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## Guide to Navigating Lease & Permit Approvals for Ocean Farming in California

### SUMMARY

Aquaculture is the process of raising and harvesting plants or animals in an aquatic environment. Marine aquaculture has a long history in California beginning with oyster culture in the late 1800s. Except where the State has otherwise assigned jurisdiction to local entities (e.g: Agua Hedionda Lagoon; Humboldt Bay; Port of San Diego; Ventura Harbor), the Fish and Game Commission (Commission) has the authority to lease state water bottoms for aquaculture. The Commission serves as lead agency for purposes of the California Environmental Quality Act (CEQA), and relies on the Department of Fish and Wildlife (DFW) for its role in subject matter expertise, resource management, and law enforcement. In concert, both the Commission and DFW oversee and ensure the continued protection of marine resources and essential habitat. In California, marine aquaculture for commercial purposes is currently limited to shellfish (e.g: oysters, abalone, clams, and mussels) and seaweed. And currently, no new state water bottom leases have been granted in California for over 25 years<sup>1</sup>.

The existing regulatory process was designed for permitting commercial shellfish operations rather than small-scale seaweed farms. There are a number of different factors that make seaweed farming unique: it can be low-tech with low environmental impacts, providing marine habitat and uptaking nutrients while serving as a carbon sink and creating a source of food, fuel or feed.

The current pathway to allow the establishment and operation of new ocean farms in California is a multi-phased, time consuming and expensive process. Project related costs may be prohibitively high and can serve as a barrier against any small scale ocean farmer starting up. First, the prospective farmer fleshes out a business plan and selects a location for the proposed operation. Contacting the State Aquaculture Coordinator is the next step, so representatives from the many regulating agencies can be organized into a Project Coordination Team (Team). This Team can help the proponent refine the plan, including its location, methods, and other possible regulatory or any operational challenges that may otherwise be encountered. This engagement occurs through a new tool called the Aquaculture Permit Counter, which is maintained by the Office of the

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<sup>1</sup> At Fish and Game Commission hearing in February 2018, an existing state water bottom lease (1985) was approved for reconfiguration, which technically involved a new lease component for purposes of environmental impact analysis.

State Aquaculture Coordinator. By engaging the Team early, surprises are reduced, and chances of successful approvals down the line are increased. At this point, an application is then submitted to the Commission for a state water bottom lease.

Typically, the Commission will refer the application to DFW for recommendations, and go through a number of procedural and environmental review steps, including public notice that the lease application is to be considered by the Commission at a public hearing. The application submittal triggers the environmental review process, i.e. CEQA, required to identify significant environmental impacts related to the farm and to avoid or mitigate any related impacts. The CEQA study, which is usually conducted by a private consultant (whether contracted by the lead agency or the project proponent) can cost anywhere from several thousand dollars and upwards into six figures, e.g. \$500,000, with filing fees to the State costing around \$3,500. The second phase involves a complex and multi-agency (state and federal) permit application process and calls for extensive reviews as each project is assessed on a case-by-case basis. Possible permit fees may be in the range of \$5,000 to \$10,000 per project. Final approvals may take several years to be granted. However, if the Project Coordination Team is properly engaged at the outset, this multi-agency process should be less complex and time-consuming.

Note the projected timelines and estimated costs presented here may vary according to each project and will depend on its unique environmental and political circumstances. As there have been no new bottom leases granted by CDFW since 1991, there are currently no existing examples of recently approved ocean farms that could be used as a guide and precedent. In order to support the expansion of mariculture practices in California, specifically seaweed farming, new policy and regulations are needed.

This document outlines the steps required to set up an ocean farm. The first step is to secure approval by the Fish and Game Commission for a state water bottom lease. The lease application triggers the environmental review process. Once a lease has been granted, the multi-agency permitting process can begin. Guidelines follow that show the steps that need to be taken along with providing detailed information. Projected costs and estimated timelines are provided, and potential barriers and opportunities identified.

