Site History and Current Research
Mission Statement

RTC’s mission is to advance understanding of the world's complex marine and estuarine environments through research, education, and outreach, with a focus on San Francisco Bay.
1874-1904
Lynde & Hough
Cod Packing Plant

Cod was dried and packed, then shipped east to be made into cod liver oil!
The U.S. Navy became the next occupant of the property purchasing it in 1904. One of the first buildings the Navy constructed was the home for the Commanding Officers. This house on the hill was originally a duplex for two families. It was renovated in 2000 and is now the Orenschall Guest Center.
The Navy built its first West Coast coaling station on the property. The photo shows coal covering much of the pavement that can now be seen from the Orenschall Guest Center windows. A portion of the large concrete trestle used to transport the coal still exists on site.
1930s? Still a coaling station…
Meanwhile…
Wire for Golden Gate Bridge cables was manufactured by Roebling & Sons in New Jersey, shipped here…

The 400-lb coils of steel wire were spooled onto reels, then barged to the Golden Gate Bridge construction site to be spun into cables.
No longer a coaling station, but gantry still in place to lift submarine net components onto net tenders
Gantry removed and hardstand built over water to create more space for net equipment
Elevation

- Flotation buoys
- End Mark II buoy
- Water surface
- Riser chain
- Net
- Concrete anchor
- Backup chain
- Steel anchor

Images show various construction and equipment related to the described diagram.
Nets from around the Pacific theater were woven, reeled and repaired on site.
Nets were loaded onto tenders, which deployed the net off the bow, inside the Golden Gate Bridge.
Largest net built was the 7-mile long, 7,000 ton net placed across GG Bridge. Note the flood current pulling on the net!
Also on site during WWII, the Navy Dock Training Center, on former site of GG Bridge cable operation
1950s
1960s-NOAA & MMTC

Old net tender recomissioned for Minerals Management Technology Center, searching for manganese (and submarine)

In 1958 the Navy decommissioned the Tiburon Net Depot and the site was passed on to the National Oceanographic and Atmospheric Administration (NOAA). NOAA established its National Marine Fisheries Service Southwest Fisheries Center on the property in 1961. In the late 70's, San Francisco State University acquired the lease for 25 of the site's total 34 acres and established the Romberg Tiburon Center for Environmental Studies in 1978.
In 1978, SF State University’s President Paul Romberg, a botanist, obtained a federal lease for 26 acres of San Francisco Bay shoreline for $1 and established the Tiburon Center for Environmental Studies (TCES).
RTC Today
RTC faculty and researchers span various academic departments in the College of Science & Engineering: Biology, Chemistry, Geography & Environment, Earth & Climate Sciences.

Research at RTC begins in our backyard of San Francisco Bay, and goes beyond the California Coast to field sites as far as the equator and Antarctica.
RTC Research

Biological Oceanography-plankton food webs
Biogeochemistry-carbon cycle
Evolutionary Ecology-population genetics, invasive species
Geography for Conservation of Endangered Species
Marine Ecological Physiology-responses to climate change
Microbial Ecology-ocean acidification & phytoplankton
Physical Oceanography-bay and ocean monitoring
Wetland Ecology-habitat restoration, sea level rise
Collaborative Research

- SF Bay National Estuarine Research Reserve
  - Headquarters and lab at RTC, reserve sites at China Camp and Rush Ranch (Suisun Bay)
  - Reserves are set aside for research of natural habitat
- Smithsonian Environmental Research Center
  - West Coast Marine Invasions Laboratory
  - Tennenbaum Marine Observatories Network & MarineGEO (long term monitoring for global change)
Delta Smelt Food Web Study

Nutrients & Phytoplankton - food for food

Copepods - food

Competitors
The Fate of Carbon in Ocean Sediments
Evolutionary Ecology

http://rtc.sfsu.edu/about/facilities/molecular.htm
Harmful Algal Blooms, Biofuels, and Ocean Acidification

What do they have in common?
Cultured 700 generations of shell-forming single-celled algae at reduced pH. End result—less carbon taken out of atmosphere.
Microplastics
Wetlands Ecology
Real-Time Monitoring of SF Bay conditions at the RTC site

Data available at http://sfbeams.sfsu.edu
Up-to-Date Environmental Observations of San Francisco Bay

**SF-BEAMS** (San Francisco Bay Environmental Assessment and Monitoring Station) provides measurements of bay environmental conditions that include water temperature, salinity, irradiance, and beam-c. The station is located north of the Tiburon Peninsula off of the Romberg Tiburon Center pier.

**Local Environmental Information**
- Tide Tables - NOAA
- Coastal Marine Forecast - National Weather Service
- Current Velocity - USGS

**Current Conditions**

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Member of **CI-CORE**, Center for Integrative Coastal Observation, Research and Education (California State University)
The 38 foot R/V Questuary with its 4 foot draw greatly expanded our research capabilities on SF Bay.
Research in the Field
SF Bay National Estuarine Research Reserve
http://www.sfbaynerr.org

System-wide Monitoring Program (SWMP) www.nerrsdata.org

- Research
- Monitoring
- Education
- Coastal Training Program
Questions?