



State of Rhode Island and Providence Plantations
COASTAL RESOURCES MANAGEMENT COUNCIL
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July 20, 2010

Coastal Resources Management Council
Chairman Michael M. Tikoian
Stedman Government Center, Suite 3
4808 Tower Hill Road
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Dear Chairman Tikoian:

This memo addresses proposed changes to Chapter 9: Other Future Uses, of the Ocean Special Area Management Plan. It also lists changes that were suggested as a result of comments made at the July 20, 2010 CRMC Council public hearing.

Changes made after the July 20, 2010 public hearing:

- Section 940 has been re-titled "Marine Conservation and Fisheries Enhancement"
- Section 940.1 has been re-titled "Enhancing Marine Conservation"
- Section 940.2 has been re-titled "Enhancing Marine Fisheries"
- Section 920.6 Line 10, the Figure citation has been changed to read, "(Figure 2, example from Florida)"
- Section 940 Figure 3, the caption has been changed to read "Options for the SAMP Area for Conservation and Fisheries Enhancement"
- (a) Amendment Memo to oceansamp@gso.uri.edu Responding Specifically to Comments Made by Save the Bay

Response to Formal Comments on Chapter 9: Other Future Uses by Save the Bay:

This memo amends a previous Memo and gives additional responses to comments by Save the Bay on the Future Uses chapter, Chapter 9, of the OSAMP. Red line changes in response to comments are copied below.

COMMENT:

Save The Bay has concerns with the lack of current and in some cases, erroneous and contradictory, information relative to liquefied natural gas supply, demand, permitting status and location. One of Save The Bay's contentions in our active opposition to the proposed Weaver's Cove LNG facility is the lack of need for liquefied natural gas in the region. We have relied on several more recent publications, studies with technical data and expert commentary and urge you to do the same for the portions of this draft chapter dealing with LNG supply and need.

The Energy Information Administration Long Range (EIA) Annual Energy Outlook provides a nationally-recognized objective assessment of the country's energy supply and demand forecast "to promote sound policy making, efficient markets, and public understanding regarding energy and its interaction with the economy and the environment."1 The EIA's Annual Energy Outlook (AEO) is updated each year and the 2009 update considered both the economic downturn as well as renewable energy incentives outlined in the American Recovery and Reinvestment Act and predicts a significant surplus gas supply capacity for the next twenty years.

Section 920: Use for Liquefied Natural Gas (LNG) Facilities

1. Natural gas is the fastest growing source of energy for consumption worldwide. Natural gas makes up about a quarter of all energy consumed in the United States every year (Foss, 2007a,b), with LNG accounting for nearly ~2% of U.S. natural gas supply (Foss, 2007a,b). Demand for natural gas in the United States has accelerated due to environmental concerns about other energy resources, rising natural gas prices, and the possibility of domestic shortages (Parfmok et al., 2004).

2. Natural gas is used in homes for heating and cooking, and can also be used to generate electricity. In locations where pipeline capacity from supply areas is expensive and use is highly seasonal, LNG storage ~~helps~~ can help reduce pipeline capacity commitments, and ~~is a very~~ can be an important fuel ~~used~~ during peak power periods (Energy Information Administration, 2003).

3. The physical properties of LNG allow for long-distance transport by ship and for local distribution by truck onshore. Liquefaction of natural gas also provides the opportunity to store it for use during high consumption periods close to demand centers, as well as in areas where geologic conditions are not suitable for developing underground storage facilities. In New England underground storage is lacking, and LNG is a critical part of the region's supply during winter (Energy Information Administration, 2003). To meet these needs, new onshore and offshore LNG plants have been proposed for southern New England. Rhode Island receives all of its LNG from shore-based pipelines (there is one existing jurisdictional peak shaving site in Providence operated by Keyspan LNG, Inc.). ~~Demand for LNG is increasing and pipeline capacity is almost reached (see Renewable Energy Chapter).~~

DELETED:

4. Current projects are expanding the capacity of existing pipelines into the Northeast (Expansion of the U.S. Natural Gas Pipeline Network: Additions in 2008 and Projects through 2011, EIA, Office of Oil and Gas, September 2009). The 2009 EIA report indicates there are multiple recent projects in the Northeast (during 2008) to bring regasified natural gas to market from LNG import terminals. The 2009 EIA report suggests that domestic sources of natural gas supplies may now be able to meet projected future demands.

NEW:

4. Current projects are expanding the capacity of existing pipelines into the Northeast (Gaul, 2009). This report indicates there are multiple recent projects in the Northeast (during 2008) to bring regasified natural gas to market from LNG import terminals, suggesting that domestic sources of natural gas supplies may now be able to meet projected future demands.