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## PERMITTING AGENCIES

Permitting Agency	Acronym	Type of Requirement
<b>STATE AGENCIES</b>		
California Department of Fish and Wildlife	CDFW	Approved species, methods, lease details (in no-granted state tidelands only), aquaculture registration
Fish and Game Commission	FGC	Bottom Lease Approval
California Coastal Commission	CCC	Coastal Development Permit/Consistency Determination Letter
US Army Corp of Engineers	ACOE	ACOE regulates wetlands and other waters of the United States per Clean Water Act (CWA)
Regional Water Quality Control Board	RWQCB	401 Water Quality Cert or Waste Discharge Requirement i.e. Clean Water Act (CWA)
State Water Resources Control Board	SWRCB	Water Rights Permit/ General Industrial Stormwater Permit
State Lands Commission	SLC	During initial FGC process to consider state water bottom leases, SLC needs to confirm no conflicting land use at site. Permit required if using State owned property i.e. above mean high tide line (MHTL).
California Dept of Public Health	CDPH	Operators License
<b>FEDERAL AGENCIES</b>		
National Oceanic & Atmospheric Administration/ National Marine Fisheries Service	NOAA/ NMFS	Formal Consultation regarding Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), EFH
US Fish and Wildlife Service	USFWS	ESA, MMPA
National Marine Sanctuaries	NMS	Role of NMS differs among specific sanctuaries according to own individual authorities. For instance in Tomales Bay, Greater Farallones National Marine Sanctuary (GFNMS) has no permit authority but by agreement (MOA) with State they provide comments when leases are considered
US Coast Guard	USGS	Maritime law enforcement agency requires aquaculture leases & structures to be marked
Department of Public Health	DPH	Certification of growing area (pre-harvest) after sanitary survey; various post-harvest (safe-handling) requirements
Native American Heritage Commission	NAHC	Notification of proposed action to California Native American tribe for any tribal interests/traditional lands within project area
Native American Graves Protection and Repatriation Act	NAGPRA	Return certain Native American cultural items to lineal descendants & culturally affiliated Indian tribes
<b>LOCAL AND REGIONAL GOVERNMENT PLANNING AGENCIES (as applicable)</b>		
Harbor or Port District		Use Permit or equivalent
City/County		Environmental Health Department
City/County		Public Notice. Local review process. Building permits

San Francisco Bay Conservation and Development Commission	BCDC	if project located in San Francisco Bay (like CCC)
Local Resource Conservation District	RCD	Consultation review
Flood Control Districts	FEMA	Floodway & Hydrological review

## PROJECTED TIMELINES

### 1. State Water Bottom Lease Application: 18 mths to 5 yrs approx.

Fish & Game Commission (FGC) w/ Dept of Fish & Wildlife (CDFW) support is Lead Agency issuing state and private water bottom leases and requires:

- CEQA/NEPA Documentation: Preparation of Environmental Impact Report (EIR), Initial Study (IS), Mitigated Negative Declaration (MND), CatEx, etc.
- Project site location identification & determination of ownership
- State Lands Commission (SLC): confirms no conflicting land use of site
- CDFW: species, methods, lease details, importation (as applicable) are determined as part of lease process & species listed on lease approval
- Project description, surveyed project location map, & 5-yr business plan
- Application submittal made to FGC incl. above documents w/ fees

CEQA Review process: Notice issued by State Clearinghouse for 30-day public & multi-agency review and comment period

FGC: Following review, Marine Advisor writes staff report for public hearing

FGC Hearing: consent calendar item possible if all issues addressed & not any public/agency opposition. If there are public concerns, hearing will include time for public process & sometimes may have to continue to later hearing.

