Record #	Name	Submitted	Organization	Section	Comment	Response
158	Edward LeBlanc	12/15/09	United States Coast Guard-Retired		General comment: Should there be a Table of Contents for this chapter, with an Introduction and Section numbers like the other chapters have?	There will be a table of contents and section numbers similar to other Ocean SAMP Chapters, these excerpts were released individually when the Recreation and Tourism, and the Marine Transportation, Navigation and Infrastructure Chapters were released.
159	Edward LeBlanc	12/15/09	United States Coast Guard-Retired	800.1	"...resulting in impacts..." should read "...resulting in adverse impacts..."	Correction made.
160	Edward LeBlanc	12/15/09	United States Coast Guard-Retired	800.7	"Because the severity of this impact varies widely..." should read "Because the severity of impacts to radar varies widely..." Also, this paragraph talks about weather radar in the first sentence, but then in the second sentence says the Coast Guard "considers impact on radar..." But we only consider impacts to navigation radar, not weather radar. The second (and last) sentence of para 7 may be more appropriate at the end of paragraph 6.	Correction made.
189	Dick West	12/16/09	United States Navy-Retired	800	Again, without the entire chapter 8 or the complete SAMP, it is difficult to evaluate how this adds to the chapter and if the flow is consistent with the chapter lay-out. The impacts of this offshore infrastructure will be a big factor in the public debate as well as the permitting process.	No response needed.
190	Dick West	12/16/09	United States Navy-Retired	800	when accurately sited and included on navigational charts, paper and electronic, these structures should enhance visual and radar navigation for surface and some airborne vessels	No evidence was found to support that offshore wind energy facilities will enhance visual and radar navigation for surface and some airborne vessels, therefore this was not included in the section
191	Dick West	12/16/09	United States Navy-Retired	800	if these structures are required to include ocean observing sensors, they can add important physical, biological and chemical data for an integrated ocean observing system.	Included text: "Operational offshore renewable energy facilities may provide enhancements to navigation and marine safety by providing mariners with access to in-situ offshore weather, wave and current data. This information may increase navigational safety by informing mariners of current offshore conditions, or providing a recent history of offshore conditions to aid in search and rescue operations within the area. "

192	Dick West	12/16/09	United States Navy-Retired	800	These structures can provide artificial breeding grounds for living marine resources	Will be discussed in Section 850 Benthic Ecosystem Effects Section.
214	Annette Grilli	12/22/09	University of Rhode Island	10	The last sentence ends with "...or aiding in search and rescue operations within the area." I recommend they clarify this by saying " ... or providing a recent history of offshore conditions to aid in search and rescue operations within the area."	Revised as Suggested
213	Steven D. Textoris	12/22/09	Minerals Management Services	6	The sentence which states: "However, research conducted to assess the potential radar impacts of the proposed Cape Wind project in Nantucket Sound found that the facility would only pose adverse impacts in accurately detecting targets within the wind farm, as the installed structures may produce false targets or mask real targets ..." I recommend they modify that sentence to say "... detecting targets within and immediately behind the wind farm ..."	Correction made.
319	Ames Colt	3/15/10	RIDEM	820.4.3	It should be noted that if a project is sited in federal waters, it is likely that cable trenching will have to cross into state waters and state upland areas which would trigger all applicable state permitting requirements.	Added text: "Moreover, the installation of a submarine cable through state waters and through and state upland areas at which point all applicable state permits and approvals would be required."
320	Ames Colt	3/15/10	RIDEM	820.4	Tables 8&9: Clarify if both tables are applicable to projects sited in federal and state waters. For example, if the facility was sited in federal waters, Table 8 would be correct with regard to the EPA issuing the NPDES permit rather than RIDEM issuing the RIPDES permit. However, it is also true that, for example, whether the project was sited in federal or state waters, the USACE may be required to issue a Section 10/404 permit, which would require issuance of Federal 401 (issued by RIDEM). Additionally, it is our recommendation that the titles of tables 8 and 9 should say “potential” permits required since not all permits are required in all situations.	Tables 8 and 9 were modified to include information about whether the permit is required if the facility was sited in state vs. federal waters, as well as transmission cables sited in state or federal waters. The titles of each of these tables were modified to "Potential Federal Actions Required to Construct an Offshore Wind Energy Facility in SAMP Area." and "Potential State Actions Required to Construct an Offshore Wind Energy Facility in SAMP Area."

321	Ames Colt	3/15/10	RIDEM	820.4	Table 9: Modify this table to include the following permits for RIDEM:DEM Dredge permit,401 Water Quality Certification and or State Water Quality Certification and RIPDES Permits. The Water Quality Certification would be required for in-water work as well as any work on the landward side of the project. Please remove "Component of the Waterfront Development Permit," as it infers WQC is only required for proposed activities landward. The WQC review would be performed in concert with the dredge permit review and would include review of habitat impacts, recreational and commercial fisheries impacts, recreational uses, and possible fill for constructing the structures.	Additional RIDEM permits were included in table 9, and "Component of the Waterfront Development Permit," was removed.
322	Ames Colt	3/15/10	RIDEM	820.4.4	It is RIDEM's understanding that in addition to pile driving for construction of the substructures and foundations, auguring is also a possible method. Therefore, we recommend that this chapter provide more detail regarding this method. Auguring would generate sediment that would be cast aside on the sea floor and would constitute filling of state waters (if the project is sited in state waters) and would require WQC review for potential adverse impacts to habitat, as well as turbidity and sediment dispersion impacts on fishery resources.	Added text "Alternatively, in areas where pile driving is not possible, drilling techniques may also be used to create holes within the seabed for the piles to be placed." All potential environmental effects of construction activities (including sediment resuspension and turbidity impacts) are discussed in Section 850.
323	Ames Colt	3/15/10	RIDEM	820.4	We recommend that information be provided here on whether an Operations and Management Plan would be required at this stage of the project and what elements would be included.	Added descriptions of the Site Assessment Plan, the Construction and Operations Plan amnd the General Activities Plan as required by MMS regulations.
324	Ames Colt	3/15/10	RIDEM	820.6.7	The last sentence on this page is unclear.	Added clarifying language: "Once approved by the National Oceanic and Atmospheric Administration as part of Rhode Island's coastal zone management program, the Ocean SAMP policies will also inform the consistency review determination of future offshore renewable energy development in federal waters within the Ocean SAMP boundary, as the CZMA requires federally approved projects be consistent with state coastal management program policies. For more information on consistency determination, see Section 820.4, Chapter 1 Introduction, as well as Chapter 10 Existing Statues, Regulations, and Policies)."

325	Ames Colt	3/15/10	RIDEM	840	It should be noted within this section that waterside improvements proposed as part of constructing the wind facility may require additional state and federal permitting.	Footnote added "Waterside improvements proposed as part of constructing the wind facility may be subject to additional state and federal permitting."
288	Annette Grilli	3/18/10	University of Rhode Island	810.1.3.2	It is mentioned that rate in Block Island are the highest in Rhodes Island, numbers (cents per kWh) are given for Block Island. A reference to the average value in Rhode Island should be quoted (17.4 cents/kWh or a proportion, order of 2 to 4 times higher in Block Island than in Rhode Island state.	Added text referring to the average electricity rate in Rhode Island of 17.4 cents per kWh.
289	Annette Grilli	3/18/10	University of Rhode Island	810.1.3	note that 3 paragraphs are labeled 3	Corrected numbering.
290	Annette Grilli	3/18/10	University of Rhode Island	810.1.4	line 3: I think it should be clearer: price fluctuations influenced by market-based factors and ”technical factors” instead of “physical factors”	Revised language from "physical factors" to "technical factors"
291	Annette Grilli	3/18/10	University of Rhode Island	810.2.2	line2: parenthesis (RGGI)	Added (RGGI).
292	Annette Grilli	3/18/10	University of Rhode Island	810.2.3	line 2: insert (RES)	Added (RES).
293	Annette Grilli	3/18/10	University of Rhode Island	810.2	Table 3: Table redundant with figure 4	Added two columns to table "Minimum Percentage of Target that must be obtained from New Renewable Energy Sources" and "Actual* or Forecasted Amount of New Renewable Energy Needed to Satisfy RES Requirements (MWh)" so the table is not entirely redundant with figure 4.

294	Annette Grilli	3/18/10	University of Rhode Island	810.3.5	line2: greatest potential wave energy….strongest wind and" larger fetch" Line5: wave resources higher on eastern boundary, since the fetch is longer line 16: mean wave amplitude is not correct, replace by significant wave height	Revised sentence to:"The greatest potential for wave energy exists where the strongest winds and larger fetch are found, which in general corresponds to temperate latitudes between 40° and 60° north and south (Pelc and Fujita 2002)." and "Furthermore, because global winds tend to move west to east across ocean basins, wave resources on the eastern boundaries of oceans also tend to be greater than those on the western edges since the fetch is longer (Pelc and Fujita 2002; Musial 2008) (see Figure 7)." Mean wave amplitude was replaced by significant wave height.
295	Annette Grilli	3/18/10	University of Rhode Island	810.3.5	line 19: A specific detailed wave energy study was conducted by Ocean Engineering in 2004 for the potential Point Judith site. Another wave study was done for the specific site of Block Island, as part of the SAMP project (2008). Reference should be done to those studies when quoting potential wave power in Rhode Island. Those references are: 1.Grilli, A.R., Grilli, S.T., Spaulding, M.L., Ford, K. and J. King 2004. Bathymetric and Wave Climate Studies in Support of Siting a Wave Energy Power Plant at Point Judith, RI. Final Technical Report prepared for RIREO Grant Phase I. Dept. Ocean Eng., Univ. of Rhode Island, 51 pps. 2.Asher, T.G., Grilli, A.R., Grilli, S.T. and M.L. Spaulding 2008. Analysis of Extreme Wave Climates in Rhode Island Waters South of Block Island. Year 1 report for State of RI Ocean Special Area Management Plan (SAMP) project. Dept. Ocean Eng., Univ. of Rhode Island, 37 pps.	Both of these references were added to the text.
296	Annette Grilli	3/18/10	University of Rhode Island	810.3.5	Line1: This is not correct, and it is not similar to wave energy. Tidal energy is the kinetic energy in the currents created by the rise and fall of the tides .	Removed "Similar to wave energy" from sentence.

297	Annette Grilli	3/18/10	University of Rhode Island	810.3.1	Line 3: shouldn't it be "AWS TrueWind"? Line 10: more exact to say, "land surfaces, especially forested areas exert a large friction on the wind velocity…. As the prevailing winds move offshore above the sea surface, which has minimal roughness length (order of 10-4 versus 1 to 6 over trees), the surface wind speed increases	Revised "TrueWind Solutions" to "AWS TrueWind". Added in text "land surfaces, especially forested areas exert a large friction on the wind velocity..." Added footnote stating "The roughness of the sea surface is on the order of 10-4 versus 1 to 6 over trees."
298	Annette Grilli	3/18/10	University of Rhode Island	820	Cost of maintenance is not considered- should be mentioned	Added text describing the cost of operation and maintenance activities to Section 820.5.
922	Bob Thresher	3/21/10	National Renewable Energy Lab		Eliminate the superfluous use of commas throughout the chapter	Removed.
924	Bob Thresher	3/21/10	National Renewable Energy Lab	810.1.1	Change "increase energy demand" to increased	Revised as suggested
925	Bob Thresher	3/21/10	National Renewable Energy Lab	810.1.3	no commas necessary after years; space between coal and (11.2%); period after oil (3.8%) and just make the last remark its own complete sentence.	Revised as suggested
926	Bob Thresher	3/21/10	National Renewable Energy Lab	810.1.4	Be consistent if using an acronym in the references in the text. Most of the time the agency name is in the parentheses but for Page 7, paragraph 4, acronyms are used; one of these acronyms is EIA 2008 but the EIA citations in the reference list are 2006 and 2010	Revised as suggested and added EIA 2008 to work cited.
927	Bob Thresher	3/21/10	National Renewable Energy Lab	810.2.3	Be consistent with numbered or bulleted lists in the text. If you number things 1), 2), 3)….in one paragraph, avoid moving to i), ii), iii) in the next list. Separate each item by a comma rather than a semi colon even in bulleted lists. Page 8 paragraph 3 in the numbered list some things are separated by semi colons while others have commas.	Renumbered to be consistent.
928	Bob Thresher	3/21/10	National Renewable Energy Lab	810.2.4	no comma necessary after "from renewable resources".	Removed

929	Bob Thresher	3/21/10	National Renewable Energy Lab	810.2.4	no comma is necessary after “that created Rhode Island’s Renewable Energy Standard.	Removed
934	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.3	When you have two sentences back to back that are the same reference, only do the citation after the last remark. Page 13 paragraph 3 line 3 remove US DOE reference.	Removed citation from first sentence.
935	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.4	It is ambiguous whether the word earth should be capitalized even though it is the name of our planet. Both capital and lower case are correct, just be consistent. Up to page 14 earth has been lower case. Page 14 paragraph 4 earth is capitalized; paragraph 5: there are two Musial 2008 refs in the appendix. They should be a and b since they are single author and the same year. Clarify in the text which reference is correct.	Changed to lower case and revised work cited to Musial 2008a and 2008b.
936	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.5	remove (Hagerman, 2001).	Removed.
937	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.7	the 1995 study by Idaho National Laboratory needs to be on the reference list since you discuss information from the study.	This study is listed under Francfort 1995.
938	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.8	remove comma after the word ‘directly’ and after the word ‘energy’;	Removed.
939	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.9	change (Bower 2007) to (Brower 2007); Table 5 has NREL 2007 as the reference but there is no NREL 2007 reference in appendix.	Fixed both citations.
940	Bob Thresher	3/21/10	National Renewable Energy Lab	810.3.1	ATM 2007 reference is not in the reference appendix.	Added ATM to the chapter work cited.
941	Bob Thresher	3/21/10	National Renewable Energy Lab	820.3	change “offshore wind are” to “is”;	Changed.

