Management of Small Docks and Piers

Introduction

Forward—

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Small Docks and Piers—

This workbook and associated PowerPoint presentations are designed to address issues related to the management of small, residential docks and piers generally associated with privately-owned waterfront properties and designed for use by a small number of watercraft. Commercial docks and wharfs or marinas will not be directly addressed.

Few issues confronting coastal managers are as divisive or difficult to manage as regulating the construction of private recreational docks and piers. The number of applications for dock permits has increased significantly over the past few decades and dock authorizations are not the single most frequently sought permit from coastal managers. For example the number of dock permit requests received annually in South Carolina increased ten-fold over the past two decades—from 80 to over 800 (Figure 1).

Other states have observed similar trends. Many coastal managers and citizens are concerned about this proliferation and the potential impacts numerous docks may have on the environment, navigation, and the ability to of the public to access the waterfront. They wand a better understanding of the tools they can use to ensure that small docks and piers are managed in such a way as to balance people's rights to access and use the water with any adverse impacts the docks may have.

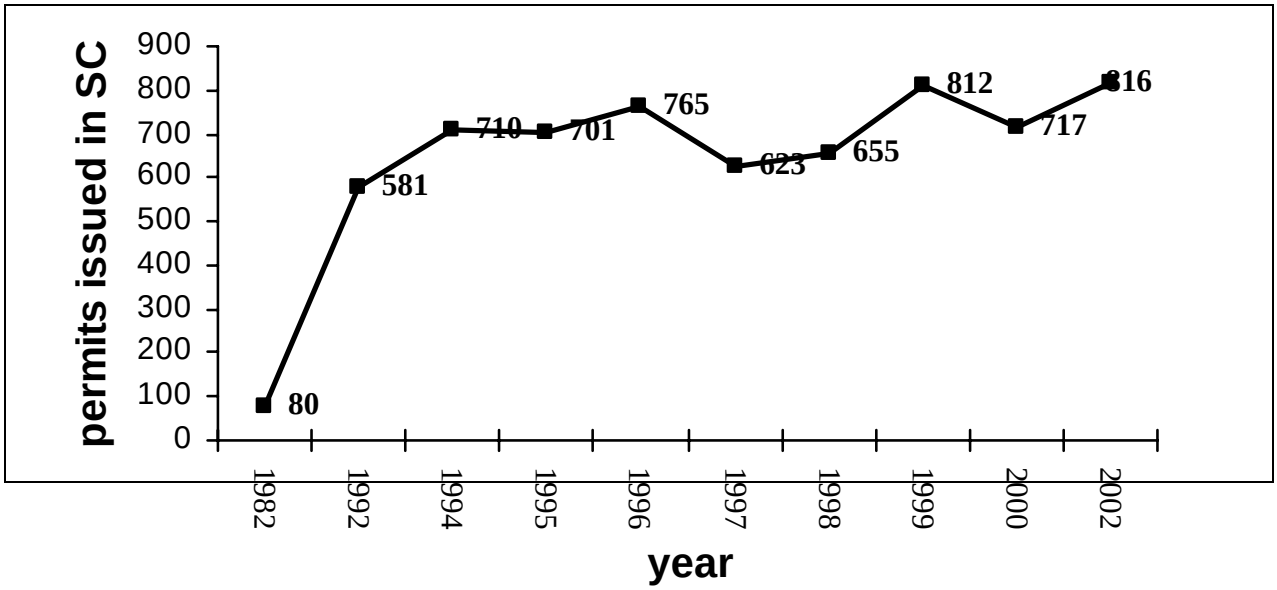

Figure 1. The graph above illustrates the increasing numbers of permits issued by South Carolina between 1982 and 2002. (Note that data are not provided for all years, thus skewing the graph somewhat but generally showing change over time.) Data courtesy South Carolina Office of Ocean and Coastal Resource Management, 2003.

Numbers of Permits Issued/Denied—

Despite the increasing number of applications received for small dock construction, few permits are being denied as seen in Table 1.

Numbers of dock permits issued and denied from various states.

State	Permits Issued	Applications Denied
Connecticut	161	Not Available
Florida	3,244	Not Available
Georgia	195	Not Available
Maine	200	2
North Carolina	1,085	3
South Carolina	808	7
Averages (where data available)	**949**	**4**

Table 1. The numbers of dock permits issued and those denied for various states. These data are from the most recent year reported; they are not necessarily all from the same year. Data taken from NOAA's Dock data base located at http://coastalmanagement.noaa.gov/czm/dockpier.html. The information in the database is provided by state programs.

Between 1987 and 2002 there were approximately 250 applications for new dock construction in Barnstable County (Cape Cod) on the Massachusetts coast; 195 were approved and 63 were initially denied. Upon appeal, only six of the denials were upheld (approximately 10% of the denied applications and a mere 2.5% of all applications received) (Macfarlane, 2003).

