Weathering the Storm

Creating a Storm Plan for a Shellfish Farm
Impacts of Storm Damage

• Creation of marine debris
• Lost and broken gear
• Time and labor to recover
• Loss of product and revenue
Do You Have a Storm Plan?

• Yes, an informal storm plan
• Yes, a written storm plan
• No, we wing it
Why you need a storm plan

• A written guideline to use in preparations
• Inform farm workers
• Verify that key components are checked and prepared
• Ensure that documentation occurs
• Mental fatigue associated with multiple storms
Planning Begins Before Installation

- Assess your farm's exposure
  - Take storms into consideration when selecting a site
  - Wave energy, wind direction, and fetch
- Size anchors, lines, and fasteners for the worst case
- Overbuild weak gear components
- Install anchors as deep as possible
- Use like-to-like attachments to avoid line chafing

Anchoring Options

Helical Auger (Screw) Anchors

Driven Earth Anchors
Components of a Plan

• Guidelines for installation of new gear
• Inspections schedule for gear
  • Prior to storm season
  • As storms are forecast
• Accurate farm inventory
• Tiered approach to prepare when storms are forecast
  • Tier 1
  • Tier 2
  • Tier 3
Creating an Inspection Schedule

• Follow a regular inspection schedule to find worn out gear before it breaks
  • Before hurricane season
  • After storms
  • Periodically throughout year

• Document the inspection
  • Checklist format

• Replace or reinforce gear and lines as damage is noted
Farm Inventory

• Keeping an accurate farm inventory will make recovery after storms easier
• Crop insurance will require documentation of what was on the farm
• Commercial applications or build your own
Storm Drills

• Do not need to conduct drills on entire farm
• Timed drills of portions of farm
• Best to practice in poor weather

http://www.oystergro.com/how-to-oystergro/
Do You Conduct Storm Drills to Determine How Long You Need to Prepare for Storm Impacts?

• Yes, yearly.
• Yes, when changes are made to the farm.
• No, we prepare when a storm is forecast.
Onshore Activities and Boats

- Low lying areas are prone to damage as well
- Plan to secure any gear ashore
- Move work boats to safe areas
Tier 1 – Tropical System Forms

• Perform a farm inspection
• Replace/repair and damaged gear
• Consider reinforcing weak points or anchoring
• Ensure stocking densities are optimal
• Follow through with gear cleaning/biofouling removal
• Verify inventory is up to date
• Document state of farm
Tier 2 – Tropical System Watch

• Continue to track storms forecast
• Keep in mind how long preparing the farm may take
• Finalize plans to prepare farm and workboats
• Sell product as you are able
Tier 3 – Tropical System Warning

• Implement the preparedness plan
  • Reinforce gear
  • Sink cages
• Document preparations with photos
• Remove any unused gear
• Get work boats to a secure area
Use available resources

• NOAA and NWS data
• Local Forecast
• Storm plan guides
• Other growers
Post Storm Recovery

• Only return to the farm once it is safe to do so
  • Make note of debris in the surrounding area
• Document state of the farm upon returning
• Inspect for lost or damaged gear
• Refloat or return gear to operational normal
• Assess mortality of crop
Questions?

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