# AGENDA OF THE MEETING OF THE DELAWARE BAY SECTION OF THE NEW JERSEY SHELLFISHERIES COUNCIL

Haskin Shellfish Research Laboratory Bivalve, NJ Tuesday, May 12, 2020 4:00 PM

Council: Chairman: Warren Hollinger (Cumberland County)

Vice Chairman: Steven Fleetwood (Cumberland County)
Councilman: Richard Malinowski (Salem County)

Councilman: Vacant (Cumberland County)
Councilman: Vacant (Cape May/Salem County)

State/Fed Reps: Russ Babb, Bureau of Shellfisheries

Craig Tomlin, Bureau of Shellfisheries Andrew Hassall, Bureau of Shellfisheries Conor Davis, Bureau of Shellfisheries

Haskin Lab: David Bushek, Director

General Public

Compliance with the Sunshine Law

Notice of this meeting was posted May 5, 2020 with the Secretary of State's Office, State House, Trenton, NJ and the Bridgeton Evening News, and Daily Journal pursuant to L. 1975 c. 231.

#### **Oyster Resource Development Account (082):**

(as of 05/06/20)

Unexpended	\$ 440,427.68	Budget authority less expenditures ( <i>total spendable dollars currently in account</i> )	
Reserved	\$ 185,787.57	Reserved by Budget Authority due to COVID 19	
Pre-encumbered	\$ 119,000.00	Pre-encumbered for 2020 Intermediate Transplant Program	

#### 1. Old Business

- 1.1. Presentation of March 3, 2020 DBSC minutes
- 1.2. Presentation of March 9, 2020 Consolidation Committee minutes
- 1.3. Vessel Transactions
- 1.4. Tongers Industry Update
- 1.5. Direct Market Industry Update
- 1.6. 2020 Intermediate Transplant Program Update
- 1.7. Red Knot Stake Holder Committee Update
- 1.8. Nantuxent Channel Dredging Project Update

#### 2. New Business

- 2.1. 2020 Vibrio Plan
- 2.2. Fisheries Disaster Relief

#### 3. Adjournment

### **List of Attachments:**

Attachment 1. Council Meeting Minutes - March 3, 2020

Attachment 2. Consolidation Committee Meeting Minutes - March 9, 2020

**Attachment 3. Direct Market Harvest Summary Table** 

**Attachment 4. List of Additional Resources** 

# Attachment 1.

**Council Meeting Minutes - March 3, 2020** 

(presented for approval)

# MINUTES OF THE MEETING OF THE DELAWARE BAY SECTION OF THE NEW JERSEY SHELLFISHERIES COUNCIL

Haskin Shellfish Research Laboratory Bivalve, NJ Tuesday, March 3, 2020 6:00 PM

Present were: Council: Chairman: Warren Hollinger (Cumberland County)

Vice Chairman: Steven Fleetwood (Cumberland County)

Councilman: Richard Malinowski (Salem County)

Councilman: Vacant (Cumberland County)
Councilman: Vacant (Cape May/Salem County)

State/Fed Reps: Russ Babb, Bureau of Shellfisheries

Craig Tomlin, Bureau of Shellfisheries Andrew Hassall, Bureau of Shellfisheries Alison Sloan, Bureau of Law Enforcement

Haskin Lab: David Bushek, Director

Jason Morson, Laboratory Researcher Jennifer Gius, Laboratory Researcher

General Public

Compliance with the Sunshine Law

Notice of this meeting was posted February 6, 2020 with the Secretary of State's Office, State House, Trenton, NJ and the Bridgeton Evening News, and Daily Journal pursuant to L. 1975 c. 231.

Mr. Tomlin welcomed everyone to the meeting, performed roll call, and read the above compliance. Councilman Hollinger reviewed the revenue and account information below.

