UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

August 23, 2011

Mr. Jeffrey M. Willis
Deputy Director
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

Dear Mr. Willis:

On August 23, 2011, the Coastal Programs Division received your request to submit the Rhode Island Program Change - Incorporation of the GLD and the associated changes to Rhode Island Federal Consistency lists into our federally approved coastal management program.

We have begun reviewing this request and will notify you shortly of the outcome of our review.

Sincerely,

Deborah Jefferson

Deborah Jefferson, Program Support Assistant
Business Management Division

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Ann Miles, Director
FERC Office of Energy Projects
Division of Hydropower Licensing
888 First Street NE
Washington, DC 20426

Dear Ms. Miles:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Licenses, renewals, and amendments to licenses for non-Federal hydroelectric projects and primary transmission lines under Sections 3 (11), 4 (e) and 15 of the Federal Power Act (16 U.S.C. 796 (11), 797, and 808).

2. Orders for interconnection of electric transmission facilities under Section 202 (b) of the Federal Power Act (16 U.S.C. 824 (a) (b)).

3. Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities, under Section 7 (c) of the Natural Gas Act (15 U.S.C. 717 f (c)).

4. Permission and approval for the abandonment of natural gas pipelines under Section 7 (b) of the Natural Gas Act (15 U.S.C. 717 f (b)).

5. Permits related to the regulation of gas pipelines and the licensing of import or export of gas pursuant to the Natural Gas Act (15 U.S.C. 717, 717(b)).

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Maritime Administration
ATTN: Coastal Zone Management Act Liaison
U.S. Department of Transportation
400 Seventh St., S.W. Room 7201
Washington, D.C. 20590

Dear Coastal Zone Management Act Liaison:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Permits and licenses for offshore LNG terminals and other deepwater port facilities issued by MARAD pursuant to sections 4 and 5 of the Deepwater Port Act of 1974, as amended (33 U.S.C. 1501).

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Robert DeSista
US Army Corps of Engineers
Regulatory Division
696 Virginia Road
Concord, MA 01742-2751

Dear Mr. DeSista:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011; the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).

2. Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

3. Approval of plans for improvements made at private expense under USACE supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).

4. Disposal of dredged materials into the waters of the U.S., pursuant to the Federal Water Pollution Control Act ("Clean Water Act"), Section 404 (33 U.S.C. 1344).

5. All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413, 1414) ("Ocean Dumping Act").

6. Permits authorizing artificial islands or fixed structures on the outer continental shelf pursuant to section 4(f) of the Outer Continental Shelf Lands Act and amendment (44 U.S.C. 1333).

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Edward LeBlanc
Waterways Chief
U.S. Coast Guard Sector SE New England
20 Risho Avenue
East Providence, RI 02914

Dear Mr. LeBlanc:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 33 U.S.C. 401, 403, 491 - 502, and 525 – 534.

2. Permits and authorizations for the handling of dangerous cargo by vessels in US ports pursuant to 33 U.S.C. 1231.

3. Permits for the handling of flammable or combustible liquids in US ports pursuant to 46 U.S.C. 391.

4. Establishment of new or changes to existing anchorages pursuant to 33 U.S.C. 471.

5. Establishment of new or changes to existing vessel traffic services pursuant to 33 U.S.C. 1223.

6. Licenses for the construction and operation of deepwater ports pursuant to the Deepwater Port Act of 1974 (33 USC 150).

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Mr. Edward Wandelt, Chief
Office of Environmental Management (CG-47)
Headquarters, United States Coast Guard
Jamal Building (RM JR09-1719)
1900 Half Street SW
Washington, DC 20024

Dear Mr. Wandelt:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 33 U.S.C. 401, 403, 491 - 502, and 525 – 534.

2. Permits and authorizations for the handling of dangerous cargo by vessels in US ports pursuant to 33 U.S.C. 1231.

3. Permits for the handling of flammable or combustible liquids in US ports pursuant to 46 U.S.C. 391.

4. Establishment of new or changes to existing anchorages pursuant to 33 U.S.C. 471.

5. Establishment of new or changes to existing vessel traffic services pursuant to 33 U.S.C. 1223.

6. Licenses for the construction and operation of deepwater ports pursuant to the Deepwater Port Act of 1974 (33 USC 150).

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Maureen Bornholdt, Program Manager
BOEMRE Office of Offshore Alternative Energy Programs
Mail Stop 4090
381 Elden Street
Herndon, VA 20170-4817

Dear Ms. Bornholdt:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Permits to drill, rights-of-use, rights-of-way, and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334,

explorations and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.

2. Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) as well as 43 U.S.C. 931(c).

3. Issuance or approval of leases, permits, easements, rights-of-way, exploration plans, development plans, production plans, and other authorizations, as appropriate, pursuant to the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et. seq.) as amended by the Energy Policy Act of 2005 (42 U.S.C. 15801 et. seq.) for the construction, operation, maintenance and/or support activities related to OCS energy development.

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Jessica Bradley
BOEMRE Office of Offshore Alternative Energy Programs
Mail Stop 4090
381 Elden Street
Herndon, VA 20170-4817

Dear Ms. Bradley:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. Permits to drill, rights-of-use, rights-of-way, and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334,

explorations and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.

2. Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) as well as 43 U.S.C. 931(c).

3. Issuance or approval of leases, permits, easements, rights-of-way, exploration plans, development plans, production plans, and other authorizations, as appropriate, pursuant to the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et. seq.) as amended by the Energy Policy Act of 2005 (42 U.S.C. 15801 et. seq.) for the construction, operation, maintenance and/or support activities related to OCS energy development.

Please send any written comments on the proposed GLD by **June 13, 2011** to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

/lam

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

COASTAL RESOURCES MANAGEMENT COUNCIL
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, R.I. 02879-1900

(401) 783-3370
FAX: (401) 783-3767

May 12, 2011

Mel Cote
Manager of the Ocean and Coastal Protection Unit
USEPA REGION 1 - New England
5 Post Office Square
Mail Code: OEP06-1
Boston, MA 02109-3912

Dear Mr. Cote:

The Rhode Island Coastal Resources Management Council (CRMC) recently completed the Rhode Island Ocean Special Area Management Plan (Ocean SAMP), a marine spatial plan to guide future uses of Rhode Island's offshore waters. On May 11, 2011, the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) approved the incorporation of the Ocean SAMP into the Rhode Island Coastal Resources Management Program (RICRMP) under the Coastal Zone Management Act (CZMA). The Ocean SAMP identifies a number of resources in federal waters that are critical to the uses and resources of Rhode Island's coastal zone. Future activities in federal waters that affect these resources will potentially affect the uses and resources of Rhode Island's coastal zone. Accordingly, the CRMC has proposed a Geographic Location Description (GLD) which describes a geographic area in federal waters where certain federal license or permit activities, under NOAA's CZMA regulations at 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the RICRMP will be subject to Rhode Island review under the CZMA Federal Consistency Provision. Pursuant to 15 C.F.R. § 930.53(c), CRMC must notify the affected federal agencies in writing at least 60 days before submitting the GLD to OCRM for incorporation into the federally approved RICRMP. Enclosed please find the draft GLD, which identifies what federal license or permit activities are involved, the proposed geographic area, and an analysis of the reasonably foreseeable effects of these federal activities on the uses and resources of Rhode Island's coastal zone.

Specifically, the CRMC is requesting federal consistency for the following federal licenses and permits:

1. NPDES (National Pollution Discharge Elimination System) permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and

aquaculture permits pursuant to Sections 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 ("Clean Water Act") (33 U.S.C. 1341, 1342, 1343, and 1328).

2. Permits for transportation of dumping material other than dredged material in navigable waters pursuant to Sec. 102 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1412) ("Ocean Dumping Act").

Please send any written comments on the proposed GLD by **June 13, 2011**to: Grover J. Fugate, RI Coastal Resources Management Council, Oliver Stedman Government Center, 4808 Tower Hill Road, Suite 3, Wakefield, RI 02879-1900. If you have any questions, please contact Grover J. Fugate at gfugate@crmc.ri.gov or 401-783-3370.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

Enclosure

cc: Allison Castellan, NOAA Office of Ocean and Coastal Resources Management

PROPOSED GEOGRAPHIC LOCATION DESCRIPTION: Analysis of Reasonably Foreseeable Effects of Federal Actions Occurring in the Federal Waters of the Rhode Island Ocean SAMP Area on Uses or Resources of Rhode Island's Coastal Zone

Proposed by the RI Coastal Resources Management Council, May 2011

This document, pursuant to 15 C.F.R. § 930.53, describes a geographic area in federal waters where certain federal license or permit activities, under 15 C.F.R. Part 930, Subpart D, and Outer Continental Shelf (OCS) authorizations, under 15 C.F.R. Part 930, Subpart E, that are listed in the Rhode Island Coastal Resources Management Program (RICRMP)will be subject to Rhode Island review under the Coastal Zone Management Act (CZMA) Federal Consistency Provision. This document also describes the listed federal license or permit activities and OCS authorizations that will be subject to Rhode Island Coastal Resources Management Council (CRMC) review when proposed in the geographic area described in federal waters and provides an analysis justifying the geographic location description (GLD) and the specified listed federal actions based on reasonably foreseeable effects to any use or resource of Rhode Island's coastal zone.

I. Geographic Location Description

Rhode Island's GLD for federal waters includes the area described and evaluated as part of the Rhode Island Ocean Special Area Management Plan (SAMP). This area includes the federal portions of Block Island Sound and Rhode Island Sound as well as portions of the Atlantic Ocean (*see* Figure 1 below). Specifically, the GLD is a polygon starting from the seaward limit of Rhode Island state jurisdiction at 3 nm from the shoreline and extending seaward to 30nm from the mainland, and approximately 45nm wide between the seaward boundaries with Massachusetts and Connecticut. The western edge of the GLD starts off at a point southeast of Watch Hill Point at [-71.7918916, 41.2730533] and follows the Rhode Island/ Connecticut and Rhode Island/New York waters border South-Southwest to [-71.8053126, 41.0368549], then extends out into federal waters South-Southeast to [-71.7830932, 40.9476722]. The southern edge starts at this point, follows an arc out to [-71.5169896, 40.9122479], and then follows a line East to [-70.8489868, 41.0276451] in federal waters. The eastern edge starts at this point and then follows a line North to the Massachusetts state waters boundary at [-70.8669827, 41.2127751], then follows the Massachusetts state/federal seaward boundary to the seaward extent of the Rhode Island/Massachusetts boundary at [-71.0910046, 41.4370765]. *See* Figure 1 below for a precise map of the GLD. If the precise location of a project within the GLD is of concern, the CRMC has on file the thousands of geographic coordinates that are the basis for the GLD boundary, and can make these available on a project by project basis.

