Record #	Submitted	Name	Organization	Section	Comment	Response
299	3/20/2010	Dan Codiga	University of Rhode Island Graduate School of Oceanography	330	Acknowledge in this section that we do in fact have a reasonably good handle (see the draft report distributed earlier today) on the "typical" annual cycle of density stratification and how it varies geographically across the osamp domain, as well as the underlying relative importances of temperature and salinity in driving the stratification. it's true that we can't yet gauge how these patterns in stratification may respond to changes in riverflow, solar heating, wind strength, storminess, etc, but the way it is phrased now makes it sound like we don't know the baseline conditions for stratification, and i would say that we actually do.	Corrected
301	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	recommend “concern of icing on vessels and infrastructure” be changed to read “concern of icing in waterways and on vessels and infrastructure”	Corrected
302	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	Table 6, under “Increasing air temperatures” recommend “Reduced icing on vessels and infrastructure” be changed to read “Reduced icing in waterways and on vessels and infrastructure”	Corrected
303	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	recommend “severity of icing on vessel and infrastructure” be changed to read “severity of icing in waterways and on vessel and infrastructure”	Corrected

304	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	Should it be mentioned somewhere in this section that increased air temps would mean reduced demand for home heating oil (or at least a slower growth in the demand rate), so consequently less oil would be shipped by sea, and therefore there would be a reduced risk to the environment?	This issue was not discussed in any of the reviewed literature as a significant impact (possibly because of the increase in energy needed to store goods).
305	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	recommend replace the word “top” with “overhead”.	Corrected
306	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	states there are “currently significant demands for dredging in…Buzzards Bay”. I know of no demand for dredging in Buzzards Bay. Could that item be fact-checked?	This was changed to Mount Hope Bay because it is more relevant to the Ocean SAMP area.
307	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	talks about the adverse impact to port security from increasing storm intensity. Would it be reasonable to speculate that the threat to port security (from both criminals and terrorists) might be reduced due to increased storm intensity, as criminals and terrorists are less likely to perform their nefarious tasks in poor weather? Ostensibly they would have a more difficult time operating boats, or mini-subs, or operating their equipment, in poor weather, etc.	This sentence was added, "Alternatively, the threat to port security might be reduced due to increased storm intensity, as they would have a more difficult time operating their equipment in poor weather."

308	3/22/2010	Edward LeBlanc	United States Coast Guard-Retired	340	speaks about the various adverse impacts from storms. Surely for each adverse impact there will be one or more mitigations proposed to counter that impact. Should there also be a mention of the increased cost of mitigations? (Subparagraph 9 does speak somewhat to storm water mitigation.) For example, the “unsafe conditions and poor visibility” mentioned in subparagraph 11 would surely be mitigated (or attempt to be mitigated) by new and improved aids-to-navigation such as more buoys, with higher-intensity lights, and more sounds signals, and more electronic signals, etc. All of this would come at a high cost.	Added "which will also incur considerable economic costs to the associated industries" to the end of this section.
300	3/22/2010	Peter Paton	University of Rhode Island Natural Resource Science	330	There is no species called an “Alaskan Shearwater”, but unfortunately I am not sure which species you meant to state as there is no citation. I know Sooty Shearwater numbers have declined dramatically in Alaska. Also, elsewhere you capitalize common names, so it should be “Common Murre” (line 7 and 10 of this section). Finally, last sentence of this section, Double-crested Cormorants are a common breeding species in Rhode Island (nesting in Narragansett Bay), and Great Cormorants are common in winter months in coastal Rhode Island.	Corrected
328	3/23/2010	Allison Castellan	NOAA		Overall, the chapter is well researched and includes a good description of the climate change issues within the Ocean SAMP area. However, at times the discuss focuses more on coastal (land-based) impacts of climate change and the relevance to the Ocean SAMP area is lost. Consider simplifying some of the discussion on climate change impacts to focus on those that directly affect the marine, Ocean SAMP area. Where you feel it is critical to discuss climate change impacts to coastal uplands and near-shore estuarine environments, be sure to show how these impacts will and have effect on the Ocean SAMP area.	Corrected

329	3/23/2010	Allison Castellan	NOAA	310	I think the use of the tables in the introductory sections to “localize” impacts by showing global, regional, and local expected trends is very useful and a technique that could be applied to other climate change issues (as more local scientific data and forecasts become available). Example: Table #1, Page #6.	No response needed
330	3/23/2010	Allison Castellan	NOAA	310	In some cases information is presented as factual or in a very strong fashion even though the same section contains caveats or exceptions to the statements. For example, on Page #10, (310.4) “Storminess is Increasing” is stated as a fact, but in Part 2 of the same section it is noted that peer reviewed research has also found such conclusions to be debatable. Ideally these descriptive sections would have some “scale of certainty (or uncertainty)” such that the reader gets a synthesis of the science as we understand it. Is there complete certainty that “storminess” will increase? Is it somewhat certain? 50/50? How likely is it that storminess will increase relative to other impacts like SLR or increasing temperatures? Can a scale of certainty be presented as is done on Page #37?	Corrected

331	3/23/2010	Allison Castellan	NOAA	340	The chart on Page #37 is useful and suggest that consideration be given to applying the same approach to each of the individual tables by adding a column that somehow expresses the level of certainty associated with each “climate change variable”. In doing so the SAMP would be better describing the RISKS associated with various climate change impacts. So, for example, there is more meaning in knowing that increasing air temperatures will have a positive impact on marine transportation by extending the shipping season if we also know the level of certainty associated with the prediction of increased air temperatures. It may be that given limited resources only those climate change variables with a high degree of certainty (for occurring) that will result in major impacts can be addressed. It could also be true that there will be very uncertain predictions whose consequences if they come to fruition are so severe that planning must be undertaken to mitigate even a remote chance of occurrence.	This information is not available for the research presented at this time.
332	3/23/2010	Allison Castellan	NOAA	310	This section seems like a logical place to discuss how warming waters may affect upwelling, hypoxia, etc. Consider adding these issues to this section.	They are mentioned here as well as in section 330 of this chapter which is cross referenced here as well.
333	3/23/2010	Allison Castellan	NOAA	310	I’m not an expert on the science but is extrapolating 1930-2008 tide gauge data to 1908 scientifically sound? Are you sure this is a linear relationship or was sea level rise more gradual at the turn of the century, accelerating in recent years similar to GHG measurements?	Extrapolation was calculated by John Boothroyd who is an expert in this field.
334	3/23/2010	Allison Castellan	NOAA	310	Do you want to comment on potential storm damage to wind turbines and other offshore energy facilities?	This is mentioned in section 340.3, Renewable Energy
335	3/23/2010	Allison Castellan	NOAA	320	Please explain what the physical and biological impacts on marine organisms are or reference other sections that discuss these impacts.	Impacts to marine organisms are discussed in section 330, Ecological Impacts of Climate Change

336	3/23/2010	Allison Castellan	NOAA	330	Is the decline in sea grass beds linked to climate change or pollution? Provide source that shows decline in sea grass is a result of climate change.	This statement is further explained as "Sea grass beds are declining due to a variety of reasons including pollution and increased sea temperatures from climate change, and; water temperature is higher on inter-tidal sea grass flats, typically feeding grounds for green turtles (Short et al. 2006)." and a reference to Short et al. 2006 was added.
337	3/23/2010	Allison Castellan	NOAA	340	Overall comment on this section—not all statements appear to be relevant for shipping/navigation within the Ocean SAMP. Please make sure the connection to the Ocean SAMP is clear. If too indirect, then delete. Also, there is a lot of duplication/redundancy within this section. I've pointed out some issues but not all. Look closely at how this information is organized and combine/simplify to the maximum extent possible.	Reviewed and corrected accordingly
338	3/23/2010	Allison Castellan	NOAA	340	Overall thought—is there any evidence that climate change would affect biofouling on ships? Not sure if the science exists to make this conclusion but may be something you would want to look into if you haven't considered it already.	There is little research on this but the future uses chapter discusses what information exists regarding it. There is not enough research for predictions about it upon human uses.
339	3/23/2010	Allison Castellan	NOAA	340	Provide documentation to support statement that acidic seas will lead to increased ship/infrastructure decay.	Added reference to PIANC 2008
340	3/23/2010	Allison Castellan	NOAA	340	Unclear is these are generalized global statements or is shipping in the Ocean SAMP area restricted in winter due to weather/icing? Only include impacts that would be relevant for Ocean SAMP area.	This statement is directly applicable to the Ocean SAMP area

343	3/23/2010	Allison Castellan	NOAA	340	This statement is not specific to shipping—offshore energy facilities too. Could be addressed through general section of climate change impacts to human activities within the Ocean SAMP area	There is no section for offshore energy facilities in this chapter and is discussed here because it is the most relevant to existing uses in the Ocean SAMP area.
344	3/23/2010	Allison Castellan	NOAA	340	Do you mean water temperatures rather than air temps? If so, this statement should be moved to another section.	Revised statement to, "Higher air temperatures and corresponding elevated water temperatures"
345	3/23/2010	Allison Castellan	NOAA	340	These paragraphs include statements about sea level rise impacts to coastal land areas--onsite systems, sewage treatment plants, stormwater infrastructure, etc. All valid points but what is the relevancy to the Ocean SAMP area? Suggest omitting discussion of these impacts.	These coastal areas are infrastructure linked to the Ocean SAMP through industry.
346	3/23/2010	Allison Castellan	NOAA	340	Document these statements. Also, fill is the only “protection” measure discussed—what about sea walls, hurricane/storm barriers, etc and other methods?	Added reference to EPA 2008 to document statement regarding fill at ports.
347	3/23/2010	Allison Castellan	NOAA	340	What about decreased navigation to bridge clearance? Would that be an issue for the Ocean SAMP area?	Covered within document.
348	3/23/2010	Allison Castellan	NOAA	340	Para 1 & 5 present very similar points (sediment movement due to storms). Suggest combining to avoid redundancy.	Statements point to different impacts.
349	3/23/2010	Allison Castellan	NOAA	340	First, assume unloading times for all ships goods (not just oil and gas) would be affected. Also, para 2 & 3 present very similar points. Suggest combining to avoid redundancy.	1. This has been edited to include all goods; 2. The first is with respect to timing for the shipping industry and the second for achoring space which would need to be provided by terminal operators and since the focus is on impacts to user groups, they are in separate paragraphs.
350	3/23/2010	Allison Castellan	NOAA	340	How are these statements relevant to the Ocean SAMP area? Also, #9 addresses increased precipitation—if decide to keep, may be best under 340.1.5.	These are related to ports that support marine transportation and navigation in the Ocean SAMP area

351	3/23/2010	Allison Castellan	NOAA	340	By “them” at the end of the sentence, I assume you are referring to the shipping lanes and not the marine mammals but it is not clear.	Revised as "3. Changing weather combined with warmer water may cause marine organisms (phytoplankton, fish, marine mammals) to move into existing preferred shipping lanes, causing possible problems for navigation and need for relocating the lanes (EPA 2008)."
352	3/23/2010	Allison Castellan	NOAA	340	This section discusses changes in energy demands for gas and oil but what about demand for alternative energy and how that may impact shipping/navigation within the Ocean SAMP?	Since the only forseeable alternative energy in RI is offshore wind, which will not need to be shipped, this issue cannot be speculated upon at this time.
353	3/23/2010	Allison Castellan	NOAA	340	Overall comment on this section—not all statements appear to be relevant for within the Ocean SAMP. Please make sure the connection to the Ocean SAMP is clear. If too indirect, then delete.Also this section is organized by rec/tourism sector yet the previous shipping/navigation section is organized by climate change impact. For consistency and to improve readability, it may be helpful to ensure that the sections are organized in the same manner.	These impacts have been determined by local researchers to be relevant to the Ocean SAMP area.
354	3/23/2010	Allison Castellan	NOAA	340	Not all impacts listed in the table and subsequent paragraphs appear to be relevant to the Ocean SAMP area. Make sure you only discuss those impacts that will affect the Ocean SAMP and don’t get carried away with describing all coastal impacts.	These impacts have been determined by local researchers to be relevant to the Ocean SAMP area.
355	3/23/2010	Allison Castellan	NOAA	340	Ocean acidification is listed at the beginning of the paragraph but rest of the paragraph talks about sea level rise/storm intensity impacts. OA discussion appears out of place.	Ocean acidifcation was deleted from this paragraph.
356	3/23/2010	Allison Castellan	NOAA	340	These para both talk about damage to property—recommend combining to avoid redundancy.	Statements point to different impacts.

357	3/23/2010	Allison Castellan	NOAA	340	These para both talk about sea level rise impacts on habitat. Recommend revising to avoid duplication between paragraphs.	Statements point to different impacts.
358	3/23/2010	Allison Castellan	NOAA	340	General—this section does not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.
359	3/23/2010	Allison Castellan	NOAA	340	Is high intensity ppt limited to the winter or could occur year round? The second sentence discusses sediment and shoaling impacts on navigation but that was discussed in navigation section. Rather than repeating, simply reference earlier sections/para that also have relevancy for the current section.	Revised to "It is difficult to speculate how climate change will impact diving. Longer summers can be a positive impact, upon diving in extending the season. However, the resulting effects of climate change on marine life and ocean visibility for diving are unknown. As is the case for boating, more severe storms would be a negative impact."
360	3/23/2010	Allison Castellan	NOAA	340	General—these sections do not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.
361	3/23/2010	Allison Castellan	NOAA	340	General—these sections do not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.
362	3/23/2010	Allison Castellan	NOAA	340	General—these sections do not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.
363	3/23/2010	Allison Castellan	NOAA	340	General—these sections do not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.
364	3/23/2010	Allison Castellan	NOAA	340	General—these sections do not include any citations. Please support your statements by citing the source(s) you got the info from.	References added.

365	3/23/2010	Allison Castellan	NOAA	340	This statement is not clear. ". . . sea condition and ocean visibility are also factors"—factors for what? Is it good or bad? How will they impact diving? In unknown, state that clearly.	The section has been revised.
366	3/23/2010	Allison Castellan	NOAA	340	". . . and in coastal regions"—viewing in coastal regions does not have anything to do with Ocean SAMP area. Just focus on viewing within the SAMP boundary.	Some coastal regions, for example, Block Island, are within the Ocean SAMP boundary.
367	3/23/2010	Allison Castellan	NOAA	340	Does longer warmer season really increase wildlife viewing opportunities? Support this statement. Some of best wildlife viewing (bird and marine mammal) occurs during migration seasons. Will climate change impact this type of wildlife viewing? Also, is there any data that shows that distribution of popular wildlife viewing species would shift?	The report states that warmer temperatures have a "potentially positive effect" on wildlife viewing. It is listed as potentially positive because people tend to be outdoors more when it is warm. The effects of climate change on wildlife are discussed in section 330.
368	3/23/2010	Allison Castellan	NOAA	340	". . .and other climate changes. . ." but isn't that what the entire section is supposed to capture? Is redundant to restate here.	This phrase was deleted.
369	3/23/2010	Allison Castellan	NOAA	340	These issues were covered in more detail in the shipping/navigation section. Consider discussing impact to all boating activities in one section to avoid redundancies.	These were covered separately in order to be consistent with other chapters where recreational boating and shipping are covered in Recreation and Tourism and Marine Transporation, respectively.
370	3/23/2010	Allison Castellan	NOAA	340	What about increase in disease (e.g., Dermo) or HABs that would render fish/shellfish unharvestable? Consider discussing these impacts here or referencing earlier section where ecological impacts are discussed. Same with impacts of invasive species on commercial fish populations/harvesting?	References to sections within this chapter and the Ecology chapter were added.

