

**A Report to the Mid-Atlantic Fishery Management Council
on the Delaware Division of Fish and Wildlife's Request for
Special Management Zone (SMZ) Designation for Five Artificial Reef Sites in the EEZ**

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SMZ Monitoring Team

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Executive Summary

The Delaware Division of Fish and Wildlife (DFW) has petitioned the Mid-Atlantic Council to designate 5 artificial reef sites as Special Management Zones (SMZs) in the EEZ under provisions of Amendment 9 to the Summer Flounder, Scup and Black Sea Bass FMP. The justification for this request was based on the need to ameliorate gear conflicts between hook and line fishermen and fixed pot/trap gear at those sites. The DFW may face termination of funding for its artificial reef program in the EEZ under the US Fish and Wildlife Service Sport Fish Restoration (SFR) Program (which is effectively the DFW's sole source of funding for its reef program) if this alleged gear conflict issue is not resolved.

A Monitoring Team was formed to evaluate the DFW request relative to the following factors: (1) fairness and equity; (2) promotion of conservation; (3) avoidance of excessive shares; (4) consistency with the objectives of Amendment 9 to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan, the Magnuson-Stevens Act, and other applicable law; (5) the natural bottom in and surrounding potential SMZs; and (6) impacts on historical uses. This report contains an analysis of these factors and recommendations relative to the DFW request. Based on that analysis, the SMZ Monitoring Team reached the following conclusions:

1. There is no evidence of potential gear conflicts on Delaware's artificial reef sites in the EEZ based on the reported levels of fishing activity at those sites from VTR data, *except* at reef sites 11 and 13. Only limited information is available for reef site 14 relative to the levels of recreational fishing activity at that site.

2. Designation of reef sites 9, 10, 13 and 14 as SMZs would be consistent with past Council policy relative to the permitting and deployment of artificial reefs at these sites, but may not be relative to site 11 because the Council was opposed to placement of an artificial reef at this location in 1996 during the original permit application in a letter to the Army Corps of Engineers.

3. Significant precedent exists in other regions (i.e., the South Atlantic) to conclude that the designation of Delaware's five artificial reef sites in the EEZ as SMZs (which would include gear restrictions in those areas) is consistent with the Magnuson Act and other applicable law.

4. The recommendation the Council makes with respect to SMZ designation for Delaware reef sites has important implications for the 30 other permitted artificial reef sites which currently exist within the EEZ portion of black sea bass management unit. The conclusion reached in the current social and economic assessment is that designation of SMZ status for the five Delaware reef sites would not impact a significant number of entities since available evidence indicates that a relatively small number of pot/trap fishermen utilize Delaware reefs in the EEZ. This conclusion might have been different if the Council were considering SMZ status for all 35 EEZ reef sites which are currently permitted to the states.

Based on the weight of evidence examined, the SMZ Monitoring Team recommends the following:

1. Given this decision is largely driven by policy considerations which are entirely under the purview of the Council's policy making function, the Council should convene the Demersal Committee (or if appropriate, a special working group) with industry advisors to develop a long term solution to this issue. It is imperative that this policy analysis consider all relevant factors and considerations and not be based solely on the issue of gear conflicts (as is the case here). Complaints about gear conflicts at New Jersey reef sites in the EEZ have already caused the USFWS to terminate that states SFR Program funding (NJ currently has 13 sites in the EEZ), so this issue extends well beyond the 5 reef sites considered in this analysis.
2. Until such time that the Council can develop a longer term solution to this issue based on a broader consideration of all relevant factors and issues, the SMZ Monitoring Team recommends that the Council consider designating all five of Delaware's artificial reefs located in the EEZ as SMZs during time periods when the recreational season for black sea bass is open. The SMZs would prohibit the use of fixed pot/trap gear within 1000 yards of the five artificial reef sites during the time period when the recreational season for black sea bass is open to ameliorate any real or potential gear conflicts at those sites (1000 yard buffer based on input from USCG and NMFS law enforcement personnel).
3. The Council would reserve the right to change or revise these SMZs, including any gear restrictions imposed as a result of such designations, if future analyses cause the Council to alter its policy with respect to SMZs during a broader consideration of this issue.
4. The Council should review the 2007 National Artificial Reef Plan and modify (if necessary) and implement the artificial reef policy it adopted in 1995.

1.0 Introduction

At its June 2011 meeting in Port Jefferson, New York, the Mid-Atlantic Fishery Management Council (Council) received a request from the State of Delaware's Division of Fish and Wildlife (DFW) to designate its five artificial reefs located in the Exclusive Economic Zone (EEZ) as Special Management Zones (SMZs). Amendment 9 to the Summer Flounder, Scup and Black Sea Bass FMP (approved by NOAA on 17 October 1996; see 61 FR 58467, Nov. 15, 1996) incorporated a provision into the FMP (Section 9.1.2.7) that allows for the designation of artificial reefs in the EEZ as SMZs, if so petitioned by the permit holder.

The current regulatory language (as of July 19, 2012) pertaining to the SMZ provision of the FMP can be found at 50 CFR Part 648: Subpart I - Management of the Black Sea Bass Fishery as follows:

§ 648.148 Special management zones.

The recipient of a U.S. Army Corps of Engineers permit for an artificial reef, fish attraction device, or other modification of habitat for purposes of fishing may request that an area surrounding and including the site be designated by the MAFMC as a special management zone (SMZ). The MAFMC may prohibit or restrain the use of specific types of fishing gear that are not compatible with the intent of the artificial reef or fish attraction device or other habitat modification within the SMZ. The establishment of an SMZ will be effected by a regulatory amendment, pursuant to the following procedure:

(a) A SMZ monitoring team comprised of members of staff from the MAFMC, NMFS Northeast Region, and NMFS Northeast Fisheries Science Center will evaluate the request in the form of a written report, considering the following criteria:

- (1) Fairness and equity;
- (2) Promotion of conservation;
- (3) Avoidance of excessive shares;
- (4) Consistency with the objectives of Amendment 9 to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan, the Magnuson-Stevens Act, and other applicable law;
- (5) The natural bottom in and surrounding potential SMZs; and
- (6) Impacts on historical uses.

(b) The MAFMC Chairman may schedule meetings of MAFMC's industry advisors and/or the SSC to review the report and associated documents and to advise the MAFMC. The MAFMC Chairman may also schedule public hearings.

(c) The MAFMC, following review of the SMZ monitoring team's report, supporting data, public comments, and other relevant information, may recommend to the Regional Administrator that a SMZ be approved. Such a recommendation will be accompanied by all relevant background information.

(d) The Regional Administrator will review the MAFMC's recommendation. If the Regional Administrator concurs in the recommendation, he or she will publish a proposed rule in the Federal Register in accordance with the recommendations. If the Regional Administrator rejects the MAFMC's recommendation, he or she shall advise the MAFMC in writing of the basis for the rejection.

(e) The proposed rule to establish a SMZ shall afford a reasonable period for public comment. Following a review of public comments and any information or data not previously available, the Regional Administrator will publish a final rule if he or she determines that the establishment of the SMZ is supported by the substantial weight of evidence in the record and consistent with the Magnuson-Stevens Act and other applicable law.

1.1. Formation of SMZ Monitoring Team

Based on requirements described above, an SMZ Monitoring Team (MT) was formed consisting of members of MAFMC Staff, the Northeast Fisheries Science Center (NEFSC), and the Northeast Regional Office (NERO) to evaluate the SMZ request submitted to the MAFMC by Delaware (see appendix i). The role of the MT is to evaluate Delaware's SMZ request for 5 reef sites in the EEZ based on the criteria developed in Amendment 9 in the form of a written report.

1.2 Basis/Justification for Delaware's SMZ Request

In a letter to Dr. Chris Moore dated April 19, 2011 (appendix ii), the DFW formally requested that the Council designate its five artificial sites currently permitted in the EEZ, (as defined by the Army Corps of Engineer [COE] permit number CENAP-OP-R-20050059-1) under the SMZ provisions of Amendment 9 to the Summer flounder, Scup and Black Sea bass FMP described above. In the SMZ request letter it was noted that "the DFW has been receiving complaints from hook and line anglers regarding fouling of fishing gear in commercial pots and lines on ocean reef sites for more than 10 years". In a presentation to the Council at its June 2011 meeting, the DFW also identified "a gear conflict between hook and line fishermen and fixed pot/trap fishermen" (including fixed commercial gear targeting black sea bass, lobster and conchs) in which hook and line fishermen foul their hooks on this fixed gear resulting in lost rigs (on both actively fished pots and lost "ghost" gear).

In its SMZ request letter, the DFW also noted that "more recently the USFWS Sportfish Restoration Program Office in Hadley, MA has begun receiving complaints from fishing groups and individuals from the Mid-Atlantic" (the SMZ MT assumed these complaints refer to gear conflicts). Finally, the DFW noted that they were notified by USFWS in March 2011 "that when gear conflicts occur, pot fishing on reef sites is not consistent with the objectives of their Sportfish Restoration Program. State reef programs must be able to limit gear conflicts by regulations in state waters or by way of SMZ's for sites in the EEZ in order to comply with the goals of the Sportfish Restoration Program." This theme was also articulated during a presentation to the Council by the USFWS entitled *Dingell – Johnson Sport Fish Restoration Program(SFRP) - Recreational and Commercial Fishing Conflicts on Artificial Reefs - Implications for Federal Funding*. That presentation described the artificial reef grant objectives of USFWS to be "to increase diversity, abundance and availability of reef-dependent

species sought by recreational fishermen through creation of artificial reefs and to provide increased fishing opportunities for recreational anglers". The major issues from the USFWS perspective include 1) proliferation of commercial fishing traps/pots on artificial reefs constructed with Dingell-Johnson Sport Fish Restoration (SFR) funds, 2) commercial/recreational gear conflict interferes with accomplishment of artificial reef grant objectives and 3) absence of mechanisms to manage commercial fishing on reefs located in State-controlled waters and the Exclusive Economic Zone. The USFWS noted the following implications for SFR funding in cases where commercial/recreational gear conflicts are not remedied: 1) replacement of expended funds 2) suspension or termination of project for noncompliance and 3) declare the State ineligible to participate in SFR program. In April 2011, the USFWS terminated SFR Program funding for New Jersey's artificial reef program based on concerns regarding conflicts involving hook and line recreational fishermen and fixed pot/trap gear on the states artificial reefs (see 12 April 2011 letter from John Organ to Bob Martin in appendix ii).

Thus, the following evaluation by the SMZ Monitoring Team of Delaware's request for SMZ status for its 5 reef sites in the EEZ focuses on the proliferation of gear conflicts between recreational fishermen and fixed pot/trap gear described by DFW in its 12 April 2011 letter and the contention that gear conflicts are contravening the goals of its artificial reef program. As noted above, this contention is consistent with policy guidance relative to acceptable uses of artificial reefs funded with SFR funds as articulated by the USFWS.

It is important for the Council to note that there are 30 additional artificial reefs permitted to other states which exist within the EEZ portion of the black sea bass management unit (Table 1). The USFWS policy of termination of SFR Program funding to state reef programs for failure to resolve the stated gear conflict issue has already been put into action relative to New Jersey's reef program (see appendix ii) through termination of SFR Program funding for that state's artificial reef program. An important policy implication for Council consideration is that SFR Program funding for Delaware's artificial reef program, as well as other state artificial reef programs in the Mid-Atlantic region, may be terminated by the USFWS if solutions to the gear conflict concerns raised by the USFWS are not addressed.

2.0 History of Development of Delaware Reef Sites

The Delaware DFW received authorization to begin constructed artificial reef sites at 11 sites in the Delaware Bay and the Atlantic Ocean in November 1994 (pursuant to COE Permit CENAP-OP_R_199400886-1). That permit allowed for construction of three reef sites in the EEZ including reef sites 9, 10 and 11 (see below for a complete description of each reef site). Deployment of materials on reefs sites 9 and 10 began in August 1995 and on site 11 in January 1996.

The DFW received a second permit from the COE in January 2006 (permit number CENAP-OP-R-200500059-1) that authorized the continued deployment of artificial reef materials at the 11 original sites (referenced above) and at three new sites, two of which are located in the EEZ (reef sites 13 and 14). Deployment of reef materials on reef site 13 commenced in December 2007 and to date, no materials have been deployed by DFW on site 14 (J. Tinsman, pers. comm.). It is

important to note that DFW's original COE permit pre-dated the implementation of the SMZ provision implemented in Amendment 9. However, an opportunity existed for the DFW to petition the Council for SMZ status for any and/or all of its reef sites during the permitting process in 2006.

2.1 Delaware Reef Sites Description

The Delaware artificial reefs are part of a complex of 14 artificial reefs sites, permitted by the US Army Corps of Engineers and maintained by the State of Delaware. The sites are in Delaware Bay and the Atlantic Ocean. Only the five artificial reef sites (sites 9, 10, 11, 13, and 14) maintained in Federal waters are described here (Figure 1).

