Ocean SAMP Chapter 2. Ecology of the Ocean SAMP Region – Comments & Responses (as of 8/5/10)

Record#	Submitted	Name	Organization	Section	Comment	Response
667	4/1/10	Caroly Shumway	Boston University		General comment on figures: I appreciate your effort to include figures in this draft. All figures, however, need to be large enough in this chapter that the reader can see all of the text in the legends and figure. In addition, a figure legend is needed for all and at a size that is legible (not legible in Fig. 2.6), particularly to explain acronyms, some scientific terms, and the colors or shading used in the figures. Fig. 2.3, define “end moraine” for user. Or have definitions at the end of this chapter. Fig. 2.5 What are the turquoise patches? The dark blue patches? Fig. 2.46. The legend is ridiculously small. Completely unreadable. Fig. 2.29 is much too small. This needs a full page. Figs. 2.39 and 2.40 are too small.	Figures have been reworked extensively with many removed, new ones inserted/created and made as large as possible within the document for improved readability and clarity.
668	4/1/10	Caroly Shumway	Boston University	200	General comment on Section 200. Introduction. This section is still lacking in summarizing the ecological importance of the facts provided. This chapter is likely to be the most widely read of the Ocean SAMP chapters nationwide. This section should highlight key patterns and processes that influence biological diversity and productivity in the region. Examples include: 1) the front south of the Race; 2) the freshwater input by Long Island Sound; 3) the fact that the area is essentially an ecotone between two ecoregions; 4) the sediment diversity in the region; 5) the areas with channels and bathyemetric high points; 6) the high productivity of the area; 7) areas of highest habitat complexity.	The entire introduction has been extensively rewritted to act as an Executive Summary of the chapter.
669	4/1/10	Caroly Shumway	Boston University		Also, the chapter currently misses any discussion of regional or global importance of any our species. There should be a section on regional and global importance.	this comment is unclear as to intent/meaning; no changes made
670	4/1/10	Caroly Shumway	Boston University		Finally, each section should have a summary, but at the beginning of each section, not the end.	summaries are now at section beginnings
671	4/1/10	Caroly Shumway	Boston University	200.6	2nd sentence: Grammatical changes: Remove commas after “often warmer” and “several degrees” and add a comma after “while in summer.” 3rd sentence: change “are” to “is” to match subject.	entire section rewritten

672	4/1/10	Caroly Shumway	Boston University	200.8	1st sentence: Grammatical changes: add “and” before “is bounded”…; 2nd sentence: delete “and” after “south” and add a comma after “31 mm”	entire section rewritten
673	4/1/10	Caroly Shumway	Boston University	210.4	Suggest reordering depositional types according to particle size for clarity (putting c before b), and noting this, by adding at end of 1st sentence: “, presented below in order of increasing size of sediment particles.” Also, the colors in the figure need to be matched to a-d.	rewritten and corrected as noted; figure removed
674	4/1/10	Caroly Shumway	Boston University	210.6	Add additional sentence after 3rd sentence as follows. “Channels and bathymetric high points are likely to drive upwelling and vertical mixing (Barth et al. 2004; Wishner et al. 2006).”	corrected
675	4/1/10	Caroly Shumway	Boston University		FYI: Lough et al. (1989) showed that aggregations of juvenile cod and haddock move over time with non-tidal current patterns in Georges Bank. A rough sea floor also causes turbulent mixing in the deep layer of the water column (Massel 1999).	no action taken
676	4/1/10	Caroly Shumway	Boston University	210.8	4th sentence. Grammatical correction: Change “that given” to “than is given”	rewritten
677	4/1/10	Caroly Shumway	Boston University	210.9	Very nice summary. Would prefer such a summary at the beginning of each major section so that the reader knows what he/she is expecting to read in the details.	corrected, see above
678	4/1/10	Caroly Shumway	Boston University	220.1	2nd sentence: Grammatical correction: change “driving” to “drive”	corrected
679	4/1/10	Caroly Shumway	Boston University	220.3.1	1st and 2nd sentences. These seem contradictory. You say that the area has not had a single hurricane strike to RI, but then show hurricanes that made landfall in RI. Am I missing something here?	rewritten to be more clear
680	4/1/10	Caroly Shumway	Boston University	230.2	Terminology needs to be more precise here. There is no larger North Atlantic ecoregion. There IS a Northeast US Large Marine Ecosystem. There is also an Acadian and Virginian ecoregion. Suggest changing sentence to read, “contact with the larger Northeast US Large Marine Ecosytem…”	corrected
681	4/1/10	Caroly Shumway	Boston University	230.1.1	Delete “limiting”	corrected
682	4/1/10	Caroly Shumway	Boston University	230.1.1	last sentence. Grammatical correction: change “and its interaction” to “and tidal interaction”	corrected

683	4/1/10	Caroly Shumway	Boston University	230.2	Figure 2.16. Add “seasurface” to the two figures at the top of this figure.	Figure legend was corrected
684	4/1/10	Caroly Shumway	Boston University	230.3.1 .5	paragraph 5. Additional language and/or references for you (Shumway, C., Pfeiffer-Herbert, A., Eller, K., 2010, Physical Oceanography Of The Northwest Atlantic Region, Chapter 3b, Northeast Atlantic Marine Ecoregional Assessment, The Nature Conservancy.) Fronts are areas of particularly high biological activity due to cross-frontal mixing of nutrients, which stimulates high primary productivity (Mann and Lazier 2006). Observations consistently show that fronts are the location of high densities of phytoplankton (Munk et al. 1995; Mann and Lazier 2006), zooplankton (Munk et al. 1995; Wishner et al. 2006), fish larvae (Munk et al. 1995), marine mammals (Etnoyer et al. 2004) and seabirds (Haney 1986). Worm et al. (2005) also showed that SST gradients are positively correlated with tuna and billfish diversity. Why is stratification biologically important? The degree of stratification of the water column affects three important ecosystem processes. 1.Stratification increases the stability of the water column, providing conditions for seasonal accumulation of high density patches of phytoplankton, which may provide a rich food source for higher trophic levels (McManus et al. 2003). However, if stratification extends too long, the water masses become depleted of nutrients. Fortunately, winter winds cause stratification to break down. This has the advantage of enabling nutrients from deeper, colder waters to come to the surface. 2.Stratification controls the development of phytoplankton blooms. Because the surface layer is well mixed down to the pycnocline (the depth of maximum change in density), phytoplankton are physically mixed throughout the layer (Mann and Lazier 2006). If the surface layer is much thicker than the euphotic zone (the vertical zone where light intensity is high enough for photosynthesis to occur), phytoplankton populations cannot grow. Conversely, if the surface layer is thin enough relative to the euphotic zone, phytoplankton populations can grow rapidly, forming a bloom. This is the mechanism responsible for the spring phytoplankton bloom in the North Atlantic Ocean (Mann and Lazier 2006). 3.Stratification also increases the potential for hypoxia by preventing deep water from exchanging with the atmosphere (Rabalais et al. 2002). Hypoxia causes the exclusion of fish and other mobile organisms and mortality of many benthic organisms (Rabalais et al. 2002).	Figure legend was corrected appropriate materials was incorporated and sections rewritten and references updated.
685	4/1/10	Caroly Shumway	Boston University	240.2	What about emerging toxins, such as endocrine disruptors like bisphenol A (BPA)?	addressed in Sec 260.3

686	4/1/10	Caroly Shumway	Boston University	250.1	Plankton. Either in this section or in section 260.2., you need to discuss the fact that boreal phytoplankton have invaded from the north due to changing climate; we are also seeing southern species of phytoplankton. See Greene et al. (2008).	
687	4/1/10	Caroly Shumway	Boston University	250.1.5 .1	1st sentence. It is a misconception that fishes passively drift as pelagic organisms. I would change to "spend some portion of their life cycle as planktonic organisms, with stochastic factors such as wind, tides and ocean currents as well as behavior influencing their horizontal and vertical distribution…" See text below, fyi. From Shumway, C. 1999. A neglected science. Environmental Biology of Fishes.We now know that the larval period of fishes is behaviorally complex and that both behavioral and stochastic factors play a role. Distributions of fish larvae are affected by six factors, the first four of which are behavioral: 1) adult spawning location and timing; 2) vertical distribution of larvae; 3) horizontal swimming by larvae; 4) behavioral capabilities and flexibility of larvae; 5) hydrography; and 6) topography (Leis, 1991). Some fishes can extend their larval period if they don't encounter suitable habitat and post-settlement habitat shifts can occur as well (Kaufman et al., 1992; Kramer et al., 1997).	corrected and rewritten
688	4/1/10	Caroly Shumway	Boston University	250.1.5 .8	paragraph 8. Grammatical correction: Add period and space after "see 250.3).	corrected
689	4/1/10	Caroly Shumway	Boston University	250.2.2	1st sentence; add, after "two biogeographic provinces"… "also known as ecoregions"	corrected
690	4/1/10	Caroly Shumway	Boston University	250.2	Suggest moving the dredging discussion to the end of this section, and put discussion of the benthic ecosystem first.	corrected
691	4/1/10	Caroly Shumway	Boston University	250.2.9	3rd sentence. Grammatical correction: Change to "Regardless of the scheme"; also change "and which can then guide" to "and to guide.."	corrected
692	4/1/10	Caroly Shumway	Boston University	250.2.9	figure 2.33. Why extrapolate grain size based on quahogs when you have an exact map of grain size based on USGS's latest maps? The Nature Conservancy provided a map to CRMC of sediment grain size classes for the Ocean SAMP. It provides the exact size dimensions of the sediment type, based on the most recent US Seabed Grain Size Classes. Strongly suggest using the TNC map here, or in addition to Roman's extrapolation.	TNC maps not available; using maps as provided by SAMP research outputs.

693	4/1/10	Caroly Shumway	Boston University	250.2	Why not include The Nature Conservancy's benthic habitat map, and ecological marine unit map here? The statistical work has already been done at a high resolution to identify different ecological units for the Ocean SAMP region.Again, The Nature Conservancy has both maps of rugosity as well as maps of bathymetric complexity, that could be used to support the King/Collie map here.	Have been told these maps will not be available until May 2010, perhaps. No action taken
694	4/1/10	Caroly Shumway	Boston University	250.2.1 .5	The Ocean SAMP boundaries should be put on this figure. How does the lobster distribution relate to habitat complexity?	figure and text removed, reference to Fisheries chapter inserted.
695	4/1/10	Caroly Shumway	Boston University	250.2.1 .2.3	Can you relate the quahog densities not just to depth, but sediment type, and include that text here? Ditto for the sea scallops.	The groundtruthing to allow such a relationship to be made has not been completed and therefore this is not possible to do with any degree of surety.
696	4/1/10	Caroly Shumway	Boston University	250.2.1 .4	2nd sentence. Grammatical correction: Change "were" to "where". 3rd sentence: insert comma after "Cape Cod".	corrected
697	4/1/10	Caroly Shumway	Boston University	250.3	The fishes section should be broken up into at a minimum, demersal fishes and pelagic fishes.	this was done in an earlier version and it was too confusing, leading to current layout/no action taken or changes made
698	4/1/10	Caroly Shumway	Boston University	250.3	Overall, the fish section is not sufficient. It needs to have a summary discussion on spatial patterns here, particularly areas of high diversity and high abundance, and relate them to the currents, habitat complexity, or sediment type.	Section has been revised and rewritten and addressed at least some of the issues raised; all cannot be addressed due to lack of referencable data to support the suggested relationships.
699	4/1/10	Caroly Shumway	Boston University	250.3.7 _250.3. 8	paragraphs 7 and 8. Can you compare the dominant fishes found in the 1950s with those that Brown found recently? Looks like only 3 of the 1950s species are still dominant: winter flounder; windowpane flounder; and longhorn sculpin. Were the surveys done at the same time of year, though? This would be important to consider before comparing.	Surveys not done in a fashion that would allow reliable comparisons across time, and the data are too spotty to allow more than simple conjecture on trends.
700	4/1/10	Caroly Shumway	Boston University	250.3.1 0_250. 3.11	paragraphs 10-11. Can you relate the distributions of these to either the physical oceanography, habitat complexity, or sediment type, or is this being done in the fisheries chapter?	Published accounts are not available by which to make these kinds of relationships with any degree of certainty for the Ocean SAMP area.

701	4/1/10	Caroly Shumway	Boston University	250.3.12	paragraph 12. Think you mean Figure 2.41 here.	corrected
702	4/1/10	Caroly Shumway	Boston University	250.3.13	paragraph 13. Grammatical correction: Fourth sentence: add comma after “During the 1980s” and after “by 1994.”	corrected
703	4/1/10	Caroly Shumway	Boston University	250.4.2	Add 3rd sentence. “Sightings occur primarily in the deeper waters of the Ocean SAMP area.”	corrected
704	4/1/10	Caroly Shumway	Boston University	250.5.2	paragraph 2. The text here does not match table 2.9. Further, the names of the turtle species should be noted in this text. Change to: “two (2) can be considered common: the leatherback and loggerhead; one (1) as regular: the Kemps’ ridley; and one (1) as rare: the green sea turtle.”	text / table mismatch corrected; no change taken in order to stay consistent with similar description of marine mammals.
705	4/1/10	Caroly Shumway	Boston University	250.6	Don’t we have maps of use, including abundance, in the Ocean SAMP area by birds? The only map to date is the seaduck map, and it basically maps every coastal area equally. This is an important addition to the phenology graphs. Policy section: Given the phenology graphs for the birds, it looks like it might be useful to restrict construction and/or use of the wind turbines from March 1-April 10th. That could eliminate any conflict between the wind turbines and the majority of the species of waterbirds, gull, and sea ducks.	there appear to be no other maps available at present; policy section amended with suggested information

706	4/1/10	Caroly Shumway	Boston University	280	Literature Cited Etnoyer, P., D. Canny, B. Mate, and L. Morgan. 2004. Persistent pelagic habitats in the Baja California to Bering Sea (B2B) Ecoregion. Oceanography 17: 90-101. Greene, C.H., A.J. Pershing, T.M. Cronin, and N. Ceci. 2008. Arctic climate change and its impacts on the ecology of the North Atlantic. Ecology, 89(11) Supplement, S24–S38. Haney, J.C. 1986. Seabird segregation at Gulf Stream frontal eddies. Marine Ecology Progress Series 28: 279-285. Mann, K.H., and J.R.N. Lazier. 2006. Dynamics of Marine Ecosystems. 3rd edition. Blackwell, Malden, Massachusetts, USA. McManus, M.A., A.L. Alldredge, A.H. Barnard, et al. 2003. Characteristics, distribution and persistence of thin layers over a 48 hour period. Marine Ecology Progress Series 261: 1-19. Munk, P., P.O. Larsson, D. Danielsen, and E. Moksness. 1995. Larval and small juvenile cod Gadus morhua concentrated in the highly productive areas of a shelf break front. Marine Ecology Progress Series 125: 21-30. Wishner, K.F., D.M. Outram., and D.S. Ullman. 2006. Zooplankton distributions and transport across the northeastern tidal front of Georges Bank. Deep-Sea Research II 53: 2570-2596. Worm, B., M. Sandow, A. Oschlies, H.K. Lotze, and R.A. Myers. 2005. Global patterns of predator diversity in the open oceans. Science 309: 1365-1369.	used as appropriate
568	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	200.4	Figure 2.1: To my knowledge, the general publication standard is that table legends go above the table and figure legends go below the figure.	Corrected throughout the chapter
569	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	210.4	Figre 2.4: Without a legend to explain what the colors mean or even where the location is, this is essentially abstract art.	This figure was removed

570	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	210.6	Figre 2.6: (1) the map legend is completely unreadable at the printed size, so you need to add something about the meanings of the different colors to your legend. Otherwise the figure provides no value. (2) You can adjust brightness and contrast of a graphic so it doesn't look quite so washed out ("Format" "Picture" in Word).	This figure was removed
571	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	220.3.1	Figre 2.10:I'll give you the benefit of the doubt and put the blame on the NOAA mapping people, who just can't seem to grasp the concept of map projections.	no action taken
572	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	230.2	Figre 2.13: This is a terrible figure to begin with, and it doesn't really show what you claim in the legend.	Figure remove/replaced with new, combined figure.
573	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	230.3.1 .6	Figure 2.21: These do not show temperature; they show the probability that the front is located at any given point.	Figure legend was corrected
574	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1	Wrong verb form: "… characteristics … provide conditions" ,	corrected
575	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2	Hyphenate "first-order",	corrected

576	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3	“phytoplankton species composition matches”,“…, in both locations the majority …”,Overly wordy – “Given the lack of recent data on phytoplankton species composition in the Ocean SAMP area,” And you can drop “in the Ocean SAMP area” at the end of the sentence.,Wrong verb: “Changes … suggest”	corrected
577	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2	“off of” is one preposition too many; just “off”,	corrected
578	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3	Change “bounds” to “overlaps”	corrected
580	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.1 .1	“all-important”,Run-on sentence	rewritten
581	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.1 .2	The topic is productivity, and you just spend paragraph 1 talking about units of measurement, but now you’ve gone off-topic to chlorophyll concentrations (in a different unit) and species diversity.,	rewritten
582	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.1 .3	“the phytoplankton population” is a misuse of terminology. The biological definition of “population” is “a relatively stable, geographically localized association of members of the same species.” It does not pertain to the number of individuals, and it is limited to one species. I’m assuming you meant “phytoplankton abundance” or “phytoplankton concentrations.”, “one-half the size” is poor wording	corrected

583	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.1 .4	Awkward wording. Is there a point to the reference to “In earlier work.” And there’s “the phytoplankton population” again. Why not – “Smayda (1957) noted that Skeletonema costatum comprised 81.2% of the total phytoplankton in lower Narragansett Bay,”, “suggested”	rewritten
584	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.1 .5	How do you get volume-based estimates from remotely sensed color (i.e., chlorophyll). Is the number presented biomass or productivity?, It’s really hard to follow what you might be trying to say when you keep switching units—three different ones in three sentences. , Did the Army Corps do this work, or were they just repeating what someone else said. You should cite original sources whenever possible., Questionable grammar: “These measurements are consistent … and is consistent”	rewritten and related to a newly added table to provide better context for the information presented.
585	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .1	“minimum”, “population” again	corrected
586	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .2	Off topic; what does this have to do with seasonality? Figre 2.28: What are the numbers in parentheses below the years? Is that the annual production referred to in your legend (because the figure’s legend is daily)?	paragraph removed, related text rewritten and new table added to provide context to material presented.
587	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .3	Ditto	paragraph removed.
588	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .4	The first parenthesis repeats what you’ve already explained. The second one is a bit late, since you started talking about chlorophyll a couple pages ago., Confusing. It looks like you are citing Hyde for the historical observations. You should move that citation somewhere in the previous sentence, and here cite the historical source(s)., “large-scale”	corrected

589	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .4	Figre 2.29: These aren't really seasonal chl-a concentrations, they're average monthly.	corrected
590	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.2 .5	Figure 2.30: Also not really seasonal production; maybe "Variability in primary production within and between years." Given that production is likely estimated from chlorophyll, does the bottom part of the figure tell me anything different than Figure 2.29?	corrected; figure removed
591	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .3	"maxima" is the plural of "maximum," so you can't have "a maxima" (unless it's a Nissan), "farther"	corrected
592	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .4	"reported no midsummer zooplankton maximum", awkward	corrected
593	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .5	Maybe use "cladocerans" to be consistent with subparagraph b and to avoid needing to capitalize the word. "Coelenterates" is obsolete nomenclature; they've been split into cnidarians and ctenophores. Given that none of the three terms will have a lot of meaning for a non-technical reader, maybe just "jellies" would be better., I think it's "hamatus", "Acartia", Lots of technical terms that readers might not understand – cyprids, nauplii, antizoea, stomatopod, tunicates, coelenterate (see also above), hydromedusae	rewritten
594	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .6	"the phytoplankton population" again	corrected

595	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .7	“showed”, “noted', three Latin names misspelled; don’t italicize “and”	corrected
596	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .8	"was"	corrected
597	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .9	"long-term"	corrected
598	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3	Table legend: “28 stations” “mid” is not a word, it’s a prefix; it needs a hyphen even when physically separated from the word that it is technically part of. Table: Only species binomials should be italicized, not the names of higher-level taxa (Appendicularia, Echinodermata, Salpa, Gastropoda, Chaetognatha, and Cirripedia). In addition, “spp.” should not be italicized.	corrected
599	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .11	Grammar: “trends ... has been noted”, awkward and run-on	corrected
600	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.3 .12	Grammar: “Differences ... is suggested, but has been studied”, “have not changed”	corrected

601	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.4 .1	comma after “proven”	corrected
602	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.4 .2	better word than “instigate”	rewritten
603	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .1	“megalopae” – too technical?	rewritten
604	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .3	delete comma	corrected
605	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .5	“mitchelli” Figure 2.31: The map is not much help, and looks like it got messed up. I would just photoshop together the three pie charts in a row, then change the labels to common names, in a font that can be read without a magnifying glass. Figre 2.32: transport isn’t from the Inner Shelf region, it’s from the shelf edge	corrected; figure corrected as best as possible but leaving map to show sample station locations.
606	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .7	Correct me if I’m wrong, but the table only deals with eggs and larvae., “suggested”	no action taken; word change corrected

607	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .8	You already explained what MARMAP meant, so just use the acronym., needs a period and space at the end of the sentence	left as is for clarity; punctuation corrected
608	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.1.5 .9	Grammar: “Reports ... requires”, “appear”	corrected
609	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.2	Poor wording: delete “and” or reword to “and fragmented as well”	corrected
611	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.3	“were not measured” is unclear; it could mean not found or not tested for.	corrected
612	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.5	“near-shore” or “nearshore”	corrected
613	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.7	delete comma, “suggested,” change “are having a greater impact” to “have a greater impact than large storms”, delete “than are large storms” , delete “resulting in their hypothesis”, change “contemporary” to “recent” Contemporary means at the same time, so in the context of the first sentence would refer to 1982, not now.	rewritten