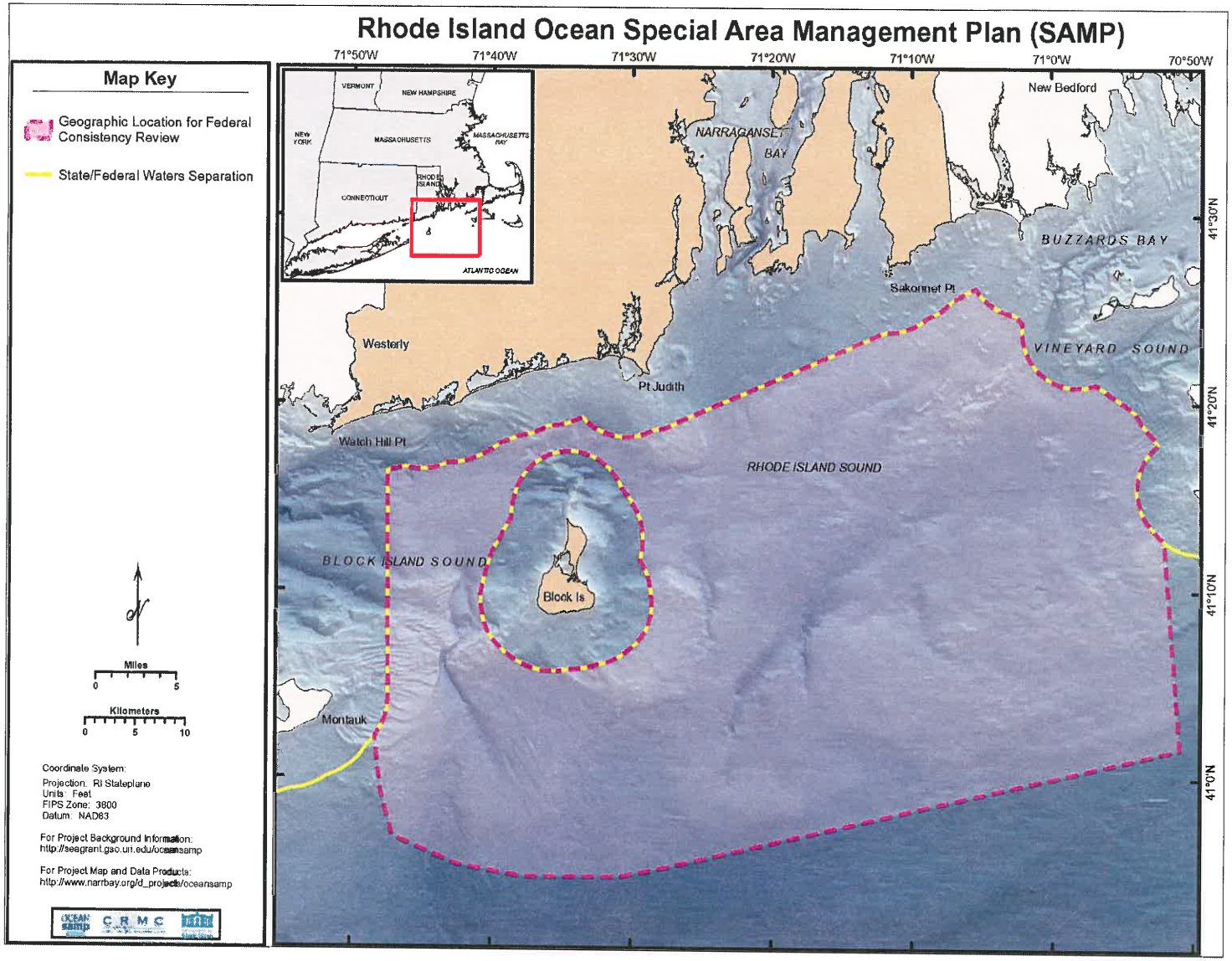

Figure 1.Geographic Location Description Boundary.

II. List of Federal License or Permit Activities (15 C.F.R. Part 930, Subpart D), and Outer Continental Shelf (OCS) Authorizations (15 C.F.R. Part 930, Subpart E) Subject to CRMC CZMA Review in the GLD

Thresholds and Exclusions:

Federal consistency review of the licenses and permits listed below is *only* sought for the following type of projects proposed for the GLD. The following thresholds apply to all of the licenses and permits listed subsequently in this document:

i. Large scale projects, including:
   a. offshore wind facilities (5 or more turbines within 2 km of each other, or 18MW power generation);
   b. wave generation devices (2 or more devices, or 18 MW power generation);
   c. instream tidal or ocean current devices (2 or more devices, or 18 MW powergeneration);
   d. offshore LNG platforms (1 or more); and
   e. artificial reefs (1/2 acre footprint and at least 4 feet high), except for projects of a public nature whose primary purpose is habitat enhancement

ii. Small scale projects, including:
   a. offshore wind facilities of a permanent nature that are smaller than the above thresholds;
   b. wave generation devices of a permanent nature that are smaller than the above thresholds; and
   c. instream tidal or ocean current devices of a permanent nature that are smaller than the above thresholds

iii. Underwater cables;
iv. Mining and extraction of minerals, including sand and gravel;
v. Aquaculture projects of any size;
vi. Dredged material disposal;
vii. Met towers with a deployment window of 10 years or greater.

In addition, the following types of activities shall be *excluded* from federal consistency review as de minimis activities. These exclusions apply to all of the federal licenses and permits listed in this document:

1. Regattas and marine parades pursuant to 33 C.F.R. §100 (USCG)
2. Regulated navigation areas pursuant to 33 C.F.R. §110 (USCG), excluding changes to vessel traffic services pursuant to 33 U.S.C. 1223.
3. Drawbridge operation regulations pursuant to 33 C.F.R. §117 (USCG)
4. Public or private aids to navigation
5. Scientific investigation, including geophysical surveys, buoy placements including met buoys, and non-permanent research installations of a size less than 5 acres
6. Scientific sampling (benthic, pelagic, and water column)
7. Surface and submerged military activities

8. Temporary speed zones or navigation modifications due to marine mammals
9. Temporary federal mooring or anchorage areas, excluding permanent such changes pursuant to 33 U.S.C. 471.

Department of Defense, Army Corps of Engineers:

1. Construction of dams, dikes or ditches across navigable waters, or obstruction or alteration of navigable waters required under Sections 9 and 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403).
2. Occupation of seawall, bulkhead, jetty, dike, levee, wharf, pier, or other work built by the U.S. pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).
3. Approval of plans for improvements made at private expense under USACE supervision pursuant to the Rivers and Harbors Act of 1902 (33 U.S.C. 565).
4. Disposal of dredged materials into the waters of the U.S., pursuant to the Federal Water Pollution Control Act ("Clean Water Act"), Section 404 (33 U.S.C. 1344).
5. All actions for which permits are required pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413, 1414) ("Ocean Dumping Act").
6. Permits authorizing artificial islands or fixed structures on the outer continental shelf pursuant to section 4(f) of the Outer Continental Shelf Lands Act and amendment (44 U.S.C. 1333).

Department of Energy, Federal Energy Regulatory Commission:

1. Licenses, renewals, and amendments to licenses for non-Federal hydroelectric projects and primary transmission lines under Sections 3 (11), 4 (e) and 15 of the Federal Power Act (16 U.S.C. 796 (11), 797, and 808).
2. Orders for interconnection of electric transmission facilities under Section 202 (b) of the Federal Power Act (16 U.S.C. 824 (a) (b)).
3. Certificates for the construction and operation of interstate natural gas pipeline facilities, including both pipelines and terminal facilities, under Section 7 (c) of the Natural Gas Act (15 U.S.C. 717 f (c)).
4. Permission and approval for the abandonment of natural gas pipelines under Section 7 (b) of the Natural Gas Act (15 U.S.C. 717 f (b)).
5. Permits related to the regulation of gas pipelines and the licensing of import or export of gas pursuant to the Natural Gas Act (15 U.S.C. 717, 717(b)).

Environmental Protection Agency:

1. NPDES (National Pollution Discharge Elimination System) permits and other permits for Federal installations, discharges in contiguous zones and ocean waters, sludge runoff and aquaculture permits pursuant to Sections 401, 402, 403, 405, and 318 of the Federal Water Pollution Control Act of 1972 ("Clean Water Act") (33 U.S.C. 1341, 1342, 1343, and 1328).
2. Permits for transportation of dumping material other than dredged material in navigable waters pursuant to Sec. 102 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1412) ("Ocean Dumping Act").

Department of Homeland Security, United States Coast Guard:

1. Construction or modification of bridges, causeways or pipelines over navigable waters pursuant to 33 U.S.C. 401, 403, 491 - 502, and 525 – 534.
2. Permits and authorizations for the handling of dangerous cargo by vessels in US ports pursuant to 33 U.S.C. 1231.
3. Permits for the handling of flammable or combustible liquids in US ports pursuant to 46 U.S.C. 391.
4. Establishment of new or changes to existing anchorages pursuant to 33 U.S.C. 471.
5. Establishment of new or changes to existing vessel traffic services pursuant to 33 U.S.C. 1223.
6. Licenses for the construction and operation of deepwater ports pursuant to the Deepwater Port Act of 1974 (33 USC 150).

Department of Interior, Bureau of Ocean Energy Management:

1. Permits to drill, rights-of-use, rights-of-way, and easements for construction and maintenance of pipelines, gathering and flow lines and associated structures pursuant to 43 U.S.C. 1334, explorations and development plans, and any other permits or authorizations granted for activities described in detail in OCS exploration, development, and production plans.
2. Permits required for pipelines crossing federal lands, including OCS lands, and associated activities pursuant to the OCS Lands Act (43 U.S.C. 1334) as well as 43 U.S.C. 931(c).
3. Issuance or approval of leases, permits, easements, rights-of-way, exploration plans, development plans, production plans, and other authorizations, as appropriate, pursuant to the Outer Continental Shelf Lands Act (43 U.S.C. 1331 et. seq.) as amended by the Energy Policy Act of 2005 (42 U.S.C. 15801 et. seq.) for the construction, operation, maintenance and/or support activities related to OCS energy development.

Department of Transportation, Maritime Administration:

1. Permits and licenses for offshore LNG terminals and other deepwater port facilities issued by MARAD pursuant to sections 4 and 5 of the Deepwater Port Act of 1974, as amended (33 U.S.C. 1501).

III. Coastal Effects Analysis for the GLD and Listed Activities

A. Definition of coastal effects

Pursuant to 15 C.F.R. Part 930, a federal action is subject to federal consistency review if the action will affect a state's coastal uses or resources. As stated in 15 C.F.R. § 930.11(g), "The term 'effect on any coastal use or resource' means any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity." "Coastal effects" is shorthand for these reasonably foreseeable effects, which include effects on any land or water use or resource. Coastal effects also include both direct as well as indirect (secondary and cumulative) effects. This document represents an analysis of the

reasonably foreseeable effects of listed federal license or permit activities under 15 C.F.R. Part 930, Subparts D and E that may be proposed in the federal waters of the Ocean SAMP area on Rhode Island's coastal uses or resources.

B. Description of RI coastal zone and connection to broader area

Rhode Island's coastal zone includes tidal waters out to 3 nm, shoreline features, and areas contiguous to shoreline features (RICRMP 100.1). Coastal waters include Narragansett Bay, a semi-enclosed estuary, as well as portions of Block Island Sound and Rhode Island Sound. Specifically, Rhode Island's coastal waters include the waters out to 3 nm of Rhode Island's south coast, as well as the waters out to 3 nm surrounding Block Island (*see*Figure 1 above). These waters are part of a larger ecosystem comprising the two Sounds, and are dynamically connected to Narragansett Bay, Buzzards Bay, Long Island Sound, and the Atlantic Ocean via the Continental Shelf. Much of this ecosystem, including portions of Block Island Sound, Rhode Island Sound, and the Atlantic Ocean, is in federal waters. It is also important to note that there is a band of federal waters in Block Island Sound separating Block Island from mainland Rhode Island (*see* Figure 1 above). Natural resources such as fish and marine mammals regularly migrate between these state and federal waters, and many human uses, including fishing, shipping, passenger transportation, and recreation, similarly move back and forth between the state and federal waters of this area. Because Rhode Island's coastal zone is part of this broader ecosystem, Rhode Island's coastal zone cannot be effectively managed without consideration of uses and activities taking place in adjacent federal waters. This ecosystem connection and effects to uses or resources of Rhode Island's coastal zone are described below.

C. Coastal use and resource characterization of the GLD

The Rhode Island Ocean SAMP research and planning process included a rigorous analysis of Rhode Island's offshore waters, including both state waters and adjacent federal waters. Federal waters of the Ocean SAMP study area include the federal portions of Block Island Sound and Rhode Island Sound, and portions of the Atlantic Ocean out to 30 nm from shore (*see*Figure 1). The RICRMC is seeking federal consistency review over listed federal actions taking place within the federal waters of the Ocean SAMP area, hereafter referred to as the Geographic Location Description (GLD).