371	3/23/2010	Allison Castellan	NOAA	340	Protected areas and biofouling are listed as examples of future climate sensitive uses yet these are not “uses.” Also, that these “uses” could be impacted by climate change is mentioned both at the beginning and end of the sentence which is redundant. Please revise to improve grammar and clarity.	Biofouling and marine protected areas are potential future uses, as described in the Future Uses chapter. Grammar was revised to eliminate redundancy.
372	3/23/2010	Allison Castellan	NOAA	350	None of the “policies” or “standards” are enforceable policies and must either be removed from the “Policy & Standards” section into a more general discussion of “Recommended CRMC Actions” or changed into standards that have some reasonable measure of determining compliance. This seems to be a reappearing theme in the draft SAMP Chapters we have reviewed so far. Perhaps it would be helpful to set up a meeting/conf. call to discuss further so you are clear on what constitutes an “enforceable policy” that you would be able to incorporate into your federally approved CZM program. Feel free to contact Allison at allison.castellan@noaa.gov to set something up.	Revised policies
374	3/23/2010	Allison Castellan	NOAA	350	Please note that a federal agency’s standards can’t be the state’s unless the state adopts the same standards through its administrative process. For CZMA Federal Consistency purposes, you cannot incorporate enforceable policies or standards by reference of state law and certainly not federal law. Thus the enforceable policies for this chapter could be new CRMC rules that copy the Corps’ or MMS’.	Revised policies

512	3/30/2010	Christopher Tompsett	Naval Undersea War College-Division Newport	320	Table 8, 1st row: 1st row – cites NEPA as the applicable permit or approval the authority should be NEPA (42 U.S.C. §4332, 40 CFR 1500). 5th row – cites the Marine Mammal Protection Act and Endangered Species Act, should be broken out into separate rows to be consistent. 6th row – NMFS is part of NOAA (not "&"), (they were renamed NOAA Fisheries Service a few years ago but they're still more commonly referred to as NMFS) 7th row – similar to above, if the MBTA and Bald and Golden Eagle Protection Act are applicable it seems like they should be broken out separately.	Added correct U.S.C. and CFR reference. Created two rows for Marine Mammal Protection Act and the Endangered Species Act. Removed NMFS and revised to NOAA Fisheries Service. Separated Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act within the table.
513	3/30/2010	Christopher Tompsett	Naval Undersea War College-Division Newport	320	Second paragraph 4 in this section.	Separated Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act within the table.
488	3/31/2010	Caroly Shumway	BU	300	Overall, very nicely worded and compelling.	No response needed

489	3/31/2010	Caroly Shumway	BU	300	Is the science certain that the severity of storms is increasing in this region? I've seen previous scientific talks that are equivocal on this point for storms in the nation. One of the points is that over the same decades, the population on the coast has increased. Depending on how severity is measured, the impact is confounded by the fact that more people are in harms way. See 2006 Revelle Lecturer Dr. Roger Pielkey, Univ. of Colorado, "Disasters, Death and Destruction: Accounting for Recent Calamities." http://dels.nas.edu/osb/revelle_archive_pielke.shtml. If this point is still debatable, as you note on page 10, suggest you change to "arguably, the severity of storms is increasing." The fact that this point is still debatable needs to be reflected throughout the text.	Revised based on comments by Isaac Ginis
490	3/31/2010	Caroly Shumway	BU	300	Remove second period at end of paragraph	Corrected
491	3/31/2010	Caroly Shumway	BU	300	Very nicely worded. Add to sentence 2, "decline in productivity of the area's fisheries resources."	This statement cannot be backed
492	3/31/2010	Caroly Shumway	BU	310	Table 1: Very nice summary. Would be helpful to have the references in this table, as it's such a useful summary, rather than just in the text.	It was decided to only include them in the text
493	3/31/2010	Caroly Shumway	BU	320	Change to: "long term and not necessarily linear phenomena, and since positive feedback loops can increase impact,"	Corrected
494	3/31/2010	Caroly Shumway	BU	320	It might be helpful to add an example of a positive feedback loop, such as release of methane from the permafrost areas leading to increased warming.	Corrected
495	3/31/2010	Caroly Shumway	BU	320	What currents are projected to slow down? These need to be named here.	The specific currents are not named, just the result as stated here.

496	3/31/2010	Caroly Shumway	BU	320	Add “is” after “change”. Add “the” before “low emissions scenario.”	Corrected
497	3/31/2010	Caroly Shumway	BU	320	Is this projected at the sea surface? If not, at what depth? And is this projected in this region? Either here or in the ecology part of this chapter, suggest adding comment that surface impacts to marine invertebrates have been shown already in southern CA.	This is globally and overall, not specifically for the surface. Experts we consulted with, told us that impacts in other areas are not relevant to this area due to other factors influencing ocean acidification.
500	3/31/2010	Caroly Shumway	BU	330	third sentence. Add after “with high metabolism” …”such as pelagic fishes and squid”.4th sentence. Probably good to clarify that this result was found in reef fish; impacts to larval temperate fish are unknown.5th sentence. The impact to reproduction and larval development has already been shown, at least in a lab setting. This should be made clearer. The way the sentence is written, it suggests these papers are just noting possible impacts.	Corrected
501	3/31/2010	Caroly Shumway	BU	330	As noted in previous comments, RI is getting invasive species not just from the south but also from the north. See attached paper by Charlie Greene.	Contacted for paper and not received; cannot address
502	3/31/2010	Caroly Shumway	BU	340	Add at the end, “Added to the complexity is the fact that a number of these variables interact in positive feedback loops.”	Corrected
503	3/31/2010	Caroly Shumway	BU	340	As noted on pg. 10, the severity of storms is debatable. Change 2nd sentence to “may be subject to” for the storm section, and keep “will be subject to” for acidification.	Corrected
504	3/31/2010	Caroly Shumway	BU	340	Add comma after “overtops ports”	Corrected
505	3/31/2010	Caroly Shumway	BU	340	Again, increasing storm intensity in this region is still debatable. That should be noted here.	Revised based on comments by Isaac Ginis

506	3/31/2010	Caroly Shumway	BU	340	Change to “mussels, starfish, and even fish may be adversely impacted.”	Corrected
507	3/31/2010	Caroly Shumway	BU	340	Need a reference here.	Several references have been added to this section.
508	3/31/2010	Caroly Shumway	BU	350	Add at end, “The Council will also consider shifting zones if needed to protect sensitive habitats that may shift due to climate change.”	Revised policies
509	3/31/2010	Caroly Shumway	BU	350	Remove second period at end of paragraph.	Revised policies
510	3/31/2010	Caroly Shumway	BU	350	Great suggestion. Possibly add in sentence 1 after “advise on adaptation options,” …”including whether shifting of zones is required to protect sensitive habitats.”	Revised policies
511	3/31/2010	Caroly Shumway	BU	350	How does the Climate Change Commission differ from the SAC? It would help to clarify this point. Will the Commission include more public members or other stakeholders?	Revised policies
498	3/31/2010	Caroly Shumway	BU	330	Is this projected at the sea surface? If not, at what depth? And is this projected in this region? Either here or in the ecology part of this chapter, suggest adding comment that surface impacts to marine invertebrates have been shown already in southern CA.	Added reference to McMahon and Hays (2006) and sentence explaining their findings regarding northern movements in leatherbacks due to increasing temperatures.
432	3/31/2010	Rachel Calabro	Save The Bay		This draft chapter of the Ocean SAMP does a very good job of pulling together the science and background data related to global climate change, and we appreciate the effort to identify the challenges related to this global issue. Will this chapter be updated as the Council reviews its policies and standards on a bi-annual basis?	No response needed

433	3/31/2010	Rachel Calabro	Save The Bay		We agree that it is very important for the Council to incorporate climate change planning and adaptation into the policy and standards in the areas of jurisdiction of the Ocean SAMP. We also agree that it is useful to use the Army Corps of Engineers standards for marine infrastructure for sea level rise. While it is good to state these intentions in this chapter, it is unclear from reading this how the standards will be incorporated into the regulatory framework of the SAMP or the Red Book. While it may not be the intent of this chapter, it might be useful to explain how these policies and standards would be implemented in a permitting context.	Revised policies
434	3/31/2010	Rachel Calabro	Save The Bay	350	On page 51, numbers 5 and 6, how do you envision that the Science Advisory Committee and a Climate Change Commission would be integrated with the Coordination Team and/or the monitoring collaborative and other state-wide efforts? There should be an effort at not duplicating state level planning initiatives, and creating an integrated plan.	Revised policies
435	3/31/2010	Rachel Calabro	Save The Bay		Again, Save The Bay supports the Council's efforts at identifying and responding to the challenges of global climate change. We hope that there are some clear standards developed and integrated into the state's seal level rise and climate change policies.	No response needed
514	3/31/2010	Robert Thompson	University of Rhode Island	300	Hotter and more humid summers could greatly increase the demand for recreational opportunities on the shoreline and the water.	Corrected
515	3/31/2010	Robert Thompson	University of Rhode Island	300	I don't fully agree with the use of the term mitigation when reducing emissions is reducing the negative consequences through avoidance rather than mitigation.	In global climate change, the term mitigation is used in this form.

516	3/31/2010	Robert Thompson	University of Rhode Island	300	you've done a nice job highlighting proactive approaches. The alternative probably isn't to do nothing but instead to be reactive, which is less efficient and which will result in lost opportunities	Thank you. Sentence changed to: Beyond these two choices, the only other option is to wait for climate changes to occur and react to them. Reactive adaptation is likely to be less efficient and result in lost opportunities.
517	3/31/2010	Robert Thompson	University of Rhode Island	300	The historic record indisputably show that the shoreline and ocean within the SAMP planning area have changed. There is no question that change will continue. While there is uncertainty about exactly what changes will occur and at what rate, there is complete certainty that 2010 conditions will not persist into the future. Thus, adaptive mangement is unavoidable.	Yes, that is the point made in the next paragraph.
518	3/31/2010	Robert Thompson	University of Rhode Island	310	Table 1: While I would agree with this statement, there is a debate in the literature (see Kerry Emanuel and his detractors). Particularly when it comes to frequency. Theoretically, more severe storms makes perfect sense to me.	Revised based on comments by Isaac Ginis
519	3/31/2010	Robert Thompson	University of Rhode Island	310	This needs to be more clearly explained unless it is explained later. It seems to me that the fate of the great ocean conveyor is the greatest area of uncertainty with the greatest potential consequences for RI	Added further information describing the NAO in paragraph 7 of this section.
520	3/31/2010	Robert Thompson	University of Rhode Island	310	Figure 1: This should be brought out more prominently. In fact, you might want to have two separate figures. One would expect the temperature at Green to be cooler than a heavily urbanized area with less water near it.. Two trend lines doesn't quite do the trick.	Corrected
521	3/31/2010	Robert Thompson	University of Rhode Island	310	I suspect that many mebers of the public won't understand why the time lag exists. The time lag isn't only important for thermal expansion, but potentially for the long-term climate of RI.	This is more detail than is necessary at this time given the initial focus on impacts of climate change for the Ocean SAMP

522	3/31/2010	Robert Thompson	University of Rhode Island	310	Even though this will be discussed in more detail below, I'd like to see the tpes of coastal structures separated into classes. Seawalls and revetments are not "effective" and that is why we supposedly have a prohibition on new hard structures. Their negative affects on the coastal environment will increase.	Out of scope
523	3/31/2010	Robert Thompson	University of Rhode Island	310	Isn't there any primary data from the Pacific? You might want to provide a bit of an explanation as to why increasing water temperature in the North Atlantic could lead to more several tropical cyclones and higher wind speeds further north. Thus, the theory supports the preliminary findings.	This section has been revised based on edits provided by Issac Ginis, a URI researcher on storm projections.
524	3/31/2010	Robert Thompson	University of Rhode Island	310	From a policy standpoint, you should distinguish between infrastructure tha tmust be on the water and that is beneficial to the public and homes and businesses that are recklessly close to the water and that ultimately place a burden on the public. They call for different policy responses.	This is more detail than covered here
525	3/31/2010	Robert Thompson	University of Rhode Island	310	Unless mitigated. In other words, increased flow does not inevitably lead to increased pollution loading. More summertime storm events has led to more frequent beach closures.	Corrected
526	3/31/2010	Robert Thompson	University of Rhode Island	320	Figure 6: I'd simplify this graph to just include the projections that are discussed and the actual emissions.	Using existing figures
527	3/31/2010	Robert Thompson	University of Rhode Island	320	I don't think that you have explained this yet and it could be very important.	Not sure exactly to what you are referring but this section was expanded to further describe the implications or river flow projections.
528	3/31/2010	Robert Thompson	University of Rhode Island	320	Do these predictions assume that the Atlantic thermohaline circulation is not disrupted?	Yes

529	3/31/2010	Robert Thompson	University of Rhode Island	320	My understanding of this is that warmer water will increase the lenght of the hurricane season allowing for the formation of more tropical storms. It will also potentially lead to lower low pressures, i.e., more intense storms. However, countervailing factors might inhibit the storm's ability to organize itself or stay organized, e.g., wind shear.	Revised based on comments by Isaac Ginis
530	3/31/2010	Robert Thompson	University of Rhode Island	320	I'd be interested in kowing what constitutes a heavy-precipitation event. This is also of importance for the design of mitigation measures for non-point source pollution. Are communities building projects that will prove to be undersized?	Added this definition "Extreme precipitation events are defined as those with a larger precipitation total for one day than the smallest maximum annual precipitation event for each of the previous 59 years, the length of record assessed for this study (Madsen and Figdor 2007)."
531	3/31/2010	Robert Thompson	University of Rhode Island	320	How is summe rbeing defined? In other words, because the calendar definition of summer doesn't change, what temperature or events are you using to define the beginning and end of summer?	Changed "summer" to "summer-like"
532	3/31/2010	Robert Thompson	University of Rhode Island	320	The Providence River isn't a freshwater river but rather a tidal waterbody.	Corrected
533	3/31/2010	Robert Thompson	University of Rhode Island	340	Figure 13: Maybe the extreme uncertanty for humans is in recreational activities: What will the recreational fishing be like? Will beaches be used more due to warmer temperatures or less due to algae blooms, beah erosion? Why is coastal infrastructure at the extreme end of uncertainty and complexity. Perhaps this is a result of lumping it all together. The certainty of SLR will certainly dictate the fate of many coastal structures.	These are all good questions to consider for future research but cannot be answered with current evidence at this time.

