

Public Notice

U.S. Army Corps of Engineers
Baltimore District

Date: April 28, 2016 Comment Period Ends: May 31, 2016

Special Public Notice #16-25

EXPIRATION OF REGIONAL GENERAL PERMIT-1 FOR AQUACULTURE AND REINSTATEMENT OF THE 2012 NATIONWIDE PERMIT #48 WITH MODIFICATIONS AUTHORIZING NEW COMMERCIAL SHELLFISH AQUACULTURE ACTIVITIES IN MARYLAND TIDAL WATERS

REQUEST FOR COMMENTS

The purpose of this notice is to inform the general public that the Baltimore District, U.S. Army Corps of Engineers Regional General Permit-1 (RGP-1) for aquaculture will expire on August 15, 2016. The District proposes to reinstate the currently suspended 2012 Nationwide Permit #48 (NWP #48) with revised regional conditions to authorize new commercial shellfish aquaculture activities in Maryland tidal waters. The proposed reinstatement of the currently suspended NWP #48 will authorize new and existing commercial shellfish aquaculture activities within the State of Maryland under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 that meet the revised conditions.

Nationwide permits are general permits issued on a nationwide basis to streamline the authorization of activities that result in minimal individual and cumulative adverse effects on the aquatic environment. Division engineers are authorized to add regional conditions specific to the needs and/or requirements of a particular region or state. Regional conditions are important tools to ensure that impacts to the aquatic environment authorized by the NWP are minimal, both individually and cumulatively.

The 2012 NWP #48 authorizes commercial shellfish aquaculture activities, including structures, such as the installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and discharges of dredged or fill material into waters of the United States necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities. To ensure that the activities authorized by the NWP have minimal individual and cumulative adverse impacts on the aquatic environment, NWP #48 requires notification to the district engineer before commencing aquaculture activities in a new project area, and in certain other circumstances.

On March 19, 2012, NAB issued a public notice suspending NWP #48 for commercial shellfish aquaculture activities in new project areas in Maryland. NWP #48 was not suspended for existing commercial shellfish aquaculture activities, but the public notice added regional conditions for such activities. The U.S. Army Corps of Engineers 2012 NWPs information and current Baltimore District regional conditions are located at:

http://www.nab.usace.armv.mil/Missions/Regulatory/PermitTypesandProcess.aspx

In response to requests from members of the public, elected representatives, stakeholders and the regulated community, the District has reviewed past processes and procedures for aquaculture activities. The information provided by the public, along with information gained from our experience working with the Maryland Department of Natural Resources, has prompted the District to propose certain changes to the aquaculture permit review process. With this public notice, the District proposes to reinstate the 2012 NWP #48 for new commercial shellfish aquaculture activities in accordance with Corps regulations at 33 C.F.R. 330.1(d), 330.4(e), 330.5. The District also proposes revised regional conditions to NWP #48, which would be applicable to Maryland tidal waters. Research or educational bivalve shellfish aquaculture activities are not authorized by this NWP and such activities will be evaluated utilizing alternative review processes.

An enclosure to this public notice (Enclosure 1) lists the proposed modifications to the 2012 NWP #48 regional conditions. The existing regional conditions for NWP #48 activities in Pennsylvania, the District of Columbia, and military installations of northern Virginia remain in place. The Baltimore District is seeking comments on the proposed revised regional conditions to NWP #48 applicable to Maryland tidal waters, and seeking comments on the need for additional regional conditions to help ensure that impacts authorized by the 2012 NWP #48 in Maryland are minimal.

In particular, we request comments on the following proposed changes:

- The District proposes to remove the project size limits in the current 2012 NWP regional conditions (50 acres for shell on bottom, 5 acres of cages on the bottom, and 3 acres of floating aquaculture structures). This change is proposed to allow an aquaculture activity's scope and size to be driven by its location and existing site conditions, rather than by any acreage limit. This is consistent with the approach of the nationwide permit program.
- The pre-construction notification/application must include certain additional details to enable the District to ensure that the activities authorized by the NWP have minimal individual and cumulative adverse impacts on the aquatic environment, including navigation (for example: a description of structure spacing; the number and spacing of vertical and horizontal lines and buoys; and information clearly identifying how adverse effects to navigation and/or ingress/egress from neighboring properties have been avoided; and that for applications proposed in waters adjacent to property owned by others, the applicant must provide proof of notification to adjacent property owners via certified mail, return receipt requested).
- Also, the District proposes a change in the current joint Federal/State aquaculture review process. Currently, the joint application is submitted to the Maryland Department of Natural Resources (MDNR) for initial review and the application and additional materials are forwarded from the MDNR to the District once MDNR completes its review and survey. The District proposes that MDNR transmit the application to the District for a concurrent application review instead of the current sequential process. Alternatively, the applicant may submit the application directly to the District when the application is submitted to MDNR.