942	Bob Thresher	3/21/10	National Renewable Energy Lab	820.1.1	about Wizelius reference; in section 820.1 paragraph 1: remove comma after “seafloor with a foundation”.	Removed
943	Bob Thresher	3/21/10	National Renewable Energy Lab	820.1.1	remove comma after landing pad.	Removed
944	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.3	Figure 11: It is not necessary to cite a reference within a reference. Cite them separately or just use a single reference. The Van der Temple 2006 reference is not in the reference appendix in the foot note you have Musial et al (2006) yet this reference is not in the appendix.	Van der Temple 2006 is cited in Hensel 2009.
945	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.3	figure 12: the illustration reference should be added to the reference appendix	Added citation to the work cited.
946	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.3	figure 13:should the reference be Musial 2008? If not Musial 2009 needs to be added to the reference appendix.	Changed citation to Musial 2008b.
947	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.3	Minerals Management Service 2007 is not in the reference appendix. If this should be MMS 2009, specify a or b since there are two 2009 refs in the appendix; sentence 3 remove comma from after ‘sea bottom’ and after ‘the seafloor’. This is a long sentence but it does not need commas. The sentence starting with “Preparation of the seabed…” should be broken into two sentences. Start the second sentence with “However,”; put a period after “…for a monopile)” and make the last thought its own sentence, perhaps “Further, their large mass may complicate…”;	Clarified all referenced. Removed comma and broke apart sentence as requested.
948	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.5	this paragraph is short and the first Musial et al 2006 reference in sentence 1 can be removed but see # 15 about Musial et al 2006 reference.	Removed.
949	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.8	this is a short paragraph and Wizelius can be referenced once.	Removed.

950	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.9	the sentence starting with “Turbines size continues…” should be broken into two sentences. Change “Turbines” to “Turbine” and put a period after “manufactured”. Start following sentence with “Plans…”	Revised as suggested.
951	Bob Thresher	3/21/10	National Renewable Energy Lab	820.2.1	Figure 16: this is not a figure and doesn’t really need a caption. You can just state that the equation came from the reference listed; paragraph 10 first sentence after equation: remove comma after “continually” and end the sentence after the equation after “maintenance”. Start next sentence with “Therefore…” In addition, the equation states an incorrect definition for capacity factor. Capacity factor is: Capacity Factor = (Turbine average power output in a year)/(Turbine rated power) or it can be stated in terms of energy as: Capacity Factor = (Energy generated in a year)/(Turbine rated power x 8760 hrs/year) The equation should be corrected and the related text needs to be made consistent.	Revised as suggested.
952	Bob Thresher	3/21/10	National Renewable Energy Lab	820.3.2	you can reference Wright et al 2002 just once; for the sentence “However, such a system…” remove comma after “onshore” and change “both requiring” to “which require…”	Revised as suggested.
953	Bob Thresher	3/21/10	National Renewable Energy Lab	820.3.2	Figure 17: MMS 2009 reference a or b? Differentiate these in the text and reference list	Differentiated between MMS 2009 a and b.
954	Bob Thresher	3/21/10	National Renewable Energy Lab	820.3.3	for the sentence “Generally a substation does not…” separate the criteria with commas instead of semi colons. Since you have set the list up by use of a colon, number them as you did in previous paragraphs. For the sentence “However, most offshore wind…” change “being build currently” to “currently being built” and “far from shore to require” to “far from shore and require”	Revised as suggested.
956	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.1	remove comma after “between projects”	Revised as suggested.

957	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.1	Table 7: The table should include the possibility of repowering the site rather than decommissioning. The last row in the table can be split to include the option of repowering the project with new advanced turbines at the end of the useful life for the initial turbines. In this case, some of the infrastructure could possibly be reused or refurbished and upgraded for the new technology rather than decommissioning and removing the entire infrastructure.	Revised as suggested.
958	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.4	period after “competitive lease process” and start a new sentence starting with “If only one…”	Revised as suggested.
959	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.3	figure 17: second box down under non competitive lease process: “Developer Must Submit Plans and”….remove “and”? The * footnote is a complete sentence and needs a period.	Revised as suggested.
960	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.4	for the sentence “Transport barges are used…” remove comma after “carry structures” and “foundation structures”. This sentence could be tightened up like so: “Transport barges are use to carry towers, blades, nacelles, scour protection and foundation structures from the onshore staging areas to the project site.” The sentence “The tower and rotor has been…” to “had been…”;	Revised as suggested.
961	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.5	remove commas from after “jet-plowing device”, “within a trench”, and “offshore substation”	Revised as suggested.
962	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.7	remove comma after “once installed”;	Revised as suggested.
963	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.8	remove commas after ‘facility” and “crews”	Revised as suggested.
964	Bob Thresher	3/21/10	National Renewable Energy Lab	820.4.9	for the sentence “Cranes would be used to lift away structures, while piles….” change to “…lift away structures, where as piles…”,	Revised as suggested.

966	Bob Thresher	3/21/10	National Renewable Energy Lab	820.5.1	remove period after “United Kingdom”	Revised as suggested.
967	Bob Thresher	3/21/10	National Renewable Energy Lab	820.5.1	Figure 18: the legend is unnecessary if the pie slices are also labeled	Revised as suggested.
968	Bob Thresher	3/21/10	National Renewable Energy Lab	820.5.2	Blanco 2009 reference says 2008 in reference appendix; remove comma in last sentence on page after “technology advances” and “are improved” the 44% increase in cost references does not agree with footnote 14 which indicates a 78% increase in cost. I bet that the footnote is correct.	Revised as suggested.
969	Bob Thresher	3/21/10	National Renewable Energy Lab	820.6.1	change “Sonly” to “only”	Revised as suggested.
970	Bob Thresher	3/21/10	National Renewable Energy Lab	820.6.2	remove hyphen from “in-service”; be consistent if using acronyms in references in the text (DSIRE).	Revised as suggested.
971	Bob Thresher	3/21/10	National Renewable Energy Lab	820.6.5	put a period after “set at $0.0023 per kWh” and start a new sentence with “However, this surcharge…”; DSIRE acronyms in references in text;	Revised as suggested.
972	Bob Thresher	3/21/10	National Renewable Energy Lab	830.1.1	put a space between “AWS True Wind” and the (Brower 2007) reference	Revised as suggested.
973	Bob Thresher	3/21/10	National Renewable Energy Lab	830.1.2	Loder et al 1998 and Pilson 2008 are not on reference appendix.	Revised as suggested.
974	Bob Thresher	3/21/10	National Renewable Energy Lab	840.1.1	MMS 2009 reference a or b?	Revised as suggested.

975	Bob Thresher	3/21/10	National Renewable Energy Lab	840.1.2	MMS 2009 reference a or b? remove comma after “local economies”;	Revised as suggested.
976	Bob Thresher	3/21/10	National Renewable Energy Lab	840.1.3	Table 12: Global Insight 2003 not in reference appendix and is MMS 2009 a or b?	Revised as suggested.
977	Bob Thresher	3/21/10	National Renewable Energy Lab	840.1.4	change “Quonset/Davisvill has been” to “have been” because in the previous section you say “Quonset/Davisvile were”. I think plural or singular are both ok when used with a slash mark but be consistent	Revised as suggested.
978	Bob Thresher	3/21/10	National Renewable Energy Lab	840.1.5	no comma after “Quonset Business Park"	Revised as suggested.
979	Bob Thresher	3/21/10	National Renewable Energy Lab	870	The following references are in the reference appendix but do not appear in the text of the report: API, ASA 2010, Boothroyd 2009, Chow et al 2003, DNV 2007, Dincer 1999, Federation of Tax Administrators 2008, Grilli and Spaulding 2009, Houghton et al 2001, IEC 2006, Kluge 2007, Leemans and Eickhout 2004, National Renewable Energy Lab 2007, Offshore Wind Collaborative Organizing Group 2005, Pimentel et al 2002, Roark 2008, Spaulding and Grilli 2010, Thomas et al 2004, Thresher 2005, US Department of Energy, Environmental Protection Agency Green Power Partnership, World Resource Institute and the Center for Resource Solutions 2004, US Department of Energy 2010. One last thing, group US DOE references together chronologically.	Removed unused references from work cited.
309	Allison Castellan	3/24/10	NOAA		The energy chapter provides an excellent description of the energy issues, purpose of the SAMP and explanation of the energy-related issues.	No response needed.
310	Allison Castellan	3/24/10	NOAA		These sections of the energy chapter do not contain any enforceable policies for CZMA purposes.	No response needed.
311	Allison Castellan	3/24/10	NOAA		Be sure it is "Department of the Interior" throughout and not "Department of Interior."	Corrected.

312	Allison Castellan	3/24/10	NOAA		Please do not use the word "utilize," use "use." Utilize is mis-used in the document (see comment on "utilize" below.)	Corrected.
313	Allison Castellan	3/24/10	NOAA	810.3.8	The beginning of the paragraph, lists the types of biomass fuels (wood, crops, manure, garbage) available. However, the explanation as to why these energy sources are not viable in Rhode Island only includes addresses garbage and wood. The paragraph could be strengthened by also explaining why biomass from other sources are not viable options as well.	Added further text and Figure 9 National Renewable Energy Laboratory Assessment of Rhode Island's Biomass Resources to clarify why crops and agricultural byproducts are not viable in RI.
314	Allison Castellan	3/24/10	NOAA	820.4.3	Please note that states have federally approved coastal zone management programs (not plans). The 3rd and 2nd to last sentences in this paragraph should read: ". . .completed by MMS relative to each affected State's federally approved coastal zone management program. Each CD includes a review of each State program, analyzes the potential impacts of the proposed lease sale in relation to program requirements, and makes an assessment of consistency with the enforceable policies of each State's program."	Corrected.
315	Allison Castellan	3/24/10	NOAA	820.4	Table 8: This table is helpful to laying out Federal license, permit and requirements. However, all the federal actions listed are not permits as the title states. The title should be revised to accurately reflect the different types of federal actions (leases, permits, reviews, consultation, easements, etc) that are listed in the table. Perhaps "Federal Actions Required to Construct an Offshore Wind Energy Facility in SAMP Area" would be more appropriate. Also, the table should clarify that some of these federal actions (e.g., MMS ROW/RUE and lease sales) are only applicable in the federal waters within the SAMP boundary. MMS does not issue OCS leases for state waters.	Changed title of table to: "Federal Actions Required to Construct an Offshore Wind Energy Facility in SAMP Area"
316	Allison Castellan	3/24/10	NOAA	820.4	Table 9: Similar to the comments for Table 8, the title should be revised to reflect that the state actions listed are broader than just permits. In addition, the table should also specify that most of these state actions are only applicable to projects occurring in state (not federal) waters within the SAMP boundary. CZMA consistency review would be applicable to projects in both state and federal waters.	Changed title of table to: "State Actions Required to Construct an Offshore Wind Energy Facility in SAMP Area." Also, included note within table that "These state actions are only applicable to projects occurring in state (not federal) waters within the SAMP boundary. CZMA consistency review would be applicable to projects in both state and federal waters."

317	Allison Castellan	3/24/10	NOAA	820.6.7	Again, please note that state have coastal zone management programs (not plans). The last sentence on this page should be revised to read: "Once approved by the National Oceanic and Atmospheric Administration as part of the Rhode Island's coastal zone management program, the Ocean SAMP will also inform the consistency review determination of future offshore renewable energy development in federal waters within the Ocean SAMP boundary."	Corrected sentence to read:"Once approved by the National Oceanic and Atmospheric Administration as part of the Rhode Island's coastal zone management program, the Ocean SAMP will also inform the consistency review determination of future offshore renewable energy development in federal waters within the Ocean SAMP boundary."
318	Allison Castellan	3/24/10	NOAA	840.3.2	There are currently 2 para #2s in this section. Double check numbering in final draft.	Corrected numbering.
326	Edward LeBlanc	3/25/10	United States Coast Guard		Looks good to me.	No response needed.
544	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	810.1.3	May want to note that customers do have energy choice and can choose a GreenUp provider which uses a renewable energy mix.	Added footnote describing consumer programs such as GreenUp which allows consumers to request that all or part of the electricity be generated from renewable sources.
545	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	810.1.3_810.1.4_810.1.5	There are three paragraph "3's"Need to re-number the paragraphs.	Corrected.
546	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	810.1.3	3rd one: This discussion appears to be out of date. All references used in the paragraph are all 2005 or prior and it does not include Northeast Gateway Deepwater Port contribution to supply or the future Neptune LNG Deepwater Port.	Included text on the Northeast Gateway Deepwater Port. Added a footnote on the future Neptune LNG Deepwater Port.
547	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	810.3	Figure 9: It appears that this map is for resources within the territorial sea and that's why there is a gap in data in the lower right, not that there is no wind resource. Suggest adding a note on the figure or in the text	Footnote added:"This map only illustrates the wind resources of Rhode Island out to the territorial sea border. The lack of data displayed in each of the lower corners of the map is a result of these areas lying outside the territorial sea border, and not because no wind resources exist in those areas."

