Storm Preparedness Guide for Suspended Shellfish Aquaculture in Atlantic Canada

PRIOR TO HURRICANE SEASON

Growers can make preparations to minimize losses due to extreme weather

- ○ Continuous monitoring and regular control of **biofouling** on all suspended gear and infrastructure
- ○ Evaluate lines, bridles, and cages throughout regular operations to **ensure integrity**
- ○ Review **storm preparedness and post-recovery plans** with employees

HURRICANE SEASON GUIDELINES

Hurricane season occurs between June 1 to November 30

PRE-HURRICANE PREPARATIONS

High likelihood of hurricane tracking to Atlantic Canadian waters

- ○ **Examine condition of gear, lines, and infrastructure**, replace or repair where needed. Ensure all bag and cage closures are in working order
- ○ **Secure any loose gear** (i.e., collectors, empty cages, and bags) to the grid or store on land, protected from wind, waves, and flooding.
- ○ **Re-examine stocking densities**, redistribute stock to minimize uneven load or overstock bags to increase positive buoyancy, if able to do so.
- ○ Consider **combining oyster seed and early juveniles** to one section of the farm.
- ○ Depending on site inventory, growers **should identify areas to prioritize sinking**, in part or fully to the bottom (i.e., seed or market-sized stock).
- ○ **Determine feasibility of sinking gear**, fully to the bottom or partially, for all or a portion of the farm.
- ○ **Document site status** with dated photographs and inventory (i.e., biomass)
- ○ **Review storm preparedness plan** for workboats and land infrastructure with employees.

These guidelines are a compilation of best practices to reduce damages and losses incurred by shellfish aquaculture farms due to weather events.

CENTRE FOR MARINE APPLIED RESEARCH

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TROPICAL STORM OR HURRICANE WATCH ISSUED

- **Continuous tracking of the storm** to evaluate next actions
- **Harvest product** if market permits or **transfer harvestable product** to a "storm-proof" storage facility
- If regulations permit, **tow bags** to area(s) that are expected to have less impacts (i.e., another lease)
- **Lower surface gear or sink the gear**, in part or fully to the bottom by removing bags from the floats, remove or fill one float with water, or fill both floats with water
- Prepare to **execute storm preparedness** plan for workboats and land infrastructure. **Review post-storm recovery plan** with employees
- **Prepare emergency gear** (i.e., charge long range radio or cell phones, verify working operation of generators, and obtain fuel/diesel)

PRIOR TO LANDFALL

- **Visually inspect farm** (> 24 hr anticipated landfall)
- **Execute storm preparedness plan** for workboats and land infrastructure
- Focus on **personal preparations and protection**

POST-STORM RECOVERY

- **Contact employees** to evaluate personal availability and mobilization risk (i.e., road damage or flooding
- **Assess accessibility of the farm** only return if conditions (i.e., wind or waves) allow
- On the water, **tour all accessible waters** surrounding the farm, remove or secure debris
- **Take pictures or video footage** and make detailed notes on the status of the farm
- **Return gear / stock to surface**, prioritizing seed and early juveniles
- **Communicate extent of damages** to associations and government bodies