Site 9

Artificial Reef Site #9 is located 4.5 nautical miles northeast of Indian River Inlet, Delaware and has an authorized minimum vertical clearance of fifty (50) feet above all structures at mean low water elevation. It has a depth range is 52-64 ft. The nearest ports are Roosevelt Inlet (12 NM) and Indian River Inlet (4.5 NM). The epifaunal community is blue mussel. The fish in the area are black sea bass, tautog, weakfish, striped bass, summer flounder, and croaker. The primary substrate is sand. Latitude and longitude corner coordinates are: SE 38°39.970' - 074°59.300' - SW 38°40.050' - 075°00.700' - NE 38°40.800' - 074°58.900' 9 52'-64' - NW 38°40.850' - 075°00.400'.

Site 10

Artificial Reef Site #10 is located 5.5 nautical miles east of Indian River Inlet and has an authorized minimum vertical clearance of fifty (50) feet above all structures at mean low water elevation. It has a depth range of 56-64 ft. The nearest port is Indian River Inlet (5.4 NM). The epifaunal community is blue mussel. Fish in the area are black sea bass, tautog, weakfish, striped bass, summer flounder, and croaker. The primary substrate is hard sand. Latitude and longitude corner coordinates are: SE 38°36.200' - 074°55.674' - SW 38°36.296' - 074°57.150' - NE 38°37.000' - 074°55.375' - NW 38°37.100' - 074°56.800'.

Site 11

Artificial Reef Site #11 is located 16.5 nautical miles east of Indian River Inlet and has an authorized minimum vertical clearance of fifty (50) feet above all structures at mean low water elevation. It has a depth range of 68-88 ft. The nearest port is Indian River Inlet (16.5 NM). The epifaunal community is blue mussel. Fish in the area are black sea bass, tautog, bluefish, and summer flounder. The primary substrate is sand. Latitude and longitude corner coordinates are: SE 38°39.880' - 074°43.050' - SW 38°40.000' - 074°44.800' - NE 38°40.750' - 074°42.750' - NW 38°40.850' - 074°44.500'.

Site 13

Artificial Reef Site #13 is located 26 nautical miles east of Indian River Inlet and has an authorized minimum vertical clearance of sixty (60) feet above all structures at mean low water

elevation. It has a depth range of 120-130 ft. The nearest port is Indian River Inlet (26 NM) and Cape Henlopen (32 NM). The epifaunal community is soft coral, northern coral, anemone, and ectoproct. Fish in the area are black sea bass, tautog, winter flounder, cod, and red hake. The primary substrate is sand. Latitude and longitude corner coordinates are: SE 38°30.140' - 074°30.580 - SW 38°30.220' - 074°31.500', NE 38°31.735' - 074°30,020' - NW 38°31.616' - 074°30.865.

Site 14

Artificial Reef Site #14 is located 58 nautical miles east of Indian River Inlet and has an authorized minimum vertical clearance of eighty (80) feet above all structures at mean low water elevation. It has a depth range of 180-186 ft. The nearest port is Indian River Inlet (58 NM), Cape Henlopen (612 NM), Cape May Inlet (55 NM), and Ocean City MD (61NM). The epifaunal community is soft coral, northern coral, anemone, and ectoproct. Fish in the area are black sea bass, tautog, winter flounder, cod, and red hake. The primary substrate is sand. Latitude and longitude corner coordinates are: SE 38°31.800' - 073°48.067 - SW 38°31.800' - 073°49.767 - NE 36°32.700' - 073°48.067' - NW 38°32.700' - 073°49.767'.

Materials Allowed on the Reefs:

Under the US Army Corps of Engineers permit for the Delaware reef program, artificial reef materials permitted for use on the sites are (2) separate categories. The first are specifically designed reef materials. These design materials are materials constructed to maximize surface area for attracting organisms to provide specific habitat requirements for targeted reef fish and other marine species. The second category of reef materials allowed is identified as materials of opportunity. Materials of opportunity that could be used for construction of artificial reef structures would include, but not limited to, concrete, rock, surplus ships, barges, tanks, armored personnel carriers, and obsolete subway cars. In accordance with the National Artificial Reef Plan, and the US Army Corps of Engineers, all materials of opportunity, must be properly cleaned, dismantle where necessary, and inspected prior to deployment to assure that they are clean and free of contaminants.

3.0 SMZ Monitoring Team Evaluation Based of the Criteria Established in Amendment 9

3.1 Evaluation relative of SMZ request relative to National Standard 4

There are six criteria listed in Amendment 9 as described above in section 1.0. The first three criteria for SMZ evaluation: (1) fairness and equity; 2) promotion of conservation; and (3) avoidance of excessive shares are related to the National Standard 4 of the MSA which sets forth criteria Councils must follow when allocation of fishery resources or access to those resources are contemplated.

Discrimination among residents of different states

First and foremost, National Standard 4 requires that management measures or programs promulgated under MSA shall not discriminate between residents of different states. An FMP

may not differentiate among U.S. citizens, nationals, resident aliens, or corporations on the basis of their state of residence. An FMP may not incorporate or rely on a state statute or regulation that discriminates against residents of another state. Conservation and management measures that have different effects on persons in various geographic locations are permissible if they satisfy the other guidelines under Standard 4.

Examples of these precepts are:

- (1) An FMP that restricted fishing in the EEZ to those holding a permit from state X would violate Standard 4 if state X issued permits only to its own citizens.
- (2) An FMP that closed a spawning ground might disadvantage fishermen living in the state closest to it, because they would have to travel farther to an open area, but the closure could be justified under Standard 4 as a conservation measure with no discriminatory intent.

In the case of SMZ designation for Delaware reefs in the EEZ, the Monitoring Committee sees no evidence of discrimination of residents of any particular state regardless of the Council's decision relative to SMZ status. Rather, the decision to designate an artificial reef as an SMZ represents an allocation of access to areas of the ocean within the geographic boundaries of the reef site in question (and any additional areas surrounding the SMZ deemed necessary to address practical law enforcement concerns) to those using the gear type allowed in the SMZs. Access to the SMZs is not restricted to fishermen from any particular state. All fishermen using the gear type allowed in the SMZs can access this area to fish regardless of the state from which they departed. While there may be a disadvantage to those fishermen from states which are not adjacent to the SMZs, this is not considered to be discriminatory within the context of National Standard 4 as can be seen in Example 2 above.

Allocation of fishing privileges

An FMP may contain management measures that allocate fishing privileges if such measures are necessary or helpful in furthering legitimate objectives or in achieving the OY, and if the measures conform with paragraphs (3)(i) through (3)(iii) described below.

(1) Definition. An "allocation" or "assignment" of fishing privileges is a direct and deliberate distribution of the opportunity to participate in a fishery among identifiable, discrete user groups or individuals. Any management measure (or lack of management) has incidental allocative effects, but only those measures that result in direct distributions of fishing privileges will be judged against the allocation requirements of Standard 4. Adoption of an FMP that merely perpetuates existing fishing practices may result in an allocation, if those practices directly distribute the opportunity to participate in the fishery. Allocations of fishing privileges include, for example, per-vessel catch limits, quotas by vessel class and gear type, different quotas or fishing seasons for recreational and commercial fishermen, *assignment of ocean areas to different gear users*, and limitation of permits to a certain number of vessels or fishermen. Given the very limited amount of ocean area occupied by the SMZs of the available fishing area on the continental shelf off Delaware, this allocation might well be considered *de minimis* in nature.

(2) Analysis of allocations. Each FMP should contain a description and analysis of the allocations existing in the fishery and of those made in the FMP. The effects of eliminating an

existing allocation system should be examined. Allocation schemes considered, but rejected by the Council, should be included in the discussion. The analysis should relate the recommended allocations to the FMP's objectives and OY specification, and discuss the factors listed below in paragraph (3) of this section.

(3) Factors in making allocations. An allocation of fishing privileges must be fair and equitable, must be reasonably calculated to promote conservation, and must avoid excessive shares. These tests are explained in paragraphs (c)(3)(i) through (c)(3)(iii) of this section:

(i) Fairness and equity.

(A) An allocation of fishing privileges should be rationally connected to the achievement of OY or with the furtherance of a legitimate FMP objective. Inherent in an allocation is the advantaging of one group to the detriment of another. The motive for making a particular allocation should be justified in terms of the objectives of the FMP; otherwise, the disadvantaged user groups or individuals would suffer without cause. For example, an FMP objective to preserve the economic status quo cannot be achieved by excluding a group of long-time participants in the fishery. On the other hand, if there is a rational connection between an objective of harvesting a species at its maximum size, closing a nursery area to fishing would be allowable.

(B) An allocation of fishing privileges may impose a hardship on one group if it is outweighed by the total benefits received by another group or groups. An allocation need not preserve the status quo in the fishery to qualify as "fair and equitable," if a restructuring of fishing privileges would maximize overall benefits. The Council should make an initial estimate of the relative benefits and hardships imposed by the allocation, and compare its consequences with those of alternative allocation schemes, including the status quo.

Part A above notes that allocation of fishing privileges should be considered in relation to achievement of OY or to achieve an objective of the FMP. In this case, the Council is being asked to restrict access to Delaware artificial reef sites in the EEZ to those recreational and commercial fishermen using rod and reel and hand line gear only in order to ameliorate gear conflicts between this gear type and fixed pot/trap gear. While this action would further the stated objectives of the Delaware Artificial Reef Program, it does not specifically address any of the stated FMP objectives nor serve to achieve OY. Neither conclusion is surprising given the extremely small area of the ocean area occupied by the artificial reefs for which SMZ designation is sought.

The designation of these artificial reefs as SMZs will serve one of the MSA's purposes, that is the promotion of recreational fishing. It is important to continue funding for the establishment and maintenance of the artificial reef program because these areas serve to enhance recreational fishing for certain species of fish such as black sea bass in the areas of the reefs. These areas provide forage and shelter for these species with benefits accruing for both recreational and commercial fishermen using compatible gear types. While fixed pot/trap fishermen would be disadvantaged because they would no longer have access to these areas, the area affected comprises an insignificant percentage of the overall area where fishing with these gear types is

not constrained. Fostering the orderly conduct of a fishery within these areas for compatible gear types is a legitimate objective particularly where the impact on those using non-compatible gear is certainly not significant.

Part B requires the Council to evaluate the tradeoffs between benefits and costs to the two user groups relative to SMZ designation on Delaware EEZ reef sites. If the Council ultimately decides to designate Delaware reefs as SMZs (which includes gear restrictions), some positive benefits would be expected to accrue to fishermen using rod and reel and handline gear through reduced gear conflicts. However, prohibition of fixed pot/trap gear as part of an SMZ designation would have a negative impact on that sector of the fishery since they would be denied access to these areas. However, given the small size of the areas affected and the few fixed pot/trap fishermen operating in these areas, the amount of these losses is speculative. Certainly, there will be adverse economic consequences for the few fixed pot/trap gear fishermen who concentrate their efforts in these areas. However, it may be stated generally that there will not be a significant impact on a substantial number of small entities. Further, the economic losses suffered by fixed pot/trap gear fishermen who are displaced from these areas could be mitigated to some degree by redirection of fishing effort to other fishing areas. The Monitoring Team lacks sufficient data to evaluate these tradeoffs quantitatively.

There are numerous other artificial reefs which are currently authorized by COE permits to states other than Delaware. The fairness and equity of the instant proposal to designate the five Delaware artificial reef sites in question as SMZs should be viewed in light of the fact that there are 30 other artificial reefs permitted to other states that currently exist in federal waters within the management unit.

(ii) Promotion of conservation. Numerous methods of allocating fishing privileges are considered "conservation and management" measures under section 303 of the Magnuson-Stevens Act. An allocation scheme may promote conservation by encouraging a rational, more easily managed use of the resource. Or, it may promote conservation (in the sense of wise use) by optimizing the yield in terms of size, value, market mix, price, or economic or social benefit of the product. To the extent that rebuilding plans or other conservation and management measures that reduce the overall harvest in a fishery are necessary, any harvest restrictions or recovery benefits must be allocated fairly and equitably among the commercial, recreational, and charter fishing sectors of the fishery.

As noted above, the SMZ designation request received by the DFW is based on the stated need to reduce gear conflicts between hook and line fishermen and fixed pot/trap gear on Delaware reef sites in the EEZ. Certainly, the significant reduction or elimination of gear conflicts falls within the ambit of "wise use" of the resource in the artificial reef sites through the promotion of at least social benefits. More trips may be made to these areas if fishermen realize that they may no longer lose gear to fixed pot/trap gear. This could result in increased economic benefits for those commercial and recreational fishermen who choose to fish in these areas. Further, the elimination of fixed pot/trap gear should reduce or eliminate the presence of ghost fishing gear in the SMZ area. Certainly, given the small size of these artificial reef areas in comparison to the totality of available fishing grounds, these conservation benefits are expected to be less than significant. This conclusion does not have any measureable impact on the overall management

scheme since fishing mortality for the sea bass stock is controlled by annual quotas which are allocated to the recreational and commercial sectors of the fishery based on historical performance of each sector. Thus limiting access to the artificial reef areas under an SMZ designation would not be expected to affect achievement of the FMPs conservation objectives one way or another.

