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Subject: WestCoastGovernorsAgreement-public comment

Dear Ms. Hamilton

I was greatly encouraged by the release of the West Coast Governors' Agreement on Ocean Health, and the identification of 7 key priority issues, including # 2: protect and restore ocean and coastal habitats. Unfortunately and surprisingly #2 does not include the need for seafloor habitat mapping: a foundational element in identifying habitat types, closing information gaps, and improving marine resource management. Seafloor mapping has been identified as a critical and necessary element in the establishment and implementation of ecosystem based management at the state and federal levels as well as in the creation and performance monitoring of marine protected areas. Less than 25% of our west coast state waters have been mapped at the resolutions required to meet these needs. Please see the attached white paper on the need for and value of seafloor mapping as a necessary requirement for the sustainable management of the health of our coastal ocean resources, economies and ecosystems.

Regards,
Rikk

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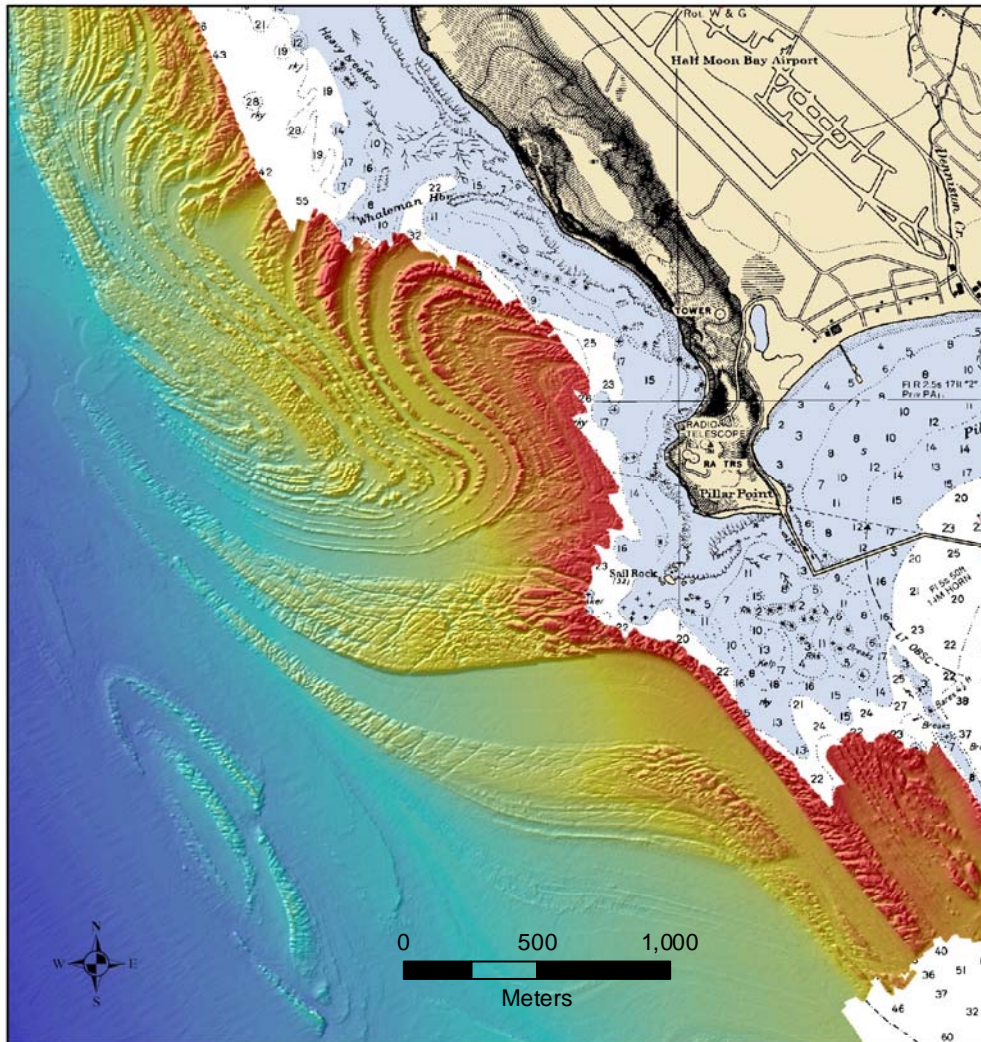
<http://seafloor.csumb.edu>