Ecology/Natural Resources

The Rhode Island Ocean SAMP area comprises portions of Rhode Island Sound and Block Island Sound as well as a section of the Atlantic Ocean out to the Continental Shelf Slope. This area is a rich, environmentally sensitive marine ecosystem with an abundance of natural resources. This area is ecologically unique because it is a transition zone characterized by the mixing of deep offshore waters with the shallower, more productive estuarine waters of Narragansett Bay and Long Island Sound. It is also unique in that it is at the boundary of two distinct biogeographic provinces, the Acadian to the North and the Virginian to the South. The mix of cold northern waters and warmer southern waters allows for rich biodiversity but also draws attention to the vulnerability of the area's natural resources to water temperature increases that may be associated with global climate change. For example, species such as American lobster, Atlantic cod, and winter flounder are at the southern extent of their range in the Ocean SAMP area, and warming temperatures may cause decreases in abundance of these important species within this area (Hare et al. 2010, Nye et al. 2009, Perry et al. 2005). The Ocean SAMP

area is a biologically productive area, replete with an abundance of finfish, shellfish and crustacean species, marine mammals, sea turtles, and birds. Block Island Sound and Rhode Island Sound are characterized by a seasonal flux of offshore organisms: every summer, there is an influx of planktonic organisms from offshore. Larger organisms, including commercially and recreationally important finfish and crustacean species as well as whales and other marine mammals, follow this source of food inshore. This seasonal influx of plankton also includes larvae of commercially important species such as lobster and menhaden, which spawn offshore but grow to adulthood further inshore. Birds are also a key part of the Ocean SAMP area ecosystem. Passerines regularly migrate through, with Block Island being an important stopover point in this migratory path, and waterbirds are abundant in the Ocean SAMP area during the winter months. Much of this marine life relies on the rich benthic habitats found in the Ocean SAMP area. For example, glacial moraines are important habitat areas for a diversity of fish and other marine plants and animals because of their relative structural permanence and structural complexity. Glacial moraines create environments that exhibit some of the highest biodiversity within the Ocean SAMP area. Most of the glacial moraines mapped through the Ocean SAMP research effort are located in federal waters of the Ocean SAMP area (*see*Figure 2). The glacial moraines, and other unique physical oceanographic and structural features, create and define the value of the Ocean SAMP area for fisheries, tourism, recreation, and other human uses, as well as its ecological value to the Eastern North Atlantic ecosystem. Therefore, as described above and in more detail below, there is a distinct linkage between the resources in this offshore area in federal waters and the coastal uses and resources of Rhode Island's coastal zone.

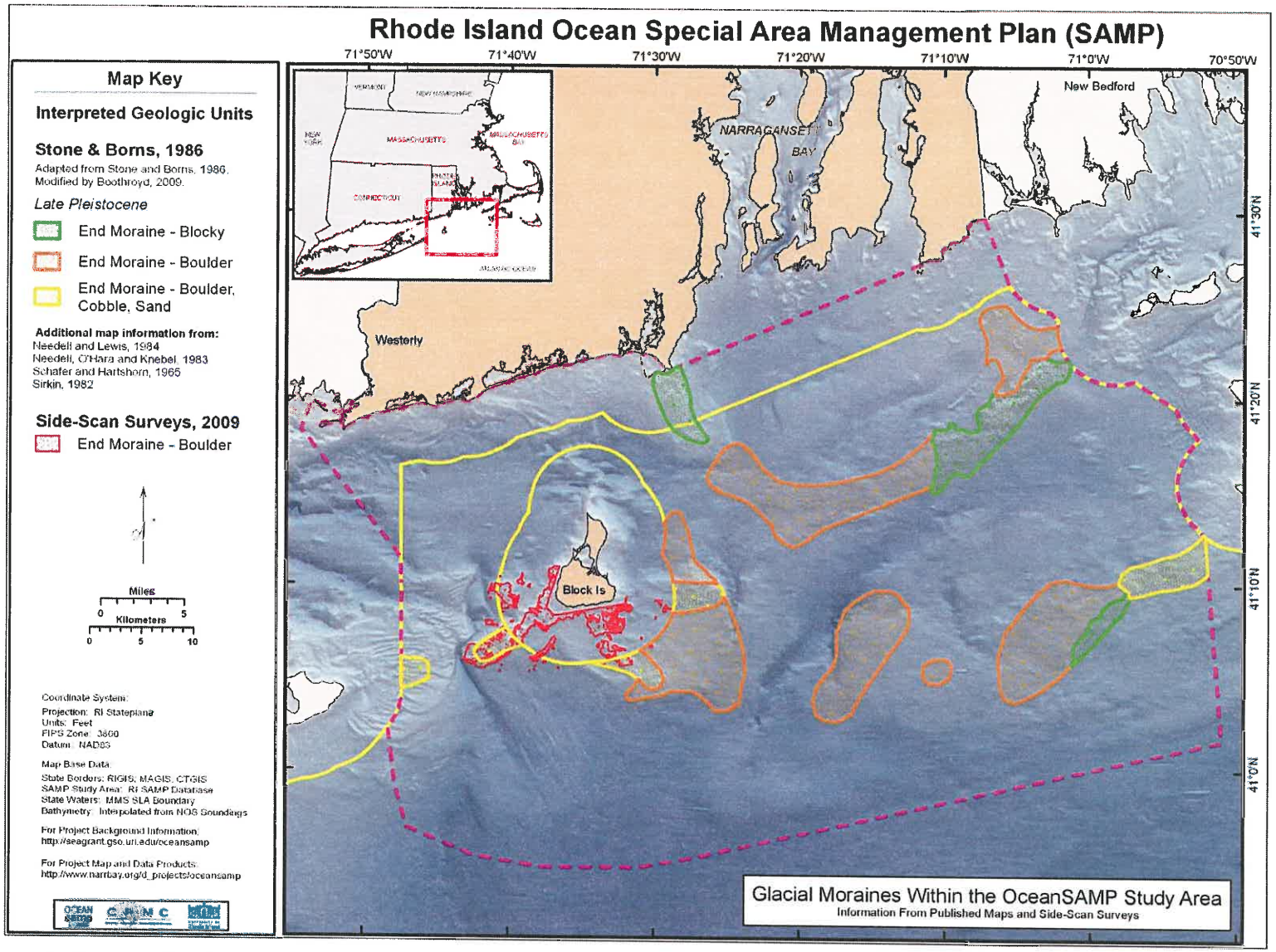

Figure 2. Glacial Moraines

Fisheries

Fishing is arguably the most prevalent and important use of both state and federal waters of the Ocean SAMP area. Rhode Island has a long tradition of both commercial and recreational fishing, and Point Judith, which abuts the Ocean SAMP area, is consistently ranked among the top commercial fishing ports in the United States. In 2009, approximately 84.5 million pounds of fish worth $61.7 million dollars in ex-vessel revenue were landed at Point Judith (NMFS Fisheries Statistics Division, 2011). This included 2.8 million pounds of lobster worth $11.2 million dollars and 26.4 million pounds of squid worth $15.2 million dollars. While lobster and squid are consistently Rhode Island's most valuable fisheries, Rhode Island fishermen target a diverse range of benthic and pelagic finfish, crustaceans, and shellfish. Rhode Island offshore fishing activities include dragging for species such as squid, butterfish, scup, hake, summer flounder, cod, monkfish, yellowtail flounder, and winter flounder; mid-water trawling for herring and mackerel; gillnetting for monkfish; scalloping; and lobstering. While Rhode Island landings are valuable in their ex-vessel revenue, the economic impact of Rhode Island's commercial fisheries extends beyond the landings value of fish and supports fishermen, fish processing and retail businesses, and fishing industry support businesses. In 2009 there were 179 fishing vessels home ported in Point Judith. A National Marine Fisheries Service economic impact study conducted in 2008 found that the Rhode Island commercial fishing industry generated approximately $706 million in sales and $380 million in income (NMFS 2008a). Recreational fishing, which includes private angling as well as party and charter boat fishing, is an equally important activity that is widespread throughout both state and federal waters of the Ocean SAMP area. Rhode Island's party and charter boat fishing fleet is largely based out of Point Judith and comprises a number of small businesses. By one count, between 2001 and 2005, 66 different charter and party boats made a total of over 7,700 trips out of Point Judith, carrying almost 100,000 anglers (Clay et al. 2008). Recreational fishermen target benthic and finfish species including Atlantic bonito, Atlantic cod, black sea bass, bluefish, scup, striped bass, summer flounder, tautog, winter flounder, and yellowfin tuna (NMFS 2008b). Recreational fishing has a notable economic impact throughout Rhode Island through the sale of fishing vessels and gear as well as anglers' spending, and is considered an important part of Rhode Island's tourism economy because of the number of out-of-state residents who travel to Rhode Island to engage in this activity. A National Marine Fisheries Service economic impact study found that Rhode Island recreational fishing generated nearly $167 million in economic impact in 2006 (Gentner and Steinback 2008).

Qualitative and quantitative data analyses performed for the Ocean SAMP show that Rhode Island commercial and recreational fishermen operate throughout both state and federal waters of the Ocean SAMP area (CRMC 2010; *see*Figure 3 and Figure 4). Figure 3, which is based on qualitative input from commercial and recreational fishermen, illustrates how fishing activity is ubiquitous throughout the area. Figure 4 is based on Vessel Trip Reports (VTRs), comprising fisheries-dependent monitoring data collected by NMFS, and does not reflect lobstering or any recreational or charter boat fishing activity. Nearly all of the Rhode Island landings of scallops, winter flounder, yellowtail flounder, cod, haddock, silver hake, and mackerel come from offshore/federal waters, as do the majority of Rhode Island squid, lobster, and summer flounder landings. Specific areas of high fishing activity may vary from year to year due to changes in the regulatory environment, market for the sale of fish, and changes in fish abundance. However, glacial moraines and other transitional areas between different habitat types are consistently

important fishing areas for both commercial and recreational fishermen because many fish species tend to congregate in these areas. It should also be noted that such areas are of particular importance for lobstermen, and accordingly may be considered as proxies for high-intensity lobstering areas. Most such areas that have been identified through the Ocean SAMP research process are in federal waters (CRMC 2010; *see* Figure 2). Areas of fishing activity may also change over the course of a year as fishermen follow their target species on their seasonal inshore/offshore migrations. For example, bottom trawlers follow longfin squid, scup, summer flounder, and black sea bass inshore during the warmer months and offshore during the winter, and conversely target winter flounder offshore during the warmer months. Midwater trawlers may follow herring inshore during the winter months and further offshore in the spring and summer, and many lobstermen follow lobster offshore during the winter and inshore during the warmer months. These fishing patterns demonstrate the fundamental importance of offshore fishing areas, including those within the Ocean SAMP area, to Rhode Island's vibrant and economically significant commercial and recreational fisheries.

