

# Seaweed Farming in Maine



# The Atlantic Sea Farms Supply Team



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# Our Partner Farmers



# How ASF Partners with Fishermen



## → Recruit & Assist

- Free assistance with lease applications and permitting
- Advise on site selection and gear/equipment

## → Produce & Provide

- Grow kelp seed in our **state-of-the-art, organic-certified** cultivation center
- Provide **free** seed to all partner farmers

## → Assist & Monitor

- Free technical assistance on and off the water
- Access to a **community of successful farmers** to talk and learn from
- Annual audits during the growing season

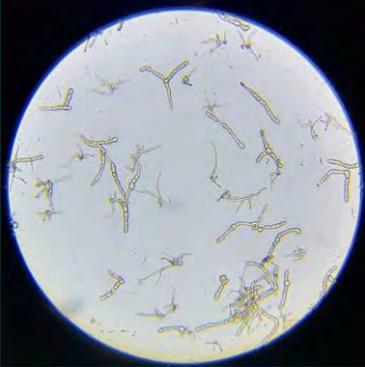
## → Guaranteed Purchase

- Set buying price and a **GUARANTEE** to purchase all kelp grown at harvest
- **Free** harvest materials: bags, landing sheets, landing fees, refrigerated transportation, and storage of product

## Process, Create & Innovate

- Kelp in everything! More on this later ...