### 2. Multi-Agency Permit Application Process: “it depends” 2 – 5 yrs approx.

Pre-Application Review: Permit Counter process allows for multi-agency review and to provide comments before lease application is underway. Once a project is granted FGC lease approval then multi-agency regulatory permit application process to allow for farm operations can begin as follows:

Primary Agencies (in order of importance/challenge factor)

- California Coastal Commission (CCC): Coastal development permit (CDP) application submitted, staff review takes 30-days on receipt of application. If deemed incomplete, notice is sent for missing information. Process repeats until staff deems application is complete & then file it. Permit Streamlining Act (PSA) states 180-days given to write report & present item at public hearing which occurs monthly. 90-day extensions granted if staff request Commissioners to postpone & item is heard within 270 days.
- CDFW: species, methods, lease details, importation (if applicable)
- Tribal Interest Determination (identified as part of CEQA process)
- Army Corps of Engineers (ACOE): existing 401 statewide permit
- NOAA Fisheries (&/or US Fish & Wildlife Service (USFWS) if applicable):

formal consultation to assess impacts happens through the ACOE permit: Environmental Species Act (ESA), Essential Fish Habitat (EFH), Marine Mammal Protection Act (MMPA)

- Regional & State Water Quality Control Board Certification: covered by general NPDES permits & if de minimis project (aquaculture) discharges regulated by individual/ general NPDES permit (before/after ACOE)
- Local Govt Agency: Use Permit (or equivalent)

#### Secondary Agencies for Consultation

- US Coast Guard
- National Marine Sanctuaries (Farallones, Monterey, Channel Islands)
- USFWS

### **PROJECTED COSTS (Estimated)**

#### Phase 1: State Water Bottom Lease Application for Ocean Farm Location

Application submittal: \$500

Completed application reviewed by DFW before presentation at FGC public hearing for final review and approval of water bottom lease and terms.

Bottom Lease application requires the following information:

- CEQA Review: Environmental Impact Report (EIR) to assess potential environmental impacts of project & identifies specific mitigation measures
- Initial Study (IS) & Mitigated Negative Declaration (MND) document preparation costs are wide ranging, approx. \$25,000 to \$500,000+ incl. costs for consultants to generate and review report(s)

#### CEQA Environmental Document Filing Fees

- EIR: \$3168
- MND or ND: \$2280 each
- County Clerk Filing Fee: \$50 + any additional applicable fees

#### Other Required Documents

- 5-year business plan: consultancy fee
- DPH testing: cost to conduct water quality surveys

#### Phase 2: Multi-Agency Permit Applications for Operating Ocean Farm

- California Coastal Commission: coastal development permit (CDP) filing fee is determined by size in sq/footage, eg 10,000 sq/ft = \$11,670 fee; or by the project development cost, e.g. up to \$100,000 cost = \$3,501 fee
- Army Corps = \$100 (payable prior to issuance)
- State Water Board/Regional Water Board: if covered by NPDES Permit, then Aquaculture project is considered De Minimis = \$2062
- DFW Aquaculture New Registration annual (Form FG750) = \$853
- NOAA/NMFS: project review & agency determination
- Local Jurisdiction = City/County Planning Dept fees

### Operational Costs

- DFW Bottom Lease: \$50/acre per year + Privilege taxes (costs vary with species – levied per landed pound or wet ton)
- DFW Aquaculture Registration Annual Renewal: \$536
- DFW Aquaculture Registration Annual Surcharge: \$642<sup>2</sup>
- Late Fee: \$158 (if application submitted after April 1<sup>st</sup>)

## **BARRIERS**

### 1. Regulatory Challenges

- Complex process for obtaining water bottom lease and related permits to establish ocean farms in California i.e. timeline, costs, issues, potential and unknown impacts
- Determination of suitable locations for ocean farm sites can also lead to potential conflicts (and public opposition) w/ other existing coastal dependent uses in same area. For example, farms may compete in coastal areas with protected public access, e.g. recreational uses, tourism, fishing
- Potential impacts of ocean farming (and related activities) on existing surrounding marine environment (e.g. direct impact on environment, competition with other plants such as eelgrass; loss of gear, equipment and generating debris in the water)
- Lack of scientific evidence to demonstrate success e.g. pilot farm
- Lack of knowledge transfer between scientific research & industry
- No current legislation or regulations specific to seaweed farming, cultivation methods, etc.
- Unknown impacts may lead regulators to err on side of caution when imposing permit conditions of approval that are prohibitively expensive or unnecessarily restrictive

