## APPENDIX VIII

# FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FWC) BUREAU OF PROTECTED SPECIES MANAGEMENT (BPSM) BOAT FACILITY SITING GUIDE AUGUST 2000

## DEFINITION

A boat facility siting plan can be defined as a Commission-approved, county-wide plan for the development of boat facilities (docks, piers, dry storage areas, marinas and boat ramps) which specifies preferred locations for boat facility development based on an evaluation of natural resources, manatee protection needs, and recreation and economic demands. The boat facility siting plan is one component of the Manatee Protection Plan (MPP). It should include, but is not limited to, the following:

1. An inventory of existing boat facilities and natural resources;
2. An evaluation of boat use and traffic patterns;
3. Criteria on which proposed sites will be screened;
4. A list and map of preferred locations, unacceptable locations, and locations which are acceptable with specific conditions;
5. Appropriate dock densities; and
6. Boat facility siting policies including a policy for the expansion of existing boat facilities.

The main goal of the resulting boat facility siting criteria will be to minimize the amount of interaction between manatees and boats. Part of this goal is also to evaluate impacts of boat facility developments on manatee habitats. The resulting criteria should be based on certain baseline information general to all Florida waterways and then tailored to fit the specifics of each county. While the primary concern of BPSM is manatee protection, we recognize that counties will need to consider recreational uses, economic factors and other marine and coastal resource needs. Much of the analysis of water-dependent facilities required by this boat facility siting plan will aid other county planning efforts.

## INFORMATION TO BE ASSESSED

The following information should be collected in order to select areas appropriate for boat facility development.

1. The boating activity study should provide a detailed overview of boat traffic patterns for the county waterways. It should describe traffic routes (points of origin and destination), the volume and types of boats, seasonal variations of boating patterns, and the types and distribution of boating activities. It should also include inventories of marina facilities, boat ramps and port facilities. Boating studies will vary from county to county depending on the nature of each county's waterways and how they are used locally.

2. Manatee use patterns of county waters should be studied so that when evaluating locations for further water-dependent development, impacts to manatees and their habitats can be minimized. With the assistance of FWC, each county should determine sites of preferred

manatee use and aggregation. The location of travel corridors, freshwater outfalls and warm water refuges should be determined. Seasonal variations of use patterns should be described and mortality information should be analyzed. Most of this information is available from FWC, USFWS and various other entities depending on the county. Manatee use information should be compared and overlaid with the boating patters information in order to understand how boats and manatees currently interact. Then problem areas can be identified and measures can be developed that will minimize and eliminate problems.

3. Habitat inventories should be done for the location of seagrass beds, freshwater, submerged vegetation, shellfish areas, existing water depths, and water circulation patterns. This information will give details about habitat quality and location, as well as insight into manatee usage of these areas. Some of this information may already exist for some counties and may only need to be checked and updated.

4. Specially-designated areas should be identified, such as Outstanding Florida Waters, aquatic preserves, federal, state and local parks, sanctuaries and research reserves, wildlife refuges, and any other lands set aside for preservation and open space. Some of these areas are not available for boating facility development or have certain restrictions. The process of identifying the locations of these areas will narrow down areas that will need to be screened for potential boat facility development.

5. Existing upland zoning appropriate for marina and boat facility development should be located and displayed on maps. Counties need to consider whether future land use zoning changes will be allowed to change the location of acceptable boat facility sites. If changes will be allowed, counties need to determine and specify how the areas will be evaluated for such changes. Criteria will need to be developed for these changes. Counties may choose not to allow zoning changes that would alter locations where boating facilities may be sited once the MPP is approved. By collecting this information, counties will reduce the number of sites that need detailed evaluation and can direct their efforts toward sited that are available for development of boat facilities. This process should minimize the amount of areas that will need to be studied in depth.

6. An inventory of the location of existing multi-family residential docking facilities should be shown on maps of the county waters. The Department of Environmental Protection's (DEP) Division of State Lands issues submerged land leases for residential docking facilities and marinas. The division defines multi-slip docks as moorings of three or more vessels. The DEP requires permits for dock construction on both private and sovereign submerged lands. Counties should also consider developing a threshold for residential multi-slip dock densities. Some of the more urban counties may have already reached their threshold in many areas because all available lands have already been developed.

7. The location of all existing marinas and boating facilities should be determined and exhibited on maps. A table for existing marinas should be compiled that will show the number of slips (both wet and dry), a break down of boat types (power vs. sail) and sizes, the percent occupancy (and any seasonal variations), the distance to the nearest inlet, the proximity of existing speed zones and the distance to popular boating destinations. Also, it should be noted if there are any plans for expansion of the current facilities. Much of this information is often obtained in conjunction with the boating study.