- The District proposes to eliminate the exclusion lines shown by the map from the existing Regional Conditions (Enclosure 2). The lines were intended to protect fish spawning habitat, but the District is coordinating with the National Marine Fisheries Service to determine how to best address this concern. The District does not want to continue to limit the utility of NWP #48 based on these imprecise designations. The District requests comments on whether these exclusion lines are needed, and, if so, whether adjustments are needed and where.
- The regional conditions clarify that no work can extend into anchorage areas; customary boating channels; navigation fairways; marked, lighted, or charted channels; or State or Federal Navigation Channels.
- The District proposes to apply certain conditions in the Regional General Permit as Regional Conditions to NWP #48, such as: coordination with the U.S. Coast Guard; restriction of activities in wetlands; marking, inspection, and disposal instructions for gear; and reporting requirements.

All activities eligible for authorization under NWP #48 must meet all terms and eligibility criteria, limitations, and general and activity-specific conditions specified in the NWP #48. In order for the NWP #48 to be valid for a particular activity, a person or entity seeking verification under the NWP #48 must obtain all other Federal, state and/or local authorizations required by law prior to commencement of such work in waters of the U.S. Activities that do not comply with the provisions of the NWP #48 may require a Standard Individual Permit.

The District proposes to retain the overall 20,000-acre maximum limit that was a condition of the District's programmatic Endangered Species Act Consultation for the Regional General Permit. Thus far the Corps has approved approximately 3,250 acres of aquaculture activities since 2011. This limit is intended to assist the District in assessing the cumulative effects of aquaculture activities in Maryland. The District seeks comments on whether to expand the 20,000-acre limit in the future.

Coastal Zone Management Consistency and Water Quality Certification: When the final revisions to the proposed regional conditions for the 2012 NWP #48 are issued, Maryland will make its Clean Water Act Section 401 water quality certification and Coastal Zone Management Act (CZMA) consistency determination decisions. Please send any written comments concerning water quality certification and coastal zone consistency determination for the subject proposal to the Wetlands and Waterways Program, Maryland Department of the Environment, Montgomery Park Business Center, 1800 Washington Boulevard, Suite 430, Baltimore, Maryland 21230-1708 within the comment period as specified above to receive consideration.

<u>Essential Fish Habitat:</u> The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 04-267), requires all Federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency that may adversely affect Essential Fish Habitat (EFH). The project sites in Maryland tidal waters lie in or adjacent to EFH for Atlantic Cod (<u>Gadus morhua</u>) adult;

winter flounder (*Pleuronectes americanus*) juvenile, and adult; windowpane flounder (Scopthalmus aguosos) eggs, larvae, juvenile and adult; blue fish (Pomatomus saltatrix) juvenile and adult; monkfish (Lophius americanus) eggs and larvae; scup (Stenotomus chrysops) juvenile and adult; black sea bass (Centropristus striata) juvenile and adult; summer flounder (Paralicthys dentatus) larvae, juvenile and adult; red hake (Urophycis chuss) eggs, larvae, juvenile; Atlantic butterfish (Peprilus triacanthus) eggs, juvenile, adult; Atlantic sea herring (Clupea harengus) juvenile and adult; sand tiger shark (Odontaspis taurus) larvae, juvenile and adult; Atlantic angel shark (Squatina dumerili) larvae, juvenile, and adult; dusky shark (Charcharinus obscurus) larvae; sandbar shark (Charcharinus plumbeus) larvae, juvenile, and adult; scalloped hammerhead shark (Sphyrna lewini) juvenile; Atlantic sharpnose shark (Rhizopriondon terraenovae) adult; blue shark (*Prionance glauca*) adult; tiger shark (*Galeocerdo cuvieri*) larvae; and eggs, larvae, juvenile, and adult stages of red drum (Sciaenops ocellatus), king mackerel (Scomberomorus cavalla), spanish mackerel (Scomberomorus maculatus), and cobia (Rachycentron canadum); and surf clam (Spisula solidissima) juvenile, all managed species under the MSFCMA.