#### 1. Revenue collected for January totaled \$8,326.00 and is summarized as follows:

License Type	Total	License Type	Total
Commercial Crab Pot	\$700.00	Dredge Boat Renewal	\$51.00
Nets	\$2,090.00	Commercial Shellfish	\$450.00
Application Fees	\$108.00	Recreational Shellfish	\$40.00
DB & AC Crab Dredge	\$1,100.00	Assign Fees	\$2,100.00
Tonging Tags	\$400.00	Lease Fees	\$71.00
Otter Trawl	\$102.00	Map Sales	\$154.00
Menhaden	\$692.00	Area 1, 2&3	\$268.00

#### Revenue collected for February totaled \$3,982.00 and is summarized as follows:

License Type	Total	License Type	Total
Commercial Crab Pot	\$600.00	Commercial SF	\$200.00
Nets	\$1,810.00	Recreational Shellfish	\$60.00

Application Fees	\$96.00	Tonging Tags	\$600.00
DB Crab Dredge	\$100.00	Menhaden	\$516.00

#### **Oyster Resource Development Account (082):**

(as of 03/03/20)

Unexpended	\$ 375,475.14	Budget authority less expenditures ( <i>total spendable dollars currently in account</i> )
Pre-Encumbered 2018-2019 Fiscal Year June 24, 2019	\$ 24,693.79 (Nantuxent Channel Survey)	Total outstanding requisitions processed against the appropriation (Amount previously set-aside for preparation of term contracts – since cancelled)

Councilman Hollinger reviewed the unexpended budget and added that Mr. Tomlin said there would be another \$100,000.00 added to that account. Mr. Tomlin elaborated that the Bureau conducted shell planting work in 2019 that was supposed to paid for from the Mitigation account. He said the money instead came from the Oyster Resource Development Account (ORDA). Mr. Tomlin reported that inquired about the ORDA budget and that the \$100,000.00 was to be reinstated into the ORDA. Councilman Malinowski clarified that the ORDA would have a balance of \$475,457.14. Mr. Babb explained that the Mitigation account was monies from dock construction and coastal development on the coast. He said that the Bureau was told a two years ago to start using that money in a discretionary way, and tasked Mr. Tomlin with purchasing \$50,000.00 worth of shell the past two years. He ensured that it was a simple accounting error that it came from the ORDA.

Councilman Hollinger reviewed the pre-encumbered money for the Nantuxent channel survey. He informed that Stockton surveyed on February [12<sup>th</sup> and 13<sup>th</sup>] and said Mr. Hassall had more information. Mr. Hassall reiterated that Stockton's Coastal Research Center surveyed the bathymetry of Nantuxent Creek and Cove on February [12<sup>th</sup> and 13<sup>th</sup>]. He explained that Stockton was to use that data to determine where to take sediment cores to observe what sediment types were throughout the Creek and Cove. Mr. Hassall reported that Stockton was processing the bathymetry data and would share their results with the Bureau.

Mr. Hassall also informed the Council that there was a time extension that the Bureau was applying for through a modification/amendment to the contract, which was a straightforward process. He explained that the contract was delayed in execution which resulted in a shifted timeline, and that the timeline on the contract was not shifted accordingly. Mr. Hassall additionally informed that there were minor budgeting issues on Stockton's end that required restructuring the budget within the modification/amendment. He added that there was no change to the project's total cost so that would also make the modification easier. Councilman Hollinger asked if Stockton found anything from their bathymetric survey. Mr. Hassall said he had not heard any results. Councilman Fleetwood asked if Stockton was done their survey. Mr. Hassall explained that Stockton was done their bathymetric survey, but still had to conduct their sediment core survey.

#### 2. Oyster Lease Ground Renewals/Non-Renewals:

#### **2.1.** Non renewed lease tabled from January meeting

Mr. Tomlin reminded the Council that the Bureau did not have enough time before the January Council meeting to send letters to those who did not renew their leases. He said there was one non-renewal that was tabled from the January meeting for Joseph Haase, who was present. Councilman Fleetwood motioned to approve the lease renewal for Joseph Haase. Councilman Hollinger seconded the motion. All were in favor and the motion passed.

