

Meeting Summary

Ecosystem and Ocean Planning Advisory Panel Meeting

July 21, 2015

Advisors: Frederick Akers (GEHWA), Bonnie Brady (LICFA), Gregory DiDomenico (GSSA), Monty Hawkins, Roman Jesien (MD Coastal Bays), Meghan Lapp (Seafreeze, Ltd.), Carl LoBue (TNC), Pam Lyons Gromen (Wild Oceans), Peter Moore (MARACOOS), Steven Ross (UNCW), Brad Sewell (NRDC), David Wallace (Wallace&Assoc.), Judith Weis (Rutgers), John Williamson (Ocean Conservancy)

Invited Habitat Experts: Sarah Cooksey (DNREC- Delaware Coastal Programs), Karen Greene (NOAA Fisheries Habitat Conservation Division (HCD)), Brian Hooker (BOEM), Terra Lederhouse (NOAA Fisheries HCD), Jake Levenson (BOEM), Catherine McCall (MDDNR - Maryland Chesapeake & Coastal Service), Howard Townsend (NOAA Fisheries HCD – Chesapeake Bay Office)

Staff and Council Members: Jessica Coakley (Staff), Warren Elliott (Council/Committee Chair)

Others: Megan Driscoll (National Aquarium), Lauren Latchford (NOAA Fisheries HCD), Andrew Rubin (NOAA Fisheries HMS)

Summary

The Ecosystems and Ocean Planning Advisory Panel (AP) met to discuss the draft policy documents to solicit some early input on these materials for the Ecosystems and Ocean Planning Committee. A number of subject matter experts on coastal and ocean development issues related to fish habitat were invited to attend the meeting to help support a more detailed discussion with the advisors.

The discussions were extensive and thorough, and as a result the advisors were only able to review about half of the material; the draft General Policies, Liquefied Natural Gas, Wind Energy, and Offshore Oil at length, and very briefly Fishing Impacts. Advisors were asked to provide any written comments on subjects they did not have the opportunity to discuss at the meeting (provided after this summary); staff are planning to schedule another AP meeting after the Committee meets in August 2015.

To the extent possible, comments at the meeting were directly integrated into the policy drafts while being discussed. They were on the screen and being edited in real time. The summary that follows here touches on general topics that were discussed and/or those comments that have not been addressed in the documents.

The group discussed the purpose of these policy documents and where they fit within the Council process (i.e., plans, consultations, larger context?) to reduce impacts on fish habitat. The group discussed the EFH consultation process and coastal zone management tools within our region in some detail. Advisors emphasized that both fisheries management and habitat restoration should be important parts of addressing fish habitat in our region. It was also noted that while future planning and enhancement are important, we need to take steps to prevent habitat degradation so it doesn't continue.

Advisors discussed the proposed ways to improve the process by being notified of projects in our regions by NOAA Fisheries and how to identify which types of projects the Council might be interesting in based on scale of project, habitat type it occurs in, or activity type (proposed agreement with NMFS

plus filter). The advisors intended to revisit this discussion at the end of the meeting but did not have time.

The advisors recommended the development of a “preamble” to these policy documents framing the issue and the context for development of the draft policies to reduce impacts on fish habitat. A draft preamble has been included based on their advice.

For all the policy documents, it was suggested that the list of species impacted by each activity be moved to the front of each policy document (as opposed to the end), and that it should document prey species and other management species that could potentially be impacted by these kinds of activities.

The group discussed the importance of habitat information and research, and put forward the idea of developing habitat research plans. These could potentially be integrated into the Council’s research plan. These could be species specific, across all plans; and could include the kind of data collection that would benefit habitat knowledge (e.g., bathymetry (multi-beam mapping), habitat mapping, links to productivity, etc.). NOAA HCD noted that identifying habitat research items is part of the essential fish habitat review process [currently planned for 2016].

There was some discussion of the Regional Planning Body and their role in this process. It was suggested that the RPB is intended to address some of the cumulative impact and larger scale planning issues that were raised (i.e., development corridors, wind energy cable connector, etc.). The group discussed how it may fit in this process.