(iii) Avoidance of excessive shares. An allocation scheme must be designed to deter any person or other entity from acquiring an excessive share of fishing privileges, and to avoid creating conditions fostering inordinate control, by buyers or sellers, that would not otherwise exist.

In the instant proposal, there is no direct allocation of quantifiable fishing privileges to individuals or entities in the form of individual fishing quotas. If the 5 reef sites in question were designated as SMZs, any fishermen, whether recreational or commercial, using appropriate gear could fish in the area without limitation (though subject to other restrictions imposed under the black sea bass FMP). The most that can be said is that the proposal represents an allocation to a particular gear type, that is rod and reel and handline (or other gears types if final action on this request results in prohibition of fixed pot/trap gear only). However, within the allowable gear sectors, no one individual or entity has an excessive share of the fishing privileges since anyone can participate at any level of fishing effort. Nor does the allocation to these particular gear sectors represent an excessive allocation of fishing privileges vis a vis other gear sectors. The areas under consideration for SMZ allocation represent 5.422 square nautical miles of the total available fishing area over the continental shelf off Delaware. The fishing privileges in these areas yield but a small fraction of the total fishery-wide catch of species that are found in the artificial reef areas.

3.2 Consistency with the objectives of Amendment 9 to the Summer Flounder, Scup, and Black Sea Bass Fishery Management Plan, the Magnuson-Stevens Act, and other applicable law;

Consistency with Objectives of the FMP

The objectives of the Summer Flounder, Scup and Black Sea Bass FMP are to:

- 1) reduce fishing mortality in the summer flounder, scup, and black sea bass fisheries to ensure that overfishing does not occur;
- 2) reduce fishing mortality on immature summer flounder, scup, and black sea bass to increase spawning stock biomass;
- 3) improve the yield from the fishery;
- 4) promote compatible management regulations between state and Federal jurisdictions;
- 5) promote uniform and effective enforcement of regulations; and
- 6) minimize regulations to achieve the management objectives stated above.

The designation of Delaware's five artificial reefs as SMZs appears to be unrelated to the first three management objectives which are designed to insure compliance with National Standard 1 (prevent overfishing), promote conservation of the resources managed under the FMP by

reducing mortality on juvenile fish and improving yield from the fishery. For example, if fixed pot/trap gear were prohibited from DE reef sites in the EEZ, it is likely that fishing effort by that gear type would shift to open areas. Even if all of the forgone catch of this sector from DE reef sites was not recouped in open areas, the amount of catch in question (see below) is small relative to the overall quota for the fishery. Thus, any conservation benefits and/or effects on fishing mortality, reduction in mortality of juvenile fish and improvements in yield are expected to be minimal. Since fishing mortality in the black sea bass fishery is controlled by quotas, the issue of designation of SMZs to address gear conflicts would not be expected to affect the conservation of the black sea bass resource.

In terms of objective number 4, the designation of DE reefs as SMZs would promote compatibility between state and federal regulations in as much as Delaware has already passed legislation prohibiting the use of fixed pot/trap gear on its permitted reef sites located in state waters. Therefore, an SMZ designation for DE reef sites in the EEZ that prohibited the same gear types would be compatible with state of Delaware regulations in this regard.

Objective 5 of the FMP specifies that the Council promote uniform and effective enforcement of regulations. The request for SMZ status for Delaware reefs is unrelated to this objective.

Objective 6 seeks to minimize the regulatory burden on the public to achieve the first five objectives of the FMP. The case has been made that the designation of Delaware permitted reefs in the EEZ as SMZs has little to do with the achievement of the first five FMP objectives. Therefore, one could reasonably conclude that SMZ designation in this case is not necessary to achieve those objectives. Rather, the sole purpose of the designation of DE reef sites as SMZs is to ameliorate gear conflicts (which is not contemplated in the any of the FMP objectives).

Consistency with the Magnuson Stevens Act and Other applicable Law

For purposes of this report, the regulations intend that a consideration of consistency with the Magnuson-Stevens Act and other applicable law be a facial examination to identify any aspects of a proposed designation that may be inconsistent with the law. If the Council ultimately decides to forward a recommendation for designation to NMFS to implement SMZs through regulation, then a much more in-depth analysis of the consistency of the ultimate recommendation will be conducted.

When the SMZ provision was first recommended to NMFS by the Council in Amendment 9, an assessment of its consistency with the MSA was conducted by the Office of General Counsel during the review process leading to its approval. There is a provision at section 303(b)(2)(A), which deals with the discretionary provisions of an FMP or amendment, that contemplates measures such as an SMZ. It reads:

[Any fishery management plan may....] designate zones where, and periods when, fishing shall be limited, or shall not be permitted, or shall be permitted only by specified types of fishing vessels or with specified types and quantities of fishing gear

The designation of the five, or fewer, artificial reef sites in Federal waters off Delaware's coast does not raise any issues with respect to the national standards other than national standard 4, which is discussed above, or other provisions of the Magnuson Stevens Act.

There are a number of additional statutes and Executive Orders that must be considered when implementing any action recommended herein. These include the Administrative Procedure Act (APA), the Coastal Zone Management Act (CZMA), the National Environmental Policy Act (NEPA), the Regulatory Flexibility Act (RFA), the Marine Mammal Protection Act (MMPA), the Endangered Species Act (ESA), the Paperwork Reduction Act, the Information Quality Act, Executive Order 12866, and Executive Order 13132. At this seminal stage, most of these statutes and Executive Orders are inapplicable since we have no final recommendation by the Council or action taken by NMFS. Without these, for example there is no Federal activity or action for purposes of the CZMA and NEPA. However, since the State of Delaware is proposing these areas, which are located in Federal waters off its coast, for designation one can infer that the proposal is consistent with its approved Coastal Zone Management Plan. Similarly, since the scope of the final areas to be designated as SMZ is unsettled, it is difficult to predict actual impacts on listed species and marine mammals. One should expect that since designation would eliminate fishing with fixed pot/trap gear in the areas, the impact on any listed species or marine mammals in the SMZs due to vertical lines in the water column would be significantly diminished. Given the limited expanse of water and bottom encompassed by the SMZs and the relative small number of fishermen that would be displaced by an SMZ designation, the economic impacts to be considered under the RFA and Executive Order 12866 would not be significant fleet wide. Further, it is reasonable to anticipate that the action will not have a significant impact on the human environment under the NEPA analysis associated with implementing SMZs. Since an SMZ designation, as currently conceived, does not have an information generating or reporting component, the Paperwork Reduction Act and the Information Quality Act are not implicated. Lastly, since a designation would have to be implemented through the normal rulemaking process, the requirements of the APA will be satisfied.

The South Atlantic Fishery Management Council (SAFMC) has designated 51 artificial reefs in the EEZ off South Carolina, Georgia and Florida as SMZs under provisions contained in the Snapper Grouper FMP. The SMZ designations apply to each artificial reef and a 500 m buffer zone surrounding the boundaries of each reef and include a prohibition on the use of fish pots, fish traps, trawls and electric reels on permitted reef sites. In some of the SMZs, the use of powerheads (bang-sticks) to harvest fish is also prohibited and individuals harvesting fish using spearguns are limited to the recreational bag/size limits established within the snapper grouper management plan.

It is important for the Council to note that the basis for the SMZ designation by the SAFMC was fundamentally different from the rationale stated by DFW. The DFW request is based on the need to ameliorate gear conflicts between the hook/line and fixed pot/trap gear. The rationale for designating artificial reefs contained in the Snapper Grouper FMP was as follows: "The intent of a SMZ is to create incentive to create artificial reefs and fish attraction devices that will increase biological production and/or create fishing opportunities that would not otherwise exist. The drawback to investing in artificial reefs or fish attraction devices is that they are costly and have

limited advantages that can be rapidly dissipated by certain types of fishing gear (e.g., traps harvesting black sea bass from artificial reefs). Fishing gear that offers 'exceptional advantages' over other gear to the point of eliminating the incentive for artificial reefs and fish attraction devices for users with other types of fishing gear prevent improved fishing opportunities that would not otherwise exist". While a reduction in gear conflicts was discussed as a collateral benefit of SMZ designation by the SAFMC, the primary factor they considered relative to SMZ designation was related to the achievement of perceived conservation benefits on reef sites through prohibition of efficient gear types such as pot/trap gear, long lines and bang sticks.

3.3 The natural bottom in and surrounding potential SMZs

The Middle Atlantic Bight (the area of the U.S. east coast and continental shelf between Cape Cod, Mass., and Cape Hatteras, N.C.) is characterized as being a homogeneous habitat of relatively flat topography, composed of soft sediments, mostly sands, but grading to silt-clay in deeper areas except for relic sand and gravel ridges, exposed Holocene to Pleistocene clay or sandstone in some areas, and glacially exposed rock along the southern New England coast (Steimle and Zetlin 2000). The natural bottom in and surrounding potential SMZs (in this case the five reef sites permitted to the DFW) is described above.

For the sites in question (9,10, 11, 13 and 14), there are no Habitat Areas of Particular Concern designations within them. The areas are Essential Fish Habitat (EFH) for a number of species, but it is unlikely that the creation of SMZs at the sites in question would have an adverse effect on the EFH or the species. It may actually benefit EFH if the fishing pressure is reduced or certain gears are prohibited.

A review of energy development site proposals for the Mid-Atlantic Area shows reef site 11 is within the BOEM Wind Energy Area (WEA) for Delaware where the OCS could be leased. However, BOEM has worked closely with the State of Delaware and others (including NMFS) on the Task Force in developing the boundaries of the WEA. As a result, the reef site will not be part of any lease. Though the NEPA process of the leasing and site assessments, any potential impacts to reef from wind facilities proposed nearby will be evaluated.

3.4 Impacts on historical uses

3.4.1 Recreational Fishery

Recreational fishing data, at the five reef sites considered in this impact assessment, were derived from aerial surveys conducted by the Delaware Department of Natural Resources and Environmental Control (DNREC), NMFS' Marine Recreational Fisheries Statistics Survey (MRFSS), Northeast Federal Vessel Trip Reports, and angler expenditure data collected by NMFS.

The DNREC has conducted bi-weekly randomized aerial flight surveys over Delaware's permitted artificial reef sites since 1997. The aerial flight surveys follow a stratified, random sampling design, and provide bi-monthly recreational fishing estimates of vessel and angler trips by two modes (headboat or private/charter) on the reef sites. Headboats are identified by the

presence of the required Coast Guard life raft on the top deck. Private and charter boats are not distinguishable from one another by air, and thus are classified together. Recreational vessels identified as drifting or anchored are included in the survey. Sailboats and vessels in transit are not included in the counts. A complete description of the DNREC aerial survey program and methods can be found in Hense, *et. al.* (2012).

Data collected through the MRFSS program, which became the Marine Recreational Information Program (MRIP) in 2011, provides estimates of recreational catch, effort, and participation across states, fishing modes, and two-month waves. The MRFSS data is also post-stratified spatially to provide estimates of catch and effort according to area fished (inland, state waters, and the federal exclusive economic zone). The MRFSS spatial estimates, however, are generally not sufficient for describing recreational fishing activity at a more disaggregate level - such as recreational fishing activity occurring at an artificial reef. Please see <http://www.st.nmfs.noaa.gov/st1/recreational/index.html> for further information on the MRFSS program.

All five of the reef sites are located in federal waters and both commercial and for-hire vessels fishing in those waters, for federally permitted species, are required to submit Vessel Trip Reports (VTRs) to NMFS. As part of this mandatory reporting requirement, the latitude and longitude of the area fished on a given trip are recorded. Questions remain concerning the reliability of the spatial data recorded on the logbooks, but these data provide at least some ability to identify commercial and for-hire trips fishing on the reef sites.

Inflation adjusted angler expenditure data collected in New Jersey and Delaware in 2006 are used to estimate anglers' trip expenditures and the gross revenue earned by for-hire boats fishing on the five reef sites. These data were collected as part of a nationwide angler expenditure study conducted by NMFS and are described in Gentner and Steinback (2006).

Reef Site 9

DNREC aerial survey data show that the number of private/charter angler trips has ranged from a low of 216 in 2010 to a high of 538 in 2006 (Figure 2). Private/charter angler trips increased in 2011 though after four consecutive years of declines. The number of angler trips taken aboard headboats has been consistently lower than private/charter angler trips every year since 2004. In 2005 and in 2009, the DNREC aerial survey data show anglers did not take a single trip to reef site 9 aboard headboats. In total, between 288 and 1,087 angler trips have been taken annually to reef site 9 between 2004 and 2011.

The number of private/charter boat trips far exceeded the number of headboat trips taken to reef site 9 each year since 2004 (Figure 3; DNREC aerial survey data). The number of private/charter boat trips ranged from a low of 64 in 2010 to a high of 149 in 2006. Headboat boat trips reached a high of 26 in 2004 and have fallen to 10 during the past two years. The number of passengers on each headboat trip fishing on reef site 9 since 2004 averaged about 22, whereas private/charter trips averaged about 3.5.

