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# Oyster Spatfall on Shellstrings in Virginia Rivers: 1977 Annual Summary

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Virginia Institute of Marine Science Gloucester Point, Virginia 23062

1977 Annual Summary

# OYSTER SPATFALL ON SHELLSTRINGS IN VIRGINIA RIVERS

BY
Dexter Haven and Paul Kendall

The Virginia Institute of Marine Science (VIMS) conducts weekly surveys from June through early October to obtain oyster spatfall information. Spat counts are made from oyster shells strung on wire and suspended from stakes on public and private beds. The number of spat on shells are counted each week of the spawning season to determine the potential of a particular area for receiving a strike and to predict the most likely period the strikes will occur. Shells planted just before the period of maximum set have the best chance of getting a good strike.

A moderate or heavy strike on shellstrings usually indicates a significant strike on exposed cultch. However, a good strike on shellstrings in some locations may not always be accompanied by good spatfall on shells on the bottom. Bottom shells are sometimes so fouled by other marine life that no room is left for small spat to attach. Even with a reasonable spatfall, survival on the bottom in saltier waters may be extremely low, due to predators such as drills and blue crabs which eat the small spat.

Usually a light set of spat on shellstrings indicates a poor set on bottom cultch. During certain exceptional years, for reasons only partially understood, a light set on our shellstrings result in an exceptional set on the natural bottom.

The average number of spat which set in one week on the smooth side of 10 shells is tabulated in this report; it is reported as spat-per-shell-per-week. Weekly set is

arbitrarily rated as follows: fair, 0.1 to 1.0; moderate, 1.1 to 10; heavy, 11 to 100. As an index of total seasonal spatfall, the weekly sets are summed in this report for each station. In evaluating setting levels, it should be recognized that in certain rivers, such as the Rappahannock and Potomac, the set is typically zero in many sections and only fair in others. Other systems, including the lower James and Piankatank rivers, Mobjack Bay and Seaside of the Eastern Shore, typically receive a moderate or heavy set and as a result, often produce quantities of seed oysters or market oysters.

If shells are to be planted in any region, it is important to plant a week or two prior to peak setting. If shells are planted much earlier, they may become so fouled with marine organisms that larvae will not set. For further information on setting seasons and time to plant shells, contact Dexter Haven, Head, Department of Applied Biology, VIMS.

Included in this report are numbers of oyster spat setting on cultch on the bottom at selected locations in the 1977 season. The data are expressed as numbers of spat per bushel of bottom material collected by an oyster dredge during the fall and winter of 1977-78.

## SUMMARY OF SETTING IN THE RIVER SYSTEMS

James River - The public rocks in the James River annually supply over 77% of the seed planted commercially in Virginia. However, rocks in the lower river are now receiving only about 10% as much set as they did prior to 1960. The decline which began after 1960 is thought to be associated with MSX which has reduced brood stocks in the lower river. Other factors such as chlorine associated with the discharge of sewage treatment plants or some other environmental aspect may be involved.

Setting began during mid-July in the lower James, from Miles Watch House to Hampton Flats. It peaked from mid to late August, but in most instances, the maximum weekly set was less than 1.0 spat per week. With only two exceptions in the lower river, the 1977 set totaled lower than that recorded during any of the preceding three years.

In the mid and upper seed area, the pattern of setting differed. It began later, during early August. It peaked during mid to late August with the highest levels ranging from 1.5 to 6.0 spat per shell. Setting was over by early October. With two exceptions, the total seasonal

set in this section of the river was higher in 1977 than during the preceding three years. However, the 1977 levels are still far below those recorded prior to 1960.

Bottom materials dredged in the fall of 1977, after setting had ceased, showed an increase in number of spat per bushel in an upriver direction. Counts per bushel were generally low in the lower river as follows: Nansemond Ridge, 66; Brown Shoal, 34; Naseway Shoal, 124; White Shoal, 314; Gun Rock, 48; and Thomas Rock, 50. In the mid and upper seed area, counts were higher: Wreck Shoal, 166; Point of Shoal, 278; Horsehead, 594; and Deep Water Shoal, 1502. The levels recorded for the lower river were about equal to those recorded for the preceding 3 to 5 years. In contrast, numbers recorded in 1977 for the mid and upper seed areas were higher. At Deep Water Shoal the 1977 set was higher than in any year recorded since 1953.

Poquoson River - At the two stations, setting began the first week in July and peaked at fair to moderate weekly levels in mid-August.

York River - Seven monitoring stations received zero to moderate weekly sets.

Spatfall began the first week in July at VIMS pier and a week or two later at upriver locations. The period of peak set occurred from early to late September.

At Gloucester Point the total spatfall was the highest in six years; upriver, at Claybank, the 1977 set was the best in the last four years.

Bottom cultch collected in the fall of 1977 showed the following numbers of spat per bushel: Green Rock, 52; Page Rock, 8; Aberdeen Rock, 50; and Bell Rock, 176. These 1977 counts were higher than 1976 at every location; the increase was greater upriver.

Mobjack Bay - In Mobjack Bay moderate setting occurred for several weeks at Tow Stake, but for most of the season it was only fair. Setting began with 8.8 spat per shell during the first week in July and continued at lower levels through September. The total seasonal set was higher than in the previous year, but not as high as in 1975.

Data from a station off Brown's Bay are present for only the first half of the season; they showed the same changes from the previous year as were noted at Tow Stake, with a moderate set indicated in late July.

Ware River - Data available for one station here show set starting in mid-July and still in progress in September when monitoring stopped. Mid-season data are missing.

In 1977 setting started three weeks later than in 1976. The magnitude of the 1977 strike was the same as for the first three weeks of 1976.

North River - Two of the three stations received moderate sets. Setting varied, with peak weekly sets of 1.4 at Cedar Point, 0.4 in Blackwater Creek and 2.7 at the head. Spatfall began in the first half of July and was still in progress when monitoring was ended in September. The time of peak set varied at the three stations.

The total 1977 set was higher than observed in 1976 at two of the three stations. It was much lower at all stations in 1977 than it was in 1974 or 1975.

East River - Weekly setting values ranged from zero to heavy. Setting began at both stations during the last half of July and peaked at the Gulf Oil Dock at 12.0 spat the third week of July. It is possible that peak setting occurred at Station 6 during the same period.

Setting levels in 1977 were about equal to or higher than levels recorded for 1976. The high levels at Gulf Oil Dock continue the trend for high setting which has been in progress since at least 1970.

New Point Comfort Area - Three systems were studied in this area: Horn Harbor, Dyer Creek and Winter Harbor. In Horn Harbor and Dyer Creek setting was only fair with many periods showing zero levels. No period could be defined as the peak period. It is noted that fair setting levels have been characteristic of these two systems since 1974.

In Winter Harbor at the public landing, moderate levels of set began in early August and continued through September; this station has received above average sets since 1973. At Crowe's, no set was seen.

Milford Haven - Two locations were studied in this area: Point Breeze and Stutts Creek. At both locations the weekly set reached only fair levels with many periods receiving zero or 0.1 spat per week. Most of the set occurred during August and September.

Piankatank River - Levels of set were recorded at nine stations ranging from Ginny Point upriver to Three Branches off Gwynns Island. Setting began in this system the second week in July. At most of the stations, the peak set occurred in early to mid-August. Levels of peak set ranged from moderate to heavy with the highest levels occurring downriver at Burton Point where 64 spat per shell were recorded.

Examination of bottom samples taken in the fall of 1977 indicated a good strike on the bottom. The following counts were obtained on bushel samples of bottom substrate: Burton Point, 322; Island Bar, 422; Palace Bar, 408; and Ginny Point, 538. These numbers are well above average for the previous six years at all four stations.

Rappahannock River - Ten stations were studied in the mid and lower river from Punch Bowl to Mosquito Point. At all but the lowest station setting began late in the season in early to mid-August with peaks occurring from mid to late August. The weekly levels of set ranged from zero to heavy with most stations showing only fair levels. The highest set of the river was recorded at Corrotoman Point where 18.9 spat were recorded in one week.

In general, levels of total seasonal set in 1977 were higher than those recorded in 1976.

Counts of spat surviving on bushel samples of bottom cultch in the fall of 1977 were: Drumming Ground, 270; Parott's Rock, 260; Hogg House, 40; Smokey Point, 12; Morattico Bar, 0; and Bowler's Rock, 0. These numbers clearly show a gradient which decreases with distance upriver. The numbers of spat surviving on bottom cultch at two downriver stations showed much improvement over previous years, whereas numbers at two upper stations showed a decline.

Great Wicomico River - Seven stations were studied in this system in 1977. Sporadic setting began in late July and occasionally reached fair levels at most stations, but many weeks showed zero levels over long periods. Because

of the erratic setting pattern, it is not possible to define peak setting periods. Setting in general was higher in 1977 than in 1976 or 1975.

Examination of bottom material dredged in the fall of 1977 resulted in the following counts of spat per bushel: Dameron Marsh, 46; Whaley's West, 52; Crane's Creek, 34; Fleeton, 82; and Haynie Point, 210. This was a slight improvement over recent years.

Dividing Creek - Fair setting occurred here in two weeks with all other weeks showing zero set to give a seasonal spatfall of 0.2 spat per shell, which was less than 1976 or 1975.

Potomac River (Virginia Tributaries) - Eight out of ten locations monitored in 1977 received set. Seasonal spatfall varied from fair to moderate and ranged from 2.1 at Cornfield Harbor to 0.1 at Gum Bar, Great Neck and Coan. With one exception, the setting occurred between mid-August and mid-September.

