State of South Carolina's Coastal Resources

Oyster Update

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 in tidal creeks. This report provides an update on the 2005 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

Oysters are harvested commercially from State Shellfish Grounds (SSGs) and from privately maintained culture permit areas. During the 2004-05 harvesting season, 114 areas including 1,887 acres of shellfish beds were designated as culture permits (Table 1). In addition to 70 culture permit holders, 223 independent harvesters were issued permits for commercial shellfish harvest on 16 SSGs that were opened for commercial harvesting by DNR's Shellfish Management Program. Of the 16 opened to harvest, 15 were opened for ½ season and one for the entire season (Table 1).

Commercial landings for 2004-05 were 81,548 bushels of oysters, of which 20,217 bushels were harvested on SSGs (Figure 1). This is an 8% increase in the SSG landings relative to the previous year. Landings from other areas decreased 15% from the previous season, for a net decrease of 10%. The 2004-05 oyster landings were valued at $1,236,242, down from the previous season's $1,321,738 (Figure 1).

Table 1. Summary of shellfish grounds by management classification for 2004-05 harvesting season.

Summary of SC Shellfish Grounds
Through June 30, 2004

Management Classification	Total # of Grounds	Total # of Commercial Permittees	Resource Acreage*
Culture Permits	114	70	1,886.9
Mariculture Permits	42 (2**)	26	1,319.96
SSGs (Intertidal)	54	223	221.7
SSGs (Subtidal)	13		8,573.2
Public Shellfish Grounds	20	N/A	100
Grant Areas	12	N/A	N/A
TOTALS	255		2,208.6*

** Intertidal oyster resource acerage (includes culture permits, intertidal SSGs and PSGs).*
*** Pending oyster mariculture permits requiring SCDHEC-OCRM approval.*

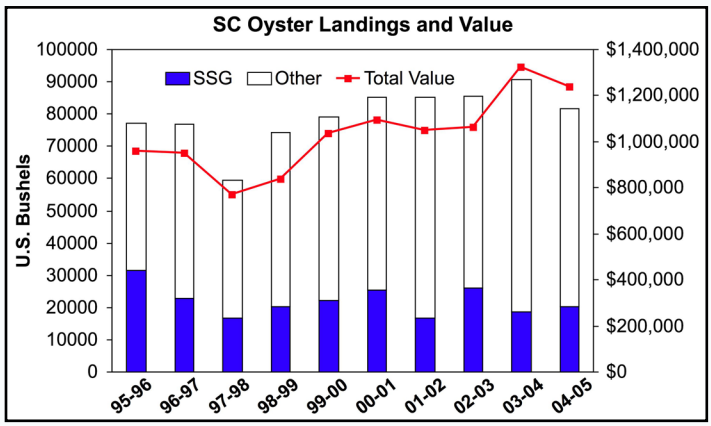


Figure 1. SC commercial oyster landings (US Bushels) on SSG and other permit categories for last ten seasons (1994-95 through 2004-05). Line represents total fishery value for each year. Recreational landings are not collected by SCDNR.

Fishery Independent Sampling

Post-harvest assessment

At the close of the 2004-05 harvest season, SCDNR evaluated the status of SSGs for the 2005-06 harvest season. Assessments for oysters indicated that of the twenty two SSGs assessed, eleven had declined in quality, seven improved and four were unchanged. In order to allow the grounds to recover, DNR Shellfish Management closed 16 SSGs to commercial oyster harvesting for the 2005-06 season. For the 2005-06 season, DNR's Shellfish Management Program opened 24 SSGs for oyster harvesting (21 for one-half season and 3 for all season), with an additional nine reserved for recreational harvesting only (Figure 2).

