

### Introduction

The eastern oyster *Crassostrea virginica* is harvested both commercially and recreationally in South Carolina. In addition to their harvest value, oysters are ecologically important because they form complex living reefs that support a host of other organisms, act as biological filters, and serve as natural breakwaters protecting shorelines and marsh habitats. This report provides an update on the 2004 status of oyster resources in South Carolina. A more comprehensive status report through 2003 is available at <http://www.dnr.sc.gov/marine/publications.html> under "State of Resources".

### Commercial Fishery Status

Commercial oyster harvests come from State Shellfish Grounds (SSGs) and from privately maintained culture permit areas. During the 2003-2004 harvesting season, 112 areas including 1,860 acres of shellfish beds were designated as culture permits (Table 1). In addition to the 112 culture permit holders, 256 independent harvesters were issued more than 1,700 permits for commercial harvest on 67 SSGs encompassing 8,795 acres (Table 1).

Commercial landings for 2003-04 were 90,803 bushels of oysters, of which 18,600 bushels were harvested on SSGs (Figure 1). This is a 28% reduction in the SSG landings relative to the previous year. Landings from other areas, primarily culture permits, increased 21% from the previous season. The 2003-04 oyster landings were valued at \$1,321,738, up from \$1,064,302 the previous season (Figure 1).

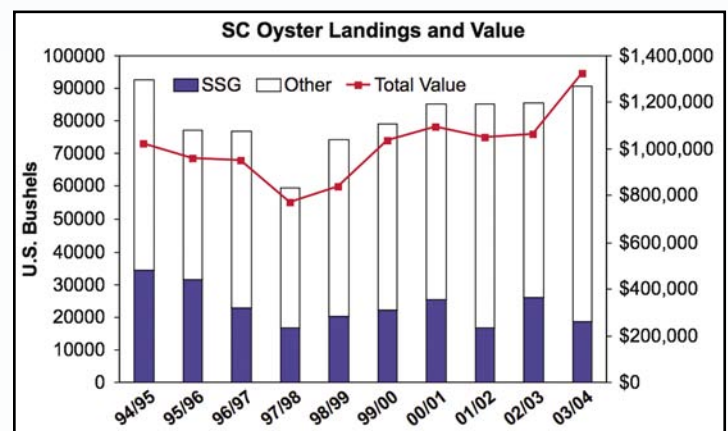


Figure 1. SC commercial oyster landings (US Bushels) on SSG and other permit categories for last ten seasons (1994/95 through 2003/04). Line represents total fishery value for each year. Recreational landings are not collected by SCDNR.

Table 1. Summary of shellfish grounds by management classification for the 2003-2004 harvesting season.

#### Summary of SC Shellfish Grounds Through June 30, 2004

Management Classification	Total # of Grounds	Total # of Permittees	Resource Acreage
Culture Permits	112	70	1,859.5
Mariculture Permits	39	23	1,247.1
SSGs (Intertidal)	54	256	221.7
SSGs (Subtidal)	13		8,573.2
Public Shellfish Grounds	20	N/A	100
Grant Areas	9	N/A	N/A
<b>TOTALS</b>	<b>247</b>		<b>2,181.2*</b>

\* Total acreage of intertidal shellfish resource only.

### Fishery Independent Sampling

#### Post-harvest assessment

At the close of the 2003-04 harvest season, SCDNR evaluated the status of SSGs. Sixteen had declined in quality, 15 had improved and five were unchanged. In order to allow the grounds to recover, 22 SSGs were closed to all commercial shellfish harvesting for the 2004-05 season. Sixteen SSGs were open for oyster harvesting, with an additional nine reserved for recreational harvesting only and 13 for mechanical harvest only (Figure 2).

#### Recruitment

Each year SCDNR assesses oyster recruitment and growth by deploying trays of shell at numerous sites spanning the coastline. Trays deployed for the 2003-04 season at 32 sites had average recruitment of 3,170 oysters/m<sup>2</sup> (300/ft<sup>2</sup>), which is similar to the previous year and to the statewide

