

CCMP Revision Comments on July Draft

Date	Name	Action (Page # From Draft)	Comment	Response
7/23/2018	Greg Wilson, Riverside Conservancy	Living Shorelines (Page 48) and Land Conservation (Page 58)	These two areas (living shoreline restoration and land conservation) are the primary foci of our organization, Riverside Conservancy, and thus we would be particularly interested in assisting the IRL Council on initiatives in these areas.	Thank you! Added Riverside Conservancy to the Actions table as a partner
7/23/2018	Greg Wilson, Riverside Conservancy	Vibrant 21st Century Communities (Page 87)	The importance of promoting the IRL's economic value and trends cannot be overstated, as this will raise awareness/concern among key stakeholders, particularly in the business community and among legislators. For this reason, I would suggest updating and disseminating the economic information on a three-year time frame rather than every five years.	Five years was suggested to allow time for incorporation of the latest data into the next assessment.
7/23/2018	Greg Wilson, Riverside Conservancy	Monitoring and Data Sharing (Page 101)	Consistent monitoring of IRL health is extremely important, but having these data in a consistent, sharable form is equally as important to understand what is working and not working and to identify best practices to use across the IRL. The SWIM program is a great start to provide such a monitoring network. If not already done, perhaps funneling these data to a central repository (e.g. at FIT or HBOI) would enable data consistency and improve sharability across the system.	Agree - included in Strategies
7/23/2018	Greg Wilson, Riverside Conservancy	Technology Innovation (Page 106)	It is very astute and forward-thinking to build this innovation section into the CCMP. As a former university technology manager myself, I know the value that technology innovation can deliver for improvement to the IRL ecosystem. The water technology directory and university startup weekend are great initiatives to stimulate and share helpful innovations. As future conferences, competitions, etc. are considered, I would suggest going beyond Florida to the national and even global stage, as many of these environmental challenges faced by the IRL are not unique and solutions may be imported from unexpected geographies.	Noted - thank you!
7/23/2018	Greg Wilson, Riverside Conservancy	Citizen Engagement and Education (Page 110)	Educating and engaging citizens in the IRL watershed as to its importance and peril are perhaps the most important factors that will result in improvement to the ecosystem. An informed, engaged citizenry can positively impact communities, businesses and legislators at all levels. The Be Floridian Now campaign and One Lagoon - One Community - One Voice initiative are very helpful. To the previous point, perhaps Technology Innovation can be applied further to the IRL Citizen Engagement challenge for new and creative approaches. Among the five IRL-bordering counties, Brevard's Blue Life campaign is to be applauded, and its citizens commended for imposing the half-cent sales tax to help restore the IRL. Hopefully such citizen engagement and commitment can be extended more broadly to promote the IRL's recovery.	Noted
7/31/2018	David Carlson, St. Lucie County	Pathway to IRL Restoration (Page 6)	Pathway to restoration I believe it should just read (including sea level rise).	Corrected

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7/31/2018	David Carlson, St. Lucie County	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Responding to Lake O discharges – I think that the word sediment or silt should be included so the public better understands where the muck originates in these massive discharges.	Added sediments to this section
7/31/2018	David Carlson, St. Lucie County	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Should agricultural runoff be included?	Added a note about nutrients from the IRL watershed
7/31/2018	David Carlson, St. Lucie County	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Underpin management?	Reworded
7/31/2018	David Carlson, St. Lucie County	Monitoring and Data Sharing (Page 100)	Monitoring funding should not be a yearly hurdle so can we advocate 5-10 year funding?	Added to strategies
8/2/2018	Wayne Mills, IRL Coalition	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Where will the current metrics to remove the IRL waters from the impaired waters list be introduced?	The proposed metrics are included in the Measuring Changes in IRL Vital Signs section
8/2/2018	Wayne Mills, IRL Coalition	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Will the fact that SB10 is insufficient to solve the discharge releases from Lake O be addressed?	The issues related to Lake Okeechobee discharges on the IRL are discussed but the focus is on actions within the IRL watershed
8/2/2018	Wayne Mills, IRL Coalition	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Will metrics be added to “focused and expanded efforts to reduce nutrient and other pollutants loads”?	The metrics are discussed in the Measuring Changes in IRL Vital Signs section and specific projects submitted by stakeholders will be included in the separate Projects Plan
8/2/2018	Wayne Mills, IRL Coalition	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Should an estimate be put together to give an approximate amount of money required to get the IRL off the impaired waters list?	The costs for the provided projects will be included in the separate Projects Plan
8/2/2018	Wayne Mills, IRL Coalition	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	I’m a proponent of using the Ishikawa Diagram often used in problem analysis in Quality Management training. I think it might be of particular interest here or as an aside to try it out using N as the problem. Could be thought provoking too.	IRLNEP evaluated creating this diagram but determined it was not needed for this CCMP
8/2/2018	Wayne Mills, IRL Coalition	Wastewater (Page 20)	Should there be a discussion of an estimated amount to convert septic to sewer and to high N removal systems for input to the overall costs for the IRL?	The estimated costs for septic system projects submitted by stakeholders will be included in the separate Projects Plan
8/2/2018	Wayne Mills, IRL Coalition	Wastewater (Page 20)	Likewise should there be a discussion of supporting regulatory changes to restrict standard septic from being installed within 50 meters of waters leading to the IRL unless they were high N removal (85%) systems?	Added information