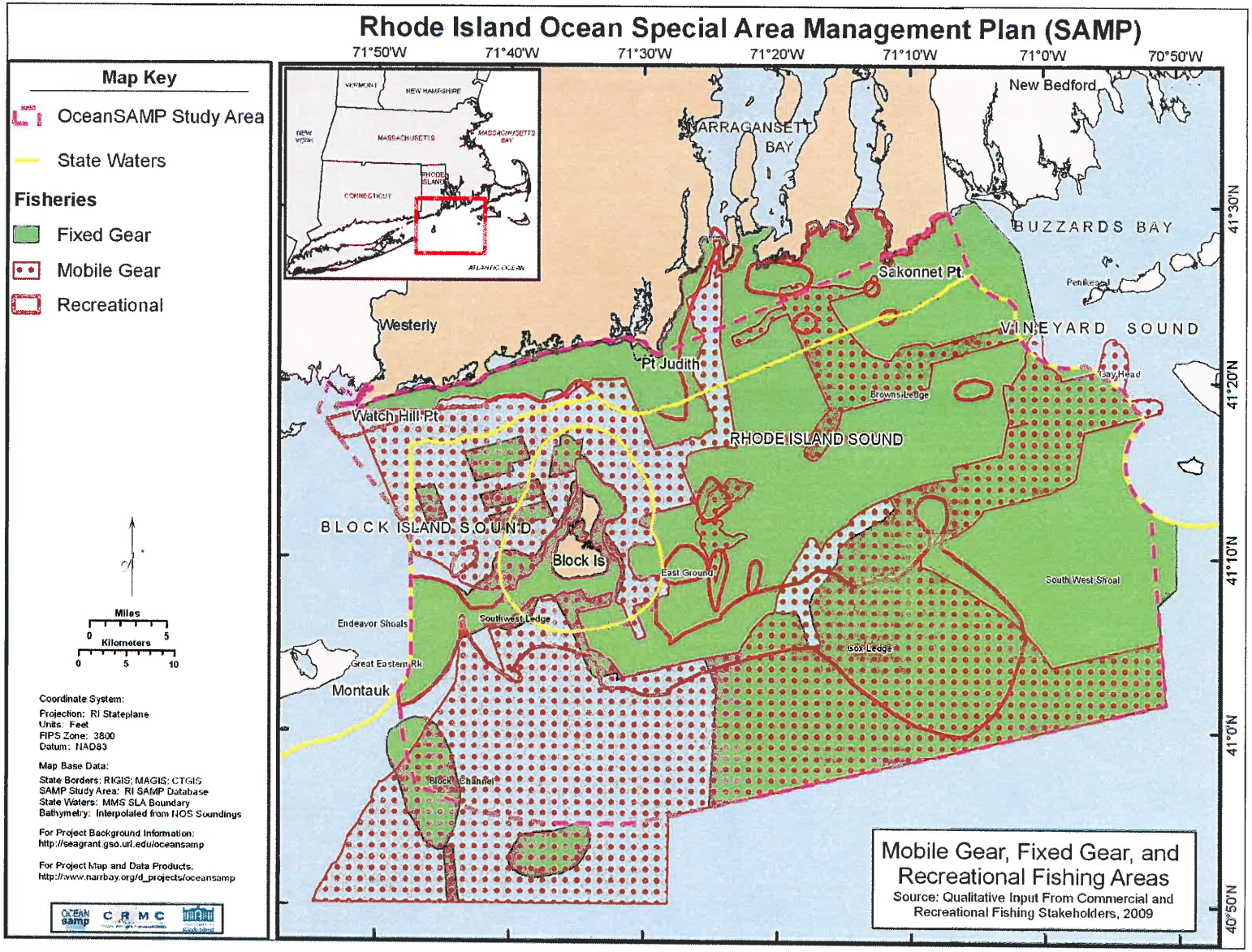

Figure 3. Fishing Activity Areas Based on Qualitative Input.

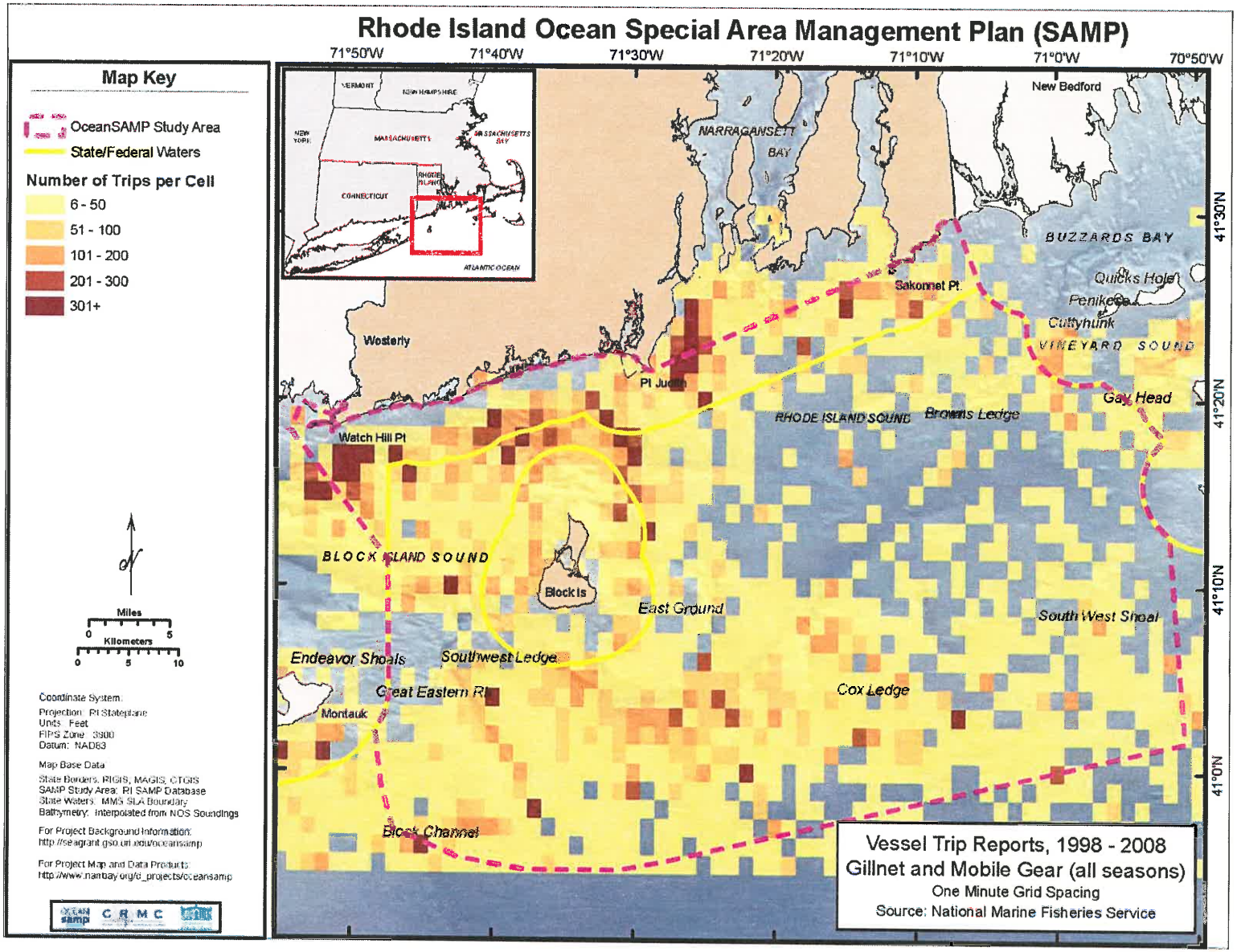

Figure 4. Gillnet and Mobile Gear Commercial Fishing Areas Based on Vessel Trip Report Data.

Marine Transportation

The Ocean SAMP area is a marine transportation crossroads between multiple heavily-used waterways: Narragansett Bay, Long Island Sound, Buzzards Bay, and Vineyard Sound. The majority of this traffic comprises ships and tug and barge units supplying coal and petroleum projects to the region, fulfilling much of southern New England's energy needs. Many of these ships passing through the Ocean SAMP area transit into Narragansett Bay en route to the Port of Providence: 233 tankers supplied nearly 6,200 tons of petroleum products to Providence in 2007 (USACE 2007). The Port of Providence has been referred to as the "energy lifeline of the state" (USACE 1998) due to its critical role in importing home heating oil and other petroleum products. The market served by the Port covers approximately 2,000 square miles, including all of Rhode Island and portions of Connecticut and Massachusetts, and provides services for a population conservatively estimated at roughly 1.25 million people (USACE 2001). This shipping activity provides much-needed energy products to Rhode Islanders, and also has a greater economic impact through its support of jobs and related activities at the Port of Providence. Other commercial ships passing through the Ocean SAMP area are car carriers bound for the port of Quonset/Davisville. Quonset/Davisville is the 12th-largest automobile importing, processing, and distribution center in the U.S. (FXM Associates 2008). It handles approximately 100 car carrying ships each year, each of which carries up to 1,000 cars, which are in turn sold throughout the northeast (Quonset Development Corporation 2009). Other marine traffic passing through the Ocean SAMP area includes passenger ferries and naval vessels engaged in military testing and training activities. The Block Island Ferry, which is a lifeline ferry service between Block Island and Point Judith, provides the primary means of transportation and cargo transport to Block Island residents and tourists, thus supporting Block Island's year-round population and vibrant seasonal tourism economy. Much of the naval activity that takes place in the Ocean SAMP area is conducted in connection with the NavalUnderseaWarfareCenter in Newport. Aside from its historic significance as part of Rhode Island's rich naval history, Naval Station Newport has a broader economic impact through its support of skilled jobs and contracts awarded to Rhode Island-based companies.

Spatial analysis of marine transportation activity conducted for the Ocean SAMP shows that the majority of commercial marine traffic passing through the area moves along a coastwise route that overlaps state and federal waters (CRMC 2010; *see* Figure 5). The area of highest-intensity traffic does not conform to codified shipping lanes or navigational areas. The Block Island Ferry, which is not included in this analysis, passes through federal waters multiple times daily as it travels back and forth between Point Judith and Block Island. While specific locations of naval testing and training activities are not available due to national security concerns, the Navy has designated most of the federal portion of the Ocean SAMP area as the Narragansett Bay Operating Area, indicating the importance of this area to Newport-based naval activities (*see* Figure 5).