Having projects engage early in the consultation process and establishing appropriate monitoring of projects were a common discussion theme. Some suggested the project developer should pay, but in some cases other agencies may pay for some of the monitoring. It was suggested it depends on each project and what is required, so there was not a draft policy relative to who pays for sampling.

The group then moved through each of the policy documents. As noted above, extensive real-time editing was done with the advisors to directly incorporate the bulk of their comments in the drafts. Some additional issues were raised specific to the individual policies:

The issue of compensatory mitigation for fishing gear/vessel impacts was raised. In the case of the oil and gas industry, there are compensatory mitigation funds set aside to pay for damage to fishing gear and/or vessels, etc. Compensatory mitigation could apply to other activities within the region such as wind. It was suggested that the Council should approach legislators to have a similar kind of fund established for wind energy, or consider including this in their habitat policies.

The issue of oil and gas dispersant use and what the policy should be on this subject was raised. There were opinions on whether they should be used, and lessons learned from the gulf. This may be an issue the Council want to comment on/revisit. Advisors also noted that the Atlantic coast is not equipped to deal with oil and gas spill response effectively, and preparedness is an issue in our region.

Several advisors raised the issue of eutrophication and water quality both in the meeting and in their written comments. While a general policy was added about point and non-point sources of pollution, this may be an area the Council want to expand or consider further development.

In general policies, the issue of whether it was worthwhile to have projects reconsult when it is time to decommission a project was met with extensive discussion. The policy statement suggests that because it may be decades before decommission projects, projects should reconsult on their options as there

may be better technologies available for removal or to consider alternative uses (i.e., artificial reefs). Advisors were clearly mixed on the outcome and whether rigs and platforms should be left in the water.

Advisors noted that there were several policies under wind and LNG that probably apply to both, and should either be cross referenced or integrated into each of those documents. Likewise, effort should be made to look across all the policies for better consistency in language describing sensitive habitat types.

Another general comment was that nearshore and offshore impacts from these activities may be different, and should be better reflected in the policy documents.

Lastly, the group touched briefly on the fishing impacts policies and agreed that that subject required more extensive discussion; perhaps even its own meeting.

Written Comments received from Advisors and Invited Experts on the Materials (as of July 30, 2015):

Comments from advisor Carl LoBue:

Recommendations – Coastal Development

There should be a water quality section in the coastal development section.

Loss of seagrass meadows, deteriorating salt marshes, harmful and toxic algae blooms, hypoxic dead zones, coastal acidification, and fish kills are all symptoms of excessive nutrient loading called Eutrophication. These symptoms are wide spread and are impacting critically important bays, harbors, estuaries, and rivers through the mid-Atlantic. The magnitude of the contribution of different sources of nutrients vary from watershed to watershed. However they are always derived from a combination of the following 1) human waste water from antiquated and improperly sited sewage treatment outfalls, or sewage that is not treated to standards that are appropriate for the area, 2) over reliance on septic systems that contaminates groundwater that ultimately feeds to rivers, bays, harbors, estuaries, nearshore waters, 3) sloppy agriculture (overuse of fertilizers or inadequate resource recovery from animal waste), and 4) nitro oxide atmospheric pollution from the burning of dirty fuels without enough emissions controls.

The steady deterioration of riverine, estuarine, and nearshore nursery areas in the Mid-Atlantic is arguably the biggest long-term threat to Mid-Atlantic and Atlantic Coast fisheries resources. The Council really needs to make some statements about this, it needs to specifically acknowledge this connection, and then make statements that are specific enough so that it will be abundantly clear that the Council supports efforts, policies and investments targeted to reverse these problems and does not support policies and projects that will make the situation worse.

I think this could probably be done with a small number of well written bullets.

In an ideal world, federal agencies (NOAA, EPA, Department of Ag, Energy, Transportation etc...) would be in alignment with improving water quality for both people and nature – some strong connections made by the Council can help to remind people that the nations and the regions recreational and commercial fishing industries rely on clean water too. Right now those statements are missing from these draft policies.

Beach Nourishment

Carefully reconsider the cost effectiveness and efficacy of investments in traditional beach nourishment projects and consider alternative investments such as non-structural responses and relocation of vulnerable infrastructure out of harm's way in light of forecasts of future coastal storms and long-term sea level rise.