Reef Site 10

Reef site 10 is estimated to have considerably more recreational fishing activity than reef site 9. DNREC aerial survey data show that 3,610 angler fishing trips were taken aboard private/charter boats in 2011 and another 2,200 angler fishing trips occurred aboard headboats (Figure 4). Private/charter angler effort and headboat angler effort has generally been increasing at reef site 10 since 2006.

The number of private/charter boat trips and headboat trips to reef site 10 are also considerably higher than at reef site 9. In 2011, 1,034 private/charter boat trips were estimated to have fished at reef site 10 and another 108 headboat trips (Figure 5). This is about 13 times higher than the number of boat trips taken to reef site 9 in 2011.

Reef Site 11

Recreational fishing activity at reef site 11 has consistently been the highest of the five reef sites during the past 8 years. The number of angler trips occurring at the site reached over 16,000 in 2005, and has declined since, but still exceeded 9,600 in 2010 and 2011 (DNREC aerial survey data; Figure 6).

The number of boat trips reached over 2,600 in 2005 and 2007 (Figure 7). Since 2005 the number of boat trips has declined, but still exceeds the number of boat trips taken to any of the other four reef sites.

Reef Site 13 (Del-Jersey-Land Inshore)

Reef site 13 was permitted in 2006 and was added to the DNREC aerial flight survey in 2009. Survey estimates have shown increasing recreational fishing activity at the site since 2009. Angler fishing trips at reef site 13 have increased from 440 in 2009, to 700 in 2010, to 1,969 in 2011 (Figure 8). In 2011 there was an 80% increase in private/charter angler trips and a 281% increase in headboat angler trips, relative to 2010 levels.

The number of recreational fishing boat trips at reef site 13 has also steadily increased over the past 3 years. The total number of boat trips increased from 86 in 2010, to 123 in 2011, and 240 in 2011 (Figure 9).

Reef Site 14 (Del-Jersey-Land Offshore)

Reef site 14 is located 58 miles off shore and is not included in the DNREC aerial flight survey program. The total level of recreational fishing activity occurring at the site is generally unknown.

NMFS' Northeast VTR Data

Annual Northeast VTR data also provide an indication of the number of for-hire boat trips (headboat and charter) occurring at each reef site. The reported latitude and longitude

coordinates of for-hire trips contained in the VTR data base from 2004 through 2010 were overlaid onto the coordinates of the 5 artificial reefs using geographical information system mapping (GIS). All for-hire VTR trips that occurred within 0.25 nautical miles of the reefs were retained for this assessment.

The numbers of for-hire VTR trips that reported fishing within 0.25 nautical miles of the reef sites during 2004 through 2010 are shown in Table 2. Reef site 11 attracted the highest level of for-hire activity, followed by reef site 10 and then 9. Only one for-hire trip was reported at site 13 and one trip at site 14 during this time period.

Since the VTRs measure headboat and charter activity combined, these data are not directly comparable to the DNREC estimates of recreational fishing activity. Nonetheless, when compared to the DNREC estimates of headboat activity alone, the reported number of for-hire fishing trips from the VTRs is considerably lower than reported by the DNREC. This may be because federally permitted for-hire vessels are only required to report location information for a given trip once when fishing within a single NMFS statistical area – which are considerably larger than the coordinates of a reef site. Therefore, the location information in the VTRs may not accurately reflect all of the areas fished on a given trip. The VTR estimates of for-hire fishing activity at the five reef sites should be considered a lower bound approximation of the actual number of trips occurring at the sites.

VTR landings reported for charter and headboats fishing within 0.25 nautical miles of the reef sites from 2008 through 2010 were calculated for reef site 10 and 11. Twelve different species were reported being harvested by recreational fishermen at reef site 10. Black sea bass, fluke, croaker, triggerfish, and scup were the primary species harvested, in order, at reef site 10. Eighteen different species were reported being harvested by recreational fishermen at reef site 11 from 2008 through 2010, but almost $\frac{3}{4}$ were black sea bass and fluke. There was no reported for-hire fishing activity at reef site 14 in the VTR time series from 1995-2010.

Social and Economic Assessment

The total value recreational anglers place on the opportunity to fish at each of the 5 reef sites can be separated into (1) actual expenditures and (2) non-monetary benefits associated with satisfaction. In other words, anglers incur expenses to fish (purchases of gear, bait, boats, fuel, etc.), but do not pay for the fish they catch or retain nor for the enjoyment of many other attributes of the fishing experience (socializing with friends, being out on the water, etc.). Despite the obvious value of these fish and other attributes of the experience to anglers, no direct expenditures are made for them, hence the term "non-monetary" benefits. In order to determine the magnitude of non-monetary benefits associated with fishing at the five reef sites, demand curves for recreational fishing must be constructed. Unfortunately, data limitations preclude the ability to construct these demand curves for recreational fishing at the five reef sites. Therefore, the angler assessment provided here is limited to describing only actual expenditures by anglers fishing at the five reef sites.

Anglers' expenditures generate and sustain employment and personal income in the production and marketing of fishing-related goods and services. An economic study of marine recreational

fishermen conducted in 2006 estimated that average trip expenditures were \$39.14 for anglers fishing from a private/rental boat and \$107.13 for anglers that fished from a party/charter boat in the Northeast region of the U.S. (Gentner and Steinback 2008). Trip-related goods and services included expenditures on private transportation, public transportation, food, lodging, boat fuel, private boat rental fees, party/charter fees, access/boat launching fees, equipment rental, bait, and ice.

Apart from trip-related expenditures, anglers also purchase fishing equipment and other durable items that are used for many trips (i.e., rods, reels, clothing, boats, etc.). Although some of these items may have been purchased specifically to fish at one of the artificial reef sites, the fact that these items can be used for multiple trips creates difficulty when attempting to associate durable expenditures with the artificial reefs. Therefore, only trip-related expenditures are used in this assessment.

Assuming the average trip expenditures estimated in Gentner and Steinback (2008) are equivalent to the expenditures of anglers fishing at the five reef sites, total angler expenditures at each reef site can be estimated by multiplying the expenditure estimates by the number of angler trips fished at a reef site by mode. Proportions calculated from MRIP angler effort data were used to assign separate estimates of private boat angler effort and charter angler effort to the single DNREC private/charter effort estimate for each reef site. MRIP effort estimates in 2011 from DE and NJ anglers fishing in federal waters were used to calculate the proportions (75% private boat, 25% charter).

Table 4 shows the estimated total trip expenditures incurred by anglers to fish at each of the five reef sites in 2011. Anglers fishing at reef site 11 spent the most (\$838.4 thousand) while anglers fishing at reef site 9 spent the least (\$39.7 thousand). Expenditure estimates for reef site 14 are unavailable because the DNREC does not include that site in their aerial survey program. In total, across all reef sites, charter/headboat angler expenditures were over three times higher than private boat angler expenditures. Private boat anglers spent an estimated \$333.0 thousand on trip expenditures while charter/headboat anglers spent over \$1.2 million to fish at reef sites 9, 10, 11, and 13.

A component of angler trip expenditures when fishing aboard a charter/headboat is the passenger access fee. Access fees, in turn, are the primary income generator for for-hire businesses. By multiplying the inflation adjusted average for-hire passenger fare estimated in Gentner and Steinback (2008) by the number of charter/headboat angler trips fished at each reef site, an estimate of gross earnings by for-hire businesses from each reef site can be developed. In 2011, for-hire boats earned an estimated \$16.2 thousand in gross revenue from fishing at reef site 9, \$201.5 thousand fishing at site 10, \$355.5 thousand fishing at site 11, and \$97.3 thousand fishing at site 13.

3.4.2 Commercial Fishery

Commercial fishing data were obtained from Northeast federal dealer reports (VTRs) and the federal Northeast permit data base. In combination, these data provide estimates of total annual landings, the ex-vessel value of landings, and descriptive information about the permitted vessels

fishing on the reef sites. These data provide the capability to identify vessels that fished on the reef sites and to compare total annual gross revenues earned by each of those vessels to their annual gross revenues earned while fishing only at the reef sites.

3.4.2.1 NMFS' Northeast VTR Data

The same GIS procedure described above to estimate the number of for-hire trips that occurred at each reef site was used to evaluate commercial fishing activity by reef site. That is, the reported latitude and longitude coordinates of commercial fishing trips contained in the VTR data base from 2004 through 2010 were overlaid onto the coordinates of the 5 artificial reefs using geographical information system mapping (GIS; Figure 10-12). All commercial fishing VTR trips that occurred within 0.25 nautical miles of the reefs were retained for this assessment.

The number of commercial fishing VTR trips that reported fishing within 0.25 nautical miles of the reef sites during 2004 through 2010 are shown in Table 3. No trips were reported within the coordinates of reef site 9 from 2004 through 2010. One commercial trip using pot gear was reported at reef site 10 in 2005 and one trip using otter trawl gear in 2010. Reef site 11 had 25 trips that set pot gear within 0.25 nautical miles of the reef in 2005, but the number of trips has declined since then and only 3 trips were reported in 2010. Commercial fishing trips setting pot gear at reef site 13 have generally been increasing since 2004. In 2010 12 trips were reported within 0.25 nautical miles of reef site 13. No commercial fishing pot trips were reported at reef site 14 from 2004 through 2010, but 17 trips using dredge gear and 7 trawl trips were reported in 2009.

VTR commercial landings from trips that reported fishing within 0.25 nautical miles of the reef sites varied across reefs. From 2008 through 2010, at reef site 11, lobster, channeled whelk, and black sea bass comprised the majority of landings. Lobster comprised 23% of total landings and 43% of ex-vessel value, channeled whelk 30% of landings and 25% of value, and black sea bass 22% of landings and 25% of total value. Landings at reef site 13 from 2008 through 2010 consisted primarily of black sea bass. Black sea bass comprised 84% of total landings and 87% of total ex-vessel value. No commercial fishing trips were reported at reef site 14 in 2008 or 2010, but in 2009 there were 17 reported trips using dredge gear and 7 using trawl gear. Landings on these trips in 2009 consisted almost entirely of scallops. Scallops comprised 98% of the landings and 99% of the total value. No commercial landings were reported at reef site 9 from 2008 through 2010 and only 1 trawl trip was reported at reef site 10 in 2010. Confidentiality rules prohibit releasing information on fewer than three vessels.

The spatial location data contained in the VTRs for vessels using stationary gear, such as pot/trap gear, may underestimate the frequency of trips setting gear with 0.25 nautical miles of the reef sites. Similar to for-hire vessel trips, vessels using pot/trap gear are only required to report location information for a given trip once when fishing within a single NMFS statistical area – which are considerably larger than the coordinates of a reef site. Therefore, the location information in the VTRs may not accurately reflect all of the areas fished on a given trip. The VTR estimates of commercial fishing activity at the five reef sites should be considered a lower bound approximation of the actual number of trips occurring at the sites.

3.4.2.2 Social and Economic Assessment

The ex-vessel value of landings at each reef site provide an indication of the importance of the sites to commercial fishermen. For purposes of this assessment, VTR data were used to calculate landings values at each reef site during 2008, 2009, and 2010. The reported latitude and longitude coordinates of commercial fishing trips in the VTR data base, that used pot/trap gear, were overlaid onto the coordinates of the 5 artificial reefs using geographical information system mapping (GIS). All pot/trap commercial fishing trips that occurred within 0.25 nautical miles of the reefs were retained. There was one reported otter trawl trip that occurred within 0.25 nautical miles of reef site 10 in 2010, 17 scallop dredge trips near reef site 14 in 2009, and 7 otter trawl trips also within 0.25 miles of reef site 14 in 2009 that were not included in this assessment. Vessels using mobile gear are not likely to interact with recreational fishing boats so those trips were excluded from the assessment.

Commercial fishing vessels using pot/trap gear reported landings at reef site 11 and reef site 13 in 2008, 2009, and 2010. There were no reported pot/trap landings at the other three reef sites during this time period. The total ex-vessel value of landings within 0.25 miles of reef 11 was less than \$10 thousand annually during 2008, 2009, and 2010 (Table 5). Vessels using pot/trap gear at reef site 13 earned more than \$20 thousand each year, reaching \$31.8 thousand in 2010. On average, ex-vessel revenues earned while fishing at reef site 11 represented approximately 4% of each vessel's total annual gross earnings from all of their fishing trips during 2008, 2009, and 2010. Vessels fishing at reef site 13 earned approximately 11% of their total annual earnings while fishing at reef site 13. Due to confidentiality restrictions only aggregate earnings estimates from each reef site can be provided.

The pot/trap earnings estimates shown here likely underestimate the frequency of trips setting gear with 0.25 nautical miles of the reef sites. As previously mentioned, commercial fishing vessels are only required to report location information for a given trip once when fishing within a single NMFS statistical area. NMFS statistical areas are considerably larger than the coordinates of a reef site, so the location information in the VTRs may not accurately reflect all of the areas fished on a given trip. Therefore, the VTR estimates of commercial fishing activity at the five reef sites should be considered a lower bound approximation of the actual number of trips occurring at the sites.