614	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.9	Table 2.6: The two parts of the first row don't line up; the last letter in one species name isn't italicized Figure 2.33: What is coarse grain, fogerty sediment?	corrected
615	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 1	citation in a smaller font, "proxy for" (also in the legend for Fig 2.34), "first-order", either delete the comma after "interpretation" or add another one after groundtruthing.,	corrected
616	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .3	"follow-up"	corrected
617	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .4	If you don't use it again, there's no need to define the abbreviation., "Arctica" is misspelled, and I'm suspicious that some of the ones in the next couple lines might be.	intent of comment unclear/no action taken; corrections made
618	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .1.1	How much of this was already covered in the sediment section? (I skipped that part).	this is new information/no action taken
619	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .1.5	"noted"	corrected

620	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .2.1	“shallow-water”, all one sentence, series is not handled correctly; change commas to semi-colons after “annulata” and “pinguis”; add “and” before “Lepthocheirus”,	corrected; no change made; corrected
621	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .2.2	“sp.” or “spp.” is not part of a species name, so should not be italicized., run-on sentence, change comma to “at”, “were analyzed”	corrected
622	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .2.4	Grammar: “Sea scallops are large bivalves”, change “were” to “where”, do you mean “>110 m”? (note there is space missing between the number and the units)	corrected
623	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.2.1 .2.5	“make-up” (“composition” would be even better) Figure 2.38: Most of the figure “legend” is just distracting; who really needs to know which overlays are turned off?	corrected
624	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1	“higher-order”, “lower-order”, “high-quality”, why are tuna “large fishes” and sharks “apex predators”? In fact, aren’t birds, marine mammals, and tuna also apex predators? , awkward	corrected; rewritten
625	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.2	Grammar: “Physical oceanography ... play a role” And “circulation flows” sounds a bit odd. , awkward, “The authors did note, however, that there were not enough data ... but they did suggest causality.”	rewritten

626	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.3	delete “of course”, change “a source” to “sources”, “bottom-dwelling”, “septemspinosa”	corrected
627	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.4	You need to watch more closely that the parts of sentences match as to singular vs. plural. This sentence is a real hash—a plural subject, a singular descriptor amplifying the subject, a plural verb, and a singular object.	rewritten
628	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.5	not very good form ... a reader should need to skip ahead to figure whose abundance?, delete last part (isn’t that true of just about every study cited?)	intent of comment unclear/no action taken; corrections made
629	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.6	“bottom-feeding”, “Obelia articulata” (stabbed in the back by the spell-checker again)	corrected
630	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.7	None of these common names should be capitalized, and it’s “longhorn sculpin” in your table on the next page	corrected
631	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.7	Table 2.7: the words got mixed up, in the next table too. And again we have the tables before they are mentioned in the text.	corrected

632	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1	delete “dwelling”, change “returning” to “return” Figre 2.39: The legends are too small to read. Maybe stack the two.	corrected; figure stacked
633	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1 1	what is a “small rock pike”?, verging on run-on sentence	rewritten
634	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1 2	are they “major” invertebrates or commercially important invertebrates?,	they are major components of the ecosystem, secondarily of commercial importance.
635	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1 3	Grammar: “fundamental shift ... that have”	corrected
636	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1 4	“noted that they expected”	corrected
637	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.3.1 5	Grammar: “Similar changes ... is being noted”, either “Northeast Atlantic” or “northeastern Atlantic”,hyphenate “cold-water” and “warm-water”, why is “red-hake” hyphenated?, previously you combined “longhorn” as one word,	corrected

638	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4_ 250.5	The cetacean and sea turtle sections of this chapter seem to be unique in citing only the SAMP technical report and nothing from the primary literature.	this is correct/no action taken
639	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.1	many toothed whales are squid specialists, so it should probably be “fish and squid eaters”, I don’t really know of evidence for marine mammals following migrating fish schools. , This seems to imply that the fish-eating toothed whales prey more on larger fishes, but in fact many species also eat most “smaller-sized schooling fishes”, Grammar: “some baleen whales ... feeds”, make it “zooplankton” ... too many people already mistaken think that baleen whales are herbivores	corrected and rewritten
640	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.2	Gives the incorrect impression that there are no studies of the populations in the SAMP area, and maybe that there have been none. While it may be true that there are none focused specifically on the SAMP area, the data represented in the figures you’re about to present came from some very extensive research projects over much a much broader area, some of which are still on-going. Only one manatee at a time, but it’s now happened in five separate years—1995, 1998, 2006, 2008, and 2009 (the last not in the draft tech rept, but added in a footnote in the upcoming revised final version)	rewritten
641	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.1 .1	“Cetaceans include whales, dolphins, and porpoises. They use ...”, Table 2.9: “Gray seal” (it would be “grey” in England or Canada); I would probably add something (perhaps “E” or “T” in parentheses) to identify the ESA-listed species.	corrected; table not changes as original work can be referenced for this information.

642	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.1 .2	Because of regulatory concerns, I would think that every ESA-listed species and every species tagged as “common” in the table should be mentioned specifically in the text (and maybe given a figure, if there is one). I think the way I would go would be to have a subparagraph (a, b, c ...) for each species, even if it’s only a couple or few sentences. Be careful ... the figures show relative abundances. In addition, while it may be true that fin whales are relatively rarer in the SAMP area than elsewhere in our study area, they are still the most common whale in southern New England and likely to occur in the SAMP area (note that the relative abundance scales are different for each species).“offshore” is probably misleading when applied to right whale migration past Rhode Island, especially in the spring. The mid-shelf may be offshore relative to Rhode Island Sound, but to me offshore implies the outer shelf or shelf edge. Right whales frequently come relatively close to shore—close enough to have supported shore whaling in eastern Long Island from the early 17th to early 20th centuries.Watch out for sloppy geographic descriptions. Baleen whales are in fact as rare or even rarer in Vineyard and Nantucket Sounds than they are in Block Island and Rhode Island Sounds.That area off to the east of the Cape and Nantucket where the big aggregations occur is Great South Channel/Wilkinson Basin/Provincetown Slope/western Georges Bank.	this would add a significant amount of text to the chapter to address relatively rare visitors (to the Ocean SAMP area). The reader can reference the Kenney report for greater detail and depth. No change made regarding those comments. Sections rewritten to better reflect use/activity to the east.
643	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.1 .2	Figre 2.46: A new way to misspell my name, (1) Are these figures really useful when shrunk down to such a small size? If you’re going to combine them, I would at least stack them vertically so each species is substantially larger. (2) The map legend is so small as to be useless. Besides, the numbers will differ between species, so would only pertain to one of the three even if they were readable. (3) See earlier comment about tweaking figure appearance.	corrected; figures stacked and made as large as possible.
644	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.1 .3.2	“white-sided”, these descriptions are pretty sketchy. There are some pretty substantial differences between the three species shown in the figure, with harbor porpoises showing more of a migratory pattern than the other two.	the reader can reference the Kenney report for further detail; no change made

645	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.2 .1	when used this way as a compound modifier, it should be “haul-out”, probably putting too much emphasis on invertebrates in the diets. For adults, cephalopods would be the only important invertebrate prey. In some species, krill are important prey for juvenile. Other invertebrates are probably only minor prey items, again mainly in juveniles.	corrected; description of diet is based on the cited literature/no change made.
646	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.2 .2	this is the first time you give a scientific name for a marine mammal species, “haul-out”, run-on; break between “Cape Cod” and “Williams”, “noted”, Note that a relative abundance figure for seals (harbor, gray, and unidentified combined) has been added to the technical report after the first draft which could be included here.	removed; corrected
647	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.4.2 .3	“ranges” (follows from “a ... species” not “Gray seals”), I guess the question is whether Cape Cod is considered part of southern New England. Gray seals are now around the Cape year-round., there is a lot more information given for gray seals, who mainly are in the SAMP area as recently weaned juveniles, than for any of the common and/or ESA-listed cetaceans, changing the spelling of the common name within the same paragraph, “gray”, “noted”	corrected; noted information did not readily turn up during literature searches made; no change made. Spelling corrected
648	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.5.1	Simplified to the point of being incorrect. As adults, only leatherbacks feed mostly on jellyfish (more properly, on gelatinous prey, because they also eat ctenophores, siphonophores, and salps). Loggerheads eat benthic mollusks and crustaceans, ridleys eat crabs and other crustaceans, and greens are herbivores. Juvenile diets are more varied, and change with life stage and habitat., same comment as for the mammals, and we got no fishery bycatch data for the turtles.	rewritten and corrected as noted
649	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.5.3	Not exactly true. We did include a map that show quite a few sightings in the SAMP area, but only a minority were from survey data that were included in the relative abundance map. In fact, later on in this paragraph where it refers to the figure showing “all sightings” is wrong (it was apparently taken from the wrong figure legend; the year span is also wrong, since there were no surveys before late 1978)., Loggerheads should be mentioned, since they are listed as Threatened (and NMFS is now considering a petition to change the status to Endangered) and are regionally much more abundant than leatherbacks (though farther offshore).	rewritten to better reflect what the figure shows

650	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.1	“nearshore”, there are no geese in the table, but what about gulls and terns?, there are no petrels; storm-petrels belong to a different family, will readers know what “passerines” are?	corrected; Paton etc. reports do not mention geese--no change; gulls and terns are mentioned already; passerine is defined
651	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.2	“overwinter”, Ornithologists have the idiosyncratic standard of capitalizing common names, like you did in the table, e.g., Common Eider, Wilson’s Storm-Petrel (note the hypenated name for the latter)., Wilson’s Storm-Petrel is perhaps a poor example to use here. This is actually their winter habitat, since they nest in the Southern Hemisphere during our winter/their summer. , Table 2.10: The first letter of Larus for Ring-billed Gull is in a different font and not italicized; it should be “Storm-Petrel, Wilson’s,” so it will need to move down the list to stay in alphabetical order.,	corrected and rewritten
652	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.3	poorly worded—“Reinert et al. (2002) found 109 species of songbirds on Block Island during the spring migration and 113 species during fall migration, with 103 of the species occurring in both seasons.”, “spring-captured” “fall-captured”, delete last part Table 2.11: Should probably say “The most common”, the scientific name for catbird is all run together; doesn’t follow the previous bird table in capitalizing common names.	corrected
653	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.3	"nearshore"	corrected
654	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.5	Then what is the point of including Fig. 2.50?, “storm-petrels” not “petrels” and the same comment applies about “after their nesting period.” Greater and sooty shearwaters also breed in the Southern Hemisphere, so this is their winter range. Figre2.52: “storm-petrels”, I’d get rid of their figure titles, since they are inconsistent and use “Samp” once. You could also conserve space by cutting off the time scale except on the bottom one, since they’re all the same. The labels on the vertical axes are all cut short.	rewritten to better explain figure use; corrected and rewritten as suggested. Figures only changed to extent possible as they are not original figures but those taken from SAMP research reports.

655	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.6	misspelled second part of scientific name (should be the same as the genus), are you sure this has been interpreted correctly? It sounds like all the harlequins are lined up in a tight bunch exactly 50 m from shore. ,	corrected; rewritten
656	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	250.6.7	This doesn't sound right to me. Maybe the primary causes of mortality of wintering loons in our area are trauma and infection, but my understanding is that the principal cause for decline in abundance is loss of breeding habitat. , should "Oil Spill" be capitalized?, I have never seen a loon eat a crab. Who says that crabs are an important enough diet component to warrant being listed first?	entire paragraph deleted, not relevant.
657	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.1.3	What's the source? Is this something new or just a periodic phenomenon? And don't italicize "sp."	paragraph removed.
658	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.2.1	another comma after "only", I think "live-market"	corrected
659	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.2.2	you are talking about multiple species, so it should be "ranges", delete "to which they are introduced", don't italicize "spp.," which is plural, so it should be "The colonial ascidians" and the next part needs to be "are particularly aggressive invasive tunicates ... and have become firmly ..." Further down in lines 6-7, "This species" is also not right., It is inappropriate to use postal abbreviations for state names in written text., Unless you were mistaken in using "spp.", you are discussing more than one species.	corrected and rewritten
660	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.2.2	figre 2.53: At least you could straighten out the scanned figure, and make it big enough to actually see the symbols and read the labels and symbol key. And delete their figure legend. table 2.12: insert "marine" into the legend, don't italicize "ssp."	figure deleted

Ocean SAMP Chapter 2. Ecology of the Ocean SAMP Region – Comments & Responses (as of 8/5/10)

661	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.3.2	"bacterium", now it should be "bacteria" (you are using the plural verb "are"), and "Flavobacteriaceae" is a family name and should not be italicized. In fact, this would be clearer worded as "and bacteria in the family Flavobacteriaceae are the ...", "their" is a strange word choice; delete or replace by "are", Awkward wording, and who thinks this? How about something like "Expected consequences to wild populations include higher mortality, ..."	corrected and rewritten
662	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	260.3.3	"bacterium" , delete the last word in the line (rickettsia-like does not make it a rickettsia)	corrected
663	4/2/10	Robert Kenney	University of Rhode Island Natural Resource Science	280	see my comments on the climate change chapter about references and formatting	will discuss w/chapter author as appropriate.
664	4/5/10	Allison Castellan	NOAA OCRM	200	Overall, this chapter is well researched and provides a very thorough overview of the physical, chemical and biological environments within the Ocean SAMP area.The current draft does not include any enforceable policies for CZMA purposes. Please make sure the policies and standards you develop are enforceable (see our comments on the policy section of other draft chapters). The Ocean SAMP chapters must include enforceable policies, otherwise, OCRM will not be able to approve any of the chapters for incorporation into your federally approved CZM program.	these are being developed and the comments will be considered throughout the policy & standards writing process
665	4/5/10	Allison Castellan	NOAA OCRM	240.2.1	This paragraph notes that toxins are typically limited to the benthos and would only be made available for uptake if the sediment was disturbed. What about consumption of benthic dwelling species? Is there any research to support uptake (or lack there of) by benthiovers?	paragraph rewritten to address this issue

666	4/5/10	Allison Castellan	NOAA OCRM	250.4	Table 2.9: Statements made in the paragraphs following this table don't always agree with information provided in the table. For example, the table lists humpbacks, minke and fin whales as "common" but para 2 states "all are relatively rare in the Ocean SAMP." The same is true for sea turtles. The table lists both loggerheads and leatherbacks s "common" but 250.5 para 2 notes that of the 4 sea turtle species, only 1 is common, 1 regular and 2 are rare. I understand data may not be refined enough to distinguish between the Ocean SAMP and nearby RI waters but, if possible, it may help to add another column to the table—one column for the species occurrence within the Ocean SAMP and another column for occurrence in nearby waters. I think it would be fine to say "unknown" if you don't have sufficient research for the Ocean SAMP area.	Table legend rewritten to be clear about this and to remove any confusion.
707	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	220.2	The "Waves" subsection (now 220.2) should be a component of the "Physical Oceanography (PO)" section, not the "Meteorology" section.	this section was moved as suggested
708	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1	A better title than "Tides" for that section, especially if as I suggest below you expand it to include the topic of tidal mixing fronts, would be something a bit broader such as "Tides and tidal processes".	titled changed as suggested
709	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.2	Either the "Temperature" subsection (of the "Physical Oceanography" section) should be accompanied by a similar "Salinity" subsection, or it should be renamed to something even more broad like "Hydrography" and include both temperature and salinity information (or perhaps temperature, salinity and density as well). There are paragraphs about salinity in both the first section (200) and the freshwater inputs section, which would fit better in their own salinity subsection.	temperature and freshwater sections combined as suggested, and rewritten to account for the movement of text.
710	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	200.4	Suggest clarifying that the OSAMP area includes central and eastern BIS as opposed to all of BIS.	incorporated

711	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	200.7	Suggest replacing sentence "As with temperature, salinity shows distinct seasonality." by: "The seasonal cycle for salinity includes lowest values in late spring and summer, Boston Universityt as compared to the seasonal cycle in temperature it is both less regular and smaller in amplitude, relative to shorter-term and inter-annual variations." Might also be appropriate to cite CU10.	this paragraph rewritten to reflect comments & suggestions
712	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	200.9	A bit odd to cite Edwards et al (2004), which was a study of circulation and frontal dynamics, for descriptions of bathymetric features—does no such description exist in the geological and sediment transport literature?	No action taken---this is where the information/refrence was found.
713	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	200.1	Using "Inner Shelf" to describe the area south of BIS/RIS is very problematic because "inner shelf" is traditionally used in coastal PO to refer to the area about a few m deep to say 10 or 15 m deep--based on being a transition between deeper shelf waters and the surf zone; this is clearly not applicable to this southern portion of the OSAMP domain. I suggest calling it the "offshore OSAMP area" or something similar, as done by CU10; there are good reasons for this as a better name and doing so will make this chapter more consistent with CU10.	suggested change was made and carried out throughout the entire documents
714	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	220.1.1	Suggest modifying first sentence so it reflects that there is "a diurnal sea breeze component, particularly in summer", but that this is generally considered a minor feature in comparison to the seasonally-varying pattern being described. As it reads now, the impression is left that winds are dominantly diurnal, which I don't think is particularly apt. Second sentence seems to belong in the waves subsection.	corrected as suggested; second sentence not moved
715	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	220.1.2	First sentence very confusing. (The only way I can get it to make sense is if I replace "overall circulation patterns" with "mean circulation on timescales of seasons or longer". Is that what was intended?) In fact, the wind is a major driver of circulation on timescales from days to months—typically the wind-driven flow magnitudes are as large as, or much larger than, the long-term mean and seasonal-mean circulation. This is described in some detail in CU10. This discussion would be more complete if it also mentioned that the seasonal-mean circulation in winter, while much weaker than shorter-term wind-driven fluctuations, has a distinct upwelling pattern (and this is not very true of the summer seasonal-mean circulation). See also CU10.Ending comment would be strengthened by noting that Codiga and Aurin (2007) made direct observations of exchange flow between LIS and BIS and showed that it was weakest in winter.	entire section rewritten and reorganized to better describe circulation patterns throughout the SAMP area.

716	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.2	This discussion would be improved if it mentioned that, for the SAMP region, the typical flow pattern is from east (and north) to west (and south). That is, flow at the southern boundary of the OSAMP area is typically along-shelf to the west and southward, such that water generally enters the OSAMP area from east (hence originating farther north along the larger-scale regional coastlinw) and exits it to the west (and/or south). So the access to the area by northern species is aided by the circulation but, except for unusual events or conditions, the opposite is true for southern species. Hence the potential importance of unusual events (extremely strong storms, hurricanes, extremely dry/wet years, etc) in the arrival of southern species.	section rewritten to reflect suggestions and comment
717	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3	Seems appropriate to mention that numerous PO aspects of the FVCOM output are covered in some detail by CU10.	corrected
718	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1.1	End of sentence, replace “circulation dynamics” with “tidal circulation dynamics”.	corrected
719	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1.2	“Experiences a semi-duirnal tide” should be “experiences a dominantly semi-diurnal tide”.“move water from the Inner Shelf into the sounds and then back out again on the following tide” should be “move water onshore towards the sounds and then oppositely as the tidal phase changes.” The point I am making here is that the tidal advection length does not reach from the offshore SAMP area all the way to the inshore SAMP area except for where the tidal currents are strongest, right between Montauk Point and Block Island. As presently stated, it reads as if water moves all the way across the OSAMP domain each tidal cycle but this isn’t accurate: the tidal advection distance is much smaller than that, particularly in RIS. Detailed tidal current ellipses, scaled such that they show the tidal advection lengths graphically relative to the shoreline features, are given in CU10.	corrected, and section rewritten to reflect suggested changes and comments.

720	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1.5	Shonting and Cook were studying RIS (not BIS), weren't they? Also, the wind stress component of the flow is, by conventional definition, not tidal; so it struck me as slightly unusual to see them included in this section.	corrected and rewritten
721	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1	This section should probably also cite CU10 with reference to the fact that it provides detailed geographic structure of each tidal constituent's (a) sea level amplitude and phase, and (b) tidal current ellipses as a function of depth.	entire section rewritten and reorganized to better describe circulation patterns throughout the SAMP area.
722	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1	Suggest possible additional content for this section:a.In the deepest 10-20 m of deeper portions of the OSAMP area, the vertical structure of tidal current ellipses has been shown to follow theoretical models for Coriolis-influenced frictional boundary layers (Codiga and Rear, 2004). The pattern, with increasing depth toward the seafloor, consists of: amplitude decay, ellipse flattening, major axis turning clockwise, and a phase advance.b.South of Block Island in the upper water column, tidal current ellipses have been observed to vary seasonally, a feature attributed to interaction with seasonal-mean background currents due to the estuarine outflow plume (Codiga and Rear 2004). c.Tidal mixing fronts—their basic attributes (see Codiga Baird Conf Extended Abstract, and CU10) and the fact that they are hypothesized to be present along the periphery of RIS (CU10).	entire section rewritten and reorganized to better describe circulation patterns throughout the SAMP area.
723	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.2.2	The high end of the mentioned temperature range should be 20 or 21 (not 13). Also, it is an obvious point, but the first sentence should probably state that max temperatures are in summer (i.e. to more effectively indicate that this para is about summer, the following one is about winter).	corrected
724	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.2.5	Figure 16. This figure caption should state whether these temperatures derive from the "hydrographic climatology" (I assume this is the case) or the "simulation" component of CU10.	corrected here and for salinity graph to be consistent

725	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.2.6	And figure 2.17! I'm glad that reading this chapter has reminded me about the BIS component of the CT DEP CTD cast dataset, which I should incorporate when we revise CU10. I am pretty sure that the version of the O'Donnell and Houk extended abstract from the Baird Symposium that I saw did not discuss this, though-- so unless there was a later version of it which did (or you are citing a different "in prep" pub from the same authors?), that citation may need to be reconsidered; this might be appropriate: Kaputa, N. P., and C. B. Olsen (2000), Summer hypoxia monitoring survey '91– '98 data review, Long Island Sound Water Qual. Monit. Program, Conn. Dep. of Environ. Protect., Hartford.	The figures are from Jim O'Donnell's Barid 2008 presentation; no action taken
726	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.1	Suggest replacing "… over its vertical profile in the water column" by "… vertically and laterally". Suggest replacing "is considered to be the strongest component of directed flow within both sounds" by "makes an important contribution to the mean circulation on seasonal and longer timescales". Suggest replacing "Tidal ebb and flood is considered to play a stronger role in …." by "… plays an important role in…" AND omitting "… than in overall circulation processes". Suggest omitting sentence that begins with "Winds are not considered to play a major role in circulation patterns within the OSAMP area either, though…" and instead including this: "Wind-driven currents play a significant role on timescales of about a day to several days, particularly during winter in association with storms, but also in the summer due to the diurnal sea breeze."	all suggested changes were put into the text
727	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.2	Ending sentence should be followed by statement that direct observations of exchange flow between LIS and BIS by Codiga and Aurin (2007—see, e.g., CU10 for full citation) showed that it is strongest in summer.	inserted into the text as suggested.
728	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.4	Regarding the sentence about flow from BIS to RIS, starting "Gay et al (2004) found…" —I've read that paper, but don't believe it addressed such a flow? Worth double-checking. Also, "persistent summer breezes" is confusing, do you mean "sea breezes", which by definition oscillate, or "persistent winds"; it seems probably the latter so I suggest you replace the word "breezes" by "wind".	sentence was removed
729	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.5	Figure 2.19. This figure is actually from the Codiga Baird Symposium Extended Abstract (not CU20). However, I would recommend strongly that you replace it by the CU10 schematic (their Figure 105) instead, and include in the discussion the fact that many basic characteristics of the circulation shift seasonally (as portrayed by that schematic).	figure added as suggested; text modified to incorporate new figure as per comments.