References

ADDED:

Gaul, D. 2009. Expansion of the U.S. natural gas pipeline network: additions in 2008 and projects through 2011. Office of Oil and Gas Energy Information Administration, Washington, DC.
http://www.eia.doe.gov/pub/oil_gas/natural_gas/feature_articles/2009/pipelinenetwork/pipelinenetwork.pdf Accessed on July 17, 2010.

Honey, M. 2010. Responsible tourism: growth and trends.
<http://www.sustainabletourism.org/Responsible%20Tourism%20%20Growth%20&%20Trends.s>
wf Accessed July 13, 2010.

Response to Formal Comments on Chapter 9: Other Future Uses:

This memo is in response to two sets of formal comments received by the Conservation Law Foundation and The Nature Conservancy on the Future Uses chapter, Chapter 9, of the OSAMP website. Comments made are restated by number, and responses follow in italics.

(1) The introduction to this chapter (Section 900.1) and indeed the chapter as a whole seems to miss a fundamental objective of marine spatial planning and what we have been told is the objective of the Ocean SAMP – balancing essential protection of the ecosystem with development of ocean resources. The first sentence stresses the need to be as efficient as possible in the use of “ocean space” and the need to optimize multiple uses and conservation of ocean space, but again fails to provide justification for such an approach. We recommend that the opening sentence be modified as follows:

“It has been recognized globally that fully functioning, healthy ocean ecosystems are essential for providing the ecosystems services that humans want and need and that there is a need to use ocean space as efficiently as possible. Therefore, it is critically important to require planning for multiple uses of compatible activities and the development of strategies to promote, enhance, and optimize the multiple uses and conservation of ocean space in a manner that ensures essential protection of ocean ecosystem.”

In discussing potential new uses of the Ocean SAMP planning area, the introduction, and indeed the entire chapter, should include more balanced language to indicate the need to consider new uses in light of not only the economic and use benefits to humans, but also the potential impacts on the ocean ecosystem. It is a fact that the ocean ecosystem is limited in its capacity to support human activities without detrimental impacts. A well designed, ecosystem-based Ocean SAMP should enable the state to make these important ecological determinations based on a thorough and scientific understanding of the ocean waters off Rhode Island and should from there determine appropriate uses and identify appropriate areas for those uses.

We have modified the introduction to create the more balanced approach as requested.

(2) The inclusion of Marine Reserves for Conservation and Marine Reserves for Fishery Enhancement as a “future use” is completely inappropriate and should not be discussed as such in Chapter 9. Moreover, the inclusion of Marine Reserves for Conservation and Marine Reserves for Fishery Enhancement in this chapter seems to suggest that the Ocean SAMP will not attempt to identify these areas at this time, but will look to do that at some future date. The mere fact that the SAMP team doesn’t intend to identify Reserves at this time does not make reserves a “future use.” Marine reserves and marine protected areas are management tools that are used to protect and enhance the marine environment including ocean wildlife populations and habitat. In fact, they are management tools that CLF has asked the SAMP team to use in the context of its ecology chapter – now, and not in some future amendment to the SAMP. Marine protected areas are in fact common management tools used throughout New England in both state and federal waters. Therefore, all discussion of marine protected areas as a “future use” in Chapter 9 should be stricken (including removing marine reserves from the Table 1 list of future uses and sections 940.1 and 940.2) and moved to the Ecology chapter where it should be discussed as a “management tool” for ecosystem-based management and marine spatial planning.

We have not moved the discussion of Marine Reserves for Conservation and Marine Reserves for Fishery Enhancement to the ecology chapter as there are no large scale designated reserves in the OSAMP area at present, nor is there any sort of use of these as “management tools” at present.

(3) Table 1 should include desalinization as a future use. Globally, nationally, and regionally communities are seeking to supplement depleted or degraded freshwater resources with desalinized ocean water. Interestingly, Table 1 suggests that only marine reserves for conservation and fishery enhancement conflict with fisheries interests. This is simply not so as LNG siting, mining, artificial reefs, aquaculture, research, and virtually any number of human activities have the potential to “conflict” with fishing activities. Generally speaking any use of the ocean planning area has the potential to conflict with any other use, which is the point of engaging in a marine zoning exercise. Therefore, we recommend that Table 1 not single out only one use in its lists of management considerations. Impacts on the natural ecology, for example, should be a management consideration for Placement of Artificial Reefs.

We have included desalinization as a future use in Table 1. We have revised Table 1 to include multiple use conflicts in many future uses.