# From Seed to Harvest



# Types of Seaweeds

## Brown Seaweed aka Phaeophyta Commonly called Kelp



## Red Seaweed aka Rhodophyta



## Green Seaweed aka Chlorophyta





**Sugar Kelp**  
*Saccharina latissima*



**Skinny Kelp**  
*Saccharina angustissima*

# Kelp in the Lab



# Cultivation Timelapse



**Week 1**



**Week 2**



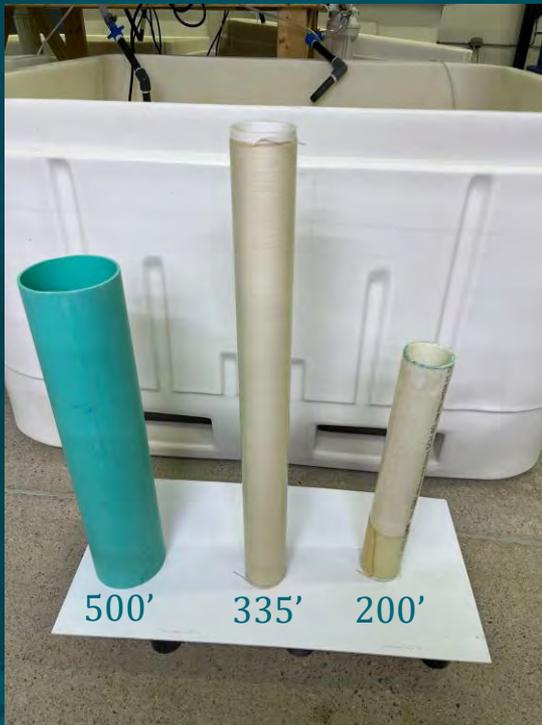
**Week 3**



**Week 4**



# Spool Types





# Farm Monitoring: Food Safety, Fouling & Kelp Grading

Snails & Eggs  
*Lacuna vincta*



Ectocarpus & Diatom Chains



Bryozoan  
*Membranipora membranacea*



Freshwater Blisters



Knives/Foreign Objects



Slit/Mud





Scott Lord & Greg Morris - Port Clyde, ME  
Sugar Kelp Harvest