730	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3	INTRO: Para 2. "Codiga (in prep) suggests that the approximate mean annual volume transport…" should actually not cite Codiga (in prep) but rather Codiga and Aurin (2007). The comments about flow near Napatree Point should clarify whether those current speeds describe total flow, including the tidal component (this seems most likely)-- or tidally-averaged flow. Para 3. If the first sentence is about flow within BIS, it shouldn't cite Codiga and Rear (they reported on flow outside BIS to the south); citing Ullman and Codiga (2004) might make more sense and is probably what was meant. Later in the paragraph, Codiga and Rear (2004) citation should also clearly be citation of Codiga and Ullman (2004) instead. Figure 2.20. This figure was used in "Codiga in prep (Baird)", however it is originally from Codiga and Aurin 2007, which is what I suggest the caption should instead cite. Para 5. End of this paragraph could also cite Mann and Lazier textbook, which also covers the topic of previous research on ecological influences of tidal mixing fronts in some detail.	all suggested changes were put into the text, including the inclusion of the new citation
731	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.2 .2	Regarding the RIS "cyclonic gyre", Kincaid et al observed a westward summertime current in the northern RIS. This would be consistent with a cyclonic gyre filling RIS, however, it is also consistent with a periphery flow around the boundaries of RIS which enters in the east and leaves toward the west but does not close nor form a gyre. In CU10 the gyre pattern of flow, which was originally put forth by Cook 1966, was discussed and it was pointed out that no evidence to date has been found to support the eastward southern limb of flow that would be needed to form a closed gyre. In the mean time, suggest modifying this para—and para 6 on page 36-- to reflect the updated info I just summarized here, which is from CU10. Basically, I don't think there is much support for the existence of the gyre that Cook 1966 hypothesized; the Kincaid et al results are evidence for the northern westward portion of it only. I'm eager to see Hyde in prep!	suggested changes incorporated into the text
732	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.2 .5	I believe it would be more accurate to state that the mixing and upwelling at Brenton Reef, and subsequent advection in to Narragansett Bay, was "hypothesized" by (rather than "found" by) Kincaid et al 2003. I could be wrong on this but as I recall, they did not have measurements of mixing or upwelling-- but rather were hypothesizing a mechanism that could explain the CTD casts they had collected.	this was corrected

733	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.4	As mentioned above, this could form part of a "salinity" subsection, or be merged with the "temperature" subsection to form a newly-named "hydrography" section covering temperature and salinity.	corrected
734	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.5	May also want to cite this: Whitney, M. M. 2010. A study on river discharge and salinity variability in the Long Island Sound and Middle Atlantic Bight. Cont. Shelf. Res., in press.	suggested manuscript accessed and pertinent information considered/added as appropriate.
735	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.5	Figure 2.24. Caption should clarify whether this is from the "hydrographic climatology" portion (i.e. to distinguish it from the "simulation" portion) of CU10.	corrected
736	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.5	INTRO: Para 3. Seems odd to consider stratification as a stressor; rather I view it as a central part of the natural seasonal cycle, and plays a role in triggering phytoplankton blooms, etc. Breakdown in to BIS and RIS subsections does not work here; for example, section 230.5.2 about BIS actually discusses the "offshore SAMP" area not BIS. Suggest putting all of content from 230.5.1 and 230.5.2 in to one main section, 230.5—instead of subsections. Figure 2.22. The same comments made above for Page 28, Figure 2.6, apply here: I am pretty sure that the version of the O'Donnell and Houk extended abstract from the Baird Symposium that I saw did not discuss this-- so unless there was a later version of it which did (or you are citing a different "in prep" pub from the same authors?) that citation may need to be reconsidered; this might be appropriate: Kaputa, N. P., and C. B. Olsen (2000), Summer hypoxia monitoring survey '91– '98 data review, Long Island Sound Water Qual. Monit. Program, Conn. Dep. of Environ. Protect., Hartford. Suggest additional content in this section, following CU10, based on their analysis of the hydrographic climatology of CTD casts from ~20+ years: a.Quantified delta-sigma and buoyancy frequency values, and their seasonal variations. b.Seasonal variations in pycnocline depths.	entire section reworked, reorganized and rewritten; stratification section moved and rewritten to better reflect its ecological importance as a force, and at times as a stressor.

737	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	250.1.5 .3	This discussion about deep larval transport would benefit from referring to the findings for seasonal-mean circulation in CU10 (shown in the four-frame schematic, their Figure 105). For example, in winter deep flow is weak but consistently onshore, whereas in summer it is counterclockwise along the periphery of RIS.	section rewritten to reflect suggestions and comment
738	4/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	250.1.5 .4	This discussion about the RIS "gyre" could be expanded/clarified following the points made above for Section 230.3.2.	suggestion incorporated
739	4/6/10	Tricia Jedele	Conservation Law Foundation	210.9	CLF is concerned with the prominent opening quote of introduction to the Ecology Chapter. The quote is not at all reflective of the overarching principles of ecosystem based management; is dated and speaks to the dynamic water mass conditions and the transitory nature of fish in only one part of the SAMP planning area, i.e., Block Island Sound. The quote seems to suggest that any changes to the ecosystem, either human induced or natural will not have a deleterious impact on fish (or by implication, the ecosystem) residing in Block Island Sound as they can simply move out of the area. This broad statement seems wholly incorrect and inappropriate – particularly as the opening of such an important chapter of the Ocean SAMP. While the SAMP planning area may be characterized by intensive interaction among various water bodies, it is important to recognize and this Chapter should articulate that there are habitats, particularly benthic habitats and benthic communities that are relatively stable and therefore dependent on maintenance of ecosystem health– a point that is underscored in Section 210 (9) and 250.2.1 (4.d.). CLF's concern is that this misplaced emphasis on the dynamic aspects of the SAMP ecosystem may lead readers to a false expectation that any natural or human disturbance will have minimal impact on the ecosystem so characterized by dynamic natural forces. Instead, the opening should reemphasize the larger goals of the SAMP, i.e., to foster a properly functioning ecosystem; to maintain the ecological capacity, integrity, and evolution of the Ocean SAMP's biophysical and socioeconomic systems.	CRMC's primary guiding principle upon which environmental alteration of coastal resources will be measured, judged and regulated is the preservation and restoration of ecological systems. This is stated in the Introduction chapter and will be stated in the Ecology and New Policies chapters.

740	4/6/10	Tricia Jedele	Conservation Law Foundation		Throughout the Chapter there are references to a lack of data and scientific understanding of various aspects of the SAMP ecosystem and the need for additional research on a variety of topics. The SAMP should be accompanied by a scientific research plan that puts forth priorities that will advance the SAMP and fill gaps in ecological knowledge in subsequent years. This Chapter, most especially, should cross reference the Global Climate Change Chapter and should specifically allow for the fact that its policy recommendations must be adjusted accordingly over time to account for things like ocean acidification, changes in use, etc…	Developing a scientific research plan is beyond the scope of this chapter; climate change informatoin is appropriately cross referenced. Introduction Chapter highlights that Ocean SAMP is an adaptive management tool meaning that policies will be revised based on new information. A research agenda will be created and implemented during year 1.

741	4/6/10	Tricia Jedele	Conservation Law Foundation	250.2.11	A fundamental characteristic of any comprehensive ocean management plan should be the consideration and identification of particular sensitive or unique areas within the overall planning area that would warrant particular protection from significant human disturbance. These could be areas of particularly complex habitat and associated high biodiversity or areas that are frequented by endangered or threatened species, or species of concern, such as the North Atlantic right whale, roseate, tern, or cusk – all species that reside or frequent the SAMP planning area during some part of the year. As the SAMP planning team considers policies and standards in the Ecology Chapter, there should be a recommendation for systematically identifying special, sensitive, or unique habitats and ocean life and recommendations for the protection of these special places in the SAMP planning areas. The Chapter notes that "habitat diversity promotes species diversity – the more complexity a habitat contains the greater the number of species the habitat can generally support." (Section 250.2 (11)). Considering that no comprehensive habitat assessment has been conducted, the chapter proposes that rugosity serve as a proxy for habitat complexity. To this end, the Chapter explains that "while only a first, rough approximation, areas of high surface roughness appear to roughly correspond to glacial moraines; these areas are often hot spots for commercial and recreational fishing activities, which while not necessarily suggesting increased diversity, does suggest highly productive areas of the Ocean SAMP area seafloor" (Section 250.2 (11)). The SAMP planning team should consider developing an Ecological Valuation Index to identify the most important habitats. We recommend that the planning team consult with the MA Coastal Zone Management Office on their work to develop an EVI for Massachusetts state ocean waters and build upon that work. In absence an EVI approach we recommend that Rhode Island identify key special, sensitive, and unique resources and habitats (including areas of high rugosity (as discussed in Section 250.2 (11)) and provide a high level of protection for these places, similar to the approach for Special, Sensitive and Unique resources employed in the MA Ocean Management Plan. This chapter should specify policy recommendations that ensure that impacts from future activities are minimal and acceptable to the scientific community and the people of Rhode Island, and should set the stage to monitor the consequences of decisions and adapt management to the monitoring results. It is incredibly important that this Chapter establish some meaningful standards and guiding principles for ecosystem based management within the SAMP area.	1) Please see Renewable Energy chapter where areas of particular concern and areas of preservation are identified based on the Ecology information; 2) RI is developing and EVI which will be completed in fall 2010 and appropriately incorporated into Ocean SAMP. For more infomration on EVI, please see description in Renewable Energy Chapter.

742	4/6/10	Tricia Jedele	Conservation Law Foundation	250.1.3 .7	Given the intensity of commercial fishing with a variety of bottom tending mobile gear as well as various fixed gears and rod and reel, there is a surprising paucity of discussion about the impacts of fishing on the ecology of the SAMP planning area (Section 250 (7)). Not only is the ecology affected profoundly by the removal of biomass (through both commercial and recreational fishing), but the impacts of various fishing gears, particular bottom tending mobile gear such as otter trawls and shellfish dredges, can alter significant seafloor habitat (Section 250 (7)). The Ecology Chapter should include an extensive discussion of the types of impacts that the various types of fishing can have and is having on the ecology of the areas as well as a discussion of the impacts of biomass removal. This information should then be fed into the identification and protection of special, sensitive and unique areas of habitat and ocean wildlife. There should also be some discussion of climate change and its projected impact on the ecological health of the SAMP area. The Fisheries and the Future Uses chapters should be cited and cross-referenced in this Chapter and, more importantly perhaps, this Chapter should be used to guide the policy recommendations made in the Fisheries and Future Uses chapters.	1) The fisheries chapter includes information on impacts of fishing . This section was expanded based on public comments;2) The climate change chapter covers impacts on the ecological health; 3) The ecology chapters is serving as a guide for policy development for many of the ocean SAMP chapters; 4) Cross-referencing of chapters has increased.
743	4/6/10	Tricia Jedele	Conservation Law Foundation	250.3.1 5	While there is some general discussion of fish distribution in various habitats, there is little discussion of the relationship of different habitats to spawning, juvenile and other critical life history stages of fish and other animals inhabiting the planning area. For example how important is rocky cobble bottom to certain bottom dwelling fish species at various life stages? Section 250.3 (15) notes that cusk, a highly depleted fish species currently undergoing a status review by NOAA Fisheries for consideration for listing under the Endangered Species Act, uses Block Island Sound as an important nursery area. The shallow ridge extending from Montauk Point to Block Island appears to be a heavily used habitat for winter flounder, a highly depleted and overfished species targeted by the groundfish fleet (Section 250.3 (10)). To the extent that data exists on important habitats for different species and different life history stages, this information should be fed into an analysis of and protection plan for various fish and other species, particularly those that are at risk such as cusk and winter flounder.	The fisheries chapter will be referenced as appropriate. Commend on cusk appears to be climate related, not habitat related; 2) The SAMPP process tries to provide a framework for these issues to be developed and dealth with in the OCean Samp; 3) Development section to the extent we could red identify habitats for protection we have done so.

744	4/6/10	Tricia Jedele	Conservation Law Foundation		Related to comment 5 above, the Ecology Chapter lacks a discussion of habitat vulnerability to anthropogenic stresses, including, but not limited to climate change. While there may not be a full understanding of this issue, it should be recognized that some habitats may be more vulnerable than others to various human induced stresses. We recommend that the SAMP planning team review the habitat vulnerability modeling now underway by the New England Fishery Management Council's Habitat Plan Development Team.	Such a dialog would be pure speculation, outside of those references already made in relation to climate change in the chapter. No action taken. Our understanding this that plan has not been completed. (Amber keep the other text in this record).
745	4/6/10	Tricia Jedele	Conservation Law Foundation	200.5	The chapter describes how the SAMP Planning Area is located at the boundary of two biogeographic provinces (Section 200 (5) and 250.2 (2)). As such, it is expected that the area will be one of the first regions to be impacted by climate change as the ocean temperature increases and this boundary shifts. How will the management regime established by the SAMP plan for and address this expected shift? Generally speaking, this chapter should include a separate section on the expected impacts of climate change on the ecology of the SAMP ecosystem, including among other things, expected changes from water temperature increases, sea level rise, changing salinity and ocean currents and ocean acidification.	The Ocean SMAP is an adaptive managment tool and is based on the best avaiable science. Polices will be updated and new resaerch will be incorpated as it becomes known. The SAMP team will develop a reserch agenda and a monitoring and evalatoin plan during year 1.
746	4/6/10	Tricia Jedele	Conservation Law Foundation	230.4	The Chapter must acknowledge and address the impacts of land-based pollution on the ocean planning area. For example, this Chapter as does the Chapter on Global Climate Change documents the importance of freshwater input from the Connecticut and Thames Rivers on the planning area (Section 230.4), but does not detail the impacts of excessive nutrients runoff from activities taking place within the watersheds of these rivers. What are the impacts of stormwater pollution and effluent from the rivers on the ocean planning area and how will the SAMP address this critical issue?	There is little to no data for such a discussion; it would be pure speculation. No action taken.

747	4/6/10	Tricia Jedele	Conservation Law Foundation	250.4.1 .1	Table 2.9 lists the marine mammals and sea turtles found in the Ocean SAMP / Rhode Island Area. While it is important to understand which species are present, it is also critical to understand the broader status of the species. For example, the table lists that the North Atlantic Right whale is common in the planning area. This may be true relative to other portions of the EEZ, but the SAMP should also describe that the whale is listed as an endangered species and that there are approximately 400 individuals currently living today. Further, the SAMP should document, as data allows, the distribution of endangered, threatened or at risk species across the planning area and their designated critical habitats, and propose protections for critical habitats or abundance hotspot areas. We note that the rating of occurrence in Table 2.9 does not mesh with the narrative in various places. For example, Table 2.9 lists North Atlantic right whales, and fin, humpback and minke whales all as "common" in the Ocean SAMP planning area, but then says that the these whales are "relatively rare" or "not common" in the SAMP planning area (Section 250.4 (2)).	I believe all these concerns are addressed, for the most part, in the rewritten and re-figured section on marine mammals.
748	4/6/10	Tricia Jedele	Conservation Law Foundation		In closing, if it is true that the SAMP is being designed to serve as a model for ecosystem-based management, then the Ecology Chapter is the linchpin of the SAMP. The significance of this Chapter should be reflected throughout the SAMP and should be featured in this Chapter. The reader should have a clear understanding that the ecology of the SAMP area is of critical importance and the policy recommendations made and conclusions reached in this Chapter should be referred to throughout the SAMP.	The preservation and restoration of the ecosystem is the guiding principle for the OCaen SAMP. The ecology chapters is the basis for many of the policies in the other chapters.
749	4/7/10	Allen Gontz	UMASS Boston		Figures:1.If these are the final figures, the resolution is not of high enough quality. Figures appear pixilated and fuzzy.2.Figures should be larger. Difficult to see details and include the information required for full understanding of the concepts presented in text.3.Figures generally lack scales, legends, identification of locations4.Figures that show areas with greater spatial extend than the SAMP should/must include the outline of the SAMP.5.Should be internally consistent.6.All figures should have frames around the boundaries of the data7.All figures require lat/lon notation on tickmarks8.With respect to the Ocean SAMP report figures – remove text boxes on the figures that serve as secondary caption. If this information is critical to the figure, then it MUST be large enough for the reader to decipher. Consider moving this information into the caption9.Remove all secondary captions from figures. Figures should have only one caption and number.	1. Many figures redone or removed. 2. All remaining made as large as possible. 3. Being addressed where possible. 4. Being addressed where possible. 5. Comment unclear, no action. 6. Will be formatted in same fashion as all SAMP figures. 7. Not possible to do this; reader can reference Fig 2.1 for that. 8. This is standard format for all SAMP figures; no action taken. 9. Completed.

750	4/7/10	Allen Gontz	UMASS Boston		Content: 1.It seems like this entire work neglects the Inner Shelf. Every section should include a discussion of the Inner Shelf as it is a component of the SAMP. The exclusion of the Inner Shelf in this work makes it an INCOMPLETE document.2.Lots of overlap that could be combined. If they are not combined, the MUST be internally consistent with respect to information and interpretations. a.Sections on Toxins 240.2 and Benthic Ecology 250.2b.Geological framework and benthic habitat3.Remove areas where figures and text are in conflict with the presentation of the same information in other areas.4.I was left with a very poor understanding of how all of this information relates to the SAMP as a whole. It seems quite disjointed and focused primarily on BIS and RIS with the Inner Shelf left out of most discussions.5.Avoid use of "THE AUTHORS" in the text. It is confusing. Not sure if you are referring to a reference or the person who wrote this chapter	1. Some portions rewritten and new text added as suggested, but not possible in all sections due to lack of information; new info will be added as it becomes available. 2.All attempts will be made to achieve consistency. 3. Has been addressed. 4. This will be addressed when and where possible; some new information has been inserted in various sections. . 5. Done for entire document.
751	4/7/10	Allen Gontz	UMASS Boston	200.3	Remove the "and" between LIS and Buzzard Bay.Second sentence "To date, mainly…" is an extremely long sentence. Consider breaking it into 2 or three parts.Third sentence "For example…" PORT should be PART. Fourth and Fifth sentences – the order should be reversed	1. Done 2. Corrected. 3. Section rewritten
752	4/7/10	Allen Gontz	UMASS Boston	200.4	Third sentence "The area of…" Is there are outside of the RIS and BIS that are included in the SAMP?	Yes, that is correct.
753	4/7/10	Allen Gontz	UMASS Boston	200.4	Figure 2.1:Outline the SAMP,Label ALL of the features cited in the text ,Rhode Island Sound,Elizabeth Islands,Narragansett Bay	Corrected
754	4/7/10	Allen Gontz	UMASS Boston	200.8	Rhode Island Sound is not labeled on Figure 2.1	Corrected
755	4/7/10	Allen Gontz	UMASS Boston	200.9	Lacks discussion of water exchange,Lacks details on interaction with LIS	Corrected; Long Island Sound is detailed later in the chapter
756	4/7/10	Allen Gontz	UMASS Boston	200.1	Lacks details on the area and average depth,Lacks discussion of key features	new information included to address details noted.