548	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	810.3.1	2nd one: “Figure 7” should be “Figure 9”	Corrected.
549	Christopher Tompsett	3/30/10	Naval Undersea War College-Division Newport	820.4.3	The second and third sentences imply that NEPA is not triggered in state waters. The NEPA trigger is federal action so Army Corps permits in state waters will still trigger NEPA. Need to re-write to say it is federal action that triggers NEPA.	Clarified description of NEPA by removing "In federal waters…"
550	Ken Payne	4/7/10	RI Office of Energy Resources	820.2	Add discussion of Least Cost Procurement Legislation (R.I. Gen. Law 39-1-27.7).	Added text describing Least Cost Procurement Legislation (R.I. Gen. Law 39-1-27.7) to section 810.2
551	Ken Payne	4/7/10	RI Office of Energy Resources	820.2	Reorder this section chronologically, beginning with the RES, then Least Cost Procurement, then RGGI and lastly the Long-term contracting legislation.	Reordered section in the suggested manner.
552	Ken Payne	4/7/10	RI Office of Energy Resources	820.2	In the introduction to this section, do not be dismissive of onshore wind. Remove language about advantages of offshore wind over onshore wind.	Removed text from introduction of Section 820 that discussed the advantages of offshore wind over onshore wind.
553	Ken Payne	4/7/10	RI Office of Energy Resources	820.2	Table 9. Include Rhode Island Energy Facility Siting Board, which is made up of representatives from RIDEM, RIPUD and State Planning.	Included text on Rhode Island Energy Facility Siting Board to table.
554	Ken Payne	4/7/10	RI Office of Energy Resources	820.2	Add qualifying language about how the cost of construction will vary over time.	Added "The cost of constructing an offshore wind energy facility will vary based on site specific conditions and the timing of installation." to the opening paragraph.

917	Tricia Jedele	4/9/10	Conservation Law Foundation	810	CLF suggests a restructuring of Section 810. 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, Liquified Natural Gas ("LNG"), in reference to the most recent data from the Energy Information Administration ("EIA") and the Department of Energy ("DOE").	Added text on offshore LNG facilities as additional sources of natural gas to the region, "and by the offshore buoy-based offshore LNG receiving facilities Northeast Gateway Deepwater Port located off the coast of Massachusetts (Energy Information Administration 2009; U.S. Department of Energy 2004; Rhode Island Office of Statewide Planning 2002; Excelerate 2010)," as well as a footnote on future offshore LNG facility projects currently beiing constructed in MA that will offer an additional source of natural gas to the region, "A second offshore LNG facility, Neptune LNG LLC is currently under construction and is expected to be online during 2010. This facility will also provide natural gas to the regional pipeline (GDF Suez Energy North America 2010)."
918	Tricia Jedele	4/9/10	Conservation Law Foundation	810.1.3	On pages 5 and 6 of Chapter 8 there are three paragraphs numbered 3.	Corrected paragraph numbering.

919	Tricia Jedele	4/9/10	Conservation Law Foundation	810.1.3	beginning “Natural gas is not an energy resource …” includes completely inaccurate statements as a result of its reliance on outdated information. For example, while the statement that “the pipeline capacity supplying New England has been characterized as only ‘marginally adequate’ and has become ‘overburdened’ overtime as the pipeline system was originally designed to supply only industrial and heating uses of natural gas, and now also supplies fuel for 38% of New England’s electricity generation,” was true in 2004, in light of current projects that are expanding the capacity of existing pipelines into the region, this is not the case today. See attached report, 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. The statement that “current predictions 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 rom overseas” is also woefully out of date. The EIA 2010 report that is cited on p. 4 makes that clear. For this reason, CLF suggests that the second paragraph 3 on p. 6 be deleted in its entirety and that paragraph 4 on p.7 be moved the bottom of p.5 appearing right after paragraph 3 on p.5 and before the Block Island paragraph on p. 6.	Removed text "Current predictions 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 from overseas (U.S. Department of Energy 2004; FERC 2005). In New England, natural gas consumption is expected to increase 31.6% by 2024 (The Power Planning Committee of the New England Governor’s Conference 2005). In addition, more than 9,000 MW of planned gas-fired power plants are considered likely to be built in surrounding regions, such as New York, Ontario, and Quebec, which may also compete with New England’s limited gas supply and delivery infrastructure (ISO New England 2005)."
920	Tricia Jedele	4/9/10	Conservation Law Foundation	820	Sections 820 through 820.4, pages 21-40 concern the construction of offshore wind energy yet only minimally, if at all, discuss the relationship between the SAMP’s finding and policy recommendations with respect to ecology, and habitat and fisheries. There is simply very little explanation as to how the SAMP, if at all, will guide the site selection, and construction of an offshore wind project. The Ecology, Future Uses, Global Climate Change and Fisheries Chapters should be referenced in these sections and some explanation should be provided as to how the policy recommendations will influence any of these sections.	These issues are discussed in greater detail in Section 850 where the potential effects of offshore renewable energy development in the SAMP area are described. In addition, the policies of the other Ocean SAMP chapters will be incorporated into Section 860

983	Wendy Waller	4/9/10	Save The Bay	820.0_820.1_820.2_820.3_820.4	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 liquified 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, specifically to correct/update relevant portions in §810.1 Increasing Energy Demands and Global Climate Change.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." 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.Therefore, the Updated AEO2009 and subsequent updates will provide your team with the most current and accurate data on energy resources going forward.	Removed text describing predicted shortages of natural gas in the region, "Current predictions 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 from overseas (U.S. Department of Energy 2004; FERC 2005). In New England, natural gas consumption is expected to increase 31.6% by 2024 (The Power Planning Committee of the New England Governor's Conference 2005). In addition, more than 9,000 MW of planned gas-fired power plants are considered likely to be built in surrounding regions, such as New York, Ontario, and Quebec, which may also compete with New England's limited gas supply and delivery infrastructure (ISO New England 2005)."

1083	Dan Codiga	5/10/10	University of Rhode Island Graduate School of Oceanograp hy	850.2.4	In reference to the potential effects of renewable energy infrastructure, specifically towers to support offshore wind turbines, on turbulence and mixing through wake effects- cites "Codiga and Ullman (forthcoming)". We request that instead it cite "Ullman (Pers.Comm.)". We make this request because the citation presently given is not accurate, these wake-related calculations willnot be included in our technical reports. (For reference, the report titles are: Characterizing the Physical Oceanography of Coastal Waters Off Rhode Island, Part 1: Literature Review, Available Observations, and A Representative Model Simulation by Daniel L. Codiga and David S. Ullman Characterizing the Physical Oceanography of Coastal Waters Off Rhode Island, Part 2: New Observations of Water Properties, Currents, and Waves by David S. Ullman and Daniel L. Codiga) Our proposal for the original SAMP project, and our proposal for the subsequent fieldwork extension, did not explicitly include plans to do calculations, analysis, or assessment related to potential effects (such as increased turbulence due to wakes of new owers/infrastructure) of new uses (such as renewable energy development) on the OSAMP area. Rather, the focus of our research is to characterize the physical oceanography of the area. As far as we know this is also true of the project component led by Malcolm Spaulding to collect new buoy-based observations, which we are also working on.For the January 2010 stakeholder meeting, at Malcolm Spaulding's request, one of us (Ullman) did some preliminary scaling calculations, and his findings were included in the presentation. The statements we have provided—which are the basis of the comments in the renewables chapter at issue here—are the result of that effort, so it is appropriate to cite that work; that's why we are suggesting that "Ullman (Pers. Comm.)" be cited.We are interested in analysis of potential effects of renewable energy development but the topic is sufficiently complex that to do a reasonably complete and defensible job with calculations and interpretations will require additional time beyond the scope of the current OSAMP project.	Changed reference to Ullman pers. comm. And also referred to Codiga and Ullman 2010c which refers to the stakeholder presentation where this was summarized in a slide.

1085	Braddock Spear	5/14/10	Atlantic States Marine Fisheries Commission		I read the sections where my expertise lies (850.7 and 850.8) and have nothing to add. I learned a bunch about potential effects. This chapter will be a great resource for any entity who plans to jump into the renewable energy game.	No response needed.
1086	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.2.5	Most of the exclusions are regulatory or already established in some way but for two of the metrics, >50 records of commercial ship traffic and the 1 km coastal zone buffer, no rationale is provided for the why these quantities were chosen to define a hard constraint so they appear to be arbitrary. If this is something that will be defined in the policies section I recommend putting a placeholder here to refer to that section, otherwise back up the choices here.	Added two footnotes elaborating on the rationale behind the >50 records of commercial ship traffic and the 1 km coastal zone buffer: "The value of vessel traffic density (i.e. > 50 Records of Commercial Ship Traffic) is not a hard constraint but instead a matter of subjective judgment. A sensitivity study was performed varying this threshold and showed that at densities higher than 50 captured the major shipping activities in the area." and "This coastal buffer zone was set based on the fact that there is likely to be significant recreational use of the waters close to the coastline (e.g. swimming, boating, diving, fishing) that potential development may interfere with. In addition, this coastal buffer was also set in part to avoid areas where construction and maintenance support of the facilities may be difficult (e.g. sufficient draft and operational area for construction vessels, zone where waves break because of shallow water depths)."
1087	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.2.5	Change “Military Testing Areas” to “Military Testing and Transit Areas”	Changed
1088	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.2	Figures 26-28: Include Sub Lane Alpha in exclusion areas.	Sub Lane Alpha was not included in the orginal TDI analysis, however it was included in the Policies and Standards Section 860 as an Area of Particular Concern that should be avoided when siting an future offshore development.

1089	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.2.8	Last sentence, change “Section 830.4” to “Section 830.3”.	Changed
1090	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.3.1_830.3.2_830.3.3_830.3.4	Refers to Appendix 3, none included in document.	Removed all reference to Appendices and just used the technical report's author and year, as all appendices will be listed at the end of the Ocean SAMP document.
1091	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	830.3	Cites a reference that is not in Section 870: Works Cited	Added reference to works cited.
1092	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	840.2	Table 10:Suggest indenting the open bullets for readibility	Changed
1093	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5	Last sentence, change “…the potential cumulative affect offshore renewable energy development.” to “the potential cumulative effects of offshore renewable energy development.”	Changed
1094	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.1.4	“a single 1 MW wind turbine displaces 1,800 tons (1633 MT) of CO2 per year compared with the current U.S. average utility fuel mix” Is this a 1 MW turbine or 1 MW-hr of power generated by a turbine or? Seems like you need to define the assumed output of a 1 MW turbine over a year, correct the units, or use a different example.	Clarified sentence to specify that this is the amount of displaced CO2 when a 1MW turbine is operating at its maximum rated output for an entire year.

1095	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.2.2	The paragraph starts with saying that there would be no wake effects between widely spaced monopiles. Need to close the loop with calculations for the closely spaced lattice jacket piles, i.e. would the distance between the jacket piles be > 4 pile diameters?	Clarified paragraph by including further information: "2. The potential effect of offshore renewable energy structures in the water column on currents and tides have been examined using modeling techniques. Modeling of the proposed Cape Wind project found that the turbines would be spaced far enough apart to prevent any wake effect between piles; any effects would be localized around each pile (Minerals Management Service 2009a). The analysis of Cape Wind demonstrated that the flow around the monopiles (which range in diameter from 3.6-5.5 m [11.8-18.0 feet] wide) would return to 99% of its original flow rate within a distance of 4 pile diameters (approximately 14.4-22 m [47.2-72.2 feet]) from the support structure (ASA 2005). Both of these studies, however, are representative of monopile wind turbine subsurface structure and may not be directly applicable to jacket-style foundations. The potential localized effects of lattice jacket structures on the hydrodynamics are likely to be even less compared to that found with monopiles as pile diameters for lattice jackets are much smaller (1.5 m [4.9 feet]) than monopiles (4-5 m [13-16.5 feet] diameter). Furthermore, the spacing between the turbines using lattice jacket support structures will be much greater than the 4 pile diameters."
1096	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.3	Be careful with the following with respect to right whales: “The SAMP area does not intersect these species’ main migratory routes that exist farther offshore along the length of the east coast, but lies adjacent to them (Kenney and Vigness-Raposa 2009).” With the Block Island Seasonal Management Area for right whales overlapping about half of the SAMP area and the following from page 32 of the cited reference, recommend checking with Bob Kenney on whether to expand some on right whale migration “They have the potential to occur in the SAMP area in any season, but would be most likely during the spring, when they are migrating northward, and secondarily in the fall during the southbound migration. In most years, the whales would be expected to transit through the SAMP area or pass by just offshore of the area…”	Revised sentences to futher clarify description: "Right whales and other baleen whales have the potential to occur in the SAMP area in any season, but would be most likely during the spring, when they are migrating northward, and secondarily in the fall during the southbound migration. In most years, the whales would be expected to transit through the SAMP area or pass by just offshore of the area. Therefore, any future offshore renewable energy projects within the SAMP area are unlikely to impede the movement of animals between important feeding and breeding grounds."