#### 3. Old Business

#### **3.1.** Approval of January 7, 2020 minutes

Mr. Tomlin reminded the Council that the minutes were mailed at the end of February which the Council confirmed. Councilman Fleetwood motioned to approve the January 7, 2020 minutes. Councilman Malinowski seconded the motion. All were in favor and the minutes were approved.

#### 3.2. Tongers Industry Update

Mr. Hassall reported that as of February 10<sup>th</sup>, there were 1,050 bushel tags sold totaling \$2,100, and that the total reported tongers harvest from ten tongers was 628 bushels as of February 14<sup>th</sup>. He added that most of the harvest was coming from Nantuxent Cove, and some from the Maurice River Cove.

#### **3.3.** Reconvening Consolidation Committee

Mr. Hassall said he had a list of five people that wanted to be on the Consolidation Committee which included:

# Councilman Fleetwood, Councilman Hollinger, Timothy Reeves, Bill Riggin, and Bobby Robbins.

Mr. Tomlin said that the Bureau would like the Council to set a date for the Committee to meet. After a brief discussion, the Council agreed that the first meeting would be on March 9, 2020 at 1:00 PM at the Haskin Lab. Mr. Tomlin said he would send a letter to the Secretary of State to inform about the meeting and to comply with the Sunshine Law.

Mr. Babb reminded that during a previous Council meeting when they discussed reconvening the Committee, he mentioned that the Bureau possibly had an opportunity to open rules and make minor changes to the consolidation rules. He said that the Bureau would probably not be able to be put the consolidation rule changes in with the other rule changes for aquaculture. He added that it may have had to be its own rule change, but that it may still go forward in 2020 if the Committee came to a consensus.

#### 3.4. Leasing Committee Updates

Mr. Tomlin reported that the Leasing Committee held had two meetings since the last Council meeting. Councilman Hollinger informed that the next meeting would be February 24<sup>th</sup> at 1:30 PM at the Haskin Lab. Mr. Tomlin said that a lot of options and ideas had been discussed at the meetings and that there was no consensus on any of the topics, but at least the conversation was happening.

#### 3.5. Red Knot Stake Holder Committee Update

Councilman Hollinger said the approved changes to the Conservation Measures (CMs) of the Programmatic Biological Opinion were released in February 2020. He reported that the Committee was able to have two of the three changes made to the CMs through the US Fish and Wildlife Service (USFWS). He explained that he first CM was that instead of the lessees having to put two racks together, the USFWS allowed to have alleys between the racks for washing rack and bags. The second CM change was that the rack height was reduced to be maintained at nine inches

instead of 12 inches. The rack height would not be in effect until April 2022 when the rule change would take effect, and the lessees must maintain the 12-inch rack height until then. He reminded that the third change that was not approved was increasing the time for lessees to work their leases around the low tide.

#### 4. New Business

#### **4.1.** Review 2020 Stock Assessment Workshop Findings

Dr. Bushek started a presentation that reviewed the status of the Delaware Bay oyster stock based on 2019 sampling and data. Dermo had been the main source of mortality in the past, but appeared to be lower in current years. Since the end of 2017 through 2019 the Dermo mortality decreased, but there was an uptick in natural mortality. He said this was most likely due to the high freshwater input from the excess rainfall over the past two years. This freshwater influx pushed Dermo down Delaware Bay which helped the oysters, but also killed off oysters in the northern most reaches of their extent in the Bay. It appeared that Dermo disease was slowing down, so part of the SARC's science advice was to see why dermo mortality decreased whether from freshwater influx or a possible resistance being built up towards Dermo. Dr. Bushek reviewed the water discharge charts from the U.S. Geological Survey station in Trenton which showed the large amounts of freshwater coming down the Delaware River into the Bay. He said the Lab would like to meet with the Delaware River Basin Commission to show them the data and its effect on the oysters and see if the water flow can be adjusted to accommodate the oyster population.