Justin Papkee- Casco Bay, ME  
Skinny Kelp Harvest

# Where Does All That Kelp Go?

## ASF Products



# Where Does All That Kelp Go?

## Ingredient Partnerships



# Where Does All That Kelp Go?

## Food Service

Campus Dining



Restaurants

Maine Beer Company



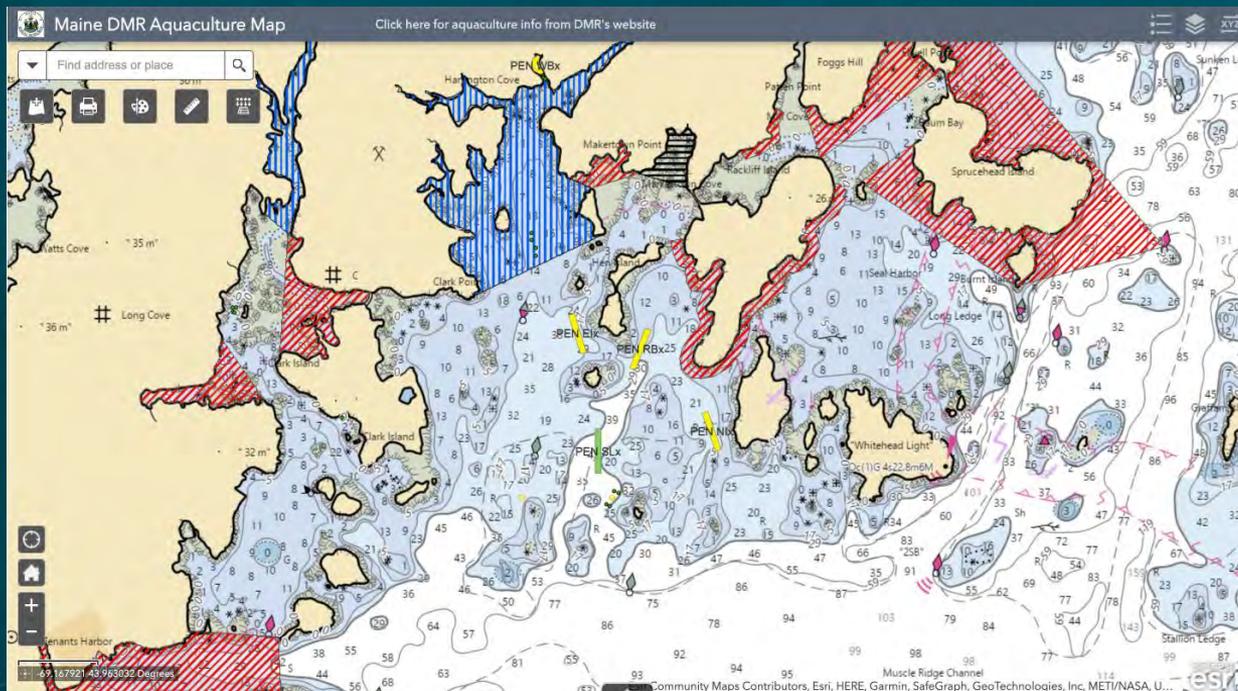
Corporate Dining



Sports Organizations

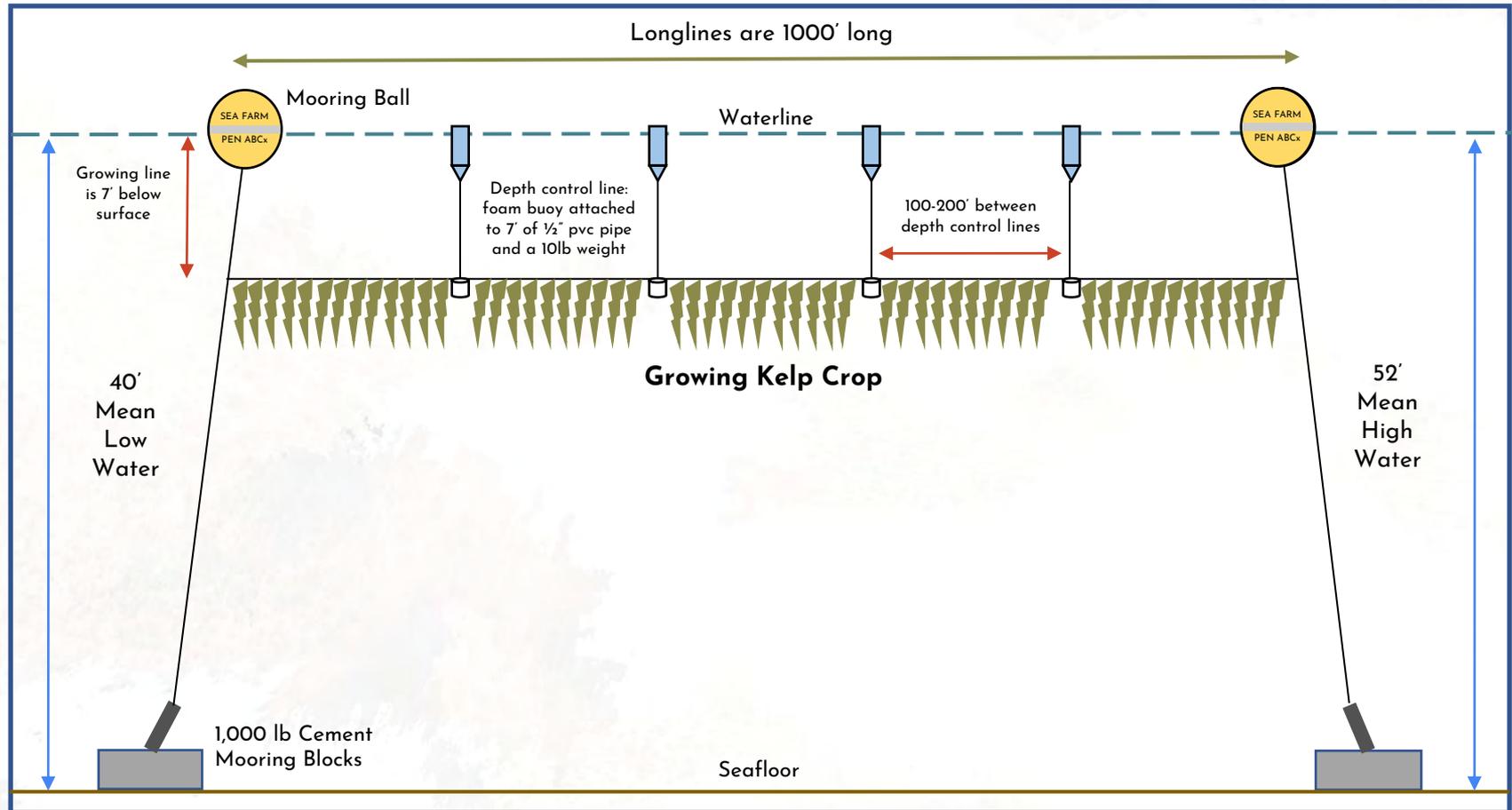


# Location, Location, Location

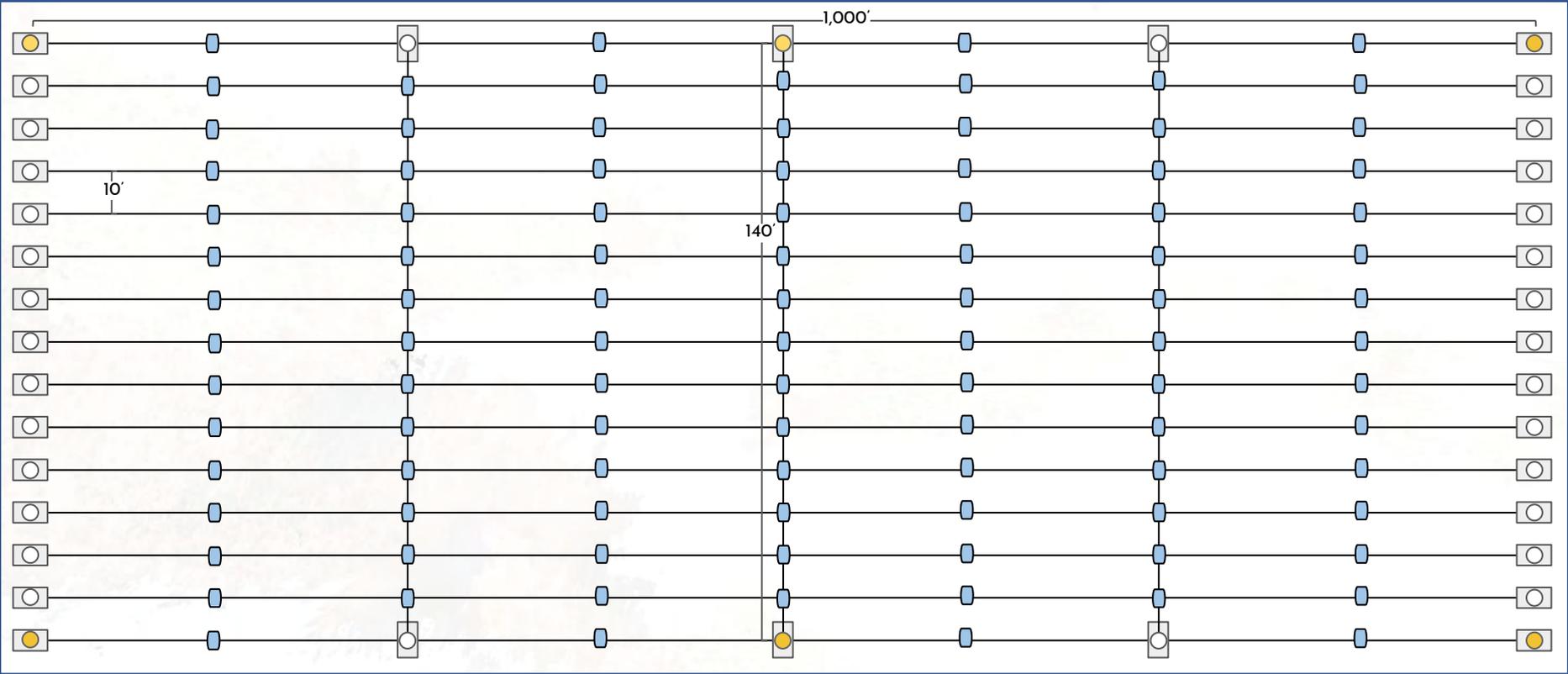


- Shellfish Open Waters
- Depth
- Bottom type
- Landowners
- Ingress/egress, docks, moorings, etc.
- Proximity to fishing activity (commercial & recreational)
- Proximity to other aquaculture sites (pros & cons)
- Navigation
- Protected species & lands