757	4/7/10	Allen Gontz	UMASS Boston	210	This section seems very disjointed in the early paragraphs. There is no discussion of the glacial history as a whole, especially when the authors put so much evidence on the glacial landforms. It lacks a paragraph that sets the framework. There isn't a discussion of those areas that were not overridden by glacial ice and the landforms or sedimentary environments that results such as past terrestrial environments, submerged shorelines, outwash and the large areas of general reworking resulting from the transgression. The section is very disjointed Discussions of glacial framework mixed with sedimentology. The relationship of the modern seafloor with the evolution from Late-Pleistocene is not clear. The section fails to include a discussion on the evolution of the areas based on sea-level change. In terms of the present seafloor, the surfical features are directly related to the reworking and modification resulting from transgression. THIS SECTION MUST INCLUDE A DISCUSSION OF THE SEA LEVEL HISTORY AND THE INFLUENCE OF SEA LEVEL CHANGES ON THE LANDSCAPE. GLACIAL GEOLOGY IS ONLY ONE PART OF THE STORY.	1. Intro paragraph inserted and some history / background follows later in the section. 2. Beyond the scope of this chapter, the reader can reference the primary literature.3. Said earlier; no action. 4. This may be addressed in following section text; comment a bit vague. 5. To be addressed if time and information is at hand. 6. partially rewritten and revised to better put sea level rise into context; new map added.
758	4/7/10	Allen Gontz	UMASS Boston	210.1	There should be a figure that shows the LGM margin and its location within the SAMP.Last sentence "The maximum extent…" contains a list of units based on sedimentary texture and one unit that is composed of a geomorphic unit that contains a genetic connotation. This last class "MORAINE" should be removed as it is merely a combination of the sedimentary textures. If you wish to go with a genetic classification scheme, then the sedimentary units must be removed and replaced with units such as beach, shallow marine…Lacks discussion of impact of reworking of terrestrial, estuarine, palustrine, lacustrine and fluvial environments during the most recent transgression. This is just as important if not more than the processes associated with glaciations.	1. Figure changed. 2. Comment unclear; no action taken. 3. Beyond the scope of this chapter.
759	4/7/10	Allen Gontz	UMASS Boston	210.1	Figure 2.2: Figure NOT required. It is not linked with the text.Comments on the margin are not readable. What do the arrows represent?The ice margin is not labeled.What is the solid black line that splits from the shoreline just to the left of the label "SHORELINE"?	Figure replaced with a new figure addressing concerns.

760	4/7/10	Allen Gontz	UMASS Boston	210.2	Figure 2.2 does not refer to 9.5 kya, but 17 kya. No information in the paragraph that relate to Figure 2.2. REMOVE. A sea level curve or figure detailing the flooding events of RIS and BIS is required.Third sentence "Current sea level…" (at Montauk, NY) the () are not required. Montauk rate requires errors and expansion to two significant figures. Without the similar precision, this reading does not add to the discussion. It should be equivalent or NOT used.What about a sea level rise reading on the eastern edge of the SAMP, ie Martha's Vineyard or Falmouth.	1. Corrected in new figure. 2. This is beyond the scope of this chapter and would not add significantly to understanding the ecology; no action. 3. corrected. 4. Corrected. 5. Corrected.
761	4/7/10	Allen Gontz	UMASS Boston	210.3	This paragraph is all about moraines and not the general geologic framework.Should include a broader discussion of the overall framework and discuss glacial, lacustrine and transgression-related landforms OR a discussion on the sedimentary environments.	The moraines are important features to the ecological layout and so are emphasized. Suggested elaboration would provide too much detail that is not needed. Reader can reference primary literature for details.
762	4/7/10	Allen Gontz	UMASS Boston	210.3	Figure 2.3:Remove title and caption for the lower right portion of the figure.Not a glacial geology map, only moraine location map and glacial lake, if this is to be a glacial geology map, it should include other glacial geological units that occur in the area, ie outwash, till, glacial lacustrine, Missing classifications around the tip of the Elizabeth Islands	1. Standard for SAMP maps. 2. New figure used; legends corrected.
763	4/7/10	Allen Gontz	UMASS Boston	210.4	CROSS-SHORE SWATHS – these have been referred to in the literature as RIPPLE SCOUR DEPRESSIONS.How does this paragraph relate to the previous paragraph?Lacks areas related to glacial lake sediments as referenced in Paragraph 3, Figure 2.3. This paragraph seems purely focused on this small area of the SAMP and not broadly applicable to the entire area. Does not seem to include all of the depositional environments that are found within the SAMP	1. Terminology kept as these are from the cited literature used here. 2, 3. The focus is on the sediment types. 4, 5. This correct but this was the information readily available and that was considered suitable for understanding the ecology.
764	4/7/10	Allen Gontz	UMASS Boston	210.4	Figure 2.4: Figure lacks legend, What are the red boxes, Where is this located within the SAMP, What areas are outside the SAMP	Figure removed
765	4/7/10	Allen Gontz	UMASS Boston	210.6	Figure 2.6: Boundaries of the SAMP, Cannot read the key to evaluate the figure, Unsure if the figure supports text	Figure removed

766	4/7/10	Allen Gontz	UMASS Boston	210.6	Paragraph is difficult to read. Consider rewriting, Very choppy,Key theme lost in list with Sentence 1,Sentence 1 – too long, the list at the end is extremely cumbersome. Reduce the components of the list or break into two sentences,Sentence 2 – awkward,Sentence 3,Are depositional areas always areas of reworking and sorting?,Depositional areas are typically found in bathymetric LOW areas. If depo areas exist on highs, state SIGNIFICANT evidence to support this.What about evidence from sidescan for disturbance and sorting based on trawling?	Enitre section rewritten.
767	4/7/10	Allen Gontz	UMASS Boston	210.5	Second sentence “Sediments and bottom…” sea floor should be seafloor, Focused on the shallow water areas in the inner areas of BIS and RIS. What about deeper water areas of the inner shelf, Lacks discussion of fair-weather processes and fine sediment deposition	figure removed and section rewritten
768	4/7/10	Allen Gontz	UMASS Boston	210.5	Figure 2.5:What do the colors represent?Focused on shallow areas, what about deeper water areas of the inner shelf	Figure removed
769	4/7/10	Allen Gontz	UMASS Boston	210.7	Move figures 2.7 and 2.8 forward. Too much space between where they are cited in the text and where they are located	Corrected
770	4/7/10	Allen Gontz	UMASS Boston	210.7	Figures 2.7 & 2.8 referenced in the paragraph do not discuss or illustrate bathymetric control on seafloor geology, MUST include bathymetry on Figure 2.7 ,Show location of figure 2.8 on 2.7,Sentence 1 – no indication on Figure 2.7 or 2.8 of benches or scarps – how do these features relate to the basic units loosely defined on figure 2.7,Sentence 2 – Paleo-shorelines are trending WSW-ENE, where are the former fluvial channels,Sentence 3 – fluvial channels and paleo-shorelines do not relate to the glacial origins, but relate to sea level rise and reworking of older sedimentary deposits.,How does till relate to sand sheets?	1. Meaning unclear. 2. Bathymetry not possbile to add. 3. Figure 2.8 removed. 4, 5, 6. Intent of comments unclear.
771	4/7/10	Allen Gontz	UMASS Boston	210.7	Figures 2.7: General: Move forward in the text Imaged pixelated Location with respect to the RI SAMP and greater region? Present shorelines? Bathymetry? HOW DOES THIS FIGURE RELATE TO FIGURE 2.3? Without locational information, one could draw the conclusion that these two figures are in conflict!!! Relate the glacial features from Figure 2.3 with the sedimentary units on Figure 2.7 Top:Avoid mix of sedimentary unit, geomorphic units and geophysical units onstruct maps that contain one map unit type Low-Moderate-High backscatter = ?? Bottom: How is sorting and reworking different from bed-load transport	new text has been added and rewritten to address comments; figures removed and text moved as well.

772	4/7/10	Allen Gontz	UMASS Boston	210.8	Sentence 1 – Who is the author? Savard or the author of this report?How does this paragraph relate to the "glacial features" of Figure 2.3. A figure with general bathymetry would be useful as would a locaitonal map indicating where this hole.Without an interpretation or relationship to processes this paragraph seems unneeded. Could easily be rolled into PARAGRAPH 9	1. Corrected. 2. Revised figure used with better bathymetry; hole not marked as is a minor feature.
773	4/7/10	Allen Gontz	UMASS Boston	210.9	Once again – mix of genetic and sedimentological units and descriptions. Stick with genetic or sediments for discussions. How are boulder fields different from moraines????	Text rewritten to clarify.
774	4/7/10	Allen Gontz	UMASS Boston	210.9	Figre 2.8: Move forward in text. To far removed from citation.Must be a higher resolution figure.To what does the backscatter scale relate? Dark = ?Location?Not sure I by the benches interpretation – the benches appear to have a radius of curvature very close to that of the interpreted mega ripples and sand waves that are in close proximity. Could this be an issue of look angle of the sidescan? Interpretation is not convincing and the text does not support the interpretation	Figure removed
775	4/7/10	Allen Gontz	UMASS Boston	220.1	Relationship of severe storms to alteration of the seabed and mobility of sediments	Mentioned in first sentence of section
776	4/7/10	Allen Gontz	UMASS Boston	220.2	What about the area within the SAMP from Block Island east to the Elizabeth Island and those areas seaward of the moraine?If you are going to discuss this in terms of one area, make the jump to the other areas	Corrected
777	4/7/10	Allen Gontz	UMASS Boston	220.1.2	Winds do not play a role in overall circulation? – Then states how the winds drive water flow out of LIS and exchanges through BIS and RIS. This is a confusing statement considering that there isn't a discussion of what the overall circulation patterns are. Include the overall circulation and how these winds alter the overall circulation	Rewritten to correct and clarify
778	4/7/10	Allen Gontz	UMASS Boston	220.1.2	Figure 2.9: For what years are the months averaged or is the daily average over one year. If so, what year.	these are averaged over a 20 year span; see cited refernece
779	4/7/10	Allen Gontz	UMASS Boston	220.1.3	Keep the wind speed units consistent with Figure 2.9. Convert 4.0 km/hr to m/sec..What is the cause of the change in winds? Related to larger-scale climate?This paragraph leaves a hanging thread. Compete the thought and relate the change in wind speeds to something.	Corrected

780	4/7/10	Allen Gontz	UMASS Boston	220.2.2	Convert 97 kph to m/s for comparison to Figure 2.9. Why 60 m? Should it not be compared to the average depth of the SAMP area? It would make much more sense. Possibly relate to the areas of sediment defined in Section 210.Based on what grain size? Is it a reasonable grain size for the area?Sentence 4 – in order to make this statement, more details must be presented (see 1-3)	Section moved, rewritten and corrected. 60 m is from the mode runs and equals the depth of disturbance.
781	4/7/10	Allen Gontz	UMASS Boston	220.2.3 .1	Figure 2.10:Difficult to follow trends of individual storms.Hurricane of 1938?Consider this as an inset in a detailed map of the SAMP area showing the hurricane trends	Intent is only show storm tracks, not detail. 38 hurricane was not a direct strike to RI. Figure legend was changed.
782	4/7/10	Allen Gontz	UMASS Boston	220.2.3 .3	Sentence 4 – what is the size of the particle transported 40-80 km?Why no discussion on character of these systems and comparison to hurricanes. This paragraph makes the Hurricanes look more significant that Nor'easters.How may nor'easters have struck in the same time period as hurricanes, What are the typical wave climates and wind climates based on these storms.Potential for sediment transport, resuspension and mobilization of the seabed	1. Particle size not given. 2. Figure 2.11 removed. The intent is to provide reference to major forces that may have an influence on the ecology over the short term, not to go into great depth about the meteorology of those forces; other sources can provide that level of detail.
783	4/7/10	Allen Gontz	UMASS Boston	220.2.3 .3	Figure 2.11: Why is this figure in FEET.What is the significance of the colored dots?	Figure removed
784	4/7/10	Allen Gontz	UMASS Boston	220.2.3 .4	What about coastal morphology for control of storm surge?Why is Figure 2.11 not cited in this paragraph. Why is the paragraph in meters and the figure in feet – CONVERT. What is the location of the estimated storm surges? Newport and providence are on Figure 2.11, both outside the SAMP and numbers in text do not match Figure 2.11.MUST reconcile the difference between Figure 2.11 and Paragraph 4. Considering Newport and Providence are outside the SAMP, you might want to remove Figure 2.11 and replace with something that is more closely related to the area of the SAMP	1. Not relevant to the discussion here. 2. Figure removed.
785	4/7/10	Allen Gontz	UMASS Boston	220.2.3 .5	Does the rest of the subsection support this in terms of the figures of hurricane strikes and storm surge? Not clearly apparent. Seems like it might be a bit of a stretch.	This discussion is based on what is reported and the literature with possible further discussion in the Climate Change chapter
786	4/7/10	Allen Gontz	UMASS Boston	230.1	Figure 2.12: Why is bathymetry in feet.Identify the warm core ring. Show the location of the SAMP	Figure has been redone.

787	4/7/10	Allen Gontz	UMASS Boston	230.2	Figure 2.13: INADEQUATE,Poorly drafted and poorly reproduced,This figure should be redone with the same quality as 2.12,Are there bathymetric contours in the Gulf of Maine? If so, what is their depth,What do the number represent?,What's the scale?,Location? Lat-long marks?	Figure removed
788	4/7/10	Allen Gontz	UMASS Boston	230.3	Showa sample of the model output.,Cannot evaluate how the NECOFS might be useable without more information on the model and a sample. This paragraph requires more development, NECOFS could be a one of the most significant additions to this section and it requires more than just lip service	The model is much too complex to show in the chapter so the reader is provided the URL to the Umass website. The model has not been run for the Ocean SAMP area and therefore this would be pure speculation.
789	4/7/10	Allen Gontz	UMASS Boston	230.1.1	Any information of the tidal residence time of LIS, BIS, RIS and the SAMP area?Sentence 3 – "…every other flood and ebb tide"? remove other. Sentence 4 – "…geological topography and glacial origins" this reads really rough. Better said with "geomorphology" which encompasses both concepts.	1. No such information was found. 2. corrected. 3 corrected.
790	4/7/10	Allen Gontz	UMASS Boston	230.1.3	What are the velocities?	Corrected
791	4/7/10	Allen Gontz	UMASS Boston	230.1.3	Figure 2.14: 1.Figure requires Outline,Numbers on the color scale for velocity,Identification of the Race and BIS,Lat Long grid, Scale	The intent it simply to show increased velocities in those areas and that they are important to overall circulation in Block Island Sound; the actual velocities are unimportant to the context.
792	4/7/10	Allen Gontz	UMASS Boston	230.1.6	Cites Figure 2.14 and references direction of flow. Figure 2.14 does not contain directional information. Either remove citation or update Figure 2.14 to include directions of tidal currents along with velocity.	Corrected
793	4/7/10	Allen Gontz	UMASS Boston	230.2	This section would benefit from a figure of summer and winter surface water temperatures	Detail is provided later in the section, this is an introduction
794	4/7/10	Allen Gontz	UMASS Boston	230.2.3	Cox Ledge has not bee identified on any figures, Figure 2.21 should be moved into this section or a comparable figure inserted here.	Fig 2.1 has Cox Ledge. Detail comes later in the section.
795	4/7/10	Allen Gontz	UMASS Boston	230.2.4	Should include figure with MARMAP stations	Readers can visit the MARMAP website for station locations rather than add another figure to the text.

796	4/7/10	Allen Gontz	UMASS Boston	230.2.5	Figure 2.16: Figure requires Blocking/outlines, Geographic location (lat/lon), Location of SAMP area, Should be referenced in Paragraph 3	Fig blocking is not used in the SAMP; other changes not possible as they are not original figures.
797	4/7/10	Allen Gontz	UMASS Boston	230.2.6	Show location of station referenced in Sentence 1 on Figure 2.16	Corrected
798	4/7/10	Allen Gontz	UMASS Boston	230.2.6	Figure 2.17: Show location on Figure 2.16, Expand vertical scale to show separation	Change not possible; not original figure
799	4/7/10	Allen Gontz	UMASS Boston	230.3.1	Last Sentence "…whether they are bluefish or right whales" to informal. Suggest replacing with "…largely determines where predators of all levels within the food chain will congregate to feed."	Corrected
800	4/7/10	Allen Gontz	UMASS Boston	230.3.2	Sentence 2 "-…-" is a very cumbersome sentence. Consider extracting the definition of buoyancy driven circulation into its own sentence	Rewritten
801	4/7/10	Allen Gontz	UMASS Boston	230.3.3	Figure 2.18: Figure pixilated, Scale figures the same, What are VS and NS,Current scales should be included and on the same scale to be able to compare between the figures	Figure resolution not problematic up checking; Figures cannot be scaled same as they are from separate sources. The intent is to show basic current flows and that they are most intense in those areas noted, not to go into the specifics of velocities, which the reader can get from the original soruce docuemnts if desired.
802	4/7/10	Allen Gontz	UMASS Boston	230.3.4	Sentence 1 – Cold deep current only present in winter. Warmer current in summer, See figure 2.16, Consider figure to illustrate the current residuals, ie cite Figure 2.19	No change; modelers are OK with this presentation.
803	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .1	Section focused on interaction between LIS and BIS, No discussion on interaction with RIS or NB,One sentence paragraph combine with paragraph2	The section is focused on BIS; no change made.
804	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .2	Is 24,000 m/s a net or gross, Sentence 3 – appears to be in potential conflict with Figure 2.17, Volume of exchange through Napatree Point	1. Gross. 2. Comment is unclear. 3. Velocity at Napatree not reported in the literature referenced.
805	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .3	Source of the remaining 14,000 m3/s?	This is the net ebb/flood that is not exchanged.

806	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .4	Figure 2.20: Pixilated, Not sure this adds anything to the body of work. It is only referenced with respect to the annual mean. There isn't a discussion that speaks to the annual trends or why max'es and min'es occur. Suggest removing or expanding the discussion to include the annual trend	Text modified to better reference figure.
807	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .6	Locate observing station on a figure	No change, not original image.
808	4/7/10	Allen Gontz	UMASS Boston	230.3.1 .6	Figure 2.21: Pixilated, Include SAMP on the figure	No change, not original image.
809	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .2	Sentence 5 – Who are the "AUTHORS"	Corrected throughout the chapter
810	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .3	Cox Ledge must be located on a figure somewhere, Who are the "AUTHORS", Sentence 2 – add "THE" in "…and an average velocity of 5 cm/s along THE bottom", What is the significance of this paragraph? It outlines two bottom velocities and does not relate them to RIS circulation. Add something that returns the discussion to RIS Circulation	1. See Fig. 2.1. 2. corrected. 3. corrected. 4 The intent is to provide access to limited information and to put into context that velocity flows inshore and offshore appear to be rather different.
811	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .4	Who is the "AUTHOR", Remove km/day notation and use only cm/s. Introduces unneeded cumbersome notation, What is the average and max? Unable to compare to Paragraph 3	1. corrected. 2. This is how the author reports it. 3. Not reported by author.
812	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .5	Sentence 1 – why "upward mixing (upwelling)" Remove upward mixing, Sentence 2 – why "advected (movement in a horizontal direction)" Readers should be of sufficient knowledge to know the concept of advected. If you are writing this an audience who is not familiar with the concept of advection, then the entire CHAPTER must be rewritten to contain more a lay-style and language	1. corrected. 2. Advected is not a common term and so is defined; this is done throughout the chapter where appropriate.
813	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .5	Figure 2.22: Not cited in text until Paragraph 6 – move to after paragraph 6, What are the units, Show lat/lon, Label Cox Ledge, Label Port Judith, What is the significance of arrow size, What is the significance of arrow color	Figure moved. 2. Unit definition added. 3. Not possible/not original figure.
814	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .7	Figure 2.23 does not show water from the north. The figure is cropped at a point where the flow paths appear to trend from the south, turn west at the Vineyard and then continue WNW into RIS	Figure removed

815	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .8	Figure 2.23: Resolution to low, Image cropped on right and bottom, Develop a frame around the entire data window, add missing lat/lon identification on tick marks, Expand figure to west to include all of RIS, See comments on Paragraph 7	Figure removed
816	4/7/10	Allen Gontz	UMASS Boston	230.3.2 .8	Is this at odd with Paragraph 7? Signell (1987) weak interaction and now Hicks & Campbell (1952) net flow into RIS. How do the salinities relate to the outflow from BB?	Merged with paragraph 7 and rewritten.
817	4/7/10	Allen Gontz	UMASS Boston	230.4	This section would benefit from a terrestrial watershed map of LIS, BIS and RIS – very useful!! No discussion of BIS. No discussion of link to BB	Fig. 2.1 shows land area; other comments unclear.
818	4/7/10	Allen Gontz	UMASS Boston	230.4.3	Confused – freshwater return flow into RIS? Do you mean BIS? Other paragraphs suggest that LIS does not impact RIS but has a strong control on BIS.Avoid "THE AUTHORS" Not sure to whom you are referring. Impact of BB on RIS? Earlier paragraphs suggest a low salinity flow into RIS from BB (ie 230.4.8)	1. Reference removed. 2. Corrected. 3. Section rewritten.
819	4/7/10	Allen Gontz	UMASS Boston	230.4.5	Figure of AMO oscillation coupled with something that you mention in the text would be useful. Correlated to fish (Merriman & Sclar) or rainfall or salinity. Otherwise, this paragraph is just arm waving	Comment unclear. There is a link to fish ecology in the text.
820	4/7/10	Allen Gontz	UMASS Boston	230.4.5	Figure 2.24: Panels too small, Pixilated, If these are important, they should be much larger, Does the white area represent no survey data or shallower than depth measurement, Bathymetric contours would be very useful on this figure, Add frames around each, Include labeled Lat/Lon ticks	figure made as large as possible given page size limitations
821	4/7/10	Allen Gontz	UMASS Boston	230.5.1	Sentence 1 "…- because of differing thermal and/or salinity/density regimes…" Density is related to both salinity and temperature. It is not appropriate to link salinity to density and allow temperature to stand alone. Reword to indicate that DENSITY drives and that salinity and temperature are components of density.Could use some degree of references that support some of the statements made in this paragraph, including "Water column is a noted phenomenon" and "Stratification reduces interaction …"	1. Corrected. 2. This is an introduction; some text removed to be clearer.
822	4/7/10	Allen Gontz	UMASS Boston	230.5.2	"-strong" could be changed to remove the "-"	Unclear; no change
823	4/7/10	Allen Gontz	UMASS Boston	230.5.3	Reference ample evidence, Is there research on other areas that you could compare the SAMP to?	1. corrected 2. no further research found.