Dr. Morson continued the presentation and reviewed the overall population trends which were broken down into overall abundance, abundance of sub-market and market sized oysters (< 2.5" and > 2.5"), natural mortality, Dermo prevalence, and spat recruitment. The total oyster abundance decreased over the last two years, but the market size abundance had been stable at appropriate levels. The overall abundance was between the target and threshold, and the market/sub-market abundances were above the target and threshold. He explained that the mortality rate had been decreasing for years which corresponded with the decreasing Dermo mortality, but that the uptick in the last two years was due to the freshwater influx. The spat recruitment was low in 2018 and 2019, which followed two great recruitment events in 2016 and 2017.

Dr. Morson then reviewed these trends within each individual management region which included the Very Low Mortality (VLM), Low Mortality (LM), Medium Mortality Transplant (MMT), Medium Mortality Market (MMM), Shell Rock (SR), and High Mortality (HM) regions. Most of the regions generally followed the trends of the overall population, except for the VLM region which had the most mortality from the freshwater influx. He highlighted a few other differences including extremely low levels of market sized oysters on the VLM region, the Shell Rock market size abundance was at its highest level since monitoring started in 1990, and that the LM region had all of its abundances above its target abundance. He explained that the presented plots along with other information were given to the Stock Assessment Review Committee (SARC) to use to decide on their recommendations of exploitation rates for each region to the Council for setting the 2020 quota.

Dr. Morson then summarized the SARC recommendations which were as follows. For the transplant regions, the VLM was recommended to be closed. The maximum exploitation rate (exp. rate) of 2.26% on the LM region was recommended which would have resulted in 26,099 bushels (bu.) transplanted from the LM to MMM region. The maximum exp. rate of 2.46% on the MMT region was recommended which would have resulted in 18,348 bu. transplanted from the MMT to HM region.

For the direct market regions, the SARC recommended the maximum exp. rate of 4.88% for SR without a transplant. For the MMM region, it was recommended to use the median exp. rates of 3.03% totaling 16,216 bu. if no transplant was conducted to that region. For the HM region, it was recommended to use the median exp. rate of 7.49%. totaling 33,903 bu. if no transplant was conducted to that region. If an intermediate transplant occurred, the SARC recommended to allow the maximum exp. rate of 3.70% for the MMM region totaling 19,801 bu. and 9.82% for the HM region totaling 44,449 bu.

**4.2.** Setting of the 2020 direct market oyster fishery quota and season dates

After some discussion, Councilman Fleetwood made a motion for the following direct market fishery scenario and the intermediate transplant scenario in agenda item 4.3:

- to start the 2020 direct market fishery season April 6, 2020;
- to remove more larger oysters from the oyster population by opening all regions in the beginning of the season, close the HM and SR regions when their regional harvests reached 35,000 bu. each, harvest the remaining MMM quota, and then reopen the HM and SR regions for the remainder of the season;
- to start the quota at the SARC recommendation of **97,103 bu.** with the maximum exp. rate of 4.88% for SR (46,984 bu.), and the median exp. rates of 3.03% for the MMM (16,216 bu.) and 7.49% for the HM (33,903 bu.);
- to increase the exp. rate on the HM region to the maximum of 9.82% (44,449 bu.) if a transplant is conducted to the HM region which would make the total quota after the transplant 107,649 bu. with additional bu. towards the HM quota that may come from the transplanted market sized oysters;

#### Councilman Hollinger seconded the motion. All were in favor and the motion passed.

Mr. Tomlin commented that he reviewed the harvest rates for the previous three years, which showed that the industry harvested 35,000 bu. on the HM region by June. He said this would leave the SR region open for the *Vibrio* season.