534	3/31/2010	Robert Thompson	University of Rhode Island	340	Table 6: The table provides a nice summary, but a number of items are not explained in the text. Consequently, members of the public who are not familiar with these issues may not understand them or be able to judge the validity of the SAMPs conclusions.	It was decided that the table go up front with further explanation following in the text. This section describes direct and indirect impacts that have been described by researchers in this field. It does not attempt to address net impacts upon these uses because the current research does not provide enough information to anticipate how impacts will interact.
535	3/31/2010	Robert Thompson	University of Rhode Island	340	Once again, I would separate out things that have to be on or near the water that are beneficial to the public interest, those that don't that are beneficial to the public interest, and those that are too close to the water that are harmful to the public interest.	Out of scope
536	3/31/2010	Robert Thompson	University of Rhode Island	340	This needs to be more thoroughly explained. What was the resolution of their digital elevation model? How much of the 47 square miles is inundated currently with a spring tide? Which vertical datum is being used when you say sea level?	Out of scope
537	3/31/2010	Robert Thompson	University of Rhode Island	340	you might want to check with the EDC and the Port of Providence on this. When I talked with the EDC a few years ago about Quonsett, they seemed confident (perhaps unjustifiably so) that they had plenty of elevation already to deal with SLR.	Checked

538	3/31/2010	Robert Thompson	University of Rhode Island	340	Table 7: 1. I'd put the table after the discussion as a summary. 2. It raises questions that are answered in the text. Would this possibly be both a positive and a negative. The beach erosion would be longer, but with more severely hot summer days, we'd have more days where the State beaches reach capacity. 3. I think this is mixed. Warmer temperatures into the fall (as opposed to longer summers) creates more beach days, but providing services will be a problem because the people who work at the beaches will have returned to school. So will the staffing of RI beaches start to look more like the staffinf of beaches further south?	It was decided that the table go up front with further explanation following in the text. This section describes direct and indirect impacts that have been described by researchers in this field. It does not attempt to address net impacts upon these uses because the current research does not provide enough information to anticipate how impacts will interact.
539	3/31/2010	Robert Thompson	University of Rhode Island	340	This, in turn, damages the attractiveness of the beaches as debris from buildings, destroyed revetments, the remains of spetic systems, and so forther, litter the beach, see, e.g., west Matunuck.	Yes, this is true and existing statements in the paragraph address the most direct impacts that are applicable to all beaches.
540	3/31/2010	Robert Thompson	University of Rhode Island	340	In New England is more frequently threated by hurricanes, people will pull their boats. Most recreational boast are already out of the water before the season for nor'easters starts.	Storms are not predicted to be more frequent, only more intense.
541	3/31/2010	Robert Thompson	University of Rhode Island	340	Isn't this part of the fall foliage circuit? If so and if the fall colors decline with warmer weather, then this cruis circuit might suffer.	This may be the case but there is no evidence to suggest this as it is to indirect an impact to be projected at this time.
542	3/31/2010	Robert Thompson	University of Rhode Island	340	How about the decreasing wind? Will it decrease enough to compromise the viability of either onshore of offshore projects?	This question has been addressed in paragraph 2 which states that the onshore data from T.F. Green and the offshore data assessed by AWS TrueWind are different data sets and the trend at T.F. Green is not expected to be reflected in winds offshore.

543	3/31/2010	Robert Thompson	University of Rhode Island	350	Why 50 when you've been discussing scenarios out to 2100? The short term should also be shorter. Perhaps it should be like a capital improvement plan that extends out over multiple time scales, including the enxt year, and tha tis modified yearly to continually adapt.	Revised policies
436	3/31/2010	Scott Mowery	NOAA NART		Consensus that the chapter provides an excellent assessment of climate change impacts specific to New England / Rhode Island and its coastal waters.	No response needed
437	3/31/2010	Scott Mowery	NOAA NART		Some concern that the chapter states a number of times that the severity of storms is increasing (first appearance page 3 Item 2) and is expected to increase, with many of the resultant impacts dependent upon this increase in severity. Scientifically, there is little hard evidence that storm intensity and/or frequency has (or will) increase, especially in terms of nor'easters (in fact, some evidence suggests that a weakened polar jet may in fact have the opposite effect on extra-tropical storms such as nor'easters). Contradicting evidence of the effects of global warming is one of the reasons that disagreements are prevalent and evidence is lacking to prove global warming increase the intensity of natural disasters. For example, global warming has been blamed for stronger and more frequent El Nino's and the increase intensity of hurricanes. When in fact hurricanes travel westward, whereas El Nino brings eastward blowing winds that disrupt storms making for a quiet hurricane seasons. (Abbott, 2006, pg. 345) This uncertainty is not conveyed in the chapter (with the exception of the bottom of page 10 for hurricanes), and as noted above, the conclusions about nor'easter frequency are even more debatable. There is little evidence of long-term trends in nor'easter frequency or strength (e.g. Hirsch et. al. 2001). Likewise the literature provides very little guidance as to how nor'easter frequency will change in the future. Art Degaetano authored the nor'easter section of the Frumhoff report cited on page 20; the finding of one additional nor'easter per year by century's end is far from a significant increase and is well within the noise of such projections.	Revised based on comments by Isaac Ginis
438	3/31/2010	Scott Mowery	NOAA NART		There is little support for the statement that there will be more extreme weather events.	Revised based on comments by Isaac Ginis

439	3/31/2010	Scott Mowery	NOAA NART		Adjust hanging indent for word wrap similar to List of Figures in the TOC	corrected
440	3/31/2010	Scott Mowery	NOAA NART	300	The phrase “unprecedented scientific consensus” seems awkward. Certainly there is scientific consensus on things like gravitational theory, etc., so it is not correct to say that the consensus is unprecedented. I would just omit the word “unprecedented”.	Changed "unprecedented" to "strong"
441	3/31/2010	Scott Mowery	NOAA NART	310	Suggest change “Overall, both air and sea temperature in the state, region and globally have been getting warmer, sea level has been rising…” to “Overall, both air and sea temperature in the state, region and globally have been increasing, sea level has been rising…”	Corrected
442	3/31/2010	Scott Mowery	NOAA NART	300	Suggest change “…and hard facts from monitoring…” to “…and data from monitoring…”	Corrected
443	3/31/2010	Scott Mowery	NOAA NART	310	The timing of spring and fall (and later on page 22 for summer) are governed by astronomy, not climate (i.e., summer/winter solstice, autumnal/vernal equinox). These sentences need to be more carefully worded to indicate that what is really being referred to is the occurrence of “winter-like” frost/freezing temperatures and some “summer-like” warm temperatures.Although things like the total melting of Greenland and the collapse of Atlantic currents are possible, the probability of these events is low and the timing uncertain - this needs to be conveyed in the text.	Revised sentence to "It also alters the timing of summer- and winter-like conditions, lengthening the amount of time with warmer temperatures and shortening the amount of time with freezing temperatures." And added "However, the probability and timing of these large-scale occurrences is currently uncertain."
444	3/31/2010	Scott Mowery	NOAA NART	310	Figure: There have been several instrument changes at T.F. Green, which creates a bias in the record -- these should be mentioned / accounted for. This is also a bigger problem in Figure 5. There was a major change in the instrument siting in 1995 which clearly shows up as a discontinuity on the graph. You base a lot of your reported impacts on this one series of inhomogeneous wind observations. This needs to be clearly presented as a caveat to using this single station record.	We do state that the station has moved in the document.

445	3/31/2010	Scott Mowery	NOAA NART	310	Paras are confusing - states RI sea level is greater than the global average, but item 3 states the global average rise is now at 3.4 mm/yr (34 cm per century); the figures for RI are 2.58 mm/yr 25.8 cm/century.	Already addressed in text
446	3/31/2010	Scott Mowery	NOAA NART	310	Generally, melting sea ice does not contributes to sea level rise.	Current records contradict this statement as stated in the text.
447	3/31/2010	Scott Mowery	NOAA NART	310	Fact remains that despite the increase in hurricane frequency no recent storms have surpassed (come close) to the 1938 record.	This section has been revised based on edits provided by Issac Ginis, a URI researcher on storm projections.
448	3/31/2010	Scott Mowery	NOAA NART	310	Figre 4: Figure label states “weather stations” (plural) in Providence. Unless this is an average of multiple stations, suggest change “stations” to “station.”	There is more than one station
449	3/31/2010	Scott Mowery	NOAA NART	310	There have been several instrument changes at T.F. Green, which creates a bias in the record -- these should be mentioned / accounted for. There was a major change in the instrument siting in 1995 which clearly shows up as a discontinuity on the graph. You base a lot of your reported impacts on this one series of inhomogeneous wind observations. This needs to be clearly presented as a caveat to using this single station record.	Three references are cited with respect to the findings of reduced wind speed. The reported impacts are not based only upon the data in this figure.
450	3/31/2010	Scott Mowery	NOAA NART	310	There is a rich literature of changes in runoff in New England. Much of this work is cited in the NECIA report and is probably worth including here.	In response to other expert comments, the reference to runoff was eliminated and replaced with text on river flow.
451	3/31/2010	Scott Mowery	NOAA NART	310	Ocean Acidification is actually reduced alkalinity (semantics!). Suggest change “increased acidity” to “reduced alkalinity” or “decreased alkalinity” -- sea water remains alkaline despite acidification.	Corrected
452	3/31/2010	Scott Mowery	NOAA NART	320	The IPCC (2007) reported 379 ppm in 2005, not 385 ppm in 2008 (a year after this report was published)	Corrected

453	3/31/2010	Scott Mowery	NOAA NART	320	The “five global models” should be listed in a footnote. Also none the of scenarios show initial reductions in emissions and most characterize emissions that continue to increase.	The five global models are well documented by the IPCC reports. This chapter does not attempt to provide an overview of climate science. Instead it focuses only on impacts. Lower and higher emissions scenarios are the primary ones used since that is what the literature on impacts displays.
454	3/31/2010	Scott Mowery	NOAA NART	320	Suggest preface “2 degrees” grid scale resolution with “approximately.”	corrected
455	3/31/2010	Scott Mowery	NOAA NART	320	Suggest the collapse of the Atlantic currents (“Atlantic thermohaline circulation”) be put into context based on the uncertainty and relatively low probability of this event.	Already addressed in text
456	3/31/2010	Scott Mowery	NOAA NART	320	Figure 7: Suggest provide explanation for the color coded numbers on the graph (e.g. 17, 21, 16, etc.).	Took coded numbers out of figure to simplify understanding
457	3/31/2010	Scott Mowery	NOAA NART	320	Suggest the collapse of polar ice sheets be put into context based on the uncertainty and relatively low probability of this event.	Already addressed in text
459	3/31/2010	Scott Mowery	NOAA NART	320	The Horton work is based on paleoclimate data that is probably not all that analogous to the current conditions. While I agree the prospect of a larger than anticipated rise is sea level needs to be conveyed, the necessary caveats about uncertainty need to be put in place.	Already addressed in text

460	3/31/2010	Scott Mowery	NOAA NART	320	Many other factors besides sea temperatures affect hurricanes. In fact, some evidence suggests that natural climate variations, which tend to involve localized changes in sea surface temperature, may have a larger effect on hurricane activity than the more uniform patterns of global warming (see University of Miami Rosenstiel School of Marine & Atmospheric Science (December 12, 2007). Natural climate variations have larger effect on hurricanes than global warming. http://news.mongabay.com/2007/1212-hurricanes.html). A reduction in atmospheric moisture, for example, caused by a minor change in the sub-tropical jet could negate the effect of surface warming. It is probably an overstatement to say that above normal activity will occur over the next several years. Look at last year, for example…. Losing credibility on such issues will only lend toward an overall disbelief or questioning of the widespread scientific consensus on the reality of global warming….	Revised based on comments by Isaac Ginis
461	3/31/2010	Scott Mowery	NOAA NART	320	"Currently 12-15 nor'easters (extra tropical storms) hit the U.S. Northeast in the months of November to March." Need to include the time series this (annual?) average refers to, and provide a citation (is this also Frumhoff et al. 2007?).	Revised based on comments by Isaac Ginis
462	3/31/2010	Scott Mowery	NOAA NART	320	Suggest change "little change is expected for summer rainfall" to elaborate more on models' showing both increases and decreases (not just that projections are variable) Suggest change "Winter precipitation could increase an average of 20-30%, depending on the emission scenario, with a great proportion falling as rain than snow." to "Winter precipitation could increase an average of 20-30%, depending on the emission scenario, with a greater proportion falling as rain rather than snow."	Corrected

463	3/31/2010	Scott Mowery	NOAA NART	320	“Having more rain when it does rain” and there will be more “heavy downpours” is not quite right. I would word this as “ more of the annual rainfall total will come in heavy rainfall events” There will not simply be a 10% increase in rain on each day that it rains as “more rain when it does rain” implies.	Corrected
464	3/31/2010	Scott Mowery	NOAA NART	330	Suggest you provide a reference for each of the climate changes mentioned (warmer waters, increased cloudiness, and altered circulation patterns). The presence of clouds dramatically increases Earth's overall albedo, reflecting a lot of the incoming sunlight back into space and creating a negative feedback or balance to global warming – which is one reason climate models have such difficulty with this issue. The reviewers have not seen any credible studies that indicate global warming will include increased cloudiness…	References added. Phrase added to clarify that increased storminess results from increased predicted rainfall and storm intensity.
465	3/31/2010	Scott Mowery	NOAA NART	330	These statements need citations.	Citations added and language changed based on comments by others.
466	3/31/2010	Scott Mowery	NOAA NART	330	A new paper by Hare et al. (2010) published in Ecological Applications, Vol. 20(2), describes this distributional change in Atlantic croaker.	Citation added
467	3/31/2010	Scott Mowery	NOAA NART	330	Suggest change “Some of the marine mammals that occur in the Ocean SAMP are protected under the Endangered Species Act and therefore demand an extra level of attention.” to “Some of the marine mammals that occur in the Ocean SAMP are protected under the Endangered Species Act and the Marine Mammal Protection Act, and therefore demand an extra level of attention.”	Corrected
468	3/31/2010	Scott Mowery	NOAA NART	330	“Changes of seawater temperature, winds and water currents can affect patch formation of zooplankton.” Can this be cited?	This sentence has been deleted and the existence of dense patches of prey is further described with a reference to Learmonth et al. 2006.

469	3/31/2010	Scott Mowery	NOAA NART	330	“Climate change models predict reductions in sea ice concentrations. Some whales are dependent on particular phytoplankton populations in the arctic (e.g. the beluga whale), which could be adversely affected by climate change.” -- This sentence seems to belong in paragraph 4, which discusses zooplankton and food sources.	This statement was corrected based on Kenney's comments.
470	3/31/2010	Scott Mowery	NOAA NART	330	“Among the 36 marine mammals identified in the Ocean SAMP range, the Beluga whale, ringed seal, Grey seal, Harp seal, and Hooded seal are dependent on polar sea ice.” Can this be cited?	Corrected
471	3/31/2010	Scott Mowery	NOAA NART	330	“In the winter of 1996, the NAO index exhibited its largest drop of the century.” Understand this to mean negative phase of NAO? Perhaps a bit more of an explanation of what “largest drop” means would help here.	There is further explanation about the NAO that would provide more insight into this question in section 310.5. A reference to this section was added here.
472	3/31/2010	Scott Mowery	NOAA NART	330	The previous section states a positive NAO index is projected because of climate change. This section suggests a negative NAO is projected…It is tenacious and speculative at best to discuss changes in the NAO as related to climate change, but to link the same to NRW recovery could be viewed as dubious and problematic WRT the credibility of this report.	The previous section discusses impacts during positive NAO index conditions. The discussion presented in this paragraph was revised to clarify that it is the projection for increased variability in NAO index conditions that may impact right whale recovery and previous paragraphs have been revised to described the indirect impact of NAO conditions upon right whale calving.

