaeologist: male
- Artifact: axe blade
- Artifact: beads
- Bai (Palauan meeting place)
- Brigantine
- Cannon
- Cave explorer
- Chamorro canoe
- Coastal toilet 1
- Coastal toilet 2
- Cultural Odisha graphics
- Currency: dollar sign
- DC Capitol building
- DC Washington Monument
- Dreamcatcher (Native American Ojibwe)
- Fale 1 (Samoa)
- Fale 2 (Samoa)
- Fale 3 (Samoa)
- Fale 4 (Samoa)
- Fale 5 (Samoa)
- Fale 6 (Samoa)
- Fale: Tsunami damaged (Samoa)
- Fale: enclosed 1 (Samoa)
- Fale: enclosed 2 (Samoa)
- Fale: enclosed 3 (Samoa)
- Fale: enclosed 4 (Samoa)
- Fale: traditional (Samoa)
- Family
- Feather
- Fishing village (Indonesia)
- Flag: Australia
- Flag: Australia Queensland
- Flag: USA Hawaii
- Flag: USA Hawaii Kanaka Maoli
- Flag: USA Maryland
- Flag: United Kingdom
- Flag: United States of America
- Footprints
- Fort Union
- Gleaning basket
- Gullah sweetgrass basket
- Halau (Hawaiian long house)
- Hawaiian Royalty Headdress
- Hawaiian double-hulled canoe (wa’a kaulua)
- Heiau (Hawaiian temple)
- Hibiscus Flower
- K’i (Hawaiian war god)
Human: Development/Infrastructure

- Water: sewage treatment plant 2
- Water: sewage treatment plant: primary
- Water: sewage treatment plant: tertiary
- Water: water pipe 1
- Water: water pipe 2
- Water: water tower
- Weir
- Well
Human: Education
Human: Environmental Degradation

- Acid rain
- Air quality: high
- Air quality: low
- Air quality: medium
- Landfill
- Lawn Fertilizer Spreader
- Noise
- Oil spill
- Old bottle
- Old tires
- Overfishing
- Plastic bag 1
- Plastic bag 2
- Plastic bottle 1
- Plastic bottle 2
- Plastic bottle 3
- Receding shoreline
- Roadside trash
- Rusty drum
- Skull and crossbones
- Soda can
- Vessel strike of marine mammal
Human: Fishing

Bamboo hand spear  Bamboo speargun  Benthic Otter Trawl  Benthic Trawler  Benthic Trawling  Chicken necking  Clammer  Crab boat  Crab pot  Crab scraping  
Cyanide fishing boat  Cyanide fishing: squeeze bottle  Double-hulled fishing boat (Samoa)  Dynamite fishing  Dynamite fishing: Molotov cocktail  Dynamite fishing: explosion  Fish aggregating device  Fish trap 1  Fish trap 2  Fishery  
Fly fishing lure  Ghost net  Indonesian zone marker  Liftback net  Line Fisher; Indonesia  Longline tuna boat  Mothership  Net fisher  Net fishers  Net fishers (India)  
Net fishers with six crew members  Outrigger canoe  Outrigger canoe 1  Outrigger canoe 2  Outrigger canoe 3  Prawn trawler  Purse Seine  Reef fishing hut  Seasonal fishing closure sign  Seining  
Shellfish Fishery  Shrimp Fishery  Skipjack  Trap fishers  Trawler boat  Trawler boat 2  Trotlining  Waterman
Management/Restoration

Anchor damage management
Archaeological site management
Avalanche control
Backcountry management
Biodiversity Hot Spot
Bioindicators
Blue crab management
Coastal zone management
Defense force lands
Degraded water quality

Economic indicators
El Nino Southern Oscillation management
Exotic plant management: crew member
Fertilizer ban icon
Fire management
First nations management (Canada)
Fisheries management
Fishing moratorium
Forestry management
Government 1

Government 2
Habitat management
Human access management
Immigration control
Indigenous management (Australia)
Indigenous management (Kuna, Panama)
Indigenous management (New Zealand)
Indigenous management (USA)
International obligations and treaties
Introduced species management

Kyoto protocol
Lawn fertilizer icon
Legislative initiative icon
Linking science and management
Marine Access Limited
Marine protected area
Marsh restoration
Money symbol
Next steps
No take zone

Oyster restoration
People icon
Poorly understood systems
Port authorities
Rain barrel icon
Recycling bins
Regional level initiatives
Restoration: boy with shovel
Restoration: girl planting tree
Restoration: man planting tree
Human: Management/Restoration

- Restoration: planting trees
- Saltwater intrusion
- Seagrass restoration
- State level planning initiatives
- Toolbox
- Volunteer
- Water quality
- Water quality management
- Water resource management
- Watershed management

Yard waste icon
Human: Manufacturing/Refining

- Asphalt plant
- Industrial building 1
- Industrial building 2
- Industrial building 3
- Industrial building 4
- Industrial park
- Industry
- Industry 2
- Manufacturing factory building 1
- Manufacturing factory building 2
- Manufacturing factory building 3
- Manufacturing factory building 4
- Manufacturing paper mill
- Petroleum industry: oil refinery
Human: Mapping/Navigation