The 1977 set was better than the 1976 set at eight of the ten locations; at the other two it was the same - zero. The 1977 set was better than the 1975 set at six stations. On our shellstrings at Ragged Point and at Kingcopsico in 1977 we saw the only spatfall recorded in eight years.

Eastern Shore, Bayside - Setting here was fair to moderate; it began in July and was still occurring in September when monitoring ceased. Cherrystone Inlet had the largest spatfall noted; one weekly spatfall there was heavy, and, over the whole season, setting was 34.9 spat per shell.

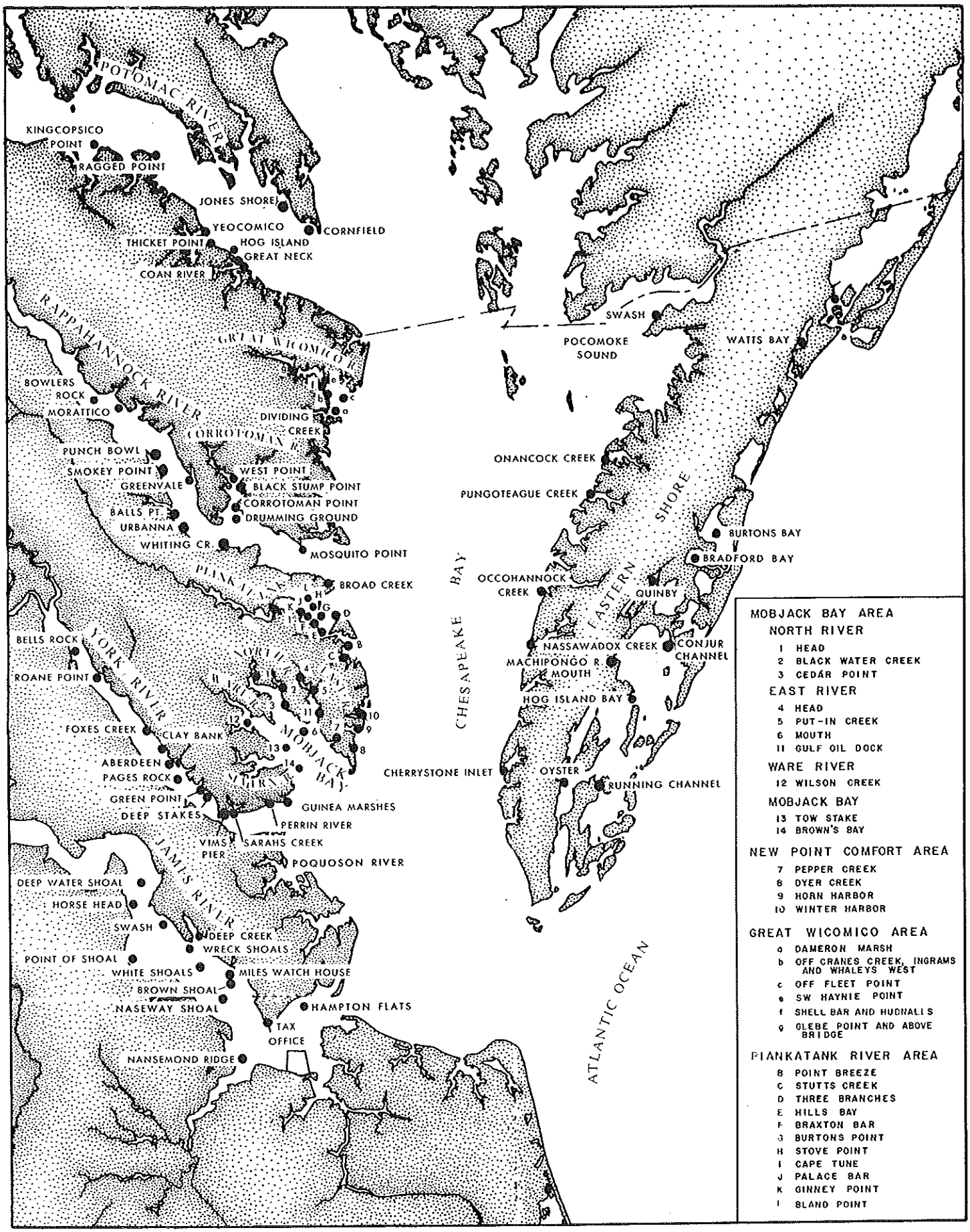
In comparison with past years, some places had more set while others had less; the picture is varied.

Eastern Shore, Seaside - Heavy setting occurred during the season at every location monitored here. Total numbers for the season ranged from 102.4 spat per shell at Quinby Bridge in the Machipongo River to 12.9 on Issac Tump in Hog Island Bay. Peak weekly setting ranged from moderate to heavy.

At three locations setting was an improvement over 1976, and, in most places, it was above the average for the last four years.

Inspectors and Police Boat Captains of the Virginia Marine Resources Commission aided in this survey by changing shellstrings in many of the estuaries. Their assistance is gratefully acknowledged.

# SHELLSTRING SURVEY STATIONS




MOBJACK BAY AREA

NORTH RIVER
- 1 HEAD
- 2 BLACK WATER CREEK
- 3 CEDAR POINT

EAST RIVER
- 4 HEAD
- 5 PUT-IN CREEK
- 6 MOUTH
- 11 GULF OIL DOCK

WARE RIVER
- 12 WILSON CREEK

MOBJACK BAY
- 13 TOW STAKE
- 14 BROWN'S BAY

NEW POINT COMFORT AREA
- 7 PEPPER CREEK
- 8 DYER CREEK
- 9 HORN HARBOR
- 10 WINTER HARBOR

GREAT WICOMICO AREA
- a DAMERON MARSH
- b OFF CRANES CREEK, INGRAMS AND WHALEYS WEST
- c OFF FLEET POINT
- e SW HAYNIE POINT
- f SHELL BAR AND HUDNALLS
- g GLEBE POINT AND ABOVE BRIDGE

PIANKATANK RIVER AREA
- B POINT BREEZE
- C STUTTS CREEK
- D THREE BRANCHES
- E HILLS BAY
- F BRAXTON BAR
- G BURTONS POINT
- H STOVE POINT
- I CAPE TUNE
- J PALACE BAR
- K GINNEY POINT
- L BLAND POINT

VIRGINIA INSTITUTE OF MARINE SCIENCE
Spatfall on Shellstrings*
Annual Summary
1974 - 1977

JAMES RIVER

| 1977 Dates Exposed** | Hampton Flats 1974 | 1975 | 1976 | 1977 | Newport News Tax Office 1974 | 1975 | 1976 | 1977 | Nansemond Ridge 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 17-27 | -- | 0.0 | -- | -- | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 | -- | 0.0 |
| Jun 27-Jul 5 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Jul 5-12 | 0.2 | 0.1 | -- | 1.0 | -- | 0.7 | -- | 0.0 | -- | 0.0 | -- | -- |
| Jul 12-19 | 3.2 | | 0.2 | | 1.2 | | 0.4 | -- | 0.2 | 0.1 | -- | 0.3 |
| Jul 19-26 | 0.3 | 0.2 | 0.3 | | 0.4 | 0.1 | -- | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 2 | 0.0 | 0.1 | 0.3 | 0.2 | -- | 0.5 | 0.2 | 0.3 | 0.3 | 0.1 | 0.0 | -- |
| Aug 2- 8 | 0.3 | -- | 0.1 | 0.6 | 0.5 | 0.4 | 0.2 | 0.7 | 0.4 | 0.0 | 0.0 | 0.1 |
| Aug 8-16 | -- | -- | 0.3 | 0.8 | 2.9 | 0.4 | 0.4 | -- | 0.7 | 0.2 | -- | 0.0 |
| Aug 16-23 | -- | 1.4 | | 0.7 | 0.6 | 1.9 | 1.0 | 0.6 | 1.2 | 1.2 | -- | 0.1 |
| Aug 23-30 | 0.9 | 2.0 | 1.7 | 0.5 | 4.4 | 4.6 | 0.0 | 0.4 | 0.8 | 0.6 | -- | 1.6 |
| Aug 30-Sep 6 | | -- | | 2.5 | | | 1.8 | 1.3 | | | 0.4 | |
| Sep 6-12 | 6.2 | -- | 1.1 | 0.2 | 4.1 | -- | 2.5 | | | | 0.4 | 0.2 |
| Sep 12-19 | -- | 5.2 | 1.3 | 2.7 | 9.6 | -- | 9.5 | 0.5 | | | -- | 0.1 |
| Sep 19-26 | 0.7 | -- | 4.4 | | -- | 0.6 | 0.1 | 1.0 | -- | 2.2 | 1.1 | 0.1 |
| Sep 26-Oct 5 | 0.1 | 1.4 | | | 1.6 | | 0.8 | 1.0 | -- | | -- | -- |
| TOTALS | 12.0 | 10.4 | 9.7 | 9.2 | 25.4 | 9.2 | 16.9 | 6.2 | 3.8 | 4.4 | 1.9 | 2.5 |