3.4.3 Recreational and Commercial Fishery Summary

In summary, there were no reported pot/trap landings in the VTR data base within 0.25 miles of reef site's 9, 10, and 14 from 2004 through 2010. Although the VTR data base may underestimate the number of commercial vessels setting gear at the reef sites, there likely have been minimal to no gear conflicts between recreational and commercial vessels fishing at reef site's 9, 10, and 14.

Moderately low levels of commercial pot/trap activity were reported in the VTRs at reef site's 11 and 13 from 2004 through 2010. The total ex-vessel value of pot/trap landings at reef site 11 was less than \$10 thousand annually during 2008, 2009, and 2010, and at reef site 13, less than \$32 thousand annually. The combined value of the landings at reef site's 11 and 13 comprised

less than 0.6% of the total annual ex-vessel value landed by pot/trap gear (excluding crab trap gear and inshore lobster trap gear) in New Jersey, Delaware, and Maryland during 2008 (\$6.4 million), 2009 (5.4 million), and 2010 (\$5.9 million). Commercial pot/trap vessels setting gear at reef site's 11 and 13 earned less than 5% of their total annual gross earnings, on average, from their reef site 11 landings during 2008, 2009, and 2010 and less than 12% from their reef site 13 landings. Also, there were no vessels that reported pot/trap landings at more than one of the reef sites in any given year. Due to the low number of pot/trap vessels setting gear at reef site's 11 and 13, confidentiality restrictions prohibit indicating the exact number of vessels that have been fishing at these sites.

Although commercial pot/trap effort has been moderately low at reef site's 11 and 13, considering the estimated high level of historical recreational fishing activity at reef site 11 and the estimated increasing recreational fishing activity at reef site 13 during the past few years, gear interactions may have been occurring at these sites.

4.0 Conclusions

1. There is no evidence of potential gear conflicts on Delaware's artificial reef sites in the EEZ based on the reported levels of fishing activity at those sites from VTR data, *except* at reef sites 11 and 13. Only limited information is available for reef site 14 relative to the levels of recreational fishing activity at that site.
2. Designation of reef sites 9, 10, 13 and 14 as SMZs would be consistent with past Council policy relative to the permitting and deployment of artificial reefs at these sites, but may not be relative to site 11 because the Council was opposed to placement of an artificial reef at this location in 1996 during the original permit application in a letter to the Army Corps of Engineers (see comment letters to COE from D. Keifer and D. Cohen in appendix ii).
3. Significant precedent exists in other regions (i.e., the South Atlantic) to conclude that the designation of Delaware's five artificial reef sites in the EEZ as SMZs (which would include gear restrictions in those areas) is consistent with the Magnuson Act and other applicable law.
4. The recommendation the Council makes with respect to SMZ designation for Delaware reef sites has important implications for the 30 other permitted artificial reef sites which currently exist within the EEZ portion of the black sea bass management unit. The conclusion reached in the social and economic assessment is that designation of SMZ status for the five Delaware reef sites would not impact a significant number of entities since available evidence indicates that a relatively small number of pot/trap fishermen utilize Delaware reefs in the EEZ. This conclusion might have been different if the Council were considering SMZ status for all 35 EEZ reef sites currently permitted to the states simultaneously.

5.0 Recommendations

Based on the weight of evidence examined, the SMZ Monitoring Team recommended the following:

1. Given this decision is largely driven by policy considerations which are entirely under the purview of the Council's policy making function, the Council should convene the Demersal Committee (or if appropriate, a special working group) with industry advisors to develop a long term solution to this issue. It is imperative that this policy analysis consider all relevant factors and considerations and not be based solely on the issue of gear conflicts (as is the case here). Complaints about gear conflicts at New Jersey reef sites in the EEZ have already caused the USFWS to terminate that states SFRP funding (NJ currently has 13 sites in the EEZ), so this issue extends well beyond the 5 reef sites considered in this analysis.
2. Until such time that the Council can develop a longer term solution to this issue based on a broader consideration of all relevant factors and issues, the SMZ Monitoring Team recommends that the Council consider designating all five of Delaware's artificial reefs located in the EEZ as SMZs during time periods when the recreational season for black sea bass is open. The SMZs would prohibit the use of fixed pot/trap gear within 1000 yards of the five artificial reef sites during the time period when the recreational season for black sea bass is open season to ameliorate any real or potential gear conflicts at those sites (1000 yard buffer based on input from USCG and NMFS law enforcement personnel).
3. The Council would reserve the right to change or revise these SMZs, including any gear restrictions imposed as a result of such designations, if future analyses cause the Council to alter its policy with respect to SMZs during a broader consideration of this issue.
4. The Council should review the 2007 National Artificial Reef Plan and modify (if necessary) and implement the artificial reef policy it adopted in 1995 (appendix iii).

6.0 References

Gentner, Brad and Scott Steinback (2008). The economic contribution of marine angler expenditures in the United States, 2006. NOAA Technical Memorandum NMFS-F/SPO-94.

Hense, Zina, William Whitmore, Scott Newlin, and Jeffrey Tinsman (2012). Aerial flight survey estimating fishing effort on Delaware artificial reef sites over a fifteen year period (1997-2011). Delaware Department of Natural Resources and Environmental Control Report.

Steimle, F.W and C. Zetlin (2000). Reef Habitats in the Middle Atlantic Bight: Abundance, Distribution, Associated Biological Communities, and Fishery Resource Use. Marine Fisheries Review. Vol 62(2). pp 24-42.

7.0 Tables and Figures

Table 1 Artificial reefs currently permitted by state within the black sea bass FMP management unit (Maine to North Carolina).

State	Number of Reef Sites	Comments
Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut	0	
New York	2	There are 2 sites, but 1's permit has expired and may or may not be renewed
New Jersey	13	
Delaware	5	
Maryland	7	MD's ocean reefs are now permitted and managed by the City of Ocean City, MD
Virginia	5	
*North Carolina	3	The 3 different sites are under 1 permit
total	35	
*NC information includes only reef sites north of Cape Hatteras		
Survey conducted on 7/24/12 by Paul Perra by contacting State Marine Fisheries Managers and/or Artificial Reef Program Managers		

Table 2. Number of Reported VTR For-Hire Trips within 0.25 Nautical Miles of the Reef Sites

	Reef Site				
	9	10	11	13	14
2004	3	0	15	0	0
2005	2	4	10	0	0
2006	2	4	26	1	0
2007	3	7	25	0	0
2008	4	20	20	0	1
2009	10	18	15	0	0
2010	0	0	2	0	0

Table 3. Number of Reported VTR Commercial Fishing Trips within 0.25 Nautical Miles of the Reef Sites, by Gear Type

	9	Reef Site and Gear Type					
		10		11	13	14	
		Trawl	Pot/Trap	Pot/Trap	Pot/Trap	Dredge	Trawl
2004	0	0	0	10	3	0	0
2005	0	0	1	25	0	0	0
2006	0	0	0	7	2	0	0
2007	0	0	0	0	1	0	0
2008	0	0	0	4	10	0	0
2009	0	0	0	8	14	17	7
2010	0	1	0	3	12	0	0

Table 4. Estimated Angler Trip Expenditures by Reef Site and Mode in 2011*

Reef Site	Private Boat	Charter/Headboat	Total
9	\$9,891	\$29,823	\$39,714
10	\$118,237	\$370,842	\$489,078
11	\$184,069	\$654,307	\$838,376
13	\$20,536	\$179,146	\$199,681
14	-	-	-

*The angler trip expenditure estimates from 2006 were converted to 2011 dollars using the Bureau of Labor Statistics Consumer Price Index.

Table 5. Ex-vessel Value of Pot/Trap Landings within 0.25 Nautical Miles of Reef Site 11 and 13

	Reef Site 11	Reef Site 13
2008	\$9,237	\$27,315
2009	\$7,625	\$22,037
2010	\$3,159	\$31,790

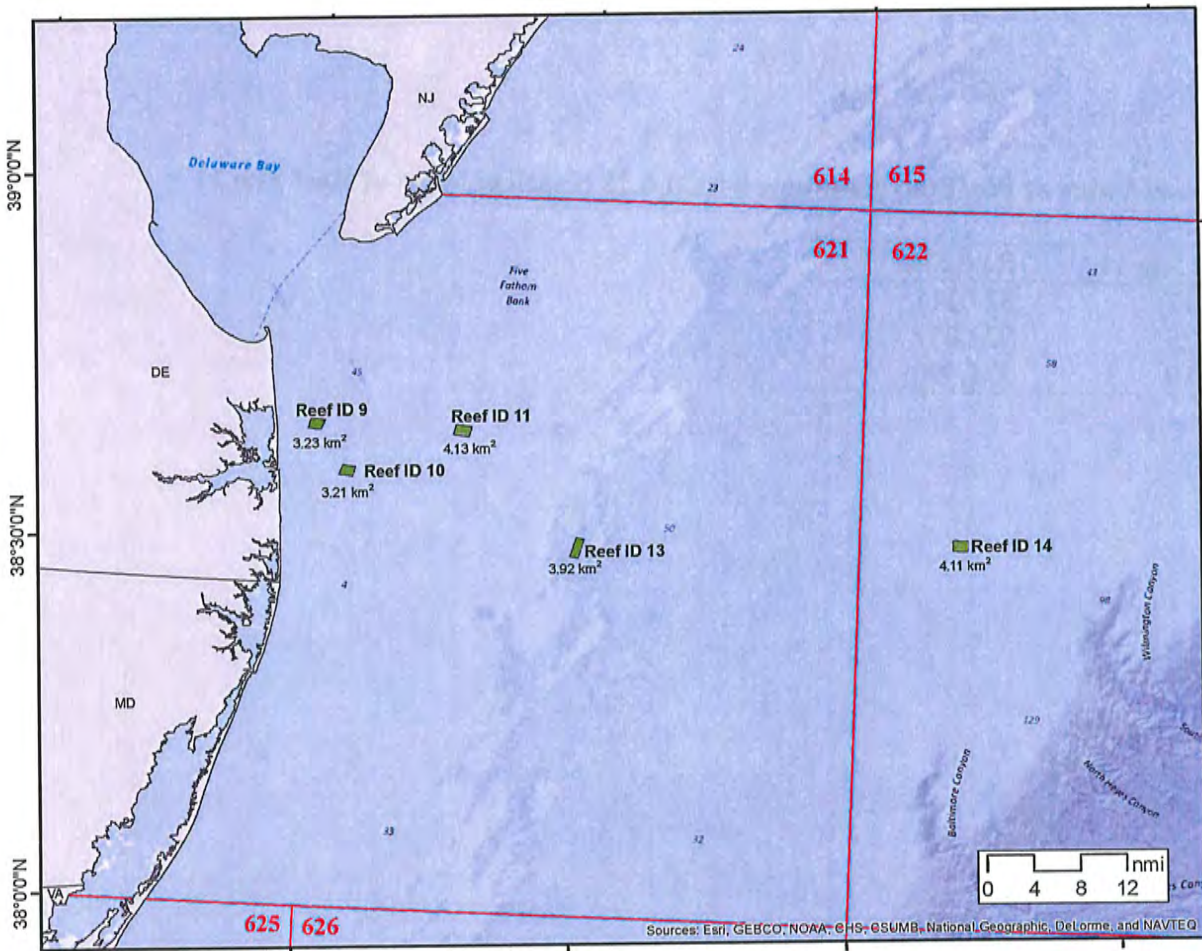


Figure 1. Location of five artificial reef sites in the EEZ for which Delaware has requested SMZ status.

