

Aquatic Habitat Restoration



Bolsa Chica wetland restoration, Huntington Beach, California

Releases of man-made chemicals have the potential to impact aquatic habitats, such as streams, lakes, ponds, vernal pools, wetlands, estuaries, or marine environments. These impacts need to be assessed to determine the nature, extent, and magnitude of the impact. The environmental setting, physio-chemical processes, and biological activity also need to be investigated. These investigations are often performed using Natural Resource Damage Assessment (NRDA) protocols. At some point, mitigation actions need to be taken to protect the habitat, minimize the impact, or restore the habitat to its pre-discharge condition. These mitigation actions may be emergency actions (e.g. spill response), interim remedies (to protect or minimize impact), or full restoration programs once an assessment is complete.

Restoration must consider the physical, chemical, and biological components of the ecological habitat. Each may have been impacted by the release, and each may require a different, but coordinated, mitigation approach.

Aquilologic staff has participated in habitat restoration programs, at the emergency response stage, during the implementation of an interim remedy, and as part of a full restoration program. These programs have included wetlands, vernal pools, estuaries, and near-shore marine environments. The actions have included spill response, contaminant source removal (e.g. excavation), groundwater contaminant interception and treatment (e.g. pump and treat), urban storm-water treatment (e.g. treatment wetlands), and habitat re-vegetation.