473	3/31/2010	Scott Mowery	NOAA NART	330	With regard to the NAO and its impact on breeding - it is hard to ignore the fact that a change in the NAO would likely cause very different atmospheric circulation changes, which in turn may be very different than the effects of increased GHG concentrations.Suggest change “All 67 oceanic bird species (such as shearwaters and petrels found in the Ocean SAMP) are among the most vulnerable birds on Earth to climate change because they don’t raise may young each year;” to “All 67 oceanic bird species (such as shearwaters and petrels found in the Ocean SAMP) are among the most vulnerable birds on Earth to climate change because they don’t raise young each year;”	Corrected to "they don't raise many young each year"
474	3/31/2010	Scott Mowery	NOAA NART	330	Suggest add to the para end: “(i.e., altered phenology)”	Corrected
475	3/31/2010	Scott Mowery	NOAA NART	330	It’s unclear what the real problem being discussed is – sea level rise inundating salt marshes, or the loss of nesting beaches? The prevalent issue in the Outer Banks is development and coastal hardening – without it, the beach would have the entire Pamlico (and to some extent, Albemarle) sound in which to migrate. I am confused why the “ Outer Banks of North Carolina, is especially prone to this because most beaches are backed by salt marsh and increased storm surge and coastal land loss will threaten these beaches which have nowhere to retreat (Hawkes et al., 2007).” This deserves a bit more elaboration, because as written, It would seem that beaches backed by coastal development (e.g., seawalls, roads), would pose a greater threat to beach migration than salt marsh habitats.	Corrected by adding coastal development (e.g., seawalls, roads, etc.) to salt marshes as and increased threat to barrier beaches
476	3/31/2010	Scott Mowery	NOAA NART	330	Ocean Acidification is actually reduced alkalinity (semantics!). Suggest change “increased acidity” to “reduced alkalinity” or “decreased alkalinity” -- sea water remains alkaline despite acidification.	Corrected

477	3/31/2010	Scott Mowery	NOAA NART	330	Suggest add a citation for this para	Added Short et al. 2006
478	3/31/2010	Scott Mowery	NOAA NART	340	General concern regarding the smorgasbord of impacts discussed in section 304. If the goal is to summarize the range of activities that can be affected by climate, than the section provides a thorough overview of these activities. However, if the section is meant to guide adaptation priorities or rank vulnerabilities, than there is very little guidance provided in terms of the uncertainty of the changes that could potentially affect the listed activities. Figure 13 is a start, but again, I feel that the uncertainty in some of these projections needs to be better articulated.	The goal is to summarize the range of activities alone and not guide adaptation at this time.
479	3/31/2010	Scott Mowery	NOAA NART	340	Table 6: Suggest modify layout so that entire table is on one page	Corrected
480	3/31/2010	Scott Mowery	NOAA NART	340	Suggest change “This sea level rise falls within current end of century projections.” to “This sea level rise scenario is within current end of century projections.”	Corrected
481	3/31/2010	Scott Mowery	NOAA NART	340	Increased corrosiveness is also dependent on other environmental factors that will likely be effected by climate change, including means and variations in water temperatures, dissolved oxygen (DO), salinity, water hardness, carbonates, and various nutrients (some of which may have mitigating effects on corrosiveness).	Added "Increased corrosiveness is also dependent on other environmental factors that will likely be effected by climate change, including some of which may have mitigating effects on corrosiveness.
482	3/31/2010	Scott Mowery	NOAA NART	340	Table 7, Row #1: Unclear why increasing air temp would be n/a re beach related activities – one would think that beach usage would increase, and that those related activities (e.g., eating ice cream, swimming, etc.) would also increase…Suggest modify layout so that entire table is on one page	Corrected
483	3/31/2010	Scott Mowery	NOAA NART	340	Will one more nor’easter per year (as cited earlier) really cause these impacts?	Revised based on comments by Isaac Ginis

484	3/31/2010	Scott Mowery	NOAA NART	340	Re reduced average wind speed – is this based on just a single wind station, Providence, that has problems with data homogeneity?	No, there are several citations for this
485	3/31/2010	Scott Mowery	NOAA NART	340	Page 12 of this report cites reductions in wind speeds in RI. This could be listed as a potential negative effect on wind energy production. In addition, changes in ocean currents, increased storm intensity, and wave environments could affect hydrokinetic and wave energy production.	Will address with more information
486	3/31/2010	Scott Mowery	NOAA NART	340	Suggest change “Changes in temperature, circulation, salinity, and food availability affect the spawning and distribution of fish and may cause changes in preferred fishing grounds for certain stocks.” to “Changes in temperature, circulation, salinity, and food availability affect the spawning and distribution of fish and may cause changes in the historic fishing grounds of certain stocks.”	Prefered is a more accurate term in this sentence.
487	3/31/2010	Scott Mowery	NOAA NART	340	Suggest add Atlantic Croaker to bullet list (see new paper by Hare et al. (2010) published in Ecological Applications, Vol. 20(2), describes this distributional change in Atlantic croaker.)	Corrected
375	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Paragraph 1, p.3 – should read “Rhode Island is inexorably linked to the ocean and therefore faces a number of challenges from climate change that are specific to the coastal and marine landscape.” Without the inclusion of “a number” the sentence reads as though these are the only climate change challenges we face.	Corrected as suggested
376	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Paragraph 4, p.3 – should include salt water intrusion into fresh water aquifers as one of the changes expected from sea level rise.	Corrected as suggested

377	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Paragraph 6, p.3 – suggest using a more ocean specific example when talking about removing GHG gases from the atmosphere. So, instead of tree planting, maybe use eel grass planting.	Corrected as suggested
378	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Paragraph 7, p.4 – CLF has two points here. First, the authors write "The other proactive choice that society can make is 'adaptation'." CLF would suggest making this specific to Rhode Island, not society. Second, the authors write, "Beyond these two choices, the only other option is to do nothing and face the consequences." From CLF's perspective, this is not really an option at all and should not be presented as one. CLF suggests deleting this last sentence altogether.	1. This is a definition of adaptation and not meant as an example. 2. It is CRMC's position that although doing nothing is not a preferr+G16ed option, it is in fact, an option.
379	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Paragraph 8, p. 4 Suggest that last sentence be changed to read: "With advanced planning, the harm and costs associated with these potential impacts can be mitigated and may be avoided.	Corrected as suggested
380	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	Para. 9, p.4 – In last sentence, use the term "data" instead of "hard facts."	Corrected as suggested
381	3/31/2010	Tricia Jedele	Conservation Law Foundation	300	CLF would like to see an affirmative statement that suggests a course to proactively reassess the interplay between the policies and plans incorporated in the climate change chapter and the remaining SAMP at least every five years so that the policies can be adjusted accordingly.	Major review will occur every 5 years. In addition, the SAMP will convene a biannual public forum to present updated information, science and policy issues. As with all SAMPs, CRMC will review the Ocean SAMP on a regular basis to incorporate new science, information, and policy revisions.

382	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	The authors should check the statement regarding the “current pH in the surface ocean is 0.1 units lower than pre-industrial levels.”	Positively confirmed and cited in 310.6.2
383	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 3, p.7 – Delete the 3rd sentence. This seems out of place and inconsistent with other statements made in the chapter. For example, see Section 310.2, para.3, discussing impacts to the marine environment, and Section 310.3, para. 6, impacts on recreation and tourism. See also, Section 340 discussing impacts on recreation and tourism. If we are losing species to global warming, losing coastline, barrier beaches, drinking water supplies, and tourism and recreational benefits, what is benefit of improved navigation? The authors should use caution when making statements that attempt to define some advantage that will be created as a result of global climate change.	CRMC recognizes the potential for both positive and negative impacts from climate change based on the perspective of the relavant user group to the specific impact; these determinations stated in this document (positive or negative) reflect those of the literature consulted in writing this section.
384	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 3, p.8 – In the 2nd to the last sentence where the chapter discusses how increased sea surface temperatures are partially responsible for Harmful Algae Blooms, the chapter should seize the opportunity to mention some of the other culprits. For example, the sentence could read: “It is also partially responsible, along with increased significant rain events contributing to run-off from point and non-point sources, for HABs.”	Pollution from point and non-point sources are not primary impacts of climate change upon this Ocean SAMP area. This section focuses on the most direct impacts associated with sea surface increases in temperature.
385	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 1, p.8 – should defined the term “subsidence” in this paragraph.	Added a definition of 'land subsidence', the downward movement relative to sea level, to the sentence.

386	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 6, p.9 – Should reference salt water intrusion of freshwater aquifers	Saltwater intrusion is a land-based impact of sea level rise which is out of the focus of this chapter which focuses on the ocean and coastal impacts that most significantly impact the Ocean SAMP area.
387	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Figure 3, p.10 – the notes describing the Figure should explain why it is relevant that sea level data is measured relative to the baseline for vertical surveying and measures the absolute change in sea-level rather than to the adjacent coast. Why does that distinction matter?	Revised to clarify the data presented. The distinction matters because the associated discussion states that locally, sea level rise differs from global estimates, and incorporates a variety of dynamics including thermal expansion of the ocean and subsidence.
388	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 1, p. 10 – Suggest that this paragraph, rather than simply provide references, explain in a little more detail why storm intensity having increased in the North Atlantic correlates well with variations in tropical Atlantic sea surface temperature.	Revised per suggestions by Dr. Isaac Ginis (URI Prof. of Oceanography)
389	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 2, p. 10 – First sentence should read: “Some studies have reported an increase in the number of tropical cyclones in certain areas, including, the North Atlantic.	Revised per suggestions by Isaac Ginis (URI Prof of Oceanography). Additional informatuion in section 340.2.1.6
390	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 4, p. 11 – Should include a reference to dam stability and potential breaching. And, in last sentence, paragraph should mention impacts to barrier beaches and coastal habitat.	Revised per suggestions by Isaac Ginis (URI Prof of Oceanography). Additional information in section 340.2.1.6

391	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 3, p.12 – Not sure of the relevance of declining wind speeds until much later in the chapter. Should probably include more explanation as to how and why declining wind speeds are significant.	There is a sentence in the following paragraph explaning the relevance of the subject and there is further explanation later in the chapter because local windspeeds at T.F. Green are not comparable to those being considered for offshore windfarms in the Ocean SAMP Area.
392	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	Para. 4, p.12 – CLF thinks that paragraph 4 is too important to appear this late in the discussion of the impacts associated with precipitation. This information should be upfront in this section and in the chapter.	The structure of the document is to provide statements of fact followed by a paragraph explaining the relevance of these facts to the Ocean SAMP area. Nevertheless, we added language to introduction (Section 300 paragraph 4) to read "more rain, salinity changes, runoff"
393	3/31/2010	Tricia Jedele	Conservation Law Foundation	310	This section should be more specific to Narragansett Bay. CRMC should look to the reports prepared by Dr. Steven D'Hondt of URI with respect to the predictions for shellfish in upper Narragansett Bay and Narragansett Bay as a whole. For example, the predictions are that by 2030 there will be no aragonite in Upper Narragansett Bay, and that by 2060/2070 the shellfish will no longer be able to precipitate out of the Bay. There should be some discussion here are about the projected impacts of acidification on the physiology, reproduction, and calcification of marine organisms, and acknowledgement that the ultimate effects on most marine organisms over the projected CO2 range is largely unknown.	The SAMP team did an extensive literature review and did not find additional acidifcation information relevant to the SAMP area. Please send reports or peer reviewed information. Unsuccessful attempts were made to engage Dr. D'Hondt.

394	3/31/2010	Tricia Jedele	Conservation Law Foundation	320	It may be more helpful to the reader if you could consolidate potential impacts in categories. For example address the projected impacts to marine organisms/habitat in one section (how does increased precipitation, decreased wind speeds, ph, storminess, river flow, etc … impact marine organisms). It is difficult to track all of the projected impacts because they are scattered throughout the chapter.	Due to difficulty in addressing the collective impacts of projected climate change, the document provides a review of existing research by climate driver.
395	3/31/2010	Tricia Jedele	Conservation Law Foundation	320	Should say more about potential impacts to shellfish.	We were not able to identify local studies that discuss potential impacts to shellfish in the Ocean SAMP area. Please provide additional studies if available. Also, see section 330.2.1.
396	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 3, p. 24 – reference in the 3rd sentence should be to the SAMP “area”.	Corrected as suggested
397	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 6, p. 25 – CLF would suggest using the term “projected” in place of the term “possible in the first sentence.	Corrected as suggested
398	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 1, p. 25 – Again, should include a reference to non-point source pollution and run-off.	Pollution from point and non-point sources are not primary impacts of climate change upon this Ocean SAMP area. No data has been identified for BI Sound on this issue.

399	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 2, p. 25 – This is the first point in the chapter where decreased wind speed is connected to a potential negative impact on SAMP ecology. This connection should be made earlier	There is a sentence in the following paragraph explaining the relevance of the subject and there is further explanation later in the chapter because local windspeeds at T.F. Green are not comparable to those being considered for offshore windfarms in the Ocean SAMP Area.
400	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 7, fn3, p. 28 – This footnote seems to be at odds with the section on decreased wind speeds.	This footnote has been deleted and the information has been revised, expanded and inserted as a part of Section 310.5 Precipitation and Weather Patterns are Changing.
401	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 8, p. 29 – More should be said about the impact on commercially important species. This is a good example of how the chapters need to do a better job at cross-pollinating where relevant. If the Fisheries chapter is going to address climate change and its impact on commercially important species more fully, then the reader should be directed to that chapter. If not, then the reader should be referred to a climate change section within the fisheries chapter or should be referred to this chapter altogether, and the discussion in this chapter should be fuller.	Most recent relevant studies are referenced in this discussion. There is little information regarding how specific commercially important species will be impacted.
402	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	This is also another example for the need to appropriately cross-reference other relevant chapters. The marine mammals chapter should include a section on climate change or should refer the reader to this chapter for the discussion of how climate change could impact marine mammals. The policy recommendations in each chapter should also cross reference each other, or be incorporated by reference.	There is no marine mammals chapter and they are covered here because they are of special concern due to the Marine Mammal Protection Act.

403	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 1, p.31 – typo in the first sentence. The word “may” should read “many.”	Corrected as suggested
404	3/31/2010	Tricia Jedele	Conservation Law Foundation	330	Para. 3, p. 35 – This is a good example of the effective cross-reference to another relevant chapter and the relevant section where the information on Lobster shell disease is described more fully.	No response needed
405	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	Para. 2, p. 37 – Not sure what value is added by this paragraph or Figure 13. The second sentence of the paragraph is not clear. If the paragraph remains it should be clarified and should be less equivocal with its terminology. We should be able to project the consequences of climate change on human uses.	There are few specific projections for this section and this paragraph states the importance of projections on human uses while explaining its uncertainty with multiple drivers.
406	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	Para. 3, p. 38 – CLF objects to the inclusion of this paragraph in the chapter. Again, that navigational channels may be easier to travel, and that we may have a longer shipping season, are not facts that necessarily imply a “positive” impact. Without further study or documentation that increased shipping seasons will actually be possible, especially given increased storm intensity and Nor’easters, or without data demonstrating that increased shipping will not also bring with it an increase in invasive species, have other detrimental impacts on the ecology of the SAMP area, or the fisheries, recreation and tourism, CLF believes it would be irresponsible to make this blanket statement.	CRMC recognizes the potential for both positive and negative impacts from climate change based on the perspective of the user group relevant to the discussion; these determinations (positive or negative) reflect those of the literature consulted in writing this section

407	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	These sections should more fully address and explore the projected impact that sea level rise and increased storm intensity will have on coastal development in the SAMP area. Substantial changes need to be made to the way we permit and zone our coastal areas in the face of sea level rise and storm intensity and the SAMP should reflect a CRCM commitment to rethink the plans for building in the coastal area.	Policies pertinent to this concern are outside of the Ocean SAMP area but within the Red Book jurisdiction in which these concerns are addressed. Please see Section 350, paragraph 1 which states the current Red Book policies and states "This [section] is the controlling provision for the upland areas within the Council's jurisdiction and the immediate shoreline areas and seaward to a distance of 500 feet offshore. Section 350 is intended to be the controlling policy for the ocean waters from beyond the 500 foot mark out to the three mile limit."
408	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	Para. 8, p.44-45 – Should reference increased beach closures in the SAMP area. The likelihood of increased beach closures has not been discussed anywhere else in the chapter and probably should be mentioned in several additional places.	Statement was added to paragraph 3 of this section "For example, in 2008 there was a significant increase in beach closures in Rhode Island over 2007. Although there was an increase in water quality sampling, the increase in closures also coincided with higher rainfall during the summer months in 2008 (Dorfman and Rosselot 2009)."