1097	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.1.7	"…behavioral reactions of whales (cetaceans) may include…" The casual reader may get confused with the terms whales, cetaceans, baleen whales, and small toothed whales in this section (850.5). You probably don't want to get into myticetes and odontocetes but perhaps a sentence at the Section 850.5 level like: "Marine mammal species in the SAMP area are either whales (cetaceans), which includes dolphins and porpoises, or seals (pinnipeds)."	Clarified by adding sentence: "3. Marine mammal species in the SAMP area are either whales (cetaceans), a scientific order which includes dolphins and porpoises, or seals (pinnipeds). "
1098	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.1.9	"In fact, for the more sensitive marine mammal species (i.e. harbor porpoises and harbor seals) the zone of audibility may extend beyond 80 km [49.7 mi] to perhaps hundreds of kilometers (Thomsen et al. 2006)." Paragraph 2 of this section discussing baleen whales "it is expected that these whales would also be most acoustically sensitive at lower frequencies (Richardson et al. 1995)" The "i.e." defines harbor porpoises and harbor seals as "the" more sensitive marine mammal species but we just don't know about mysticetes, perhaps just go with "The zone of audibility may extend beyond 80 km [49.7 mi] to perhaps hundreds of kilometers for some marine mammal species (e.g. harbor porpoises and harbor seals) (Thomsen et al. 2006)."	Revised as suggested.
1099	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.1.12	1st sentence refers to Figure 3 which is U.S. States with Renewable Energy Standards (DSIRE 2010), not sure what the right reference is.	Fixed figure number.
1100	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.1.16	Suggest adding a bullet along the lines of "activities of the marine mammals at the time of the noise exposure"	Revised as suggested

1101	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.5.2.2	“In fact, no ship strikes have been recorded for vessels travelling less than 10 knots [11.5mph] (Laist et al. 2001)” – arguably less likely to occur but the number isn’t zero.Newer reference available. From Jensen, A.S. and G.K. Silber. 2003. Large Whale Ship Strike Database. U.S. Department of Commerce, NOAA Technical Memorandum. NMFS-OPR- , 37 pp. (http://www.nmfs.noaa.gov/pr/pdfs/shipstrike/lwssdata.pdf) On page 4 “The range of speeds at which vessels were operating when a whale was hit was 2–51 knots” also see Figure 6 on page 10.	Revised sentence to: " In fact, the number of ship strikes recorded decreases significantly for vessels travelling less than 10 knots [11.5mph] (Jensen and Silber 2004), which suggests that reducing ship speeds to this level may reduce the risk of vessel strikes even further (Minerals Management Service 2009a). "
1102	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.7.12	“Certain fish species are thought to have very sensitive hearing, while others may be relatively insensitive to sound (Popper and Hastings 2009).” This appears to be trying to explain that among fish species there are hearing specialists and hearing generalists. The reference describes the relative sensitivity to sound between the two groups; it doesn’t state that fish have very sensitive hearing. Recommend	Clarified to: "2. Fish vary greatly in their hearing structures and auditory capabilities, so it is difficult to generalize about the effects of noise generated by wind farm construction and operation on fish. There is lack of knowledge about the hearing capacities of most fish species. Certain fish species are thought to be hearing specialists, and may have enhanced hearing sensitivity and bandwidth, while others may be hearing generalists, and may be less sensitive to sound (Popper and Hastings 2009). "
1103	Christopher Tompsett	5/16/10	Naval Undersea War College-Division Newport	850.7.1.6	For fish TTS is not necessarily injury, hearing sensory organs may be fatigued and not injured, similar to TTS in mammals.	Revised to: "6. Impacts to fish from sound can be in the form of damage to organs such as the swim bladder, or damage to the auditory sensor in the ears. Sound can also cause permanent or temporary threshold shift in hearing (PTS or TTS respectively), meaning fish lose all or part of their hearing, on either a permanent or temporary basis. "
1137	Allison Castellan	5/18/10	NOAA		I know this is beyond the deadline (hard keeping up!) but just wanted to let you know that beyond the comments we already provided on the draft policies for this chapter, I do not have any further comments on this chapter. Lots of great info though. I'm sure this will become a "go to" source of synthesized info on impacts of wind turbines for many others too. One minor thought though, rather than "Renewable Energy" should the chapter be retitled to focus more narrowly on just wind turbines since it really doesn't address hydrokenetics or other types of offshore renewables?	While the focus of the chapter is on offshore wind energy,chapter begins with a broad focus on all forms off renewable energy. Section 810.3 is meant to describe why other forms of offshore renewables are not viable for utility-scale development and therefore are not discussed in further detail within the chapter.

1200	Karina Lutz	5/18/10	People's Power & Light and Mass Energy Consumers Alliance	810.1.4	I did find an error on p. 8 footnote-it should be GreenUp and the description of the program could use clarification. I also want to look more deeply at it if I'm not too late.	Revised footnote to fix GreenUp reference.
1132	Richard Hittinger	5/19/10	Rhode Island Saltwater Anglers Association	850.8.1	Generally I think you have not given sufficient consideration to Recreational Fishing or Rod & Reel Commercial fishing in sections 850.8 or 850.10. Recreational fishing and rod & reel commercial use of the SAMP area is quite extensive in summer months. The few comments below may help improve those sections. Section 850.8.1 seems to quote other reports on commercial fisheries,but I think these same concepts are applicable to recreational fishing and increased fish populations, as discussed here, could be a positive impact on recreational fishing. Adding such a discussion would strengthen this section.	Added language: "Alternatively, the increased habitat for some species created by the structures may result in increased populations of commercially important species (see Section 850.7.7), leading to economic gains for commercial fishermen targeting these species (BMT Cordah Limited 2003), and increased opportunities for recreational anglers, who are likely to focus their efforts around the wind turbines." and "There is also the potential for secondary effects on fish populations if fishermen are displaced from the wind farm area, and as a result concentrate their efforts elsewhere on vulnerable populations or habitats (BMT Cordah Limited 2003). Likewise, if the wind turbines serve as fish aggregating devices, attracting and concentrating fish from elsewhere in the Ocean SAMP area, and attracting more commercial and recreational fishing activity to the area to take advantage of the aggregation, it could have the undesired outcome of leaving fish species more vulnerable to overharvesting from more concentrated fishing effort (Whitmarsh et al. 2008)."
1134	Richard Hittinger	5/19/10	Rhode Island Saltwater Anglers Association	850.8.3	Section 850.8.3 discusses access to fishing grounds, but does not mention anything about the potential for moorings to be located in the area of the scour pads. This concept was discussed at the Baird Symposium in Newport in November 2009 by Dan Cohen, President of Fishermen's Energy Corp. and others. The installation of such moorings would improve access for recreational fishers as well as commercial rod & reel fishers.	The incorporation of mooring systems into the design of an offshore renewable energy facility is not discussed in this section, however is included in section 860, the policies and standards section.

1135	Richard Hittinger	5/19/10	Rhode Island Saltwater Anglers Association	850.8.5.4	Under section 850.8.5 #4 mentions the artificial reef effect, but only with respect to commercial fishing in terms of "increased catch". I think this concept of moorings properly placed in the scour pads could increase fishing activity.	Added text: "Positive impacts to fish catch may occur during the operational phase as a result of reef effects if there is a resulting increase in or aggregation of biomass around the turbine structures. If there is an increase in fish in the vicinity of the turbines, this could benefit fishermen, particularly recreational and commercial rod and reel fishermen, who may be most easily able to target these fish. "
1136	Richard Hittinger	5/19/10	Rhode Island Saltwater Anglers Association	850.1	Section 850.10 describes increased boat tours to the wind farm, etc., but does not describe the potential for increased tourism due to increased recreational fishing at the mooring fields placed in the scour pad areas. If properly managed these locations could be similar to the moorings placed near ships intentionally sunk as artificial reefs. These artificial reefs have demonstrated extensive increases in tourisim through recreational fishing and diving on new reefs in many locations from New Jersey to Florida to Great Britian. I think this discussion in one item under 850.10 would be an improvement.	The potential enhancement to recreational fishing is addressed in Section 850.8 as Section 850.10 is meant to decribe the potential effects on other forms of recreation and tourism uses of the SAMP area.
1198	Phil Colarusso	5/21/10	United States Environmental Protection Agency, Region 1		I spent several hours yesterday and a few more today going through the effects chapter. I think it is pretty well done. The chapter is generic as they are not dealing with a specific project, but they do a thorough job of reviewing the available literature and speaking to potential effects in a generic sense. They cover all of the bases,noise, EMF, invasive species, water quality and others. They have developed an ecological value metric, which is still forthcoming. It will be in Appendix 3 and will be interesting to review. Thus, I have no comments.	No reponse needed.
1201	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.1.1	Sentence#5: Annual electricity usage, not demand – see next comment	Revised as suggested

1202	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.1.1	Sentence#6: Is this demand or total electricity use over the course of the year. Demand is usually used for daily.	Revised to "total electricity use" rather than demand.
1203	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.1.1	Sentence#6:Replace demand at the end of the sentence with "anticipated annual electricity needs".	Revised as suggested
1204	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.1.1	Sentence#8:Replace demanded at the end of the sentence with "required".	Revised as suggested.
1205	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.1.1	Last sentence: Replace demand with "need for electricity".	Revised as suggested.

1206	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.3.2	Sentence#4:This is actually a bit misleading. Rhode Island has better solar resources than Germany, a country which has made a significant investment in solar energy. The issue really is cost. the cost per unit of energy produced using solar is higher in RI than in the southwest because of less sunlight, but less expensive than Germany (all else being equal). As cost of solar declines or as the cost of carbon intensive fuels increases, solar could be a viable source of electricity in RI. Also, household solar hot water costs may be competitive even sooner.	"Clarified text by directly quoting from the state's energy plan: abundance:""As stated by the Rhode Island State Energy Plan: “Rhode Island is in a more northerly latitude, is low in elevation, and is frequently overcast or cloudy; these circumstances militate against solar power, in the form of photo-voltaics, as means of meeting electric demand at a utility scale in a manner that is cost-effective. Solar thermal energy, for example to heat hot water, is justifiable for residential and commercial applications, dependent on site conditions.” (Rhode Island Office of Energy Resources 2010, pg. 5)."" "
1207	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.3.9	Sentence#2 should read: "Wind turbines convert the energy from wind into electricty and may be developed both onshore and offshore.	Revised as suggested.
1208	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.3.1	Sentence#8: The winds are not moving offshore – As one moves further offshore to measure wind speeds… resulting in greater wind speeds near the surface (wind speed doesn’t increase, rather it is reduced less by friction relative to onshore	Revised as suggested, changing sentence to: "As one moves further offshore to measure wind speed, the frictional effect of land is removed, resulting in greater wind speeds near the surface (Brower 2007)."
1209	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.3.12	Sentence#1: add in "with existing technology" after production.	Revised as suggested.

1210	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810.3.12	Feasibility is function not simply of the magnitude of the resource, but also the cost of harnessing that resource.	See response above.
1211	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	810	While I do not doubt that wind is currently the most viable commercial scale renewable energy resource in RI, I felt that the rationale was overly dismissive of other forms of renewable energy and biased towards wind. The beginning section reads more as justification of offshore wind, rather than a truly objective analysis of renewable energy resources in RI	Removed paragraphs 2 through 4 in this section.
1212	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	830.3	This is perhaps the point of most interest regarding the Offshore wind component – it is too bad that this is not yet ready for comment.	This section will be updated once all relevant Ocean SAMP research is completed and a suitable Renewable Energy Zone is identified.
1213	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	840.1.3	Table 10:The economic impact of constructing a wind farm in the SAMP seems quite different from Cape Wind. Its not clear if that is truly the case. The information is presented in a way that doesn't make the comparison straightforward.It also is not clear if the economic analyses of the two projects have used different underlying assumptions. Additional clarity and transparency would make this section more understandable and useful.	Table 10 represents the best available data on the total economic impact of any proposed offshore wind energy facility in the U.S. and therefore provides the "3. While the impact of offshore wind energy development on Rhode Island's economy will vary depending on the project, Table 10 provides one example of the scale of economic impact the construction and operation of an offshore wind energy facility may have on surrounding communities. While these figures cannot be applied directly to offshore wind energy development in the SAMP area, it does suggest that large, utility-scale offshore wind projects have the potential to generate millions of dollars in economic activity and support a number of new jobs."

1216	Tim Gleason	5/21/10	United States Environmental Protection Agency, Region 1	840.3	This section is silent on analyses that suggest electricity rates will increase as a result of the addition of offshore wind. A transparent and thorough analysis is recommended.	The potential for offshore renewable energy development to increase energy electricity rates was touched upon in this section with the following sections: "Depending on the prices agreed upon in the power purchase agreement, the effect of offshore renewable energy development in the SAMP area may result in higher or lower electricity rates for Rhode Island residents." and "4. Alternatively, the energy produced from an offshore wind energy facility may result in higher electricity rates, especially as the offshore renewable energy industry in the U.S. is just beginning to develop. The price per kilowatt hour of electricity produced from on offshore renewable energy facility will vary between projects. " A detailed economic analysis of the potential for increased electricity rates was not within the scope of the Ocean SAMP.

1433	Caroline Karp	6/25/10	Brown		I have tried to follow the political process that led to the Ocean SAMP. Some aspects of this process are unclear to me and lead to questions that I think should be addressed in the Introduction to the Ocean SAMP. Is CRMC (a)engaged in Energy Facility Siting for a specific offshore wind project and gathering data to support a NEPA-mandated /Ecological Assessment/ for Deepwater Wind OR (b) undertaking a serious Marine Spatial Mapping (zoning) effort to guide all sorts of future commercial development and human uses in this subsection of State waters?The SAMP should clarify CRMC's authority with respect to energy facility siting (of an offshore wind facility) given that CRMC does not serve on the Siting Board (see R.I.G.L.§ 42-98-1) but does have a statutory obligation to independently review applications for licenses "to site, construct or alter a major energy facility in including any facility of 10 MW or greater capacity that generates electricity by water power and the construction or alteration of transmission lines which transmit more than 125 kW". It seems reasonably clear that CRMC cannot undertake to help site an energy facility that it subsequently has to evaluate for permitting purposes.	"To clarify the objectives of this chapter and CRMC's authority with respect to energy facilities the following paragraphs were added to the Introduction of this chapter: ""3. The objectives of this chapter are to: (1) provide an overview of renewable energy resources, and existing statutes, standards and initiatives in Rhode Island; (2) identify what offshore renewable resouces in the Ocean SAMP area have the potential for utility-scale energy generation; (3) describe utility-scale offshore wind energy technology and stages of development; (4) identify areas within the Ocean SAMP area with the greatest potential to support utility-scale development; (5) delineate a Renewable Energy Zone within state waters of the Ocean SAMP; (6) summarize the current understanding of the potential economic and environmental effects of offshore renewable energy and; (7) outline CRMC policies and regulatory standards for offshore renewable energy and other offshore development in the Ocean SAMP area. 4. CRMC's authority to plan for the future of energy facilities in the coastal zone is defined in the CRMC's 1978 Energy Amendments, which apply federal regulations governing approved coastal management programs (15 CFR 923 et. seq.). As stated in the 1978 Energy Amendments, the CRMC is required to identify and develop a planning process for energy facilities that are likely to be located in, or which may significantly affect, the coastal zone. This planning process must include procedures for assessing the suitability of sites for energy development, as well as policies and techniques to manage energy facilities and their anticipated impacts. The Ocean SAMP has been developed consistent with this authority. 5. This chapter is not meant to be a state energy plan, as such plans are developed by the Rhode Island Statewide Planning Program and the Office of Energy Resources. Furthermore, this chapter does not focus on any one particular proposed project; rather it examines the potential for offshore renewable energy as one future use of the Ocean SAMP area. Any specific offshore renewable energy project will be examined specifically during the application process, outlined in Section 860. Moreover, the environmental impacts of any proposed offshore renewable energy project will be reviewed and evaluated under the National Environmental Policy Act (EPA)."

