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MAFS-32

A grainy, high-contrast illustration of a tropical storm. On the left, palm trees are being blown over by strong winds. In the center, a large, dark, swirling storm cloud dominates the sky. On the right, a boat is shown on the water, appearing to be in the path of the storm. The overall style is that of a halftone or dithered print.

Severe Weather and Hurricane Planning Guide for Marina/Boatyard Operators

Using this guide for severe weather planning will help the marina operator prepare for, respond to, and recover from hurricanes and severe weather. However, following this guide will not assure that no damage will occur, nor will it necessarily exempt the marina or boatyard operator from being held responsible for any damages. The Florida Sea Grant College, the Marine Advisory Program, and the Florida Cooperative Extension Service assume no liability for any damage or injury that may occur in the use of these guidelines.

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**SEVERE WEATHER AND HURRICANE PLANNING GUIDE
FOR
MARINA/BOATYARD OPERATORS**



I. Early Planning Steps - Initiate immediately and update annually.

- A. Contact the County Civil Defense Director and Marine Patrol each spring to review:
 - 1. Overall disaster plan.
 - 2. Emergency assistance communications.
 - 3. With insurance representative, whether vessels in wet slips should evacuate the marina considering such factors as: severe weather draw-bridge policy, boat evacuation routes, safe harbors, and whether boats may be dashed against docks by wind and waves, or pilings may be pulled loose as storm tide rises.
 - 4. Regional map of the marina/boatyard's location with respect to storm surge, flood plain, wind damage potential, evacuation routes and bridge locations.
- B. Develop a detailed map of the marina/boatyard complex showing locations of: utility equipment and power shutoff points; sources of auxiliary power; potential hazard areas such as from fallen objects, trees, poles, etc.; emergency equipment and supplies; communication equipment; first aid stations; and escape routes.
- C. Make sure that dockage space rental agreement and storage contract limits liability for property damage and personal injury. Specify that vessel owners will be billed for services and materials necessary for preparation, response, and recovery. If it calls for evacuation of vessels, make sure all clients understand.
- D. Double check with insurance agent that marina is adequately insured, particularly for wind and water damage; current photographs of marina facilities are on file; that any applicable specifications required by the insurance policy (the fine print) have been met and that this is confirmed in writing.
- E. Establish a severe weather **Standard Operating Procedure (SOP)** for response and recovery. (See guidelines in Section IV). Annually review it with staff and clientele. Consider encouraging an annual flotilla to visit possible "safe harbor" areas.
- F. Prepare and maintain a **Disaster Preparedness Kit (DPK)**. (See section V recommendations).
- G. Plan a communication system with wet slip clientele, including name, address, and telephone number of designated caretaker in the event they are out of town during hurricane season.
- H. Post and maintain a phone number list to include: Civil Defense, insurance agent, utility companies, fire department, police and Marine Patrol, rescue service, hospital, and employees. **Renew contacts annually with them.**
- I. Purchase, maintain and monitor a battery operated NOAA weather-alert radio and a portable AM-FM radio for local government advisories. Make sure local warning system is understood.
- J. Distribute to clientele the *Hurricane and Severe Weather Checklist for Boaters*.
- K. Conduct and record frequent safety inspections of the entire marina/boatyard facility with insurance agent. **Correct problems immediately!**

II. Response Actions - Taken well in advance of anticipated severe weather.

- A. Be alert to NOAA weather updates and local officials' advisories. Take appropriate actions based on the proximity and predicted movement of the severe weather.
- B. Alert staff and clientele, review **SOP**, and check **DPK**. Allow staff to prepare their homes before reporting for duty. (Don't forget the live-aboards).
- C. Implement severe weather **SOP**. (see section IV)
- D. Prepare to evacuate.
 - 1. Account for all personnel and clientele.
 - 2. Arrange for transportation. (Rent necessary vehicles/equipment early!).
 - 3. Base the decision to evacuate on recommendations from local authorities and the condition of evacuation routes.

- E. **Evacuate:** Clientele, essential files, records, equipment and personnel when premises are secured or **immediately** on order from authorities.