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8/2/2018	Wayne Mills, IRL Coalition	Wastewater (Page 22)	Should a recommended limit of 3mg/l of N be set for STP's along the IRL?	It is more difficult to set a treatment standard for septic systems than it is to set a standard for WWTPs due to the differences in the systems
8/2/2018	Wayne Mills, IRL Coalition	Wastewater (Page 22)	Should the CCMP support the recent TCRPC Resolution to pursue alternatives to land disposal of bio-solids on site draining into Florida's waters?	Not at this time. Options for biosolids are still being discussed
8/2/2018	Wayne Mills, IRL Coalition	Marinas and Boating (Page 92)	Is there sufficient enforcement on the prohibition of discharging raw and MDS sewerage from vessels within the 3 mile limit? Do we have No Discharge Zones in place for entire IRL?	Enforcement and education programs are in place and one of the suggested strategies is to increase enforcement to ensure compliance
8/6/2018	SFWMD	Seagrasses	The figure shows the entire IRL, however when I have seen this graph (or one like it in the past), only data from the section of the IRL covered by SJRWMD was included. Does this graph also include the transect and mapping data collected by SFWMD in the southern portion of the lagoon?	An updated graph was added that includes data through 2017 for both SJRWMD and SFWMD.
8/6/2018	SFWMD	Seagrasses	I have heard (not sure if its true but from a reliable source) that there is a plant in the northern lagoon that feels it is more economic for them to dump their waste in the lagoon and pay the fine then to have to find a different method of waste disposal. If this is true, and their waste is a factor in poor water quality in the lagoon how will this be addressed in the process of improving water quality and clarity?	If this is true, the appropriate regulatory agency would need to be notified for enforcement
8/6/2018	SFWMD	Seagrasses	Will plants created from tissue cultures be kept in mesocosms (pseudo donor bed?) and transplanted into the lagoon when water quality conditions are good? Or will plants be planted before conditions are good in the hopes they will survive and be established when conditions are right for them to flourish. Is there a donor bed in the IRL robust enough to withstand removal of plugs or will you be getting seagrass from other water bodies?	This section was reworded
8/6/2018	SFWMD	Contaminants of Emerging Concern	Emerging Contaminants-2: Possibility of government funding (federal, state, city) to promote xeriscaping which reduces use of pesticides and herbicides. An incentive could be for every square foot of lawn changed to xeriscape the residents property tax is reduced by some amount	Added to list of strategies

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8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	Has capping the muck (like many restoration projects in the Lake Worth Lagoon) been considered?	This approach can be evaluated but removing the muck is needed to create a substrate suitable for seagrass, oyster, and clam growth
8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	What will be done with the removed muck?	There are designated disposal areas within the IRL watershed and others will need to be identified
8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	Capping muck would take care of this [barrier to success of limited land area]. Consider bringing Palm Beach County ERM to the table to discuss there experiences (both good and bad) with capping muck	Noted
8/6/2018	SFWMD	Impaired Waters (TMDLs, BMAPs, and RAPs)	Are revisions to the TMDL models still going to use the historic seagrass depth limits?	Other options for targets are being evaluated as part of the TMDL development process
8/6/2018	SFWMD	Impaired Waters (TMDLs, BMAPs, and RAPs)	When was the Loxahatchee River identified as impaired? What fork?	The Loxahatchee River was identified as impaired in 2016. The northwest fork is impaired for nutrients
8/6/2018	SFWMD	Connected Waters and Watersheds	CERP is currently listed at \$16.4B. This is the number that was in the last report to Congress in 2015.	Revised the cost
8/6/2018	SFWMD	Throughout	Wording edits throughout the document	Addressed
8/6/2018	SFWMD	Stormwater	Can we get a 2018 number? [for population growth]	Updated to 2017
8/6/2018	SFWMD	Stormwater	There are many more dispersed water storage projects in S-IRL, do you want to add them? Curious as to why only this one is listed? I think they are all in the BMAP's so maybe best to just reference them? [SJRWMD projects table]	This list was removed from the document and future projects submitted by the stakeholders will be listed in a separate project plan.
8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	St. Lucie has huge muck accumulations. Suggest referring to the 2004 Study done by Kevin Henderson and IFAS. "Characterization, Sources, Beneficial Re-Use, and Removal of Marine Muck Sediments in the St Lucie Estuary."	Added text
8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	SFWMD did a nutrient flux study in the SLE if you want it.	Noted
8/6/2018	SFWMD	Legacy Loads and Healthy Sediments	And a large muck removal component of the CERP IRL-S project [aligning CCMP with plans]	Added
8/6/2018	SFWMD	Atmospheric Deposition	Are there numbers for south? [atmospheric deposition table]	There were a lot of questions about this table so it was deleted