1435	Caroline Karp	6/25/10	Brown		If the Ocean SAMP is being developed as a legitimate Marine Spatial Mapping (zoning) effort with "enforceable CRMC standards" for some part of RI's coastal waters, it should explicitly address high priority areas for conservation of living marine organisms and habitats as well as identifying areas that might/not be impacted by development of offshore renewable energy, specifically wind and/or wave to-energy fields off Block Island and in adjacent federal waters.	In Section 860.2.2 Areas of Particular Concern and Section 860.2.3 Areas Designated for Preservation, important areas within the Ocean SAMP boundary are identified and protected. Certain forms of offshore development are required to avoid Areas of Particular Concern to the greatest extent possible and are prohibited from developing in Areas Designated for Preservation. In addition to identifying areas where offshore development should be avoided or prohibited, Section 860.2.1 #2 identifies the most suitable area for offshore renewable energy development within the state waters.

1468	George L. Mellor	6/25/10	Block Island Resident	800	I address Chapter 8 of the SAMP. It is a very large document which includes reference to the possible installation of a wind farm south of Block Island. However, it gives "cry short shrift to that which concerns Block Islanders, namely its visual impact. A most important aspect of the Island is its preservation of natural view sheds and that includes the surrounding oceans - it is, after all, an island. The idea of huge near-shore structures wilh night time blinking red lights is anathema to most islanders who otherwise favor offshore wind fanns. (The "gift" of a mainland electric cable at first persuaded somc residents that the project's net cost benefit was positive, but the reality of its size and proximity has now shifted island opinion.)The SAMP does not include simulations of the visual impact of the wind farm and an estimate of the loss ofpropcrty value. A final cut at the later can be made by reference to property assessments; it will be seen that ocean views have value.	"The purpose of Chapter 8, Renewable Energy and Other Offshore Development is not to examine any particular project rather to discuss overall potential and possible effects of offshore renewable energy development in the Ocean SAMP study area. However, within this chapter the potential visual effects of offshore wind energy development is discussed in Sections 850.9. Cultural and Historic Resources and 850.10. Recreation and Tourism. In these two sections the potential visual effects to cultural and historic landmarks, as well as recreational uses and coastal tourism are discussed in general. The potential for visual impacts are dealt with the most with regards to cultural and historic landmarks because Section 106 of the National Historic Preservation Act requires that a given project’s visual effect on historic resources be evaluated from National Historic Landmarks, properties listed or eligible for listing on the National Register of Historic Places, or Traditional Cultural Properties. Moreover, a specific project's visual impacts will be examined as part of the CRMC's review process, outlined in Section 860, and as part of the federal review process required under the National Enviromental Policy Act. "

1550	Kevin Flynn	6/30/10	RI Division of Planning	810.3.2	It was evident that the focus of this chapter was on identifying opportunities for utilty scale off-shore energy generation. It is a very comprehensive review of off-shore wind potential in Rhode Island's marine waters.The "Renewable Energy Source in RI" section states that for each source (wind, solar, geo-thermal, etc.), that most of these sources are "not viable on a utility scale". Although the Chapter focus is not on small-scale renewable energy generation, a brief mention of that small-scale potential may exist should be included and not dismissed. For example, the end of SEction 810.3 paragraph 2 states..."RI does not experience sufficient solar radiation to make utility-scale solar power a viable option." It may be helpful to simply recognize that small-scale (residential, schools, LEED certified buildings, etc.) is feasible in some cases. The sentence could read, "RI does not experience sufficient solar radiation to make utility-scale solar power a viable option, but small-scale more localized land based options may be feasible." Although it may not be the focus of the plan to concentrate on terrestrial energy sources, it might be useful to briefly mention that on-shore potential does exist (especially in New Shoreham).	In Section 810.3 the text was revised to reflect that small-scale solar may be a viable option in certain locations within Rhode Island. The text now reads: "As stated by the Rhode Island State Energy Plan:“Rhode Island is in a more northerly latitude, is low in elevation, and is frequently overcast or cloudy; these circumstances militate against solar power, in the form of photo-voltaics, as means of meeting electric demand at a utility scale in a manner that is cost-effective. Solar thermal energy, for example to heat hot water, is justifiable for residential and commercial applications, dependent on site conditions.” (Rhode Island Office of Energy Resources 2010, pg. 5).Therefore, while solar energy in Rhode Island may not currently be a cost-effective means of generating utility scale renewable energy, residential and small scale commercial use of solar thermal and photo-voltaic energy may be feasible, depending on site-specific conditions."
1553	Kevin Flynn	6/30/10	RI Division of Planning	800	The Introduction section of Chapter 8, should cite the renewable energy-related work of other state agencies such as the office of Energy Resources, DEM, and the Division of Planning (Energy Plan Update) should be included. The current State Energy Plan, SGP 781, 2002 in this section should be referenced.	Added reference to the Rhode Island State Guide Plan Section 781 in the introduction, a more detailed description of other existing state renewable energy statutes, initiatives and standards see Section 810.2.

1450	Donald Pryor	7/1/10	Brown	800	This chapter provides the first indications of criteria for siting and process for approval of applications. However the proposed criteria are substantially incomplete and the underlying rationale, particularly for ecological criteria, is questionable.The proposed siting criteria would prohibit approval in “areas designated for preservation” and demand avoidance of “areas of particular concern”.Three of the seven categories of “areas of particular concern” (which applicants would be required to avoid, minimize or mitigate) are undefined. “Moraines and fish habitat” are slated to be “in development”. High intensity fishing areas are to be designated by a Fishery (or Fishermen’s) Advisory Board. Another category is “other areas identified during the pre-application review by state and federal agencies as areas of importance.”	"The rationale behind designating glacial moraines as areas of particular concern was added so that 860.2.2 paragraph #3 (iii) now reads: ""Glacial moraines are important habitat areas for fish because of their relative structural permanence and structural complexity. The Council also recognizes that because glacial moraines contain valuable fish habitats they are also important to commercial and recreational fishermen. Accordingly, the Council shall designate glacial moraines as identified in Figure 8.50 and Figure 8.51 as Areas of Particular Concern."" Areas of high fishing activity as identified during the pre-application process by the Fishermen’s Advisory Board were also included as Areas of Particular Concern to be consistent with the regulatory standards within the Fisheries Chapter (560.2 #6) and the Renewable Energy and Other Offshore Development (860.2.1 #10) that state: ""The Council recognizes that moraine edges, as illustrated in Figure 8.50, are important to commercial and recreational fishermen. In addition to these mapped areas, the FAB may identify other edge areas that are important to fisheries within a proposed project location. The Council shall consider the potential adverse impacts of future activities or projects on these areas to Rhode Island’s commercial and recreational fisheries. Where it is determined that there is a significant adverse impact, the Council will modify or deny activities that would impact these areas. In addition, the Council will require assent holders for Offshore Developments to employ micro-siting techniques in order to minimize the potential impacts of such projects on these edge areas."" “Other areas identified during the pre-application review by state and federal agencies as areas of importance” were included in the list of areas of particular concern to allow the Council to designate new areas of particular concern as more detailed information became available about a particular project site.

1454	Donald Pryor	7/1/10	Brown	800	The proposed application process involves a joint agency working group comprising “state and federal agencies that have a regulatory responsibility related to the proposed project” and “co-led by CRMC and the lead federal agency with primary jurisdiction over the proposed project”. The commitment to coordination is laudable but could lead to misunderstanding of the process. Despite requirements for federal consistency, CRMC’s SAMP regulations cannot direct federal agencies. The SAMP process proposed would have to be in addition to processes under federal laws and regulations. Approval by the joint working group would not replace required federal approvals. Curiously, the proposed approval process calls for joint agency working group approval of the Site Assessment Plan (akin to an EIS) but leaves approval of the Construction and Operations Plan to the Council alone. Federal responsibilities cover both areas.	The Renewable Energy and Other Offshore Development Policies and Standards are not meant to direct federal agencies, only outline the policies and review process the CRMC will follow with regards to any future offshore development. The Renewable Energy and Other Offshore Development Regulatory Standards 860.2.5.3(i) were revised to read: "The applicant shall receive the approval of the SAP by the Council." The Joint Agency Working Group is meant to be a coordination mechanism for state and federal agencies that have a regulatory responsibility related to the proposed project. The Joint Agency Working Group will not have approval over the Site Assessment Plan at the state level, rather the CRMC Council, in coordination with the Joint Agency Working Group, will approve the Site Assessment Plan and the Construction and Operations Plan.
1455	Donald Pryor	7/1/10	Brown	800	The proposed application process does not appear to require any public review (or even disclosure). It should.	Prior to the Council's decision on the Construction and Operations Plan and issuance of a permit/assent a public comment period will be held pursuant to the Administrative Procedures Act (R.I. Gen. Law 42-35 et seq.) As a result the public will be able to provide written comments or comments during the public hearing.

1656	Donald Pryor	7/1/10	Brown	800	No rationale is provided for designating sea duck foraging habitat as an area for preservation (prohibited area). Despite recognition in the chapter that “preferred sea duck foraging areas are strongly correlated with environmental variables such as water depth, bottom substrate, bivalve community and bivalve density” (page 103), the designated area includes all bottom areas in depths less than 20m. However, the April 20 version of the Ecology chapter identified predominant foraging areas for sea ducks as depths between 5 and 25 meters (figure 2.42, page 91). In response to comments on that chapter, a response was given that “subsequent work by Paton et al. have revised diving duck foraging depth from 25m to 20m.” No citation is given for the subsequent work nor is any explanation given for the <5m depths. The effect of this designation is to rule out anything other than deepwater wind in the Ocean SAMP area.Ecological considerations are not developed adequately to support the importance given to the purported diving duck habitat, to help define “moraines and fish habitat” or to consider protection of other sensitive, critical aspects of the ecosystem. The promised appendix on an ecological value map has been removed from the table of contents of the latest version of this chapter, the description in 830.3 is very general and lacks specifics relevant to this plan, and the cited paper seems to be still unavailable. No alternative framework is presented.	"Text was added to Section 860.2.3 #1(i) to describe Sea duck foraging habitat as follows:""Ocean SAMP sea duck foraging habitat in water depths less than or equal to 20 meters [65.6 feet] (as shown in Figure 8.54) is designated as an Area Designated for Preservation due to their ecological value and the significant role these foraging habitats play to avian species."" This area was designated as an area for preservation because of the potential for sea ducks to be displaced from areas developed with offshore wind energy facilities (see Section 860.4). A more detailed discussion of the literature reviewed to determine that water depths of less than or equal to 20 meters is sea duck foraging habitat can be found in Table 8.14 and Section 860.4. The Ecological Value Map being developed as part of the Ocean SAMP process will be described in detail in a technical report by French-McCay and Grilli (2010) that will be included in the final Ocean SAMP document as an appendix. Section 830.3 is meant to be a brief summary of what is described in that appendix."

1481	Elliot Taubman	7/2/10	Citizen		It is a testament to the SAMP process that the Army Corps of Engineers has stated publicly that they may not have to issue a formal Environmental Impact Statement because of the SAMP process. This is true. The problems the author sees are what is NOT addressed sufficiently in the SAMP. In particular, while the Department of Interior and Army Corps seem to be in line for the overall the project, the following federal jurisdictional issues are left hanging.The delineation between federal and state waters, and how state versus federal jurisdiction works. It would be more efficacious if there was a specific request to all the relevant federal agencies to engage in a Grand Jurga to reconcile all their interests in the study area with the state agencies involved.	The chapter does contain a description of the difference in federal versus state jurisdiction with regard to proposed offshore renewable energy projects in Section 820.4. Additional information on the statutes that grant the Department of Interior's Bureau of Ocean Energy Management, Regulation and Enforcement (formerly named the Minerals Management Service) authority over offshore renewable energy facilities in federal waters and the U.S. Army Corps of Engineers authority over offshore renewable energy facilities in state waters can be found in Chapter 10, Existing Statutes, Regulations, and Policies of the Ocean SAMP. The Joint Agency Working Group described in Section 860.2.1.4. has been designed as a mechanism to coordinate with all relevant state and federal agencies on any proposed Offshore Development within the Ocean SAMP study area.
1484	Elliot Taubman	7/2/10	Citizen		If the end product is a recommendation for the Deepwater Wind demonstration project and then larger projects, which may involve both Deepwater Wind and Cape Wind, it would be helpful to have a blueprint on how to deal with the delay from all the processes involved.	This chapter is not meant to deal specifically with any one proposed project, rather to discuss the potential future use of the Ocean SAMP study area for offshore renewable energy development. The review process outlined in Section 860 is meant to provide a blueprint for any potential developer who may want to propose a project within the Ocean SAMP area. By outlining all application and review requirements for offshore developments in the Ocean SAMP document, inefficiencies in the review of a project at the state level will likely be minimized.
1485	Elliot Taubman	7/2/10	Citizen		Perhaps there should be a federal-state agreement involving the RI DEM, CRMC, EDC, USACE, United States Coast Guard, USFERC, USDOE, USN and any other agencies which may be involved.	All relevant federal and state agencies will coordinate with the CRMC through the Joint Agency Working Group described in Section 860.2.1.4.