824	4/7/10	Allen Gontz	UMASS Boston	230.5.1	With the exception of paragraph 1, this section reads like a laundry list of observations without any link between them.It should really be either 2 or 3 paragraphs, not 4.There is not enough information to support the amount of paragraphs.Consider – Introduction, Stratified, Mixed and the three paragraphs.The section leaves me asking “SO WHAT?” – Must link this to something as has been done in other sections.	section rewritten to reflect suggestions and comment
825	4/7/10	Allen Gontz	UMASS Boston	230.5.1 .1	Who are “THE AUTHORS”.Is there data to support stratification break down in the fall?	Corrected throughout the chapter
826	4/7/10	Allen Gontz	UMASS Boston	230.5.1 .2	One sentence paragraph – AVOID.Combine with other paragraphs, expand or remove.“…along a line a few miles east of a line…” cumbersome. Avoid duplication of words, try “…along a transect that follows a line…”.This suggests stronger stratification in the fall than summer and in direct conflict with other paragraphs in this section.	Section reorganized and rewritten
827	4/7/10	Allen Gontz	UMASS Boston	230.5.1 .3	Where are the locations?	corrected
828	4/7/10	Allen Gontz	UMASS Boston	230.5.1 .4	One sentence paragraph, AVOID	corrected
829	4/7/10	Allen Gontz	UMASS Boston	230.5.2	Why no discussion of the Inner Shelf? Its in the SAMP. If you are going to discuss stratification of BIS and RIS, why not Inner Shelf. The section is incomplete without it.	Description inserted.
830	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .1	Figre 2.25:Inset map with location required.Pixilated.Why no reading on bottom after Jan 97.If you suggest storms in your caption, indicate large storms on the figure that correlate with surface salinity lows, otherwise, do not mention the relationship to storms.Aren’t increased precipitation events related to storms?.Move to after Paragraph 2	figure not original cannot be changed. Other comments addressed, corrected. Paragraph 2 reorganized.
831	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .2	Move ahead of Figure 2.25.See comments for Figure 2.25	Reorganized
832	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .3	Show mid-column readings if you are going to talk about them and show surface and bottom readings.Sentence 3 “…O’Dennell and Houk.” Add the citation “(in prep)” or other	Section totally reorganized

833	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .3	Figure 2.26: Pixilated.Mid-column sample depth?.Remove gray background.What do the red "X" represent? Sample locations, if so, say it in the caption.Are all samples locations repeated on the two surveys?.Scale based on color ramp, are they the same?	Figure not original, cannot be altered. Section totally reorganized.
834	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .4	Doesn't really add anything to the discussion. Could be merged into your Summary, Paragraph 5	Section totally reorganized
835	4/7/10	Allen Gontz	UMASS Boston	230.5.2 .5	Merge with Paragraph 4	Section totally reorganized
836	4/7/10	Allen Gontz	UMASS Boston	240.1	Not sure if this quote supports the section.Geologically speaking, it is a bit confusing with its timescale. Within a few centuries of WHAT	removed; corrected
837	4/7/10	Allen Gontz	UMASS Boston	240.2	Last half of paragraph is very choppy, consider better transitions between sentences 4 and 5	Corrected
838	4/7/10	Allen Gontz	UMASS Boston	240.3	Sentence 2 – "In trace amounts toxins…" should be "In trace amounts, toxins…". Impact on reproduction?	Corrected
839	4/7/10	Allen Gontz	UMASS Boston	240.1.1	Consider adding a figure that shows the location of sampling stations for this sub section.Overall, better refinement on the spatial and temporal scale of the reported measurement is required. Are they averaged over multiple readings, multiple locations, multiple surveys?References?"BENTHOS" are you referring to the epi and infauna or the geological processes of burial and sequestration?Sentence 3 – "…can be difficult to comprehend in well-studied ecosystems" consider adding "even" to the sentence – "…can be difficult to comprehend, even in well studied ecosystems"Sentence 4 – What about the Inner Shelf?	1/2. Figure not added; resources not available. 3. Introduction so references/details are following. 4. corrected. 5. corrected. 6. corrected.
840	4/7/10	Allen Gontz	UMASS Boston	240.1.2	Who are "THE AUTHORS"	Corrected throughout the chapter
841	4/7/10	Allen Gontz	UMASS Boston	240.1.3	Where were these measured. Point station or averages from broad scale survey? Include it in the Table caption, not just in Paragraph 4.for NO3, are these averages for the time reported? What was the variation?For NO2, what was the ranges for "SUMMER" in terms of reading and months. Average of single sample. Was this truly 0, or below the limit of detection.Must clarify how these samples were integrated to develop the single value or range presented.	Confusing comment-references a section and inappropriate Table. Table does show time frame and is it clear that the values are averages or ranges as presented.

842	4/7/10	Allen Gontz	UMASS Boston	240.1.4	No samples for the Winter months.	Correct
843	4/7/10	Allen Gontz	UMASS Boston	240.1.5	Map with sample locations	Map not created; resources not available
844	4/7/10	Allen Gontz	UMASS Boston	240.1.6	Where were the samples collected?How important is this to the SAMP area?Based on link of Inner Shelf to BIS and RIS.How often does this process occur	This was a 1 time collection on the outer shelf so there is not context re: recurrance of such an event and it is not known how important it might be to the ecology overall.
845	4/7/10	Allen Gontz	UMASS Boston	240.1.7	How does this compare to “adjacent” areas – show numbers?What are the adjacent areas	Comment unclear; no action taken.
846	4/7/10	Allen Gontz	UMASS Boston	240.2.2	See comments for Table 2.1.Move closer to Paragraph 5.Move out of Subsection 240.2	Corrected
847	4/7/10	Allen Gontz	UMASS Boston	240.2.1	Are you referring to dredge sites or dredge spoil disposal sites.High potential for impact during disposal activities.High potential for reactivation of contamination sequestered below the seafloor during offshore construction and/or dredging	Corrected
848	4/7/10	Allen Gontz	UMASS Boston	240.2.2	Is the location the center of the site.Single disposal event or multiple events.What are the toxins associated with the disposed sediments.Was the site capped.What is the grain size of the sediments disposed of? Are the currents capable of remobilizing the sediments?.How susceptible to resuspension through storm events are the disposed sediments?.Show the traffic lanes on Figure 2.27	1/2. Not relevant to the discussion. Rest comments addressed and/or corrected.;
849	4/7/10	Allen Gontz	UMASS Boston	240.2.2	Figure 2.27: Resolution to low.Is the RIDS indicator box to scale?.What is the spatial limit of Brenton Reef.What is the spatial extent of impact from the North Cape spill	A new figure was inserted
850	4/7/10	Allen Gontz	UMASS Boston	240.2.3	What is the spatial extent of the site.What material was disposed there.What is the water depth.Does the sampling by Battle indicate if the dredged sediments have been capped by recent deposition or eroded and transported.How much material was emplaced.Source of material.What about chronic exposure	addressed and corrected noting toxins assessed.
851	4/7/10	Allen Gontz	UMASS Boston	240.2.4	Location of sites.What metals.What organic and inorganic contaminants were tested	locations and toxins tested noted

852	4/7/10	Allen Gontz	UMASS Boston	240.2.5	What was the scale of impacted areas.Is this spill in the SAMP.What is the possibility of other spills.What about movement of large vessels though the area toward Providence or BB	Corrected
853	4/7/10	Allen Gontz	UMASS Boston	250	The biological portion of this study is well outside of my realm of expertise. I will comment on Subsection 250.2 – Benthic Ecology, but not on the rest of the section.	No action needed
854	4/7/10	Allen Gontz	UMASS Boston	250.2.1	Choppy, poorly constructed introductory paragraph.Are you using benthos and benthic environment interchangeability.If you are specific about oil spills in BIS, why not specific about the location of the dredge disposal in RIS	Rewritten
855	4/7/10	Allen Gontz	UMASS Boston	250.2.2	This is a much better Paragraph 1 than the current Paragraph 1, Consider eliminating Paragraph 1 and start with this ass your introduction paragraph.Add some references to show the degree of previous studies and the degree of spatial and temporal limits	Rewritten
856	4/7/10	Allen Gontz	UMASS Boston	250.2.3	Who are “THESE AUTHORS” Avoid use.Replace “four million cubic meters” with the number cited in 240.2.2.Consider including a table showing the comparison between in and out of the RIDS	Paragraph moved and rewritten
857	4/7/10	Allen Gontz	UMASS Boston	250.2.4	Use the same terminology as in 240.2.3 – Brenton Reef.Remove “4 miles” and convert to kilometers to remain consistent with the rest of the document..Convert cubic yards to cubic meters to remain consistent	Paragraph moved and rewritten
858	4/7/10	Allen Gontz	UMASS Boston	250.2.7	Who are “THE AUTHORS” avoid.Refer to figure 2.9	Corrected throughout the chapter
859	4/7/10	Allen Gontz	UMASS Boston	250.2.8	Poorly written overall.Not sure why, organic content via loss on ignition is a common analytical technique on sediment cores and required on most USACE cores. Check for additional information. There should be LOI information available for portions of BIS, RIS and the Inner Shelf	paragraph removed.
860	4/7/10	Allen Gontz	UMASS Boston	250.2.9	Reference the schemes developed.Reference the proxy maps developed.Why are these good.Why are these bad.What else needs to be included in them to make them useful.Cite Table 2.6 as an example.Cite Figure 2.33 as an example.Cite Figure 2.34 as an example	1/2. To be addressed. 3-5 not relevant. 6-8 are explained in the following paragraphs of the text.

861	4/7/10	Allen Gontz	UMASS Boston	250.2.9	Table 2.6:Poor alignment of rows – Check Column 1 and ensure consistency in alignment with Column 2.Organize table based on increasing grain size.Only data on 7 species?.Figure 2.33 should add at least 1 more species.What about(Benthic fishes,Lobsters,Crabs,Mollusks,)Other invertebrates,Nothing lives in/on gravel?.VERY INCOMPLETE	1-4. Corrected.5. Unclear comment. 6. These are the data available, and Yes, it is incomplete.
862	4/7/10	Allen Gontz	UMASS Boston	250.2.9	Eliminate secondary caption and source in text box on figure.Show SAMP boundary.No other sources that could assist in filling in the western section of the SAMP?.How is this different from the figures in the geology section?.This figure does not match with those in the geology section.Resolve the apparent conflict between this and Figures 2.7, 2.6, 2.4, 2.3	1. This is the SAMP standard; no change. 2. No other sources found. 3. Other figures have been removed. 5/6 resolved by figure removal.
863	4/7/10	Allen Gontz	UMASS Boston	250.2.1	How was Figure 2.33 developed – samples or inferences from Quahogs?.Paragraph adds nothing mostly repeat of Paragraph 9 with a little site specific information. Combine with Paragraph 9 and remove	Reference added so reader can see orginal for the specifics requested here.
864	4/7/10	Allen Gontz	UMASS Boston	250.2.1 1	Is this the Ocean SAMP Report? If not cite as King & Collie (YEAR).How does the features on Figure 2.34 align with the moraines mapped on Figure 2.7, 2.6, 2.4, 2.3	This analysis not yet completed by researchers.
865	4/7/10	Allen Gontz	UMASS Boston	250.2.1 1	Figure 2.34:What do the Quartiles represent.Does this correlate to bed relief, if so, suggest relief numbers.Might be good to correlate with grain size.Pixilated.Remove 2 text boxes from figure, unless they are an integral part of the figure for this purpose. If they are, then they MUST be readable.Cite as King & Collie, YEAR	To be addressed.
866	4/7/10	Allen Gontz	UMASS Boston	260	Might want to consider an intro statement that sets the stage and outline the importance in a paragraph or two.No discussion of anthropogenic activities including .potential offshore drilling resulting in increased ship traffic.increased construction of offshore facilities like windfarms and pipelines.alteration of freshwater inputs through dam removal	1. Text added. 2. Discussion is in the Renewable Energy chapter.
867	4/7/10	Allen Gontz	UMASS Boston	260.1	Only address two invertebrate pelagic species.Are there others?Why only these?	These are the only ones addressed in the literature.
868	4/7/10	Allen Gontz	UMASS Boston	260.1.2	What is Skeletonema?	Corrected
869	4/7/10	Allen Gontz	UMASS Boston	260.1.3	One sentence paragraph – AVOID. Combine, expand or remove.Expand to indicate the significance of the species	removed; corrected

870	4/7/10	Allen Gontz	UMASS Boston	260.2.1	Are species brought in by wind, currents or wildlife truly invasive? Are these not the mechanisms that naturally distribute species throughout enhanced ranges?	Sentence removed
871	4/7/10	Allen Gontz	UMASS Boston	260.2.2	How does this species alter the benthic ecosystem ecology?	Corrected
872	4/7/10	Allen Gontz	UMASS Boston	260.2.2	Figure 2.53:Too small,Pixilated,Resolution too low,Frame the image,Scale?,Remove secondary figure caption that identifies the figure as Fig. 2,What do the number refer to?,How many of these sites are actually in the SAMP. It looks like only ~ 6.	Figure removed
873	4/7/10	Allen Gontz	UMASS Boston	260.2.3	How does this plan attempt to mitigate the species?Is there any documentation of any of these species in the SAMP? If you, include that information	Status of species not known as noted in text.
874	4/7/10	Allen Gontz	UMASS Boston	260.3	Are there others? Only 2?What about red tides?	these are the major ones of concern; red tide not a disease and addressed earlier in appropriate section
1219	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	210.5	Regarding benthic habitat as discussed in 210 (5): what impact does dumping dredge spoils have? I don't see this impact mentioned. I did see the analysis of impact of trawling. Is trawling the same as drag-netting? [I found a paragraph on pg. 62]	There were no specific references in the literature to studies of impacts when the dredged materials were placed, only after the fact and during the ecological recovery period post material placement. The reference to drag-netting has been removed as it was a confusing term—the discussion is with regard to trawling only.
1220	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	220.1.1	Section 220.1 (1) Can the characterization of wind as diurnal be refined by speed ranges? Also can the sentence be rewritten without "during summer" in parenthesis? What is the character of winter wind regarding diurnal-nocturnal? What about winds of storms in any season regarding their nocturnal-diurnal duration? I think it would be more useful to break out the characterization by month or aggregates of months rather than 2 seasons. Now that I see chart below, perhaps referring to this figure in the text would help. For the chart, the average is over what period of time? While I understand that data may be scarce, since wind is a critical resource, greater detail should be provided.	The section on Wind has been rewritten and now addresses several of the concerns noted; the intent here is to provide information on winds only with regard to ecology of the area, so further detail on wind is provided in technical appendices and in the Renewable Energy chapter. The importance of wind is noted throughout the chapter text, where appropriate, with regard to shaping currents and its impacts on the water column; this puts it more in context with its impact on the ecology.

1221	5/27/10	Eugenia Marks	Audubon Society of Rhode Island		Are there data for extremely high winds or waves generated by storms within the SAMP?	Text has been added to the chapter that gives a better description of extremes for both wind and waves in the Ocean SAMP area.
1222	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	220.3	Section 220.3: For those of us over age 25, the statement ”no hurricane strikes since the turn of the century” borders on amusing. I think the statement could be reworded on the order of “Despite the decade from 2000 – 2010 being labeled…, there has not been a direct hit of a hurricane to RI during that time.”	Text has been revised to reflect the intent of this comment
1223	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	230.3	Section 230. (3) (p.24): I am glad to see a reference to the complexity of ecological analysis and a model that has attempted to forecast some of the physical oceanographic characteristics. I hope that as I read the chapter, I will see some discussion of the biological connections to the physical oceanography so that the reader will have an appreciation for food- and breeding-driven behaviors that may depend on currents, temperatures, and other parameters of physical oceanography. [I see a section under circulation (230.3) that alludes to these relationships.]	No response required for this comment
1224	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	230.1	Section 230.1 (p.24) Tides Are there velocities or pressures associated with tides, especially as water moves around land bodies such as islands that would be useful to know for structure embedded in the substrate? [I found on page 34.	In general, there is little if any information regarding tidal velocities and/or pressures around the shorelines of the islands in the Ocean SAMP area and so such information is not available. The Race and the opening between Fishers Island and Napatree Point have limited velocity information, and this is mentioned in context in chapter text.
1225	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	230.1	Section 230.1 (p.24) Tides. There are some migrations of marine organisms that are based on moon stage that also causes tides. I think this is worth a sentence or two in that feeding behavior for pelagic birds, fish, and marine mammals may be related to these spring and fall migrations.	There were no reports in the literature for the area describing what the reviewer notes; while such vertical migration behavior is a common occurrence in many areas of the ocean, it is not mentioned here as it is not known if such actually do occur in the Ocean SAMP area as they are not referenced in the literature.

1226	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	230.1	Some mention of the electrical conductivity of salt water? Electro-magnetic conductivity?	It is presumed the reviewer is in reference to impacts of underwater transmission cables on marine biota; this is addressed in the Renewable Energy chapter and not in the ecology chapter as it is not currently a part of the existing environment and therefore not germane to the ecology at present.
1227	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	240.2.3	Pg. 45 at 3: Battelle reported no acute response in amphipods. Do we have an data on concentrations of contaminants that would cause chronic or sub lethal impacts such as declining or depressed population?	No references testing specifically for chronic or sub lethal impacts were found; however, reports noting that the benthic community as a whole is responding in a positive direction suggests that chronic impacts are small, though this is implied only.
1228	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	250.1.2 .2	Pg. 50-51: I cannot reconcile the text that says “chlorophyll a concentrations (the green pigment contained in the primary producers) in the Ocean SAMP area show fairly consistent peaks during late summer and early fall, and a distinct and significant fall bloom” and Figure 2.29. The royal blue (0.3ug/l—low concentration) occur in summer through September, and orders of magnitude greater concentrations in October - January. I do not understand the use of the word ”peaks.”	Figures have been removed, a table added, and the text rewritten in this section to better clarify and explain primary production in the Ocean SAMP area; it is hoped that the reviewers comments have been addressed through these revisions.
1229	5/27/10	Eugenia Marks	Audubon Society of Rhode Island		Will there be a process for adding new research over the years in the form of electronic links – or at least a list of researchers who are active in the mouth of the Bay, Block Island and Rhode Island Sounds? This question is applicable to the whole Ocean SAMP document. What is the procedure for periodic updates of the various SAMPs?	This comment needs to be addressed by the Ocean SAMP management team and/or by the RICRMC; this is not a question the chapter author is able to answer.
1230	5/27/10	Eugenia Marks	Audubon Society of Rhode Island		Is there any research on microhabitat of metal structures in the water absorbing enough radiant energy to affect the population organisms living on the metal? I would guess that any harmful algal bloom would need warm water, and with the constant change of water in the vast ocean, I would not think that metal superstructure in the water would affect ambient water conditions, but could affect a very small area on the metal itself. Or conversely, freezing from ocean action and air temperature in severe winter conditions could create a different microhabitat extreme. I think this is too minor to consider. Just musing.	If this were to be addressed it would be most appropriate in the Renewable Energy section on impacts of energy development.

1231	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	250.2.1	250.2.1 Invertebrates (1). Invertebrates in benthos also provide food for birds, but in fairly shallow waters. Common loons that winter in these waters forage for crabs as deep as 5.5 meters; Harlequin ducks are shallow divers foraging for invertebrates; Common Eider also feed on invertebrates up to a depth of 10 meters; and Scoters may dive up to 20 meters (White-winged), 9 meters (Surf), and "a few meters" (Black).	This information is more specific to the Avifauna section of the chapter and will be considered for addition in that section, if not already mentioned.
1232	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	250.3	250.3 Fishes (1) Pelagic birds such as Petrels, Shearwaters, and Northern Gannets feed on small schooling fish such as herring, anchovies, and mackerel.	A reference to the importance of baitfishes to pelagic birds will be added to the text.
1233	5/27/10	Eugenia Marks	Audubon Society of Rhode Island	250.4.1 .1	Table 2.10 (pg. 83): are the blanks missing data? Data could be supplied by other sources, for example Peter Paton. Or do the blanks represent year-round use? Does not seem likely given the rarity of some of the species with blank. I see the graph below. What data set do these two figures represent? How many observations?	Reviewer comments will be incorporated, where possible, in the table.
1234	5/27/10	Eugenia Marks	Audubon Society of Rhode Island		Audubon continues to have concerns that food web connections between the resources in the Ocean SAMP area have not been made. Foraging habitat displacement is a major issue in the development of a wind farm. European data are inconclusive other than to note that displacement occurs.	The Ocean SAMP team has included the most available accurate information on these topics. Please provide additional scientific references to literature that references this issue and we would be glad to consider adding it to the chapter.
1236	5/28/10	Donald Pryor	Brown	270	Section 270 on Policies and Standards simply states that it is "under development". No statements or even suggestions are made about how ecological considerations should be factored into spatial planning or what aspects are most important.	Such statements, etc., would not be appropriate in the chapter text and will be addressed in the Policies and Standards section, currently in development.
1237	5/28/10	Donald Pryor	Brown		The recently released draft of "Chapter 8: Renewable Energy" (draft of May 6, 2010) refers to an "Ecological Value Map" (EVM), and an "Ecological Topology Map" (ETM) as well as a "Technology Development Index" (TDI). Unfortunately, that draft chapter does not fully describe the EVM; the reference for further information is described as "forthcoming" and thus not available; and the Appendix 3 described as dealing with the EVM is not included. Data sources and weighting factors are not described in that chapter nor are links to information in the Ecology chapter suggested either in the Renewable Energy or Ecology chapters.	Since the EVM is under development, it is not possible to include data sources, weighting factors, etc. These kinds of information will be part of the EVM report, when released. Any findings from that report will need to be addressed in the ecology chapter at some future date.