Aquaculture projects have the potential to adversely affect EFH or the species of concern by the alteration of spawning, nursery, forage and/or shelter habitat as described under the MSFCMA for the species and life stages identified above. The bottom substrate at project sites typically consists of sand, shell, or silt. Projects are screened to avoid impacts to submerged aquatic vegetation. The Baltimore District has made a preliminary determination that site-specific impacts would not be substantial and an abbreviated consultation will be conducted with NMFS. No mitigative measures are recommended at this time to minimize adverse effects on EFH. This preliminary determination may be modified if additional information indicates otherwise and could change the District's preliminary determination.

Endangered Species: Maryland tidal waters are not currently mapped as critical habitat for any known Federally-listed threatened or endangered species; however, the waterways are known to be utilized by transient individuals of the following species: Loggerhead sea turtles (*Caretta caretta*); Kemp's Ridley sea turtles (*Lepidochelys kempii*); Leatherback sea turtles (*Dermochelys coriacea*); Green sea turtles (*Chelonia mydas*); Shortnose sturgeon (*Acipenser brevirostrum*); and Atlantic sturgeon (*Acipenser oxyrinchus*). The District's preliminary review of aquaculture projects that may be verified under NWP #48 indicates the following for Federal listed threatened or endangered species, pursuant to Section 7 of the Endangered Species Act, as amended:

Aquaculture Type	Federally-listed	Determination*
	threatened or	
	endangered species	
Shell on bottom on	Sturgeon	May affect, but is not likely to adversely affect
existing soft bottom (e.g.,	Turtles	May affect, but is not likely to adversely affect
soft sand, mud)		(Beneficial effect)
Shell on bottom on	Sturgeon	May affect, but is not likely to adversely affect
existing hard bottom	Turtles	May affect, but is not likely to adversely affect
(e.g., mixed shell, shell		(Beneficial effect)
hash, hard sand, existing		,
shell)		

Installation of Cages,	Sturgeon	May affect, but is not likely to adversely affect
Floats, Buoys, Lines, or		(Beneficial effect)
Other Markers within the	Turtles	May affect, but is not likely to adversely affect
Water Column at or near		
the water surface		
Installation of Cages on	Sturgeon	May affect, but is not likely to adversely affect
the Bottom with Buoys,	-	(Beneficial effect)
Lines, or Other Markers	Turtles	May affect, but not likely to adversely affect

5

The District has initiated informal programmatic consultation under Section 7(a)(2) of the ESA with the National Marine Fisheries Service. As the evaluation continues, additional information may become available, which could modify this preliminary determination.

<u>Historic Properties:</u> The evaluation of the 2012 NWP considered compliance with the National Historic Preservation Act of 1966. NWP General Condition 20 states that in cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.

Comment Process: The District is soliciting comments from the public; Federal, State, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the reinstatement of the 2012 NWP #48 for new commercial aquaculture activities in Maryland tidal waters and implementation of revised regional conditions. Any comments received will be considered by the District to determine whether to reinstate the 2012 NWP #48 for new commercial aquaculture activities in Maryland tidal waters and implement the revised regional conditions. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors, including navigation. Comments provided will become part of the public record for this action. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Written comments should be submitted within the comment period specified above and directed to Mr. Woody Francis, 410-962-5689 or by email at woody.francis@usace.army.mil, U.S. Army Corps of Engineers, Baltimore District, Regulatory Branch, 10 South Howard Street, Baltimore, Maryland 21201.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the proposal. Requests for public hearings must clearly state the reasons for holding a public hearing. It is requested that you communicate the above information to any persons known by you to be interested and not being known to this office who did not receive a copy of this notice.

^{*} Assumes the District would permit up to the 20,000-acre maximum limit of authorized aquaculture activities from August 15, 2011, though the period the 2012 NWPs are in effect. To date, the District has authorized approximately 3,250 acres, which is approximately 16 percent of that limit. Oyster aquaculture is anticipated to improve water quality and may have a beneficial effect on sturgeon and turtles that would be insignificant or discountable.

Information on shellfish aquaculture is located at:

http://dnr2.maryland.gov/fisheries/Pages/aquaculture/shellfish.aspx

http://www.nab.usace.army.mil/Missions/Regulatory/Aquaculture.aspx

Copies of this public notice may also be found on the Baltimore District Regulatory website at:

http://www.nab.usace.army.mil/Missions/Regulatory/PublicNotices.aspx

FOR THE DISTRICT ENGINEER:

BETH E. BACHUR

Acting Chief, Regulatory Branch

Beth & Bachur

Enclosure 1

The following proposed 2012 Nationwide Permit #48 Regional Conditions would be applicable within the Baltimore District in the State of Maryland.