(4) Section 920 (2) and (3), Use for Liquefied Natural Gas (LNG) Facilities, states that “demand for LNG is increasing and pipeline capacity is almost reached.” This statement, as are a number of the statements made in this section, is wholly inaccurate. It is important and necessary to appropriately characterize New England’s projected energy demands and generation capacity to provide the context for the need for renewable energy. But, it is equally important to discuss the regional need for natural gas, and in particular, Liquefied Natural Gas (“LNG”), in reference to the most recent data from the Energy Information Administration (“EIA”) and the Department of Energy (“DOE”). To this point, consider the following:

This section includes completely inaccurate statements as a result of its reliance on outdated 2003 information. For example, while the statement that “the pipeline capacity is almost reached” was true in 2003, in light of current projects that are expanding the capacity of existing pipelines into the region, this is not the case today. See Expansion of the U.S. Natural Gas Pipeline Network: Additions in 2008 and Projects through 2011 (EIA, Office of Oil and Gas, September 2009). The 2009 EIA

report makes it clear that the largest projects completed in the Northeast during 2008 in terms of capacity were related to bringing regasified natural gas to market from LNG import terminals. 2009 EIA report at p. 9. Statements that suggest that there is strong evidence that domestic sources of natural gas supplies will not be able to keep up with future demand without the addition of new sources of gas in the form of LNG are also woefully out of date. The EIA 2010 report that is cited on p. 4 makes that clear. For this reason, CLF strongly suggests that the paragraphs 2 and 3 be amended to reflect more accurate and current information.

Section 920 (9) should indicate that the construction of the Neptune/Suez LNG facility has been completed and is now on line. This list should include relevant LNG facilities now under consideration in Maine and those built and/or planned in Atlantic Canada as each of these facilities has the potential to impact LNG supplies to the Northeast region.

We have modified paragraphs 2 and 3 to take account of this additional information. We have modified Section 920 (9) to mention the Neptune/Suez LNG facility, and the facilities under consideration in Maine and Atlantic Canada.

(5) Section 930 (Short Sea Shipping) lacks any description of the potential negative impacts of short sea shipping, though they are listed in Table 1. This section should include a paragraph discussing the potential negative impacts of short sea shipping to existing uses and the ocean ecosystems within the SAMP planning area.

There are two paragraphs numbered 2 in this section. Also, in the first paragraph #2, the subparagraph (c) before "Hurricanes may become" should be (d) instead. The punctuation between (b) and (c) should be changed from period to semicolon. The comma following the parenthetical reference to Tufts University, 2008, should be deleted.

We have revised Table 1 and added to the text to note the potential negative impacts of short sea shipping. We have modified and clarified the sections as suggested.

(6) Sections 940.1 (Use for Enhancing Marine Conservation) and section 940.2 (Use for Enhancing Marine Fisheries) should be moved to the Ecology chapter, per our comment above. The last sentence in Section 940.1 appears to make an inappropriate and ad-hoc recommendation regarding the use of marine parks (as defined by the World Conservation Union) in the SAMP area. The Ocean SAMP should identify important ecological areas and protective measures should be designed and implemented based on the specific characteristics of the area and the vulnerability of habitat and marine life in the area. This protection will depend upon the specific site characteristics and might require the designation of a no-take marine reserve or it could allow for certain activities such as recreational fishing and commercial fishing with gear that does not impact the seafloor. It is premature to assume that all commercial fishing, or any activity, can or cannot be allowed in any conservation areas.

We have not moved the sections on Use for Enhancing Marine Conservation and Use for Enhancing Marine Fisheries to the ecology chapter as there are no large scale designated uses for enhancing marine conservation or marine fisheries in the OSAMP area at present.

Section 940.1, once moved to the Ecology Chapter, should include a discussion of the benefits of marine protected areas (MPAs), not just to fish populations (and these benefits are well documented) but also, and more importantly, to the ocean ecosystem at large. Over the past few years, there has been a growing consensus among the government, academic, and environmental communities that

our ocean resources must be managed from a more holistic, ecosystem perspective and that MPAs will play an increasingly important role in this new approach to ocean management. Scientific research and support for MPAs has been emerging rapidly and forcefully. In 2000, President Clinton issued a U.S. executive order calling for a national system of MPAs (EO 13158) and the establishment of a federal advisory committee on MPAs, to which CLF's Dr. Priscilla Brooks was appointed in 2010. The National Academy of Sciences (2001), the Pew Oceans Commission (2003), and a broad spectrum of scientists and conservation organizations here in the U.S. and worldwide have all recommended the designation of networks of protected areas as one of the essential tools for the preservation of threatened marine ecosystems. Regions around the nation have been and continue to designate new marine protected areas, including no-take marine reserves. Prime examples include the recent designation of networks of marine protected areas along the California coast and the designation of 355,000 square miles of Pacific Ocean waters around the Northern Hawaiian Islands and the Marianas Archipelago in 2006 and 2009, respectively, as highly protected Marine National Monuments.