Seafloor Mapping – The Missing Foundation for Protecting Ocean Health

Prepared as public comment to West Coast Governors' Agreement on Ocean Health

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Mavericks, Half Moon Bay, California: High-resolution multibeam sonar map showing spectacularly faulted and deformed seafloor geology, in shaded relief and colored by depth, overlain on the NOAA 18682 nautical chart (depth soundings in feet). This level of detail is needed, but not available for 66% of California state waters. (Source: California OPC North Central Coast Mapping Project).

Problem: We cannot manage what we do not understand, and we cannot understand what we do not know. Such is the case for western state and federal waters. The entire surface of Mars has been mapped in greater detail than the narrow strip of seafloor within the 3-mile state waters boundary. Yet, in California over 85% of the Gross State Product (the 7th largest economy in the world) and 75% of its population are based in the coastal market sectors that border and rely on these highly productive waters. The continued success of our robust coastal economies is dependent upon the health and sustainable

management of our coastal ocean ecosystems and resources. Despite having the ability to create the needed high-resolution base maps for these dynamic and critically important hidden landscapes, the only information available for managing the sustainable use and protection of more than 66% of California's state and federal seafloor habitats is in the form of nautical charts: tools never intended and woefully inadequate for the tasks at hand. The percentage of federal and state waters mapped off of Oregon and Washington is even lower. This lack of high-resolution seafloor maps has limited and profoundly compromised our ability to address a variety of critical marine and coastal management issues including:

- **Coastal Erosion**, sediment transport and beach loss
- Baseline data for environmental change detection and **Coastal Ocean Monitoring**
- Development and implementation of true **Ecosystem Based Management**
- Restoration of **Degraded Habitats, Depleted Fish Stocks** and **Endangered Species**
- Identification, classification and protection of **Essential Fish Habitats**
- Effective design and monitoring of **Marine Protected Areas**
- Discovery, assessment and monitoring of **Earthquake** and **Tsunami Hazards**
- Placement and maintenance of **Oil, Gas** and **Telecommunication Facilities**
- Location and removal of **Seafloor Debris** and **Derelict Fishing Gear**
- Identification and protection of **Submerged Archaeological Sites**
- Managing offshore **Sand** and **Aggregate Mining**
- Maintaining **Shipping Channels** and **Harbor Entrances**
- Surveillance for submerged threats to **Homeland Security**

Solution: A comprehensive, high-resolution 1:24,000 scale geologic and habitat base map series covering all of the western US state waters out to at least the 3 mile state lands limit. Such a tri-state project would require, involve and leverage existing expertise from industry, resource management agencies and academia in Oregon, Washington and California. California's Ocean Protection Council (OPC), Department of Fish and Game, US Geological Survey and the National Marine Sanctuary Program have already funded a \$3.5m proof-of-concept North Central Coast Mapping Project that has demonstrated the viability, efficiency and value of this approach in support of the state's Marine Life Protection Act Initiative. The tiered approach involves the use of state-of-the-art sonar, LIDAR (aerial laser) and video seafloor mapping technologies; computer aided classification and visualization; expert geologic and habitat interpretations codified into strip maps spanning California's land/sea boundary; and the creation of an online, publicly accessible data repository for the dissemination of all mapping products. Moreover, because the envisioned tri-state project would involve and train scores of university students, it would also help meet the rapidly growing demand for professionals in the public and private sectors skilled in the applications of these geospatial technologies.