1238	5/28/10	Donald Pryor	Brown		No results of any recent research under the Ocean SAMP are reported.	Appropriate information from ongoing Ocean SAMP research is used in the ecology chapter as it becomes available. As currently written, findings of Codiga and Ullman make up a large portion of the physical oceanography section of the chapter as are findings by Spaulding on some elements of meteorology, work by Collie and King on seafloor mapping is in the benthic ecology section, findings of Keeney are included for marine mammals and the section on avifauna is largely based on Paton et al. findings from their Ocean SAMP research.
1239	5/28/10	Donald Pryor	Brown		Almost every other page references papers prepared for the 2008 Sea vGrant Science Symposium but these are described as “in press”. A request to make at least preliminary versions of these papers available has not been acknowledged or responded to (although Sea Grant has confirmed that they are not available).	The works cited are “in press” meaning that they are being developed for public release. While an exact date of availability cannot be provided, it is intended that Rhode Island Sea Grant will make that information available sometime during the summer of 2010. In revisions to the ecology chapter since release for public comment, many references linked to the 2008 Sea Grant Science Symposium have been replaced with references available in the literature to address similar comments provided by other reviewers.

1240	5/28/10	Donald Pryor	Brown		Technically, the Ecology draft chapter appears to have a number of errors such as misstatements of the biogeographic location of the Ocean SAMP area; contradictions between statements and data concerning winter temperature patterns; overlaps and contradictions with the Fisheries chapter; assertions of "rapid ecological change' in benthos while quoting references finding "relatively stable communities over decadal periods"; and failure to accurately describe observed patterns of pelagic-demersal ratios. The draft chapter fails to make any comparisons with studies of the ecology of the adjacent Buzzards Bay. It also fails to make connections with NMFS studies such as the recent "Ecosystem Status Report for the Northeast US Continental Shelf Large Marine Ecosystem". Unfortunately, given the lack of policies and recommendations or connections to other tools to be used in spatial planning, it is not possible to evaluate the significance of these apparent errors and omissions.	Revisions to the chapter have addressed similar contradictions and discrepancies noted by other reviewers, though with greater detail provided; without further elaboration regarding specific examples in the text these general statements cannot be directly addressed, though such contradictions, etc. will be corrected wherever noted. NMFS MARMAP data has been incorporated into the ecology chapter in subsequent revisions to the text.
1241	5/28/10	Donald Pryor	Brown		The Executive Director of CRMC indicated at the May stakeholder meeting that significant weight would be given to the foraging habitat for diving ducks. This chapter describes that habitat as all areas between 5m and 25m depth based on literature review (see figure 2.42). If, in fact, the intent is to prohibit structures in depths between 5m and 25m, that would have a significant impact on potential uses, including wind energy, in those relatively shallow waters. The data and information provided seem insufficient to base a policy which would, in effect, further commit the state to deepwater wind.	Subsequent work by Paton et al. have revised diving duck foraging depth from 25m to 20m, and this is reflecting in the chapter text. Since policies and standards are still development at this time, it is not possible to say if any attempt to "prohibit" structures at those depths will be included.
1260	5/28/10	Kathleen Wainwright	The Nature Conservancy	230.2.5	figure 2.10 needs to also show the path of the 1938 hurricane	The 1938 hurricane did not make a direct strike on Rhode Island and is therefore the track of that storm is not shown in the figure.
1261	5/28/10	Kathleen Wainwright	The Nature Conservancy	250.4.1 .3	should add that Fall on Block Island is extremely important to hatching year birds who are blown off course during their first migration. Due to this there is a much greater density of passerines in the fall on Block Island and migrating through the SAMP area. Also, there is no mention that Herring Gulls and Greater Black-backed Gulls BREED on Block Island. It is the largest rookery in the state for these two species, around 600 nesting pairs total.	This will be addressed in revisions, where appropriate and possible.
1262	5/28/10	Kathleen Wainwright	The Nature Conservancy	250.4.2 .2	Fig. 2.39 Harbor seal haul-out sites are incomplete, given the scale it might make more sense to use smaller stars to really pinpoint the locations. We would be happy to provide detailed input. Also, this winter and spring until the present Block Island has had the largest group of gray seals to ever haul out on Sandy Point in 20 years.	The figure has been revised to address this comment.

1263	5/28/10	Kathleen Wainwright	The Nature Conservancy	250.6.2	Table 2.11. As mentioned in 3) above, it should indicate Herring Gulls and Greater Black-backed Gulls breed on Block Island, and we believe the Greater Black-backed Gulls are here year-round. Pacific Loons have been observed to winter off Block Island as a result of the Ocean Samp research, not sure why that isn't mentioned, possibly the information has not gotten from NJ Audubon to URI. This phenomenon could be a climate change impact of reduced sea ice in the arctic.	Pacific loon is not mentioned in the report by Paton et al., nor was reference found as such in the literature and so it is not mentioned. Gulls are not passerines and so are not mentioned in the table; this will be addressed in the text as noted above.
1264	5/28/10	Kathleen Wainwright	The Nature Conservancy		Given that this is the ecology chapter, and that it is a spatial planning exercise, we are concerned that there is no real coarse or fine identification of the most important or sensitive areas ecologically. TNC is happy to provide input and guidance on how to go about this. Obviously, the entire area is important but we feel that the most critical sites need to be identified, and the existing and future threats to those areas need to be addressed. It would make sense to try to map spawning and nursery areas for fish and shellfish species, for example. Further, with specific regard to fisheries impacts, given that the ocean SAMP is not a fisheries management document , the ecological impacts of the various fisheries need to be evaluated and stakeholders and resource managers should work collaboratively via cooperative research and other means to address these impacts to provide for a sustainable fisheries resource base as well as the necessary components for a degraded ecosystem to recover.	The data to undertake such an exercise have not been available for incorporation or consideration. The chapter does use bottom roughness and a few other features as possible points of interest, but without corresponding published accounts to reference it is not possible to present such information in a way that could be considered valid.
1265	5/28/10	Kathleen Wainwright	The Nature Conservancy		A concern after reading this chapter is that much of the data is fairly old (30+ years) and because the ocean system is dynamic we wonder how much difference there is between the old citations in this chapter and what is actually occurring now.	This is noted in numerous occasions throughout the chapter text, and outside of what is published to present as "now vs. then", it is not possible to make that link.

1266	5/28/10	Tricia Jedele	Conservation Law Foundation	210.6	The ecology chapter should be much more than a mere "stitching together" of "available patchwork data on the SAMP area." Of course, the ecology chapter should be an accurate reporting of the inventory of ecological assets that we have available to us in the SAMP area, but it should also be a road map for how we will foster a properly functioning ecosystem, maintain ecological capacity, integrity, and evolution of the SAMP area's biophysical and socioeconomic systems. Without the roadmap, the inventory exercise is essentially meaningless. As stated in our draft comments, the opening sections also continue to emphasize the dynamic aspects of the SAMP ecosystem (p. 8 and 210(6)) as well as the stability of the ecosystem (section 210(4)) and includes language about the potential impacts of climate change (page 10) – i.e., one example of how human activity can impact the ecology of the SAMP area. CLF continues to be concerned that this misplaced emphasis on the dynamic aspects of the SAMP ecosystem may lead readers to a false expectation that any natural or human disturbance will have minimal impact on the ecosystem so characterized by dynamic natural forces.	The chapter has been largely reorganized and rewritten in an attempt to better link together the various sections and to move from an "inventory" of habitats, etc. to one that better tells the story of the ecology of the Ocean SAMP area ecosystem. The Ocean SAMP area is indeed a dynamic area, and as with all ecosystems, change is imminent whether it be of natural or anthropogenic origin. Furthermore, "impact" is subjective and is most often considered in a negative sense, e.g., denigrating the system in some fashion. Throughout the ecology chapter every attempt has been made to refer to alterations as "change" to the ecosystem, not as an impact. Certainly ecosystems are, and will continue to change, due to changing climate and other influences. Ecosystems shift species, etc., in response to change and then continue on some new trajectory. That trajectory may or may not be one that some or all of the human populace is satisfied with (i.e., a shift to tubifex worms) or one that many are thrilled about (i.e., eelgrass and scallops). It is not the intent of the ecology chapter to make a subjective statement about the change, but rather attempt to present what change is occurring, why it is occurring, if known, and where it may be leading, if possible to say.

1267	5/28/10	Tricia Jedele	Conservation Law Foundation	240.1.1	There are still multiple references in this chapter to the lack of data (for example, Section 240.1(1) on page 42, Section 240.1(7) on page 44 and Section 250.1(1) on page 47), but CRMC did not draft a scientific research plan to fill the gaps in knowledge. CLF urges the CRMC to delay the finalization of the SAMP until it is able to adequately fill in the missing data or until it has established a scientific research plan to fill the gaps in knowledge.	This comment cannot be directly addressed by revisions to the ecology chapter. Data does not exist. However, as new information from Ocean SAMP sponsored research, and from other sources, it is being included, where possible and practical, into the chapter text.
1268	5/28/10	Tricia Jedele	Conservation Law Foundation	270	It is essential that the State of Rhode Island through this key chapter identify and protect special, sensitive and unique areas of ocean habitat and wildlife from all damaging human activities, including, and especially, fishing. The ecology chapter should make strong habitat protection recommendations in the Policies and Standards section – a section, which unfortunately remains blank at the time these comments are filed. We highlighted this point in the comments we filed on the fisheries chapter on May 4, 2010, pages 2 and 3. At a minimum, the State should identify and protect "key ecological areas." A key ecological area should be defined as a geographically delineated area which by itself or in a network has distinguishing ecological or oceanographic characteristics, is important for maintaining habitat heterogeneity or the viability of a species, or contributes disproportionately to an ecosystem's health, including its biodiversity, function, structure, or resilience. For example, important ecological areas could include areas of high productivity or diversity; areas that are important for feeding, migration, or the life history stages of species; or areas of biogenic habitat, structure forming habitat, or habitat for (or high densities of) endangered or threatened species. Key ecological areas, if protected from harm, should be able to support and maintain the structure and function of the local surrounding coastal and offshore habitats.Areas that might be of special concern that are already referenced to in chapter 2 include the inner shelf south of Block Island, the glacial moraine areas with unique habitat diversity ("hot spots"), the shallow sill area with wave-buffering capacity, the Block Island canyon, and the "jet" 5 km south of Montauk Point. Montauk Point itself seems to lend itself to identification as a special area for protection, with its dense population of loons and occurrences of the Northern Gannett. The new draft continues to use the term "rugosity" as a proxy for "habitat complexity in Section 250.2(9). Habitat complexity is more accurate.CLF also suggested inclusion of an Ecological Valuation Index in this chapter (see CLF's April 6, 2010 comments).	The OCean SAMP now has identified areas of particular concern and preservation areas based on the data collectedn and input from researchers.

1269	5/28/10	Tricia Jedele	Conservation Law Foundation	250.3	There is still a surprising paucity of information regarding the impacts of fishing on the ecology of the SAMP area. The discussion of the Driscoll study remains unchanged, still failing to specifically refer to the effect of dredging on marine biomass removal and other anthropogenic effects besides trawl door scars. The chapter still does not include any discussion of the ecological impacts that different types of fishing can have on the SAMP area. Specifically, there is no mention of how the use of specific fishing gear correlates with habitat alteration. The Fisheries and Future Uses chapters are not cited or cross-referenced, except in relation to lobster population. The failure to connect ecosystem impacts with specific human activities severely undermines the usefulness of this chapter and virtually assures that it will not be able to be relied upon to support or guide future policy decisions with respect to habitat protection.	Ecology and fisheries chapter authors have been collaborating and working together to better cross reference information, and this will be incorporated into revisions. There was little if any literature available on ecosystem alterations due to the use of fishing gear within the Ocean SAMP area, and therefore that is not a significant portion of the chapter text. Limited reported showed that areas of high fish abundance/biological activity are those areas where trawl marks/fishing activity is abundant. It is not clear in the literature for the Ocean SAMP area if fishing is a cause of the fish abundance, or if abundance is a cause of fishing/trawling activity. There is some indication that a dominant tube-dwelling amphipod, reported to be a significant part of the diet of demersal fishes, actually does very well in habitats where the bottom is disturbed. However, the information is not robust enough to make inference in either a positive or negative direction for the relationship of fishing activity on benthic productivity, and so it is not elaborated upon in the chapter text.

1270	5/28/10	Tricia Jedele	Conservation Law Foundation	250.1.5 .2	In CLF's draft comments, we expressed concern that the general treatment of fish distribution in various habitats lacked meaningful discussion of the relationship of different habitats to spawning, juvenile and other critical life history stages of fish and other animals inhabiting the planning area. CLF is uncertain whether our initial comments were considered or rejected. The only reference to this important ecological character of the SAMP area is a brief mention in 250.1.5 (2) stating that invertebrates spend their larval stage adrift with plankton. CLF doesn't believe that this is adequate because the topic is important to a full understanding of the SAMP area to be managed under the SAMP plan. CLF suggests the ecology chapter cites specific examples of important relationship between habitat and life history stages. For example, rocky cobble bottom could be critical to certain bottom dwelling fish species at various life stages. It doesn't appear that the data on this point are lacking, because the ecology does make some brief mentions of such relationships. Section 250.3 (15) notes that cusk, a highly depleted fish species currently undergoing a status review by NOAA Fisheries for consideration for listing under the Endangered Species Act, uses Block Island Sound as an important nursery area. The shallow ridge extending from Montauk Point to Block Island appears to be a heavily used habitat for winter flounder, a highly depleted and overfished species targeted by the groundfish fleet (Section 250.3 (11)). To the extent that data exists on important habitats for different species and different life history stages, this information should be fed into an analysis of and protection plan for various fish and other species, particularly those that are at risk. In other words, the relationship between habitat and life history stage should be treated as its own section in order to facilitate development of a management policy that is sensitive to the importance of certain sub-areas within the SAMP area.	There is little information in the literature that provides data to develop specific links between, for example, fish and bottom habitat. There are generalizations made in chapter text, where possible and applicable as the reviewer notes, but without specific, referenced data to rely upon, further elaboration could be not only misleading, but perhaps untrue. All attempts have been made to provide detailed information regarding species–habitat relationships, where possible. Based on several reviewer comments, all species life-history descriptions were moved into the fisheries chapter, since this where such information was deemed most appropriate, and are now referenced as such in the ecology chapter.

1271	5/28/10	Tricia Jedele	Conservation Law Foundation	200	Our draft comments pointed out that the ecology chapter lacks a discussion of habitat vulnerability to anthropogenic stresses, including, but not limited to climate change. It appears that the only response to this comment was a cursory description of the potential impacts of climate change on the planning area in the introduction to the chapter (Section 200, p. 10). We continue to urge the State to review the habitat vulnerability modeling now underway by the New England Fishery Management Council's Habitat Plan Development Team. With a response to this comment, it is unclear whether the team seriously considered this suggestion.	Numerous inferences, where possible to do so based upon the literature, exist within the chapter text regarding possible change in the ecosystem from changing climate; other comments along the line of what the reviewer suggests are included in the climate change chapter. It is unclear what other anthropogenic stresses the reviewer is in reference to regarding habitat vulnerability; and see response to #1 above.Our understanding is this has not been completed.
1272	5/28/10	Tricia Jedele	Conservation Law Foundation	250.3	The chapter continues to describe the SAMP area as located at the boundary of two biogeographic provinces. (Section 200, 250(3) and 250.2(3)). As CLF noted in the draft comments, it is expected that the area will be one of the first regions to be impacted by climate change as the ocean temperature increases and this boundary shifts. The question still remains: how will the management regime established by the SAMP plan for and address this expected shift? Generally speaking, this chapter should include a separate section on the expected impacts of climate change on the ecology of the SAMP ecosystem. While the chapter does have a section entitled Emerging Issues (260), its topic headings are limited to Native Species Explosions, Invasive Species, and Marine Diseases. Climate change should be first on this list. In order to develop successful resource management policies, one must consider ecological changes from water temperature increases, sea level rise, changing salinity and ocean currents and ocean acidification. Another opportunity to discuss anthropogenic effects on the vulnerability of marine habitats is in the nutrient section of this chapter. CLF believes the section should be changed as such and also suggests two other changes. First, the term "sketchy" is unscientific and vague. Is the data geographically limited? Is the variance too high? Was there experimental error? Second, CLF believes that including a map displaying the nutrient concentrations geographically throughout the SAMP area is needed. This would shed some light on the effect of population and/or heavily fertilized regions on nutrient distribution in the SAMP area.	The climate change chapter provides greater elaboration on climate change and possible significance to the overall Ocean SAMP ecosystem, and that is referenced in the ecology in subsequent revisions. The emerging issues section points to some of the most pertinent and probable changes to the Ocean SAMP area ecology that are supported by reports in the literature. With regard to nutrients, no data were found that might lead to an assessment as suggested by the reviewer. Productivity and chlorophyll are presented as possible proxies of nutrient availability, and in general, the Ocean SAMP area appears to be slightly less productive than adjacent ecosystems. As such there does not appear to be any indication that nutrients are a major issue of concern, nor do existing sources of information suggest that land-based nutrient input is problematic.

1273	5/28/10	Tricia Jedele	Conservation Law Foundation	230.4	Our comment that the ecology chapter must acknowledge and address the impacts of land-based pollution on the ocean planning area was not addressed. For example, this chapter as does the chapter on Global Climate Change documents the importance of freshwater input from the Connecticut and Thames Rivers on the planning area (Section 230.4), but does not detail the impacts of excessive nutrients runoff from activities taking place within the watersheds of these rivers. The only reference to runoff is the relation to freshwater influence on salinity, without any mention of the non-point pollution issue. The SAMP document should highlight the impacts of stormwater pollution and effluent from the rivers on the ocean planning area and address how these impacts should influence SAMP policies. It is not sufficient that there is only one reference to land-based sources of nutrients (Connecticut in 250.1.1 (3)), which seems only incidental, and does not adequately portray the true importance of this issue.	The influence of the Connecticut River, based on published accounts there is nothing to suggest that nutrients are problematic, though Block Island Sound, which is the "receiving area" for Long Island Sound outflow, is more productive than Rhode Island Sound. However, there is nothing in the published literature accessed that suggests nutrients are problematic and they are therefore not addressed as such in the ecology chapter. If anything, some inference might be able to be developed about nutrient inputs from Long Island Sound as improving the productivity of Block Island Sound and perhaps aiding in the development of biological hotspots (e.g., along the front) just south of Block Island, though again this is not reported as such in the literature and therefore is not elaborated upon in the chapter text.

1274	5/28/10	Tricia Jedele	Conservation Law Foundation	230.2.6	Table 2.10 lists the marine mammals and sea turtles found in the Ocean SAMP / Rhode Island Area. As we noted in our draft comments, while it is important to understand which species are present, it is also critical to understand the broader status of the species. The author did address one of CLF's specific examples of this by incorporating the following sentence: "Right whales, a particularly endangered species with approximately 400 individuals remaining, can be common offshore during the spring and fall migration, but are not common in the SAMP area." Given the appearance of approximately 1/3 of the Northern Right Whale population in Block Island Sound last month, this sentence may need to be amended. That being said, the chapter should highlight the importance of status of the endangered, threatened, or at-risk species that inhabit or may inhabit the planning area. Further, the SAMP should document, as data allows, the distribution of endangered, threatened or at risk species across the planning area and their designated critical habitats, and propose protections for critical habitats or abundance hotspot areas. The SAMP mentions several special habitat needs of endangered, threatened, and at-risk species. CLF suggests these areas be geographically identified in the ecology chapter. These include the feeding habitat for ducks in 25 m or less shallows; the near shore shallows habitat needs of terns in the summer; the inlets, bays, and estuary habitat of the harbor seals; and the cusk's southern habitat range, which will presumably move further south with the latitudinal migration of species due to climate change. Additionally, Block Island is an essential spawning ground for many fish species and the commercially-important American lobster relies on the eastern part of Rhode Island Sound for successful larval transport. Our unaddressed draft comment remains that the rating of occurrence in Table 2.9 does not mesh with the narrative in various places. For example, Table 2.10 lists North Atlantic right whales, and fin, humpback and minke whales all as "common" in the Ocean SAMP planning area, but then says that the these whales are "relatively rare" or "not common" in the SAMP planning area (Section 250.4.1(2)).	Text, tables and graphics in the marine mammal section of the chapter have been reorganized, rewritten and/or replaced, and should have addressed many if not all comments provided here. Discrepancies between table and text, as noted above, have been recognized and addressed in revisions to the chapter. Maps for diving duck foraging (revised to be 20m depth) are included in the chapter text and may be addressed in the policies and standards sections currently under development.

1275	5/28/10	Tricia Jedele	Conservation Law Foundation	240.1.4	Section 240.1(4) cites results from 2002 US Army Corps of Engineers data on toxic metals in the SAMP area. The section's only restatement of the results is the remark that the numbers were below RI Department of Environmental Management standards. CLF challenges the reliance on DEM's standards as the ultimate threshold for determining whether toxic metals are an issue significant enough to warrant further mention in the ecology chapter because it fails to address the potential for cumulative impacts.	There is no indication in the literature that any sediment in impacted sites (e.g., oil spill and/or dredged material placement) contains metals or other toxins at levels of concern for benthic organisms/habitat. Without further information available it is not possible to address this comment further.
1276	5/28/10	Tricia Jedele	Conservation Law Foundation	250.2.1	Section 250.2(1) emphasizes the SAMP area's "capacity as a site for the disposal of dredged material." CLF notes that the language referring to dredging throughout this chapter tends to imply that the SAMP area is an ideal place for dredging. CLF strongly suggests correcting for the fact that the chapter does not appear to list any disadvantages associated with dredging or with disposing dredged material in the SAMP area. Section 250.2(1) also cites a study of rapid population recoveries that CLF believes is misleading. Have all the species recovered, or just the scientist's target species? Have species outside the immediate dumping area suffered? Have there been any changes to the primary productivity of the area due to changes in water clarity as it relates to light attenuation? Have there been any studies on the effect of particles disturbed by dredging interfering with the filtering mechanisms of bottom feeders? CLF suggests that the ecology chapter include a chart that compares and contrasts the information provided in the individual section discussing Rhode Island Sound and Block Island Sound found within section 230 and 250. For example, the species compositions could be positioned side by side to facilitate the reader's understanding of the key ecological differences between the two important areas within the larger SAMP area. Other examples of characteristics to compare/contrast between the two sub-areas are average water temperature, average depth, etc.	Dredging impacts are addressed in the Renewable Energy chapter and are therefore not addressed. The ecology chapter text does not in any way suggest, nor is there any attempt to suggest, that the area is a good place to place dredge materials; this has not been mentioned by any other reader, and therefore this reviewer may simply have misinterpreted the text. Chapter text reports what is provided in the literature, which suggests that the areas where dredged materials were disposed have recovered to a significant degree. An attempt to make comparisons between Block Island Sound and Rhode Island Sound as suggested by the reviewer were attempted, but the data sources are not able to be directly compared as suggested due to differences either in timing and/or methodology of sampling; it could be misleading to present the material is this way and it has therefore not been done.
1277	5/28/10	Tricia Jedele	Conservation Law Foundation		In closing, if it is true that the SAMP is being designed to serve as a model for ecosystem-based management, then the yet-to-be-completed ecology chapter is the linchpin of the SAMP. The significance of this Chapter should be reflected throughout the SAMP and should be featured in this chapter. The reader should have a clear understanding that the ecology of the SAMP area is of critical importance and the policy recommendations made and conclusions reached in this chapter should be referred to throughout the SAMP.	Chapters reference the Ecology chapter appropriately and is the first Ocean SAMP chapter to highlight its importance.