1486	Elliot Taubman	7/2/10	Citizen		There seems to be a disconnect between US government policy to foster regional and national grids to promote renewable energy, and particularly offshore wind, with the parochial view that this is Rhode Island's electricity. A better orientation would be that RI is strategically important to the whole region and country, and a PURPA Section 210 and 216 analysis would result in a future scenario which connects Montauk Point with Block Island and the Rhode Island mainland.	This chapter does not serve as state energy plan, rather it describes and examines one potential future use of the offshore environment within the Ocean SAMP study area. Current Rhode Island renewable energy statutes, initiatives and standards are described in Section 810.2. Regional electricity demand and the demand for renewable energy in New England are described in Sections 810.1 and 810.2.
1487	Elliot Taubman	7/2/10	Citizen		There is likely to be local opposition to wherever a cable comes ashore from offshore wind. A rigorous analysis of existing state laws on utility siting, the appeals process, and particular sites should be considered. Suggested sites for Deepwater cable connection have been Charlestown and Point Judith, but why not Qounset Point? It would be nearer high voltage nodes and may actually cost less in time and political grief. With a similar political-environmental problem.	This chapter/the entire Ocean SAMP document does not analyze any particular underwater cable route that may be used as part of a proposed offshore renewable energy facility, that type of siting analysis will be performed on a project-by-project basis during the application process.
1488	Elliot Taubman	7/2/10	Citizen		While the SAMP study area ends very close to Montauk Point, NY, no analysis is made whether the Navy may actually allow the cables, particularly if they promote overall national security. The Pentagon is amazingly "green" these days on energy issues, and no assumptions should be made about military opposition to a high voltage cable. Any cable could be buried beneath the path of submarines, as various cables are now. It is not sufficient to say there is a problem. The question is what are the benefits versus the costs of such a proposal. It is not irrelevant that local opposition, to power lines in wealthy suburbs of New York City, has caused a bottleneck in power supply for Long Island, Hartford, Providence and Boston.	This chapter/the entire Ocean SAMP document does not analyze any particular underwater cable route that may be used as part of a proposed offshore renewable energy facility, that type of siting analysis will be performed on a project-by-project basis during the application process. It should also be noted that the Navy has been an active stakeholder in the Ocean SAMP process and has reviewed and commented on each draft chapter, including Chapter 7 (Marine Transportation, Navigation, and Infrastructure), which discusses and defines policies related to submarine routes and other military uses.

1489	Elliot Taubman	7/2/10	Citizen		The Public Utilities Commissiion, in a number of instances, has honored the direction to consider the impact of its decisions on the economy and environment of local municipalities. In particular, the special situation of Block Island has been considered in matters as diverse as ferry service, bus service, and electric utility installations. This is Pursuant to RIGS 39-1-1. The positive economic and environmental benefits to Block Island of a cable to the mainland are clear. It is also certain that Block Islanders cannot pay for such a cable by themselves. If an offshore wind project actually comes to fruition, and the cable costs are are shared regionally over the entire National Grid system, then even a 1.8 ratio of Island to mainland rates will still result in a much lower rates than the currents rates, which are over $.60 per kwh. Another probable result is that simple physics will result in the Island being almost completely reliant on renewable energy from any offshore wind, and the existing and proposed solar and wind installations. This not only benefit the Island, but may result in substantially increased state tax revenues from tourism. As it is now, Block Island produces seven figure annual tax revenue to the state, while receiving low six figure benefits from the state, which were recently cut If the FERC does not block a PUC decision on the allocation of cable costs and facilities, there will still be issues about any power purchase/wheeling agreements between NG and Block Island Power. It may be helpful to ask FERC now to at east have staff involvement at the Rhode Island level.	This chapter does not analyze any currently proposed offshore renewable energy projects or underwater cables. Any project specific impacts or benefits will be thoroughly examined during the CRMC's review and application process (described in Section 860) and during the federal review process required under the National Environmental Policy Act. Furthermore, the CRMC will work in coordination with a Joint Agency Working Group (described in Section 860.2.1.4.) comprised of all relevant state and federal agencies during the review of an application for a proposed offshore development.
1469	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.1	We recommend separating the ecological and economic goals outline in section 1.i. Ecologically effective and economically beneficial can be contradictory objectives, therefore we suggest section 860.1.i to read “Foster a properly functioning ecosystem.” We suggest inserting a subsequent goal about economically beneficial outcomes.	This section restates the overall goals of the Ocean SAMP which are discussed in Chapter 1, Introduction, and Chapter 11, Policies of the Ocean SAMP. As these goals were developed through the Ocean SAMP stakeholder process, we have chosen not to revise them.
1470	Kathleen Wainwright	7/2/10	The Nature Conservancy	8601.4	This is listed as a “General Policy” in this chapter but in Chapter 11 those are listed as “Regulatory Standards.” We suggest making this a Regulatory Standard in this chapter as well.	Policy 860.1#4 was revised in Chapter 11, The Policies of the Ocean SAMP to be listed as a General Policy. Distinction between General Policies and Regulatory Standards was made per the guidance of NOAA's Office of Ocean and Coastal Resource Management.

1471	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.1.2.3	Per our comments submitted to you on the Fisheries chapter, we recommend renaming the Fishery Advisory Board as the “Sustainable Fishery Advisory Board” and renaming it as such as it appears throughout this chapter.	"As stated in the document, the FAB is designed to be an advisory body to the Council, comprised entirely of commercial and recreational fishermen representing those who fish in the Ocean SAMP area. The original intent of the FAB was to provide the commercial and recreational fishing industries with an opportunity to have early input into the Council’s decision-making process with regard to offshore construction and development, with the goal of mitigating any potential conflicts between fishermen/fishing activity and offshore development activities. It has nothing to do with fisheries management. The FAB simply provides the Council with advice. It does not make formal determinations and is not intended to supplant any existing authority of any other federal or state agency responsible for the management of fisheries. The FAB does not conduct any sort of environmental impact assessment; such reviews are conducted by the relevant federal and state management agencies whose responsibilities are defined by law. The FAB also does not provide advice or make decisions with regard to fisheries management issues. We have added a line to the FAB policy to clarify the role of the FAB in this regard. Because of this, it does not make sense to amend the FAB as proposed here. "

1472	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.1.2	Per the letter to Chairman Tikoian, dated July 1, 2010, from The Nature Conservancy, the Conservation Law Foundation, Save the Bay, and the Audubon Society of Rhode Island, we recommend that the Council establish a Science and Ecology Advisory Committee to aid with monitoring, baseline assessments, and adaptive management.	"The Joint Agency Working Group described in 860.2.1.4. which is comprised of ""state and federal agencies that have a regulatory responsibility related to the proposed project, as well as the Narragansett Indian Tribal Historic Preservation Office"" will include members with expertise in science and ecology. The role of the Joint Agency Working Group, in coordination with the CRMC Council, is to establish ""pre-construction survey and data requirements, monitoring requirements, protocols and mitigation measures for a proposed Offshore Development."" As stated in your letter to Chairman Tikoian, dated July 1, 2010, from The Nature Conservancy, the Conservation Law Foundation, Save the Bay, and the Audubon Society of Rhode Island, the purpose of the recommended science and ecology committee is ""to aid the Council and perspective developers in creating the best monitoring plans and in implementing adaptive management procedures."" This is the same purpose of the Joint Agency Working Group. In addition to creating a Joint Agency Working Group, CRMC will develop and implement the Ocean SAMP Science Research Agenda (see Chapter 11), in coordination with Ocean SAMP researchers, federal, state, and local government and other parties, to improve management policies and practices. The Ocean SAMP Science Research Agenda will allow CRMC to: 1) Continue to learn about Rhode Island's offshore natural resources and human activities; 2) Better understand the potential effects of future development and other human impacts; and 3) Increase Rhode Island's understanding of the projected impacts of global climate change. "
1473	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.2.1	We cannot comment on "Figure X" without a map of the Renewable Energy Zone	A map of the Renewable Energy Zone has been included in the most recent version of the chapter, therefore it will be available for commenting.

1474	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.2.3	We recommend the Council add the proposed Science and Ecology committee to the list of consulting entities.	See response above on the recommendation for a science and ecology committee.
1475	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.2.4	The proposed Science and Ecology committee should be consulted in the development of avoidance, mitigation and minimization of impacts in Areas of Particular Concern.	See response above on the recommendation for a science and ecology committee.
1476	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.2.5.4	sections vii-xii:We strongly recommend that, based on The Nature Conservancy's Northwest Atlantic Ecoregional Assessment (NAM-ERA), there are regionally important habitats that were identified in the Ocean SAMP study area that merit inclusion as Areas of Particular Concern. These are as follows, and are spatially identified in the technical appendix that we have provided to you (Anderson, M.G, J. Odell, M. Clark, Z. Ferdaña, and J.K. Greene. 2010. The Northwest Atlantic Marine Ecoregional Assessment: Identifying Conservation Areas in the Northwest Atlantic Marine Region. Phase Two. The Nature Conservancy, Eastern U.S. Division, Boston, MA.):-Hard bottom occurrences (and some reasonable radius around them)-Areas containing seafloor features of interest, especially from the terminal moraine south to the edge of the SAMP study area-Migratory species aggregation areas, which also are from the terminal moraine south to the edge of the SAMP study area (which is likely a key migratory corridor for marine mammals and pelagic fish). Also, we commend the inclusion of the 20m depth as Areas Designated for Preservation. However we also believe that the oceanographic processes and the migratory species aggregations around the 20m depth between Block Island and Montauk is especially critical and should be designated as such.	"The technical appendix submitted for inclusion in the Ocean SAMP (received on 7/19/2010) will be included as an appendix. CRMC will work with TNC to refine how the Northwest Atlantic Ecoregional Assessment can inform Areas of Particular Concern in the Ocean SAMP area. "

1477	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.3	Table 1:Because of the tremendous amount of information that the Ocean SAMP has aggregated and included as critical information, we strongly suggest that developers that submit a Site Assessment Plan be required to directly cite the appendices and other references in the chapters (including the Conservancy's NAM-ERA). To that end, we propose changing the language in Row Nine (References) to read as follows: "Any document or published sources that the applicant cites as part of the plan. The applicant shall reference information and data discussed in the Ocean SAMP (including appendices), other plans referenced in the Ocean SAMP, and other plans previously submitted by the applicant or that are otherwise readily available to the Council." New language is provided in italics.	Added text to 860.2.5 Application Requirements #3: "The applicant shall reference information and data discussed in the Ocean SAMP (including appendices and technical reports) in their SAP." In addition, Table 8.21. Contents of a Site Assessment Plan under (9) Reference Information:" The applicant may shall reference information and data discussed in the Ocean SAMP (including appendices and technical reports), other plans referenced in the Ocean SAMP, other plans previously submitted by the applicant or that are otherwise readily available to the Council."
1478	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.3	The proposed Science and Ecology committee should be consulted by the Council as to the need for the studies provided for the SAP.	See response above on the recommendation for a science and ecology committee.

1480	Kathleen Wainwright	7/2/10	The Nature Conservancy	860.3.1_860.3.2	We propose that the Council be given the authority to require monitoring as part of the Construction and Operations with the objective of promoting adaptive management.	"The Council, in coordination with the Joint Agency Working Group, will deternine monitoring requirements. As stated in Section 860.2.9: ""The Council in coordination with the Joint Agency Working Group, as described in Section 860.1.2.2 shall determine requirements for monitoring prior to, during, and post construction. Specific monitoring requirements shall be determined on a project-by-project basis and may include but are not limited to the monitoring of: i. Coastal processes and physical oceanography ii. Underwater noise iii. Benthic ecology iv. Avian species v. Marine mammals vi. Sea turtles vii. Fish and fish habitat viii. Commercial and recreational fishing ix. Recreation and tourism x. Marine transportation, navigation and existing infrastructure xi. Cultural and historic resources"" In addition, within Section 860.2.9 there are additional monitoring requirements outlined with regards to recreational use of a proposed project site, as well as biological assessments that will be required for Offshore Developments."

1557	Caroline Karp	7/8/10	Brown	800	The Introduction provides a thorough and well-written case for replacing reliance on fossil fuels with renewable forms of energy. The chapter also provides a good summary of existing laws and agreements intended to reduce the State's contribution to CO2-equivalent emissions. However, It is not clear whether/how an offshore wind farm will address RI's carbon emissions goals without providing accounting information regarding the _marine and terrestrial carbon footprint_ of this project beyond the information provided on p85 (4). The carbon accounting should include the construction and life cycle analysis of the new off- and on-shore converter and transmissions systems that will have to be built to accommodate the proposed wind field in RI waters as well as the much larger footprint associated with the wave/wind field proposed for adjacent federal waters . In addition, the SAMP, which relies heavily on climate change predictions to justify looking at offshore wind development, should estimate the impact of this project on per capita energy use and CO2 equivalent energy-related emissions.	Sections 810.4. No Action Alternative and 850.1 Avoided Air Emissions address the potential impact offshore renewable energy development may have on air emissions. Because every project is different and the Ocean SAMP is not evaluating one particular project, it is not possible to calculate the reduction in CO2 emissions. Instead the chapter cites general statistics such as: "A single 1 MW turbine operating for one year displaces approximately 1,800 tons of carbon dioxide, the primary global warming pollutant based on the current average U.S. utility fuel mix. Alternatively, to generate the same amount of electricity as a single 1-MW turbine operating for one year, using the average U.S. utility fuel mix, would mean emissions of 9 tons of sulfur dioxide and 4 tons of nitrogen oxide each year (AWEA 2009)." Furthermore, because this chapter is not examining any particular offshore renewable energy project, a cost accounting of a facilities carbon footprint is not possible, as the carbon footprint of a facility depends on project specific factors (e.g. size, location, technology, installation techniques, etc.)
1558	Caroline Karp	7/8/10	Brown	800	This chapter focuses on offshore wind w/o considering other marine-related renewable energy projects that have been considered in RI's marine and coastal waters, e.g., the wave to energy facility with wind turbines at Point Judith and various in-stream tide- and current- to energy proposals. I think the Council should seriously consider whether the publicly-funded Ocean SAMP is the right vehicle to help site and evaluate the ecological and envtl impacts of each new energy project in marine and coastal waters.	Section 810.3 Renewable Energy Sources in Rhode Island describes the potential in Rhode Island for utility-scale production from a variety of different renewable sources, including wave energy and in-stream tidal. The main finding of Section 810.3 was that offshore wind energy currently provides the greatest potential for utility-scale offshore renewable energy generation and therefore is the focus of the remainder of the chapter.