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8/6/2018	SFWMD	Contaminants of Emerging Concern	A discussion on agricultural changes in the watershed, and the potential for increased amounts of these chemicals and run-off associated with these changes might be appropriate. Large decreases in Citrus, changes in irrigation associated with that?? Not sure, just wondering since there has been such a large change over the past 10 or so years. [glyphosate]	Added text
8/6/2018	SFWMD	Wetlands and Impounded and Altered Marshes	Not entirely true, most at least in SLC and MC have culverts that are opened to provide connection to the lagoon [reference to "Impounding the wetlands effectively controlled mosquitoes, but it also isolated these wetlands from the IRL"]	Added to text
8/6/2018	SFWMD	Wetlands and Impounded and Altered Marshes	Need to add data on SIRL, SLC and MC mosquito control districts would have this information to add to the table below and update the above %'s	Added information to text
8/6/2018	SFWMD	Exotic and Invasive Species	How about actively supporting NFP groups that try to control invasive pops like the lion fish hunts? [deliverables table]	Added to list of strategies
8/6/2018	SFWMD	Forage Fishes	Hasn't anyone else done an inventory in the last 38 years??? Love Grant, but this is getting old! [Gilmore et al 1981]	Updated to a 1995 reference
8/6/2018	SFWMD	Forage Fishes	New inventory? [deliverables table]	Added to list of strategies
8/6/2018	SFWMD	Harmful Algal Blooms (HABs)	Where is it? Ref? [for Preliminary Strategic Plan for Algal Toxins and Aquatic Animal Health in the Indian River Lagoon]	Reworded this paragraph
8/6/2018	SFWMD	Harmful Algal Blooms (HABs)	May want to add the 2018 event	Added
8/6/2018	SFWMD	Harmful Algal Blooms (HABs)	Wondering if the discussion on glycosphate needs to be added hear as well?	Covered under Contaminants of Emerging Concern
8/6/2018	SFWMD	Citizen Engagement and Education	Martin county has a good education program also, not sure the name, but I suggest you ask them and include.	Added
8/6/2018	SFWMD	Appendix I. Related Plans	CERP IRL-S PIR?	Deleted this appendix as related plans are cited throughout.
8/6/2018	Tom Carey, Volusia County	Throughout	Wording edits and typo corrections throughout the document	Suggested edits made throughout
8/6/2018	Tom Carey, Volusia County	Acronyms	We have FDOT, FDOH, etc., should an "F" be placed in front of these – for consistency? [for DEO and DEP]	DEO and DEP do not include the "F" in their acronym
8/6/2018	Tom Carey, Volusia County	Indian River Lagoon (Page 2)	In the text box, third bullet, it states "all" marine life - a bit presumptive, perhaps "much" is a better word?	Changed as suggested
8/6/2018	Tom Carey, Volusia County	IRLNEP Management Conference (Page 5)	IRL Council Management Board table: Is there a new DEP rep? List Elly 'Mel' Bromberg.	List has been updated
8/6/2018	Tom Carey, Volusia County	IRLNEP Management Conference (Page 6)	Citizens' Advisory Committee table: List Frank Catino as the CAC chair?	Changed as suggested
8/6/2018	Tom Carey, Volusia County	IRLNEP: Measuring Performance and Progress (Page 10)	IRLNEP Evaluation Logic Model: Not clear what "STATE" means in the last column heading?	This graphic was deleted

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8/6/2018	Tom Carey, Volusia County	Wastewater (Page 20)	OSTDS: Nutrients yes but pathogens? I may be wrong but septic tanks do a good job of pathogen removal.	Clarified that failing systems do not remove pathogens
8/6/2018	Tom Carey, Volusia County	Wastewater (Page 20)	OSTDS: Chain, such as...(list examples)	Reworded this sentence
8/6/2018	Tom Carey, Volusia County	Wastewater (Page 20)	Title next table: Wastewater Treatment in the IRL Watershed?	Did not add title to table to be consistent with rest of document
8/6/2018	Tom Carey, Volusia County	Wastewater (Page 22)	Strategies, 1st bullet: I don't agree with this strategy as effective in reducing nutrient pollution. Good septic, bad septic, they all pollute – very little if any nutrient removal occurs even the most well maintained OSDS.	Agree - this bullet was reworded
8/6/2018	Tom Carey, Volusia County	Stormwater (Page 26)	#4 Maintenance: Not sure what this is saying	Corrected
8/6/2018	Tom Carey, Volusia County	Contaminants of Emerging Concern (Page 39)	Add a new bullet under Strategies: Ensure all IRL counties have an active Small Quantity Generator Assessment, Notification and Verification Program.	Added
8/6/2018	Tom Carey, Volusia County	Wetlands and Impounded and Altered Marshes (page 52)	Table should show units – acres I think	Added units
8/6/2018	Tom Carey, Volusia County	Forage Fishes (page 74)	"Fisheries focusing on forage fish in Florida's waters are relatively small." - I'm not sure what this means.	Reworded this sentence
8/6/2018	Tom Carey, Volusia County	Trash-Free Waters (page 90)	Strategies: Just a thought – we include the annual Halifax/Indian River Cleanup in the International Coastal Cleanup(ICC) each year. Perhaps if other IRL counties participate in the ICC, they could include an IRL cleanup as well in the same event.	Noted
8/6/2018	Tom Carey, Volusia County	Trash-Free Waters (page 91)	Trash-Free Waters-2: Derelict vessel removal cost averages \$350 to \$450 per vessel length.	Added this information to the table
8/6/2018	Tom Carey, Volusia County	Monitoring and Data Sharing (Page 102)	Medium-term Outcomes: Each/every is a pretty stringent requirement. Should "as appropriate" or "appropriate monitoring" be used in some fashion?	Change to as appropriate
8/11/2018	Becky Bruner, Martin County Soil & Water Conservation	Overall	Regarding Indian River Lagoon CCMP. I have went through papers. I don't have the knowledge of you and Duane and team. I think you've covered it all and all the people along IRL should be extremely proud to have your team leading us into the solutions and the future. I do hope we can get more people educated, as you all say, to have one voice to communicate-collaborate-coordinate...Much action plan and data and it makes me think of all the people, and many municipalities we have to help get clean water to someday.	Thank you!
8/14/2018	Ken Grudens, Indian River Land Trust	Overall	Document is very comprehensive, covers a lot of ground. With the 32 Action Plans, it feels when reading like there's a lot of overlap and recurring items, and got the overall feeling that, even though a comprehensive plan, charts and tables feel rather cookie cutter.	Noted