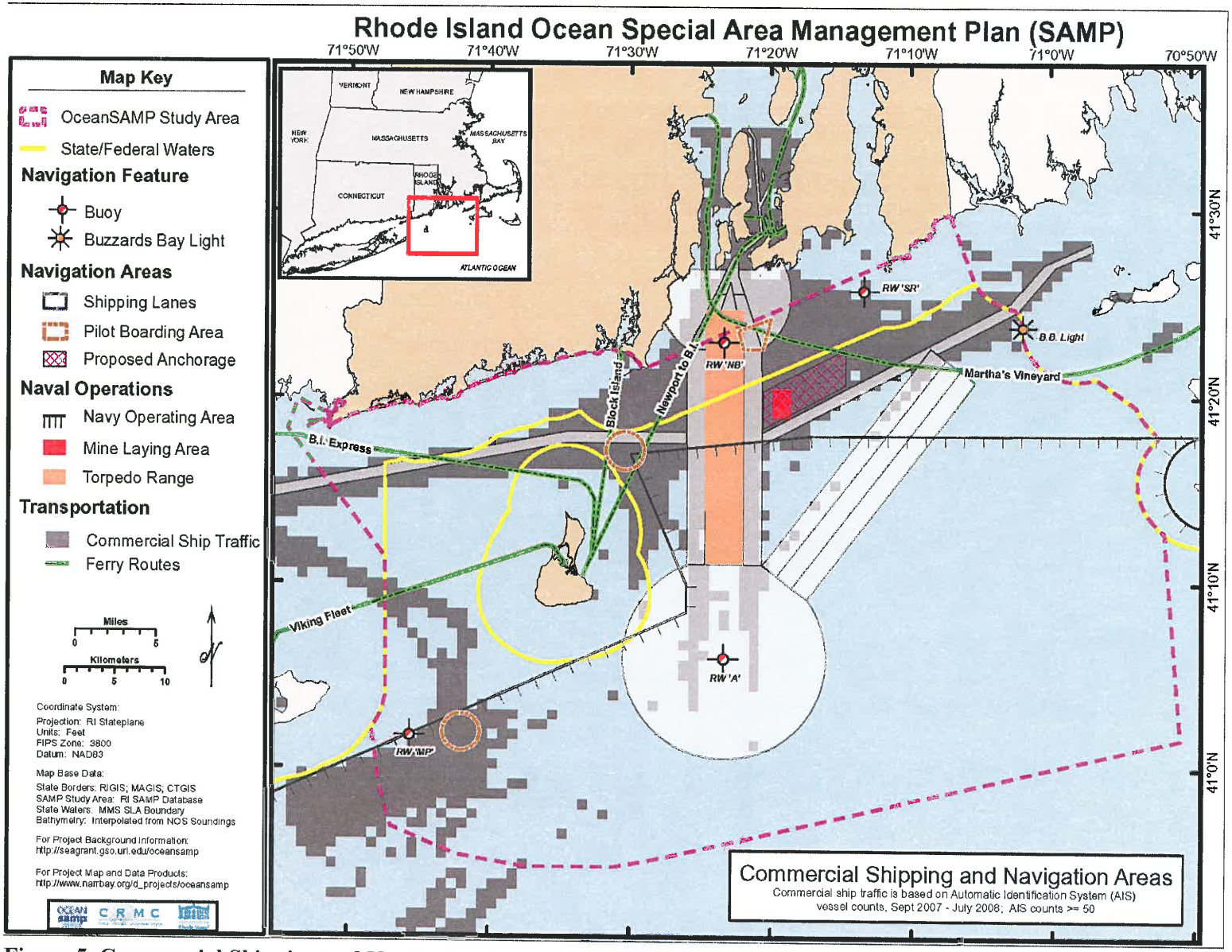

Figure 5. Commercial Shipping and Navigation Areas

Marine Recreation and Tourism

Recreational boating and marine tourism activities are ubiquitous throughout the Ocean SAMP area and are a time-honored part of Rhode Island's history and culture. Recreational boating activities, including yacht racing, cruising, and wildlife viewing, are based out of Rhode Island communities including Newport, Block Island, and Point Judith. Newport has been a world-renowned center of yacht racing and marine recreation since the 19th century due to the ideal sailing conditions in Block Island and Rhode Island Sounds, and hosted the America's Cup yacht racing competition for over 50 years. Some of the world's most famous and most competitive yacht racing events, including Block Island Race Week and the Newport-Bermuda Race, are based out of Rhode Island, and 19 major racing events, most involving out-of-state visitors who spend money at Rhode Island businesses, take place within the Ocean SAMP area over every 2-year period (CRMC 2010). Boat-based wildlife viewing activities, including whale watching, bird watching, and shark cage diving, are other popular recreational activities that take place on charter boats based out of Point Judith. Other charter boat captains run wreck-diving trips on a variety of wrecks throughout the area. Cruise ships, passing largely through the federal waters of the Ocean SAMP area, bring as many as 68,000 visitors annually to Newport (Newport & Bristol County Convention and Visitors Bureau 2009b). Recreational boaters and sailors engaged in day or long-distance trips regularly pass throughout the area en route to or from Block Island, Long Island Sound, Buzzards Bay, or Vineyard Sound. All of these recreational activities have economic impacts throughout Rhode Island by employing Rhode Islanders in the marine trades and tourism professions, drawing out-of-state visitors, and encouraging spending at restaurants, marinas, boatyards, and other venues.

Spatial analysis conducted for the Ocean SAMP (CRMC 2010; *see* Figure 6 and Figure 7) indicates that all of these recreational activities regularly take place in both state and federal waters of the Ocean SAMP area, and most operate in areas or along routes that overlap state and federal waters. For example, the famed Newport-Bermuda race passes directly through both state and federal waters of the Ocean SAMP area, while Block Island Race Week activities take place in both state and federal waters within Block Island Sound. Other activities, such as cruising and wildlife viewing activities, are dispersed throughout the Ocean SAMP area. It should also be noted that all of these activities rely on the natural beauty, abundance of natural resources, and ideal sailing conditions found in Rhode Island's offshore waters. For example, wildlife viewing activities such as whale watching depend on the seasonal migrations of whales through the Ocean SAMP area, as well as whales' pursuit of prey species, such as squid, as they migrate inshore during the summer months.

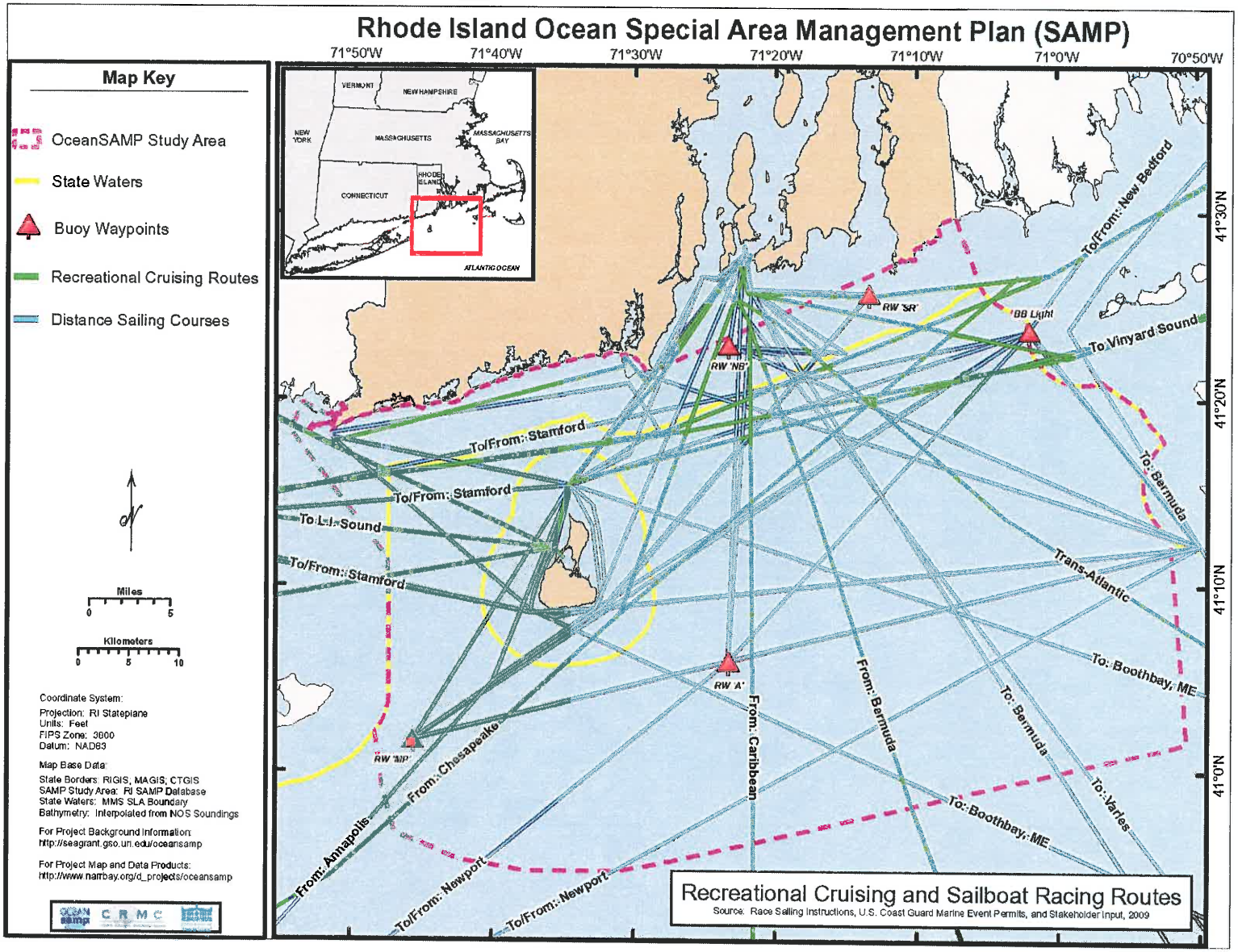

Figure 6. Recreational Cruising and Sailboat Racing Routes

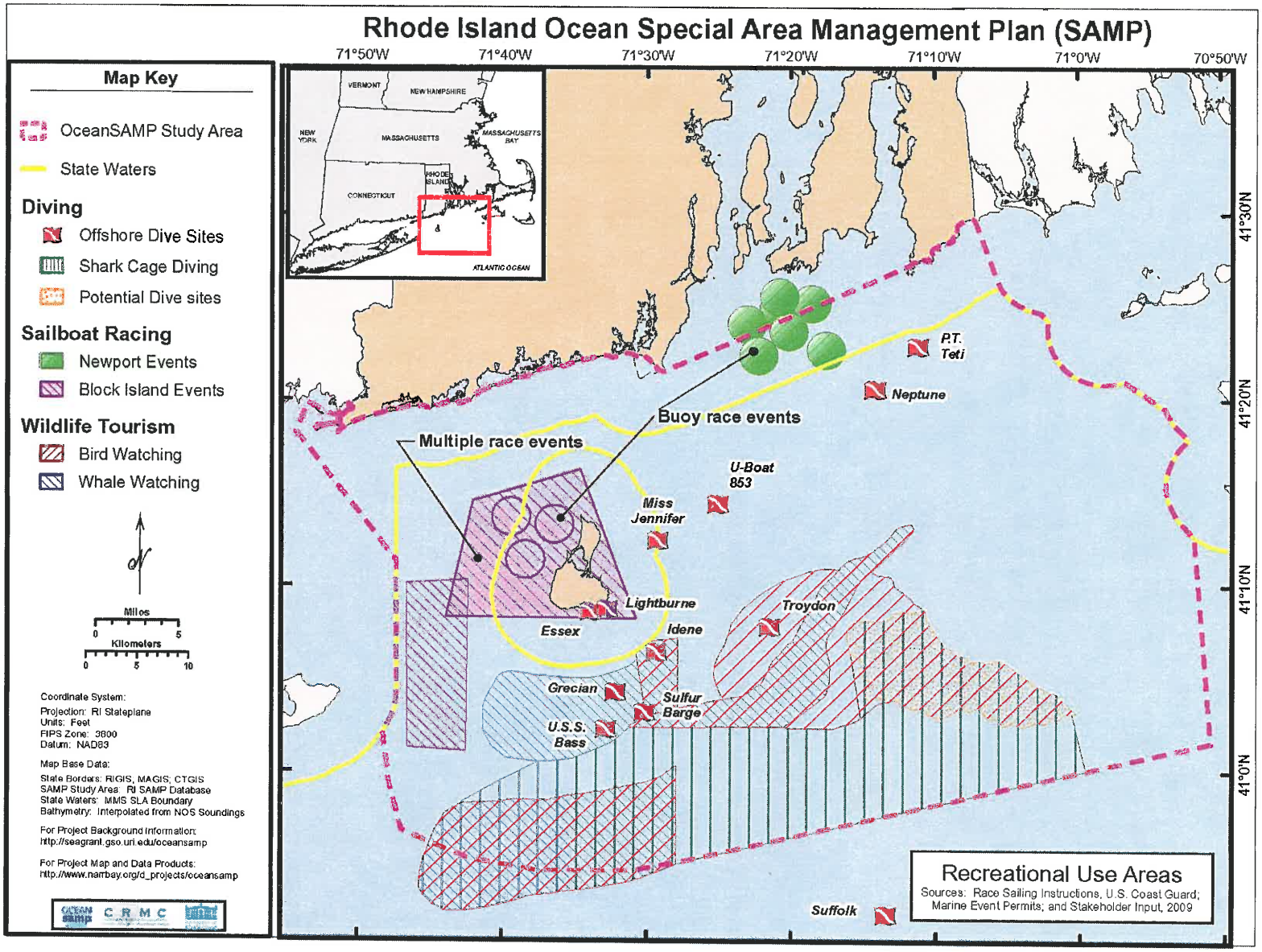

Figure 7. Other Recreational Use Areas

Other Human Uses

There is a variety of human-made infrastructure throughout the Ocean SAMP area that provides vital services to Rhode Island (*see* Figure 8). The Rhode Island Sound Disposal Site, also known as "69B," is an active dredged material disposal site located in federal waters east of Block Island. This site was designated as the result of the "Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project" (Battelle 2003) which came about in response to a request from the Governor of Rhode Island that the EPA designate a disposal site to facilitate the dredging of Rhode Island's ports and shipping channels (EPA 2004). This site has already been used for the disposal of dredged materials from the ProvidenceRiver dredging project, and is expected to be used for upcoming dredging projects in Quonset, Providence, and MountHopeBay.Underwater telecommunications cables running through the Ocean SAMP area are owned and/or operated by companies including AT&T and Verizon, and facilitate both domestic and international telecommunications (CRMC 2010).