409	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	When referencing fisheries most likely to be impacted by climate change, both the lobster and the shellfishing fisheries should be included.	The lobster fishery is cited in 340.5.2 paragraph 1 as a species likely to move north, decreasing in abundance and/or extent of time in which they can be caught by fishers in the Ocean SAMP area. Given information available at this time, other shellfish fisheries within the Ocean SAMP are not considered to be significantly impacted by climate change with respect to their potential commercial or recreational fishery.
410	3/31/2010	Tricia Jedele	Conservation Law Foundation	340	Para. 1, p.49 – This a gaping hole in the Future Uses chapter and in the Climate Change chapter. We need to understand the capacity of the Ocean SAMP area to accommodate all of the uses we already impose on it and need from it before we can make sound planning decisions about whether the identified future uses are actually feasible or justifiable. The policies and recommendations section should recognize the limitations of the Future Uses chapter and this chapter should more fully address the concern that climate change may seriously impact our projected future uses and our approval of projects and uses of the SAMP area will have to be adjusted proactively and not reactively.	The intent of this paragraph is to state that climate change impacts will be considered in any proposal for future use when it is proposed. A sentence was added to this paragraph to emphasize this statement: "Due to the time sensitive nature of climate change drivers, these impacts would have to be considered when these uses are proposed in order to consider the effects as accurately as possible."
411	3/31/2010	Tricia Jedele	Conservation Law Foundation	350	This section should more fully explain with greater specificity how the CRMC intends to take climate change into account when assessing projects and uses in the SAMP area. It would be very useful if we understood the climate change criteria against which project and uses will be measured after the SAMP is approved.	This is specifically addressed with respect to public infrastructure in the CRMC Red Book (public working draft revision) and the Ocean SAMP policies also reflect this suggestion

412	3/31/2010	Tricia Jedele	Conservation Law Foundation	350	Para. 1, p. 52 – The CRMC should not simply be requiring the most robust infrastructure and design materials, but should also have a set of criteria that guide decision-making with respect to rebuilding coastal infrastructure after it has been damaged by a storm. Before we assess whether we are using the right materials, we should be assessing whether we should be building in the first place.	Coastal infrastructure and land use planning is out of the jurisdiction of the Ocean SAMP policies and is covered by CRMC policies in the Red Book.
413	3/31/2010	Tricia Jedele	Conservation Law Foundation	350	Para. 3, p.52 – The SAMP should require a minimum review period of at least every 5 years, and the Council should do more than merely endorse the develop of design standards for coastal infrastructure.	Major review will occur every 5 years. In addition, the SAMP will convene a biannual public forum to present updated information, science and policy issues. Land-based coastal infrastructure within 500' is under the regulatory jurisdication of the CRMC Redbook.Within the Ocean SAMP, this paragraph states that CRMC "endorses" and "will work" to develop standards, and RI is currently engaged in this national discussion and process. Design standards (350.2.1) also incorporate an analysis for SLR. .
414	4/1/2010	Kathleen Waingwright	The Nature Conservancy	300	#7: Add “Ecosystem adaptation,is the use of restoration or management of functional natural systems to help minimize negative impacts on people and biodiversity.” “Climate Change and Conservation: A Primer for Assessing Impacts and Advancing Ecosystem-based Adaptation in the Nature Conservancy”, March 2010 (TNC Report)) Or use the AHTEG definition. Add IPCC definitions for vulnerability and resilience.	This reference was requested and not sent so it is not included in this document.
415	4/1/2010	Kathleen Waingwright	The Nature Conservancy	300	#8: add phenological shifts and ocean acidification to potential impacts	Corrected

416	4/1/2010	Kathleen Waingwright	The Nature Conservancy	300	#9: This uncertainty is best addressed through consistent use of an adaptation management framework. TNC Report	Yes, that is the point made in the next paragraph.
417	4/1/2010	Kathleen Waingwright	The Nature Conservancy	300	# 9 or #10 at the end suggest adding “the goal of these impact assessments is to evaluate exposure of natural and human communities to changes in climate and link exposure to the sensitivity of species or key processes that shape ecosystems. Assessing vulnerability helps us develop priorities when implementing adaptation actions. TNC Report	This reference was requested and not sent so it is not included in this document.
418	4/1/2010	Kathleen Waingwright	The Nature Conservancy	310	#3: It is not clear if this represents an increase in the number of storms	This section has been revised based on edits provided by Issac Ginis, a URI researcher on storm projections.
419	4/1/2010	Kathleen Waingwright	The Nature Conservancy	310	#4: add “marine species” after affects coastal habitat and add “creating anoxic conditions“ after transporting contaminants and nutrients	Added "wildlife" to cover both marine and coastal species and did not add creating anoxic conditions because there are many other adverse impacts created by transport of contaminantes and nutrients and this statement is meant to address all of them.
420	4/1/2010	Kathleen Waingwright	The Nature Conservancy	320	General comment: Pete August used the IPCC 2001 report in his presentation on climate change because it did use the ice sheet melt	No response needed
421	4/1/2010	Kathleen Waingwright	The Nature Conservancy	330	#2 - #3: Suggest calling out the need for research and inventory over the long term to address the lack of data.	Already addressed in text

422	4/1/2010	Kathleen Waingwright	The Nature Conservancy	330	2. Add “Great Salt Pond on Block Island is a regionally important migratory shorebird stop over site. As beach habitat continues to disappear it will make it very hard on species like piping plover and roseate tern due to being flooded out by moon high and storm tides. Long term key stop over areas may disappear.	Added, "for example, Great Salt Pond on Block Island which is a regionally important migratory shorebird stop over site" to the final sentence in this paragraph because the rest of this statement is already addressed by edits suggested by Paton.
423	4/1/2010	Kathleen Waingwright	The Nature Conservancy	350	General: We recommend the addition of a section explicitly linking sharing of data and science about climate change with NROC and adjacent states. Climate change is a broad and sweeping topic both in its geography and in its scope of impacts so having a regional perspective will greatly improve how we understand climate change in Rhode Island’s waters.	Out of scope
424	4/1/2010	Kathleen Waingwright	The Nature Conservancy	350	5. The Science Advisory Committee is a good idea. In forming a data collection program, it should develop hypotheses of change and test them over time through a monitoring program. It’s not feasible to test everything and it’s not in the best interest of CRMC to promote a series of heuristic studies. The hypotheses should be ecosystem based and should be conceivably impacted by future projects in the study area (for example, phytoplankton blooms and other fronts may shift due to climate change, shifting productive areas into new locations that may be impacted by potential projects). Also, the ‘i.e.’ in the parenthetical description of indicators should say ‘e.g.’ Lastly, the final sentence should be say “understand changes in ecosystem adaptation in the study area, such as boundaries of bioregions; invasive species……”	Revised policies

425	4/1/2010	Kathleen Waingwright	The Nature Conservancy	350	6. It's unclear how the SAC is different from the Climate Change Commission. For clarification, perhaps it should be named the Climate Change Strategies Committee? Perhaps the SAC should be called the Climate Change Science Committee? Also, this section references considerable coastal activities and permitting. Shouldn't this be in the "Red Book" so that the other SAMPs that more directly address land-based areas would benefit from these strategies?	Revised policies
426	4/1/2010	Kathleen Waingwright	The Nature Conservancy	350	Section 1: Add storm surge and acidification impacts to standards.	Revised policies
427	4/1/2010	Kathleen Waingwright	The Nature Conservancy	350	Section 2: Add storm surge and acidification impacts to add to standards for working with the ACOE.	Revised policies
428	4/1/2010	Kathleen Waingwright	The Nature Conservancy		This is very well done and comprehensive. From The Nature Conservancy's perspective having natural resource and biodiversity protection explicitly stated as goals of the SAMP in this chapter is our highest priority, hence our comment on ecosystem adaptation.	No response needed
429	4/1/2010	Kathleen Waingwright	The Nature Conservancy		What I see lacking is a snapshot of what our ecosystem is in warm season and cold season, and what each will become. The fact that winters are warming faster than summers further supports looking at the system seasonally as they are so different.	Out of scope
430	4/1/2010	Kathleen Waingwright	The Nature Conservancy		Ecosystem drivers like plankton and forage species are not adequately covered. Perhaps tracing climate change up and down the food web might be more fruitful. Key species might be Atlantic herring in winter and Loligo squid and sand lance in summer.	Revised

431	4/1/2010	Kathleen Waingwright	The Nature Conservancy		I was unable to find text relating to use of natural shorelines vs. hardened structures, or pro-active opportunities for salt marsh migration.	Out of scope
555	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	310	Figure 1 – Need to move "(Source: Pilson 2008)" to the end of the legend, so as to be consistent with other figure legends.	Formal response not required
556	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	Figure 12 is all screwed up (computer glitch). Also, the citation should say "(Source: NFSC 2009)" and should not be bolded so as to be consistent with the rest of the figure legends.	Formal response not required
557	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	320	Figure 6 – In the legend there is a citation of "(LeQuéré et al. 2009)" but at the end it says "(Source: Allison et al. 2009)". This is confusing. Which is the source of this figure?	Formal response not required

558	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	320	Figure 10 – Change (Figure from Rhamstorf et al. 2007) to (Source: Rhamstorf et al. 2007).	Formal response not required
559	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography		In the text and the Lit Cited, change “O’Donnell in press” to this updated citation: O'Donnell, J. (2009). A Change in the Wind: Long Term Trends in the Forcing of Long Island Sound. Proceeding of the 2008 Long Island Sound Research Conference.	Formal response not required
560	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography		Literature Cited - some are in justified format while others are left aligned – format needs to be consistent.	Formal response not required

561	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	I disagree with having broken up the section devoted to "Phenology" (timing of biological events, into this sectioned titled "Plankton Bloom" and putting the discussion of the ctenophores and sand shrimp into section 330.1.3 (paragraphs 8 and 9). One of the major and important findings among ecologists is that climate change is affecting the phenology of biological communities, and this can have far-reaching effects on particular ecosystems. It is very important that this topic is discussed as a whole – that the timing of life cycles etc of many species will be altered. The change in phytoplankton bloom is one of the most well-documented examples of this phenomena in RI marine waters, and has been pointed out as a warning sign of other changes to come. Obviously it is important that the change in the phytoplankton dynamics be discussed in some detail in the SAMP document, being that this likely has large implications for the entire ecosystem. However, organizing the discussion of phonological changes based on taxonomy undermines the discussion of how climate change is altering phenology. I suggest changing the title to "Shifts in the Timing of Biological Events", and putting paragraphs 8 and 9 from section 330.1.3 back into this section. In section 330.1.3, there can be one sentence to refer readers back to this regarding winter flounder predation by sand-shrimp and zooplankton grazing by ctenophores. If you decide to leave this section as is, the title should be changed to "Phytoplankton Bloom Dynamics". Plankton refers to both zooplankton and phytoplankton. Also, if you only use the term "Plankton Bloom" people might think this section is referring to harmful algal blooms (which is covered in the next section). By adding "Dynamics" this insinuates you are not just talking about the development of a massive bloom.	Formal response not required

562	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	In paragraph 3 of this section it should say “phytoplankton bloom” instead of “plankton bloom”.	Formal response not required
563	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	the font is smaller than the rest of the text and should be enlarged.	Formal response not required

564	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	This section I imagine would be very confusing to a non-scientific reader. There are two types of HAB's – those that are extremely toxic (such as red tides), and those which cause a severe hypoxic/anoxic event. Most of the time, folks associated the term of "harmful algal blooms/HABs" to the toxic kind. The discussion of anoxia/hypoxia, although linked to phytoplankton blooms, is still a somewhat separate topic and deserves a separate title. Hypoxic/anoxic conditions can be persistent in areas even when no bloom is occurring, and they can develop due to physical conditions related to wind and currents. Therefore this discussion should not be under the "Harmful Algal Bloom" section. It is also confusing to transition from paragraph 1 to paragraph 2. If paragraphs 2 and 3 are under a separate section titled "Hypoxia" readers will immediately understand the context of this discussion. b. Also there needs to be a sentence describing the harmful effects of hypoxia (the "why we care" bit). For example something like this that is more relevant to the SAMP area: "Severe hypoxic events have caused large fish kills and mass mortality of bottom-dwelling organisms previously in Narragansett Bay and chronic hypoxia has negatively impacted the abundance and diversity of the bottom-dwelling community (NBEP 2009). This community is integral to the ecological function and structure of Narragansett Bay, and such negative impacts could have large-scale effects on the ecosystem as a whole (NBEP 2009)."	Formal response not required
565	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	(Title) – Since the following sections tend to be organized by ecological communities, rather than different types of ecosystems, the title should be changed from "Benthic and Pelagic Ecosystems" to "Marine Community Dynamics". (Also there is no need to specify "benthic" and "pelagic" since the following sections do not specifically address the benthic community/ecosystem versus the pelagic community/ecosystem).	Formal response not required

566	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	330	(Title) – why is this titled “Emerging Issues”? Are disease and invasive species issues that are more recently emerging compared to the previously discussed topics of ocean acidification etc in sections 330.1 and 330.2? I don’t think so. In fact, I don’t see a need to separate any of these topics section 330 into three sections – why not just put them all equally under 330 “Ecological Impacts of Climate Change”?	Formal response not required
567	4/9/2010	Leanna Heffner	University of Rhode Island Graduate School of Oceanography	320	The statement: “Movement of sediment could have adverse impacts on planktonic organisms and navigation.” What about benthic species?	Formal response not required
1284	5/28/2010	Pete Bonk	Citizen, Westerly, RI		This is a disappointing document. It is clear that is was created to arrive at a predetermined conclusion that CO2 is the "Great Satan" and must be controlled at all costs. If this premise is rejected, than a much more honest and useful management plan of the ocean waters of Rhode Island would have been created.	The chapter is a factual review of best available scientific data/information. The Ocean Special Area Management Plan would not be honest and useful if it did not take into consideration global climate change.
1285	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Only if any changes are meaningful on an appropriate time scale. Do keep in mind that Block Island and offshore island of NY and MA are glacial moraines of very recent origin. Nature doesn't care. there is no "Nature" to care, if your beach house is going to be washed away or left high and dry due to the ceaseless cycles of the world. Enjoy the moment and adapt as needed.	The changes that have occurred and future climate change projections are in a timeframe that is meaningful to coastal and marine planning.That is why the climate change chapter is in the Ocean SAMP.