- Large Harbors, Treatment Plants, etc.
- Public Uses
- Shore-side infrastructure & access
- Social License & community acceptance

# Cross-Section View of Farm

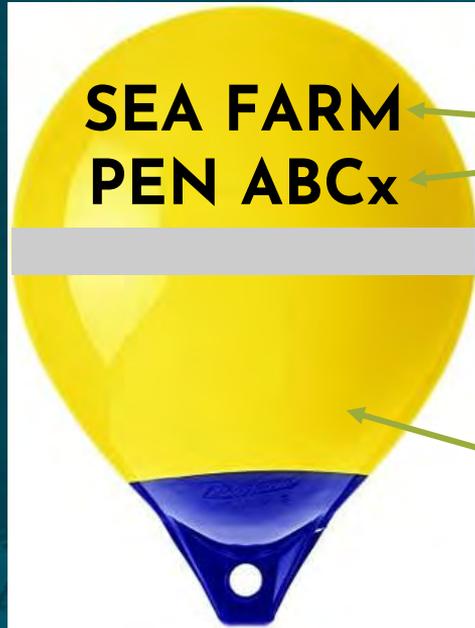


# Overhead View of Farm



# Updated DMR Lease Marking Requirements:

As of January 1, 2023, the outermost corners of the lease area (for LPAs: at each end of the culture line) and any boundary line that exceeds 200 yards (600 ft) must be marked by readily identifiable floating devices.



'SEA FARM' & DMR Assigned Lease Acronym must be at least 2" high and in a contrasting color

Floating device must be marked with reflective material

Floating device must be yellow and readily distinguishable from other buoys or gear on site