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8/14/2018	Ken Grudens, Indian River Land Trust	Overall	For consistency, decide what the term “Public Lands” means. It is used throughout the document, but the context could have several meanings. Does it mean all lands owned by the public? Does it mean all open land? Conservation lands? Are privately held conservation lands included? Suggest using the term “Public and private conservation lands”.	Term was changed throughout the document.
8/14/2018	Ken Grudens, Indian River Land Trust	Overall	Also, for consistency, choose a term to describe NGOs, non-profits, interest groups. These are used throughout the document interchangeably. If it is the case that they all mean the same thing, choose one term.	Term was changed to interest groups
8/14/2018	Ken Grudens, Indian River Land Trust	Pathway to IRL Restoration (Page 6)	5th line in parentheses “(including and sea level rise)”. Not sure what this means exactly.	Corrected
8/14/2018	Ken Grudens, Indian River Land Trust	Measuring Changes in IRL Vital Signs (Page 12)	Bottom chart under Wetlands Indicators (Measures): Public use doesn’t seem like a measure of success for wetlands conservation. Under Targets for Wetlands, be sure to include acres of land conserved with targets. Also, “Acres restored” should be “acres acquired and restored”.	Removed as an indicator
8/14/2018	Ken Grudens, Indian River Land Trust	Role of the IRLNEP (Page 15)	Chart – One Lagoon: Restoration plan and regional restoration centers ID’d seems very ambitious. May need to look at dates and extend outward.	Dates are currently being reevaluated
8/14/2018	Ken Grudens, Indian River Land Trust	Wastewater (Page 24)	Outcomes: Short term says 1- 3 years, not 1-2 as outlined as performance measure.	Corrected
8/14/2018	Ken Grudens, Indian River Land Trust	Seagrasses (Page 43)	Chart for SG Monitoring: Add other partners like FIT, FOS, HBOI, and others working on monitoring SG in the IRL.	Added to table
8/14/2018	Ken Grudens, Indian River Land Trust	Wetlands and Impounded and Altered Marshes (Page 53)	Wetlands: Not clear what the word “Targeted” means in the chart at top of page. 124 acres targeted seems like a very low number for northern IRL. Where does this number come from and is it correct?	Targeted for rehabilitation - this was clarified in the table
8/14/2018	Ken Grudens, Indian River Land Trust	Wetlands and Impounded and Altered Marshes (Page 54)	Action Plans: Propose an action plan for a “RIM Plus”: strategy of enhancing habitat. Reconnection combined with intermittent drawdowns during period when impoundments are flooded adds benefits. Looking for something more than RIM but less than full on breaching of impoundment dikes. Perhaps a #5 could be “Enhance and Manage Impoundment Habitats”- an action plan that focuses on actively managing impoundments and enhancing their habitat value.	Added "managing" to #4
8/14/2018	Ken Grudens, Indian River Land Trust	Wetlands and Impounded and Altered Marshes (Page 54)	#3 and #4 should have mosquito control districts added as partners. Also, in #3, include non-profits as private landowner partners.	Added to list of partners

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8/14/2018	Ken Grudens, Indian River Land Trust	Wetlands and Impounded and Altered Marshes (Page 54)	Outcomes: Medium term says 2 – 4, s/b 3-4.	Corrected
8/14/2018	Ken Grudens, Indian River Land Trust	Land Conservation (Page 59)	Land protection, 2nd paragraph, 2nd sentence: What is meant there? Is it conservation lands or public lands? Suggest changing 'land acquisition' to 'lands acquired for conservation'. Also, private conservation lands should appear in Appendix F as they are significant.	Wording was modified. Appendix F was deleted.
8/14/2018	Ken Grudens, Indian River Land Trust	Land Conservation (Page 60)	Outcomes: [reference definition of short, medium and long-term outcomes in beginning of document where short term outcomes are related to knowledge] Acquiring land cannot be short term – it generally takes significantly longer. Suggest saying 'Identify and target lands for acquisition and begin the process to acquire' as the short-term goal. Medium term would then be to acquire lands; and long term would be to continue to acquire additional lands.	Adjusted the outcomes as suggested
8/14/2018	Ken Grudens, Indian River Land Trust	Land Conservation (Page 60)	Also, in reference to Medium term outcomes definition – definition states medium term outcomes are related to behavior change. Suggest broadening this definition to include other things that aren't behavior, such as implementation of change actions (land acquisition, etc.).	The definition for outcomes in the introduction is from EPA
8/14/2018	Ken Grudens, Indian River Land Trust	Land Conservation (Page 60)	Consider addition of private funding as lead agencies or partners. These are potential funding sources for acquiring lands for conservation, particularly in #1 and #5.	Private landowners are listed as lead for these two, added private sources under funding
8/14/2018	Ken Grudens, Indian River Land Trust	Biodiversity (Page 68)	See note above about use of "Public lands". Where are the private conservation groups?	Private conservation groups are listed in Biodiversity-1
8/14/2018	Ken Grudens, Indian River Land Trust	Species of Concern (Page 71)	Table – Species of Concern #1: What are "Interest groups" under partner organizations? Not sure what the thought is there.	Deleted interest groups
8/14/2018	Ken Grudens, Indian River Land Trust	Exotic and Invasive Species (Page 73)	Consider addition of an action plan to eradicate invasives. This is not really addressed except as "provide information" in #2. Should be part of active management of the IRL.	This would be part of the early detection and rapid response plan in Invasive Species-2
8/14/2018	Ken Grudens, Indian River Land Trust	Distinctive Lagoon Communities (Page 96)	In Distinctive Communities or possibly in Vibrant 21st Century Communities, consider an action plan that includes redeveloping viable waterfront areas to create livable waterfront communities. Actions can include promoting redevelopment, identification of target properties, encouraging redevelopment of brownfields, etc.	Added as a strategy
8/20/2018	Kevin Shropshire, City of Rockledge	Climate Ready Estuary	Should the segment, "Climate Ready Estuary" be in a different category than "Living Resources"? It seems to be more aimed at "Healthy Communities" than "Living Resources".	This was updated to include both Living Resources and Health Communities