1514	6/21/10	Kathleen Wainwright	The Nature Conservancy	250.2.1	Insert a new paragraph "10" (not to replace the current paragraph 10 but to go before the current paragraph 10) that states: "The Nature Conservancy (TNC) has provided the CRMC with its Northwest Atlantic Marine Ecoregional Assessment (NAM-ERA). [Need citation] The NAM-ERA was conducted in two phases. Phase 1 of the (NAM-ERA) provided a database with maps indicating priority areas for diverse conservation targets, using 'Ten-Minute Squares' (roughly 100 square miles) as the unit of analysis. Characteristic habitats and species were selected to represent biodiversity and ecological functions within the Northwest Atlantic planning area, from Cape Hatteras to the Bay of Fundy and from the coastline to the shelf-slope break. Phase 2 identified a set of areas that, if effectively protected from incompatible human uses, will support and maintain the structure and function of coastal and offshore habitats and species across the entire planning area. Priority conservation areas were identified through integration and analysis of the recommended datasets produced by each of the habitat and species technical teams during Phase 1 of the Assessment. An inclusive suite of priority conservation areas was defined and mapped; the Conservancy refers to this group of areas as a "portfolio." In particular the NAM-ERA identified a portfolio of priority conservation areas for the species and habitats associated with the benthos of the Northwest Atlantic. Detailed information is available on the species target selection, data sources and data processing steps as well as the criteria, methods and results of identifying individual Ten-Minute Squares in Phase 2 based on the presence, abundance and persistence of six seafloor characteristics: demersal fish, diversity of fish communities, cold water corals, hard bottom habitat, seagrass habitat, and benthic habitats." In addition, an assessment of regionally significant Ten-Minute Squares for the Rhode Island OSAMP area was conducted and the data was downscaled to a finer resolution and is included as an appendix in this plan. Hyperlink here	Paragraph NOT inserted into text as suggested. The provided text is a description of methodologies employed in a TNC project, and in not appropriate for inclusion in the chapter; it does not add any new information and is not value added. If a proper citation is provided, either as a Personal Communication, Website URL, or TNC publication/report, the author is willing to insert a reference noting the development of such materials and that they, once published and fully available, may be a useful reference for the consideration in the identification of conservation areas.

1515	6/21/10	Kathleen Wainwright	The Nature Conservancy	250.3.13	Insert a new paragraph "13" (not to replace the current paragraph 13 but to go before the current paragraph 13) that states: "TNC's NAM-ERA (2010) has identified priority demersal fish areas as part of its benthic habitat assessment. In Phase 2 (Portfolio Selection) of the NAM-ERA, TNC analyzed thirty-eight years (1968 – 2006) of trawl survey point sample data, classified into distinct fish community types based on similarities in species composition and abundance among the samples. This analysis was not limited to the NAM-ERA's (32) primary conservation target species but rather included all species captured during the survey period (154-250 depending on the subregion). For each distinct group of samples, the Ten-Minute Squares were identified that had 4 or more fish communities present in the sample. The classification process was done separately for each of three subregions (Gulf of Maine, Southern New England, and Mid-Atlantic Bight) and samples that were depauperate in species (less species than the average number for the community type) were excluded. The NAM-ERA also identified important Ten-Minute Squares for migratory species, including large pelagic fishes such as tunas and sharks, as well as small pelagic fishes such as herring. For each species, TNC calculated a decadal persistence score for each Ten-Minute Square (Phase I). If a species had been observed in three or four decades (persistence score of 3 or 4) within a Ten-Minute Square, that square was tagged with a "1" for that species, indicating that the species was consistently observed in a square over decades. The number of "1s" was summed for each square across all species. For example, a square tagged with a "1" for albacore tuna and "1" for swordfish received a score of "2" for large pelagics. The final score ranged from 0 to a possible 14, with higher numbers indicating more species persistently present in the area. To identify areas of high potential importance, squares were selected if they scored as high persistence areas for at least two species (broad solution) or three species (strict solution)."	Paragraph NOT inserted into text as suggested. The provided text is a description of methodologies employed in a TNC project, and in not appropriate for inclusion in the chapter; it does not add any new information and is not value added. If provided with a proper citation, the author would be willing to insert a reference noting the development of such materials, and that they, once published and fully available, may be a useful reference for the identification of priority demersal fish habitat.

1516	6/21/10	Kathleen Wainwright	The Nature Conservancy	250.4.3	Insert Paragraph 3 below: "TNC's NAM-ERA (2010) analyzed cetacean distribution for certain target species. Information was collected on both baleen whales and toothed whales and the two groups were analyzed separately because they have distinct geographic distributions. The baleen whales and northern dolphins/porpoises group included seven species characteristic of the cold-northern waters of the Gulf of Maine: fin whale, humpback whale, minke whale, Northern Atlantic right whale, sei whale, Atlantic white-sided dolphin, and harbor porpoise. The toothed whales and dolphins included three species typical of the continental slope and warmer southern waters: sperm whale, bottlenose dolphin, and striped dolphin. Collectively, these federally protected species were selected to represent the diversity of cetaceans throughout the region, and their distributions cover the full range of the region. Twenty four years of effort-corrected seasonal sightings data (1979-2003), provided by the United States Navy, were analyzed to identify those areas where each species has been consistently sighted over many years. To accommodate for the bias introduced by uneven survey coverage or "effort", a standard approach was to use to calculate sightings per unit effort or SPUE, an index of relative density that allows for comparison of data spatially and temporally within the study area. Spring and summer SPUE values were used for this analysis. For each species and season, the SPUE values were tabulated within every Ten-Minute Square of ocean. Then, for each species and season, the Square whose mean SPUE values were one or two standard deviations above the regional mean were identified. These squares were tagged with a "1" to indicate that the square had the highest concentration of sightings of that species for that season within the region. The number of TMS categorized as "1" in either season was summed for each square across all species in each group. To prevent "double counting", a species was only counted once in this final sum, even if a TMS had the highest SPUE value for that species in both seasons. For example, a square tagged with"1s" in spring for fin whale, in spring and summer for right whale, and in summer for minke whale, received a score of "3" for the baleen whale and northern dolphin group. For additional prioritization (the "strict solution"), a subset of the Squares selected for high SPUE values were selected based on the following criteria: (1) a square had the highest concentrations of sightings for at least three species of the baleen group or (2) a square had the highest concentrations of any two of the three toothed whales."	Paragraph NOT inserted into text as suggested. The provided text is a description of methodologies employed in a TNC project, and in not appropriate for inclusion in the chapter; it does not add any new information and is not value added.

1389	6/22/10	Eugenia Marks	Audubon Society of Rhode Island		Audubon Society of Rhode Island supports an orderly and thorough review of the impacts of off-shore development to the complex ecosystem in marine waters as well as to the above-water ecosystem, including humans, that rely on the marine ecosystem for natural, recreational, aesthetic, spiritual, and commercial value. Audubon Society representative has participated throughout the SAMP process, and although these comments have been presented previously, we submit them for the record this evening.The material of the Ecology Chapter appears comprehensive and well integrated. Thank researchers for basic data and staff and you for syntheses and for providing it for review. Following are comments from Audubon Society of Rhode Island on the Ecology Chapter of SAMP.	Comment provided via written testimony from the June 22, 2010 public hearing for the Ecology, Global Climate Change and Existing Policies OSAMP Chapters.
1620	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6	At this point in time, it's probably better to cite the Paton et al. (2010; below) interim report (that will be an appendix in the SAMP document) rather than the Winiarski et al. 2009 or Paton et al. 2010 presentations that are available on the SAMP website. In fact, reporting the Paton et al. (2010) presentation is not necessary and will avoid confusion (same citation, one for a presentation, the other for the interim report). The interim report is a more up-to-date summary of the same results. However, a few of the figures cited in this Chapter are unique to the Winiarski et al. (2009) presentation and so could be retained (e.g., Fig. 2.38), although in most cases we offer to provide you with more up-to-date versions of the same figures that incorporate all the results presented in the Paton et al. (2010) interim report.	All references to Winiarski et al. and/or the Paton et al. presentation were changed as suggested.
1621	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.5 _250.6. 6	Appendix D of Paton et al. (2010) could be used to develop longer phenology figures to replace 2.36 and 2.38 (see attached Excel workbook).	Figure 2.38 was replaced/updated with figures taken from the emailed attachment / Excel workbook, as suggested.
1622	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.6	Fig. 2.37 legend- suggested alternative wording: "Areas with Ocean SAMP area that might be used by seaducks based on the literature, which suggests most seaducks forage in areas with water depths <20 m deep. Since the distribution of the benthic community is not known, this figure shows only potential foraging sites based on water depth and not preferred foraging sites."	Figure 2.37 amended to reflect suggested changes.

1623	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.7	Fig 2.39 – "boat-based" should be replaced with "ship-based". "Dark-winged Scoter" is not a species, so it should be changed to "Surf or Black Scoter". Also, this version of the figure is based on an incomplete dataset. According to Paton et al. (2010), during land-based surveys: "The 15 most abundant species (or species groups), in terms of overall detections, were unidentified scoter (105,656 detections; these were primarily either Surf or Black Scoters),Common Eider (80,445), Herring Gull (59,614), Surf Scoter (42,704), Black Scoter (32,274), Double-crested Cormorant (25,626), unidentified gull (23,860), Tree Swallow (14,025), Great Black-backed Gull (12,583), Laughing Gull (12,097), Northern Gannet (8,718), Red-breasted Merganser (7,926), Common Loon (6,770), White-winged Scoter (6,750), unidentified seaducks (5,303, mainly eider and scoters far offshore), and Ring-billed Gull (3,723) (Table 13)." The upper panel could be changed to reflect these new numbers.	Boat-based was changed to ship-based as suggested. The figure was updated with the data supplied in the emailed attachment of suggested changes.
1624	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.7	Also from Paton et al. (2010): "During ship-based surveys, we detected a total of 56 species, which included 6 species of Procelliformes (tubenoses), 9 Anseriformes (waterfowl), 5 species of gulls, two species of terns, three species of jaegers, and five species of alcids (Table 17). The five most abundant species, in terms of mean number of detections per survey were Herring Gull (30.6 detections per survey), Wilson's Storm-Petrel (28.0), Northern Gannet (23.7), Great Black-backed Gull (18.5), and Cory's Shearwater (9.6).." See Table 17 of Paton et al. (2010). Thus the lower panel could be changed to reflect these new figures.	The figure was updated based on data in Table 17 of the appendix/technical report as suggested.

1625	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	200.13	for the paragraph that summarizes the birds (2nd full paragraph), we recommend incorporating some of the general trends evident from our surveys during 2009-10, as summarized in our interim report submitted in June 2010. Here is the original paragraph:"Bird life throughout the Ocean SAMP area is varied, with waterbirds being the most abundant. Passerines utilize Ocean SAMP air space during migration periods, and Block Island is an important stop over and resting spot for many species. Use of Ocean SAMP waters by waterbirds is heaviest dUniversity of Rhode Islandng winter months, with a peak from early March through mid-April. Water of less than 20 m in depth is important feeding habitat for diving ducks, and nearshore shallow waters are important feeding habitat for terns nesting onshore during summer months." Here is our suggested revision of this paragraph: "Bird life throughout the Ocean SAMP area is dynamic, with substantial changes between seasons and years. During summer in some years (e.g., 2009), tens of thousands of pelagic seabirds migrate into the SAMP area and feed for several months, although in other years (e.g., 2010) these seabirds inhabit more offshore ocean areas and they are not observed within the SAMP area. We occasionally detected the endangered Roseate Tern during summer, with most observations in nearshore areas. In general, bird life is most diverse and abundant during fall and spring migration and during winter, when thousands of gannets, loons, seaducks (e.g., eider, scoter), and alcids (e.g., razorbills, murres, dovekies) inhabit the SAMP area. Water depth is an important factor in the spatial distribution of these wintering birds. Gannets and loons are piscivorous specialists and tend to occur in areas where water depths were 30-45 m and <30 m deep, respectively. Previous research suggested that the primary foraging depths for seaducks was <20 m, although seaducks in the SAMP area were consistently foraging in waters up to 25 m deep. Razorbills were consistently found in shallower depths and closer to the mainland, Common Murre primarily used the central latitudes of the study area with intermediate depths, while Dovekies were the offshore specialist that reached peak densities in the deeper depths in the southern sections of Rhode Island Sound and the Continental Shelf. In addition, songbirds utilize Ocean SAMP air space especially during migration periods, and Block Island is an important stop over and resting spot for many species."	The suggested revisions to Page 12 WERE NOT made; this section presents a very brief overview of the avifauna section of the ecology chapter, and the suggested changes were much too detailed for inclusion. However, 250.6., #2 on Page 100 was amended to include most of the changes/additions suggested.

1626	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.1	Our suggested changes are inserted/deleted: “Birds are among the top consumers in the Ocean SAMP area; they are attracted to the area because of the temperate climate (many of these birds nest in the Arctic or Antarctic) and because of the seasonal abundance of fish and invertebrate prey. The impact of avifauna on the overall ecology of the Ocean SAMP area is not well studied and requires further research.”The suggested changes to the last sentence above were because the interactions between bird consumers and their prey is complex – includes bird impacts on invertebrates (as stated), but also bird impacts on fish which in turn affects invertebrates, as well as impacts of the prey community distribution and abundance on that of birds.	Section rewritten to reflect their suggestions, as appropriate. It is not well known or documented that birds are top consumers within the entire ecological framework, and so this change was not made. Further research is suggested in the original text, and must be balanced against all other research needs and priorities for research developed accordingly, this “required” was not inserted as suggested.
1627	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.2	Our suggested changes are inserted/deleted:“A variety of waterbirds utilize the water and air space of the Ocean SAMP region, with substantial changes between seasons and years (Fig. 2.36). Waterbirds utilizing Ocean SAMP waters during summer include nearshore species such as cormorants, gulls, and terns as well as more oceanic species such as shearwaters and storm-petrels. In general, bird life is most diverse and abundant during fall and spring migration and during winter, when thousands of gannets, loons, geese, seaducks (e.g., eider, scoter), and alcids (e.g., razorbills, murres, dovekies) inhabit the SAMP area. Passerines (e.g., songbirds) tend to utilize Ocean SAMP air space especially during fall migration, with Block Island serving as an important resting, staging or feeding site. Passerines also utilize Block Island for nesting and breeding purposes.”	This section was amended with much of the information that was suggested for inclusion in comment #1626. Please see explanation.

1628	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.4	We agree that this is the list of the 25 species that are most common; however, the seasonal occurrence of these species is not correct. Here is our list of the 25 species and the months they are most common in the study area: Red-throated loon – Oct to May Common loon- Oct to May Horned grebe – Nov to May Cory's shearwater – June to Aug Greater shearwater – June to September Manx shearwater – May to Aug Sooty shearwater – May to September Northern gannet- September to June Double-crested cormorant- March to November Great cormorant- October to March Common eider- October to April Black scoter- September to May Surf scoter- September to May White-winged scoter- September to May Herring gull- Year round Great black-backed gull- Year round Ring-billed gull- Year round Laughing gull- May to November Black-legged kittiwake- October to April Common tern- April to November Roseate tern- May to September Least tern- May to August Razorbill- November to April Common murre- November to April Dovekie- November to April	Table was updated accordingly

1629	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.4	Our suggested changes are inserted/deleted:"Water depth is an important factor in the spatial distribution of water birds in the Ocean SAMP area (Paton et al. 2010). Gannets and loons are piscivorous specialists and tend to occur in areas where water depths were 30—45 m and <35 m deep, respectively. Razorbills were consistently found in shallower depths and closer to the mainland, Common Murre primarily used the central latitudes of the study area with intermediate depths, while Dovekies were the offshore specialist that reached peak densities in the deeper depths in the southern sections of Rhode Island Sound and the Continental Shelf. Previous research suggested that the primary foraging depths for seaducks was <20 m, although seaducks in the SAMP area were consistently foraging in waters up to 25 m deep (Figure 2.37) where bivalves and other forage are available (Paton et al. 2010). While bathymetry is known for the Ocean SAMP area, benthic community composition is not and therefore preferred/critical waterbird forage areas cannot be readily identified.."In our interim report there is a good alternative Figure 2.37 that shows water depths to 25 m – this is Fig. 8 (pg. 43) of the report. Please use it along with it's figure legend instead of this Fig. 2.37.	Section was updated accordingly; Figure 2.37 was not replaced as the author feels it shows the area referenced in the text in a suitable and fitting fashion.
1630	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.6	Our suggested changes are inserted/deleted:"Waterbird occurrence in the Ocean SAMP area substantially changes between seasons as shown in Fig. 2.36 for a variety of bird species, and in Fig. 2.38 for certain bird species or groups that are present in a given season. Gull use of the area is year round, whereas pelagic seabirds such as shearwaters and storm-petrels inhabit the SAMP area only during summer. In general, bird life is most diverse and abundant during fall and spring migration and during winter, when thousands of gannets, loons, sea ducks, and alcids (e.g., razorbills, murres, dovekies) inhabit the Ocean SAMP area."	Section was updated accordingly to best reflect the information and intent of the suggested changes.
1631	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.6	Fig. 2.38 – We would prefer to provide you an updated figure that includes a full year's worth of data (from our June 2010 report). See attached excel workbook with phenology figures.	Excel workbook figure was used/replaced outdated version

1632	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.7	Fig. 2.39 – We would prefer to provide you an updated figure that includes a full year's worth of data (from our June 2010 report). See attached excel workbook with phenology figures.	Excel workbook figure was used/replaced outdated version.
1633	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.8	Our suggested changes are inserted/deleted using Word Editor:"Various species of terns are found throughout the Ocean SAMP area during summer months (Winiarski et al. 2009; Paton et al. 2010), with more birds in the area during the post-breeding season. Nearly all observations of the endangered Roseate Tern were over the waters north of Block Island, increasing with proximity to the Rhode Island coastline. Roseate Terns do not appear to regularly utilize more open, deeper water areas of Block Island Sound, Rhode Island Sound or the Offshore Ocean SAMP area, although they were detected often roosting on Block Island. The migration routes of Roseate Terns through the Ocean SAMP area to and from their major staging area on Cape Cod are still not known. Impact of terns on fish ecology of the Ocean SAMP area is not known."	Suggested revisions largely incorporated, though not verbatum.

1634	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6.9	We are concerned that these summaries for each species or species group are based on our data from only winter plane-based surveys (this was the best data available when the chapter was written, but it can now be updated given our June 2010 interim report). You could the Extended Abstract of Paton et al. (2010, pages 4-7) to highlight more avian guilds than is currently highlighted. As such, we suggest the following changes, inserted/deleted using Word Editor:"9. Paton et al. (2010) report the following patterns of avian use of Ocean SAMP area waters for the period of late November 2009 through late February 2010:a. Both Common and Red-throated Loon are abundant species during winter months in the Ocean SAMP area, and population estimates suggest this area provides critical wintering habitat for a significant number of loons. Loons were found to be scattered throughout the area, though thinly throughout most of the central portion of Rhode Island Sound. Densest concentrations occurred along the Rhode Island south shore shoreline, around Block Island shoreline, and in the area west of Block Island bordering Montauk Point and the opening to Long Island Sound. Waters < 35 m deep appear to be preferred, although some loons were documented in deeper offshore waters of Rhode Island Sound. b. Scoters and common eider were among the most abundant birds we observed using nearshore habitats during the winter months. They tended to be concentrated around the west side of Block Island, along the Rhode Island south shore shoreline, and around the Sakonnet shoreline bordering Rhode Island Sound. Fewer were found over the open waters of Block Island Sound, Rhode Island Sound or the offshore Ocean SAMP area. Scoter appeared to be most abundant from November through January; eider appeared to use the area from October through March. Previous research suggested that the primary foraging depths for seaducks was <20 m, although we found seaducks were consistently foraging in waters up to 25 m deep in the SAMP study area (Paton et al. 2010).c. Alcids (razorbills, dovekies, murres) are migrants that winter in the Ocean SAMP study area. They were found scattered throughout the area, though densest concentrations occurred in deeper waters south of Block Island and throughout the central portions of Rhode Island Sound and south onto the Offshore Ocean SAMP area. These species exhibited spatial segregation in the Ocean SAMP study area, with Razorbills specializing in the northern sections that were shallower and closer to land, Common Murre tending to use the central latitudes of the area, while Dovekies were the offshore specialist that reached peak densities in the southern sections of Rhode Island Sound and the Inner Continental Shelf. d. Northern gannets are a common spring and fall migrant through the Ocean SAMP study area. This piscivorous specialist tends to occur in areas where water depths were >30 m deep. In general, they are observed scattered throughout the area, though their densities peaked in a zone approximately 3 miles offshore from Block Island and mainland Rhode Island in both fall and winter. Gannets tend to concentrate around active fishing vessels in the western half of the study area."	Suggested revisions largely incorporated, though not verbatum.