1559	Caroline Karp	7/8/10	Brown	800	This preliminary assessment should address the terrestrial impacts of the proposed Deepwater Wind project, including its carbon footprint. For example, how much land will be required for the on-shore transmission facility and converter station associated with the Deepwater Wind project? In addition I think this chapter should explicitly address the carbon footprint and envtl impacts associated with the off-shore and on-shore transmission systems and high voltage submarine cabling that would be required for development of the wave-wind platform being discussed for adjacent federal waters as Phase II of the Deepwater Wind project.	"This chapter does not examine any particular proposed offshore renewable energy project, rather it describes all of the potential impacts that may be possible from offshore renewable energy development. Any particular project's affects on the environment will be examined thoroughly through the National Environmental Policy Act (NEPA) review process that every offshore renewable energy projects in federal or state waters must go through. Every project will have its own unique set of potential effects (both positive and negative) which will be examined under NEPA. The potential terrestrial environmental effects of offshore renewable energy development are not examined here because they do not lie within the Ocean SAMP study area. The offshore environmental impacts of transmission cables are discussed extensively in Section 850.The carbon footprint associated with the off-shore and on-shore transmission systems and high voltage submarine cabling cannot be explicitly calculated because this chapter is not focused on a particular project, and the carbon footprint will be different between all projects depending on its size and location. "
1560	Caroline Karp	7/8/10	Brown	820.4.3	Preceding tables: Which agencies have jurisdiction over the terrestrial elements of the Deepwater Wind project (pp.42 et seq)?	This chapter does not examine any particular offshore renewable energy project. Table 8.8 summarizes state agencies with jurisdiction over offshore renewable energy facilities and transmission cables. Agencies with jurisdiction over the terrestrial elements of an offshore renewable energy project are not discussed in this chapter because they do not fall within the Ocean SAMP boundary.

1561	Caroline Karp	7/8/10	Brown	850.4	Chapter 8 is explicitly written as though it is intended to provide a preliminary “Envtl Assessment” for the Deepwater Wind offshore wind development proposal (p.83 (4)). I think this is problematic for several reasons:At one level the SAMP is presented as though CRMC genuinely intends to provide an /ecologically-based Marine Spatial Map/ to guide or /zone/ future industrial and commercial development of RI’s coastal and marine waters. If so, it should build on what is considered “best practice” in terrestrial zoning and marine ecosystem-based management. In some cases the SAMP does this, e.g., in terms of identifying commercially and recreationally ‘valuable’ natural resources and culturally significant resources such as shipwrecks. However, the SAMP does not yet do this (based on what I’ve read so far) in terms of:1.Including all marine waters within State boundaries that are under development pressure from industrial development proposals, including energy development. For instance, is this SAMP expected to guide development of ship channels related to energy development or trans-shipment of fossil fuels, coastal LNG terminals, offshore LNG? If not, why not?2.Identifying “built out” and “unbuildable areas” based on the need to “protect and conserve natural resources and critical habitats” from existing (un-) sustainable industrial, commercial, recreational, residential uses; 3. Identifying what is happening on the boundaries of the SAMP – biologically and in terms of economic development—that is likely to influence the future of the SAMP area.4. Defining overlay districts” to provide seasonal or permanent protection for critical resources or uses of public trust resources.	"The purpose of this chapter is not to assess any particular offshore renewable energy project. Pursuant to the 1978 Energy Amendments, the CRMC is required to identify and develop a planning process for energy facilities that are likely to be located in, or which may significantly affect, the coastal zone. This planning process must include procedures for assessing the suitability of sites for energy development, as well as policies and techniques to manage energy facilities and their anticipated impacts. The Ocean SAMP has been developed consistent with this authority. Section 860 outlines a regulatory framework for all offshore development in the Ocean SAMP area, including offshore renewable energy and LNG (see Section 860.2.1 paragraph 1 for a full definition of 'offshore development.') In Section 860.2.2 Areas of Particular Concern and Section 860.2.3 Areas Designated for Preservation, important areas within the Ocean SAMP boundary are identified and protected. Certain forms of offshore development are required to avoid Areas of Particular Concern to the greatest extent possible and are prohibited from developing in Areas Designated for Preservation. In addition to identifying areas where offshore development should be avoided or prohibited, Section 860.2.1 #2 identifies the most suitable area for offshore renewable energy development within the state waters.Chapter 9, Other Future Uses discusses potential future uses of the Ocean SAMP area. "

1562	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:1. The baseline studies and environmental impact assessment associated with the Ocean SAMP constitute a public subsidy to Deepwater Wind. This chapter, titled /Renewable Energy /but explicitly focusing on Deepwater Wind's proposal, should address under what circumstances private ventures qualify for this sort of public investment and/or indicate whether and how this public investment is recoverable from the developer. For instance, should the various coastal and off-shore LNG proposals receive this level of publicly-funded assistance with respect to siting and impact analysis?	This chapter is not meant to assess any particular proposal for an offshore renewable energy facility, rather the purpose of the chapter is to examine the potential for renewable energy development in the Ocean SAMP area, what potential effects may result from such development, and outline the CRMC regulatory framework for this potential future use. There is no discussion of any specific proposals for offshore renewable energy facilities or any other offshore development within this chapter.
1563	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:2.The Ocean SAMP, and this chapter in particular, should consider the "need" for this project _based on conservation and efficiency-related efforts_ by the Office of Energy Policy and others to reduce State and regional demand for fossil fuel-based energy before proceeding to develop new supply. Recall the USEPA and USDOE mantra "reduce, reuse, recycle" BEFORE developing new materials/sources of energy; principles of industrial ecology that recommend looking for opportunities to capture 'waste energy' to supply energy demand instead of using cheap energy to attract and subsidize economic development; and Braungart and McDonough's industrial xxx argument.	This chapter and the Ocean SAMP document as a whole is not meant to serve as a State Energy Plan or outline state energy policy on energy efficiency or energy conservation. Instead, this chapter examines the potential for the use of the Ocean SAMP area for offshore renewable energy development, the potential effects of offshore renewable energy that should be considered when planning and evaluating proposed projects, as well as outline a regulatory framework for offshore development in the Ocean SAMP area.

1564	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:3The SAMP, and this chapter in particular, should consider the ”need” for this project _based on other state and regional efforts to supply utility scale renewable energy_, e.g., Cape Wind, Pt. Judith wave to energy and proposals for municipal-scale wind turbines, before proceeding to develop new supply. Does it make sense for every coastal state to have an offshore windfield OR Is this a decision that should be made on a regional basis in order to: take appropriate precautions about harm to public trust resources;avoid poorly thought-out public investments in technologies that might well be obsolete within the 20-25 lifetime of the windfields; better understand the capacity of the grid to accept and deliver new sources of renewable energy that are being developed almost simultaneously;better understand the capacity of the grid to accept and deliver wind and other sources of renewable energy at an affordable price ;better understand the consequences of potential ‘over-supply’ on investments in natural gas, waste to energy plants etc.	"This chapter does not argue for or against the future development of offshore development in the SAMP area, rather it describes offshore renewable energy resources, technology, stages of development, and potential economic and environmental effects, as well as outlines a regulatory framework for offshore development in the Ocean SAMP area. Under section 300.1 of the Rhode Island Coastal Resources Management Program, any application for a Category B Assent are required to demonstrate the need for the proposed activity or alteration. "
1565	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:4This chapter should clearly indicate whether the developer is responsible for developing the on-shore transmission equipment necessary to transmit and deliver wind-generated energy Block Island Sound.	This chapter does not guide or assess any particular offshore renewable energy project. In addition, onshore transmission equipment is outside the scope of the Ocean SAMP. Onshore transmission equipment requirements fall outside the jurisdiction of the CRMC.
1567	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:6.This chapter currently appears to promote the use of the French-McCay /Ecological Value Map/ (pp. 73-75), otherwise known as /Applied Science Associates/’ Ecological Service Value Index?, as a way to site a windfield in the SAMP area. It seems completely inappropriate for a public agency to promote products developed by a private company such as ASA which is already working as a contractor for CRMC as part of the SAMP.	Applied Science Associates is contracted through URI, with funds provided by the RIEDC, to perform research in support of the Ocean SAMP. ASA's contract is in compliance with all URI/state purchasing protocols. In this chapter we present preliminary results of ASA's research, just as we would present the results of any other research conducted by any other consultant or contractor. We are not advocating ASA's products, simply reporting the results of work they performed for the Ocean SAMP.

1569	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:7.This chapter does not appear to take much if any advantage of research vis a vis offshore wind development undertaken as part of the Cape Wind or the 450MW Delaware wind projects. This seems unfortunate. For example, these projects, which predate Deepwater Wind, have developed expertise in terms of the public trust issues surrounding leasing subtidal lands and negotiating reasonable purchase power contracts at reasonable and competitive prices.	This chapter has used the research associated with the Cape Wind Energy Project extensively and cites the Final Environmental Impact Statement for this project often (cited as MMS 2009a throughout the document). The Cape Wind EIS and related technical reports, biological opinions and federal agency attachments were used most heavily in Section 840 and 850 where the potential economic and environmental effects of offshore renewable energy development were discussed.
1570	Caroline Karp	7/8/10	Brown		This chapter should address the “carbon footprint” of offshore wind development in terms of construction, materials, operation etc., i.e., at what point over the 20-25 year life of the windfield, would the Block Island project become “carbon neutral” in terms of its development and O/M costs?	Because this chapter does not examine any particular project, it is not possible to include statistics on the size of a proposed project's "carbon footprint" or the time required to become "carbon neutral." Every proposed project is different therefore the point at which a particular project will become "carbon neutral" will vary between projects. Section 850.1 paragraph # 3 does recognize the impacts that the construction, installation and decommissioning of an offshore wind energy facility may have on air emissions.

1571	Caroline Karp	7/8/10	Brown	850.4.4	This chapter should address weather conditions in the SAMP area such as annual and seasonal frequency of low/no wind days and fog that might influence energy generating capacity and collision risks to migratory birds which may/not fly in fog (pp. 119-20). I raise this because the Nantucket-Block Island area is identified as a region “where the heavy-fog frequency is about twice that of the other stations along the Atlantic coast (Pearce 1969)” and the summer peak energy demand season seems to coincide pretty well with low winds in this region.	" Section 850.4 discusses the potential impact of low visibility conditions on the risk of collision to birds. Added footnote on prevalence of fog in the Ocean SAMP area:""Merrill 2010 reports that based on historical data sets, the Ocean SAMP typically experiences 3-4 foggy days per month during the months of March-May and October-December, and 6-10 foggy days during June, July and August."" The seasonal variations in wind speeds is discussed in Section 830.1 paragraph 2, and in greater detail in Chapter 2, Ecology of the SAMP Region and in the Technical Report 19. Wind Resource Assessment in the Vicinity of a Small, Low Relief Coastal Island by Malcolm L. Spaulding, Ravi Sharma, Annette Grilli, Marty Bell, Alex Crosby, and Lauren Decker. "

1572	Caroline Karp	7/8/10	Brown	850.4.4 _850.7. 5	This chapter should provide more information regarding the size, operation and carbon footprint of the 'energy facility' associated with the windfield. For instance, what is the energy source for the transformer? In several places, the text refers to backup diesel generators and storage of significant volumes of 'electrical insulating oil' (pp. 120) and 'dielectric fluids' (p.152). Are the transformer and insulating oil pumps petroleum-based? The Water Quality sections should be more explicit about ecological and envtl risks associated with petroleum spills and/or leakage of insulating oils-- which used to be PCBs and then Freon-based.	"Transformers that may be used to step up or step down the voltage of the export transmission cable do not require separate energy sources, rather they use the electricity they are converting to operate. The back-up diesel generators as mentioned in Section 820.3 #4 would be affiliated with staffing quarters that may exist offshore. As stated in Section 850.7.4, the insulating oil used in conjunction with most offshore transformers located on the substation is composed of a type of mineral oil and therefore is petroleum-based. A technical report prepared for the Cape Wind Energy Project Final Environmental Impact Statement, stated that ""Electric insulating oil (with a specific gravity of 0.882) is a light oil that floats on water. This type of oil is relatively non-persistent in that it rapidly disperses (breaks into small droplets in the water column, which facilitates natural biodegradation) with a small degree of evaporation so that by 36 hours after the spill only about 12 percent of the original spilled amount would still be present on the water surface. The cleanup of this type of oil would be considerably less complex than the cleanup of a heavy fuel oil spill such as the oil that spilled from the Bouchard No. 120 barge spill due to the lower persistence of the electric insulating oil on shorelines and the inability of this oil to sink below the water surface (Environmental Research Consulting 2006)."" In addition, this report states ""Note that while electric insulating oils that were used in the past in transformers contained PCBs (polychlorinated biphenyls), these substances are not permitted in newly installed transformers (Environmental Research Consulting 2006)."" "

1573	Caroline Karp	7/8/10	Brown	820.3	pp. 37 et seq. refers to the need for large off- and on-shore converters located on a separate needed to increase the voltage address transmission losses of energy associated with submarine cables over the distance of the cable from wind field to transmission system.This chapter and/or the developer should provide more information about impacts of heat/energy loss (e.g., pp.37 et seq., 89) associated with submarine cabling from Block Island to the mainland. Some studies suggest that submarine cabling over this distance could result in 15-20% loss of energy as heat and result in annealing the associated sediments. In what ways would ecological/envtl risks and impacts change if high voltage cables were used instead of AC/DC cables?	Section 850.2 paragraph 9 does discuss the potential impact of heat loss from submarine cables on the surrounding environment: "Studies on the effects of radiated heat from buried cables have found a rise in temperature directly above the cables of 0.19ºC [0.342 ºF] and an increase in the temperature of seawater of 0.000006ºC [0.0000108 ºF]. This is not believed to be significant enough to be detectable against natural fluctuations (MMS 2009a)." This was actually a finding of the Connecticut Siting Council as part of the 'Cross Sound Cable Interconnector' project, a high voltage DC buried cable system between New England and Long Island New York (BERR 2008).
1575	Caroline Karp	7/8/10	Brown		My apologies for the length and complexity of these comments to the extent that I address general policy and somewhat detailed technical issues. I think that CRMC and the CRC have done a great job compiling existing information about the SAMP Area and possible impacts of a windfield on ecosystem functions and human uses of this area. I think more needs to be done to clarify the social, economic and environmental costs and benefits of industrial and utility-scale off-shore energy development.	See response above
1576	Caroline Karp	7/8/10	Brown	850	On the other hand, if the SAMP is actually written to guide development of the proposed Deepwater Wind project off Block Island (p.83), it is problematic in the following respects:5. This chapter and/or the Introduction should clarify whether development of this wind field is intended or likely to result in reduced energy use or reduced carbon-related emissions considering possible "snap back" effects related to promotion of economic development and increased energy use because of "clean energy". (See experience of CAFÉ standards on development of SUVs and VMTs.)	The table already included a row on the effects of increased turbidity and suspended sediments, however it was moved within the table to follow the row on water quality. Listed within the row on the potential effects of increased turbidity was "Affect primary production; secondary effects on prey species; potential smothering of eggs and larvae."