| 1977 Dates Exposed** | Brown Shoal 1974 | 1975 | 1976 | 1977 | Miles Watch House 1974 | 1975 | 1976 | 1977 | White Shoal 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 17-27 | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | -- | 0.0 | -- |
| Jun 27-Jul 5 | 0.2 | 0.0 | 0.0 | | 0.1 | 0.0 | 0.0 | | | -- | 0.0 | 0.0 |
| Jul 5-12 | 0.2 | 0.2 | -- | | 0.2 | 0.0 | -- | -- | | -- | 0.0 | -- |
| Jul 12-19 | -- | | 0.9 | 0.0 | 0.6 | | 0.0 | -- | | -- | 0.0 | 0.1 |
| Jul 19-26 | 0.2 | 2.8 | 0.3 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | | -- | 0.1 | -- |
| Jul 26-Aug 2 | -- | 0.4 | 0.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | | -- | 0.0 | 0.0 |
| Aug 2- 8 | 2.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | | -- | 0.0 | 0.1 |
| Aug 8-16 | 1.0 | 2.0 | 0.0 | 0.5 | -- | 0.0 | 0.0 | 0.5 | | 0.6 | 0.1 | 3.0 |
| Aug 16-23 | 0.9 | 1.6 | 0.8 | 0.7 | 0.7 | 0.2 | 0.2 | 0.5 | | 2.7 | 1.3 | 0.6 |
| Aug 23-30 | 6.4 | 5.6 | 0.5 | 0.3 | -- | 0.8 | 0.1 | 0.5 | | 2.0 | 0.2 | 6.0 |
| Aug 30-Sep 6 | | 1.8 | 0.8 | 0.6 | -- | 1.6 | 0.1 | 0.2 | | 5.6 | 0.5 | 4.1 |
| Sep 6-12 | 4.3 | 3.6 | 3.9 | 0.5 | 0.4 | 0.8 | 0.1 | 0.2 | | 3.4 | 1.7 | 0.4 |
| Sep 12-19 | 1.4 | 3.4 | 6.7 | 0.4 | 0.2 | 1.8 | 0.4 | | | 2.4 | 2.6 | 0.0 |
| Sep 19-26 | -- | 2.4 | 3.2 | 0.5 | 0.6 | 0.2 | 0.6 | -- | | 1.0 | 2.3 | 0.7 |
| Sep 26-Oct 5 | 0.0 | 3.6 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.4 | 0.0 | 0.8 |
| TOTALS | 16.6 | 27.4 | 17.6 | 3.7 | 3.3 | 5.5 | 1.6 | 1.9 | | 18.1 | 8.8 | 15.8 |

Not Sampled

| 1977 Dates Exposed** | Wreck Shoal 1974 | 1975 | 1976 | 1977 | Warwick River Mouth 1974 | 1975 | 1976 | 1977 | Point of Shoal 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 17-27 | 0.0 | 0.0 | 0.0 | 0.0 | -- | | -- | 0.0 | 0.0 | -- | -- | -- |
| Jun 27- Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | -- | | -- | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Jul 5-12 | 0.3 | 0.0 | -- | 0.0 | -- | | -- | 0.0 | 1.3 | 0.0 | -- | 0.0 |
| Jul 12-19 | 0.6 | | 0.0 | 0.0 | -- | | -- | -- | 0.1 | | 0.0 | 0.0 |
| Jul 19-26 | 0.0 | 1.3 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 2 | 0.1 | 0.5 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.1 |
| Aug 2- 8 | 0.6 | 0.1 | 0.0 | 0.0 | 0.3 | | 0.2 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 |
| Aug 8-16 | 0.3 | 0.0 | 0.1 | 0.4 | 0.5 | | 0.1 | 2.2 | 0.5 | | 0.2 | 5.7 |
| Aug 16-23 | 1.1 | 0.0 | 0.2 | 0.7 | 0.4 | | 0.3 | 0.3 | 1.5 | 1.3 | 0.0 | 2.6 |
| Aug 23-30 | 0.2 | 1.6 | 0.0 | 1.5 | 0.0 | | 0.1 | 0.2 | 0.6 | 1.0 | 0.1 | 3.5 |
| Aug 30-Sep 6 | | 2.2 | -- | 1.1 | | | 0.0 | 0.2 | | 0.6 | 0.0 | 1.6 |
| Sep 6-12 | 0.4 | 0.8 | 0.0 | 0.1 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 |
| Sep 12-19 | 0.2 | 4.0 | 0.7 | 0.1 | 0.0 | | 0.1 | 0.0 | 0.0 | 1.0 | 0.0 | 0.1 |
| Sep 19-26 | 0.3 | 1.0 | 1.1 | 0.0 | 1.0 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 |
| Sep 26-Oct 5 | 0.0 | 0.6 | 0.1 | 0.2 | 0.0 | | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 |
| Oct 5-27 | -- | -- | -- | 0.0 | -- | | -- | 0.1 | -- | -- | -- | -- |
| TOTALS | 4.1 | 12.1 | 2.2 | 4.1 | 2.2 | | 1.1 | 3.0 | 4.7 | 4.3 | 0.5 | 14.9 |

Not Sampled

* Shows spat per shell (smooth side only).
** Dates in other years were approximately the same.
● Not sampled in previous years.

General Guide to Setting:

0.1 to 1.0 spat per shell = fair
2 to 10 spat per shell = moderate
11 to 100 spat per shell = heavy

| 1977 Dates Exposed** | Mulberry Swash | | | | Horsehead Shoal | | | | Deepwater Shoal | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 17-27 | -- | 0.0 | -- | -- | 0.0 | 0.0 | -- | -- | 0.0 | 0.0 | -- | -- |
| Jun 27-Jul 5 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 5-12 | 0.4 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| Jul 12-19 | 0.0 | | 0.0 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 |
| Jul 19-26 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- |
| Jul 26-Aug 2 | 0.4 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | -- | 0.0 | 0.3 | 0.0 | -- | 0.0 |
| Aug 2- 8 | 0.6 | 0.0 | 0.0 | 0.2 | 0.3 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Aug 8-16 | 0.8 | 0.0 | 0.0 | 4.0 | 0.5 | | 0.3 | 1.1 | 0.5 | | 0.0 | 0.6 |
| Aug 16-23 | 3.2 | 0.0 | 0.1 | 0.0 | 0.6 | 0.6 | 0.1 | 0.5 | 0.3 | 0.5 | 0.0 | 0.4 |
| Aug 23-30 | 0.2 | 0.2 | 0.0 | 1.7 | 0.0 | 0.8 | 0.0 | 2.3 | 0.0 | 0.6 | 0.0 | 1.5 |
| Aug 30-Sep 6 | | 0.4 | 0.0 | 2.4 | | 0.2 | 0.0 | 0.4 | | 0.0 | 0.0 | 0.4 |
| Sep 6-12 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | -- | 0.1 | 0.2 |
| Sep 12-19 | 0.0 | 0.8 | 0.2 | 0.0 | 0.0 | 0.4 | 0.7 | 0.1 | 0.0 | 0.0 | 0.2 | 0.3 |
| Sep 19-26 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 |
| Sep 26-Oct 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 |
| TOTALS | 5.9 | 1.5 | 0.7 | 8.5 | 3.2 | 2.3 | 1.5 | 4.6 | 2.2 | 1.1 | 0.8 | 3.5 |

POQUOSON RIVER

| 1977 Dates Exposed** | Lloyds Bay ● 1977 | Tom Banks Cove ● 1977 |
|---|---|---|
| Jun 12-19 | 0.0 | 0.0 |
| Jun 19-28 | 0.0 | 0.0 |
| Jun 28-Jul 5 | -- | 0.0 |
| Jul 5- 9 | 0.0 | 0.1 |
| Jul 9-19 | 0.1 | 0.3 |
| Jul 19-25 | 0.7 | 0.3 |
| Jul 25-30 | 0.1 | 0.2 |
| Jul 30-Aug 6 | 0.0 | 0.0 |
| Aug 6-13 | 0.0 | 0.0 |
| Aug 13-22 | 0.9 | 3.4 |
| Aug 22-Sep 2 | 0.6 | 0.9 |
| Sep 2-10 | 0.2 | 0.9 |
| Sep 10-17 | 0.1 | 0.3 |
| Sep 17-Oct 1 | 0.1 | 0.8 |
| TOTALS | 2.8 | 7.2 |

YORK RIVER

| 1977 Dates Exposed** | VIMS Ferry Pier | | | |
|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | -- | 0.0 | 0.0 | -- |
| Jun 20-27 | -- | 0.0 | | 0.0 |
| Jun 27-Jul 5 | -- | 0.1 | 0.0 | 1.0 |
| Jul 5-12 | | | 0.2 | |
| Jul 12-20 | 0.7 | 0.0 | -- | 1.2 |
| Jul 20-28 | 0.2 | 0.9 | 0.7 | 0.0 |
| Jul 28-Aug 4 | 0.0 | 0.1 | -- | 1.0 |
| Aug 4-11 | -- | 0.0 | 0.0 | 0.0 |
| Aug 11-18 | 0.0 | 0.0 | 0.2 | 0.4 |
| Aug 18-26 | | -- | -- | |
| Aug 26-31 | 0.3 | -- | 0.1 | 0.3 |
| Aug 31-Sep 8 | 0.8 | 3.0 | 0.0 | 0.9 |
| Sep 8-13 | 8.0 | 0.0 | 0.3 | 6.7 |
| Sep 13-20 | 2.2 | 3.6 | 0.4 | 6.6 |
| Sep 20-27 | 0.4 | 5.0 | 0.1 | 3.8 |
| Sep 27-Oct 4 | 2.0 | 0.0 | 0.1 | 1.0 |
| Oct 4-11 | -- | -- | 0.0 | -- |
| TOTAL | 14.6 | 12.7 | 2.1 | 22.9 |