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8/20/2018	Kevin Shropshire, City of Rockledge	State of the Lagoon	"State of the Lagoon" technical report every 10 years, to be issued for 2025. Are there plans for smaller, more frequent updates, less than 10 years apart? This is the age of 'instant updates' and a 10-year span between updates might not be received in a positive manner.	These reports will take several years to prepare. It may be possible to prepare a small update in 5 years with full report development every 10 years.
8/20/2018	Kevin Shropshire, City of Rockledge	Throughout	Capitalization of the primary "R" words. There are multiple occasions when the RESOUCCE, RECOVERY, RESEARCH, etc., verbiage, all in caps, is immediately before or after abbreviations, also all in caps. This can get a bit confusing as to what is an abbreviation and what is not. Maybe italicize, underline or single capitalize the "R" words?	Italicized the R words
8/20/2018	Kevin Shropshire, City of Rockledge	Emergency Preparation & Response (Page 99)	Why does IRLNEP want to have a role in Emergency Response? Multiple organizations already in existence with staff and financial capability. Maybe be an informational resource to support other organizations/agencies, but not a vehicle of response?	IRLNEP Is looking to provide information and support to other organizations and not to function as a vehicle for response.
8/20/2018	Kevin Shropshire, City of Rockledge	Appendix D	Appendix D WWTP Maps: include actual discharge destinations, not just permitted discharge destinations; i.e. 5 MGD to deep well, not just listing the surface discharge permit that never is used	Maps were added with the WWTF location and name. Did not have good information on all the discharge points.
8/20/2018	Kevin Shropshire, City of Rockledge	Wastewater (Page 24)	Barrier: "Inadequate regulatory oversight for application of reclaimed water..." – source? Municipalities with reclaimed water for irrigation are permitted under the respective WWTP permits, required to have inspection programs, sampling, reporting requirements, etc.	Reworded
8/20/2018	Kevin Shropshire, City of Rockledge	General	Is there a possibility of a grant system to subsidize the innovative technologies that are not affordable to the "lowest bid" requirement of municipal governments?	This can be explored
8/21/2018	Catherine York, EPA	Measuring Changes in IRL Vital Signs (Page 12)	One Lagoon Water Quality Table: Not all impaired waters have a TMDL, BMAP, or RAP developed. For instances where these plans have not yet been developed, the water quality targets should be the applicable water quality criteria.	Language modified as suggested
8/21/2018	Catherine York, EPA	Impaired Waters (TMDLs, BMAPs, and RAPs)	Since not all impaired waters have a TMDL, BMAP, or RAP developed, consider providing more clarity regarding the meaning for this section (e.g. Addressing Impaired waters with TMDL, BMAPs, and RAPs)	Changed title to Impaired Waters (Including TMDLs, BMAPs, and RAPs)
8/21/2018	Catherine York, EPA	Impaired Waters (TMDLs, BMAPs, and RAPs)	For instances where TMDLs, BMAPs, and/or RAPs have not yet been developed, the water quality targets should be the applicable water quality criteria.	Language modified as suggested
8/21/2018	Catherine York, EPA	Impaired Waters (TMDLs, BMAPs, and RAPs)	Should clarify that the goal is to achieve the applicable water quality criteria.	Language modified as suggested
8/21/2018	Catherine York, EPA	Impaired Waters (TMDLs, BMAPs, and RAPs)	Semantics, but typically exceeding the WQS indicates impairment. Perhaps rephrase to something like "...meet WQS & work toward improving conditions beyond the levels required to achieve WQS..."	Changed text

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8/21/2018	Catherine York, EPA	Seagrasses	A proposed refinement of the TMDLs for Banana River Lagoon, North IRL, and Central IRL that was shared by A. Janicki with EPA last year indicated that seagrass targets would be used as the response variable signaling improvement and ultimately achievement of the nutrient WQS. How will the naturally recovered seagrass be differentiated from the planted seagrass?	This will need to be determined when the TMDL is adopted
8/21/2018	Rebecca O'Hara, Florida League of Cities	General	Ok I've now had an opportunity to read through the plan. Wow! I love how this plan is organized and put together – especially the specific strategies (short, mid, long-term) and barriers to success. A lot of thought and work was put into this. There is a lot of good content in there, as well. It was especially interesting to read about the sources of nutrients in light of our discussion at the policy committee meeting. I also liked the leading statement about taking responsibility and “owning” the problems.	Thank you!
8/21/2018	Irene Arpayoglou, IRL Aquatic Preserves	Spoil Islands	Edits to text	Updated section based on information provided
8/22/2018	Edie Widder, ORCA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Responding to a Need for Integrated, Systematic, and Sustained Monitoring, Mapping, and Modeling: One of the reasons we're in this fix is funding cutbacks of monitoring. It may not be politically smart to mention it but it sure as hell is pertinent. See this recent Miami Herald article.	Added new strategy about funding for monitoring in the Monitoring and Data Sharing section
8/22/2018	Edie Widder, ORCA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Leveraging the Knowledge and Experience of the NEP Network: All those methods of reducing nutrients are desirable but since we can't afford to do them all we need to prioritize. For example in most cases it makes no sense to replace septic systems if wastewater systems are inadequate and overstressed. It does make sense to limit any new septic wherever possible. Need solid metrics for each region in order to create a customized priority list.	The IRLNEP is gathering project information from stakeholders in a separate projects plan. The IRLNEP is letting stakeholders prioritize their projects based on needs in their area.
8/22/2018	Edie Widder, ORCA	Measuring Changes in IRL Vital Signs (Page 12)	Table for Habitat Quality: I think we should also include Buffer Zones – these are other than Living Shorelines. Berms and swales for the capture of runoff and the elimination of sloping grass lawns down to the edge of seawalls. The Measure would be Miles of buffer zone. This is low hanging fruit requiring education programs and either incentivization or zoning to have a significant impact in relatively short order. Buffer zones can also surround agriculture and they don't necessarily have to be living shorelines. Cover crops and drip irrigation are additional ag related Habitat Quality parameters that should be included.	Added miles of buffer zones to Living Shorelines Vital Sign, added ag BMPs to Stormwater Vital Sign