The existing regional conditions for NWP #48 activities in Pennsylvania, the District of Columbia, and military installations of northern Virginia remain in place.

The general conditions for Nationwide Permit 48 can be found at: http://www.nab.usace.army.mil/Missions/Regulatory/PermitTypesandProcess.asp
<a href="mailto:x

Note: Proposed changes from the existing Nationwide #48 Regional Conditions are shown in strikethrough and italics.

Nationwide Permit #48 Commercial Shellfish Aquaculture Activities

Permit Specific Regional Conditions (Applicable in Maryland)

1. This NWP does not authorize the following activities:

- a. Activities located in any areas mapped as submerged aquatic vegetation. In the Baltimore District, the applicant may refer to the Virginia Institute of Marine Science aerial surveys for obtaining such information.
 http://web.vims.edu/bio/sav/index.html

 The applicant should also refer to other reliable sources to comply with this condition;
- b. Activities associated with the cultivation and/or introduction into tidal waters of shellfish species that are not indigenous to the Chesapeake Bay and its tributaries, the Maryland coastal bays; or
- c. Activities associated with the mining of subtidal fossil shell deposits in waters of the Chesapeake Bay and its tributaries for use as cultch for a shellfish cultivation operation.
- d. Activities that cause interference with navigation. No work may extend into anchorage areas; customary boating channels; navigation fairways; marked, lighted, or charted channels; or State or Federal Navigation Channels.
- e. Activities must not adversely affect ingress to and egress from neighboring properties.
- f. Commercial aquaculture activities for crustaceans or finfish.

- g. Shellfish habitat restoration activities, including shellfish seeding that are conducted to restore populations of shellfish in navigable waters of the United States. Shellfish habitat restoration activities may be authorized by another form of Department of the Army permit (e.g., nationwide permit# 27 or individual permit).
- h. Activity or vehicular access to the project site that have more than a minimal adverse impact on coastal or wetland vegetation.
- a. Commercial shellfish aquaculture activities in new project areas in waters within the Chesapeake Bay and its tidal tributaries upstream of the geographic exclusion lines defined in Enclosure 1.
- b. Commercial shellfish aquaculture activities in new project areas authorized under individual on bottom, submerged land leases administered by the Maryland Department of Natural Resources (DNR) (including bags on bottom, shellfish seed, and other suitable substrate (e.g., shell, shell fragments, concrete no larger than 3-inches in diameter on bottom) that are more than 50 acres in total coverage.
- c. Commercial shellfish aquaculture activities in new project areas authorized under individual water column leases administered by DNR utilizing on bottom cages that are more than five acres in total coverage.
- d. Commercial shellfish aquaculture activities in new project areas authorized under individual water column leases administered by DNR utilizing off bottom suspended culture (e.g., floats/mesh cages) of more than three acres in total coverage.
- i. Oyster gardening activities.
- j. The establishment of Aquaculture Enterprise Zones or preapproved areas of the Atlantic Coastal Bays.
- k. Activities that impound water.
- 1. Predator control devices (i.e., mesh fences, mesh nets, mesh tents) suspended or erected vertically or obliquely in the water column to surround or enclose shellfish containment gear.
- m. Existing or proposed activities associated with an ongoing Corps or Environmental Protection Agency enforcement action until such time as the enforcement action is resolved, or the Corps determines that the activity may proceed independently without compromising the enforcement action.
- n. Activities that have more than minimal individual and/or cumulative adverse impact. on navigation.