| 1977 Dates Exposed** | Deep Stakes | | | | Green Rock | | | | Pages Rock | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | 0.0 | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | | 0.0 |
| Jun 20-27 | 0.0 | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | | 0.0 |
| Jun 27-Jul 5 | 0.0 | | | | 0.0 | | | | 0.0 | | | |
| Jul 5-12 | 0.0 | | | 0.0 | 0.0 | | | -- | 0.0 | | | 0.0 |
| Jul 12-20 | 0.0 | | | 0.2 | -- | | | 0.1 | 0.0 | | | 0.1 |
| Jul 20-28 | 0.0 | | | 0.0 | 0.0 | | | 0.4 | 0.0 | | | 0.1 |
| Jul 28-Aug 4 | 0.0 | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | | 0.1 |
| Aug 4-11 | 0.1 | Not Sampled | Not Sampled | | 0.0 | Not Sampled | Not Sampled | | 0.0 | Not Sampled | Not Sampled | |
| Aug 11-18 | 0.0 | | | 0.8 | 0.0 | | | 0.4 | 0.0 | | | 0.1 |
| Aug 18-26 | 0.4 | | | 0.5 | 0.4 | | | 0.5 | 0.2 | | | 0.5 |
| Aug 26-31 | | | | 0.0 | | | | 0.4 | | | | 0.3 |
| Aug 31-Sep 8 | 0.6 | | | | 0.0 | | | | 0.4 | | | |
| Sep 8-13 | | | | 1.2 | | | | 1.1 | | | | 1.0 |
| Sep 13-20 | 0.0 | | | | 0.2 | | | | 0.2 | | | |
| Sep 20-27 | 0.0 | | | | 0.0 | | | | 0.0 | | | |
| Sep 27-Oct 4 | 0.4 | | | 1.8 | 0.0 | | | 0.4 | 0.0 | | | 2.0 |
| Oct 4-11 | -- | | | -- | -- | | | -- | -- | | | -- |
| TOTALS | 1.5 | | | 4.5 | 0.6 | | | 3.3 | 0.8 | | | 4.2 |

| 1977 Dates Exposed** | Aberdeen Rock 1977 | Claybank 1974 | Claybank 1975 | Claybank 1976 | Claybank 1977 | Foxes Creek 1974 | Foxes Creek 1975 | Foxes Creek 1976 | Foxes Creek 1977 |
|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | 0.0 | 0.0 | 0.0 | -- | -- | | 0.0 | -- | 0.0 |
| Jun 20-27 | 0.0 | 0.0 | 0.5 | -- | -- | | 0.0 | -- | |
| Jun 27-Jul 5 | | 0.0 | 4.4 | -- | -- | | 0.2 | -- | -- |
| Jul 5-12 | | | | 0.0 | -- | | | -- | 0.1 |
| Jul 12-20 | 0.0 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | -- | 0.0 |
| Jul 20-28 | 1.1 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | 0.0 |
| Jul 28-Aug 4 | 0.0 | 0.0 | 0.0 | -- | -- | | 0.0 | -- | 0.0 |
| Aug 4-11 | 0.3 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | 0.0 |
| Aug 11-18 | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.5 |
| Aug 18-26 | 1.0 | 0.0 | 0.0 | 0.0 | 0.7 | | -- | 0.0 | |
| Aug 26-31 | 0.5 | 0.2 | 0.0 | 0.0 | 0.0 | | -- | 0.0 | 0.2 |
| Aug 31-Sep 8 | | 0.4 | 0.0 | 0.0 | 2.8 | | 0.0 | 0.0 | 0.5 |
| Sep 8-13 | 7.0 | | 0.0 | 0.0 | 2.0 | | 0.0 | 0.0 | 1.1 |
| Sep 13-20 | | 0.2 | 0.0 | 0.0 | 0.8 | | 0.0 | 0.0 | 0.4 |
| Sep 20-27 | | 0.0 | 0.2 | 0.0 | 0.4 | | 0.2 | 0.0 | 0.4 |
| Sep 27-Oct 4 | -- | 0.0 | 0.0 | 0.1 | -- | | 0.0 | 0.0 | -- |
| Oct 4-11 | -- | -- | -- | 0.1 | -- | | -- | 0.0 | -- |
| TOTALS | 9.9 | 0.8 | 5.1 | 0.2 | 6.7 | | 0.4 | 0.0 | 3.2 |

Not Sampled

MOBJACK BAY

| 1977 Dates Exposed** | Tow Stake Station 13 1974 | Tow Stake Station 13 1975 | Tow Stake Station 13 1976 | Tow Stake Station 13 1977 | Off Browns Bay Station 14 1974 | Off Browns Bay Station 14 1975 | Off Browns Bay Station 14 1976 | Off Browns Bay Station 14 1977 |
|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | | -- | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Jun 20-28 | | 0.0 | 0.2 | -- | | -- | 0.0 | 0.0 |
| Jun 28-Jul 2 | | 2.6 | 0.1 | 0.0 | | 0.1 | 0.0 | 0.0 |
| Jul 2-11 | | | -- | 8.8 | | 2.0 | -- | 0.0 |
| Jul 11-18 | | 5.8 | 8.5 | 0.1 | | 5.1 | 0.0 | 2.3 |
| Jul 18-28 | | 0.2 | 2.1 | 1.3 | | 0.4 | 0.1 | 0.2 |
| Jul 28-Aug 2 | | 0.1 | 0.3 | 0.0 | | 0.0 | 0.1 | 0.7 |
| Aug 2- 8 | | 0.0 | | 0.2 | | 0.0 | -- | 0.0 |
| Aug 8-15 | | 0.0 | | 0.0 | | 0.0 | -- | 0.0 |
| Aug 15-25 | | | 0.6 | 2.4 | | | -- | -- |
| Aug 25-Sep 2 | | 33.6 | | | | 2.8 | -- | -- |
| Sep 2- 9 | | | | 1.3 | | | -- | -- |
| Sep 9-20 | | 4.8 | 0.6 | | | 0.0 | -- | -- |
| Sep 20-30 | | 0.0 | -- | 2.0 | | 0.4 | -- | -- |
| Sep 30-Oct 7 | | | 0.1 | -- | | -- | -- | -- |
| TOTALS | | 47.1 | 12.5 | 16.1 | | 10.8 | 0.2 | 3.2 |

Not Sampled

WARE RIVER

| 1977 Dates Exposed** | Off Wilson's Creek Station 12 1974 | Off Wilson's Creek Station 12 1975 | Off Wilson's Creek Station 12 1976 | Off Wilson's Creek Station 12 1977 |
|---|---|---|---|---|
| Jun 13-20 | -- | 0.8 | 0.0 | 0.0 |
| Jun 20-28 | -- | 7.3 | 2.7 | 0.0 |
| Jun 28-Jul 2 | -- | 24.0 | 1.6 | -- |
| Jul 2-11 | -- | | 3.7 | 0.0 |
| Jul 11-18 | 2.3 | -- | 2.8 | 0.7 |
| Jul 18-28 | -- | 0.3 | 7.9 | 1.5 |
| Jul 28-Aug 2 | 0.0 | 0.0 | -- | 5.8 |
| Aug 2- 8 | 0.0 | 0.0 | -- | -- |
| Aug 8-15 | 0.2 | 0.0 | -- | -- |
| Aug 15-25 | | | -- | -- |
| Aug 25-Sep 2 | 0.0 | 13.2 | -- | -- |
| Sep 2- 9 | | | -- | -- |
| Sep 9-20 | 0.0 | 3.6 | 0.3 | -- |
| Sep 20-30 | 0.0 | 0.1 | -- | 5.0 |
| Sep 30-Oct 7 | 0.0 | | 0.2 | -- |
| TOTALS | 2.5 | 49.3 | 19.2 | 13.0 |

NORTH RIVER

| 1977 Dates Exposed** | Cedar Point Station 3 1974 | Cedar Point Station 3 1975 | Cedar Point Station 3 1976 | Cedar Point Station 3 1977 | Black Water Creek Station 2 1974 | Black Water Creek Station 2 1975 | Black Water Creek Station 2 1976 | Black Water Creek Station 2 1977 | Head Station 1 1974 | Head Station 1 1975 | Head Station 1 1976 | Head Station 1 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 14-21 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Jun 21-28 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 |
| Jun 28-Jul 5 | 0.6 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 3.0 | |
| Jul 5-12 | 0.5 | 0.0 | 0.7 | | 0.2 | 0.0 | 0.1 | | 5.4 | 0.0 | 2.4 | 0.0 |
| Jul 12-19 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.5 | -- |
| Jul 19-26 | 0.1 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | -- |
| Jul 26-Aug 2 | 0.0 | 0.0 | -- | 0.6 | 0.0 | 0.0 | -- | 0.0 | 0.1 | 0.3 | -- | 0.0 |
| Aug 2- 9 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 5.2 | 0.1 |
| Aug 9-15 | 0.5 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.8 | 0.0 |
| Aug 15-23 | 2.1 | 0.3 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 2.8 | 2.7 |
| Aug 23-30 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 30-Sep 6 | 1.8 | 3.8 | 0.0 | 0.0 | 1.4 | 2.0 | 0.0 | 0.0 | 0.6 | 13.8 | 0.0 | 0.1 |
| Sep 6-13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 0.0 | 0.0 |
| Sep 13-20 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | -- | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 1.1 |
| Sep 20-27 | 0.2 | 0.0 | 0.0 | 1.4 | 0.0 | -- | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 1.2 |
| TOTALS | 5.9 | 4.9 | 1.0 | 3.2 | 2.0 | 2.3 | 0.2 | 0.7 | 7.8 | 14.8 | 15.2 | 5.2 |