1286	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Sea level has risen significantly, over 100 meters, since the most recent ice age, which was only 20,000 years ago. We are in an interglacial period. The real issue here and throughout this report, is if any of the litany of eefects are outside the range of natural variation. Here in New England we have had Nor'easters since long before the rise of the modern Industrial Age. The claim of severity of storms has been challenged by many. The effects on long term climate are extremely complex. The many models uses are handly keen predictive tools of climate, are ful of unwarranted assumptions of the influence of clouds as well as a linear relationship of the grenhouse effect with CO2 levels. Consider the models of hurricane tracking, a much simpler problem than climate in that the time frame of prediction is days and weeks, not years and millennia. The hurrican prediction models are of high practical and economic interest- where to evacuate, etc. Yet even these models are very inexact. For instance, ALL the models in 2004 had Hurrican Katrina heading back NE into the pandandle of Florida until Katrina had passed over the souther tip of Florida. In the ensuing years the models have not improved much: In 2009 TS Danny was initally tracked ot be aiming for NYC; this storm never achieved hurrican status and was subsumed by another low pressure system. My point is models of these complex systems, even in the best of circumstances, are very limited in predictive ability. The core issue for this report is sea level rise tied to rising temperatures. The recent revelations from the "Climategate" scandal show that much of the sicence on which this claim is based has been irredeemably corrupted by political factors. In true scientific discouse there is no place for hiding data, as in the now infamous "Hide the decline" attempt to manipulate the data to a predetermined, politically determined outcome	The paragraph is a factual statement in summary form of climate trends in the past century. Climate changes over historic timeframes, such as glacial cycles, but the recent changes and timeframe for the projected changes are much more compressed than historic natural changes.

1287	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Error here: Water vapor is a greenhouse gas, and is present in variable amounts up to several percent recall that 1% is 10,000 ppm. Co2 is close to two orders of magnitude less plentiful.	Sentence changed to "The most prevalent greenhouse gas in the atmosphere in terms of anthropogenic emissions, carbon dioxide, has risen from a pre-industrial level of 280 parts per million (ppm) to 385 ppm in 2008, the highest it has been in 650,000 years.
1288	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	No one argues that CO2 levels have risen in the last 50 years or so when direct measurements were made on a consistent basis. But there is no scientific consensus that CO2 is the driver for all of these dire events. What is ignored and is well known, not speculation, is that an increase of CO2 is beneficial to plant growth for food and foests. How much more biomass is there on the planet now vs. 50 years ago? I have seen estimates of as much as 15% more.Also, what is the time frame over which these claims of more extreme weather events, etc. are being measured? 30, 50 or even 100 years is a pitifully short period on which to base claims of changing condiditions, which are always varying anyway, and to pin these changes on a single cause.	The Ocean SAMP chapter on climate change is based on the best available scientific data/information and is fully referenced. In the sea, CO2 forms carbonic acid, which as the chapter recognizes can have detrimental effects on the marine environment.
1289	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Nature is not static. Animal populations of many species can vary widely over a period of years in a region, even as the average value, measure over a sufficiently meaningful time period appears relatively constant.	Same as previous response.
1290	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Even the stars in the sky don't shine forever. Closer to earth, we know the coastal structures of Rhode Island, and indeed any coast, are subject to violent change. What would Galilee/Jerusalem look like without the constant intervention of channels and dredging? Barrier islands are always getting rearranged. Nature does not care; it will do what it will do	Coastal and marine ecosystems are dynamic, but this fact does not imply that it is meaningless to not understand what global climate change does and might do to the ecosystems on top of natural dynamics.

1291	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	This concern is alwayd dead last in any survey. Quite honestly, we have more pressing issues. REAL problems, which need the always limited resources a society can apply at any given time. We can readily adapt, as we always have, to long term changes that are and always be out of our ability to control.	The para. is factual irregardless of what side of the fence the reader is on with regard to global climate change
1292	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Oh please. Without access to affordable energy, that currently being provided by natural gas, coal, oil nuclear, hydro, etc. the USA and Rhode Island in particular will continue an economic decline. Povery is not good for the environment.We all know the rapidly growing economies of China, India and other societies will do nothing ot lover CO2 emissions. And they shouldn't! They realize they have more pressing issues of getting major portions of their populations out of poverty. That takes energy use, lots of it. Adapting CO2 reducing policies in Rhode Island and the US in a world that won't do anything significant about their CO2 use will only serve to impoverish Rhode Island and even further deindustrialize the USA.	Reducing greenhouse gas emissions through reduced consumption of fossil fuels and and promoting clean energy technologies are policy goals of RI state government
1293	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	You do nothing and adapt as needed. Peoples and societies have always adapted to their environment.	The para refers to 'proactive' adaptation. Proactive means planned adaptation and is different from doing nothing until the problem occurs. The latter is reactive adaptation, which is likey to be less efficient and result in lost opportunities.

1294	5/28/2010	Pete Bonk	Citizen, Westerly, RI	300	Don't forget to include how Rhode Island and the entire Northeast has been shaped and reshaped by the four major and many minor glacial epochs that have occurred over the last 2 million years, and as recently as 20,000 years ago. That's some climate change for you - With no intervention at all from humanity - Even in recent recorded history of the last 2000 years or so we know there have been extended - 100s of years - of cooler and warmer weather. The Little Ice Age ended around 1850- no wonder there is an observed warming when that is the starting year for observations. It is a good this is has warmed since then!	Don't see the direct relevance of this comment to the text of para. 8.
1297	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	The SAMP is a Rhode Island management tool. While CLF understands that climate change is a global issue, insofar as reducing greenhouse gas emissions in a meaningful way involves a global effort, and that in this respect, “society” will have a number of choices available to it, including, the choice to do nothing about climate change, Rhode Island also has the ability to make its own choices. The SAMP can take responsibility for recommending RI-specific actions, policies and management tools with respect to adaptation to climate change or the SAMP can cloak climate change as a societal problem over which we have little to no control. CLF strongly prefers that the Rhode Island SAMP address climate change in a Rhode Island-specific voice to the extent that is possible. Paragraph 6 and 7 should talk about the choices that Rhode Island can make. Furthermore, CLF urges the authors to recognize that the need to reduce green house gas emissions and the need to respond to a changing climate by incorporating adaptation policies are not mutually exclusive choices. We can and should do both. Finally, CLF strongly objects to including the last sentence of paragraph 7. Doing nothing and facing the consequences is not an option and should not be presented as one. CLF suggests deleting this last sentence altogether.	Changed "society" to "Rhode Island" and added “wait for climate changes to occur and react to them. Reactive adaptation is likely to be less efficient and result in lost opportunities.” and deleted “do nothing and face the consequences” to clarify statement regarding options for Rhode Island in dealing with climate change impacts. Note that CRMC's position is that while reactive adaptation (non proactive adaptation) is not a prefered option, it is in fact, an option.

1298	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Table 1:CLF's comment that "The authors should check the statement regarding the "current pH in the surface ocean is 0.1 units lower than pre-industrial levels" was unaddressed and the Table was unchanged. CLF assumes that this means the accuracy of the pH statistics used in this table has been verified.	Positively confirmed and cited in 310.6.2
1299	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	CLF believes that the 3rd sentence of paragraph 3 is irresponsible, inaccurate, and misleading and should be removed. Moreover, this sentence is entirely inconsistent with other statements made throughout the chapter. For example, see the first and last sentences of the same paragraph discussing "numerous effects on the marine ecology" and "serious societal costs of coastal land and infrastructure loss. If we suffer serious damage to our ports, seawalls and revetments, docks, roads, bridges, etc… as a result of sea level rise, what is the value of a longer shipping season? See Section 310.4, para. 4, p.11 and Section 340 describing potential damage from increasing storm intensity and past damage to the ports of Providence and East Providence. If we are losing species to global warming, losing coastline, barrier beaches, drinking water supplies, and as a result, losing tourism and recreational benefits, what possible benefit to tourism, recreation and fishing could be created? The authors should use caution when making statements that attempt to define some economic advantage that will be created as a result of global climate change.	Beginning with the third sentence of this paragraph, these statements were revised as "This impact of climate change may have some benefits for tourism and recreation, fishing, and other Ocean SAMP uses that are more easily conducted in warmer weather. Shorter, warmer winters and reduced icing on vessels' gear and structures could be beneficial to winter navigation and shipping. In the long run, warming may also produce other global changes that will affect the Ocean SAMP area, positively and negatively." However, CRMC recognizes the potential for both positive and negative impacts from climate change based on the perspective of the relavant user group to the specific impact; these determinations stated in this document (positive or negative) reflect those of the literature consulted in writing this section.

1300	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	In the 2nd to the last sentence where the chapter discusses how increased sea surface temperatures are partially responsible for Harmful Algae Blooms, the chapter should seize the opportunity to mention some of the other culprits. For example, the sentence could read: “It is also partially responsible, along with increased significant rain events contributing to run-off from point and non-point sources, for HABs.”	Pollution from point and non-point sources are not primary impacts of climate change upon this Ocean SAMP area. This section focuses on the most direct impacts associated with sea surface increases in temperature.
1301	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	should defined the term “subsidence” in this paragraph.	Added a definition of 'land subsidence', the downward movement relative to sea level, to the sentence.
1302	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Should reference salt water intrusion of freshwater aquifers.	Saltwater intrusion is a land-based impact of sea level rise which is out of the focus of this chapter which focuses on the ocean and coastal impacts that most significantly impact the Ocean SAMP area.
1303	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Figre 3:the notes describing the Figure should explain why it is relevant that sea level data is measured relative to the baseline for vertical surveying and measures the absolute change in sea-level rather than to the adjacent coast. Why does that distinction matter?	The distinction matters because the associated discussion states that locally, sea level rise differs from global estimates, and incorporates a variety of dynamics including thermal expansion of the ocean and subsidence.
1304	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Suggest that this paragraph, rather than simply provide references, explain in a little more detail why storm intensity having increased in the North Atlantic correlates well with variations in tropical Atlantic sea surface temperature.	Revised per suggestions by Isaac Ginis

1305	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	In addition to the discussion about the projected impacts of acidification on the physiology, reproduction, and calcification of marine organisms, and an acknowledgement that the ultimate effects on most marine organisms over the projected CO2 range is largely unknown, there should be some reference to the significance of bivalves as a part of the food chain.	Added the phrase "many that are valuable to the food chain" after the list of examples of marine animals with shells or skeletons of calcium carbonate.
1306	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	It may be more helpful to the reader if you could consolidate potential impacts in categories. For example address the projected impacts to marine organisms/habitat in one section (how does increased precipitation, decreased wind speeds, ph, storminess, river flow, etc … impact marine organisms). It is difficult to track all of the projected impacts because they are scattered throughout the chapter.	Due to difficulty in addressing the collective impacts of projected climate change, the document provides a review of existing research by climate driver.
1307	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	The SAMP should address the potential impacts to shellfish not only because acidification could be a concern for animals that have shells or skeletons but also because these marine animals are a critical part of the food chain and larger ecosystem and will likely be first and most severely impacted by ocean acidification – an impact that could have serious consequences for the SAMP area.	There are no local studies that discuss potential impacts to shellfish in the Ocean SAMP area. This is an area of research that has been identified for further investigation to be included in future versions of the Ocean SAMP document.
1308	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	The first sentences has an extra word. The word “have” should be deleted.	Corrected as suggested

1309	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	Should include a reference to non-point source pollution and run-off or Chapter 2, Section 250.1.6 should include a reference to non-point source pollution.	Pollution from point and non-point sources are not primary impacts of the ecology or of climate change upon the Ocean SAMP area. This section focuses on the most direct impacts associated with sea surface increases in temperature.
1310	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	More should be said about the impacts on commercially important species from both climate change and overfishing. For example, the first sentence could read: “It is possible that warming waters, in addition to overfishing, may be a significant cause for the decline of ecologically and commercially important winter flounder, etc… This is a also good example of how the chapters need to do a better job at cross-pollinating where relevant. If the Fisheries chapter is going to address climate change and its impact on ecologically and commercially important species more fully, then the reader should be directed to that chapter. If not, then the reader should be referred to a climate change section within the fisheries chapter or an ecology section within the fisheries chapter or should be referred to these chapters altogether. Finally, the discussion of this point in this chapter should be fuller.	Added sentence stating, "It is possible that warming waters, in addition to other stresses, may be a significant cause for the decline of ecologically and commercial important species (see also Section 340.5 of this chapter)." Section 340.5 - Fisheries Resources and Uses provides additional information on the impacts of climate change on commercially important species.

1311	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Not sure what value is added by this paragraph or Figure 13. The second sentence of the paragraph is not clear even with the addition of the sentence “added to the complexity is the fact that a number of variables interact in a positive feedback loop…” If the paragraph remains it should be clarified and should be less equivocal with its terminology. We should be able to project the consequences of climate change on human uses.	There are few specific projections for this section and this paragraph states the importance of projections on human uses while explaining its uncertainty. In addition, the addition in the second sentence illustrates that this is a review of direct impacts from climate change upon these uses but not net impacts due to the complexity of the interaction of these.The final sentence of this paragraph is revised for clarification, "Added to the complexity is the fact that a number of these variables interact in a variety of ways, making the net impact of climate change drivers upon human uses unpredictable given the amount of research available at this time."

1312	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	CLF objects to the inclusion of this paragraph in the chapter. Again, that navigational channels may be easier to travel, and that we may have a longer shipping season, are not facts that necessarily imply a “positive” impact. Without further study or documentation that increased shipping seasons will actually be possible, especially given increased storm intensity and Nor’easters, or without data demonstrating that increased shipping will not also bring with it an increase in invasive species, have other detrimental impacts on the ecology of the SAMP area, or the fisheries, recreation and tourism, CLF believes it would be irresponsible to make this blanket statement. CLF suggests the following language, “although it is projected that increasing air temperatures will reduce concern of icing in waterways and on vessels and infrastructure, it is not clear, given the potential for negative impacts to infrastructure and ports, what impact this will have on shipping in the SAMP area.”	Revised sentence based on this suggestion to "Although it is projected that increasing air temperatures will reduce concern of icing in waterways and on vessels and infrastructure, it is not clear, given the potential for negative impacts to infrastructure and ports, what net impact this will have on shipping through the SAMP area."
1313	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Table 6: CLF finds it disturbing that the SAMP team would even attempt to assign potentially positive values to the various effects of climate change which will be dynamic and systemic. It creates the sense that CRMC is attempting balance the benefits of increased navigability with the loss of barrier beaches or port closures. This table in its current form adds little value and should be removed.	Revised sentence in paragraph 2 which references the table for clarification. It now reads, "Table 6 presents a summary of the primary drivers of climate change with direct potential impacts to the user groups associated with marine transportation, navigation and infrastructure."
1314	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	The slide show used at the public hearing on May 20, 2010 made this point in a clearer and more appropriate way. Again, if sea level rise will make it difficult to unload cargo and passengers, and affect the use of infrastructure in ports and harbors, how can the authors make the point in para 8. on p. 43 that increased ease of navigability may lead to an increase in shipping of goods to and from Rhode Island ports?	The information presented in this section is based on direct impacts with respect to the direction of change only and not the magnitude, which is unknown at this time. In addition, the net result of these sometimes counteracting impacts is indeterminate at this time.