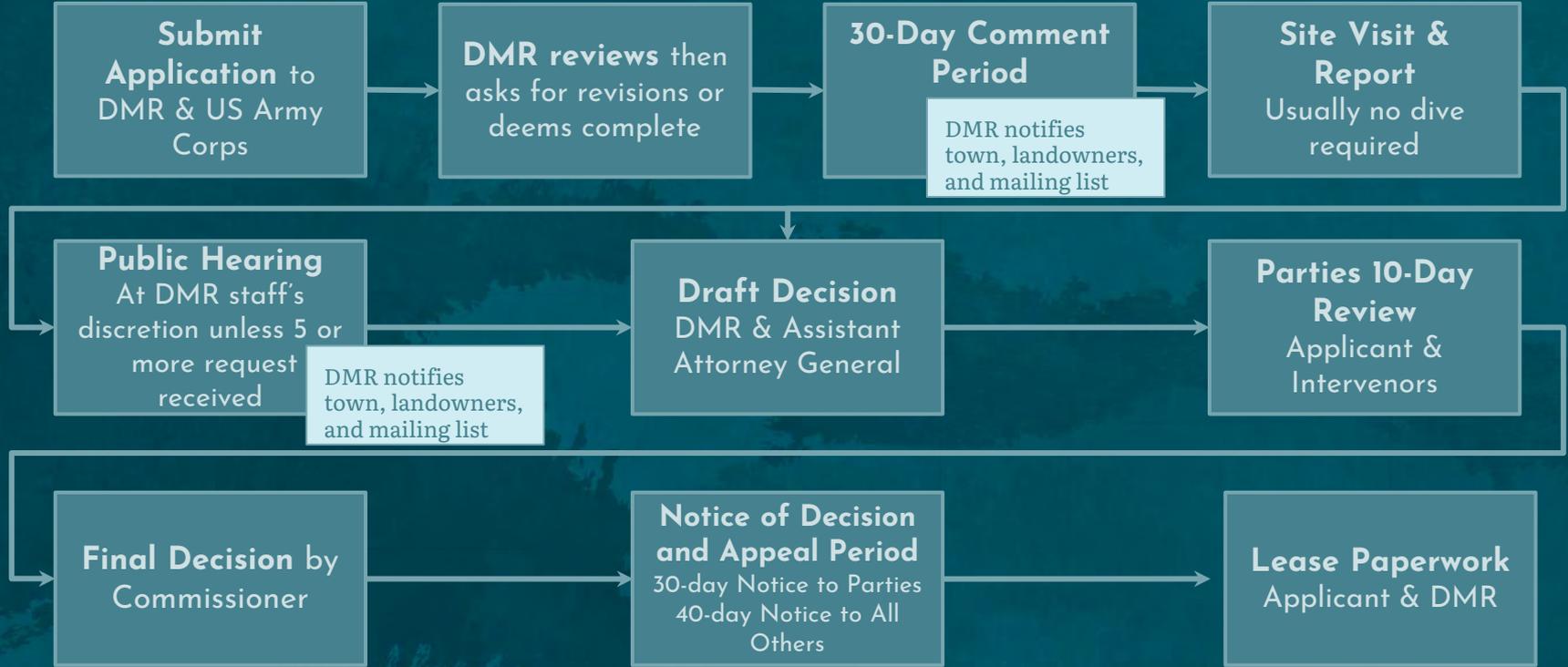
# Lease Types

	Size	Duration	Fees	Renewable?	Time from Submission to Granting of Lease
LPA's	Up to 400 sq. ft	1 year	<b>Application:</b> \$100 <b>Rent:</b> \$100/year <b>Harvester License:</b> \$133	Yes, annually	~ 6 month - 1 year
Experimental	Up to 4 acres	Up to 3 years	<b>Application:</b> \$100 <b>Rent:</b> \$100/acre/yr <b>Harvester License:</b> \$133  <b>Escrow/Bond:</b> \$5,000	No	~ 2 years
Standard	Up to 100 acres (but typically 8-10 acres in the ASF Network)	Up to 20 years	<b>Draft Application:</b> \$500 <b>Final Application:</b> \$1,000 <b>Rent:</b> \$100/acre/yr <b>Harvester License:</b> \$133  <b>Escrow/Bond:</b> \$5,000	Yes, with \$1,500 renewal application fee	~ 3-4 years