III. Recovery Activities - After the "all clear" has been issued.

- A. Return only after official all clear notification is issued.
- B. Conduct safety inspection and document damages photographically before permitting clientele on the property. If necessary, request assistance from Civil Defense, fire department, utility companies, or police.
- C. Clearly mark and blockade hazard areas; be particularly careful of fallen electrical lines and leaking fuel.
- D. Set up operations center, log in all arrivals and departures, and designate spokesperson(s) for media, insurance and clientele.
- E. Begin clean-up and repair procedures only after insurance company has been contacted and legal documentation of damage has been accomplished.

IV. Standard Operation Procedures (SOP) - Guidelines

For Developing: The SOP is a checklist of specific tasks and duties arranged in their order of importance.

- A. Organize the **SOP** according to the predicted time of arrival of the severe weather. For example, at minus 48 hours, all personnel and clientele might be alerted. It should define when and under what conditions to begin response actions.
- B. Establish procedures for communicating with and assisting clientele in preparing, responding, and recovering from severe weather. For example, this might consist of a list of calls to be made, distributing a written checklist of tasks for clientele to use in preparing their vessels, assigning staff members to provide materials and assistance when needed.
- C. Outline specific tasks for each department or staff member to accomplish during preparation, response, and recovery. Establish responsibility for boarding the windows; operating emergency pumps; supervising traffic; preparing special equipment such as pump-out stations, generators, **DPK**, etc.; deciding what equipment, files, and personnel are to be evacuated, in what order, when and how; and deciding where equipment and supplies are to be stored and secured, etc.
- D. Include list(s) of files, documents, photographs, equipment, etc. requiring special attention. Example - Staff assignments; evacuation routes; clientele and staff evacuation deadlines and final inspection before leaving; recovery safety inspection; guidelines; and methods for logging arrivals and departures.

V. Disaster Preparedness Kit(s) (DPK) - Recommended

Equipment and Supplies - Disaster preparedness kits are a collection of equipment and supplies which can be made immediately available to staff and/or clients to prepare for and recover from the effects of a disaster. Materials should be purchased well in advance, properly stored, and maintained in serviceable condition at all times! The following general categories and examples are offered as a guideline for assembling kit(s).

- A. Items needed by personnel and clients. Examples are: first aid kits, stretchers, flares, blankets, tools, medicine, radios, food and water, batteries and flashlights, life jackets, foul weather gear, sanitation facilities, gas-powered generators, pumps, hoses, etc.
- B. Items needed to secure facility. Examples are: plywood, nails, duct tape, extra line and cable, auxiliary power, fuel, fire control equipment, tools, emergency lighting, sandbags, barricades, warning signs, chafing gear, used tires, etc.
- C. Items needed for evacuation. Examples are: **SOP**, including legal documents and photographs (see Section IV), personal effects, extra food and water, medicine, clothing, portable radio, special tools needed for recovery, a trailer or truck to haul heavy items, keys, etc.

KNOW THESE TERMS AND DEFINITIONS USED BY THE NATIONAL WEATHER SERVICE:

- **Tropical Disturbance.** A moving area of concentrated showers in the tropics which maintains its identity for 24 hours or more.
- **Tropical Depression.** An area of disturbed weather associated with low pressure and wind circulation at the surface. Highest sustained winds are less than 39 mph.
- **Tropical Storm.** Same as above except highest sustained winds range from 39 to 73 mph.
- **Hurricane.** Same as above except highest sustained winds are 74 mph or higher.
- **Advisory.** A message released by a Hurricane Center, usually at six-hour intervals, updating information on the storm or hurricane including watches and warning whenever they are in effect.
- **Special Advisory.** Same as Advisory but is issued whenever there is a significant change in any information previously released.
- **Intermediate Advisory.** Updates information contained in Advisories at 2 to 3 hour intervals whenever a watch or warning is in effect.
- **Gale Warning.** Wind speed of 39 - 54 mph expected.
- **Storm Warning.** Wind speed of 55 - 73 mph expected.
- **Hurricane Watch.** A hurricane may threaten your area.
- **Hurricane Warning.** A hurricane is expected to strike your area within 24 hours or less.
- **Tornado Watch.** Tornadoes and severe thunderstorms are possible in your area.
- **Tornado Warning.** Tornado detected in your area, **TAKE SHELTER.**
- **Storm Surge.** A rise in tide caused by a hurricane as it moves over or near the coastline. It can be much higher than normal astronomical tide and has high, breaking waves superimposed on it.

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