1315	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	These sections should more fully address the adaptation option addressed at the outset of the chapter. The SAMP team should define the projected impact that sea level rise and increased storm intensity should have on coastal development in the SAMP area. Substantial changes need to be made to the way we permit and zone our coastal areas in the face of sea level rise and storm intensity and the SAMP should reflect a CRCM commitment to rethink the plans for building in the coastal area.	Policies pertinent to this concern are outside of the Ocean SAMP area but within the Red Book jurisdiction in which these concerns are addressed. Please see Section 350, paragraph 1 which states the current Red Book policies and states "This [section] is the controlling provision for the upland areas within the Council's jurisdiction and the immediate shoreline areas and seaward to a distance of 500 feet offshore. Section 350 is intended to be the controlling policy for the ocean waters from beyond the 500 foot mark out to the three mile limit."
1316	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Table 7:CLF finds it disturbing that the SAMP team would even attempt to assign potentially positive values to the various effects of climate change which will be dynamic and systemic. It creates the sense that CRMC is attempting balance the benefits of longer cruise ship seasons with the inundation of beaches and unique coastal habitat. This table in its current form adds little value and should be removed.	Revised the final sentence of this paragraph which references the table for clarification. "Table 7 presents a summary of the primary drivers of climate change with direct potential impacts to the user groups associated with recreation and tourism in the Ocean SAMP area."

1317	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Should reference increased beach closures in the SAMP area. The likelihood of increased beach closures has not been discussed anywhere else in the chapter and probably should be mentioned in several additional places. Beach closures, will also, of course, impact tourism and recreation.	Statement was added to paragraph 3 of this section "For example, in 2008 there was a significant increase in beach closures in Rhode Island over 2007. Although there was an increase in water quality sampling, the increase in closures also coincided with higher rainfall during the summer months in 2008 (Dorfman and Rosselot 2009)."
1318	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	regarding coastal lagoons was deleted. Please provide an explanation for the deletion prior to the hearing on June 22, 2010.	This paragraph was not deleted but is now number 7 in this section.
1319	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	regarding salt marshes was deleted. Please provide an explanation for the deletion prior to the hearing on June 22, 2010.	This paragraph was not deleted but is now number 8 in this section.

1320	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Section 340.4 is not complete. It is impossible to provide comments in compliance with the APA at this time. CRMC should address how the exclusion of this chapter will impact public comment and the hearing scheduled for June 22, 2010.	Added an introductory paragraph to address this incomplete section that reads, "Climate change drivers could impact the preservation and maintenance of historical and cultural assets in a variety of ways. Potential impacts include, sea level rise and storm surge, which could increase erosion of coastal assets, and more severe storms and ocean acidification could increase damage to submerged assets. Due to the lack of research on the impacts of climate change upon these assets, these issues will be targeted for future research in the Ocean SAMP area and results will be reported in future versions of this document." The following sections (340.4.1 and 340.4.2) of the document describe projected impacts given the current research available.
1321	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	When referencing fisheries most likely to be impacted by climate change, both the lobster and the shellfisheries should be included.	The lobster fishery is cited in 340.5.2 paragraph 1 as a species likely to move north, decreasing in abundance and/or extent of time in which they can be caught by fishers in the Ocean SAMP area. Other shellfish fisheries are not considered to be significantly impacted by climate change with respect to their potential commercial or recreational fishery.

1322	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	This continues to be a gaping hole in the Future Uses chapter and in the Climate Change chapter. We need to understand the capacity of the Ocean SAMP area to accommodate all of the uses we already impose on it and need from it before we can make sound planning decisions about whether the identified future uses are actually feasible or justifiable. The policies and recommendations section should recognize the limitations of the Future Uses chapter and this chapter should more fully address the concern that climate change may seriously impact our projected future uses and our approval of projects and uses in the SAMP area will have to be adjusted proactively and not reactively.	The intent of this paragraph is to state that climate change impacts will be considered in any proposal for future use when it is proposed. A sentence was added to this paragraph to emphasize this statement: "Due to the time sensitive nature of climate change drivers, these impacts would have to be considered when these uses are proposed in order to consider the effects as accurately as possible."
1323	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	This section should more fully explain with greater specificity how the CRMC intends to take climate change into account when assessing projects and uses in the SAMP area. It would be very useful if we understood the climate change criteria against which project and uses will be measured after the SAMP is approved. It is simply not enough to insert CRMC's climate change policy from January 15, 2008. CLF would like to see an affirmative statement that suggests a course to proactively reassess the interplay between the policies and plans incorporated in the climate change chapter and the remaining SAMP at least every five years so that the policies can be adjusted accordingly. The Marine Protected Areas Federal Advisory Committee's April 2010 report entitled: Climate Change in the Ocean: Implications and Recommendations for the National System of Marine Protected Areas, artfully states what we already know, "there is abundant scientific evidence that marine ecosystems are undergoing substantial changes – physically, chemically and biologically – due to the direct and indirect effects of changes in climate and atmospheric composition." As such, the SAMP should definitively and formally plan to revisit its policy recommendations with respect to climate change every 5 years.	No response.

1324	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	CLF agrees that it is important to require an analysis of the historic and projected rates of sea level rise but believes that before requiring the most robust infrastructure and design materials, the CRMC should also have a set of criteria that guide decision-making with respect to building in the first instance or whether rebuilding of coastal infrastructure after it has been damaged by a storm will be allowed. Before we assess whether we are using the right materials, we should be assessing whether we are building in the right location or whether we should be building in the first instance.	
1325	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	The SAMP should require a minimum review period of at least every 5 years, as opposed to “periodically,” which is not an enforceable timeframe.	As with all SAMPs, CRMC will review the Ocean SAMP on a regular basis to incorporate new science, information, and policy revisions, as refined in the policy section of this Ocean SAMP. In addition, the CRMC Red Book has a similar policy to reflect periodic review of policies and programs.
1326	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	should read “Rhode Island is inexorably linked to the ocean and therefore faces a number of challenges from climate change that are specific to the coastal and marine landscape.” Without the inclusion of “a number” the sentence reads as though these are the only climate change challenges we face.	Corrected as suggested
1327	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	should include salt water intrusion into fresh water aquifers as one of the changes expected from sea level rise.	Corrected as suggested

1328	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	suggest using a more ocean specific example when talking about removing GHG gases from the atmosphere. So, instead of tree planting, maybe use eel grass planting.	Corrected as suggested
1329	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	CLF has two points here. First, the authors write "The other proactive choice that society can make is 'adaptation'." CLF would suggest making this specific to Rhode Island, not society. Second, the authors write, "Beyond these two choices, the only other option is to do nothing and face the consequences." From CLF's perspective, this is not really an option at all and should not be presented as one. CLF suggests deleting this last sentence altogether.	1. This is a definition of adaptation and not meant as an example. 2. Sentence changed to: Beyond these two choices, the only other option is to wait for climate changes to occur and react to them. Reactive adaptation is likely to be less efficient and result in lost opportunities. Note that CRMC's position is that while reactive adaptation (non proactive adaptation) is not a prefered option, it is in fact, an option.
1330	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	Suggest that last sentence be changed to read: "With advanced planning, the harm and costs associated with these potential impacts can be mitigated and may be avoided.	Corrected as suggested
1331	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	In last sentence, use the term "data" instead of "hard facts."	Corrected as suggested

1332	5/28/2010	Tricia Jedele	Conservation Law Foundation	300	CLF would like to see an affirmative statement that suggests a course to proactively reassess the interplay between the policies and plans incorporated in the climate change chapter and the remaining SAMP at least every five years so that the policies can be adjusted accordingly.	Major review will occur every 5 years. In addition, the SAMP will convene a biannual public forum to present updated information, science and policy issues. As with all SAMPs, CRMC will review the Ocean SAMP on a regular basis to incorporate new science, information, and policy revisions.
1333	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Table 1:The authors should check the statement regarding the "current pH in the surface ocean is 0.1 units lower than pre-industrial levels."	Positively confirmed and cited in 310.6.2
1334	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Delete the 3rd sentence. This seems out of place and inconsistent with other statements made in the chapter. For example, see Section 310.2, para.3, discussing impacts to the marine environment, and Section 310.3, para. 6, impacts on recreation and tourism. See also, Section 340 discussing impacts on recreation and tourism. If we are losing species to global warming, losing coastline, barrier beaches, drinking water supplies, and tourism and recreational benefits, what is benefit of improved navigation? The authors should use caution when making statements that attempt to define some advantage that will be created as a result of global climate change.	CRMC recognizes the potential for both positive and negative impacts from climate change based on the perspective of the relavant user group to the specific impact; these determinations stated in this document (positive or negative) reflect those of the literature consulted in writing this section.
1335	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	In the 2nd to the last sentence where the chapter discusses how increased sea surface temperatures are partially responsible for Harmful Algae Blooms, the chapter should seize the opportunity to mention some of the other culprits. For example, the sentence could read: "It is also partially responsible, along with increased significant rain events contributing to run-off from point and non-point sources, for HABs."	Pollution from point and non-point sources are not primary impacts of climate change upon this Ocean SAMP area. This section focuses on the most direct impacts associated with sea surface increases in temperature.

1336	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	should defined the term “subsidence” in this paragraph.	Added a definition of 'land subsidence', the downward movement relative to sea level, to the sentence.
1337	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Should reference salt water intrusion of freshwater aquifers	Saltwater intrusion is a land-based impact of sea level rise which is out of the focus of this chapter which focuses on the ocean and coastal impacts that most significantly impact the Ocean SAMP area.
1338	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Figure 3:the notes describing the Figure should explain why it is relevant that sea level data is measured relative to the baseline for vertical surveying and measures the absolute change in sea- level rather than to the adjacent coast. Why does that distinction matter?	Revised to clarify the data presented. The distinction matters because the associated discussion states that locally, sea level rise differs from global estimates, and incorporates a variety of dynamics including thermal expansion of the ocean and subsidence.
1339	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Suggest that this paragraph, rather than simply provide references, explain in a little more detail why storm intensity having increased in the North Atlantic correlates well with variations in tropical Atlantic sea surface temperature.	Revised per suggestions by Isaac Ginis
1340	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	First sentence should read: “Some studies have reported an increase in the number of tropical cyclones in certain areas, including, the North Atlantic.	Revised per suggestions by Isaac Ginis (URI Prof of Oceanography). Additional informatuion in section 340.2.1.6

1341	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Should include a reference to dam stability and potential breaching. And, in last sentence, paragraph should mention impacts to barrier beaches and coastal habitat.	Revised per suggestions by Isaac Ginis (URI Prof of Oceanography). Additional information in section 340.2.1.6
1342	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	Not sure of the relevance of declining wind speeds until much later in the chapter. Should probably include more explanation as to how and why declining wind speeds are significant.	There is a sentence in the following paragraph explaning the relevance of the subject and there is further explanation later in the chapter because local windspeeds at T.F. Green are not comparable to those being considered for offshore windfarms in the Ocean SAMP Area.
1343	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	CLF thinks that paragraph 4 is too important to appear this late in the discussion of the impacts associated with precipitation. This information should be upfront in this section and in the chapter.	The structure of the document is to provide statements of fact followed by a paragraph explaining the relevance of these facts to the Ocean SAMP area. Given this, we added language to introduction to include impacts due to "more rain, salinity changes, runoff"

1344	5/28/2010	Tricia Jedele	Conservation Law Foundation	310	This section should be more specific to Narragansett Bay. CRMC should look to the reports prepared by Dr. Steven D'Hondt of URI with respect to the predictions for shellfish in upper Narragansett Bay and Narragansett Bay as a whole. For example, the predictions are that by 2030 there will be no aragonite in Upper Narragansett Bay, and that by 2060/2070 the shellfish will no longer be able to precipitate out of the Bay. There should be some discussion here are about the projected impacts of acidification on the physiology, reproduction, and calcification of marine organisms, and acknowledgement that the ultimate effects on most marine organisms over the projected CO2 range is largely unknown.	The SAMP team did an extensive literature review and did not find additional acidifcation information relevant to the SAMP area. Please send reports or peer reviewed information. Unsuccessful attempts were made to engage Dr. D'Hondt.
1345	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	It may be more helpful to the reader if you could consolidate potential impacts in categories. For example address the projected impacts to marine organisms/habitat in one section (how does increased precipitation, decreased wind speeds, ph, storminess, river flow, etc … impact marine organisms). It is difficult to track all of the projected impacts because they are scattered throughout the chapter.	Due to difficulty in addressing the collective impacts of projected climate change, the document provides a review of existing research by climate driver.
1346	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	Should say more about potential impacts to shellfish.	We were not able to identify local studies that discuss potential impacts to shellfish in the Ocean SAMP area. Please provide additional studies if available. Also, see section 330.2.1.
1347	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	reference in the 3rd sentence should be to the SAMP "area".	Corrected as suggested

1348	5/28/2010	Tricia Jedele	Conservation Law Foundation	320	CLF would suggest using the term “projected” in place of the term “possible in the first sentence.	Corrected as suggested
1349	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	Again, should include a reference to non-point source pollution and run-off.	Pollution from point and non-point sources are not primary impacts of climate change upon this Ocean SAMP area. This section focuses on the most direct impacts associated with sea surface increases in temperature.
1350	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	This is the first point in the chapter where decreased wind speed is connected to a potential negative impact on SAMP ecology. This connection should be made earlier.	There is a sentence in the following paragraph explaning the relevance of the subject and there is further explanation later in the chapter because local windspeeds at T.F. Green are not comparable to those being considered for offshore windfarms in the Ocean SAMP Area.
1351	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	Footnote 3:This footnote seems to be at odds with the section on decreased wind speeds.	This footnote has been deleted and the information has been revised, expanded and inserted as a part of Section 310.5 Precipitation and Weather Patterns are Changing.