The Ocean SAMP area also contains many submerged cultural and historic resources, only some of which have been identified and mapped. Some of these resources, such as shipwrecks (*see* Figure 9), are part of Rhode Island's colonial and post-colonial history, while others, such as tribal landscapes, date back to pre-contact times and are of great significance to Rhode Island's indigenous peoples, including the Narragansett Indian Tribe. All of these resources are part of Rhode Island's long history of using its coastal lands and waters for fishing, transportation, recreation, and subsistence, and are essential to the state's culture and heritage. These resources are especially sensitive insofar as they are non-renewable and may easily be disturbed or degraded as a result of offshore development.

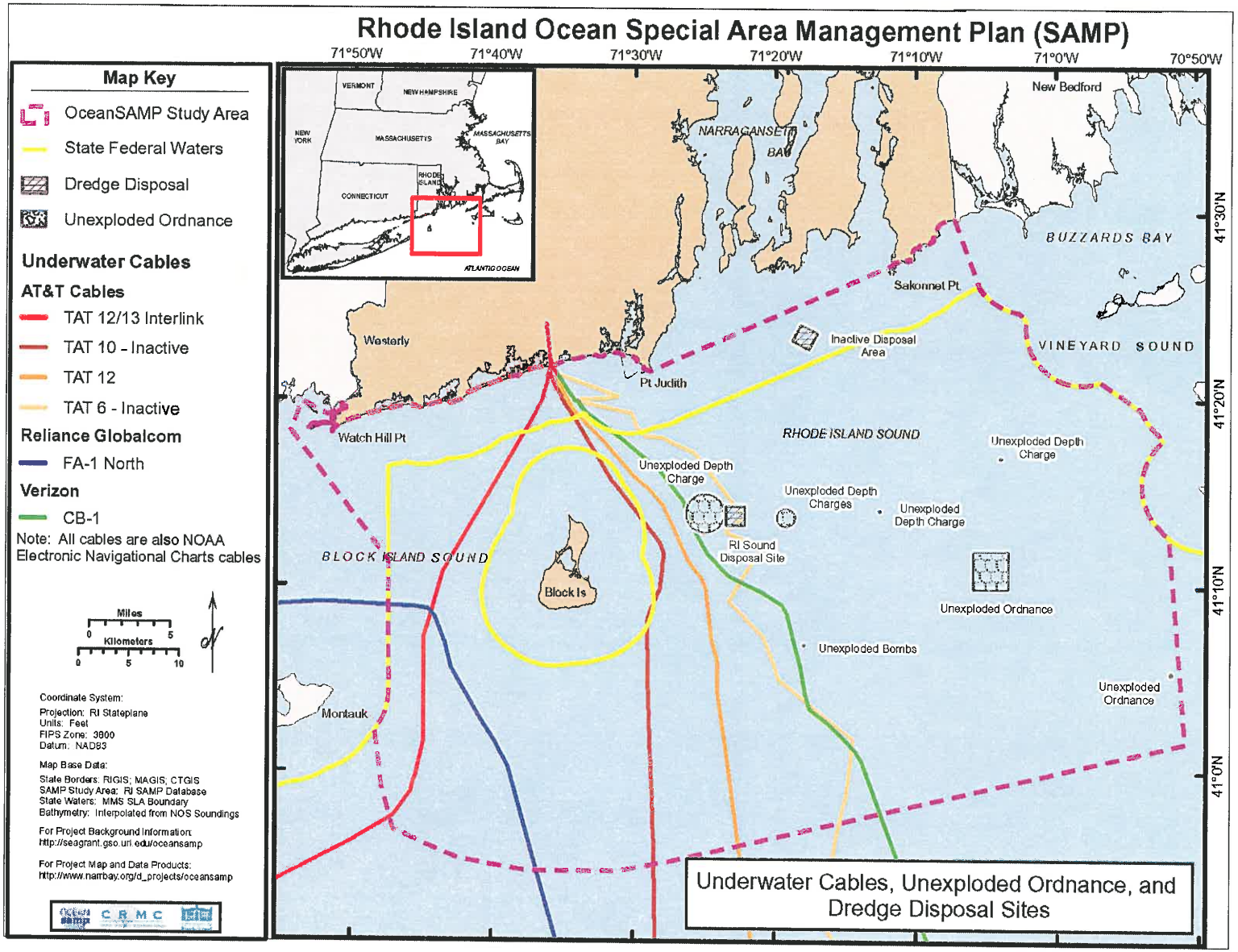

Figure 8.Underwater Cables, Unexploded Ordnance, and Dredge Disposal Site

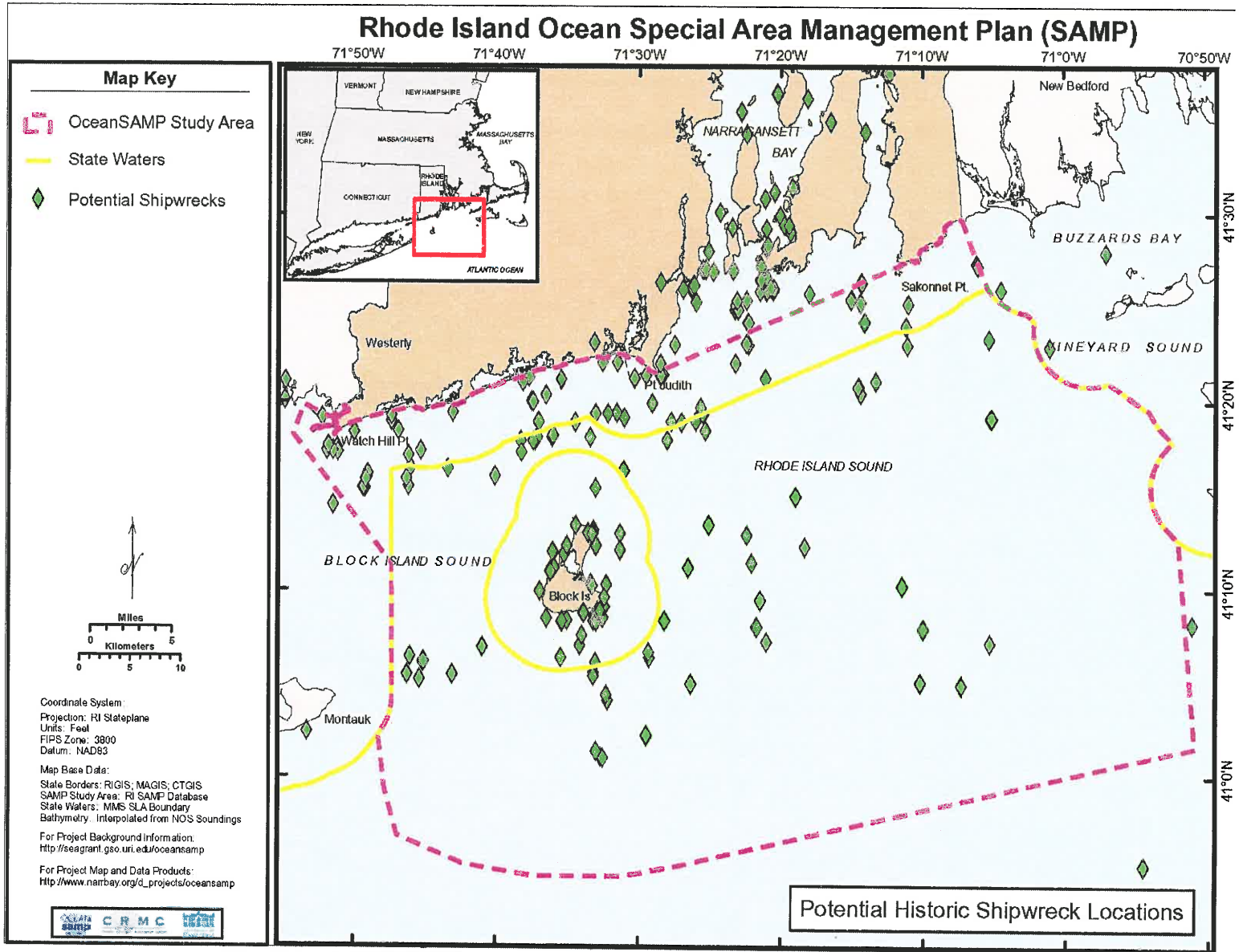

Figure 9. Potential Historic Shipwreck Locations

D. Effects Analysis Related to Specific Listed Activities in the GLD

The following is an analysis of the reasonably foreseeable effects of the specific listed federal actions on Rhode Island's coastal zone. Please note that federal consistency review of the federal licenses and permits listed below are subject to the thresholds and exclusions as outlined above.

1. Permits for the construction or placement of artificial structures (USACE licenses and permits listed above):

The construction or placement of artificial, fixed structures in the federal waters of the Ocean SAMP area could have numerous reasonably foreseeable effects on Rhode Island's coastal zone and the aforementioned coastal uses as described below.

Navigation access for fishing, transportation, and recreation: Offshore construction and the placement of offshore structures may have short- and long-term coastal effects on commercial and recreational fisheries, marine transportation, and recreational boating. As described in the above characterization of the GLD, including the spatial data, Rhode Island-based commercial and recreational fishermen, commercial mariners, and recreational boaters regularly transit through and operate in the GLD. The construction and placement of new structures in the GLD have the potential to displace fishermen, mariners, and recreational boaters from their traditional operating areas through temporary construction-related exclusion zones, permanent exclusion zones around offshore structures, or through the general increase in vessel traffic that may be associated with an offshore project (e.g. Mackinson et al. 2006, MMS 2007). Whereas construction-related exclusion zones may be temporary, the loss of even two or three fishing or boating seasons has the potential to permanently shut down some of Rhode Island's smaller-scale commercial fishing, ferry, or recreational charter boat businesses. Such exclusion zones and related disruptions may also cause yacht racing event organizers to move high-profile, lucrative racing events to other locations. Even if exclusion zones around offshore structures are not formally designated, fishermen, mariners and boaters may find it dangerous or impractical to operate around the offshore structures. The presence of offshore structures and related anti-scour devices, submarine cables, and other equipment may prohibit mobile gear fishermen, including draggers and scallopers, from safely operating and deploying their gear around these structuresSuch structures may also deter fixed gear fishermen and recreational fishermen from operating in the area because of concerns about potential collision with the structures, insurance coverage, or problems operating their fishing, navigation, and radar equipment (Mackinson et al 2006). As discussed above, spatial data analysis conducted for the Ocean SAMP indicates that Rhode Island commercial and recreational fishermen operate throughout the entire GLD, and rely on this area for their livelihoods. Rhode Island's most lucrative commercial fisheries, including the squid and lobster fisheries, rely disproportionately on federal waters for their landings. Analysis of spatial use patterns also indicates that commercial mariners and recreational boaters operate throughout much of the GLD and concentrate their activities in several key locations – many of which overlap or are located entirely within the GLD - that are not currently codified as designated navigation areas. A disruption to marine transportation patterns could potentially disrupt critical petroleum shipments destined for the Port of Providence, or could disrupt the operation of passenger ferries such as the Block Island Ferry, which is Block Island's primary means of access to the mainland. As such, the construction or

placement of new offshore structures has the potential to significantly disrupt fishing and navigational access throughout the GLD.