Figure 2. Reef Site 9 - Estimated Number of Angler Trips by Mode

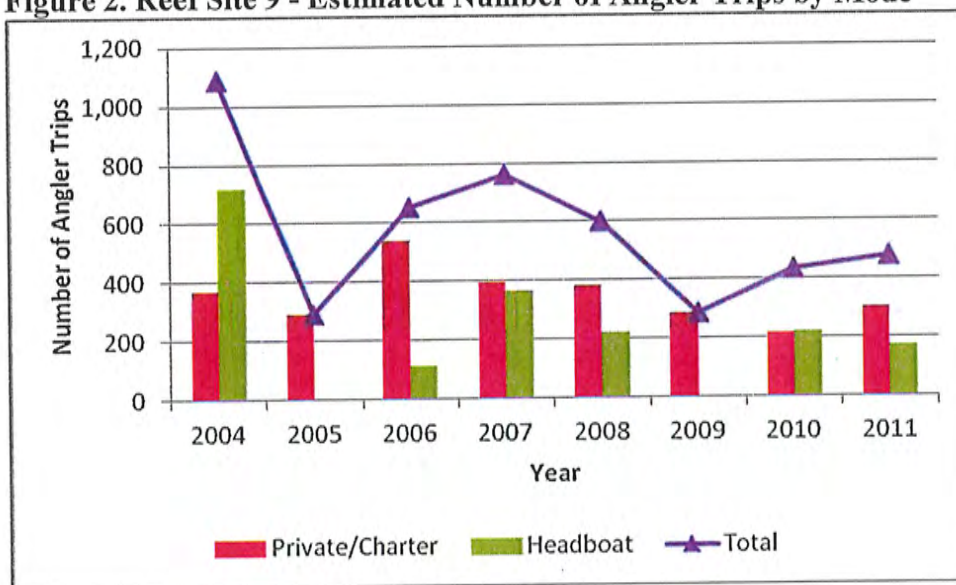


Figure 3. Reef Site 9 – Estimated Number of Boat Trips by Mode

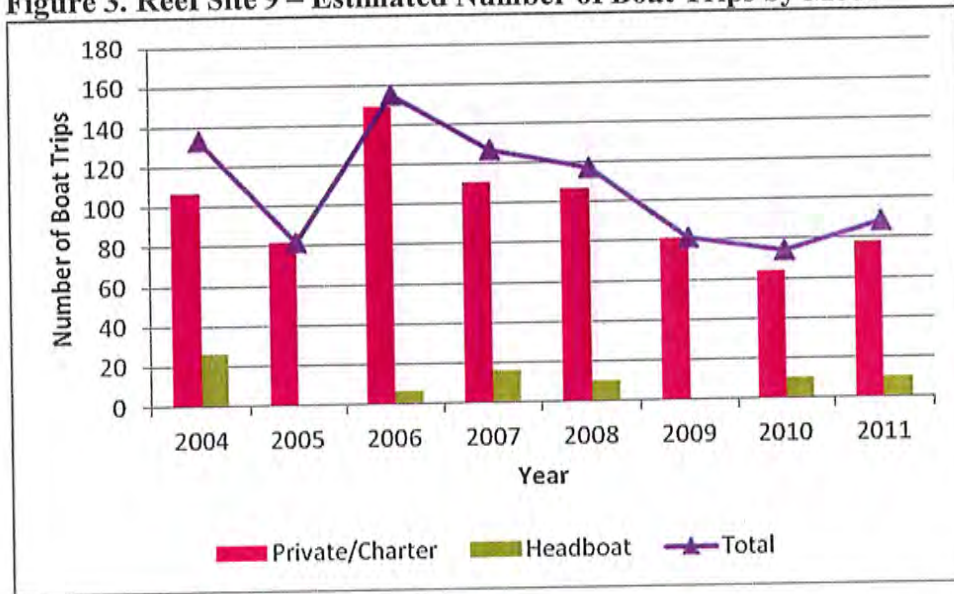


Figure 4. Reef Site 10: Estimated Number of Angler Trips by Mode

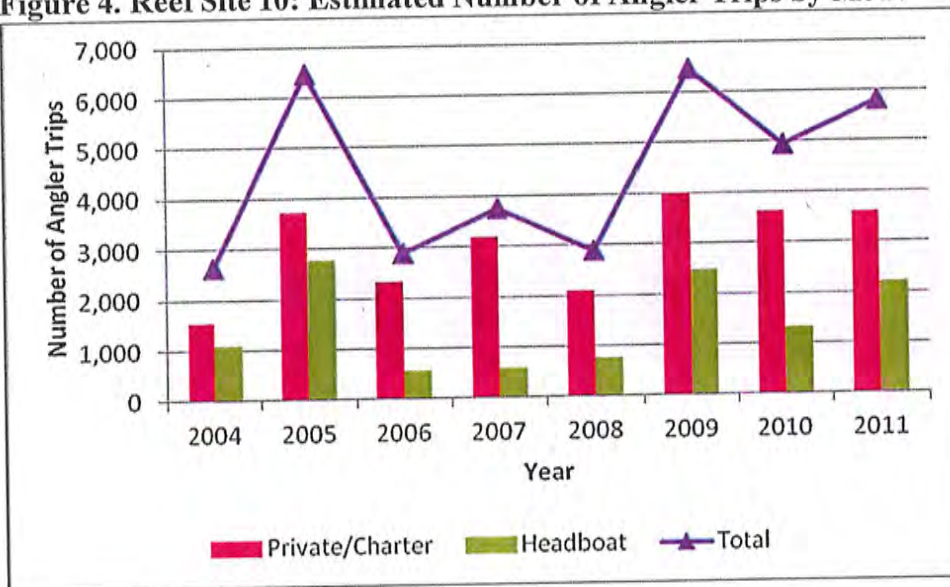


Figure 5. Reef Site 10 – Estimated Number of Boat Trips by Mode

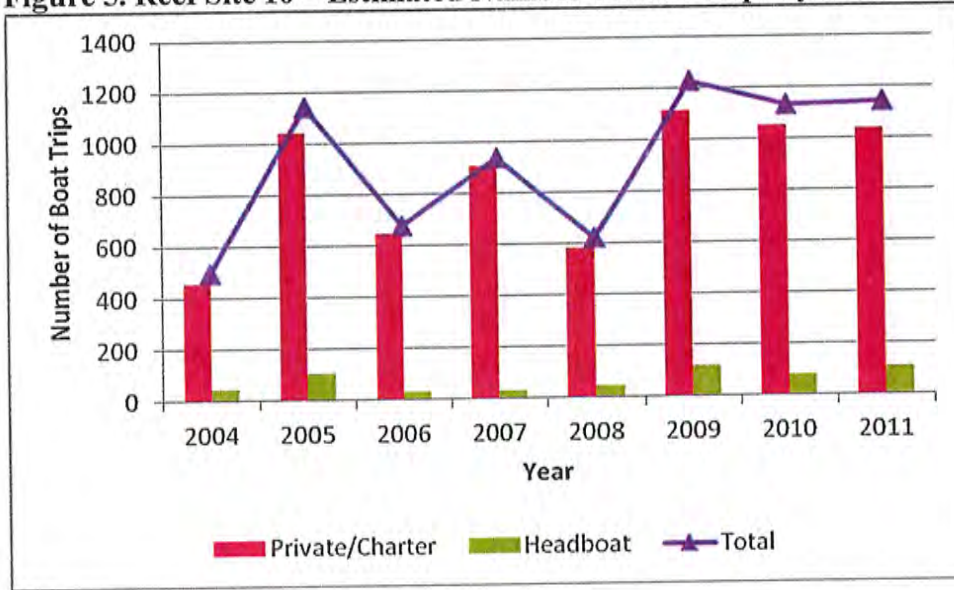


Figure 6. Reef Site 11: Estimated Number of Angler Trips by Mode

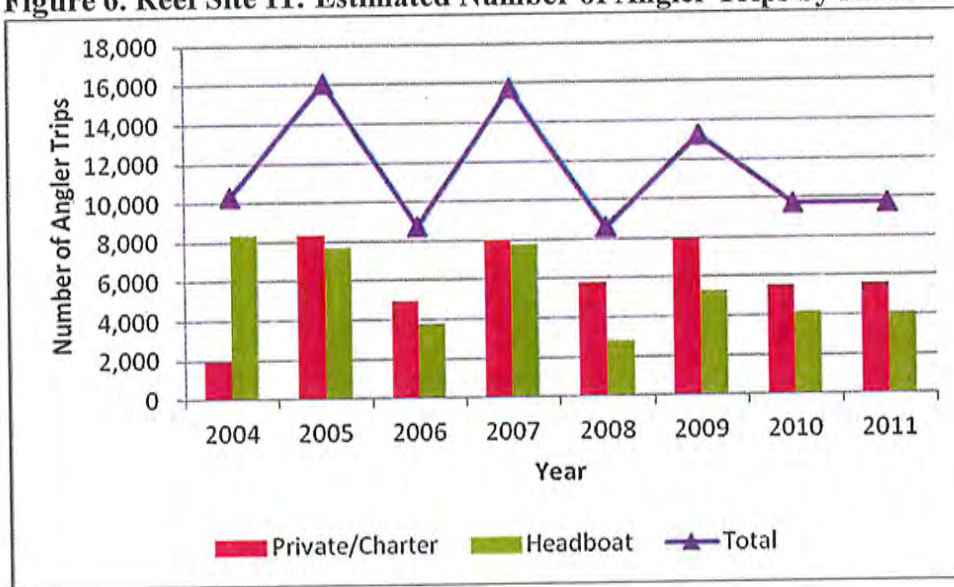


Figure 7. Reef Site 11 – Estimated Number of Boat Trips by Mode

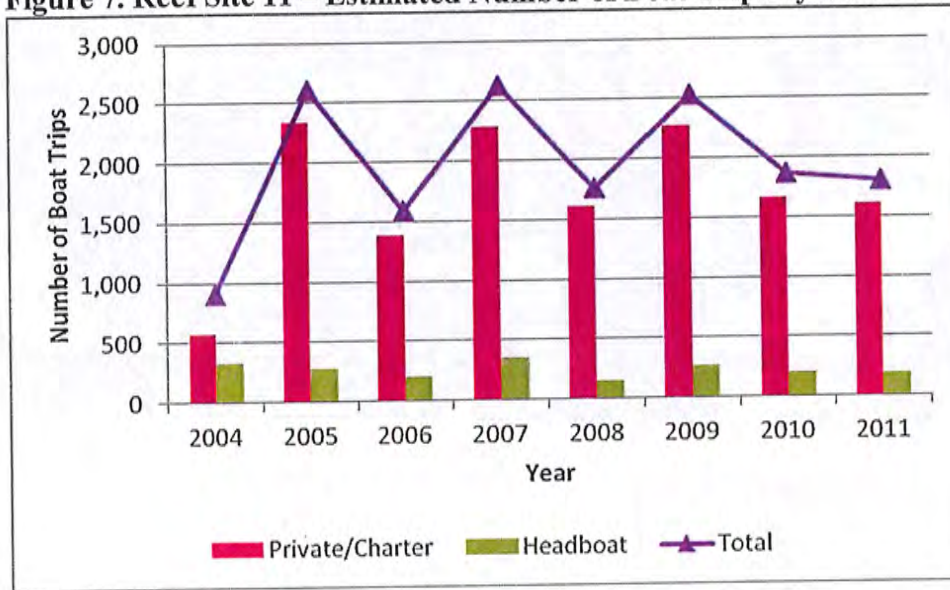


Figure 8. Reef Site 13: Estimated Number of Angler Trips by Mode

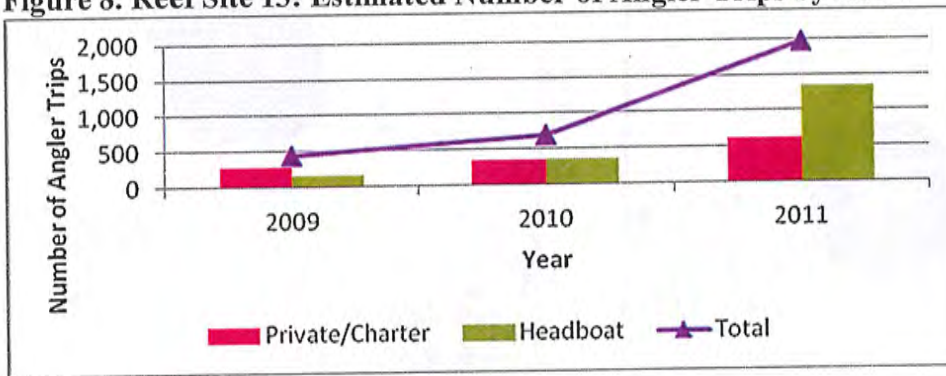
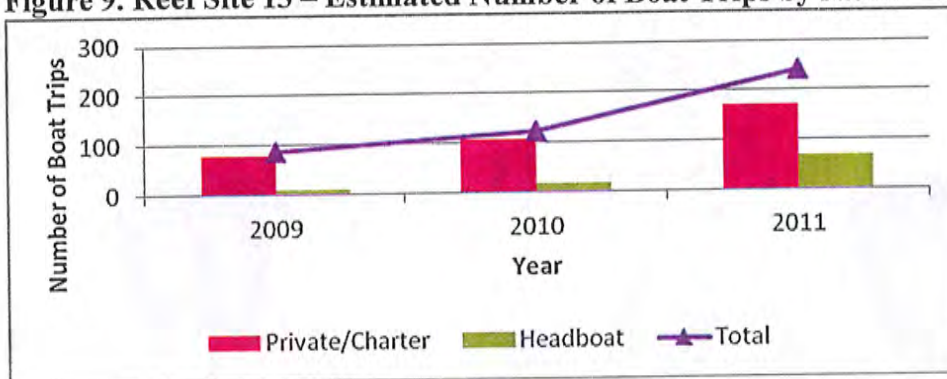
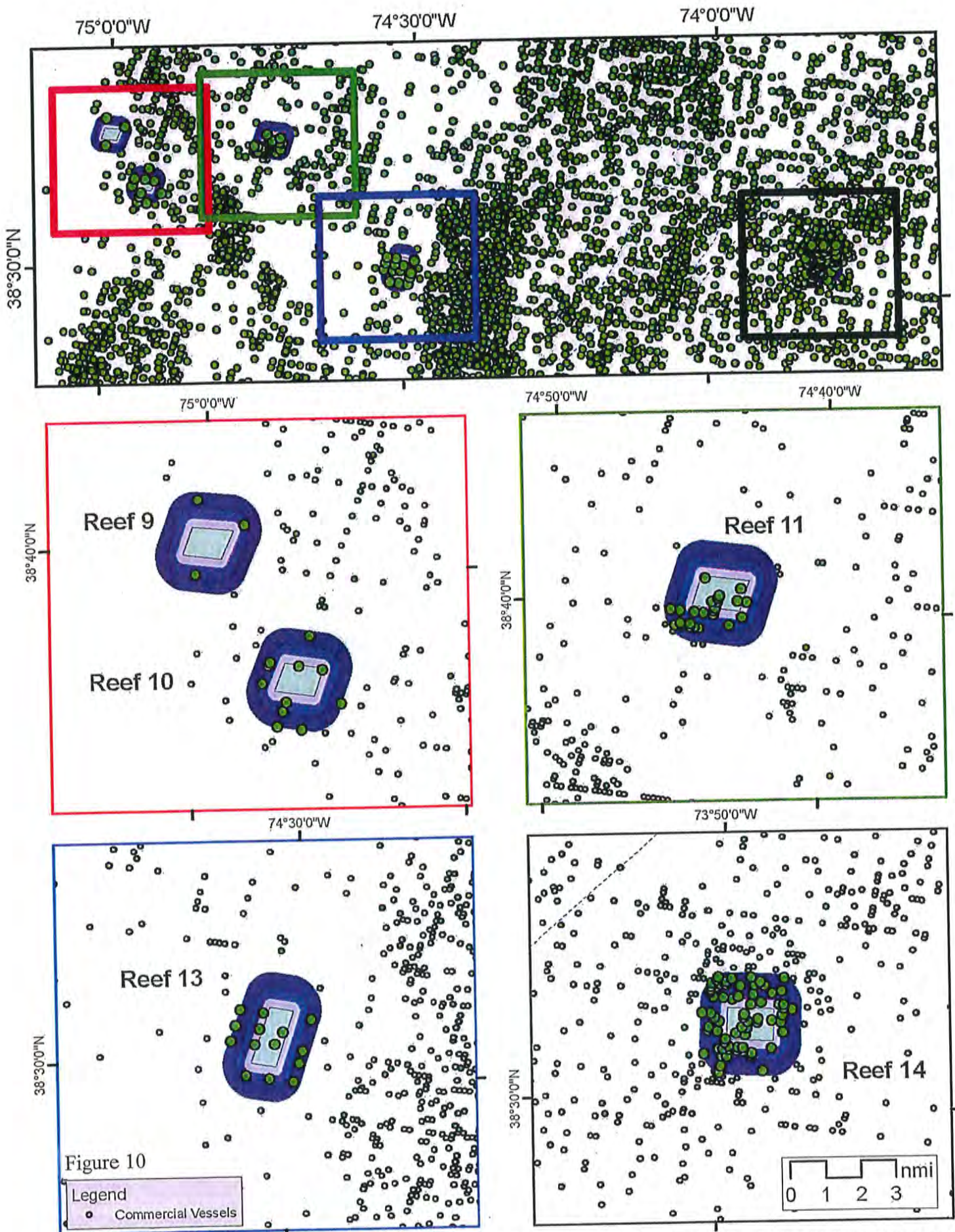
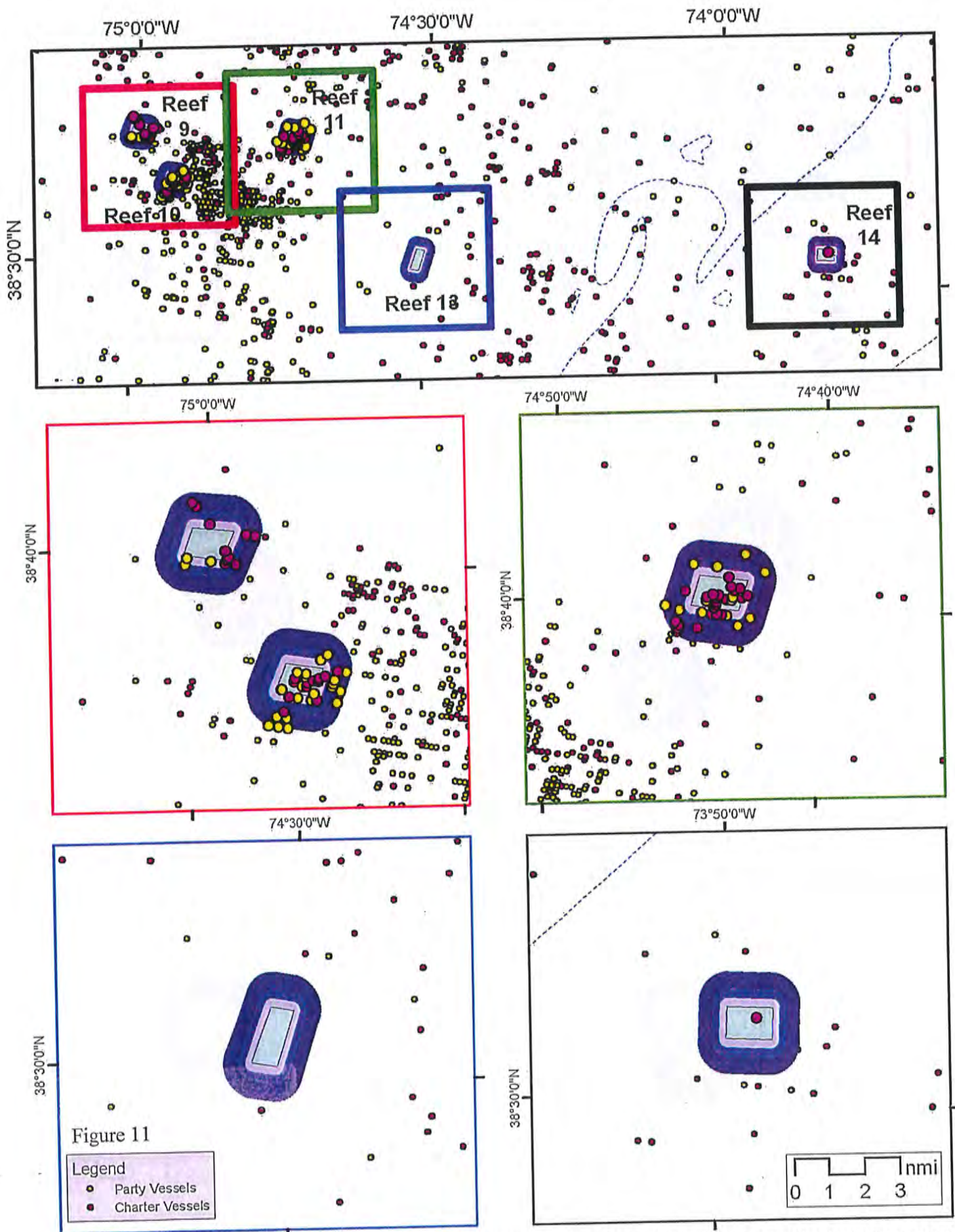


Figure 9. Reef Site 13 – Estimated Number of Boat Trips by Mode

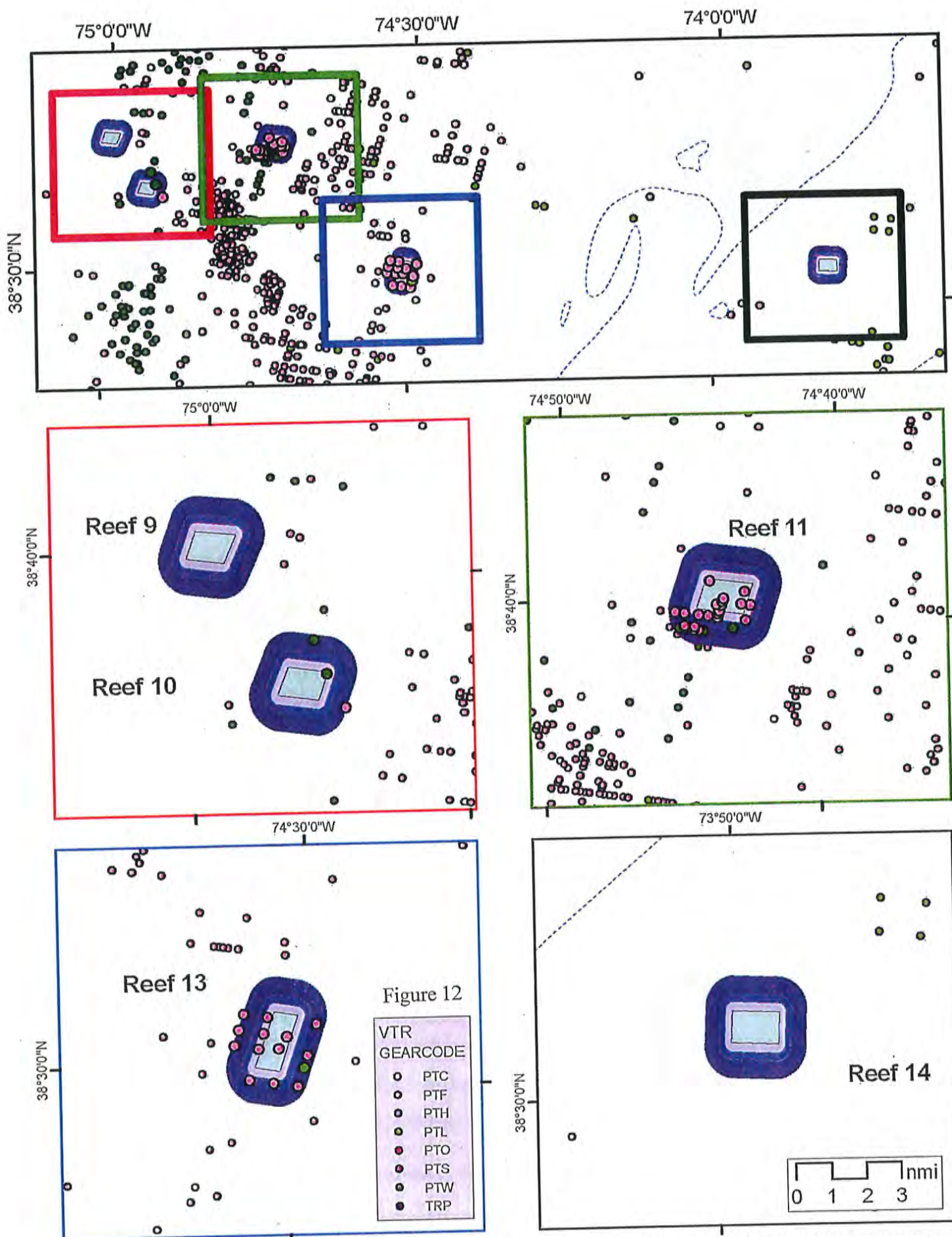




VTR trips from 2004-2010 in proximity to artificial reefs using all gears other than handline gear. Points vary by color according to fleet category, larger circles were used to distinguish points that are within 1 nautical mile of a reef. Reefs (in green) were buffered by 1/4, 1/2 and 1 nautical mile (blue hues).



VTR trips from 2004-2010 in proximity to artificial reefs using handline gear. Points vary by color according to fleet category, larger circles were used to distinguish points that are within 1 nautical mile of a reef. Reefs (in light green) were buffered by 1/4, 1/2 and 1 nautical mile (blue hues).



VTR trips from 2004-2010 in proximity to artificial reefs using commercial pot and trap gear. Points vary by color according to reported gear, type larger circles were used to distinguish points that are within 1 nautical mile of a reef. Reefs polygons (in green) were buffered by 1/4, 1/2 and 1 nautical mile (blue hues).