1635	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	250.6	Please add a Bullet that focus on passerine birds. Here's our suggested bullet:During land-based seawatches, Paton et al. (2010) detected 7 species of raptors and 27 other species of landbirds. However, with the exception of Tree Swallows, which are diurnal migrants along the coast, Paton et al. (2010) detected very few songbirds or other types of landbirds during land-based seawatches. During ship-based line transect diurnal surveys, only 8 species of landbirds were detected in Rhode Island's offshore waters (Paton et al. 2010).. This is not surprising as most landbirds, particularly songbirds, are nocturnal migrants, and only effectively monitored by radar. Mizrahi et al. (2010) did have a radar unit on Block Island throughout 2009. Mizrahi et al. (2010) were not able to separate out landbirds from other species during radar investigations. Based on this radar study, peak flight altitudes of targets ranged between 200-400 m above sea level, with more birds passing over Block Island in the fall than spring. Peak migration appeared to take place from sunset to 5 hours after sunset.	Suggested revisions incorporated, though slightly rewritten.
1636	7/28/10	Peter Paton	University of Rhode Island Natural Resource Science	280	Literature Cited: Mizrahi, D., R. Fogg., T. Magarian, V. Elia, and D. La Puma. 2010. Radar monitoring of bird and bat movement patterns on Block Island and its coastal waters. Draft Interim Report. Rhode Island Ocean Special Area Management Plan, Kingston, RI. Paton, P., K. Winiarski, C. Trocki, and S. McWilliams. 2010. Spatial Distribution, Abundance, and Flight Ecology of Birds in Nearshore and Offshore Waters of Rhode Island Interim Technical Report for the Rhode Island Ocean Special Area Management Plan, Kingston, RI	References added to the chapter.

1674	8/1/10	Tricia Jedele	Conservation Law Foundation	200	The authors define ecosystem as "a collection of various ecological communities." This rather narrow definition of "ecosystem" sets the tone for the ecology chapter. Disappointingly, the chapter continues to be nothing more than a descriptive tool designed to characterize the SAMP area resource. Although the chapter recognizes in a scattered way that the SAMP area ecosystem, beyond being a mere collection of communities, is a functional unit with complex linkages across systems, the authors make little effort to establish a context in this chapter to change the way we currently use the resource or manage the SAMP ecosystem for the future. That is to say, the chapter is still written primarily to use the threats posed by impending climate change to justify renewable energy development zones, but does little else to establish meaningful areas of habitat protection from harmful human activities. If "the primary guiding policy for the Ocean SAMP is to protect and where possible restore and enhance natural resources" then the SAMP should do more than just protect the areas from the impacts associated with future activities, it should systematically identify special, sensitive, or unique habitats and ocean life and make strong recommendations for the protection of these special places from current activities and future activities. As we have previously noted, areas that might be of special concern that are already referenced in chapter 2 include: the inner shelf south of Block Island, the glacial moraine areas with unique habitat diversity ("hot spots"), the shallow sill area with wave-buffering capacity, the Block Island canyon, and the 'jet' 5 km south of Montauk Point. Montauk Point itself seems to lend itself to identification as a special area for protection, with its dense population of loons and occurrences of the Northern Gannett. By way of example, the failure to "systematically" identify key ecological areas is most noticeable in the context of the unexplained difference in the treatment between sea duck foraging habitat and moraines.	The author has attempted to make links between ecosystem components where and when such links, based on the published literature, seemed appropriate. Existing text points out all the important features noted in the provided comment, and ties them to the ecology as best can be done given the current state of understanding of the various components of the Ocean SAMP ecosystem. Climate change is a major force acting upon the Ocean SAMP ecosystem, and is noted as such because change within the ecosystem and larger region appear to be occurring at a rate that outstrips our current understanding of how the ecosystem functions, thus limiting predictive ability significantly. Those areas where published findings and/or new results are being brought forth from ongoing research being undertaken as part of the overall Ocean SAMP planning effort, are being used to call forth special areas for consideration, such as for sea duck foraging habitat as noted in the attending comment. See below for further information on the difference in treatment between seaduck foraging habitat and moraines.
1675	8/1/10	Tricia Jedele	Conservation Law Foundation	270.2.1	Section 270.2, p. 111 provides that "The Council designates the Ocean SAMP sea duck foraging habitat (Chapter 8, Figure 39) as Areas Designated for Preservation due to their ecological value and the significant role these foraging habitats play on[sic] for these avian species." As such, the Council may "prohibit any Large-Scale Offshore Development, mining and extraction of minerals, or other development that has been found to be in conflict with the intent and purpose of an 'Area Designated for Preservation'." CLF agrees with the recommendation that these areas be designated as such, but has the following concerns.	This comment does not appear to require any response.

1676	8/1/10	Tricia Jedele	Conservation Law Foundation	210_220.1_250.6.5	Nowhere in the SAMP, including the Ecology chapter, is it explained how the authors determined that the sea duck foraging habitat is entitled to the heightened protections that come with being an "Area Designated for Preservation," but that the moraines are only deemed worthy of the protections afforded the label "Areas of Particular Concern." For example, the glacial moraines are recognized throughout the chapter as creating unique bottom topography, which influences the patterns of currents, and creates a mosaic of habitats which diversifies the overall ecological fabric of the area. See pp. 13-18 The physical habitat areas provided by these moraines are understood to provide a "powerful influence" on benthic ecological makeup provide the foundation for greater biotic diversity of the ecosystem. The glacial moraines even perform the function of acting as submerged jetty at the mouth of Block Island Sound, dissipating storm wave energy. See p. 21. In contrast to the extensive discussion of the value and significance of the identified moraines in the SAMP area, the only treatment given to sea ducks in the Ecology chapter is in paragraph 5 on p. 102. Because of the incredible habitat value the moraines provide, CLF is calling on the Council to identify all of the moraines as Areas Designated for Preservation. And, if the Council will not do so, even for those moraines that are in state waters or partly so, CLF is requesting that the Council's justifications for providing heightened protections for sea ducks while giving a reduced level of protection to the glacial moraines responsible for providing do much critical habitat area be clearly set forth in the SAMP document. The Council should be able to articulate and the readers should be able to understand how an area receives special designation and the criteria that are being used to guide the designation.	This comment primarily refers to Chapter 11, The Policies of the Ocean SAMP, and Chapter 8, Renewable Energy and Other Offshore Development. Seaduck foraging habitats have been identified as Areas Designated for Preservation, which means that they are closed to Large-Scale Offshore Development, because the URI avian research team recommended this based on scientific research that indicates that offshore development can permanently displace seaducks from their foraging habitats. This finding has been clarified in Chapter 8, Renewable Energy, in the "Effects" section (sections 850.4, #6, and 850.4) and in the "Policies" section (section 860.2.3 #1(i)). These changes will also be reflected in subsequent revisions of Chapter 11, The Policies of the Ocean SAMP. In addition, the bird section of the Ecology chapter has been expanded (section 250.6 #5) to clarify the importance of seaduck foraging habitat, and we have added a reference to the Renewable Energy chapter for further information on this topic. By contrast, no scientific research has been identified which indicates that offshore development can permanently damage glacial moraines or permanently displace any species from glacial moraine habitats. However, because (as CLF points out) glacial moraines are known to have high habitat value, it was determined that glacial moraines merited designation as Areas of Particular Concern.

1677	8/1/10	Tricia Jedele	Conservation Law Foundation	200_210_230.4.1.1	Throughout the Ecology chapter, the authors make speculative statements about how climate change is impacting certain fish species, but will not correspondingly make any statements about the known impacts of fishing and the use of fishing gear on fish and habitat. For example, p. 11 cites the decline in bottom dwelling fishes such as winter flounder, and suggests that these changes "appear[s] to be correlated" to warming water temperatures resulting from climate change. See also p. 12 suggesting that changes to the fish communities are a result of climate change. CLF does not disagree that climate change is impacting the entire ecology of the ocean, including fish habitat and fish species, but, climate change is not the only factor impacting the fish community. The SAMP must recognize that overfishing and the use of certain fishing gear have had and continue to have detrimental impacts on a variety of fish species and sea floor habitat. The continued failure to articulate the obvious impacts associated with human misuse of ocean resources is troubling, but even more troubling is the speculation in the SAMP document itself is the speculation that benthic organisms not only can withstand "altered or destroyed" habitat patches, but that they thrive in altered and destroyed patches. See p. 18. See also p. 20 (a preponderance of fish trawl marks in depositional areas suggest a preference for this environment by commercially important demersal fish species). The fact that a vital fish habitat exists in an area that is heavily trawled does not mean that the trawling causes the vitality. Indeed, on p. 40, para. 1, the Ecology chapter recognizes that "circulation determines the area of food concentration, which in turn largely determined where predators [including human predators] will congregate to feed. Speculative statements should be removed from the SAMP unless they can be supported by actual data and sound science.	Authors were specifically requested to not use citations in the introduction to chapters as these were to be used directly as public outreach/education tools; readers would be instructed to see chapter text for details. The information related to comment re: page 11 is found in Section 250.3, #1 and #12 and cites Collie et al. (2008). The information related to comment re: page 12 is found in Section 250.3, #13 and #14 and cites Collie et al. (2008) and Nye et al. (2009). As the purpose of the Ecology chapter is to characterize the area's ecosystem, and not the human uses of this ecosystem, the impacts of fishing on the area's resources and habitats are not addressed here. Instead they are addressed in Chapter 5, Commercial and Recreational Fisheries, which includes a detailed section on the impacts of fishing that has already been expanded considerably in response to previously filed CLF comments. The author agrees with comments regarding speculative statements on pages 18 and 20, and these have been amended to present them as hypothetical statements.

1678	8/1/10	Tricia Jedele	Conservation Law Foundation	230.3.2 .1	CLF agrees with the conclusion on p. 34 (para. 1) that the seasonal input of freshwater is important to the ecology of the Ocean SAMP area, and that terrestrial-based nutrients are important to fuel healthy plant growth. But, while clean, terrestrial-based nutrients are important to the health of the SAMP area, the significant influence of Long Island Sound on the SAMP area should also bring the concerns associated with toxins, storm water discharge and land-based pollution. According to the Connecticut Department of Environmental Protection, storm water runoff from marinas is twice as toxic—gallon for gallon—as runoff from metal industries, and ten times more toxic than runoff from any other industrial source, including rubber, plastic, and bulk petroleum facilities. The Long Island Sound Study (a six-year research and management project that began in 1985 as part of the National Estuary Program) identifies storm water runoff from pesticide and fertilizer applications, car engine fluids, earth-moving activities, and any other material dumped on land or water, including, industrial pipes, sewage pipes and maintenance activities in marinas and on boats as sources contributing to the pollution of Long Island Sound. The frequency and severity of Harmful Algae Blooms (HABs) have been linked to increased nutrient loading from human activities. Runoff and erosion from fertilized agricultural areas, erosion from river banks, river beds, land clearing (deforestation), and sewage effluent are the major sources of phosphorus and nitrogen entering water ways. The Ecology chapter indicates that the approximate mean annual volume transport between Long Island Sound and Block Island Sound (through “the Race,” which is the main portal for exchange between Block Island Sound and Long Island Sound) is 24,000 meters cubed per second. The Ecology chapter should appropriately identify the connection between land-based pollution and marina activities on the health of a marine ecosystem and should note how this SAMP or the other existing SAMPS, like the Pawcatuck River or Salt Ponds Regional SAMPs, are designed to address the land-based pollution issues.	No change to the text is made to address this comment. The author could find no published accounts, from CT OLISP or other sources, that would suggest that Long Island Sound is providing pollutants to the Ocean SAMP area in concentrations of concern, nor are there any published accounts noting any connection between land-based pollutants and impact in the Ocean SAMP area, and particularly with regard to the land area of Connecticut draining into Long Island Sound. As such any reference or change in the text as suggested would be pure conjecture and could possibly be open for misinterpretation.

1679	8/1/10	Tricia Jedele	Conservation Law Foundation	270.1	The General Policies Section, 270.1, contains a number of vague and ambiguous standards and measures. CLF believes that the Council should explain in greater detail how it intends to determine whether the "impacts from future activities are 'unavoidable' (i.e., will the Council allow an applicant to argue that the costs associated with alternatives are excessive? What criteria will be used in making this determination?); If the impacts are "unavoidable", what criteria will be used in assessing appropriate levels of minimization or alternatively mitigation? What does the phrase "acceptable to the scientific community" mean? How will the opinions of the "scientific community" and the public be weighed? What does the Council mean by the phrase "will employ the precautionary principle?"	Policy 270.1 has already been revised per the direction of the CRMC Ocean SAMP Subcommittee, who requested revisions when they reviewed Chapter 11, The Policies of the Ocean SAMP (which includes all policies/standards from the various Ocean SAMP chapters). The new version of this policy reads: "The Council recognizes that the preservation and restoration of ecological systems shall be the primary guiding principle upon which environmental alteration of coastal resources will be measured. Impacts from future activities shall be avoided and, if they are unavoidable, minimized and mitigated."The terms unavoidable, avoid/avoided, minimize and mitigate are used throughout the RICRMP and are widely-used and accepted. These terms will be applied in a manner that is consistent with the standards set out in CRMC's enabling legislation.
1680	8/1/10	Tricia Jedele	Conservation Law Foundation	270.2	The Regulatory Standards Section, 270.2, also contains a number of vague and potentially unenforceable standards. For example, how will the intent and purpose of an Area Designated for Preservation be defined so as to facilitate the determination of whether a proposed development is "in conflict" with the intent and purpose? With respect to the Areas of Particular Concern, how will the decision about whether an impact could be "avoided" or "no other alternatives are available" be made. How are these terms being defined?	As noted above, the terms avoid/avoided are used throughout the RICRMP and are widely-used and accepted. Terms such as alternatives and conflict are also used throughout the RICRMP and are widely-used and accepted. These terms will be applied in a manner that is consistent with the standards set out in CRMC's enabling legislation.

1681	8/1/10	Tricia Jedele	Conservation Law Foundation		The EVI should be used by the Council for more than simply identifying appropriate zones for renewable energy. As discussed above, the Ocean SAMP is in need of a systematic method designed to identify sensitive, important, and ecologically valuable areas within the Ocean SAMP area – an EVI would be that systematic method. CLF strongly recommends that the EVI be pulled from the Renewable Energy chapter –where its presence merely confirms that the Ocean SAMP's sole purpose is to identify appropriate areas for offshore renewable energy projects – and placed in the Ecology chapter – where it can be used as the tool it was intended to be.	The Ecological Value Map (EVM) is not yet completed or tested. It is referenced in the Renewable Energy chapter because, once it is completed and tested, it may help the Ocean SAMP team identify sites that are appropriate for renewable energy development. In addition, it may help CRMC identify areas of high ecological value. Once the EVM is completed and tested, it will be integrated as appropriate into the Ocean SAMP document. However, given that EVM results are not yet available, it is not yet possible for CRMC to determine exactly how these results will be used and incorporated into the Ocean SAMP document and management framework.
1682	8/1/10	Tricia Jedele	Conservation Law Foundation		CLF is taking this advance opportunity to flag these issues of concern with respect to the Ecology chapter. We intend to file additional comments by the September 9, 2010 deadline. That being said, it would be of great assistance to us if we were to be provided with a response to these comments before the August 24, 2010 public hearing.	No change/response required.
1658	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	220.1.3	Page 22, #3. This discussion would be more complete if it also mentioned that the seasonal-mean circulation in winter, while much weaker than shorter-term wind-driven fluctuations, has a distinct upwelling pattern-- and this is not true of the summer seasonal-mean circulation, as demonstrated by CU10 and UC10.	New text inserted that mentions upwelling as noted.
1659	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	220.1.3	Page 22, #3. The ending comments would be strengthened by noting that Codiga and Aurin (2007) made direct observations of volume transport in the exchange flow between LIS and BIS and showed that it was weakest in winter.	New text inserted citing Codiga & Aurin (2007) re: volume transport in winter.

1660	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.6	Page 27, #6. Change this: “Codiga and Ullman (2010) report on many of the physical oceanographic aspects of the Ocean SAMP area that would be of importance to the NECOFS model application.” to this: “Many detailed aspects of physical oceanography in the Ocean SAMP area based on Finite Volume Coastal Ocean Model (FVCOM) hydrodynamic simulations, which underlie NECOFS, have been described by Codiga and Ullman (2010).”	Text was amended/changed as suggested.
1661	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.1.1 _230.1. 2	Page 28, #1 and #2. Suggest citing recent results from SAMP research (Harris et al; UC10) corroborating these earlier results for waves, but also demonstrating that geographic variability of waves across the offshore SAMP area and central RIS is modest; geographic variability farther inshore is poorly known and worthy of additional attention.	Text was amended to cite suggested research and to incorporate the intent of the revision suggestion.
1662	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.1 .6	Page 33, #6. I am pretty sure that the version of the O’Donnell and Houk extended abstract from the Baird Symposium that I saw did not discuss this-- so unless there was a later version of it which did (or you are citing a different “in prep” pub, from the same authors?), that citation may need to be reconsidered. In any case this is the appropriate publication to cite as it is the original dataset and presents many of the discussed aspects: Kaputa, N. P., and C. B. Olsen (2000), Summer hypoxia monitoring survey ’91– ’98 data review, Long Island Sound Water Qual. Monit. Program, Conn. Dep. of Environ. Protect., Hartford.	Text was amended to include the proper citation containing the original data; new citation added to reference section.
1663	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.3.3 .5	Page 39, #5. Should cite UC10, in which a a salinity intrusion, revealed by a broad range of hydrographic and current observations, is discussed in some detail.	Section totally rewritten to reflect findings on mid-depth salinity intrusion, as suggested.
1664	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.2	Page 40, #2. The ending comments would be strengthened by noting that Codiga and Aurin (2007) made direct observations of volume transport in the exchange flow between LIS and BIS and showed that it was weakest in winter.	Reference to Codiga & Aurin 2007 added to text as suggested.
1665	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.3	Page 41 caption to Figure 2.15. Replace the third word “circulation” with “tidal circulation”.	"tidal" inserted as suggested.

1666	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.5	Page 41, #5. In the first sentence: your Figure 2.16 is actually not from Codiga and Ullman 2010, but rather is from Codiga (2009). Same for the citation in the middle of the first paragraph on page 45, it should be Codiga (2009) not CU10.	Text amended to include the correct citation, as suggested.
1667	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.5	Page 42, caption to Figure 2.16. This is a schematic, hypothesized flow pattern (not at all a model result); it is from Codiga (2009), not CU10; and it does not show temperature/salinity/sigma-t.	Citation corrected in figure legend, and legend text corrected as suggested to schematic not modeled.
1668	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.6	Page 42, #6. First sentence: Figure 2.17 is not a model output. It is a summary schematic depiction based on integrating our best understanding from observations and models.	Text corrected to state summary schematic, not modeled.
1669	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.6	Page 43. Caption to Figure 2.17. Replace “Hypothesized annual water flow volumes at the surface and the bottom” with “Schematic summary, based on observations and model outputs, of currents and hydrography”.	Text amended as suggested to say schematic, using text provided by reviewer.
1670	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.1 .2	Page 44, #2, last sentence. Replace “Codiga (in prep) reports” with “Codiga (2009) hypothesized”	text replaced as suggested.
1671	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.1 .3	Page 44, #3. “…southeast of Montauk Point (Figure 2.19; Edwards et al. 2004).” This needs to also cite Kirincich and Hebert (2005) and Codiga (2005).	Citations inserted as suggested; new citations amended into References section of chapter also.

1672	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	230.4.2 .6	Page 47, #6. At the end, replace this: "However, Codiga and Ullman (2010) point out that reports of a gyre in Rhode Island Sound are consistent with reports of flow around the periphery of the sound, but that there is no evidence that the flow is closed to form a distinct gyre as originally noted by Cook (1966). This is an area where further research is needed to improve understanding of circulation in Rhode Island Sound." With this: "While a cyclonic gyre the size of RIS is consistent with flow counterclockwise around its periphery, the analysis of model output in CU10 and of current observations in UC10 have both demonstrated that along the southern edge of RIS the flow is westward, which contradicts the idea that flow closes in a distinct gyre as originally suggested by Cook (1966)."	Suggested wording inserted as provided.
1673	8/5/10	Dan Codiga	University of Rhode Island Graduate School of Oceanography	280	References cited Codiga, D.L. 2005. Interplay of wind forcing and buoyant discharge off Montauk Point: seasonal changes to velocity structure and a coastal front. J. Phys. Oceanogr. 35, 1068-1085. Codiga, D.L. 2009. Circulation in Block Island Sound, Rhode Island Sound, and adjacent waters, with emphasis on subsurface flows. In: Schwartz, M.L., A. Desbonnet,B.A. Costa-Pierce (Eds.), Sound Connections: The Science of Rhode Island and Block Island Sounds. Proceedings of the 7th Annual Ronald C. Baird Sea Grant Science Symposium, Block Island, Rhode Island. [http://seagrantadm.gso.uri.edu/Baird_08/Abstracts/codiga.pdf]. Codiga, D.L., D.S. Ullman. 2010. Characterizing the Physical Oceanography of Coastal Waters Off Rhode Island, Part 1: Literature Review, Available Observations, and A Representative Model Simulation. Appendix to Rhode Island Ocean Special Area Management Plan, 169 pp. Kirincich, A., D. Hebert. 2005. The structure of the coastal density front at the outflow of Long Island Sound in spring 2002. Continental Shelf Research 25, 1097-1114. Ullman, D.S., D.L. Codiga. 2010. Characterizing the Physical Oceanography of Coastal Waters Off Rhode Island, Part 2: New Observations of Water Properties, Currents, and Waves. Appendix to Rhode Island Ocean Special Area Management Plan, 108 pp.	References provided here were all used in the text and/or figure legends and were included/inserted into the References section of the chapter.