Dr. Morson said he thought closing the SR and HM regions at 35,000 bu. and reopening after the MMM region was harvested to target larger oysters was good from a management standpoint. However, he cautioned that the SARC should keep this strategy in mind when evaluating the quota recommendations because the larger sized oysters may reduce the average number of oysters per bushel used to calculate the quota. *Further discussion ensued*.

After setting the 2020 direct market and intermediate transplant scenarios, the Council set the dates for the season as follows:

• Direct Market Program Sign-Up Period: March 16, 2020 through March 26, 2020

• Tags Available: March 30,2020

Direct Market Program Opens: April 6, 2020
 Direct Market Fishery Closes: November 27, 2020\*

• Intermediate Transplant Sign-Up Period: March 16, 2020 through March 26, 2020

• Intermediate Transplant Begins: April 20, 2020

<sup>\*</sup> If water temperature at Ship John Light falls below 10 degrees Celsius prior to November 20, 2020 the season will close on November 20, 2020.

After discussion, Councilman Hollinger made a motion to approve the direct market and intermediate transplant dates outlined above. Councilman Fleetwood seconded the motion. All were in favor and the motion passed.

#### **4.3.** Setting of the 2020 intermediate transplant parameters

While making a motion for the 2020 direct market oyster fishery quota, Councilman Fleetwood also motioned for the following 2020 intermediate transplant scenario:

- to require a transplant of up to 44,447 bu. to include an exp. rate of 2.26% from the LM region (26,099 bu.) and 2.46% from the MMT region (18,348 bu.);
- to not follow the SARC recommendation of transplanting from the LM to MMM and from the MMT to HM region, but instead to transplant from both LM and MMT regions to the HM region;
- to start the transplant in the LM region, and move to the MMT region if and when the LM region appears to degrade and no longer look suitable for harvest.

Since this scenario was part of the direct market scenario motioned by Councilman Fleetwood, Councilman Hollinger already seconded the motion and all were in favor. Further discussion ensued.

After some discussion, Councilman Hollinger said that the Council had not raised the transplant fee in many years. Councilman Hollinger made a motion to increase the intermediate transplant fee from \$2.75 per bushel to \$3.00 per bushel. After a brief discussion, Councilman Fleetwood seconded the motion. All were in favor and the motion passed.

#### **4.4.** Aquaculture Development Zone new lease agreements

Mr. Tomlin said that the Bureau had the new lease agreements as well as the new shed lot agreements for those with an ADZ lease. He informed that the Bureau would send a letter out the following day notifying the ADZ lease holders that the lease agreements would be available the following week and would like them to be signed before April 1, 2020. Councilman Hollinger said that he and Ned Gaine had made comments on the lease agreements. Mr. Tomlin replied that the State incorporated comments that were allowed, but could not incorporate all of them. Councilman Hollinger elaborated that anyone that had an ADZ lease had the opportunity to obtain a shed lot lease. He continued explaining that the ADZ lease was with the Bureau of Shellfisheries, but the shed lot lease was with the Bureau of Lands Management.

Mr. Gain opined that there was one concept in the shed lot agreement he did not care for, which was that the agreement was able to dictate what could be done in Delaware Bay. He expressed his dislike because the agreement is only for the shed lot. Mr. Tomlin replied that the items Mr. Gaine was concerned with were derived from specific events that occurred on the Dennis Creek Wildlife Management Area (WMA) before and after it became a WMA which was why it was included in the lease agreement. He also said that WMAs do not allow commercial activities under normal circumstances. Therefore, the ADZ lease holders were held to a higher standard and the agreements were stricter because the licenses allowed a commercial activity on a WMA. *Further discussion ensued*.

#### **4.5.** Aquaculture Development Plan

Councilman Fleetwood was informed there was an Aquaculture Development Plan update that was sent out by the Aquaculture Advisory Council (AAC). He said that comments were due by March 20, 2020, but he had not heard about the document until right before the Council meeting and did not receive a copy of the document or the email in which it was dispersed. He was concerned that he was not given a chance to comment on a document that would have affected his aquaculture activities in NJ, and that he had not been sent a copy as a Council member.