Wetland Dredging and Filling

Modify #2, to read something, "with the exception of the beneficial re-use of dredged materials for wetland restoration...."

Recommendations - Shipping

In the ports and marinas section, I recommend a short bullet on 'encouraging proper short and long-term planning for forecasted future extreme events and sea level rise.'

Reason 1) Many marinas were caught off guard by Sandy and the result was storage of gas, oil, paints at many marinas was not in a place it should have been if people thought more carefully about what was coming, a lot of what was stored in the flood zone ended up going into the bays and harbors –

Reason 2) Investments in infrastructure related to ports and shipping should include and plan around forecasts for sea level rise and coastal storms – it's simply a smart cost effective thing to do.

Fishing Gear:

I think the top 4 statements could be modified and included to represent an umbrella for ALL of the Council policy recommendations

1. An ecosystem approach, which includes consideration of long-term health of essential habitat, and its linkages within the ecosystem, is fundamental to the sustainable use of all of our marine resources.
2. To ensure healthy and productive marine ecosystems, it is imperative that human use impacts in sensitive habitats be considered in deciding the appropriateness of all human uses that impact marine and coastal areas, including but not limited to fisheries management..
3. Sustainable use that safeguards ecological processes is a priority of decision making in the marine and coastal environments.
4. Not all areas require equal levels of protection, as not all areas are equally ecologically or biologically significant or vulnerable to particular stressors.

Additional on fishing gear: I am not without opinions on the issue of impacts of fishing, and fishing methods – but worry that this is a very serious issue that requires much more deliberate conversation than this simple review allows time for, and thus I will hold my comments to this until future conversations.

Thank you so much for considering my comments and suggestions

Comments from advisor Judith Weis:

I would like to see consideration in the Coastal Development section of pollutants coming in from agricultural areas and urban areas - from point sources (e.g. sewage treatment plants) and runoff of fertilizers, etc.

These inputs impair water quality and can have major deleterious effects on fishery species that utilize estuaries or coastal habitats. (We have published about how snapper bluefish are affected by living in a polluted estuary.)

Please change "toxins" whenever it appears in the background documents and/or recommendations to "contaminants" or "toxicants." I explained that "toxins" technically refers to chemicals made by living things, like jellyfish venom, snake venom etc.

Comments from advisor John Williamson:

What seems to be missing from the Offshore Wind Energy background document is a sense of the scale of wind projects. The Walney 1, Walney 2 and West of Duddon Sands projects, taken together, are typical of the current generation of offshore wind projects in Europe. (BTW, the developer, DONG Energy, is in process of buying lease-rights in the Massachusetts WEA.) The scale of these projects is large enough that they shape the environment around them – going way beyond isolated impacts implied by the background document. Therefore, policy needs to consider the cumulative impacts of a wind farm in a much greater area than the immediate footprint of the windfarm alone. Estimates from UK fishermen are that the effected environment is 2.5X to 3X larger than the footprint – that is anecdotal from three different “stakeholder” sources. Policy needs to consider redirection of tidal flows, prevailing currents, sediment transport and settlement “downstream” from construction activities, and sensitive habitats which might be affected outside the OWF.

Taken together the three projects (which are now in operation) cover about 50 square nautical miles (my calculation). The inter-array and export cables, depicted on the charts, cover approximately 140 nautical miles. The act of burying this cable to a depth of 6’ will require disturbance of over 500,000 cubic yards of substrate material (again, my calculation). Foundations and assembly of 350 wind towers create additional potential for sediment disturbance. The stone riprap at the base of each tower (to control scour), cumulatively for 350 towers, introduces about a third of a square mile of benthic structure to the area.

It might also be noted that OWF technology is evolving rapidly and much larger projects are already in early permitting stages in the EU. Additionally, construction methods are evolving to allow projects in greater depths of water (currently depths to 150’). Floating turbine technology is anticipated within the next three to five years which will allow projects in much deeper water at less cost (towers/turbines can be assembled ashore and towed to final location).

What we have seen so far on offshore wind projects have been very small-scale – 2 or 3 turbines off of VA and 5 turbines off of RI. But I think it is likely that we will see much larger projects coming off the drawing boards in the next 3 to 4 years. As I noted, DONG Energy is in process of buying one of the leases BOEM granted last year in the Massachusetts area – DONG is the major developer in Europe and they don’t build small projects.