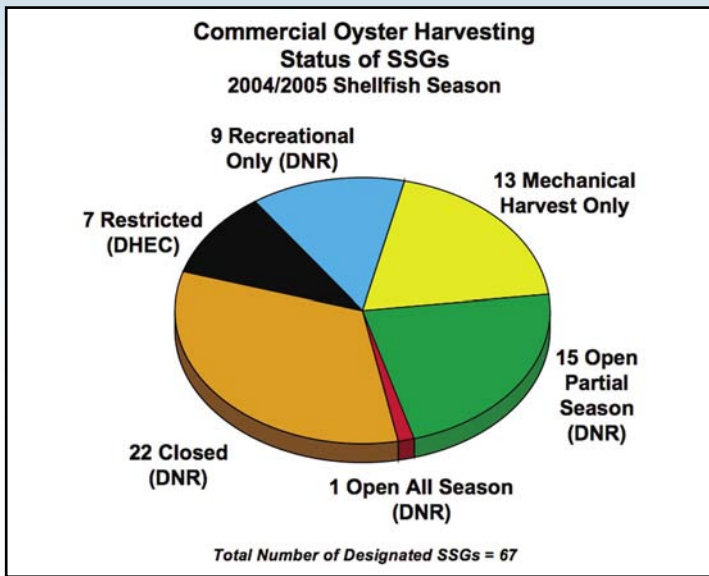


Figure 2. Commercial and recreational oyster ground harvesting status for the 67 SSGs during 2004/05 season.

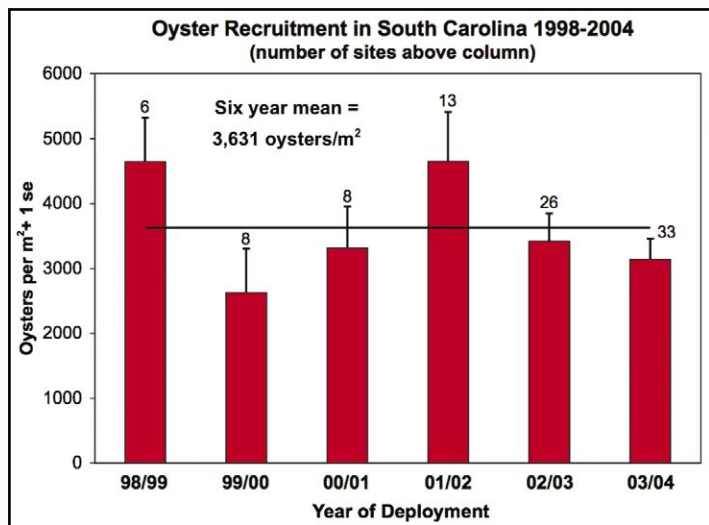


Figure 3. Mean oyster density in statewide recruitment assessments by harvesting. Numbers above columns indicate number of sites assessed that year. Horizontal line indicates overall average across all years.

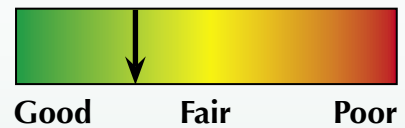
average for the last six years (Figure 3). Mean size of oysters which recruited to these shell trays after 9 – 11 months was 21 mm, which is typical for South Carolina oysters.

### Disease

During late summer and early fall of 2004, a limited assessment was conducted at six SC sites for the oyster diseases Dermo and MSX. Dermo was present at all six sites with infection levels varying throughout the state. MSX infections were not observed at the two northern sites in Georgetown County. At the four remaining sites in Charleston and Beaufort Counties, between 4% and 20% of the oysters had MSX infections. Overall, more MSX infections were observed in 2004 than in 2003, when no more than 4% of oysters were infected. Disease status was also evaluated at five small-scale restoration sites constructed in 2001 and 2003. Dermo was present in oysters at all sites, with higher disease levels in the older reefs. MSX infections were identified at four of these five sites. These oyster diseases are not harmful to humans.

### Summary

- A total of 90,803 bushels of oysters valued at \$1,321,738 were commercially landed in the 2003-2004 season, which is similar to the previous ten years' landings.
- State Shellfish Ground assessments after the 2003-04 harvest season noted 16 SSGs had declined in quality, five remained unchanged and 15 had improved since the previous assessment. For the 2004-05 season, 22 SSGs were closed to commercial harvest and one recreational-SSG was closed also. This is five more than were closed in the 2003-04 season.
- Recruitment at 32 sites evaluated between spring 2003 and spring 2004 was slightly less than the previous year, averaging about 3,100 oysters/m<sup>2</sup> (300/sq. ft.) at a mean size of 21 mm.
- Of six natural populations sampled for oyster diseases, all had Dermo and four had MSX. More MSX infections were observed in 2004 than in the previous year. Dermo was present in oysters at five restored sites, with higher disease levels in older reefs. Oysters at four of the five restored sites had MSX.



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