The benefits of marine protected areas are widely recognized and include increases in the abundance, size and age of individual species within MPAs. The overall biomass within protected marine areas usually increases rapidly, and is often accompanied by an increase in the number of species thriving in the area and recovery of ecological community structure. Protected areas also benefit surrounding areas because they serve as sources for repopulation of fished areas – as population density goes up there can be emigration of both larval and adult animals to other areas, called the *spill-over* effect.

We have added additional references as suggested and updated to include the spill-over effects possible.

(7) Section 940.2 (Use for Enhancing Marine Fisheries) should be moved to the Ecology Chapter per our recommendation above. Once moved to the Ecology Chapter, it should include a discussion of the work now underway by the New England Fishery Management Council (NEFMC) to identify and protect areas in New England's ocean waters (including those in Rhode Island) which are particularly vulnerable to fishing gear. An area in the Ocean SAMP planning area known as Browns Ledge is one of seven areas that has been identified by the NEFMC habitat science team as an area that is particularly vulnerable to the destructive impacts of certain kinds of bottom-tending mobile fishing gear and is not being investigated for further protection. This area should therefore be investigated as one of the important ecological areas worthy of protection within the Ocean SAMP.

We have not moved the sections on Use for Enhancing Marine Fisheries to the ecology chapter for the reasons stated previously. We have added mention of this on-going process in the NEFMC regarding Browns Ledge into the possible future outcomes of stakeholder processes.

(8) Section 940.2.1 should include a discussion of the potential negative impacts of artificial reefs. Specifically, para. 4, p. 12-13, CLF recommends changing the word "contentious" to "inconclusive."

Section 960 should include a discussion of the negative impacts of finfish and, to a lesser extent, shellfish aquaculture – impacts which have been well studied and published in the literature. We are unaware of the impacts of seaweed aquaculture and recommend that a literature search be conducted regarding any impacts from this activity.

We have changed to the word "inconclusive" and added additional information of the potential negative impacts of artificial reefs and aquaculture.

(9) Section 960.2 (1), p.17 – The second sentence is a fragment.

This has been changed.

(10) Section 960.4 should include a broader discussion of marine biotechnology and the potential for unknown uses of a variety of marine organisms for a variety of technological and medicinal purposes.

This section remains as written since we agree with this comment but feel the subject is adequately reviewed.

(11) The potential negative impacts of ecotourism and underwater cemeteries should be explored and referenced in Section 970. Specifically, Para. 1, p. 19 – CLF suggests that this paragraph be replaced with one that actually deals with the expansion of ecotourism as a potential future use rather than the current one that treats ecotourism like a side effect of an offshore wind project. Moreover, the current paragraph belongs in the Renewable Energy chapter detailing the impacts of offshore wind projects.

This section is revised to account for ecotourism development in general, with the windpower tourism as a subset of the larger trends in water ecotourism.

(12) Section 970.1 (Development of a Research and Education Center) should include a more thorough discussion of scientific research areas as tools for understanding ecosystem function and the impacts of human activities. Few of these areas exist in New England ocean waters and for that reason it is difficult to form a complete understanding of ocean ecosystems and the impacts of various stressors.

Additional text is added to include discussion of scientific research areas as tools for understanding ecosystem function and the impacts of human activities.

(13) 900 Introduction

1. This section seems to focus solely on economies and does not include conservation areas as a projected future use that also has inherent ecosystem benefits with monetary value. Specifically, Figure 1. We would like to see Conservation or Marine Protected Areas added to the Future Uses model.

2. This section uses language to describe principles that the average stakeholder may not understand. Clearer, simpler language would be more useful for a public document.

Table 1. Submerged Shellfish Aquaculture – Ecosystem Benefits should be added to Potential Benefits.

Fig. 1 has been modified, language has been simplified, and Table 1 changed as suggested.

(14) 910 Use For Mining

2. Add at the end “However, other “soft” shoreline solutions are alternatives to armoring which often compound erosion problems downshore.

This section has been modified as suggested.

(15) 960.1 Shellfish Aquaculture

2. Add “The Woods Hole Oceanographic Institution and the Marine Biological Laboratory have both initiated pilot projects and experimental farms within the OSAMP footprint to test the viability of offshore mussel culture. The forthcoming results of these experiments should provide guidance for regulation and permitting of potential future offshore aquaculture ventures.”

This section has been modified as suggested.

(16) 940.2 Use for Enhancing Marine Fisheries

5. Change last sentence to TNC is exploring similar approaches to provide incentives for developing more sustainable fishing practice through a pilot project in the Gulf of Maine. (G. Smith, TNC) TNC reserves the right to modify the California description as well. Language for that is forthcoming from our California program.

The last sentence has been changed as suggested.

Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Grover J. Fugate". The signature is written in dark ink and is positioned above the typed name and title.

Grover J. Fugate, Executive Director
Coastal Resources Management Council