EAST RIVER

| 1977 Dates Exposed** | Mouth Station 6 1974 | 1975 | 1976 | 1977 | Gulf Oil Dock Station 11 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|
| Jun 7-14 | 0.0 | 0.0 | 0.0 | -- | 0.4 | 2.0 | -- | -- |
| Jun 14-21 | 0.3 | 0.1 | 0.1 | -- | 0.6 | 2.8 | 0.0 | 0.0 |
| Jun 21-28 | 0.0 | 0.0 | -- | -- | 0.2 | 6.7 | 1.8 | 0.0 |
| Jun 28-Jul 5 | 0.2 | 7.6 | 2.6 | -- | 0.0 | 6.5 | 4.1 | 0.0 |
| Jul 5-12 | 0.1 | 3.8 | 2.3 | -- | 16.2 | 5.9 | 4.3 | } |
| Jul 12-19 | 1.6 | 3.6 | 5.6 | 0.0 | 0.6 | 2.9 | 1.3 | }0.0 |
| Jul 19-26 | 0.1 | } | } | } | 3.9 | 1.5 | -- | 12.0 |
| Jul 26-Aug 2 | 0.0 | }1.0 | }0.8 | }3.0 | 0.4 | 0.2 | 5.9 | 0.0 |
| Aug 2- 9 | 2.1 | } | } | } | 1.6 | 1.6 | -- | 0.0 |
| Aug 9-15 | 0.0 | } | } | } | 0.0 | 1.4 | 0.0 | 2.8 |
| Aug 15-23 | 0.2 | }0.9 | }0.1 | } | 0.2 | 4.7 | 0.0 | 11.6 |
| Aug 23-30 | 0.2 | } | 3.0 | }4.5 | 0.4 | 9.7 | 0.0 | 1.6 |
| Aug 30-Sep 6 | 1.8 | }9.0 | 1.2 | } | 2.0 | 15.8 | 0.0 | 0.2 |
| Sep 6-13 | 0.4 | 8.4 | } | } | 0.0 | 0.8 | 0.2 | 1.7 |
| Sep 13-20 | 0.6 | 5.6 | }1.1 | } | 0.0 | 0.4 | 0.0 | 1.6 |
| Sep 20-27 | 0.4 | 0.4 | } | }7.6 | 0.0 | 0.0 | 0.0 | 3.6 |
| Sep 27-Oct 4 | -- | -- | 0.0 | } | -- | -- | 0.0 | -- |
| TOTALS | 8.0 | 40.4 | 16.8 | 15.1 | 26.5 | 62.9 | 17.6 | 35.1 |

NEW POINT COMFORT AREA

| 1977 Dates Exposed** | Winter Harbor, Crowe's Station 10 1974 | 1975 | 1976 | 1977 | Horn Harbor, Mitcham's Station 9 1974 | 1975 | 1976 | 1977 | Dyer Creek Station 8 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 14-21 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 21-28 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 28- Jul 5 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.5 |
| Jul 5-12 | 0.0 | -- | 0.0 | } | 0.0 | 0.0 | 0.0 | } | 0.0 | 0.0 | 0.1 | } |
| Jul 12-19 | 0.5 | 0.0 | 0.0 | }0.0 | 0.7 | 0.0 | 0.0 | }0.0 | 0.1 | 0.0 | 0.2 | }0.0 |
| Jul 19-26 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -- |
| Jul 26-Aug 2 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 |
| Aug 2- 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 9-16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 |
| Aug 16-23 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.1 |
| Aug 23-30 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.0 |
| Aug 30-Sep 6 | 0.2 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.1 | 1.0 | 0.2 | 0.0 | 0.0 |
| Sep 6-13 | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | } | 0.2 | 0.2 | 0.0 | 0.0 | -- |
| Sep 13-20 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | }0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Sep 20-27 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | } | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | 1.3 | 0.0 | 0.1 | 0.0 | 1.7 | 0.2 | 0.2 | 1.0 | 1.4 | 0.4 | 1.4 | 1.0 |

| 1977 Dates Exposed** | Winter Harbor Public Landing - Station 10 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|
| Jun 14-21 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 21-28 | -- | 0.0 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 1.6 | 7.0 | 0.0 | 0.0 |
| Jul 5-12 | 0.6 | 2.1 | 0.0 | } |
| Jul 12-19 | 19.9 | 6.3 | 0.2 | }0.0 |
| Jul 19-26 | 0.1 | 30.7 | 0.1 | 0.1 |
| Jul 26-Aug 2 | 1.6 | 1.4 | -- | 7.0 |
| Aug 2- 9 | 0.0 | 0.4 | 0.2 | -- |
| Aug 9-16 | 0.9 | 4.3 | 0.0 | 3.8 |
| Aug 16-23 | 0.0 | 4.1 | 7.6 | 2.0 |
| Aug 23-30 | 5.8 | 1.9 | 1.1 | 3.7 |
| Aug 30-Sep 6 | 2.4 | 252.0 | 0.0 | 4.2 |
| Sep 6-13 | 7.4 | 58.6 | 0.1 | 3.6 |
| Sep 13-20 | 0.4 | 35.6 | 0.0 | 2.8 |
| Sep 20-27 | 2.6 | 16.2 | 0.0 | 7.8 |
| TOTALS | 43.3 | 420.6 | 9.3 | 35.0 |

## MILFORD HAVEN

| 1977 Dates Exposed** | Point Breeze Station B | | | | Stutts Creek Station C | | | |
|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 20-28 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.2 | 0.0 | -- | 0.0 | 0.1 | 0.0 | 0.0 |
| Jul 5-11 | 0.0 | -- | 0.0 | 0.0 | 0.4 | 0.2 | 1.9 | } 0.0 |
| Jul 11-18 | 1.6 | 1.8 | -- | -- | 0.3 | 3.6 | -- | |
| Jul 18-25 | 0.0 | 0.3 | -- | -- | 0.0 | 0.1 | 0.0 | 0.0 |
| Jul 25-Aug 1 | 1.0 | 0.0 | -- | -- | 0.1 | 0.3 | -- | 0.0 |
| Aug 1- 8 | 0.0 | 0.3 | -- | 0.1 | 0.0 | 0.0 | 0.0 | 0.3 |
| Aug 8-15 | 0.1 | -- | -- | 0.5 | 0.0 | 0.0 | 0.2 | 0.2 |
| Aug 15-22 | -- | -- | 0.5 | } 0.2 | 0.0 | 0.0 | 0.1 | 0.0 |
| Aug 22-29 | 0.0 | -- | 0.0 | | 0.0 | 0.0 | 0.0 | 0.5 |
| Aug 29-Sep 6 | 0.5 | -- | 0.0 | 0.1 | 1.8 | 0.2 | 0.0 | 0.1 |
| Sep 6-12 | 0.2 | 1.8 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.1 |
| Sep 12-19 | 0.0 | 0.4 | 0.0 | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 |
| Sep 19-26 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.4 |
| TOTALS | 3.5 | 4.8 | 0.5 | 1.5 | 2.8 | 5.3 | 2.2 | 1.6 |

## PIANKATANK RIVER

| 1977 Dates Exposed** | Three Branches Station D | | | | Hills Bay Station E | | | | Burton Point Station G | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | | 0.0 | -- | 0.0 | 0.0 | 0.0 |
| Jun 20-28 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.5 | | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Jul 5-11 | 0.5 | 0.0 | -- | 0.0 | 1.0 | 0.4 | | 1.1 | 0.1 | 0.6 | -- | 0.0 |
| Jul 11-18 | 1.7 | -- | -- | 0.2 | 1.5 | 0.2 | | 0.1 | 1.4 | 1.9 | -- | -- |
| Jul 18-25 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.1 | Not Sampled | 0.7 | 0.8 | 0.1 | 0.2 | -- |
| Jul 25-Aug 1 | 0.2 | 0.4 | 0.0 | 0.1 | 0.2 | 0.0 | | 0.2 | 2.8 | 0.2 | 0.7 | -- |
| Aug 1- 8 | -- | -- | -- | 0.0 | 0.0 | 0.0 | | 0.9 | 0.1 | 0.0 | 0.0 | -- |
| Aug 8-15 | 0.0 | 0.6 | 0.3 | 4.3 | 0.0 | 0.1 | | 0.6 | 0.1 | 1.5 | } 0.0 | 64.0 |
| Aug 15-22 | 0.0 | -- | } 0.0 | 0.1 | 0.0 | 1.0 | | 0.7 | 0.0 | 1.6 | | 0.4 |
| Aug 22-29 | -- | -- | | 0.0 | | 3.4 | | 0.0 | 0.0 | -- | } 0.0 | 0.0 |
| Aug 29-Sep 6 | -- | -- | 0.0 | 0.0 | | -- | | 0.0 | | 2.2 | | } 0.0 |
| Sep 6-12 | 0.0 | 0.0 | } 0.0 | 0.0 | 0.4 | 0.6 | | 0.2 | 0.0 | 0.0 | 0.0 | |
| Sep 12-19 | } 1.2 | 0.0 | | 0.7 | | -- | | 0.0 | | 0.0 | 0.0 | |
| Sep 19-26 | | 0.0 | 0.0 | -- | | -- | | -- | | 0.0 | 0.0 | } 0.0 |
| TOTALS | 3.6 | 1.4 | 0.3 | 5.4 | 3.1 | 6.6 | | 4.5 | 5.3 | 10.0 | 0.9 | 64.4 |