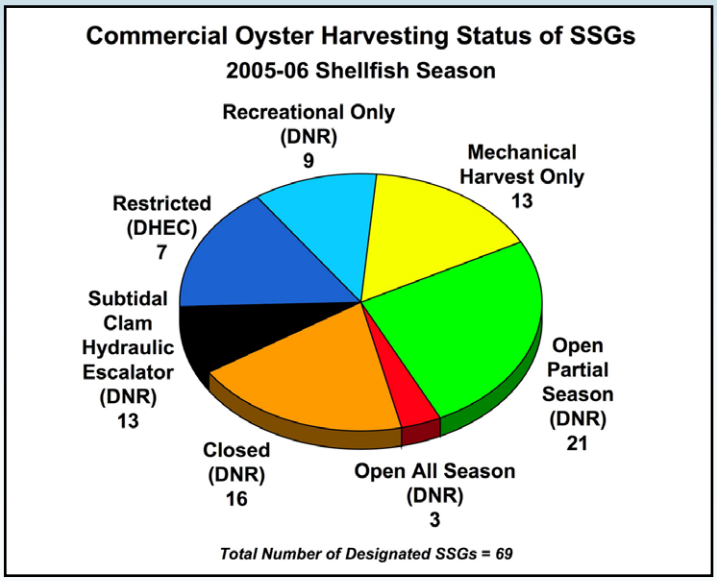


Figure 2. Commercial and recreational oyster ground harvesting status for the 69 SSGs during 2005-06 season.

Recruitment

Each year SCDNR assesses oyster recruitment and growth by deploying trays of shells at numerous sites spanning the coastline. Trays deployed for the 2004-05 season at 38 sites had average recruitment of 6,650 oysters/m^2 (630/ft^2), which is higher than the statewide average for the last six years (Figure 3). Mean size of oysters which recruited to these shell trays was 20 mm after 9 – 11 months, which is typical for South Carolina oysters.

Disease

During late summer and early fall of 2005, twenty-seven sites were sampled for the oyster diseases Dermo and MSX as part of our long-term annual assessment and SCECAP project (link to http://www.dnr.sc.gov/marine/scecap/index.htm). Dermo was present at all sites with between 20 and 100% of the oysters sampled having infections. Infection intensities were typical for SC with mean intensity levels ranging from a low of 0.3 to a high of 3.8 on a scale of 0-6. MSX infections were observed in only 10% of the oysters sampled at two sites (a total of two individuals). Overall, fewer MSX infections were observed in 2005 than in 2004, when as many as 20% of oysters sampled had infections. Neither Dermo nor MSX are harmful to humans.

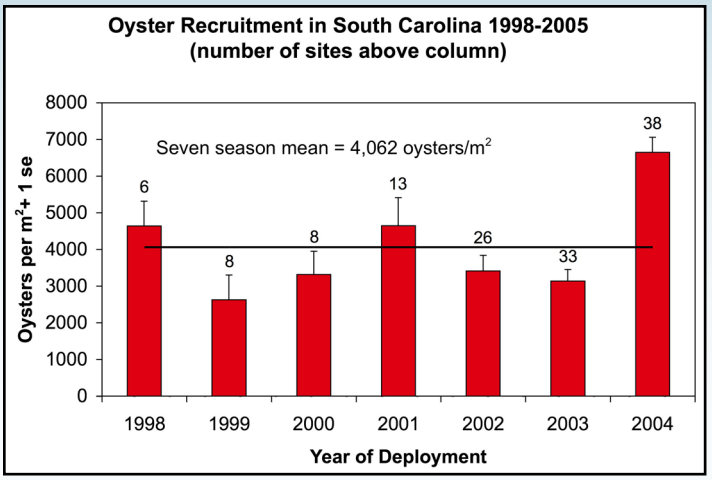
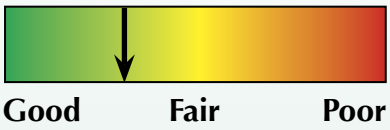


Figure 3. Mean oyster density in statewide recruitment assessments by harvesting. Numbers above columns indicate number of sites assessed that year. Horizontal line indicates overall average across all years.

Summary

- A total of 81,548 bushels of oysters valued at $1,236,242 were commercially landed in the 2004-05 season, a slight decrease from the previous year but within expectations based on ten-year trends.
- Of the twenty two State Shellfish Grounds assessed for oysters after the 2004-05 harvest season, eleven SSGs had declined in quality, four remained unchanged and seven had improved since the previous assessment. For the 2005-06 season, DNR's Shellfish Management Program closed 16 SSGs to commercial oyster harvest. This is six fewer than were closed in the 2004-05 season.
- Recruitment at 38 sites evaluated between spring 2004 and spring 2005 was the highest observed in seven years of monitoring, averaging 6,650 oysters/m^2 (630/ft^2), more than twice the previous year's recruitment.
- Of 27 natural populations sampled for oyster diseases, all had Dermo but only two had MSX. The Dermo levels were typical for SC, while the MSX infections were down from 2004.



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