- o. *Activities that use* of unsuitable materials for shellfish seeding (i.e., asphalt, bituminous concrete, slag, tires, wallboard, plastic, wood, metal, crushed glass, trash, and garbage).
- p. Activities that will have more than minimal adverse effects on existing or naturally occurring beds or populations of shellfish, marine worms, or other invertebrates that could be used by man, other mammals, birds, reptiles, or predatory fish.
- q. Activities that result in the physical destruction (e.g., through excavation, dredging, mining, fill or significant downstream sedimentation by substantial turbidity) of an important spawning/nursery habitat are not authorized by this permit.
- 2. **Shellfish Certification:** Shellfish introduced into tidal waters of the Chesapeake Bay and its tributaries, or in the Maryland coastal bays *and their tributaries*, must be certified (under Maryland standards) as being disease and parasite free.
- 3. **Vertical and Horizontal Lines:** The total number of vertical and horizontal lines must be minimized to the maximum extent practicable.
- 4. **Private Aids to Navigation:** If the Corps or the U.S. Coast Guard determine that private aids to navigation are required to mark the project area, the permittee must prepare and provide for United States Coast Guard (USCG) approval (address below), a Private Aids to Navigation Application (CG-2554) prior to commencement of the authorized work. The form can be found at this link: http://www.uscg.mil/forms/cg/CG_2554.pdf.

Commander (dpw) Fifth Coast Guard District 431 Crawford Street, Room 100 Portsmouth, VA. 23704-5504 Attn.: Private Aids to Navigation

Email address: CGD5Waterways@uscg.mill

Fax Number: (757) 398-6303

The permittee must provide the Corps with a copy of the USCG's approval of aids to navigation within 30 days of the date of issuance by the USCG.

5. Local Notice to Mariners: Prior to the proposed project start/placement date, the permittee must provide coordinates (latitude and longitude) for all perimeter corners of the approved lease area, including minimum depth and other pertinent facility information to the USCG, and request that a Local Notice to Mariners (LNM) be issued regarding the authorized work. This written request can be done either by e-mail, letter or fax to:

Commander (dpw)
Fifth Coast Guard District
431 Crawford Street, Room 100
Portsmouth, VA. 23704-5504

Attn.: LNM

Fax Number: (757) 398-6303

No authorized work may commence until this required USCG LNM has been issued by the USCG, identifying the location and schedule for commencement of the approved aquaculture work.

No authorized aquaculture work may commence until the permittee informs the Corps in writing, with the date that the USCG publishes the LNM.

- 6. Navigation Charts: The permittee must submit a copy of the Corps permit and plans for the aquaculture operation to the National Oceanic and Atmospheric Administration (NOAA) for charting the location of the authorized operation on navigation charts. Their address is NOAA-Marine Chart Division, Nautical Data Branch-N/CS26, 1315 East West Highway-Station 7350, Silver Spring, MD 20910-3282.
- 7. **Equipment Anchoring and Lease Marking:** All authorized equipment, gear, and manmade material must be securely anchored. The permittee must clearly and permanently mark all in-water structures and equipment with the permittee's name and the lease number issued by the DNR. These markings must be maintained to ensure that they are readable and visible at all times for identification purposes.
- 8. Inspection of Aquaculture Operation: The permittee must regularly inspect the condition of the structures (e.g., floats, cages, lines, anchors, etc.) associated with this aquaculture operation as authorized herein, to ensure that any structures/gear do not affect safety on the waterway or interfere with general navigation. The permittee shall recover all storm-damaged, accident-damaged, or dislodged equipment within 10 days after it is dislodged and shall either restore their location within the permitted areas as authorized or dispose of such equipment in accordance with state and local ordinances and lease agreements issued by the State of Maryland.
- 9. **Disposal of Structures, Gear, or Waste:** Disposal of structures, gear or waste products onsite or into waters of the United States is prohibited. All structures, gear and waste products, including dead or dying culture animals, shall be disposed of in an approved upland disposal site in accordance with any Federal, State, and local regulations

10. Reporting:

- a. The permittee must maintain accurate records and submit an annual report covering the previous year's activities to the Corps before January 31 of each year. Annual reports must be submitted to: U.S. Army Corps of Engineers, Baltimore District (ATTN: Regulatory Branch), 10 South Howard Street, Baltimore, MD 21201; the National Marine Fisheries Service, Habitat Conservation Division, Chesapeake Bay Field Office, 177 Admiral Cochrane Drive, Annapolis, MD 21403; and the National Marine Fisheries Service, Protected Resource Division, 55 Great Republic Drive, Gloucester, MA 01930 and must include the following minimum information:
 - i. Name of permittee, Corps permit number, lease number, point of contact, phone number, and email address;
 - ii. Copy of Corps authorization;
 - iii. The size of the total lease area (in acres);