Appendix i

SMZ Monitoring Team

Joel Macdonald

NOAA Office of General Counsel
Northeast Section Chief
55 Great Republic Drive
Gloucester, MA 01930-2276

Paul Perra

National Marine Fisheries Service
Northeast Regional Office
55 Great Republic Drive
Gloucester, MA 01930-2276

Richard Seagraves

Mid-Atlantic Fishery Management Council
800 N. State Street, Suite 201
Dover, DE 19901

Scott Steinback

National Marine Fisheries Service
Northeast Fisheries Science Center
166 Water Street
Woods Hole, MA 02543

Appendix ii
Correspondence Referenced in SMZ Report



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
FISHERIES BUILDING
3002 Bayside Drive - Dover, DE 19901
P.O. Box 330 - Little Creek, DE 19961
(302) 735-2964

April 19, 2011

Dr. Christopher M. Moore, Executive Director
Mid-Atlantic Fishery Management Council
Suite 201
800 N. State St.
Dover, Delaware 19901

Dear Chris,

I am writing to request time on the June 14-16, 2011 MAFMC meeting agenda to present Delaware's request for Special Management Zone (SMZ) status for our five permitted artificial reef sites in the EEZ. As you know, Amendment #9 to the Summer Flounder Management Plan (1995), which is essentially the Black Sea Bass Management Plan, contains a provision under section 9.1.2.7 (pages 51-52) by which a holder of a USACOE permit for an artificial reef site in the EEZ may request SMZ status for the area within the permitted site in order to regulate fishing on the site by limiting fishing gear types. This provision is modeled after similar language in the SAFMC Snapper-Grouper Plan. Although SMZ status has never been requested under the Black Sea Bass Plan, this provision has been used routinely under the Snapper-Grouper Plan. Delaware has been considering making this request for some time but recent developments have added additional urgency to this request.