Environmental impacts on fisheries resources/landings: Offshore construction and the placement of offshore structures may also have significant effects on Rhode Island's fisheries by impacting fish stocks and the habitats upon which they rely. Offshore construction activities, which may include pile-driving and the disturbance or removal of bottom sediments, can have significant effects on marine life and habitats. Habitat disturbance may include sediment disturbance and settling, resultant increased turbidity of the waters in the construction area, and the installation of new infrastructure (MMS 2007a). Pile-driving and increased vessel traffic associated with marine construction can result in significant underwater noise. Underwater noise has the potential to affect fish species by affecting animal feeding reproductive, vocalization, and other behaviors necessary for survival, or causing injury or death (Thompsen et al. 2006). One study has illustrated that cod, which are one of the more popular recreationally and commercially targeted species within the GLD, alter their behavior in response to pile driving sounds (Mueller-Blenkle et al. 2010). Underwater noise may also cause some fish species to leave the area. Once construction is completed, offshore structures may still have a variety of effects on fisheries resources. The introduction of new structures in the water column may affect water flow around the structures, which may result in scour holes in the sea bed. The new structures may become colonized by non-mobile organisms and may ultimately attract nuisance species or alter fish feeding and aggregation behaviors (Wilhelmsson et al. 2006, Gill and Kimber 2005). Some offshore structures, such as wind turbines, may generate some operational noise that, while significantly less than construction noise, may affect some fish species (studies reviewed by Gill 2005). Some fish species may even collide with the new structures. All of the aforementioned impacts may affect commercially or recreationally targeted fish species in and around the area of the new structure, thereby affecting Rhode Island fisheries that rely on these fish species. Cumulatively, such impacts may result in the short- or long-term displacement of fish species that sustain Rhode Island's commercial and recreational fishing businesses.

2. **Permits for the construction, placement, or operation of energy-related structures (FERC, BOEMRE, and MARAD licenses and permits listed above):**

The construction, placement, or operation of energy-related structures in the federal waters of the Ocean SAMP area could have numerous reasonably foreseeable effects on Rhode Island's coastal zone and the aforementioned coastal uses as described below.

Navigation access for fishing, transportation, and recreation: Offshore construction and the placement of offshore energy-related structures may have short- and long-term coastal effects on commercial and recreational fisheries, marine transportation, and recreational boating. As described in the above characterization of the GLD, including the spatial data, Rhode Island-based commercial and recreational fishermen, commercial mariners, and recreational boaters regularly transit through and operate in the GLD. The construction and placement of new structures in the GLD have the potential to displace fishermen, mariners, and recreational boaters from their traditional operating areas through temporary construction-related exclusion zones, permanent exclusion zones around offshore structures, or through the general increase in vessel traffic that may be associated with an offshore project (e.g. Mackinson et al. 2006, MMS 2007).

Whereas construction-related exclusion zones may be temporary, the loss of even two or three fishing or boating seasons has the potential to permanently shut down some of Rhode Island's smaller-scale commercial fishing, ferry, or recreational charter boat businesses. Such exclusion zones and related disruptions may also cause yacht racing event organizers to move high-profile, lucrative racing events to other locations. Even if exclusion zones around offshore structures are not formally designated, fishermen, mariners and boaters may find it dangerous or impractical to operate around the offshore structures. The presence of offshore structures and related anti-scour devices, submarine cables, and other equipment may prohibit mobile gear fishermen, including draggers and scallopers, from safely operating and deploying their gear around these structuresSuch structures may also deter fixed gear fishermen and recreational fishermen from operating in the area because of concerns about potential collision with the structures, insurance coverage, or problems operating their fishing, navigation, and radar equipment (Mackinson et al 2006). As discussed above, spatial data analysis conducted for the Ocean SAMP indicates that Rhode Island commercial and recreational fishermen operate throughout the entire GLD, and rely on this area for their livelihoods. Rhode Island's most lucrative commercial fisheries, including the squid and lobster fisheries, rely disproportionately on federal waters for their landings. Analysis of spatial use patterns also indicates that commercial mariners and recreational boaters operate throughout much of the GLD and concentrate their activities in several key locations – many of which overlap or are located entirely within the GLD - that are not currently codified as designated navigation areas. A disruption to marine transportation patterns could potentially disrupt critical petroleum shipments destined for the Port of Providence, or could disrupt the operation of passenger ferries such as the Block Island Ferry, which is Block Island's primary means of access to the mainland. As such, the construction or placement of new offshore structures has the potential to significantly disrupt fishing and navigational access throughout the GLD.

Environmental impacts of offshore structures on fisheries resources and landings: Offshore construction and the placement of offshore energy-related structures may also have significant effects on Rhode Island's fisheries by impacting fish stocks and the habitats upon which they rely. Offshore construction activities, which may include pile-driving and the disturbance or removal of bottom sediments, can have significant effects on marine life and habitats. Habitat disturbance may include sediment disturbance and settling, resultant increased turbidity of the waters in the construction area, and the installation of new infrastructure (MMS 2007a). Pile-driving and increased vessel traffic associated with marine construction can result in significant underwater noise. Underwater noise has the potential to affect fish species by affecting animal feeding reproductive, vocalization, and other behaviors necessary for survival, or causing injury or death (Thompsen et al. 2006). One study has illustrated that cod, which are one of the more popular recreationally and commercially targeted species within the GLD, alter their behavior in response to pile driving sounds (Mueller-Blenkle et al. 2010). Underwater noise may also cause some fish species to leave the area. Once construction is completed, offshore structures may still have a variety of effects on fisheries resources. The introduction of new structures in the water column may affect water flow around the structures, which may result in scour holes in the sea bed. The new structures may become colonized by non-mobile organisms and may ultimately attract nuisance species or alter fish feeding and aggregation behaviors (Wilhelmsson et al. 2006, Gill and Kimber 2005). Some offshore structures, such as wind turbines, may generate some operational noise that, while significantly less than construction noise, may affect some fish

species (studies reviewed by Gill 2005). Some fish species may even collide with the new structures. All of the aforementioned impacts may affect commercially or recreationally targeted fish species in and around the area of the new structure, thereby affecting Rhode Island fisheries that rely on these fish species. Cumulatively, such impacts may result in the short- or long-term displacement of fish species that sustain Rhode Island's commercial and recreational fishing businesses.

Environmental impacts of submarine cables and pipelines on fisheries resources and landings: The installation of submarine cables and pipelines may result in benthic habitat disturbance through the process of plowing trenches for the cables or pipes and then burying them with new sediment; subsequent repairs and modification of these cables would create additional habitat disturbance. These disturbances, which include sediment disturbance, turbidity, construction-related underwater noise, and conversion to new habitat types, are most problematic for sessile benthic organisms and submerged aquatic vegetation (Johnson et al. 2008). Submarine electrical cables associated with offshore developments may also emit electromagnetic fields (EMF), which may have some effects on some fish species, especially sharks, rays, and bony fishes (Gill et al. 2005). EMF may affect some fishes' ability to navigate, which could in turn affect fish feeding, breeding, migration, or other behaviors necessary for survival (Gill et al. 2005, DONG Energy and Vattenfall 2006). Pipelines which are placed directly on the seafloor, rather than buried, can result in erosion and scour around the pipe and may also create a physical barrier to migration for benthic invertebrates such as lobster. In addition, pipelines used to transport petroleum products create the risk of accidents or leaks of oil and other contaminants into benthic sediments and/or the water column, which may result in the mortality of fish and invertebrates (Johnson et al. 2008). All of these potential impacts may affect fish species targeted by Rhode Island commercial and recreational fishermen.

Environmental impacts of LNG terminals and LNG transportation on fisheries resources and landings: Offshore LNG terminals and deepwater ports and associated vessel operations may have multiple potential impacts on fisheries resources and habitats that are important to Rhode Island commercial and recreational fishermen. The installation of an offshore LNG terminal may have several of the abovementioned environmental impacts associated with offshore structures and pipelines including habitat disturbance, the release of containments through a potential LNG spill, and some underwater noise. In addition, offshore LNG terminals that involve regasification of the cooled natural gas may have numerous additional impacts on fisheries resources. Fish eggs and larvae, and plankton may be impinged and entrained through the intake structures used for the regasification process (Johnson et al. 2008, Gallaway et al. 2007). Johnson et al. (2008) indicates that entrainment and impingement may have "substantial" impacts on marine organisms. Onsite regasification may also result in the discharge of warmer waters, which may adversely affect fish species, especially in the egg and larval life stages (Johnson et al. 2008). Cumulatively, offshore LNG terminals may have potentially serious effects on fish species that are important to Rhode Island commercial and recreational fishermen.

Other impacts of LNG terminals: In addition, the USCG establishes security/exclusion zones around LNG terminal structures as well as around LNG tankers in transit through U.S. waters and while moored and waiting to offload the LNG product. Such exclusion zones would affect fishermen as well as commercial mariners and recreational boaters by excluding them from areas they have traditionally used. As discussed above, such exclusions may be particularly

problematic if the timing of the LNG tankers' transit coincided with sailboat races or other time-sensitive marine events or activities.

3. **Permits for dredging, disposal of dredged material, or other dumping-related activities (USACE licenses and permits listed above):**

Dredging, the disposal of dredged material, or other dumping-related activities in the federal waters of the Ocean SAMP area could have numerous reasonably foreseeable effects on Rhode Island's coastal zone and the aforementioned coastal uses as described below.

Navigation access for fishing, transportation, and recreation: Dredging, the disposal of dredged material, and other dumping-related activities may have short-term coastal effects on commercial and recreational fisheries, marine transportation, and recreational boating. As described in the above characterization of the GLD, including the spatial data, Rhode Island-based commercial and recreational fishermen, commercial mariners, and recreational boaters regularly transit through and operate in the GLD. Dredging or dredge disposal activities in the GLD have the potential to displace fishermen, mariners, and recreational boaters from their traditional operating areas through temporary exclusion zones or through the general increase in vessel traffic that may be associated with such an activity (e.g. Mackinson et al. 2006, MMS 2007). Whereas exclusion zones may be temporary, the loss of even two or three fishing or boating seasons has the potential to permanently shut down some of Rhode Island's smaller-scale commercial fishing, ferry, or recreational charter boat businesses. Such exclusion zones and related disruptions may also cause yacht racing event organizers to move high-profile, lucrative racing events to other locations. Even if exclusion zones are not formally designated, fishermen, mariners and boaters may find it dangerous or impractical to operate around such offshore activities. As discussed above, spatial data analysis conducted for the Ocean SAMP indicates that Rhode Island commercial and recreational fishermen operate throughout the entire GLD, and rely on this area for their livelihoods. Rhode Island's most lucrative commercial fisheries, including the squid and lobster fisheries, rely disproportionately on federal waters for their landings. Analysis of spatial use patterns also indicates that commercial mariners and recreational boaters operate throughout much of the GLD and concentrate their activities in several key locations – many of which overlap or are located entirely within the GLD - that are not currently codified as designated navigation areas. A disruption to marine transportation patterns could potentially disrupt critical petroleum shipments destined for the Port of Providence, or could disrupt the operation of passenger ferries such as the Block Island Ferry, which is Block Island's primary means of access to the mainland. As such, dredging or dredged material disposal activities have the potential to significantly disrupt fishing and navigational access throughout the GLD.

*Environmental impacts of dredging and dredged material disposal on fisheries resources and landings:*Dredging and the disposal of dredged material can have a significant impact on fisheries resources. Offshore dredging, which may include mineral extraction for the purposes of beach nourishment and construction aggregates, can result in the complete removal or conversion of benthic habitats, changes in sediment composition, topography, and hydrology, increased turbidity and degraded water quality due to suspended sediments, the release of contaminants from the dredged sediments, and underwater noise associated with the dredging process (Johnson et al. 2008). Such habitat degradation could impact species that are targeted by

Rhode Island's commercial and recreational fishermen. The disposal of dredged material can have equally significant impacts. Benthic organisms may be buried in the process, and more mobile species may leave the area. Recolonization may increase the occurrence of opportunistic species. These processes may affect fish by reducing prey availability. Dumping may change the biological and chemical characteristics of the sediment, and will temporarily increase the turbidity of the water column. The increased volume of suspended sediments is likely to push some fish out of the area, may affect foraging patterns, and can even cause injury or death. Sedimentation may also affect the viability of fish eggs and larvae. The disposal of dredged material can also result in a release of contaminants, making contaminants biologically available to organisms in the water column or through the food chain (Johnson et al. 2008). Both dredging and dredged material disposal can have a significant impact on fisheries by displacing, injuring or killing commercially and recreationally targeted fish species. Such activities could, in turn, have significant effects on Rhode Island's fishing industry.