The small number of permit denials, of course, leads to a significant increase in the number of docks constructed. For example, Alexander and Robinson (2004) used aerial photography and field data coupled with a geographic information system to quantify the change in the number and size of docks between 1970 and 2000 on Wilmington Island, GA. They found there was a 73% increase in the number of docks during this period (174 docks in 1970 to 301 docks in 2000). Not only did the number of docks increase but they also got larger, resulting in a 90% increase in total dock area (24,048 m^2 in 1970 to 45,679 m^2 in 2000). They determined that docks shaded 0.5% of the marsh surrounding the island in 2000. Under current Georgia laws regarding subdivisions and dock licensing regulations, maximum estimates of cumulative impact suggest that 4-6% of the marsh could eventually be shaded at full build out.

In summary, the numbers shown in Figure 1 and Table 1 illustrate three points:

1. Coastal states receive a considerable number of dock permit applications each year,
2. The number of permit requests has been increasing, and
3. Only a fraction of dock permit applications are ultimately denied.

The increased number of permit applications for dock construction translates to more time spent by coastal managers in reviewing applications. These permit reviews may be controversial due to the limited scientific knowledge surrounding the direct, indirect, and cumulative impacts of these structures. In addition, often a group of private citizens concerned about the potential adverse impacts from the proposed dock or the applicants have strong opinions as to whether or not the dock should be permitted. Therefore, making clear decisions, that will withstand appeals and can serve as precedents for future permit decisions, can be challenging.

As will be discussed in the following sections of this workbook, docks have been shown to have multiple impacts on waterways and adjacent shores that include:

- Environmental impacts to wildlife and wildlife habitat, water quality, and sediments (Section 2),
- Navigational impacts on a wide range of boat types operating on the water (Section 3),
- Visual impacts or changes in waterway character (Section 4), and
- Impacts to public shoreline access (Section 5).

Complexity of the Dock Permitting Process—

Not only are dock and pier permits increasing, but the permitting process for small, residential docks can be complex. Dock construction and use are often subject to a range of jurisdictions and statutory programs. For example, the landward end of most docks is on private property. In coastal areas, docks generally extend into waters “owned” by a state, and are subject to certain federal regulations as well. Consequently, a homeowner wishing to construct a private dock may need to comply with a several regulatory programs, including:

- local zoning and/or building regulations,
- local or state environmental standards,
- state regulations regarding use of public waters for private interests, and

- federal environmental and navigation concerns.

In most instances, each of these reviews has a separate procedure (and fee), a separate set of interests to protect, and a separate set of standards to meet. This can lead to confusion for an applicant who receives a permit through one process but is denied under another. It also introduces an additional level of unpredictability for both the applicant and coastal managers.

Public Perceptions—

Considerable anecdotal information exists regarding public perceptions of whether too many docks exist and their impacts, but very limited systematic analysis of these issues has been conducted. Studies done on public perceptions from South Carolina provide some insight, but it is not clear whether the results may be accurately transferred to other locations.

In an attempt to get a better sense of public sentiment regarding docks in South Carolina, Felts *et al.* conducted opinion surveys of residents of coastal counties (2001) and of dock owners (2002). Some of the findings follow:

Public perceptions about docks from South Carolina residents who own docks and those who live in other parts of coastal counties in the state.

Questions asked	Positive Responses	
	Dock Owners	Coastal County Residents
1. Should docks be regulated?	66%	50%
2. Should length be regulated?	75%	50%
3. Should size of docks be regulated?	80%	60%
4. Should there be a fee?	33%	50%
5. Do docks harm environment?	20%	20%
6. Do associated boating uses harm environment?	40%	50%
7. Do docks adversely affect views?	10%	25%
8. Are there too many docks?	25%	30%
9. Are there places where docks should not be built?	60%	60%

Figure 2. Public perceptions regarding small docks in South Carolina. From Felts *et al.* (2001, 2002)

It is interesting to note that dock owners appear to be more favorable toward regulation than those who do not own docks. The authors offer two possible interpretations for this phenomenon: 1) Owners already have their dock and would like future construction restricted, or 2) Owners better understand the need to manage docks as they are closer to the issue.

Only a relatively small percentage of dock owners and the general public seem to believe that docks have adverse environmental impacts. However, a greater number, about half, feel that associated boating does have adverse impacts. A small number of those surveyed felt that docks had adverse visual impacts.

Only about one quarter of those surveyed felt that there are too many docks, but more than half agreed that there are places where docks should not be built.

As mentioned previously, it is not clear whether these results are transferable to other areas. They do, however, offer at least some systematic insight into public perceptions about various aspects of docks, including their construction and use.

Management Needs—

Managers have indicated that they need a variety of types of information in order to make predictable and defensible decisions regarding the impacts of small, residential docks.

- A science-based understanding of the ecological impacts from construction and use over time,
- Techniques to consider cumulative impacts during the planning and permitting process,
- A better understanding of Best Management Practices and their benefits,
- Techniques for practical management approaches at the local and state level to allow for a more comprehensive regulations on an ecosystem or geographic area *viz. a viz.* the current case by case approach, and
- Guidance on how to incorporate scientific information into statutes, ordinances, regulations and rules.

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