### 2. Costs

- Operational Costs
- Condition Compliance: complying w/ regulations burden on farmer
- Cost of Bonding/Clean-up
- Lease application and multi-agency permitting fees incl. CEQA
- DFW: agency “taxes”; annual permit fee & bottom lease fee
- Water quality testing conducted on regular basis e.g. monthly

### 3. Identifying Ocean Farmers

- Need ocean farming skills &/or training
- Financial investment for gear & equipment incl. boat
- Business expertise (lease application requires 5-yr business plan)

### 4. Farm Locations

- Location in state waters: avoid conflict w/ fisheries, protected

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<sup>2</sup> If total gross sales were at least \$25,000 in previous registration year

- species and habitat, e.g. ESA, EFW, MPAs, etc
  - No existing GIS spatial planning maps to use for reference
  - Protected sites like bays (e.g. Tomales Bay, Morro Bay, SF Bay etc.) preferred, Pacific storms can be detrimental to operations
5. Public Perception
- Lack of knowledge regarding mariculture and ocean farms can lead to public opposition & slowing down of the permitting process

## **OPPORTUNITIES**

- California's Coastal Act calls out coastal dependent uses as priority use in coastal zone, i.e. aquaculture
- FGC Bottom Lease terms allow for 15 year approval w/ 10-year extension, i.e. 25 years
- Public knowledge and support is growing through outreach, e.g. press
- Support state legislative effort to propose future policy changes

## **FURTHER INFORMATION**

If you have any questions or comments regarding the information presented here in this document, please contact:

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## **GLOSSARY of ACRONYMS**

ACOE: US Army Corps of Engineers  
CCC: California Coastal Commission  
CDFW: California Dept of Fish & Wildlife  
CDP: Coastal Development Permit  
CDPH: California Dept of Public Health  
CEQA: California Environmental Quality Act  
CWA: Clean Water Act  
EFW: Essential Fish Habitat  
ESA: Endangered Species Act  
FGC: California Fish and Game Commission  
GIS: Geographic Information Systems  
IS: Initial Study  
LCP: Local Coastal Program  
MMPA: Marine Mammal Protection Act  
MND: Mitigated Negative Declaration  
ND: Negative Declaration  
MPA: Marine Protected Area  
NEPA: National Environmental Policy Act  
NMFS: National Marine Fisheries Service  
NOAA: National Oceanic Atmospheric Administration  
NPDES: National Pollutant Discharge Elimination System Permit  
Porter-Cologne Act: Porter-Cologne Water Quality Control Act  
RWQCB: Regional Water Quality Control Board  
SLC: State Lands Commission  
SWRCB: State Water Resources Control Board  
USFWS: US Fish and Wildlife Service  
USGS: U.S. Coast Guard  
WQC: Water Quality Certification

## SELECTED STATE & FEDERAL AGENCY CONTACTS

### **California Dept of Fish & Wildlife (CDFW)**

Randy Lovell, State Aquaculture Coordinator  
CDFW Sacramento office  
916.445.2008  
randy.lovell@wildlife.ca.gov  
[aquaculturematters.ca.gov](http://aquaculturematters.ca.gov)

### **CDFW Marine Aquaculture Coordinator**

Kirsten Ramey, Marine Aquaculture Coordinator & Environmental Scientist  
Aquaculture and Bay Management Project  
707.445.5365  
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<https://www.wildlife.ca.gov/Conservation/Marine/ABMP/Aquaculture>

### **Fish and Game Commission (FGC), Sacramento CA**

Susan Ashcraft, Senior Environmental Scientist & Marine Advisor  
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### **California State Lands Commission (SLC)**

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### **California Coastal Commission (CCC)**

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