| 1977 Dates Exposed** | Braxton Bar Station F | | | | Stove Point Station H | | | | Cape Tune Station I | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | | 0.0 | | -- | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Jun 20-28 | | 0.3 | | -- | | 0.0 | 0.1 | 0.0 | | -- | 0.0 | 0.0 |
| Jun 28-Jul 5 | | 0.3 | | -- | | 0.6 | 0.1 | 0.0 | | 1.7 | 0.1 | 0.0 |
| Jul 5-11 | | 0.0 | | -- | | -- | -- | 0.0 | | 6.3 | 0.0 | 0.0 |
| Jul 11-18 | | 0.6 | | -- | | 0.6 | -- | -- | | -- | 0.0 | 0.6 |
| Jul 18-25 | | 0.2 | | -- | | -- | 0.0 | -- | | -- | 1.0 | 1.2 |
| Jul 25-Aug 1 | | 0.0 | | -- | | 0.2 | 0.0 | -- | | 0.1 | -- | -- |
| Aug 1- 8 | | 0.0 | | -- | | 0.1 | 1.0 | -- | | 0.0 | 0.1 | 0.2 |
| Aug 8-15 | | -- | | -- | | -- | } 0.7 | -- | | 0.0 | } -- | -- |
| Aug 15-22 | | -- | | } 0.0 | | -- | | 0.2 | | 1.0 | | 3.0 |
| Aug 22-29 | | 7.2 | | | | -- | } 0.0 | } 0.0 | | 2.8 | | 0.0 |
| Aug 29-Sep 6 | | 0.3 | | 0.1 | | 0.0 | | | | 0.9 | } 0.0 | 0.0 |
| Sep 6-12 | | -- | | 0.8 | | 0.4 | 0.0 | 0.0 | | 0.2 | 0.0 | 0.0 |
| Sep 12-19 | | -- | | -- | | -- | 0.0 | -- | | 0.0 | 0.0 | -- |
| Sep 19-26 | | -- | | -- | | -- | 0.0 | 0.3 | | -- | 0.0 | -- |
| TOTALS | | 8.9 | | 0.9 | | 1.9 | 1.9 | 0.5 | | 13.0 | 1.2 | 5.0 |

Not Sampled

| 1977 Dates Exposed** | Bland Point Station L | | | | Palace Bar Station J | | | | Ginney Point Station K | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | | | 0.0 | -- | 0.1 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 20-28 | | | 0.0 | -- | 0.0 | 0.5 | 0.0 | 0.0 | -- | 0.8 | 0.0 | 0.0 |
| Jun 28-Jul 5 | | | 0.0 | -- | 0.0 | 5.6 | 0.1 | 0.0 | 0.0 | 2.9 | 0.0 | -- |
| Jul 5-11 | | | 0.0 | -- | 1.8 | 3.9 | 0.0 | 6.9 | 0.3 | 7.5 | 0.1 | -- |
| Jul 11-18 | | | 0.0 | -- | 1.7 | 2.0 | 0.0 | 0.4 | 2.0 | 1.2 | 0.0 | -- |
| Jul 18-25 | | | 1.9 | -- | 0.9 | 0.0 | 3.0 | 0.3 | 3.0 | 0.0 | 0.7 | 0.0 |
| Jul 25-Aug 1 | | | -- | -- | 3.2 | 0.0 | -- | 22.8 | 3.5 | 0.0 | 1.9 | 0.8 |
| Aug 1- 8 | | | 0.6 | -- | 1.5 | 0.0 | 0.0 | 5.6 | 1.5 | -- | 1.0 | 1.5 |
| Aug 8-15 | | | -- | -- | 0.3 | -- | } 0.3 | 23.1 | 0.4 | 2.3 | } 0.0 | 28.2 |
| Aug 15-22 | | | -- | 0.4 | 0.0 | 1.2 | | 0.3 | 0.0 | 9.6 | | 0.0 |
| Aug 22-29 | | | } 0.0 | 0.1 | 0.0 | 3.0 | } 0.0 | 0.0 | 0.4 | -- | } 0.0 | } 0.0 |
| Aug 29-Sep 6 | | | | 0.0 | 0.8 | 0.2 | | 0.0 | 0.0 | 0.0 | | |
| Sep 6-12 | | | 0.0 | 0.1 | 0.2 | 2.0 | 0.0 | 0.0 | 0.2 | 1.6 | 0.0 | |
| Sep 12-19 | | | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.1 | } 0.2 | 1.4 | 0.0 | 0.2 |
| Sep 19-26 | | | 0.0 | 0.0 | -- | 0.2 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 |
| TOTALS | | | 2.5 | 0.6 | 10.5 | 18.6 | 3.4 | 59.6 | 11.5 | 27.3 | 3.7 | 30.7 |

Not Sampled (Bland Point Station L, 1974 and 1975)

RAPPAHANNOCK RIVER

| 1977 Dates Exposed | Lawson's Bay, near Mosquito Point | | | | Corrotoman Point | | | | Whiting Creek | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | -- |
| Jun 20-27 | | 0.5 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 0.0 | | | 0.0 | -- |
| Jun 27-Jul 5 | | 0.4 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | | | 0.0 | -- |
| Jul 5-11 | | 8.4 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | | | 0.0 | -- |
| Jul 11-18 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Jul 18-25 | | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Jul 25-Aug 1 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | | | 0.0 | 0.0 |
| Aug 1- 8 | | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | | | 0.5 | 0.0 |
| Aug 8-15 | | 0.0 | 0.7 | 2.0 | 0.0 | 3.4 | 1.3 | 18.9 | | | 0.0 | 0.0 |
| Aug 15-22 | | 0.0 | 0.2 | 1.8 | 0.0 | 0.0 | 0.1 | 14.7 | | | 0.1 | 0.1 |
| Aug 22-29 | | 2.6 | 0.1 | 1.2 | 0.2 | 4.8 | 0.4 | 3.9 | | | 0.0 | 0.4 |
| Aug 29-Sep 5 | | 2.2 | 0.0 | } | 0.2 | 2.4 | 0.5 | } | | | 0.1 | 0.0 |
| Sep 5-12 | | 2.8 | 0.2 | } 3.0 | -- | 1.2 | 0.0 | } 3.0 | | | 0.0 | 0.4 |
| Sep 12-19 | | 1.2 | 0.0 | } | 0.8 | 0.2 | 0.0 | | | | 0.0 | 1.5 |
| Sep 19-26 | | 0.0 | 0.0 | 0.4 | 0.0 | -- | 0.0 | 0.4 | | | 0.1 | 0.0 |
| Sep 26-Oct 3 | | -- | 0.1 | -- | -- | -- | 0.0 | -- | | | -- | -- |
| TOTALS | | 18.2 | 1.5 | 8.7 | 1.3 | 15.4 | 2.7 | 41.0 | | | 0.8 | 2.4 |

Not Sampled (Lawson's Bay, near Mosquito Point, 1974 and 1975; Whiting Creek, 1974 and 1975)

| 1977 Dates Exposed** | Balls Point | | | | Goose Point | | | | Greenvale | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 | 1974 | 1975 | 1976 | 1977 |
| Jun 13-20 | | | -- | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 20-27 | | | -- | 0.0 | | | -- | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Jun 27-Jul 5 | | | 0.0 | -- | | | -- | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 |
| Jul 5-11 | | | 0.0 | -- | | | -- | 0.0 | 0.0 | 7.0 | -- | 0.0 |
| Jul 11-18 | | | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | -- | } 0.0 |
| Jul 18-25 | | | 0.0 | -- | | | 0.0 | 0.0 | -- | 0.0 | 0.0 | |
| Jul 25-Aug 1 | | | 0.0 | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | } 0.0 |
| Aug 1- 8 | | | 0.0 | -- | | | -- | -- | 0.0 | 0.0 | 0.1 | 0.0 |
| Aug 8-15 | | | 0.0 | 0.5 | | | 0.1 | 0.4 | 0.9 | 0.0 | 0.1 | 0.2 |
| Aug 15-22 | | | -- | 0.1 | | | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Aug 22-29 | | | 0.0 | } | | | 0.0 | 0.1 | 0.4 | 0.0 | -- | 0.2 |
| Aug 29-Sep 5 | | | -- | } 0.6 | | | 0.0 | 0.3 | 0.0 | 3.0 | 0.2 | } |
| Sep 5-12 | | | 0.0 | 0.1 | | | 0.0 | 0.1 | -- | 3.8 | 0.2 | } 0.7 |
| Sep 12-19 | | | 0.0 | -- | | | 0.0 | 2.0 | 0.0 | 7.8 | 0.1 | |
| Sep 19-26 | | | 0.0 | 0.2 | | | 0.0 | 0.0 | -- | -- | 0.0 | 0.2 |
| Sep 26-Oct 3 | | | -- | -- | | | -- | -- | -- | -- | 0.1 | -- |
| TOTALS | | | 0.0 | 1.5 | | | 0.2 | 2.9 | 1.3 | 24.9 | 0.9 | 1.3 |

