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**Port of San Diego
Planning and Green Port - Aquaculture Program
Two 2017 Sea Grant Fellowship Opportunities**

Host Location and Contact Information:

Port of San Diego
Planning and Green Port – Aquaculture and Blue Technology Program
3165 Pacific Highway
San Diego, CA 92101

Supervisor and Point of Contact for Prospective Fellows and Finalists:

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Position Description:

The Port of San Diego was created by the State Legislature to manage San Diego Bay and surrounding waterfront land through a regional governance approach in 1962. The Port of San Diego is the fourth largest of the 11 deep water Ports in California, and is bordered by five member cities: Chula Vista, Coronado, Imperial Beach, National City, and San Diego. The Port oversees two marine cargo terminals, two cruise ship terminals, over 20 public parks, the Harbor Police Department, and the leases of over 200 tenants and over 500 sub tenant businesses around San Diego Bay. The Port is an economic engine, and environmental steward of San Diego Bay and the surrounding tidelands, and a provider of community services and public safety.

The Port's Planning and Green Port Department consists of several programs:

1. **Aquaculture and Blue Technology**
2. **Energy:** Energy efficiency; Conservation, and Renewables; and Climate Planning and Policy
3. **Environmental Conservation:** Natural Resource Management; Permitting; and Mitigation Banking
4. **Environmental Protection:** Storm Water; Water Quality and Watersheds; Site Assessment and Bioremediation
5. **Long Range Planning:** Integrated Planning; Planning and Policy

Since 2015, the Port has been exploring Blue Economy opportunities to diversify its portfolio of business lines and assets in alignment with its mission and responsibility to the region and the State of California. The Blue Economy is comprised of a wide variety of marine-dependent business clusters such as aquaculture and fisheries, eco-tourism, scientific research, security, and blue technology. The Port is interested in further exploring aquaculture to support a variety of economic and environmental development opportunities in and around San Diego Bay.

Aquaculture is a growing opportunity for new business development in southern California. This opportunity is primarily being driven by the growing global demand for seafood and the lack of a domestic supply. Traditional harvest fisheries are fully exploited and cannot meet this increasing demand. In the U.S., over 91% of our seafood is imported and 50% of that is from aquaculture, contributing to a nearly \$11 billion trade deficit. Demand will continue to increase with growing populations and an increased per capita consumption overall. While there is a clear food production component to this demand, aquaculture offers multiple co-benefits, such as fisheries enhancement, ecosystem restoration, mitigation banking, bio-fuel/medical purposes, bioremediation, and education and outreach.

Two Sea Grant Fellows within the Port of San Diego's Planning and Green Port Department will assist the Program Manager of Aquaculture in a range of duties encompassing planning and pre-development work for pilot scale aquaculture projects; involvement in policy level processes that may interact with government (federal, state, and local resource agencies), aquaculture industry, academia, and a variety

of other stakeholders and constituents; and will have the opportunity to be involved in a variety of collaborative aquaculture, blue technology, and natural resource projects.

The Port's current aquaculture initiatives and a Sea Grant Fellow's ideal complementary skill set include:

- **Supporting the CA Shellfish Initiative:** a collaborative effort to expand shellfish aquaculture (commercial and native shellfish restoration), to include stakeholder interests with localized regional planning and policy efforts. Skills needed include communication, collaboration, planning, inter-personal, administrative, and detail-oriented.
- **Marine Spatial Planning for Aquaculture:** Using a variety of marine spatial planning tools and trade-off analysis to inform aquaculture planning in and around San Diego Bay. This work may involve local, state, regional, and national collaborative efforts. While this work will be initially focused on aquaculture, it could be expanded to future ocean planning efforts. Skills needed include communication, collaboration, planning, inter-personal, administrative, and detail-oriented.
- **Planning and Pre-development:** involves planning, designing, site selection, drafting various permitting package materials for a variety of land and ocean based projects for appropriate algae, shellfish, and finfish projects, including technology park feasibility studies. Involves working with inter-disciplinary teams across departments to assimilate existing data (water and sediment quality), identifying data gaps, and planning for new data collection to assist with identifying suitable locations for various types of aquaculture operations. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills.
- **Projects:** assist with a variety of pilot and other projects conducted internally, or externally with potential business partners proposing aquaculture projects through the Port's newly established Aquaculture Business Incubator. This work may include proposal reviews, planning, permitting and entitlements (CEQA, Coastal, ACOE, RWQCB), coordination with partners, and education and outreach activities. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills.
- **Natural Resources and Coastal Resiliency:** potential to be involved or gain exposure to a variety of projects, including but not limited to: natural resources management, wetlands restoration and monitoring, living shorelines, climate change studies, permit compliance, bioremediation, sustainable energy, etc. Skills needed include communication, collaboration, planning, inter-personal, administrative, detail-oriented, and computer and data management skills, and also willing to work in the field if needed.
- **Other:** coordination on aquaculture projects with CA Department of Fish and Wildlife (CDFW) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Aquaculture office in CA; participation in offshore aquaculture inter-agency and other working groups to promote sustainable development of aquaculture in California and the U.S.

A successful candidate must be able to work independently but also function as part of a multi-disciplinary team within the Port's Planning and Green Port Department, as well as counterparts in other agencies and industry, with emphasis on communication, inter-personal skills, interaction with policy and regulatory information; there is little emphasis on direct scientific research, however, the ability to conduct literature, legal, and administrative reviews/research will be an important contribution. Strong organizational, listening, and writing skills and a willingness to work on and interact with a broad variety of projects will greatly enhance the fellowship.