Ned Gaine agreed that not enough information was being shared to the lease holders by the AAC. The message conveyed to him was that comments were due by March 20 and action would be taken at the next AAC meeting, which left him to assume there would be no further input from the public for this document which was not the case. Councilman Fleetwood said he would like the Council to send a letter to the AAC to ask for more time to comment on the document, and a letter to the Atlantic Coast Section of the Council to make sure they were aware of the document. Councilman Hollinger who sits on the AAC said that the AAC did not intend for the lack of communication and would gladly disperse the document to those that did not receive it. He also agreed the Council should ask for a time extension for comments by the public and the Council. Dr. Bushek commented that the document was the existing document that had been posted on the AAC website [since 2011], and that these were updates to that living document. Further discussion ensued. Mr. Tomlin said he would draft the letters for the Council to send out.

After discussing timing for the comments to the AAC document, Councilman Fleetwood motioned to have the next Council meeting on April 7, 2020 to meet before the next AAC meeting. Councilman Hollinger seconded the motion. All were in favor and the motion passed.

Councilman Malinowski asked if anybody had other issues to attend, to which no one responded. Councilman Hollinger motioned to adjourn the meeting. Councilman Malinowski seconded the motion. All were in favor and the meeting was adjourned.

**5.** The NJ Shellfisheries Council, Delaware Bay Section meeting adjourned at 7:19 PM.

The tentative date, time, and place of the next Council meeting will be:

Date: April 7, 2020 Time: 6:00 PM

Place: Haskin Shellfish Research Laboratory

6959 Miller Ave Port Norris, NJ 08349

### Attachment 2.

### **Consolidation Committee Meeting Minutes - March 9, 2020**

(presented for approval)

# MINUTES OF THE MEETING OF THE DELAWARE BAY SECTION OF THE NEW JERSEY SHELLFISHERIES COUNCIL

# SPECIAL MEETING CONSOLIDATION COMMITTEE

Haskin Shellfish Research Laboratory Bivalve, NJ Monday, March 9, 2020 1:00 PM

Present were: Committee: Councilman Warren Hollinger, Chairman (Cumberland County)

Councilman Steven Fleetwood, Vice Chairman (Cumberland County)

Timothy Reeves, Industry William Riggin, Industry Robert Robbins, Industry

State/Fed Reps: Craig Tomlin, Bureau of Shellfisheries
Andrew Hassall, Bureau of Shellfisheries

Compliance with the Sunshine Law

Notice of this meeting was posted March 5, 2020 with the Secretary of State's Office, State House, Trenton, NJ and the Bridgeton Evening News, and Daily Journal pursuant to L. 1975 c. 231.

#### 1. Committee Goals

For the purposes of the meeting, it was held as an open floor discussion. Mr. Tomlin stated the goals of the Committee were to discuss what the existing consolidation rules were [within N.J.A.C 7:25A-1.3 through 1.5], discuss the Committee and industry members' ideas about possible rule changes, and come up with a consensus on changes to the rules to be presented to the Council. He noted that the rule changes were for the industry and not for the State, and that the State only had a few criteria they wanted kept in place. Mr. Tomlin directed the Committee to a packet he distributed that contained the New Jersey consolidation regulations, and for example references also contained regulations for surf clams in NJ and a few other states' regulations including Delaware and Louisiana. He noted that the surf clam regulations allowed three licenses to be harvested by one vessel and that there were no tonnage requirements.

#### 2. Discussion of the Rules

Mr. Tomlin reviewed a list of ideas brought to him from various industry members on how the consolidation rule should be changed. He told the Committee that the three most common ideas included no tonnage requirements for the licenses, assigning the licenses to an individual instead of a boat, and that licenses stand alone with no license number or boat attached. Mr. Tomlin stated that the Committee had many options for changes to the rule as long as they agreed no more than the prescribed quotas were to be harvested and they did not increase the number of licenses.