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8/22/2018	Edie Widder, ORCA	Impaired Waters (Page 18)	Barrier: Inadequate long-term support for real-time monitoring. (One of the lessons learned from the Chesapeake Bay is that they went through years of mathematical modeling based studies that said they were meeting TMDLs when it turned out they weren't.)	Added to list of barriers
8/22/2018	Edie Widder, ORCA	Wastewater (Page 20)	Strategies: Explore new technologies for AWT – especially those that generate power, remove contaminants of emerging concern and reclaim N and P separately - and conduct cost benefit analysis.	Added to list of strategies
8/22/2018	Edie Widder, ORCA	Contaminants of Emerging Concern (Page 39)	Strategies: Seek innovative and cost-effective wastewater treatment technologies to reduce the pollutant waste load to surface and ground waters. This is critical and needs to be addressed in Action Plan. If the Janicki Omniprocessor works as advertised Contaminants of Emerging Concern that are coming through WWTPs can be eliminated. This is a technology that ostensibly can pay for itself, which suggests the biggest roadblock is nobody wants to take the risk. IRLNEP could help smooth the way by bringing communities together with angel investors for a beta test site.	Added to list of strategies
8/22/2018	Edie Widder, ORCA	Climate Ready Estuary (Page 84)	Developing a climate ready estuary is an opportunity to implement significant improvements by working with secondary insurers to incentivize homeowners to replace bulkheads with living shorelines. LSLs are cheaper than bulkheads and provide better protection against storm surge.	Added to list of strategies
8/22/2018	Edie Widder, ORCA	Trash-Free Waters (Page 91)	Strategies: Look into stormwater litter traps around trash hotspots	Added to list of strategies
8/23/2018	Cecelia Harper, EPA	Throughout	Change Lake Okeechobee "discharges" to "releases" per Clean Water Act.	Corrected throughout
8/23/2018	Cecelia Harper, EPA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Responding to Lake O discharges: "billions of gallons of freshwater" - Ensure this is accurate.	Verified that this is accurate
8/23/2018	Cecelia Harper, EPA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Responding to Lake O discharges: "inoculant of the cyanobacteria Microcystis from Lake Okeechobee fueled harmful algal blooms (HABs) in portions of the southern IRL" - Double check this local watersheds are also contributors and sometimes the only contributor of nutrients.	Added a note that these are in addition to nutrients from the IRL watershed; however, large quantities of nutrients are entering the IRL from Lake Okeechobee
8/23/2018	Cecelia Harper, EPA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Responding to Lake O discharges: Local watershed contributions should also be discussed as they often constitute a much larger percentage of nutrient contributions...there have been years when there were no Lake O releases and there were still HABs in the northern estuaries.	Added a note about nutrients from the IRL watershed
8/23/2018	Cecelia Harper, EPA	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Leveraging the Knowledge and Experience of the NEP Network: "replacing septic systems with connections to a sewer system" -Removing old septic systems would be necessary too to stop the NPS issue from failing systems.	Changed wording

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8/23/2018	Cecelia Harper, EPA	IRL Vital Signs (Page 11)	Very nice visual!	Thank you!
8/23/2018	Cecelia Harper, EPA	Impaired Waters (Page 17)	You may want to coordinate with the EPA WQ and TMDL program b/c some of these segments have been adopted as H1 NNC through TMDLS but it is also my understanding that the IRL H1 NNCs adopted as TMDLS are also being revised; at least they were when I was the FL WQ coordinator; FDEP's plans could have changed. Contacts Katie Snyder and Laila Hudda. You may also want to have a short discussion on the adopted of NNC for these segments rather than just applying the narrative nutrient standard. That is a great accomplishment!	DEP is in the process of evaluating new TMDLs for the IRL but these have not been adopted yet.
8/23/2018	Cecelia Harper, EPA	Impaired Waters (Page 18)	Strategies: Surpass not exceed? Exceed could be read as exceeding the criteria (impairment)...	Changed wording
8/23/2018	Cecelia Harper, EPA	Impaired Waters (Page 18)	Citations: TMDL documents - I think these are being updated; check to see where they're at in the process of adopting new H1s through TMDLS that establish updated NNC.	DEP is in the process of evaluating new TMDLs for the IRL but these have not been adopted yet.
8/23/2018	Cecelia Harper, EPA	Impaired Waters (Page 19)	Citations: RAP documents - Its my understanding from Katie that the Mosquito Lagoon RAP will be a change to standards and that the Lox RAP may not be still up for discussion may want to mention this in the write up.	Information on the Mosquito Lagoon has been updated. The Loxahatchee will not be a change to standards but the RAP is moving forward.
8/23/2018	Cecelia Harper, EPA	Stormwater (Page 26)	Check sentence doesn't flow "allowed enter. . ."	Corrected
8/23/2018	Cecelia Harper, EPA	Connected Waters and Watersheds (Page 63)	Yes very good point! Coordination should occur both ways between IRL NEP and CERP efforts.	Noted
8/24/2018	Vince Bacalan, EPA	Indian River Lagoon (Page 2)	Text box 5th and 6th bullets: Are these statements highlighted in yellow accurate, especially the part about 'hold stormwater'? Not sure if this is the kind of message to stakeholders in light of the current condition of IRL.	Reworded bullet
8/24/2018	Vince Bacalan, EPA	Indian River Lagoon (Page 2)	Is this box referenced elsewhere? Or is this introducing what a healthy estuary should offer?	This box is introducing what a healthy estuary should offer
8/24/2018	Vince Bacalan, EPA	Pathway to IRL Restoration (Page 6)	"restoration": Every time I see this word, I'm tempted to ask: to what levels? I bet the readers would likely ask the same question. Clarifying this and tying this back to what a 'healthy' lagoon should be is one approach.	A statement on the restoration goal was added to this section
8/24/2018	Vince Bacalan, EPA	Evaluating Risks Associated with Sea Level Rise and Climate Change (Page 8)	Is this the part to mention how VA findings are being incorporated into this CCMP, at least on the broad scale? Will there be a comprehensive explanation of risk assessment results into the development of this new CCMP in this section? If so, it should be focused on those high risks and the rationale for retaining them here despite the high degree of likelihood and consequence resulting from certain stressors.	Information on the vulnerability assessment was added to the Climate Ready Estuary section

