The San Francisco Estuary Institute has created a new map of aquatic habitat for the San Francisco Bay Area called the Bay Area Aquatic Resource Inventory (BAARI). This map is a consolidated and riparian functional areas suitable for LID. The final dataset will be made available to the public and will be updated on a regular basis.

**HABITAT CHANGE - NAPA VALLEY**

Comparison of the historical and contemporary aquatic resources in Napa Valley allows better understanding of changes to the hydrology and landscape in the watershed. 1/3 of the historical drainage network has been filled or buried. Despite the loss, there has been a 25% increase in the total length of channel on the Valley floor. The increased connectivity dramatically changes the characteristics of stormwater runoff and drained the majority of the valley wetlands in the valley.

**SITE SUITABILITY**

BAARI was used to evaluate the amount of aquatic habitat within a proposed development project. The total length of streams in this potential project area was calculated and compared to existing data from the National Hydrography Dataset (NHD) and the National Wetland Inventory (NWI) datasets. The BAARI estimate was 22,838 linear feet—approximately 4.5 times that of NHD. BAARI more accurately depicts the catchment’s aquatic habitat than leading to better evaluation of the proposed project by Water Board staff.

**APPLICATIONS OF BAARI**

- Integration of aquatic resource data among the levels of government provides the accuracy of local knowledge with the standardization of a regional and national dataset and the national acceptance from federal dataset into one map.
- Partnerships with National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) programs
- Develops streamlined integration of CARI to the NHD and NWI datasets

**SITE EVALUATION**

BAARI was used to evaluate the amount of aquatic habitat within a proposed development project. The total length of streams in this potential project area was calculated and compared to existing data from the National Hydrography Dataset (NHD) and the National Wetland Inventory (NWI) programs. BAARI is a more complete and detailed data source.

**CARI MAPPING PROJECTS**

- Mapping methods (BAARI, NHD, and others) are being evaluated and used to fill the needs of a state-wide base map, California Aquatic Resources Inventory (CARI)
- Methodology will be proposed to the State Water Resources Control Board in June 2012
- BAARI, Tahoe Aquatic Resources Inventory (TARI) and the Southern California Wetlands Mapping Project for the first pieces of a statewide map

**HABITAT CHANGE - NAPA SONOMA MARSH RESTORATION**

BAARI is used to quantify recent changes in aquatic habitats after restoration activities in the Napa Sonoma Marsh Restoration. The project remapped the same area using georectified 2007 Google Earth™ imagery after Pond 5 the breaching of which inundated a tidal flow. BAARI mapped this area using NAW-2005 imagery, prior to the restoration effort, and remapped the same area using georectified 2007 Google Earth™ imagery after Pond 5 the breaching with similar tide levels.

- Provide a region-wide, standardized, and high resolution region-wide, standardized, and high resolution region-wide, standardized, and high resolution region-wide, standardized, and high resolution region-wide, standardized, and high resolution region-wide, standardized, and high resolution
- Make BAARI a living map
- Partnerships with local agencies and organizations
- BAARI, Tahoe Aquatic Resources Inventory (TARI) and the Southern California Wetlands Mapping Project for the first pieces of a statewide map

**DATA INTEGRATION AND STEWARDSHIP**

- Form the first pieces of a statewide map
- Partnerships with National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) programs
- Develops streamlined integration of CARI to the NHD and NWI datasets
- Make CARI order regional data accessible through the NHD and NDI on-line resources
- Integration of CARI into the National Wetland Inventory and the NHD will allow the use of local developed datasets in a regulatory context

**Why aren’t we all looking at the same map?**

Integration of aquatic resource data among the levels of government provides the accuracy of local knowledge with the standardization of a regional and national dataset and the national acceptance from federal dataset into one map.