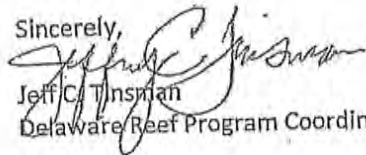
To offer a brief history of this subject, the Delaware Division of Fish and Wildlife has been receiving complaints from hook and line anglers regarding fouling of fishing gear in commercial pots and lines on ocean reef sites for more than 10 years. In 2007, we attended several MAFMC meetings and made presentations to the Ecosystem Committee regarding this conflict. At that time the Committee took no official position and we were referred to the Demersal Committee. No SMZ request was made at that time. More recently, the USFWS Sportfish Restoration Program Office in Hadley, MA, has begun receiving complaints from fishing groups and individuals from the mid-Atlantic region. Wallop-Breaux funding is an important federal funding source for many state reef programs. In March, 2011, USFWS personnel attended the ASMFC/GSMFC Reef Committee meeting in St. Petersburg, FL and informed state reef coordinators that when gear conflicts occur, pot fishing on reef sites is not consistent with the intent of their Sportfish Restoration Program. State reef programs must be able to limit gear conflicts by regulations in state waters or by way of SMZ's for sites in the EEZ in order to comply with the goals of the Sportfish Restoration Program. If states do not comply, the SFR Program may respond in several ways. In April, 2011, the SFR Program exercised one of these options. The New Jersey Reef Program was informed that their Sportfish Restoration Program funds for reef development had been terminated, effective immediately, until the reef permit holder addressed these gear conflicts (enclosure).

Delaware's Good Nature depends on You!

If a spot can be found on the agenda for this issue, I would envision making a short presentation, including our formal SMZ request, Bill Figley, from Reef Rescue (NJ) would make a short presentation and Vaughn Douglas of the Sportfish Restoration Program would present his agency's position. Should other states within the region join me in this effort, they would present their requests as well.

I have spoken with Tom Hoff and Jessica Coakley about this issue and have been advised to address this request to you. I will leave it to your discretion as to whether the presentation would best be made to the Demersal Committee or to all voting members of the Council. I appreciate your consideration of this issue and if you have any questions, please contact me at your convenience.

Sincerely,


Jeff C. Tinsman
Delaware Reef Program Coordinator

cc: Tom Hoff, MAFMC staff
Jessica Coakley, MAFMC staff
Dave Saveikis, Director, DFW
Craig Shirey, Fisheries Administrator
Richard W. Cole, proxy for Dave Saveikis

Delaware's Good Nature depends on You!



United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 Westgate Center Drive
Hadley, MA 01035-9589



In Reply Refer To:
FWS/Region 5/MBSP-WSFR

APR 12 2011

WSFR – New Jersey

Bob Martin, Commissioner
Department of Environmental Protection
401 E. State Street, 7th Floor, East Wing
P.O. Box 402
Trenton, New Jersey 08625-0402

Dear Mr. Martin:

I am writing to you regarding conflicts involving fishing gear used on artificial reefs constructed and maintained with Dingell-Johnson Sport Fish Restoration (SFR) funds in New Jersey. Over the past several months, I have been contacted by phone, mail, and personal visits by a variety of New Jersey recreational anglers who have claimed that proliferation of lobster pots and fish traps for commercial purposes interferes with hook and line and spear recreational fishing. My staff has investigated the allegations and confirmed that the use of pots and traps is interfering with the purposes for which the reefs were constructed.

The SFR Act (16 U.S.C. 777) states that "fish restoration and management projects" shall be construed to mean projects designed for the restoration and management of all species of fish that have material value in connection with *sport or recreation* in the marine and/or fresh waters of the United States. Sport fish are limited to aquatic, gill-breathing, vertebrate animals, bearing paired fins, and *having material value for sport or recreation*. Eligible projects are those having as their purpose the restoration, conservation, management, and enhancement of sport fish, and *the provision for public use and benefits from these resources*.

Federal regulations implementing the SFR Act (50 CFR Part 80) mandate the following:

- States must apply SFR funds only to activities or purposes approved by the Regional Director. If otherwise applied, such funds must be replaced or the State becomes ineligible to participate.
- When property is used for purposes that interfere with the accomplishment of approved purposes, the violating activities must cease, and any adverse effects resulting must be remedied.
- The State is responsible for the accountability and control of all assets to assure that they serve the purpose for which acquired throughout their useful life.

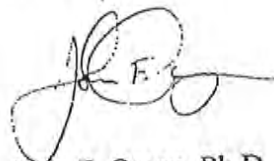
Bob Martin, Commissioner

- The Secretary of the Interior may terminate or suspend those projects in noncompliance, or may declare the State ineligible for further participation in program benefits until compliance is achieved.

Because of the aforementioned conflicts that clearly violate provisions of the SFR Act and its implementing regulations, I am terminating all further SFR funding for the artificial reef program in New Jersey, effective the date of this letter. Funding can be restored when appropriate action is taken to eliminate the conflicts that currently interfere with recreational fishing on these reefs.

If you have any questions or require further information regarding this matter, please contact me at 413-253-8501 or via email at john_organ@fws.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John F. Organ". The signature is stylized with a large loop at the beginning and a long horizontal stroke extending to the right.

John F. Organ, Ph.D.
Chief, Division of Wildlife
and Sport Fish Restoration

cc: David Chanda

Artificial Reefs

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

ROOM 2115 FEDERAL BUILDING

300 South New Street
Dover, Delaware 19901-6790

302-674-2331
FAX 302-674-5399

David R. Keifer
Executive Director

Dr. Lee G. Anderson
Chairman

Anthony D. DiLernia
Vice Chairman

Mr. Frank J. Cianfrani
Chief, Regulatory Branch
Philadelphia District
Corps of Engineers
100 Penn Square East
Philadelphia, PA 19107

24 August 1994

Dear Mr. Cianfrani:

We have reviewed Public Notice CENAP-OP-R-199400886-1 (DNREC, Div. Fish and Wildlife) dated 29 July 1994. The applicant proposes to establish and construct eight separate artificial reef sites at various locations along the western portion of the Delaware Bay and three sites in the Atlantic Ocean along the coast of Delaware.

We have three concerns with this project at this time. First, preliminary studies of tire toxicity in Maryland are showing that tires should not be placed in low salinity waters, but that they can be used in full strength sea water without releasing toxic leachates. We know that Tim Goodger of NMFS will be raising this issue as well and may have more than the preliminary results of the Maryland study. Second, we are concerned with the use of coal fly ash in large quantities. We would encourage the use of coal or other fly ash only on an experimental basis and that extensive monitoring of the benthic and fisheries communities be conducted around any experimental site. Finally, the candidate artificial reef site #11 needs to have a more extensive evaluation of the foregone fisheries impacts. We have been told that this is a very important black sea bass pot fishery site. We believe that surf clam fishermen may also have used this site extensively in the past. The use of this site by both recreational and commercial fishermen needs to be better documented before we would be satisfied that an artificial reef is the best use of this portion of the ocean.

Thank you for consideration of our comments on this project.

Sincerely yours,



David R. Keifer

DRK/TBH

Artificial Reefs

CAPE MAY SEAFOOD ASSOCIATION, INC.
 P.O. BOX 555
 CAPE MAY, NEW JERSEY 08204
 (609) 884-3000 PHONE
 (609) 884-3261 FAX

February 27, 1995

Mr. Frank J. Cianfrani, Chief
 Army Corp. of Engineers
 Regulatory Branch
 Wanamaker Building
 100 Penn Square East
 Philadelphia, PA 19107-3390

Re: BENAP-OP-R-199400886-1

Dear Mr. Cianfrani,

We understand your office is considering issuing a permit to the Delaware Department of Natural Resources and Environmental Control, Division of Fish, Game and Wildlife, for the construction of eleven artificial reefs sites off the coast of Delaware.

The Cape May Seafood Association, Inc. represents the major fishery producers in Cape May County, New Jersey:

Atlantic Capes Fisheries, Inc.
 Lund's Fisheries
 Axelsson & Johnson's
 Cold Spring Fish & Supply
 Snow's/Doxsee

In general we support the construction of artificial reefs as a method of enhancing the habitat. Artificial reefs can provide significant spawning grounds. The construction of artificial reefs, though, should be coordinated with natural obstructions on the bottom. Care should be taken not to construct reefs in areas where active commercial fishing, potting and trawling are undertaken. The construction of artificial reefs in these active commercial fishing areas can negatively impact the existing fisheries.

Post-It™ brand fax transmittal memo 7671		# of pages 2
To <i>David Kiefer</i>	From <i>Daniel Cohen</i>	
Co. <i>MAFMC</i>	Co. <i>CMSA</i>	
Dept.	Phone# <i>884-3000</i>	
Fax #	Fax# <i>884-3261</i>	

Letter to Frank Cianfrani

Page 2

February 27, 1995

After analyzing the proposals we generally support Sites 1 through 10. We believe these are sited in areas to enhance the habitat without conflicting with existing uses.

Site number 11 we believe should not be used as an artificial reef. This area is an area of traditional pot fishing and trawling. Site 11 should be abandoned.

We sincerely hope you will take our concerns to heart and remove Site 11 from your consideration.

Thank you for your attention to the above.

Sincerely yours,

Daniel Cohen / lg

Daniel Cohen, President
Cape May Seafood Association, Inc.

cc: Delaware Dept. of Natural Resources and Environmental Control
Mid Atlantic Fisheries Management Council David Kiefer
Army Corp. of Engineers - Edward Bonner
Axelsson & Johnson's
Lund's Fisheries
Atlantic Capes Fisheries
Snows/Doxsee
Cold Spring Fish & Supply

②

Appendix iii
Mid-Atlantic Fishery Management Council - Artificial Reef Policy

In June 1995, the Council adopted five policy statements on artificial reefs and the associated effects of reef activities on fisheries under Council authority. The goal was to have Council policy for artificial reefs such that all States in the Mid-Atlantic are treated uniformly. As stated in the National Plan (1985), the Federal role is one of providing technical assistance, guidance and regulations for the proper use of artificial reefs by local governments in a manner compatible with other long-term needs and to improve coordination and communication on artificial reef issues.

1) Each new EEZ artificial reef site proposal must have a stated conservation and management objective.

It is the Council's position that unless an organization (local government or association) has a conservation and management objective for a reef site, there is no way to evaluate the potential costs and benefits associated with a reef proposal. In essence, without stated objectives an artificial reef proposal is little more than "ocean dumping".

2) The MAFMC endorses the National Artificial Reef Plan (1985) and encourages staff to work with ASMFC, NMFS, and the States in the updating of plan.

The MAFMC was not heavily involved in the development of the National Artificial Reef Plan in the early 1980s because of higher priorities for fisheries that were under or attempting to be managed at that time. It is now the understanding that ASMFC is leading the reevaluation and updating of the Reef Plan and staff is encouraged to work closely in this endeavor. Artificial reefs have become much more important to MAFMC activities with the expansive efforts by States to locate additional reefs in the EEZ, as well as our management of additional species that frequently inhabit artificial reefs (e.g. black sea bass).

3) Only materials identified and acceptable in either the National Artificial Reef Plan (1985) or the Reef Material Criteria Handbook (1992) or revisions thereof should be used for the creation of artificial reefs.

The Council wants only materials that are "environmentally acceptable" to be used in artificial reefs. Environmentally acceptable deals with both the toxicity of materials and also the issue that materials have to be compatible with the reef site. The latter deals with the potential energy levels at the site, and the issue that what may be acceptable at one site may be unacceptable at a different site that has a much different energy level at the bottom. The Council is greatly concerned over the usage of tires for artificial reef sites specifically. Tires have recently been shown (MD studies) to be toxic to certain organisms at reef sites with low salinity (e.g. bays and estuaries where salinities of 15 ppt or less occur), but appear to not be toxic in high salinity. The Council still believes that tires are an inappropriate material because of high energy levels in the ocean which inevitably leads to tire structure breakdown and thus mobility off the reef once they get caught up in ocean currents.

4) No fishery management regulations may be implemented for any artificial reef in the EEZ without concurrence by the MAFMC.

The Magnuson Act states that the Council shall "prepare and submit to the Secretary a fishery management plan with respect to each fishery within its geographical area of authority that requires conservation and management... ". It is the intent of the MAFMC that they agree with any attempt at fishery management around any artificial reef in the EEZ in the Mid-Atlantic off of New York through Virginia.

5) The Council will attempt to facilitate communication on the siting of any new artificial reef in the EEZ with various user groups of the proposed site.

Siting of new artificial reef is regulated by the US Army Corps of Engineers and often commercial and sport fishing interests are not well informed of Corps activities. Also individual States may coordinate with fishing interests within their State on artificial reefs, but the highly migratory nature of many fisheries necessitates information transfer to organizations beyond individual States. Council staff will attempt to widely distribute information on new sitings in the initial stages of reef proposals.

These five policy statements should help facilitate Federal, State, and local activities in the Mid-Atlantic and can only be beneficial to the ocean and coastal habitats.