Not Sampled (Balls Point, 1974 and 1975; Goose Point, 1974 and 1975)

| 1977 Dates Exposed** | Weeks Creek 1974 | 1975 | 1976 | 1977 | Smokey Point● 1977 | Waterview● 1977 | Punchbowl 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | | | 0.0 | -- | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Jun 20-27 | | | 0.0 | -- | 0.0 | 0.0 | | | -- | 0.0 |
| Jun 27-Jul 5 | | | 0.0 | -- | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Jul 5-11 | | | -- | -- | 0.0 | -- | | | 0.0 | 0.0 |
| Jul 11-18 | | | 0.1 | -- | 0.0 | 0.0 | | | 0.0 | -- |
| Jul 18-25 | | | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Jul 25-Aug 1 | Not Sampled | Not Sampled | 0.0 | 0.0 | 0.0 | 0.0 | Not Sampled | Not Sampled | 0.0 | 0.0 |
| Aug 1- 8 | | | -- | 0.0 | | 0.0 | | | 0.0 | |
| Aug 8-15 | | | -- | 0.3 | 0.0 | 0.0 | | | 0.0 | 0.1 |
| Aug 15-22 | | | 0.0 | 0.0 | 0.0 | 0.2 | | | 0.0 | 0.0 |
| Aug 22-29 | | | 0.0 | 0.1 | 0.0 | 0.1 | | | 0.0 | 0.3 |
| Aug 29-Sep 5 | | | 0.0 | 0.3 | 0.2 | 0.3 | | | 0.1 | 0.3 |
| Sep 5-12 | | | 0.0 | 0.3 | 0.6 | 0.3 | | | -- | 0.0 |
| Sep 12-19 | | | 0.0 | 0.6 | 1.3 | 0.0 | | | 0.0 | 7.0 |
| Sep 19-26 | | | 0.0 | 0.1 | 0.2 | 0.1 | | | 0.0 | -- |
| Sep 26-Oct 3 | | | -- | -- | -- | -- | | | -- | -- |
| TOTALS | | | 0.1 | 1.7 | 2.3 | 1.0 | | | 0.1 | 7.7 |

GREAT WICOMICO RIVER

| 1977 Dates Exposed | Dameron Marsh Station a 1974 | 1975 | 1976 | 1977 | Cranes Creek Station b 1974 | 1975 | 1976 | 1977 | Fleet Point Station c 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 6-13 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.1 | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- |
| Jun 13-20 | 0.0 | 0.0 | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | -- |
| Jun 20-28 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Jul 5-13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 13-18 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 18-25 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 |
| Jul 25-Aug 1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.4 | 0.2 | 0.1 | 0.0 | -- | 0.0 | 0.0 | 0.2 |
| Aug 1- 8 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 | 0.0 | 0.0 |
| Aug 8-15 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Aug 15-22 | 0.2 | 0.0 | -- | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 | 0.0 |
| Aug 22-29 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.1 | 1.0 | 0.0 | 0.0 | 0.7 |
| Aug 29-Sep 5 | 0.0 | 0.0 | -- | -- | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | -- | 0.0 | 0.2 |
| Sep 5-12 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 | 0.1 | 1.6 | 0.4 | 0.6 | 0.0 | 0.5 |
| Sep 12-19 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 |
| Sep 12-26 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | -- | 0.0 | -- |
| TOTALS | 0.2 | 0.5 | 0.1 | 0.7 | 1.2 | 0.6 | 0.2 | 2.2 | 6.1 | 1.2 | 0.0 | 1.8 |

| 1977 Dates Exposed** | Haynie Point Station e 1974 | 1975 | 1976 | 1977 | Shell Bar Station f 1974 | 1975 | 1976 | 1977 | Hudnall's Dock Station f 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 6-13 | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | -- |
| Jun 13-20 | 0.0 | 0.1 | 0.0 | -- | 0.0 | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- |
| Jun 20-28 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 5-13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 13-18 | 0.1 | 0.0 | 0.0 | 0.0 | 1.1 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | -- | 0.0 |
| Jul 18-25 | 0.0 | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 25-Aug 1 | 0.3 | 0.5 | 0.1 | 0.1 | 8.9 | 0.0 | 0.2 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 |
| Aug 1- 8 | 0.7 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.5 | 0.8 | 0.0 | 0.0 | 0.1 |
| Aug 8-15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 |
| Aug 15-22 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 |
| Aug 22-29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -- | 0.6 |
| Aug 29-Sep 5 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.2 | 0.7 |
| Sep 5-12 | 0.0 | 0.2 | 0.0 | 0.4 | 1.6 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 1.1 |
| Sep 12-19 | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.6 |
| Sep 19-26 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | 1.5 | 1.6 | 0.2 | 1.1 | 12.8 | 0.2 | 0.4 | 1.5 | 3.0 | 0.1 | 0.6 | 3.8 |

DIVIDING CREEK

| 1977 Dates Exposed** | Glebe Point Station g 1974 | 1975 | 1976 | 1977 | Holland's Pier 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|
| Jun 6-13 | 0.0 | -- | 0.0 | -- | | -- | -- | -- |
| Jun 13-20 | 0.2 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | -- |
| Jun 20-28 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.2 | 0.0 | 0.0 |
| Jul 5-13 | 0.0 | -- | -- | 0.0 | | 0.2 | 0.0 | 0.1 |
| Jul 13-18 | 0.4 | 0.2 | 0.0 | 0.0 | | 0.0 | 0.3 | 0.0 |
| Jul 18-25 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Jul 25-Aug 1 | 2.3 | 0.0 | 0.9 | 0.0 | | 0.0 | 1.1 | 0.0 |
| Aug 1- 8 | 8.8 | 0.0 | 0.0 | 0.0 | Not Sampled | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | -- |
| Aug 15-22 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Aug 22-29 | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 0.0 | 0.0 |
| Aug 29-Sep 5 | 0.0 | 0.0 | -- | 0.1 | | 0.0 | 0.0 | 0.1 |
| Sep 5-12 | 0.0 | 0.0 | 0.0 | 0.5 | | 0.0 | 0.0 | 0.0 |
| Sep 12-19 | 0.0 | 0.0 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 |
| Sep 19-26 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTALS | 11.7 | 0.2 | 0.9 | 1.0 | | 0.4 | 1.4 | 0.2 |

POTOMAC RIVER

| 1977 Dates Exposed** | Cornfield 1974 | 1975 | 1976 | 1977 | Jones Shore 1974 | 1975 | 1976 | 1977 | Great Neck 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | | -- | 0.0 | 0.0 | -- | 0.1 | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- |
| Jun 20-27 | | -- | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 |
| Jun 27-Jul 5 | | 0.0 | 0.0 | -- | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 5-13 | | -- | -- | -- | -- | -- | -- | -- | 0.0 | 0.0 | -- | 0.0 |
| Jul 13-18 | | -- | 0.0 | 0.0 | -- | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 18-26 | Not Sampled | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 1 | | | 0.0 | -- | -- | | 0.0 | -- | 0.0 | | 0.0 | 0.0 |
| Aug 1- 8 | | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | -- |
| Aug 15-23 | | 0.0 | 0.0 | 0.1 | -- | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 |
| Aug 23-29 | | 0.1 | 0.0 | 1.9 | -- | 0.0 | 0.0 | 0.6 | 1.0 | 0.0 | 0.0 | 0.0 |
| Aug 29-Sep 5 | | 0.0 | 0.0 | 0.1 | -- | 0.4 | 0.0 | 0.7 | 0.0 | 0.7 | 0.0 | 0.0 |
| Sep 5-14 | | 0.6 | 0.0 | 0.0 | 1.0 | 0.8 | 0.0 | 0.1 | -- | 1.4 | 0.0 | 0.1 |
| Sep 14-19 | | 0.0 | 0.0 | | 2.4 | 0.0 | 0.0 | | 0.0 | -- | 0.0 | 0.0 |
| Sep 19-26 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | | 0.7 | 0.0 | 2.1 | 3.4 | 1.4 | 0.0 | 1.5 | 1.7 | 2.1 | 0.0 | 0.1 |

| 1977 Dates Exposed** | Coan 1974 | 1975 | 1976 | 1977 | Hog Island 1974 | 1975 | 1976 | 1977 | Thickett Point 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | 0.0 | | -- | 0.0 | | 0.0 | 0.0 | -- | 0.0 | 0.0 | -- | -- |
| Jun 20-27 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- |
| Jun 27-Jul 5 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- |
| Jul 5-13 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Jul 13-18 | 0.0 | | 0.0 | 0.0 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 18-26 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 1 | 0.1 | | 0.0 | 0.0 | | | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.1 |
| Aug 1- 8 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Aug 15-23 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 23-29 | 0.0 | Not Sampled | 0.0 | 0.0 | Not Sampled | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.3 |
| Aug 29-Sep 5 | 0.0 | | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Sep 5-14 | 0.2 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Sep 14-19 | 0.0 | | 0.0 | 0.0 | | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sep 19-26 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | 0.3 | | 0.0 | 0.1 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.7 |

| 1977 Dates Exposed** | Yeo-comico | Ragged Point | 1975 | King Copsico Point | 1975 | Gum Bar | 1977 |
|---|---|---|---|---|---|---|---|
| Jun 13-20 | 1974, | 1974 | 0.0 | 1974 | 0.0 | 1975 | 0.0 |
| Jun 20-27 | | | 0.0 | | 0.0 | | 0.0 |
| Jun 27-Jul 5 | 1975, | 1976 | 0.0 | 1976 | 0.0 | | 0.0 |
| Jul 5-13 | | | 0.0 | | 0.0 | | 0.0 |
| Jul 13-18 | 1976 | and | 0.0 | and | 0.0 | and | 0.0 |
| Jul 18-26 | | | 0.0 | | 0.0 | | 0.0 |
| Jul 26-Aug 1 | and | 1977 | 0.0 | 1977 | 0.0 | | 0.0 |
| Aug 1- 8 | | | 0.0 | | 0.0 | | 0.0 |
| Aug 8-15 | 1977 | | 0.0 | | 0.0 | 1976 | 0.0 |
| Aug 15-23 | | | 0.0 | | 0.0 | | 0.0 |
| Aug 23-29 | All | All | 0.0 | All | 0.0 | All | 0.1 |
| Aug 29-Sep 5 | | | 0.3 | | 0.0 | | |
| Sep 5-14 | Zeros | Zeros | 0.0 | Zeros | 0.2 | Zeros | 0.0 |
| Sep 14-19 | | | -- | | -- | | 0.0 |
| Sep 19-26 | | | 0.0 | | 0.0 | | 0.0 |
| TOTALS | | | 0.3 | | 0.2 | | 0.1 |