Attached is recently published information on offshore noise pollution which you might find interesting. It looks at the effects on cod. There is no similar information on noise impacts on black sea bass or fluke

– that “experiment” has yet to be done. But when recreational fishermen are getting excited about the reef-effects of offshore wind farms, they may be in for a surprise. It’s new territory. (If the attachment is not readable, the URL: <http://phys.org/news/2015-07-highlights-noise-threat-atlantic-cod.html>)

Comments from advisor Meghan Lapp:

I have been reading through the AP briefing materials for next week, and I have a few corrections to make to the descriptions of fishing gear in the “Habitat Impacts from Fishing Anthropogenic Activity Background Document”, as well as a few other statements I found problematic. I built commercial fishing trawls for almost 5 years, so I am very familiar with the types of gear involved.

On the Bottom Otter Trawls section describing types of footropes, there are a few incorrect statements. It says “In areas of rough or uneven seafloor, bottom trawls can be outfitted with many small rubber cookies near the underside of the net mouth to help them roll smoothly over bottom contours: these are often called ‘roller sweeps’.” Firstly, the vast majority of trawls in the Mid Atlantic are fitted with what is called a cookie sweep. (No nets are framed by bare wire on the underside by a bare wire footrope/sweep.) Some may have raised footropes with chains that tickle the bottom, or chains that are covered in cookies, but the majority of nets are framed along the bottom mouth with a sweep made from wire covered in rubber cookies with an occasional lead weight (because the rig is so light otherwise it would never touch the bottom). The cookies protect the wire from damage. This is what is known as a cookie sweep. It is not used on “rough uneven sea floor”, it is used on sand and smooth bottom areas. Also, it is not called a roller sweep. A roller sweep is an entirely different type of gear, a sweep made of a wire covered with large rubber cylinders designed to get over very rocky areas. I have never heard of them ever being used in the Mid Atlantic region, because the vast majority of bottom in the Mid Atlantic region is smooth and sandy bottom. I have only heard of them being used in rocky areas more towards the Gulf of Maine, and they are rarely used any more. So, the term “roller sweep” should be removed and the correct definition of a cookie sweep should be entered into the document.

Rockhopper sweeps do not incorporate rollers. A rockhopper is not a roller. It is essentially a very large rubber cookie. They vary in size and are rarely used in the Mid Atlantic region, again usually because they are used in rocky bottom. They are used to “hop” over rocks, hence the term rockhopper. But there is really no need to use them in the Mid Atlantic, because the bottom doesn’t contain very many rocky areas. Occasionally vessels will use “small” rockhoppers (10-12 inch) in certain places in the Mid Atlantic, so it could be included in the document. But it is not extremely common; most of the time cookie sweeps are used.

On page 15 of the document it says that rockhopper gear is mostly covered in plastic, which I have never heard of. Cookies, rockhoppers, and rollers are all made of rubber.

I am a bit disturbed by the statement also on page 15 that says, after describing bottom trawl impact, that bottom trawls can “decrease and disrupt overall ecosystem productivity and function.” Recent studies have shown that bottom trawling can actually have negligible effect on soft (sand and mud) bottom with no effect on invertebrate species, all while actually increasing fish productivity: <http://www.opc.ca.gov/2015/02/fishery-bulletin-ecological-effects-of-bottom-trawling-on-fish-habitat-along-the-central-california-outer-continental-shelf-lindholm-et-al/> and see also <http://rspb.royalsocietypublishing.org/content/280/1769/20131883>. These are more recent studies and documents than what are quoted as sources in the document, and they are peer reviewed. So, I would suggest revising that section if possible.

Page 2 states implies that depths greater than 200 feet are not impacted by wave or current energy. However, there is not much evidence to support this. Significant bottom currents have been studied and observed at up to 300-1500 meters, with resulting siltation and sediment transport in deepwater canyons of 1500 meter depths. See <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3266243/>. This is just one study, but it actually points out that storms transporting clay sediments at these depths may actually be necessary for deepwater ecosystems. Other studies exist, however, and oil companies in the past have expressed concerns over hurricanes in the Gulf of Mexico uncovering buried pipelines due to the damage a hurricane can cause the seafloor at a depth of 300ft. Characterizing areas deeper than 200 feet as “low energy” seems a bit of a stretch.