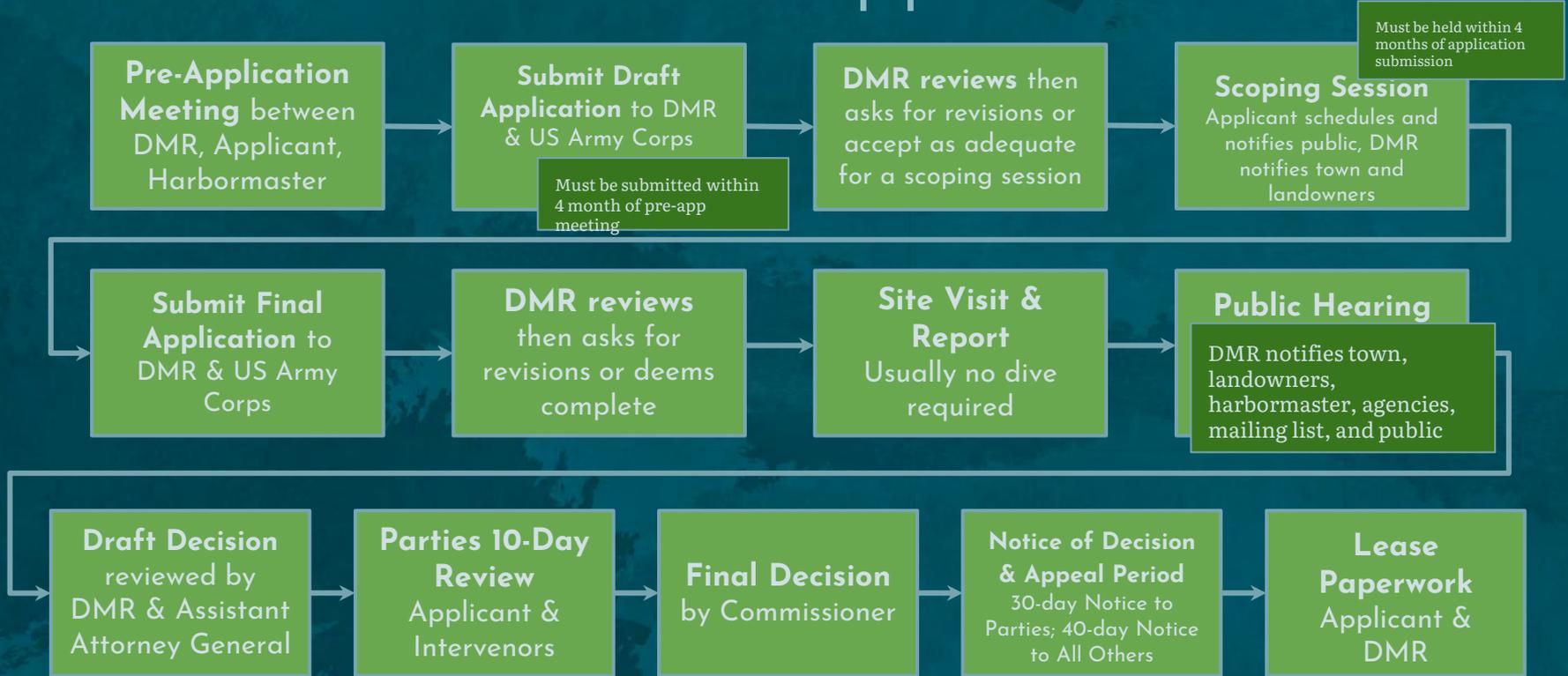
# Who will you talk to when applying for a lease?

- Landowners
- Local fishermen
  - especially those who historically fish the area around your proposed lease
- Nearby aquaculturists
- Harbormaster
- Owners/users of where you want to land
- Anyone who is curious or has questions!
  
- 2 Letters of Support from key people

# DMR Experimental Lease Application Process



# DMR Standard Lease Application Process



## To successfully work with ASF & get a kelp lease from the State of Maine it is expected that:

### Farmer / Applicant:

- Signs 1 page agreement to partner for 1 year after a successfully granted lease
- Talks to their community prior to submitting their application
- Works with ASF on the application process
- SUBMITS their own lease application, in their own name / business name and pays the associated fees
- Follows up on their application progress throughout the permitting timeline
- Arranges their own required meetings for their lease (pre-application meeting, scoping session)

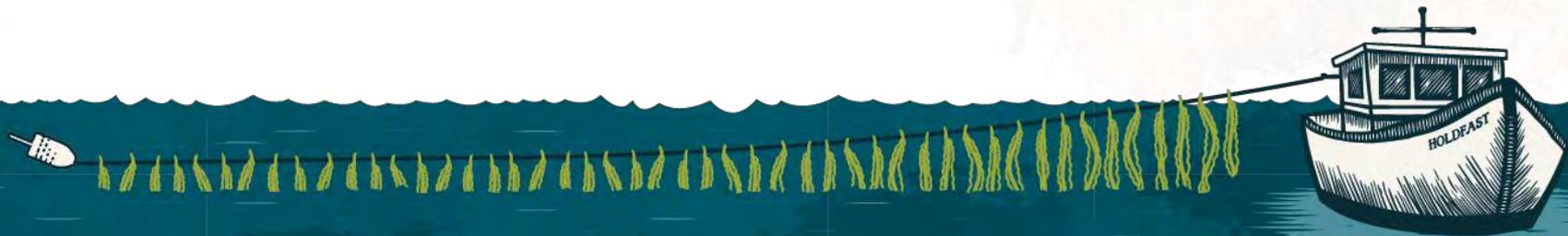
### ASF:

- Advise on site selection & farm gear/ equipment
- Complete application paperwork and diagrams for a successful application
- Provide Letter of Support to include in the final application
- Communicate with DMR throughout the application process when necessary
- Be present at any required meetings to support applicant in the application process (scoping session, public hearing)



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