1352	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	More should be said about the impact on commercially important species. This is a good example of how the chapters need to do a better job at cross-pollinating where relevant. If the Fisheries chapter is going to address climate change and its impact on commercially important species more fully, then the reader should be directed to that chapter. If not, then the reader should be referred to a climate change section within the fisheries chapter or should be referred to this chapter altogether, and the discussion in this chapter should be fuller.	Most recent relevant studies are referenced in this discussion. There is little information regarding how specific commercially important species will be impacted.
1353	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	This is also another example for the need to appropriately cross-reference other relevant chapters. The marine mammals chapter should include a section on climate change or should refer the reader to this chapter for the discussion of how climate change could impact marine mammals. The policy recommendations in each chapter should also cross reference each other, or be incorporated by reference.	There is no marine mammals chapter and they are covered here because they are of special concern due to the Marine Mammal Protection Act.
1354	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	typo in the first sentence. The word “may” should read “many.”	Corrected as suggested
1355	5/28/2010	Tricia Jedele	Conservation Law Foundation	330	This is a good example of the effective cross-reference to another relevant chapter and the relevant section where the information on Lobster shell disease is described more fully.	No response needed

1356	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Not sure what value is added by this paragraph or Figure 13. The second sentence of the paragraph is not clear. If the paragraph remains it should be clarified and should be less equivocal with its terminology. We should be able to project the consequences of climate change on human uses.	There are few specific projections for this section and this paragraph states the importance of projections on human uses while explaining its uncertainty with multiple drivers.
1357	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	CLF objects to the inclusion of this paragraph in the chapter. Again, that navigational channels may be easier to travel, and that we may have a longer shipping season, are not facts that necessarily imply a “positive” impact. Without further study or documentation that increased shipping seasons will actually be possible, especially given increased storm intensity and Nor’easters, or without data demonstrating that increased shipping will not also bring with it an increase in invasive species, have other detrimental impacts on the ecology of the SAMP area, or the fisheries, recreation and tourism, CLF believes it would be irresponsible to make this blanket statement.	CRMC recognizes the potential for both positive and negative impacts from climate change based on the perspective of the user group relevant to the discussion; these determinations (positive or negative) reflect those of the literature consulted in writing this section
1358	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	These sections should more fully address and explore the projected impact that sea level rise and increased storm intensity will have on coastal development in the SAMP area. Substantial changes need to be made to the way we permit and zone our coastal areas in the face of sea level rise and storm intensity and the SAMP should reflect a CRCM commitment to rethink the plans for building in the coastal area.	Policies pertinent to this concern are outside of the Ocean SAMP area but within the Red Book jurisdiction in which these concerns are addressed. Please see Section 350, paragraph 1 which states the current Red Book policies and states "This [section] is the controlling provision for the upland areas within the Council’s jurisdiction and the immediate shoreline areas and seaward to a distance of 500 feet offshore. Section 350 is intended to be the controlling policy for the ocean waters from beyond the 500 foot mark out to the three mile limit."

1359	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	Should reference increased beach closures in the SAMP area. The likelihood of increased beach closures has not been discussed anywhere else in the chapter and probably should be mentioned in several additional places.	Statement was added to paragraph 3 of this section "For example, in 2008 there was a significant increase in beach closures in Rhode Island over 2007. Although there was an increase in water quality sampling, the increase in closures also coincided with higher rainfall during the summer months in 2008 (Dorfman and Rosselot 2009)."
1360	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	When referencing fisheries most likely to be impacted by climate change, both the lobster and the shellfishing fisheries should be included.	The lobster fishery is cited in 340.5.2 paragraph 1 as a species likely to move north, decreasing in abundance and/or extent of time in which they can be caught by fishers in the Ocean SAMP area. Given information available at this time, other shellfish fisheries within the Ocean SAMP are not considered to be significantly impacted by climate change with respect to their potential commercial or recreational fishery.

1361	5/28/2010	Tricia Jedele	Conservation Law Foundation	340	This a gaping hole in the Future Uses chapter and in the Climate Change chapter. We need to understand the capacity of the Ocean SAMP area to accommodate all of the uses we already impose on it and need from it before we can make sound planning decisions about whether the identified future uses are actually feasible or justifiable. The policies and recommendations section should recognize the limitations of the Future Uses chapter and this chapter should more fully address the concern that climate change may seriously impact our projected future uses and our approval of projects and uses of the SAMP area will have to be adjusted proactively and not reactively.	The intent of this paragraph is to state that climate change impacts will be considered in any proposal for future use when it is proposed. A sentence was added to this paragraph to emphasize this statement: "Due to the time sensitive nature of climate change drivers, these impacts would have to be considered when these uses are proposed in order to consider the effects as accurately as possible."
1362	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	This section should more fully explain with greater specificity how the CRMC intends to take climate change into account when assessing projects and uses in the SAMP area. It would be very useful if we understood the climate change criteria against which project and uses will be measured after the SAMP is approved.	This is specifically addressed with respect to public infrastructure in the CRMC Red Book (public working draft revision) and the Ocean SAMP policies also reflect this suggestion
1363	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	The CRMC should not simply be requiring the most robust infrastructure and design materials, but should also have a set of criteria that guide decision-making with respect to rebuilding coastal infrastructure after it has been damaged by a storm. Before we assess whether we are using the right materials, we should be assessing whether we should be building in the first place.	Coastal infrastructure and land use planning is out of the jurisdiction of the Ocean SAMP policies and is covered by CRMC policies in the Red Book.

1364	5/28/2010	Tricia Jedele	Conservation Law Foundation	350	The SAMP should require a minimum review period of at least every 5 years, and the Council should do more than merely endorse the develop of design standards for coastal infrastructure.	Major review will occur every 5 years. In addition, the SAMP will convene a biannual public forum to present updated information, science and policy issues. Land-based coastal infrastructure within 500' is under the regulatory jurisdication of the CRMC Redbook.Within the Ocean SAMP, this paragraph states that CRMC "endorses" and "will work" to develop standards, and RI is currently engaged in this national discussion and process. Design standards (350.2.1) also incorporate an analysis for SLR.
1242	6/1/2010	Donald Pryor	Citizen		Policies and recommendations in this chapter, beyond the generality of taking climate change into account, do not provide specifics to aid in spatial planning or zoning of the Ocean SAMP area. Instead of clear policies and recommendations, the chapter proposes seeking funding, setting up committees and commissions, and conducting advocacy campaigns.	Policies have been revised. General Policies are more focused and regulatory standards require public infrastructure projects to provide an analysis of historic and project (medium and high) rates of sea level rise and shall at minimum assess the risks for each alternative on public safety and environmental impacts resulting from the project.
1245	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island		The rich resource of research from URI's Graduate School of Oceanography is appreciated in this document. The public benefit of such research is illuminated in this document.	Thank you.

1246	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island		The recent data on increases in CO2 emissions; local temperature, precipitation, and sea-level; ocean acidity; and storm activity make this document particularly useful. We hope that the documents will be amended and that the public will be notified adequately as new data become available.	Thank you. The intention is to amend the document periodically as new data becomes available.
1247	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	300	Climate change mitigation is a human intervention to actively reduce the production of greenhouse gas emissions (e.g. through replacement of fossil fuels with renewable energy) or to remove the gases from the atmosphere (e.g. through eel grass planting). While this document is about marine ecology and examples may come from that context, the limitations of effect and extent possible due to shallow water, minimal CO2 uptake, and other ecological considerations, of using eelgrass planting as an example of mitigation seems weak. Since a transfer from use of fossil fuels to other means of generating electricity, used in the same sentence, is as terrestrial as marine, the example for removing gases from the atmosphere might say “e.g., through planting additional vegetation on land and in water,” or “through planting trees and other terrestrial vegetation and eelgrass and marsh vegetation in marine environment.”	The sentence was changed to "Climate change mitigation is a human intervention to actively reduce the production of greenhouse gas emissions (e.g. through replacement of fossil fuels with renewable energy) or to remove the gases from the atmosphere (e.g. through planting additional vegetation on land and in water)."
1248	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	310	It might be useful to the reader to note that Table 1 follows on the next page.	The sentence was chaned to "A summary of observed climate change trends described in this section at the global, regional and state levels is given in Table 1 below."

1249	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	310	Suggest that “wildlife” be added to the list of “adversely affected” targets in this section. Although “habitat” is listed, a reference to what uses that habitat should be included. Discussion: Increased precipitation, along with the removal of dams and installation of fish passageways, may alter the diadromous fish use of the SAMP due to increased populations. Eel, various species of herring, and less likely, salmon, may respond to efforts throughout the northeast to improve passage to breeding and development habitats. The following excerpt from an article on salmonid species is of interest, although the article is not from our area and the salmonid restoration in RI largely seems to have failed: “A warming climate is likely to increase ecosystem productivity and result in increased biomass and yields of many targeted species (Reist et al. 2006b). ….Increased productivity in nearshore areas could boost returns of anadromous fish. However, increased productivity in freshwater systems could lead to a decrease in the frequency of anadromy followed by a decrease in population production. An anadromous life history strategy provides for larger individual and population sizes (Gross et al. 1988), but increased freshwater productivity may allow some populations to forego migration to saltwater and switch to a freshwater resident form. Although the resident population would be sustainable, it would not likely attain the production levels attained from the anadromous strategy.” (Wildlife Response to Environmental Arctic Change (WildREACH). Alaska F&W Service.) Increased sediments and toxicities may affect wildlife resource use of the area, other articles suggest.	1) "Wildlife" has been added to the list of adversely affected targets. 2) Discussion of habitats and who uses the different habitats is covered in the Ecology and Fisheries Chapter. Not necessary to discuss in this chapter. 3) Although a good idea and a possible future research project, there is no literature relevant to Rhode Island that confirms that increase precipitation, along with the removal of dams etc, may alter the diadromous fish use of the SAMP.
1250	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	320	Figure 7: We ask that the projection for the projections of emissions constant from 2000 be put in aqua or some cooler color. Orange conveys a psychological perception of warning or danger, inappropriate for the best, lowest projection of greenhouse gas emissions.	We do not have the original file to change. The graphic is cut and pasted from another document.
1251	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	Although it seems obvious that poleward is to the north, will there be readers who could warp the reading?	The word "poleward" is changed to "northward" in the document

1252	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	In first line, I suggest adding “adversely” before “affect lobster populations….”	Suggested change made.
1253	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	Are there not studies showing shift in prey species for marine mammals as a result of warmer temperatures and potential cetacean population impacts? I would prefer that this section be re-written to reflect information in #7 on page 32, which indicates that there are climate change impacts to whale populations, and #10 on page 33, which indicates that disease affects adult mammals. “No research showing direct impact to adult marine mammals’ populations as a result of climate in the SAMP is known, however, studies showing indirect impacts are noted below.” may be a fair statement. Population sustainability should be the issue.	Sentence changed to “No research showing direct impact to adult marine mammals’ populations as a result of climate in the SAMP is known, however, studies showing indirect impacts are noted below.”
1254	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	last sentence: Instead of “Some of the marine mammals,” please state, “Of the XX large marine mammals that use the SAMP area, XX are on the ES list “ or alternatively “All of the cetaceans that use the SAMP area are listed under the U. S. Endangered Species Act..” All marine mammals are provided protection from harassment under the MMPA	Last sentence changed to "Of the 29 large marine mammals that use the SAMP area, 7 are listed as Endangered under the Endangered Species Act, and therefore demand an extra level of attention. In addition, all marine mammals are provided protection from harassment under the Marine Mammal Protection Act."

1255	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	is inadequate because it does not distinguish pelagic species that are directly impacted as the ocean in the Ocean SAM area is their habitat. While #1 talks about the 67 species of “oceanic birds” it is not clear, especially considering paragraph #2 whether the 67 species are pelagic or include more terrestrial seashore birds. 1 should at least distinguish pelagics (petrels, etc.), sea ducks, gulls and relatives, and shorebirds, each of which has a slightly different seasonal use of the area. There is no indication of ecological relationship to other taxa. Please add an appendix of birds species that use this area, which partitions for foraging that might be affected by climate change and a few sentences about their general life patterns, seasonal use, etc. that might be affected by climate change. I suggest that several ornithologists including Charles Roman (NPS), Suzanne Paton (USF&WS), or Shai Mitra (SUNY-Staten Island) may be able to provide useful information on climate change impacts to pelagic and off-shore species.	The 67 species of seabirds referenced in the first sentence is a general comment about seabirds and not with specific reference to the Ocean SAMP area. The bird species that use the Ocean SAMP area are described in the Ecology chapter (Section 250.6) and listed in Table 2.11. Further analysis of the impacts of climate change on those species is not readily available and beyond the scope of this chapter at this time. This could be an important research topic and can enter later versions of the Ocean SAMP.
1256	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	330	should at least distinguish pelagics (petrels, etc.), sea ducks, gulls and relatives, and shorebirds, each of which has a slightly different seasonal use of the area.	Added sentence in 350.1.5 "Each type of seabird (e.g. pelagics, sea ducks, gulls and relatives, and shorebirds) has a slightly different seasonal use of the area and, therefore, the impacts of climate change may affect them differently."
1257	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	340	Although “bird-watching” is covered in other chapters, as are fisheries, cultural-historical, etc., I suggest that you give the same note to “pelagic bird-watching” as these other activities, or perhaps more inclusively “wildlife observation” as people do pay to watch not only pelagic birds but also whales off RI as well as even sharks.	The topic of wildlife observation is covered in the recreation and tourism chapter

1258	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island	350	Please add a paragraph that addresses process, equipment and infrastructure designs that cause least harm to vertebrate wildlife. This could include Turtle Excluder Devises, construction practices to minimize wildlife impacts, as well as future designs to protect birds and bats from wind blades.	Policy section has been revised.
1259	6/1/2010	Eugenia Marks	Audubon Society of Rhode Island		Will there be a section that will propose policy from these data? The SAMP is a plan for use of the area given the characteristics of the area and the social values of Rhode Island, the U.S., and indeed the global community. I trust that the dire predictions of increasing stresses on the environment will result in policy recommendations that will reverse the trends of greatest impact.	Policy section has been revised.
1438	6/28/2010	Caroline Karp	Citizen		The document available on-line for public review and comment is dated April 30, 2010. This is NOT the version the Council approved on June 22^nd . I support the Policies and Standards in the April 30 version.	No response.

1439	6/28/2010	Caroline Karp	Citizen		The June 22^nd version of /Policies and Standards/ concludes in the 1^st paragraph that "offshore renewable wind energy in RI waters is a logical recommendation based on the data regarding trends and possible regional and local impacts of global climate change". This conclusion does NOT make sense given the data on sources, trends and impacts presented in this otherwise very well written chapter for the following reasons:Development of an offshore wind is NOT carbon-negative or carbon-neutral in terms of materials, construction, operation OR maintenance. The carbon costs associated with development of offshore wind should be explicitly estimated and accounted for in determining whether and in what time horizon a wind project actually offsets CO2-equivalent emissions.This recommendation is not consistent with the policies, statutes and agreements developed during the RGGI process that concluded that the State of Rhode Island should focus on reducing emissions (mitigation) via the RGGI cap + trade system among energy generators, energy efficiency and conservation as very high priorities. New (renewable) energy sources that make it possible to consume MORE energy per capita without reducing per capita emissions are not desirable. Ideally, the SAMP should state that CRMC supports RGGI and other state policies intended to reduce per capita emissions and does not propose to increase availability of energy unless doing so also reduces emissions.	Changes made to new policy section Intro and 1150.2
1440	6/28/2010	Caroline Karp	Citizen		To the extent that CRMC is involved in Energy Facility Siting, the Global Climate Change (and Renewable Energy) Chapters should report state and regional efforts to mitigate emissions pursuant to RGGI since it is important to recognize the emissions reductions and offsets that will be achieved by projects that have already been approved in determining whether Deepwater Wind is desirable or necessary in terms of the regional energy portfolio. (See http://www.epa.gov/statelocalclimate/state/tracking/individual/ri.html for EPA's incomplete list of RI's efforts to reduce emissions relative to its 1990 emissions baseline.)	This is beyond the scope of the Ocean SAMP. The comments address energy planning, which is not within the prevue of the CRMC.

1441	6/28/2010	Caroline Karp	Citizen		Should EVERY coastal state pursue development of marine-based renewable energy? I don't think so. To the extent that CRMC is pursuing either an Energy Facility Siting or Marine Spatial Mapping (zoning) exercise, this Chapter and the Renewable Energy Chapter should address the best locations for marine-based renewable energy options such as tidal energy, wave to energy or wind options (including their carbon footprints) _at a regional scale_ before recommending a single project or a single type of project in RI waters.	This is beyond the scope of the Ocean SAMP, which is a Rhode Island plan, not a regional strategy.