Anyway, I don't know if any of this can be incorporated into the documents before the meeting, but I thought in any event I would let you know.

Comments from advisors Meghan Lapp, Greg DiDomenico, Robert Ruhle, Peter Moore, and Bonnie Brady:

Ecosystems and Ocean Planning Committee Members,

After consultation with several Ecosystem and Ocean Planning AP members, including Greg DiDomenico, Bonnie Brady, Meghan Lapp, Robert Ruhle and Peter Moore we respectfully request that the EOP Committee should take no action on creating a policy regarding fishing impacts.

Due to concerns with the Draft Policy presented at the Ecosystems and Ocean Planning AP meeting, and no opportunity to discuss that document in order to provide AP input, we feel strongly that it is premature to develop a Council policy to address fishing impacts.

We therefore request that no action be taken on this policy at the August meeting and future actions on this policy statement should be postponed.

Thank you for your consideration,

Meghan Lapp, Fisheries Liaison, Seafreeze Ltd.

Greg DiDomenico. Garden State Seafood Association

Robert Ruhle, F/V Darana R

Peter Moore, Industry Liaison

Bonnie Brady, Long Island Commercial Fishing Association

Comments from invited expert Catherine McCall (MDDNR - Maryland Chesapeake & Coastal Service):

Thanks for this continued opportunity to provide feedback. I am passing along a few thoughts for consideration as your discussions move forward.

Best,

Catherine

Marine Transport

- General Item 2 - suggest a rephrase from "sources of erosion" to "sediment load sources" as sediment may not just be from erosion
- General Item 6 - suggest a strike of "such as SAV" at the end as the committee may not want to limit just to this habitat
- One item for consideration could be evaluation of nearby port/transport facilities to evaluate the need for expansion/alteration of a particular facility
- One item for committee consideration could be a policy statement addressing the addition or incorporation of public/fishing access into smaller transport projects where appropriate. With a changing landscape for working waterfronts, the consideration of benefit not only for marine transport communities but also for the fishing community could provide access opportunities. This would be project specific.
- Question for consideration - what type(s) of marine transport would this apply to? Would it be activities related to both non-fishing and fishing transport projects? For instance, is it to address project proposals just for non-fishing commercial ports, or would it also apply to fishing harbor alterations?

Coastal Development

- Generally, the committee may want to consider how they consider landscape-level and/or cumulative impacts to fisheries habitat and resources and how that issue is reflected in response to project application reviews. There is significant dialogue in Maryland about how impervious surface affects fisheries resources. If the concern is at the landscape level, the committee may want to consider how to articulate the cumulative impacts of project review level in individual project applications. For instance, is it impervious surface limits, consideration of placement of infrastructure, etc.? Some of this may depend upon thresholds for location, scope of projects.

Fishing Impacts

- Throughout many of the other draft council policies, there was discussion about fishing activities' relationship with other uses (e.g. fishing activity amongst turbine arrays). The committee may want to consider how they might articulate how they could consider fishing activity changes related to other uses or in response to other activity/industry changes.

Comments from invited expert Karen Greene (NOAA Fisheries HCD):

Coastal Development - Draft Council Policy

General

1. Avoid coastal development in sensitive aquatic habitat such as submerged aquatic vegetation, wetlands, complex bottom, shellfish beds, and other priority fish habitats.

This is the difficulty with the term "coastal development." It is quite broad. Water dependent activities such as marinas, ports, beach nourishment, docks, bridges, etc. should not be placed in sensitive aquatic habitats, but non-water dependent development like commercial and residential development and some infrastructure should not be placed in any aquatic habitat.

4. Restore, create, enhance, and preserve. This is generally the order of preference.

Preservation is the last option since it does not provide new or improved habitat to offset a loss from development.

Dredge Material Disposal

1. Ensure that all options for disposal of dredged materials are comprehensively assessed. The consideration of upland alternatives for dredged material disposal sites should be evaluated before wetland or offshore sites are considered.