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8/24/2018	Vince Bacalan, EPA	IRLNEP Core Values (Page 9)	"healthy IRL system": Has this been defined explicitly?	The vision, mission, promise, and goals wording was previously reviewed and approved by the Management Conference
8/24/2018	Vince Bacalan, EPA	IRL Vital Signs (Page 11)	Is the CRE between healthy communities and living resources on purpose?	Yes - the climate ready estuary section affects both categories
8/24/2018	Vince Bacalan, EPA	Measuring Changes in IRL Vital Signs (Page 12)	Where indicators and targets are identified, these should be incorporated in appropriate Actions.	Noted
8/24/2018	Vince Bacalan, EPA	Measuring Changes in IRL Vital Signs (Page 12)	"pollutant load reductions": Based on NPDES guidelines?	Not just NPDES guidelines because this also includes septic systems and biosolids
8/24/2018	Vince Bacalan, EPA	Measuring Changes in IRL Vital Signs (Page 12)	"Threshold levels identified for human and wildlife health...": Rec water criteria?	Added reference to water quality criteria
8/24/2018	Vince Bacalan, EPA	Measuring Changes in IRL Vital Signs (Page 12)	What seagrass level is IRLNEP aiming for?	Added TMDL targets
8/24/2018	Vince Bacalan, EPA	Measuring Changes in IRL Vital Signs (Page 13)	One Voice: Are these supplemental documents or incorporated into one large document?	These will be supplemental documents
8/24/2018	Vince Bacalan, EPA	Taking Action (Page 13)	"10 broad categories": Which categories are being referenced here? Or are these referring to the 10 R?	These are referring to the Rs
8/24/2018	Vince Bacalan, EPA	IRL Health Concern Levels (Page 14)	Where are these displayed? Are all vital signs at Level 1 or 2? These should help prioritize IRLNEP's efforts.	These are displayed at the beginning of each Vital Sign section and the priorities were assigned based on input from the Management Conference
8/24/2018	Vince Bacalan, EPA	Role of the IRLNEP (Page 14)	Are these actions meant to be similar to the One Voice measures (communicate, collaborate, coordinate) or slightly different?	These are meant to be slightly different to specifically represent the IRLNEP's role
8/24/2018	Vince Bacalan, EPA	How to Use This Plan (Page 16)	Actions: Are the listed actions meant to be addressed as a deliverable as well?	The wording was changed to "Goals"
8/24/2018	Vince Bacalan, EPA	How to Use This Plan (Page 16)	Strategies: I'm having trouble distinguishing different strategies to the deliverables because some could apply to both. I also want to reiterate that where applicable, indicators/targets should be specified so easier to track progress and measure success, particularly in Actions that are meant to restore or protect something.	Noted
8/24/2018	Vince Bacalan, EPA	How to Use This Plan (Page 16)	Action Plan Outputs: Is action plan = work plan?	The items lead by the IRLNEP in the action plan could be part of the work plan

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8/24/2018	Vince Bacalan, EPA	Impaired Waters (Page 17)	Actions: Once targets are determined, can they be incorporated into the actions so they are explicit and clear to the readers?	Noted
8/24/2018	Vince Bacalan, EPA	Wastewater (Page 22)	Strategies 1st bullet: Driven by which entity, or IRLNEP's policy?	This bullet was reworded
8/24/2018	Vince Bacalan, EPA	Wastewater (Page 24)	Outcomes: How do outcomes here (and elsewhere) relate back to the strategies if IRLNEP is not the lead for projects? In other words, are the timeframes here driven by the partner agencies or based on IRLNEP's target?	Meeting the timeframes will be the responsibility of the lead agency(ies) in coordination with the listed partnered agency(ies)
8/24/2018	Vince Bacalan, EPA	Stormwater (Page 26)	Table: Reduction in terms of what time factor? Annually or over x period of time?	Reductions are in lbs/yr, this table was deleted and will be part of the separate Projects Plans
8/24/2018	Vince Bacalan, EPA	Stormwater (Page 27)	Action Plan Outputs: Are numbered action items arranged in priority/sequential order?	These are not in priority order
8/24/2018	Vince Bacalan, EPA	Atmospheric Deposition (Page 36)	Table: What timescale is this capturing, i.e., up to 2018?	This table was deleted
8/24/2018	Vince Bacalan, EPA	Atmospheric Deposition (Page 37)	Atmospheric Deposition-2: Should role be Conduct if IRLNEP is the lead entity here?	This is the IRLNEP Management Conference, not the IRLNEP, so conduct is not needed
8/24/2018	Vince Bacalan, EPA	Emerging Contaminants (Page 40)	Long-term: "significantly reduced" Based on what targets is this goal being measured against?	From current conditions, modified to clarify this
8/24/2018	Vince Bacalan, EPA	Seagrasses (Page 42)	Actions: Are the 'R' actions usually become specific outputs in the table as well? Some are captured there while others are identified under Strategies. And what are the stressors being targeted here?	The R actions are used where applicable
8/24/2018	Vince Bacalan, EPA	Seagrasses (Page 42)	Which restoration goal is the target here and what's being used to inform this?	Discussed in Measuring Vital Signs section
8/24/2018	Vince Bacalan, EPA	Seagrasses (Page 43)	Seagrass-3: Include conduct per IRLNEP's role?	Added
8/24/2018	Vince Bacalan, EPA	Filter Feeders (Page 44)	Actions: "sustainable commercial harvests" I would try to avoid the perception that this CCMP action is here to directly provide economic benefit.	Noted - trying to show this as a result of a healthy lagoon
8/24/2018	Vince Bacalan, EPA	Filter Feeders (Page 45)	"commercial fisheries and aquaculture" As mentioned above, stay relevant to core 320 principles, unless this particular action is not being supported by 320 funds.	Noted
8/24/2018	Vince Bacalan, EPA	Filter Feeders (Page 46)	Filter Feeders-3: Will the RESTORE component be addressed by this specific action output?	Yes, modified wording
8/24/2018	Vince Bacalan, EPA	Living Shorelines (Page 48)	Actions: For this other RESTORE actions, will there be working targets against which these projects are measured against or be working toward?	Yes, these are being developed and included in the Measuring Changes in IRL Vital Signs section