Buoy: midchannel, safe
Buoy: port, lighted
Buoy: starboard, lighted
Can buoy: port
Can buoy: starboard
Canadian autoroute sign
Cardinal marker: east
Cardinal marker: north
Cardinal marker: south
Cardinal marker: west
Channel buoy: midchannel, light
Channel buoy: midchannel, no light
Channel buoy: port
Channel buoy: starboard
County highway sign
County highway sign 2
County highway sign 3
Divers flag, USA
Divers flag, alfa flag international
Interstate 17 sign
Interstate highway sign
Interstate highway sign 2
Interstate highway sign 3
Interstate highway sign 4
Lateral marker: USA, port
Lateral marker: USA, starboard
Lateral marker: international port
Lateral marker: international, starboard
Lifeguard flag: Australia, safe to swim between flags
Lifeguard flag: UK, danger no swimming
Lifeguard flag: UK, no inflatables
Lifeguard flag: UK, surf craft only
Lifeguard flag: USA, swim in designated areas
North Arrow 1
North Arrow 2
North arrow 3
Nun buoy: port
Nun buoy: starboard
Regulatory marker: danger
Regulatory marker: keep out
Regulatory marker: speed limit
Scale bar
Scale bar: kilometers vs miles
State highway sign
State highway sign 2
State highway sign 3
State highway sign 4
Storm warning: gale
Storm warning: hurricane
Storm warning: small craft advisory
Human: Mapping/Navigation

Storm warning: storm whole gale
Trans-Canada highway sign
U.S. highway sign
U.S. highway sign 2
U.S. highway sign 3
U.S. highway sign 4
U.S. highway sign 5
Human: Recreation

- Surfing
- Swimmer
- Tent
- Tourism
- Trail biking
- Tubing
- Water skiing
- Wind surfing
- Young birder
Human: Services

Business colleagues
Business: group presentation
Business: man sitting 1
Business: man sitting 2
Business: man sitting 3
Business: planning meeting
Business: woman sitting 1
Business: woman sitting 2
Fire and rescue: fire engine
Fire and rescue: fire station

Fire management: crew member with drip torch 1
Fire management: crew member with drip torch 2
Health care industry: red cross
Hospitality: casino
Hospitality: cruise ship
Hospitality: eco-resort
Hospitality: ferris wheel
Hospitality: flight attendant
Hospitality: liveaboard dive boat
Hospitality: roller coaster

Hospitality: seafood restaurant
Hospitality: tourism resort
Hospitality: visitor center
Management
Retail: Strip mall
Retail: corner store
Retail: downtown shopping center
Retail: fish market
Retail: gasoline pump
Road salt truck

Wildlife rehabilitation center
Human: Transport


Vehicle: sedan  Vehicle: subcompact car
Processes: Biological

- Process; primary production low
- Process; respiration low
- Process; respiration high
- Respiration
- Respiration; response, bioassay; low; (x = symbol)
- Response, bioassay; high; N
- Response, bioassay; high; N+P
- Response, bioassay; high; P
- Response, bioassay; high; light
- X
- N
- N+P
- P
- Seabird guano
- Total organic carbon (TOC)
- Uptake; iron
- Uptake; nitrogen
- Uptake; phosphate
Processes: Inputs/flows

- Antibiotics
- Atmospheric nitrogen
- Atmospheric wind/rain
- Groundwater
- Inputs: atmospheric carbon dioxide
- Inputs: atmospheric lead
- Inputs: atmospheric mercury
- Inputs: atmospheric nitrogen
- Inputs: atmospheric particulates
- Inputs: atmospheric phosphorus
- Inputs: atmospheric sulphur
- Inputs: bacteria
- Inputs: conductivity
- Inputs: dissolved organic carbon
- Inputs: freshwater
- Inputs: gas
- Inputs: humic stained water
- Inputs: iron stained water
- Inputs: nutrients (non-point source)
- Inputs: nutrients 1
- Inputs: nutrients 2
- Inputs: nutrients, toxins, sediment
- Inputs: particulate organic carbon
- Inputs: saltwater
- Inputs: sediments 1
- Inputs: sediments 2
- Inputs: sediments 2
- Inputs: sediments and nutrients
- Inputs: sewage
- Inputs: toxicants
- Inputs: toxics
- Inputs: trash
- Pathogens
- Radioactive materials
- Toxicants: high
- Toxicants: low
- Toxicants: lead
- Toxicants: organo-chlorine
- Treated Effluent
Prokaryotes and Viruses: Bacteria/cyanobacteria/archaea

- Acinetobacter spp. (Bacteria)
- Anabaena
- Archaea
- Bacterium
- Bacterium with prophage
- Bacteroidetes
- Coccolid bacterium
- Cyanobacteria
- Cyanobacterial mat
- Infected bacterium

- Jannaschia spp
- Lyngbya majuscula
- Nodularia spp
- Synechococcus spp
- Trichodesmium spp
- Sigmoid bacterium
Prokaryotes and Viruses: Viruses

Adenovirus

Virus

Virus inserting DNA