There are a few EPA-designated offshore disposal sites that have been in uses form many years. These should be used before new disposal sites are considered. Also, aquatic disposal in the estuaries should be avoided.

2. Consider beneficial uses for uncontaminated sediments when practicable and feasible. Priority should be given to beneficial uses of material that contributes to [fish] habitat restoration and enhancement, landscape ecology approaches, and includes pre- and post-disposal surveys.

Should specify fish habitat otherwise we wind up losing aquatic habitat for the creation of bird islands.

Wetland Dredging and Filling

2. Do not dispose of dredge material in wetlands.

This somewhat repeats item one. Could say that dredged material should not be placed in wetlands unless the placement is specifically designed to restore or to enhance the fishery habitat of the wetlands.

Marine Transport

8. Avoid dredging in fine sediments to reduce turbidity plumes and the release of nutrients and contaminants, which tend to bind to fine particles.

Often it is the fine sediments that accumulate in the channels and need to be dredged. It may be better to say that when dredging fine grained sediments, use best management practices and dredging equipment (i.e., adjust lift speeds, use an environmental bucket or hydraulic dredge, avoid barge overflow) to minimize turbidity plumes.

Comments received from advisor Brad Sewell:

General Policies on Non-Fishing Activities and Projects – Draft Council Policy

Engage Early - Early consultation with Council, stakeholder community, (etc.) by agencies is critical to inform planning for activities and projects to best minimize and avoid impact to fish and wildlife, and to design effective monitoring plans and data collections to evaluate impacts. This should include establishing both environmental and economic baselines for impacts analysis and monitoring.

Before and After Monitoring - To inform consideration of impacts, monitoring habitat and biological/ecological conditions in the project areas before, during, and after development and operations, is necessary to provide a better understanding of the potential and realized impacts. Should

have established environmental monitoring protocol, baseline data, etc. (Look to wind energy workshop for language.)

Monitoring Data - Project monitoring information should be reviewed for any unanticipated adverse impacts, such that remediation or mitigation measures can be considered. Monitoring data should be archived in NOAA's National Centers for Environmental Information (NCEI) or other long-term archiving process for potential future use. <https://www.ncei.noaa.gov/> Should add data to MARCO Portal, MARACOOS,

Research - Increasing investment in research and monitoring should provide a better understanding of expected impacts and support improvements in the consultation process. Dedicated funding to support habitat research, monitoring. Research of impacts to habitat from project activities should be prioritized.

Surveys – Given the great harm to ocean fish and wildlife from seismic surveys, surveys should only occur in areas available for leasing, should avoid duplication by industry, should account for cumulative impacts, and should be subject to highly precautionary limits on the amounts of annual and concurrent survey activities.

Development should not occur in or through sensitive areas and those areas already prohibited to fishing. This includes discrete canyon and broad areas on the Outer Continental Shelf identified for deep sea coral protection. Proposal to change to: "Activities that impact benthic habitat in deep sea coral zones should be restricted."

Timing Restrictions - Project activities (exploration, construction, and operations) should be conducted when the fewest species, least vulnerable species, and least vulnerable life stages are present. Appropriate work windows should be established based on multi-season pre-construction biological sampling in the affected area.

Note that MAFMC doesn't have a 5 year habitat research plan – maybe they could address this as well.

If an activity with adverse effects on sensitive habitats, species or life stages is to be conducted, protective buffers that prevent adverse effects should be used.

Decommissioning of Projects/Platforms - Decommissioning options for platforms (such as those used in liquefied natural gas, oil, and wind production, to the extent that such activities occur within the region) should be developed, but projects should re-consult with appropriate agencies when preparing to decommission. This provides the opportunity for consideration of best decommissioning methods; original decommissioning options may be decades old and may not make use of best available technologies. It also allows for consideration of platforms to remain for alternative uses (e.g., oil platforms decommissioned for use as artificial reefs in the Gulf of Mexico).

Chemicals - Ensure that the use of chemicals does not adversely affect marine biota or aquatic environment. Avoid the use of biocides (e.g., aluminum, copper, chlorine compounds) to prevent fouling; less damaging antifouling alternatives should be implemented to avoid the leaching of these chemicals into the environment.