1459	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.2.2	Page 87 #2: It is helpful to state findings form other projects related to effects of renewable energy infrastructure on local currents. However, in addition to considering the type of pilings and the spacing of turbines,the local currents and conditions may also be a factor. The effects on currents may be project specific depending on the location of a wind farm and site specific modeling may be necessary to determine impacts.	Added text to Section 850.2 paragraph 1: "The potential effects to coastal processes as a result of offshore renewable energy development are dependent on the size, scale and design of the facility, as well as site specific conditions (i.e. localized currents, wave regimes and sediment transport). As a result, the potential effects will vary between projects and may even vary between different parts of a project site."
1460	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.3.2	Page 90 #2: Sediment disturbance can also impact eggs and larvae, and the extent of impacts may vary depending on life stage. It would be helpful to also consider impacts on life stages other than adult fish and shellfish in this section. There's an extra period at the end of the paragraph.	The potential for offshore renewable energy development to smother eggs and larvae was mentioned in Section 850.3.1 paragraph #8: "During the construction and decommissioning phases of a project, the eggs and larvae of many fish species may be vulnerable to being buried or removed." Deleted extra period
1462	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.3.7	Page 92 #7: See comment above (1637). Consider mentioning the need to monitor post construction to ensure seabed returns to its pre-disturbance state.	Added text to that paragraph: "Post-construction monitoring may be used to track the recovery of a project site."
1463	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.3.3.3	Page 97 #3: May want to mention that demersal eggs and larvae could also be impacted, though this may fit better on page 90 #2 (1460).	The potential for offshore renewable energy development to smother eggs and larvae was mentioned in Section 850.3.1 paragraph #8: "During the construction and decommissioning phases of a project, the eggs and larvae of many fish species may be vulnerable to being buried or removed."
1464	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.3.5.2	Page 99 #2: Add period at the end of the first sentence.	Added period as suggested

1465	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.7.9	Page 146 #9: Good information. Are there any predictions of the pile driving range in decibels within the 4000 m radius? Do we know the predicted construction and operation noise in decibels?	There are no predictions done for this area for decibels within 4000 m. Data on decibles for construction added to Sec. 850.7.1, para. 5, and for operation added to para. 13.: "Peak sound levels produced by pile driving have been measured at anywhere from 228 dB re-1 µPa to 257 dB re-1 µPa, at frequency levels ranging from 20 to more than 20,000 Hz (see Table 8.17). " and "Miller et al. (2010) predicted that within the Ocean SAMP area where eight wind turbines are proposed south of Block Island, the operational noise of the turbines would contribute 424 pW/m2 or 88 dB re 1 µPa of additional noise, significantly less than the noise produced by shipping, wind, and rain in the area. This level would be greater than ambient noise within one kilometer (0.6 miles) of the source, and would be below ambient noise levels at a distance of ten kilometers (6 miles) from the source (Miller et al. 2010). Underwater noise created by offshore wind turbines in Europe has been measured at 118 dB re 1 µPa2 for a 1/3 octave band at a range of 100 meters during full power production (Betke et al. 2004). "
1466	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.7.3.1	Page 150 #1: Clarify the statement that the disturbance area is “small”. What is this in comparison to? The Ocean SAMP area? Existing projects? An offshore wind farm would be considered a large project compared to existing offshore development.	Clarified statement to mean the disturbance area is a small portion of the SAMP overall. The sentence now reads: "The total area of the seafloor affected within will be only a small percentage of the entire Ocean SAMP area will be small; however, the overall effect will depend in part upon the relative prevalence or scarcity of the habitat type(s) affected, and the availability of similar habitat in the adjacent area."

1467	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.12.3	Page 171 Table: Sedimentation is discussed as a potential water quality impact in the chapter; however, the table only includes accidental spillage of contaminants or debris. May want to include sedimentation in the table under water quality as well.	The table already included a row on the effects of increased turbidity and suspended sediments, however it was moved within the table to follow the row on water quality. Listed within the row on the potential effects of increased turbidity was "Affect primary production; secondary effects on prey species; potential smothering of eggs and larvae."
1637	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.2.8	Page 88 #8:It cannot be predicted that all scars from cable laying will recover naturally. Scars along the bottom could impact migration for benthic animals. The extent of impacts may depend on the amount of time it may take for the natural bathymetry to recover. It may be worth stating in this section that depending on the extent and depth of scars, the bathymetry may need to be restored to minimize impacts.	Added sentence to paragraph 8:"However, depending on extent and depth of scars and the site specific conditions, areas which may not recover naturally may require the bathymetry to be restored to minimize impacts." Paragraph 7 changed to read: "7. In many cases, the seabed is expected to return to its pre-disturbance state after cable installation. The extent of the impacts from cable laying may depend on the amount of time it takes for the natural bathymetry to recover. Post-construction monitoring may be used to track the recovery of a project site. On rock or other hard substrates where the seabed may not recover easily, backfilling may be required, or else permanent scarring of the seabed may result. Scars along the bottom may impact migration for benthic animals. "
1638	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.3	Page 121 #3: The last sentence in this paragraph makes a broad conclusion regarding impacts to whales which is not supported by any analysis.	Deleted last sentence.

1639	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.4	Page 123 Table 15: The seasons should be defined by month (e.g., "Spring"). The distribution information on right whales does not appear to reflect the right whale sightings from spring 2010, when large numbers of right whales were present within the SAMP area.	"This table summarizes information presented in the Kenney and Vigness-Raposa (2009) technical report completed for the Ocean SAMP. This report describes marine mammal distribution in the Ocean SAMP area using spring, summer, fall and winter. Therefore, this table was created to be consistent with this report. The technical report by Kenney and Vigness-Raposa (2009) does note the occurrence of 98 right whale sightings in April of 2010."
1640	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.5	Page 126 #5:Recommend including a sentence noting that in addition to the Marine Mammal Protection Act (MMPA) protections, the Endangered Species Act (ESA) prohibits take (include definition of take), and that any wind farm will require consultation under the ESA and MMPA.	Added and revised paragraph # 5 to read: "Further protection is granted under the ESA by the NMFS for marine mammals that are listed as threatened or endangered. The ESA prohibits any person, including private entities, from "taking" a "listed" species. "Take" is broadly defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or to attempt to engage in any such conduct." As a result, any proposed project's project will require consultation under the ESA and MMPA to examine all potential effects on the welfare of marine mammals are scrutinized prior to development in order to ensure that potential adverse impacts are minimized."
1641	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.6	Page 126 #6:Suggest inserting the word "may" between underwater noise and poses on line 3 as the risks to marine mammals from any project are likely to vary based on the exact project design and location.	Inserted "may" as suggested.
1642	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.5	Page 127 #5: Suggest including "and maintenance of an exclusion zone" after "marine mammals" on line 3.	Inserted "and maintenance of an exclusion zone" as suggested.

1643	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.5	Page 128 Table 16: What types of activities are included under "construction" should be noted. Additionally, should not that the noise associated with pile driving will vary greatly depending on the size of the piles and the hammer used. The table should note what size the piles were that resulted in the noise levels included in the table.	"Revised table to list ""Construction Equipment"" and is meant to include sources such as hand tools and other machinery. Added note to table: ""**(note: noise associated with pile driving will vary greatly depending on the size of the pile and hammer used)."" "
1644	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.7	Pages 130-131 Table 17: This table should include the 120 dB re 1 uPa rms theshold value for continuous nose sources.	Included 120 dB re 1 uPa rms for continuous nose sources into the table.
1645	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.8	Page 131 #8: In this paragraphy and throughout the Marine Mammal and Sea Turtle sections, there are numerous times when citations such as "MMS 2007" and "MMS 2009" are used; the document should use primary sources for citations whenever possible.	Primary sources were incorporated as much as possible. In cases where primary sources were not available, MMS 2007 & 2009 were cited.
1646	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.11	Page 132 #11: This paragraphy should note the size of the piles, the attenuation rate, and the method of installation used to produce the model results. It should also note that this is an estimate and that the zones may be larger or smaller depending on the actual proect specifications.	"Added text: ""This analysis was calculated for a 1.7 m [5.5 foot] diameter pile (similar to those used in lattice jacket structures) driven into the bottom with an impact hammer."" and ""It should be noted that this is an estimate and that the zones may be larger or smaller depending on the actual size of the pile and method of installation."" Also a footnote was added with the attenuation rate: ""Based on an attenuation rate = 17log(range from source) for a sound source at 200 Hz. See Miller et al. 2010 for more information."" "
1647	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.1.12	Page 134 #12: Suggest that "project area" be replaced with "designated exclusion zone" on line 8.	Replaced "project area" with "designated exclusion zone" on line 8 as suggested.

1648	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.13	Page 134 #13: This paragraph should include information on the source level of the pile driving noise and the noise levels at 20km.	Added a footnote stating: "Measurements made at Horns Rev during pile driving activities recorded high sound levels of about 190 dB re 1 µPa at several hundred meters away from the sound source. A best fit attenuation of 18 dB per 10 times increase in distance was used to estimate a source level of 235 dB re 1 µPa at 1 meter distance and 150 dB re 1 µPa at a distance of more than 20 km. See Tougaard et al. 2006 for more information."
1649	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.1.14	Page 135 #14: If ambient noise data for the SAMP area is available, it should be included in this paragraph.	Added footnote describing the findings on ambient noise from Miller et al. 2010:"Miller et al. (2010) created an ambient noise budget for an area southwest of Block Island using a Passive Aquatic Listener device for the 1/3-octave band centered at 500 Hz. The main contributors to the noise budget at this location were shipping with 97 dB re 1 µPa and wind related noise was 97 dB re 1 µPa. Rain was next with 92 dB re 1 µPa and lastly, biological noise with 87 dB re 1 µPa."
1650	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.5.2.2	Page 138 #2: Suggest replacing the "MMS 2009a" citation with the citation for the NMFS ship strike rule.	Replaced reference as suggested.
1651	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.6.2	Page 140 #2:As the action aea for the Cape Wind Biological Opinion does not align with the SAMP area, the Biological Opinion does not appear to be a good citation for information on sea turtles in the action area. This is another area where using primary citations (i.e., scientific papers) would be better. Also, if citing the Biological Opinion, it would be appropriate to cite it as a NMFS not a MMS document.	Reference to Biological Opinion deleted

1652	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.6.2	Page 140 Table 18: This table gives the impression that sea turtles are rare in the SAMP area. While sea turtles are not routinely noted in surveys, this is often because the surveys are not designed to detect sea turtles. Juveniles, are particularly difficult to detect. All of the species of sea turtles noted in the table are liekly to be present in the SAMP area from the late spring/early summer through late fall. It is also unclear how the document defines "southern New England" as watesr south of Cape Cod are within the normal summer ranges for both Kemp's ridley and green sea turtles, and these species are frequently documents in the waters off Long Island as well as in Cape Cod Bay.	Added sentence to paragraph 4: "While sightings of most of these species are infrequent, sea turtles, particularly juveniles, are not routinely detected during surveys, meaning they may be more common in the Ocean SAMP area than survey data would suggest."
1653	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.6.3	Page 140-141 #3: The paragraph should clarify that the foraging depths of 16-49 feet were for sea turtles in Long Island waters. Again, the MMS citation seems out of place here.	Sentence changed to read: "They are capable of diving to great depths, although a study of sea turtles off Long Island found them primarily foraging in waters between 16 and 49 feet (4.9 and 14.9 meters) in depth."
1654	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.6.1.2	Page 141 #2: The Cape WInd EIS reference may be inappropriate, as impacts from noise will depend on the size of the piles, the installation methodology, and the particular characteristics of the site. This paragraph should note the size of the piles modeled for the Cape WInd EIS and note that impacts would be different dependingon the specifics of any project in the SAMP area. The statement that only leatherback sea turtles would be foraging in the SAMP area is not wel supported by the information presented.	Deleted sentence referring to leatherback turtle foraging.
1655	Louis Chiarella	7/14/10	National Marine Fisheries Service	850.6.1.3	Page 141 #3: Effects to sea turtles from seismic surveys will dpeend on the type of device used, water depths, etc. The Cape Wind EIS reference may be inappropriate if there is any difference in the survey methodology completed in the SAMP area.	Added text to paragraph to clarify: "While the Cape Wind EIS predicted only minimal effects to sea turtles from seismic surveys (MMS 2009a), the effects to sea turtles from seismic surveys in the Ocean SAMP area will depend on the type of survey device used, the water depths, and other factors."