- iv. The following information must be included for each lease area:
 - 1) The location of areas within the lease area that were cultivated over the last year;
 - 2) Size of each cultivated area within the lease (in acres);
 - *3) Description of culture method(s) and harvesting method(s);*
 - 4) Description of the type of material (e.g., spat-on-shell, shellfish shells, shell fragments, concrete fragments, or other approved materials) that was planted on the lease area.
 - 5) The total number of vertical, horizontal lines, buoys and other structures utilized on site.
 - 6) Identify the area in acres and the amount in cubic yards for each type of material (e.g., spat-on-shell, shellfish shells, shell fragments, concrete fragments, or other approved materials) that was planted on the lease area;
 - 7) Identify the date(s) (mm/dd/yy) that the authorized aquaculture equipment, gear, and/or suitable substrate was deployed;
 - 8) Name(s) of cultivated species;
 - 9) A statement regarding the presence or absence of submerged aquatic vegetation within the authorized lease area;
 - 10) A statement regarding any entanglements or interactions with Federally protected threatened and endangered species;
 - 11) A statement whether any temporary protective enclosures such as nets, etc. were used and a description of gear that was used;
 - 12) Information concerning storm damage, loss of equipment and recovery, including identification of the number and type of any structure/equipment/gear that were damaged, lost and/or were not recovered;
 - 13) Provide a signed statement that all perimeter markers are in place and that the work is being performed and maintained in accordance with the terms and conditions of the Corps' authorization.
- 11. Abandonment: The permittee must provide the Baltimore District with thirty (30) day advance written notification of the intent to abandon the activity authorized under this RGP. Upon abandonment of the activity authorized by this permit, all structures and equipment used to support the aquaculture operation must be completely removed from the waterway and the entire area restored to pre-construction conditions to the satisfaction of the Baltimore District.
- 12. If the project does not have a prior authorization from the Corps in effect as of August 15, 2016, the prospective permittee must submit a pre-construction notification (PCN). The Joint State/Federal Application for a Commercial Shellfish Aquaculture Lease and Federal Permit (Joint Application) shall serve as the PCN.

The application is located at:

http://dnr2.maryland.gov/fisheries/Documents/Commercial-Shellfish-Lease-Application.pdf

The instructions are located at:

$\frac{http://dnr2.maryland.gov/fisheries/Documents/Shellfish-Lease-Application-Instructions.pdf$

The Maryland Department of Natural Resources will forward the Joint Application to the Corps. Alternatively, the applicant may submit the application directly to the Corps. The Corps' review period shall commence with the receipt of a completed PCN at the Corps District Office.

- 13. In addition to the information required by NWP 48 and regional condition 31a, the PCN must include:
 - i. A copy of the lease or permit issued by the appropriate state government agency if a lease or permit has been issued at the time of PCN submittal;
 - ii. Legible project vicinity map (black line on white background), to scale, and depicting the footprint of project area relative to prominent land/water geographic features, *including approximate latitude/longitude coordinates of the project footprint*;
 - iii. Legible overview plans (black line on white background), to scale (100':1", or 50':1"), depicting the entire project footprint and adjacent waters overlaid on composite mapping of the 5 most recent years of submerged aquatic vegetation (SAV) data (derived from the Virginia Institute of Marine Science (VIMS) aerial surveys), and showing local water depths (bathymetry) of the project area, and other important ecological features of the site (e.g., native tidal marsh) that may be affected by project activities.
 - iv. Detailed project description, with the following information:
 - a) Description of proposed activities, including site preparation, and harvest activities (e.g., dredging, harrowing and dragging of bottom substrate, tonging), and a description of how structures and vertical and horizontal lines would be arranged throughout the project area, spacing of rows and spacing between structures;
 - b) Types of aquaculture gear to be used, including anchoring devices, *maximum number of vertical and horizontal lines, and buoys;*
 - c) Acreage of project footprint affecting bottom and water column;
 - d) Impacts (temporary and/or permanent) *to aquatic areas* required for access to the aquaculture facility/gear, and remedial measures proposed to restore temporarily affected aquatic areas;

- e) Substrate type of bottom affected by proposed activities (particularly for on-bottom activities).
- v. Cross-sectional view of proposed aquaculture structures and all associated apparatus that represents the proposed operations of the activity (onbottom, suspended, or floating).
- vi. If the applicant proposes work in waters adjacent to property owned by others, the applicant must provide proof of notification to adjacent property owners via certified mail, return receipt requested. In addition, the applicant may include any statement of no objection or comments from the adjacent property owner(s).
- vii. The PCN must include details that clearly identify how adverse effects to navigation and/or ingress to and egress from neighboring properties has been avoided.