The Committee and Bureau representatives had a long discussion about the different aspects of the existing rules and scenarios of changing those rules. The topics discussed included: keeping the dredge requirements in place; keeping the license fee structure by tonnage or changing the fee to a fixed rate; if tonnage regulations should be removed; if the licenses should be assigned to a vessel or entity, or become unattached to any vessel or entity; if quotas could become transferrable with a designated agent to harvest; and how many licenses should be allowed for consolidation onto one vessel.

#### 3. Meeting Results and Future Planning

A consensus was not met by the Committee on any topics discussed, but nothing was completely disregarded. The Committee agreed there were to be no changes to the rules that govern the size, number, and weight of the dredges, and that the number of licenses and quota would not be increased or surpassed. From the topics discussed, the Bureau agreed to review the tonnages and fees for the 80 existing licenses to find the minimums, maximums, and averages.

The Committee agreed they would take time to think about the scenarios put forth and would continue the discussion at the next meeting. Mr. Tomlin said the Bureau would also review the different scenarios to see if there would be issues with any of them, and what may be plausible to change. Mr. Tomlin said he would provide an update to the Committee, and that everything may be discussed at the next meeting. The Committee agreed to table all discussion, and to hold the next meeting April 1, 2020 at 1:00 PM.

4. The Consolidation Committee meeting of the NJ Shellfisheries Council, Delaware Bay Section adjourned at 2:35 PM.

The tentative date, time, and place of the next Committee meeting will be:

Date: April 1, 2020 Time: 1:00 PM

Place: Haskin Shellfish Research Laboratory

6959 Miller Ave Port Norris, NJ 08349

# Attachment 3.

# **Direct Market Harvest Summary Table**

April 6 - May 6, 2020

Seed Bed	<b>Bushels Harvested</b>	<b>Boat Days</b>	CPUE
Shell Rock	3089	17	181.7
Nantuxent	2735	23	3 118.9
Bennies Sand	1715	12	142.9
Hog Shoal	127	-	127.0
Bennies	60	-	60.0
HMM subtotal	4637	37	125.3
	High Mortality Regior	CPUE Average	114.8
	Overal	I CPUE Average	126.1
Grand Total	7233	5!	131.5

Date	<b>Bushels Harvested</b>	<b>Boat Days</b>	CPUE	
4/6/2020	435		2	217.5
4/7/2020	322		2	161.0
4/8/2020	60		1	60.0
4/14/2020	197		1	197.0
4/15/2020	493		4	123.3
4/16/2020	191		1	191.0
4/17/2020	175		1	175.0
4/20/2020	746		5	149.2
4/21/2020	294		3	98.0
4/23/2020	710		6	118.3
4/24/2020	358		2	179.0
4/27/2020	701		4	175.3
4/28/2020	308		2	154.0
4/29/2020	839		6	139.8
April subtotal	5829		40	145.7
April Avg CPUE				152.3
5/1/2020	685		5	137.0
5/4/2020	355		3	118.3
5/5/2020	550		3	183.3
5/6/2020	307		4	76.8
May subtotal	1897		15	126.5
May Avg CPUE				128.9
Grand Total	7233		55	131.5

	Bushels Planted on	Percent of
Seed Beds	Lease Grounds	<b>Total Harvest</b>
Nantuxent	2157	7 30%
Shell Rock	1311	18%
Bennies Sand	417	7 6%
<b>Grand Total</b>	3885	54%

### Attachment 4.

### **List of Additional Resources**

### 2020 Vibrio Control Plan:

https://www.nj.gov/dep/bmw/docs/nj2020vibrioplan.pdf

### **January 2020 Revised Conservation Measures:**

 $\underline{https://www.fws.gov/northeast/njfieldoffice/pdf/Aquaculture 2020.pdf}$