In the Event of an Accident/Event – Should an accident occur, scientists should be given timely access to the response zone so that they can conduct independent scientific research during and after an event.

Enforcement – Regulators should consistently track all environmental protection and mitigation measures required of operators, and should ensure swift enforcement when measures are not being met.

Transparency in Reporting – All accidents and events, as well as any violations of environmental protection and mitigation measures, should be reported and published in a format and location easily accessible to the public. Periodically, summary reports should be made published in order for the public to gain a comprehensive picture of the impacts of non-fishing activities and projects.

Offshore Oil – Draft Council Policy

1. Offshore oil exploration and development is not consistent with our vision for sustainable fisheries in the region.
2. If oil and gas exploration and development do advance in the region, the Council urges the highest level of precaution in all activities in order to reduce the impacts that will occur to marine, coastal and human environments.
3. The selection of leasing areas should be informed by a full understanding of the potential impacts of oil and gas exploration and development on the marine, coastal and human environments and economies of the Mid-Atlantic.
4. Pre and post-development ecological monitoring should be undertaken to understand further the impacts of oil and gas activities and to facilitate corrective measures in the event of environmental impacts to ocean fish and wildlife.
5. Onshore facilities associated with exploration and production (e.g., pipelines, roads, bridges, and other structures) should not be constructed on/through sensitive fish habitat (e.g., salt marsh, mud flats, shellfish beds, and submerged aquatic vegetation (SAV)).
6. The expansion of existing onshore oil/refining facilities and/or the shipping of oil into ports which already have been developed and have existing deep water facilities would decrease the need for additional dredging, and should be prioritized over new development
7. Use methods to transport oil and gas that eliminate the need for handling in sensitive fishery habitats.
8. Offshore oil development should not occur in sensitive areas and those already prohibited to fishing. This includes discrete canyon and broad areas on the Outer Continental Shelf identified for deep sea coral protection.

9. If sited near sensitive habitat, the Council insists on the use of best available technology to reduce potential impacts. This may include horizontal directional drilling to avoid impacts to sensitive habitats.
10. Monitoring and leak detection systems should be used at oil extraction, production, and transportation facilities, to prevent oil from entering the environment.
11. The disposal of chemicals used in petroleum development should be rigorously regulated. Avoid the discharge of produced waters, drilling muds, and cuttings into the marine and estuarine environments. Re-inject produced waters into the oil formation, whenever possible, and develop a frack-out plan (what about capping of materials?).
12. The adverse impacts from discharges of chemicals, produced waters, drilling muds, and cuttings into the environment should be evaluated and prevented when they occur, including physical and chemical effects on pelagic and benthic species and communities.
13. Potential adverse impacts to marine resources from oil spill clean-up operations should be weighed against the anticipated adverse effects of the oil spill itself. The use of chemical dispersants near sensitive habitats should be avoided.

Note that currents can take spills from the area and should ensure that plan for areas oil is transported to and impacts on nursery areas.

14. Ensure oil and gas exploration, production and transportation facilities have developed adequate oil spill response plans and protocols and have the training, resources and capacity to implement them in the event of an oil spill. Oil spill response plans should include the identification of sensitive marine habitats, the location and timing of sensitive life stages, important dispersal and/or migratory corridors, and should be updated on a regular basis, with input by the Council.
15. Regulators must ensure industry maintains readily deployable resources for rescue, response and containment events that are proven to be effective in the Mid-Atlantic region.
16. Short-term and long term impacts from sound during exploration, construction, and operations on the environment/ecosystem should be evaluated and minimized. Time and area restrictions on seismic survey activities should be designed to minimize impacts on marine mammals and sea turtles, as well as minimize the impacts on fish populations and fisheries. Careful, seasonal planning of seismic surveys should be undertaken to avoid duplicative surveys and reduce any potential impacts to the resources and fisheries under our jurisdiction. Seismic surveys could consider restricting their activities to the winter months when there is less potential for disruption to fisheries. (See 4/13/15 MAFMC Comments to Delaware Coastal Programs on Proposed Geophysical Seismic Surveys, pg 3).

Note that seismic surveys can have impact on HMS recreational fishing tournaments.