8. An inventory of all the boat ramps in the county should be conducted and the locations should be depicted on a map. Information concerning each ramp should be collected such as the number of ramps, the amount of parking (on and off site), and the number of boats launched (with seasonal and weekday/weekend use variations identified). The ramp's proximity to inlets, the ICW and popular boating destinations should be determined. Again, this information should be available from the boating study.

9. An inventory and map showing the locations of port facilities, freight terminals, fuel and transient docks, and boat yards should also be completed for each county. A description of the activities occurring at each of the different types of facilities should be provided. This will be useful when developing criteria for each type of facility that will guarantee appropriate protection for manatees and their habitats. Our office is developing a proposed rule that will address wharf bumpers and fenders. (Please request an update from our office on the status of this rule.)

10. For all of the inventoried information described in points 1-9 above, the information should be exhibited on maps. This will facilitate the spatial analysis that is needed for evaluating areas for boat facility development. For ease of analysis, similar scale maps should be used so that information can be overlaid. The use of a Geographic Information System (GIS), if available, will enhance the mapping process. All of the inventoried information should be considered before choosing a particular scale, especially if GIS is unavailable. Maps for the final boat facility component of the MPP will need to be legible and easy to interpret so that the process of evaluation can be clearly understood.

**EVALUATION OF DATA**

Once all the information above is compiled, the focus of the detailed analysis can be narrowed by removing lands that are unavailable for boating facilities. Examples may be public wildlife refuges, or areas with conflicting upland land use zoning. The remaining areas will be the focus of the boat facility siting plan.

Next, a search should be made for areas where manatee use patterns and boat use patterns overlap. Areas should be identified where boat use patterns show minimal overlap with manatee use patterns and these should be examined further to evaluate them as preferred marina site locations. It should be determined whether boating activities and facilities located in these areas will affect manatees and their habitats in a negative way and to what degree, if any. Through this evaluation, it can be decided whether these areas would be the preferred locations for boating facilities.

In locations where boat/manatee use patterns converge significantly, an assessment should be made of the degree of overlap. Once identified, these locations should be scrutinized carefully to determine if additional boat facilities will significantly impact manatees. The siting plan should specify areas where different types of facilities would be allowed. Additionally, the type of facility proposed (ramp, dry storage, marina, etc.) may be restricted by physical, environmental or operational factors - or by land use. In creating the specific criteria for each area, the local baseline information should be used. The criteria should be customized for each area and be written to allow the size or type of facility that would be best in the area (if allowed at all). For example, certain sized marinas may be allowed in areas with moderate manatee use if seagrasses are not present, dredging is not required, appropriate speed zones are in place and boat slips are limited in number. In areas where seagrasses are present but manatee usage is low,

dry storage or ramp facilities may be more appropriate. Counties should consider whether to assign density thresholds for specific areas. For example, several counties have used the 1:100' ratio of power boat slips to amount of linear shoreline owned for areas deemed as essential manatee habitat.

Some general factors to consider in selecting marina and boat facility sites include:

- proximity to inlets and/or the ICW,
- existing water depths adequate for clearance beneath vessels,
- presence of seagrass beds, and/or shellfish harvesting areas (Class 11 waters),
- proximity to popular boating destinations,
- amount of manatee use, and
- distances of boat/manatee use pattern overlap.

Criteria should also be developed for marina expansions. Some areas may not warrant expansion. Some expansion might be considered under specific circumstances. The expansion of existing facilities in some areas may also be the preference over new boat facility development. The percent occupancy of marinas in the adjacent area should be considered when evaluating requests for marina expansions. While demand for boat slips must be addressed by county officials, existing marinas should be used to their fullest capacity before expansions and new marinas are permitted.

Some general criteria to be considered for siting of marina facilities are:

- Expansion of existing facilities may be preferred over new facilities if environmentally sound;
- There should be no impact to seagrass;
- Mitigation for seagrass destruction should not be allowed;
- Areas with adequate depth and good flushing which require no new dredging are preferable;
- Locations near inlets and popular boating destinations are preferable;
- Piling construction is preferred over dredge and fill techniques;
- Marinas should not be sited in essential manatee habitats; and
- Marinas should not be situated in areas with high manatee mortality occurrence.

There are also some special considerations for port and associated facilities. Port facilities, freight terminals, fuel and transient docks, and boat yards should require wharf fenders on all new facilities located in manatee habitat areas and require retro-fitting of existing facilities on an established time table if these facilities do not provide adequate clearance through an open-face pier design. Prop guards for tug boats and other large vessels regularly using manatee inhabited waters should be considered once an operationally functional and efficient design is developed. Expansion of port facilities or the development of new facilities should not impact seagrass beds.

The boat facility siting plan should describe the process and discuss the criteria used to evaluate and identify where and how boating facilities would be allowed. It should be clear why certain areas were determined to be unavailable for boating facilities. The whole process of screening and layering mapped resources and areas using specific criteria should be clearly stated in this boat facility siting plan.