EASTERN SHORE, BAYSIDE

| 1977 Dates Exposed** | Pocomoke Sound, Swash 1974 | 1975 | 1976 | 1977 | Onancock Creek 1974 | 1975 | 1976 | 1977 | Pungoteague Creek 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Jun 20-27 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jun 27-Jul 5 | 0.0 | 0.0 | 0.0 | -- | | -- | -- | 0.0 | 0.0 | -- | 0.0 | 0.0 |
| Jul 5-11 | | 0.0 | 0.0 | -- | | | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 |
| Jul 11-18 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 |
| Jul 18-25 | | 0.3 | 0.0 | 0.1 | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 25-Aug 1 | | 0.7 | 0.1 | 0.0 | | -- | | 0.1 | 1.4 | -- | | 0.4 |
| Aug 1- 8 | 0.1 | 0.0 | 0.4 | 0.2 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | |
| Aug 8-15 | | -- | | 0.3 | | 0.0 | | 0.0 | -- | 0.0 | | 0.0 |
| Aug 15-22 | 0.0 | 0.4 | 5.1 | 0.1 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | | 0.1 |
| Aug 22-29 | | -- | 0.0 | -- | | 0.0 | 0.0 | | | 0.6 | 0.0 | |
| Aug 29-Sep 6 | 0.6 | 0.0 | 0.1 | 1.4 | 0.0 | | | 0.0 | 0.0 | | | 0.1 |
| Sep 6-12 | | 0.0 | -- | 0.2 | | 0.2 | | 0.2 | | 2.0 | | 2.0 |
| Sep 12-19 | -- | 0.2 | 0.3 | -- | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | |
| Sep 19-26 | -- | -- | 0.2 | -- | -- | | | | -- | | | 2.8 |
| Sep 26-Oct 3 | -- | -- | | -- | -- | -- | | -- | -- | -- | | -- |
| TOTALS | 0.7 | 1.6 | 6.2 | 2.3 | 0.0 | 0.3 | 0.0 | 0.3 | 1.4 | 2.6 | 0.0 | 5.4 |

| 1977 Dates Exposed** | Occohannock Creek 1974 | 1975 | 1976 | 1977 | Nassawadox Creek 1974 | 1975 | 1976 | 1977 | Cherrystone Inlet 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | -- | -- | -- | 0.0 | 0.0 |
| Jun 20-27 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.1 | -- | 0.0 | 0.0 |
| Jun 27-Jul 5 | | 0.0 | 0.1 | 0.0 | | 0.0 | 0.0 | 0.1 | -- | -- | 0.0 | 0.3 |
| Jul 5-11 | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 | -- | -- | 0.0 | 0.0 |
| Jul 11-18 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.3 | -- | 0.0 | 0.0 |
| Jul 18-25 | | | 0.0 | 0.0 | | | 0.0 | 1.4 | | -- | 0.0 | 0.3 |
| Jul 25-Aug 1 | | 0.0 | 0.0 | -- | | 0.0 | 0.1 | 0.2 | -- | -- | 0.1 | 0.3 |
| Aug 1- 8 | 0.0 | 0.0 | 0.1 | 0.1 | | 0.0 | 0.0 | 0.0 | -- | | 0.1 | 0.2 |
| Aug 8-15 | | 0.2 | 0.1 | 0.4 | | 2.4 | 0.0 | 1.2 | -- | 10.0 | 0.6 | 13.2 |
| Aug 15-22 | 0.0 | 2.0 | 0.0 | 0.5 | | 1.2 | 0.1 | | 6.0 | | 0.1 | 7.2 |
| Aug 22-29 | | 0.6 | 0.1 | 0.1 | | 1.8 | 0.5 | 0.1 | | | 0.5 | |
| Aug 29-Sep 6 | 0.4 | 2.8 | 0.1 | 0.4 | | 6.4 | 0.4 | 0.2 | 4.4 | | 0.1 | 10.0 |
| Sep 6-12 | | -- | 0.0 | | | 11.2 | 0.8 | 0.1 | | 15.6 | 0.0 | 2.2 |
| Sep 12-19 | -- | | 0.1 | | | 8.6 | 1.5 | -- | -- | | 0.1 | 1.2 |
| Sep 19-26 | -- | 0.6 | 0.1 | 0.2 | | | 1.3 | -- | -- | | 0.9 | -- |
| Sep 26-Oct 3 | -- | -- | -- | -- | | -- | 0.4 | -- | -- | -- | 0.2 | -- |
| TOTALS | 0.4 | 6.2 | 0.7 | 1.7 | | 31.6 | 5.1 | 3.3 | 10.8 | 25.6 | 2.7 | 34.9 |

Not Sampled

DIVIDING CREEK

| 1977 Dates Exposed** | Glebe Point Station g 1974 | 1975 | 1976 | 1977 | Holland's Pier 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|
| Jun 6-13 | 0.0 | -- | 0.0 | -- | | -- | -- | -- |
| Jun 13-20 | 0.2 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | -- |
| Jun 20-28 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | 0.0 |
| Jun 28-Jul 5 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.2 | 0.0 | 0.0 |
| Jul 5-13 | 0.0 | -- | -- | 0.0 | | 0.2 | 0.0 | 0.1 |
| Jul 13-18 | 0.4 | 0.2 | 0.0 | 0.0 | | 0.0 | 0.3 | 0.0 |
| Jul 18-25 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Jul 25-Aug 1 | 2.3 | 0.0 | 0.9 | 0.0 | | 0.0 | 1.1 | 0.0 |
| Aug 1- 8 | 8.8 | 0.0 | 0.0 | 0.0 | Not Sampled | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | 0.0 | 0.0 | 0.0 | -- | | 0.0 | 0.0 | -- |
| Aug 15-22 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Aug 22-29 | 0.0 | 0.0 | 0.0 | 0.3 | | 0.0 | 0.0 | 0.0 |
| Aug 29-Sep 5 | 0.0 | 0.0 | -- | 0.1 | | 0.0 | 0.0 | 0.1 |
| Sep 5-12 | 0.0 | 0.0 | 0.0 | 0.5 | | 0.0 | 0.0 | 0.0 |
| Sep 12-19 | 0.0 | 0.0 | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 |
| Sep 19-26 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| TOTALS | 11.7 | 0.2 | 0.9 | 1.0 | | 0.4 | 1.4 | 0.2 |

POTOMAC RIVER

| 1977 Dates Exposed** | Cornfield 1974 | 1975 | 1976 | 1977 | Jones Shore 1974 | 1975 | 1976 | 1977 | Great Neck 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | | -- | 0.0 | 0.0 | -- | 0.1 | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- |
| Jun 20-27 | | -- | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 |
| Jun 27-Jul 5 | | 0.0 | 0.0 | -- | -- | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 5-13 | | -- | -- | -- | -- | -- | -- | -- | 0.0 | 0.0 | -- | 0.0 |
| Jul 13-18 | | -- | 0.0 | 0.0 | -- | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 18-26 | Not Sampled | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 1 | | | 0.0 | -- | -- | | 0.0 | -- | 0.0 | | 0.0 | 0.0 |
| Aug 1- 8 | | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | | 0.0 | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | -- |
| Aug 15-23 | | 0.0 | 0.0 | 0.1 | -- | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 0.0 | 0.0 |
| Aug 23-29 | | 0.1 | 0.0 | 1.9 | -- | 0.0 | 0.0 | 0.6 | 1.0 | 0.0 | 0.0 | 0.0 |
| Aug 29-Sep 5 | | 0.0 | 0.0 | 0.1 | -- | 0.4 | 0.0 | 0.7 | 0.0 | 0.7 | 0.0 | 0.0 |
| Sep 5-14 | | 0.6 | 0.0 | 0.0 | 1.0 | 0.8 | 0.0 | 0.1 | -- | 1.4 | 0.0 | 0.1 |
| Sep 14-19 | | 0.0 | 0.0 | | 2.4 | 0.0 | 0.0 | | 0.0 | -- | 0.0 | 0.0 |
| Sep 19-26 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | | 0.7 | 0.0 | 2.1 | 3.4 | 1.4 | 0.0 | 1.5 | 1.7 | 2.1 | 0.0 | 0.1 |

| 1977 Dates Exposed** | Coan 1974 | 1975 | 1976 | 1977 | Hog Island 1974 | 1975 | 1976 | 1977 | Thickett Point 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jun 13-20 | 0.0 | | -- | 0.0 | | 0.0 | 0.0 | -- | 0.0 | 0.0 | -- | -- |
| Jun 20-27 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- |
| Jun 27-Jul 5 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- |
| Jul 5-13 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Jul 13-18 | 0.0 | | 0.0 | 0.0 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 18-26 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.0 |
| Jul 26-Aug 1 | 0.1 | | 0.0 | 0.0 | | | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.1 |
| Aug 1- 8 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 8-15 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -- | 0.0 |
| Aug 15-23 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug 23-29 | 0.0 | Not Sampled | 0.0 | 0.0 | Not Sampled | 0.0 | 0.0 | -- | 0.0 | 0.0 | 0.0 | 0.3 |
| Aug 29-Sep 5 | 0.0 | | 0.0 | 0.1 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 |
| Sep 5-14 | 0.2 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| Sep 14-19 | 0.0 | | 0.0 | 0.0 | | -- | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sep 19-26 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| TOTALS | 0.3 | | 0.0 | 0.1 | | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.7 |

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