

Chesapeake Bay Oyster Population Estimation

Monitoring Program: BASINS

State: MARYLAND

Year: 1999

Basins in Maryland

For convenience and ease of data presentation, the Chesapeake Bay tributaries in Maryland waters have been grouped into "Basins". The Basins used for Maryland in this project include: the Chester River, Eastern Bay, Choptank River, Little Choptank River, Tangier Sound, the Potomac River, Patuxent River, and the Maryland portion of the Chesapeake Bay mainstem.

Data Types and Notes

A. Fishery Independent data: These data are derived from the annual dredge survey conducted by the Maryland Department of Natural Resources. An oyster dredge, 30 inches wide and 18 inches tall, is deployed from the R/V Miss Kay. The dredge weighs approximately 82 pounds, has 3.5 inch long tines, and lacks a "diver" flap on the base of the dredge. Two tows are made with the dredge, averaging about 230 feet in length. A half bushel of oysters is retained from each the two tows, and then measured to provide length-frequency data as well as oysters for disease diagnostics.

B. Fishery Dependent data

B1. Public/Commercial effort - The total number of bushels of oysters landed within the state of Maryland during 1999 as reported by commercial fishermen is presented. These data were obtained from the Maryland Department of Natural Resources Fisheries Statistics Division. One bushel of oysters was assumed to contain 350, 3.5 inch oysters. A market oyster is 3 inches or 76 mm from its beak to its hinge (shell length).

B2. Private effort - Oysters harvested from leases are subject to harvest taxes like that of the public fishery. One bushel of oysters harvested was assumed to contain 350 market oysters.

C. Restoration Efforts

C1. Reefs - unexploited sanctuaries - These data are from surveys being conducted on constructed oyster reefs and within oyster sanctuaries by personnel from the University of Maryland.

C2. Replenishment - exploited shell plants and three dimensional structures - These data are from the annual replenishment reports produced by the Maryland Department of Natural Resources Shellfish Repletion program.

D. Oyster Aquaculture

D1. Oyster gardening - The amount of oysters produced by oyster gardeners in Maryland is small relative to those in Virginia. As such, this section has not been completed and/or included.

This summary sheet was assembled at the Sarbanes Cooperative Oxford Laboratory by Ms. Jessica Coakley and Ms. Kelly Greenhawk using data provided by the agencies and institutions listed above.

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	Chester	Eastern Bay	Choptank	Little Choptank	Tangier	Potomac	Patuxent	Main Stem	Total number of oysters	Total oyster biomass(g)
A. Fishery Independent survey										
Average number of oysters/m2	4.7	7.1	10.1	9.3	3.0	3.9	5.4	3.5		
Average oyster biomass/m2	5.3	8.0	11.4	10.5	3.4	4.4	6.1	4.0		
Number of reefs surveyed	2	6	8	2	10	7	1	7		
Area surveyed	974.6	2471.9	4884.4	857.0	7753.5	1726.4	172.3	11972	5.21E+08	5.89E+08
B. Fishery Dependent survey										
B1. Public/Commercial effort										
Total landings (bushels x 1000)	21.0	32.6	133.1	84.1	38.0	32.7	5.6	78.0	1.28E+08	1.44E+08
B2. Private effort										
Number of oysters harvested/m2										
Oyster biomass harvested/m2										
Acres surveyed									2.66E+06	3.00E+06
C. Restoration efforts										
C1. Reefs/unexploited sanctuaries										
Average number of oysters/m2	No Data Available									
Average oyster biomass/m2										
Number of reefs surveyed										
Acres surveyed										
C2. Replenishment/exploited ground										
Average number of oysters/m2										
Average oyster biomass/m2										
Number of reefs surveyed										
Acres surveyed									8.28E+07	n/c
Grand total number of oysters									6.51E+08	
Grand total oyster biomass										7.36E+08

“n/c” indicates data that were not calculated.