4. **Permits for other activities that may affect water quality (EPA licenses and permits listed above):**

The transport or dumping material as well as the construction and/or operation of various offshore projects may result in the discharge or accidental spill of contaminants, wastewater, and other debris into the GLD. These discharges may have a variety of environmental impacts, including impacts on fishery resources that are targeted by RI commercial and recreational fishermen. The transportation of contaminated dumping materials through the area may result in accidental spills which can have a range of impacts, depending on the nature of the material. The disposal of dredged material can have significant impacts. Benthic organisms may be buried in the process, and more mobile species may leave the area. Recolonization may increase the occurrence of opportunistic species. These processes may affect fish by reducing prey availability. Dumping may change the biological and chemical characteristics of the sediment, and will temporarily increase the turbidity of the water column. The increased volume of suspended sediments is likely to push some fish out of the area, may affect foraging patterns, and can even cause injury or death. Sedimentation may also affect the viability of fish eggs and larvae. The disposal of dredged material can also result in a release of contaminants, making contaminants biologically available to organisms in the water column or through the food chain (Johnson et al. 2008).

Discharges associated with offshore energy structures may include domestic waste waters and other debris associated with human activity at the site (Johnson et al. 2008). Electric service platforms associated with offshore wind energy facilities may contain a variety of hazardous materials including fuel, oils, greases, coolants, and other contaminants (Johnson et al. 2008). Biocides used to prevent marine organisms from fouling LNG tankers and pipelines are discharged into surrounding waters and may cause the mortality of fish eggs and larvae (Johnson et al. 2008). For example, Blaxter (1977) found high mortality of Atlantic herring eggs and impairment of larval migration. Marine traffic associated with offshore activities may result in a variety of discharges ranging from human debris to accidental oil spills (Johnson et al. 2008). Discharges associated with aquaculture activities may include fish waste, biochemicals, and pathogens which may have a range of environmental impacts (Johnson et al. 2008). The

discharge of these materials could have significant effects on Rhode Island's fishing industry by injuring or killing commercially and recreationally targeted fish species.

5. **Permits for other activities that may affect navigational access or navigational safety (USCG licenses and permits listed above):**

Navigation access for fishing, transportation, and recreation: Offshore construction, the placement of offshore structures, and changes to anchorages and vessel traffic services may have short- and long-term coastal effects on commercial and recreational fisheries, marine transportation, and recreational boating. As described in the above characterization of the GLD, including the spatial data, Rhode Island-based commercial and recreational fishermen, commercial mariners, and recreational boaters regularly transit through and operate in the GLD. The construction and placement of new structures in the GLD have the potential to displace fishermen, mariners, and recreational boaters from their traditional operating areas through temporary construction-related exclusion zones, permanent exclusion zones around offshore structures, or through the general increase in vessel traffic that may be associated with an offshore project (e.g. Mackinson et al. 2006, MMS 2007). Whereas construction-related exclusion zones may be temporary, the loss of even two or three fishing or boating seasons has the potential to permanently shut down some of Rhode Island's smaller-scale commercial fishing, ferry, or recreational charter boat businesses. Such exclusion zones and related disruptions may also cause yacht racing event organizers to move high-profile, lucrative racing events to other locations. Even if exclusion zones around offshore structures are not formally designated, fishermen, mariners and boaters may find it dangerous or impractical to operate around the offshore structures. The presence of offshore structures and related anti-scour devices, submarine cables, and other equipment may prohibit mobile gear fishermen, including draggers and scallopers, from safely operating and deploying their gear around these structures. Such structures may also deter fixed gear fishermen and recreational fishermen from operating in the area because of concerns about potential collision with the structures, insurance coverage, or problems operating their fishing, navigation, and radar equipment (Mackinson et al 2006). Changes in anchorages or vessel traffic services may also exclude fishermen, mariners, and boaters from certain areas. As discussed above, spatial data analysis conducted for the Ocean SAMP indicates that Rhode Island commercial and recreational fishermen operate throughout the entire GLD, and rely on this area for their livelihoods. Rhode Island's most lucrative commercial fisheries, including the squid and lobster fisheries, rely disproportionately on federal waters for their landings. Analysis of spatial use patterns also indicates that commercial mariners and recreational boaters operate throughout much of the GLD and concentrate their activities in several key locations – many of which overlap or are located entirely within the GLD - that are not currently codified as designated navigation areas. A disruption to marine transportation patterns could potentially disrupt critical petroleum shipments destined for the Port of Providence, or could disrupt the operation of passenger ferries such as the Block Island Ferry, which is Block Island's primary means of access to the mainland. As such, the construction or placement of new offshore structures, or changes to anchorages and vessel traffic services, has the potential to significantly disrupt fishing and navigational access throughout the GLD.

6. **Permits for the handling of dangerous cargo/hazardous materials (USCG licenses and permits listed above):**

The transportation and handling of dangerous cargo and flammable or combustible liquids may have a wide range of environmental impacts, depending on the substance and method of storage and transport. Dangerous cargos and flammable or combustible liquids may include liquid and gaseous petroleum products, toxic and radioactive substances, and other materials. Marine casualties involving vessels transporting petroleum products may result in oil spills which can have a variety of environmental impacts including habitat degradation, mortality of fish at all stages of the life cycle, and impacts from dispersants used in oil spill response (Johnson et al. 2008). Marine casualties involving other substances may have a wide range of environmental impacts depending on the characteristics of the particular substance. The environmental impacts of any such casualty may have potentially serious effects on fish resources targeted by Rhode Island's commercial or recreational fishermen. In addition, the U.S. Coast Guard may establish security zones around vessels carrying dangerous cargos, such as LNG (as discussed above). Such exclusion zones would affect fishermen as well as commercial mariners and recreational boaters by excluding them from areas they have traditionally used. Such exclusions may be particularly problematic if the timing of the LNG tankers' transit coincided with sailboat races or other time-sensitive marine events or activities.

Works Cited

Battelle. 2003. *Task 10.4: Alternative Site Screening Report* for the *Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project.* U.S. Army Corps of Engineers, New England District, Concord MA, June 2003.

Blaxter JHS. 1977. The effect of copper on the eggs and larvae of plaice and herring. *Journal of the Marine Biological Association of the United Kingdom* 57:849-59.

Clay, P., Colburn, L., Olsen, J., Pinto da Silva, P., Smith, S., Westwood, A., Ekstrom, J. 2008. Community Profiles for the Northeast US Fisheries. Northeast Fisheries Science Center, NOAA. Available at: http://www.nefsc.noaa.gov/read/socialsci/community_profiles/

DONG Energy and Vattenfall. 2006. Review Report 2005: The Danish Offshore Wind Farm Demonstration Project: Horns Rev and Nysted Offshore Wind Farms Environmental impact assessment and monitoring. The Environmental Group. 150 pp.

Environmental Protection Agency. 2004. Final Environmental Impact Statement for the Rhode Island Region Long-Term Dredged Material Disposal Site Evaluation Project.

FXM Associates. 2008. Economic Effects of the Port of Davisville, RI. Prepared for the Quonset Development Corporation.

Gallaway, B.J., W.J. Gazey, J.G. Cole, and R.G. Fechhelm. 2007. Estimation of Potential Impacts from Offshore Liquefied Natural Gas Terminals on Red Snapper and Red Drum Fisheries in the Gulf of Mexico: An Alternative Approach. *Transactions of the American Fisheries Society.* 136 (3): 655-677.

Gentner, B., Steinback, S. 2008. The Economic Contribution of Marine Angler Expenditures in the United States, 2006. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-94.

Gill, A.B. 2005. Offshore renewable energy: ecological implications of generating electricity in the coastal zone. *Journal of Applied Ecology*, 42: 605-615.

Gill, A.B., Gloyne-Phillips, I., Neal, K.J., and Kimber, J.A. 2005. The potential effects of electromagnetic fields generated by sub-sea power cables associated with offshore wind farm developments on electrically and magnetically sensitive marine organisms – a review. FINAL REPORT. COWRIE-EM FIELD 2-06-2004.

Gill, A.B., Kimber, J.A. 2005. The potential for cooperative management of elasmobranchs and offshore renewable energy development in UK waters. *Journal of the Marine Biological Association of the United Kingdom*, 85: 1075-1081.

Hare, J.A., Alexander, M.A., Fogarty, M.J., Williams, E.H., and Scott, J.D. 2010. Forecasting the dynamics of a coastal fishery species using a coupled climate-population model. *Ecological Applications* 20:452-464.

Johnson, M.R., Boelke, C., Chiarella, L.A., Colosi, P.D., Greene, K., Lellis-Dibble, K., Ludemann, H., Ludwig, M., McDermott, S., Ortiz, J., Rusanowsky, D., Scott, M., and Smith, J. 2008. Impacts to Marine Fisheries Habitat from Nonfishing Activities in the Northeastern United States. NOAA Technical Memorandum NMFS-NE-209.

Mackinson, S., Curtis, H., Brown, R., McTaggart, K., Taylor, N., Neville, S., and Rogers, S. 2006. A report on the perceptions of the fishing industry into the potential socioeconomic impacts of offshore wind energy developments on their work patterns and income. Science Series Technical Report, Cefas Lowestoft, 133.

Minerals Management Service (MMS). 2007. Final Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use Facilities on the Outer Continental Shelf. October 2007. Available online at: http://ocsenergy.anl.gov/documents/fpeis/index.cfm. Last accessed December 7, 2009.

Mueller-Blenkle, C., Jones, E., Reid, D., Lüdemann, K., Kafeman, R., and Elepfandt, A. 2008. Reactions of cod *Gadus morhua* to low-frequency sound resembling offshore wind turbine noise emissions. *Bioacoustics*, 17 (1-3): 207-209.

Newport & Bristol Convention and Visitors Bureau. 2009. Cruise Ship Schedule. Online at http://www.gonewport.com/. Last accessed December 7, 2009.

NOAA National Marine Fisheries Service (NMFS). 2011. Fisheries Statistics Division. Annual Commercial Landings Statistics. Online at: http://www.st.nmfs.noaa.gov/st1/commercial/landings/annual_landings.html.

NMFS. 2008a. Fisheries Economics of the United States 2006. Online at: http://www.st.nmfs.noaa.gov/st5/publication/economics_communities.html.

NMFS. 2008b. Fisheries of the United States 2007. Online at: ' http://www.st.nmfs.noaa.gov/st1/fus/fus07/02_commercial2007.pdf.

Nye, J., Link, J., Hare, J. and Overholtz, W. 2009. Changing spatial distribution of northwest Atlantic fish stocks in relation to temperature and stock size. *Marine Ecology Progress Series* 393:111-129.

Perry, A.L., Low, P.J., Ellis, J.R. and Reynolds, J.D. 2005. Climate change and distribution shifts in marine fishes. *Science* 308:1912-1915.

Quonset Development Corporation. 2009. Ship Waybill Database. Accessed July 27th, 2009.

Rhode Island Coastal Resources Management Council (CRMC). 2010. Rhode Island Ocean Special Area Management Plan. Adopted October 19, 2010.

Thomsen, F., Lüdemann, K., Kafemann, R., and Piper, W. 2006. Effects of offshore wind farm noise on marine mammals and fish, biola, Hamburg, Germany on behalf of COWRIE Ltd.

U.S. Army Corps of Engineers, 2007. *Waterborne Commerce of the United States: Calendar Year 2007, Part 1– Waterways and Harbors Atlantic Coast*. WRWCUS-07-1. Online at: http://www.ndc.iwr.usace.army.mil. Last accessed October 16, 2009.

U.S. Army Corps of Engineers. 2001. Providence River and Harbor Maintenance Dredging Project Final Environmental Impact Statement. U.S. Army Corps of Engineers, New England District, August 2001.

U.S. Army Corps of Engineers. 1998. Providence River and Harbor Maintenance Dredging Project Draft Environmental Impact Statement. U.S. Army Corps of Engineers, New England District, October 1998.

Wilhelmsson, D., Malm, T., and Öhman, M.C. 2006. The influence of offshore windpower on ' demersal fish. *ICES Journal of Marine Science*, 63: 775-784.