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8/24/2018	Vince Bacalan, EPA	Living Shorelines (Page 50)	Living Shorelines-1 and 3: Conduct as well?	Added
8/24/2018	Vince Bacalan, EPA	Wetlands and Impounded and Altered Marshes (Page 52)	Actions: Restore to what particular target or level of condition?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Spoil Islands (Page 57)	Barrier: "sea level rise" Is this considered at high risk of not meeting goals or providing intended benefits to the community?	This could be a high risk depending on the amount of sea level rise
8/24/2018	Vince Bacalan, EPA	Land Conservation (Page 60)	Long-term: Are there targets for determining progress and success?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Species of Concern (Page 71)	Species of Concern-1: "track recovery process" Based on which indicators/measures?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Exotic and Invasive Species (Page 72)	Any chance this section and species of concern be similar enough to possibly combine?	Kept separate
8/24/2018	Vince Bacalan, EPA	Forage Fishes (Page 74)	This is a different approach from biodiversity? To streamline further, may be beneficial to consider consolidating these two sections.	Kept separate
8/24/2018	Vince Bacalan, EPA	Forage Fishes (Page 75)	Long-term: At which targets could we see this being met?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Commercial and Recreational Fisheries (Page 77)	Closely tied to forage fishes...	Kept separate
8/24/2018	Vince Bacalan, EPA	Commercial and Recreational Fisheries (Page 78)	Strategies: Many goals are dependent on the state of water quality in the IRL. Are these action items more appropriate to be done by partners and not by IRLNEP?	Those actions have been assigned to other partners in the action tables
8/24/2018	Vince Bacalan, EPA	Commercial and Recreational Fisheries (Page 78)	Fisheries-1: Please consider my previous comment regarding economic perceptions when associated in this CCMP, unless there's no intent on using 320 funding to support this action.	Noted
8/24/2018	Vince Bacalan, EPA	Commercial and Recreational Fisheries (Page 79)	Long-term: "recovered" Has this been defined to what previous levels?	Not yet
8/24/2018	Vince Bacalan, EPA	Harmful Algal Blooms (Page 82)	HAB-1 and 2: Should 'conduct' be included here since IRLNEP is lead and a funding source?	Added
8/24/2018	Vince Bacalan, EPA	Climate Ready Estuary (Page 83)	What's the timing on the VA results to be incorporated into this draft CCMP? The only barrier to not including those findings are if there are many new goals that were not in the 2008 CCMP.	The results are included in the updated CCMP
8/24/2018	Vince Bacalan, EPA	Climate Ready Estuary (Page 84)	Is the shaded portion of this figure indicates the current state where IRLNEP is? I believe you are further along, correct?	The color coding in the figure is for each step and not representative of where the IRL is in the process

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8/24/2018	Vince Bacalan, EPA	Climate Ready Estuary (Page 84)	How would focus on these infrastructures affect the successful implementation of CCMP?	These infrastructures are key locations for implementing projects to achieve CCMP goals
8/24/2018	Vince Bacalan, EPA	Climate Ready Estuary (Page 84)	Strategies: "adaptation plan" This would be a follow-up to risk-based VA.	Correct
8/24/2018	Vince Bacalan, EPA	Vibrant 21st Century Communities (Page 88)	Action Plan Outputs: An example of where the environmental approach of CCMP integrates into the economics of the study area. I see distinction in funding sources here but may need to be more explicit because readers may already have the assumption (as I did) that IRLNEP includes 320 funding.	Noted
8/24/2018	Vince Bacalan, EPA	Vibrant 21st Century Communities (Page 88)	Short-term: "economic value of the IRL" Should be closely tied to the ecosystem services. I think this section needs to be reworked somehow so distinction is made between the environmental efforts and those that support economy.	The economic value of the IRL includes factors other than ecosystem services
8/24/2018	Vince Bacalan, EPA	Trash-Free Waters (Page 90)	Strategies 1st bullet: One consideration is to include businesses (restaurants, retailers, etc.) to spread the message and make lagoon friendly logos more widely visible.	Added to list
8/24/2018	Vince Bacalan, EPA	Trash-Free Waters (Page 91)	Action Plan Outputs: Are there considerations for appealing to behavioral changes in addition to removing existing trash around? What exactly does this mean? No plastics, straws, etc.?	The Trash-Free Lagoon campaign would focus on behavioral changes. Yes, this would mean no plastics, fishing gear, etc.
8/24/2018	Vince Bacalan, EPA	Marinas and Boating (Page 93)	Boating-1: Targets?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Marinas and Boating (Page 94)	Barriers 3rd bullet: Restructure this sentence? I'm having trouble following.	Reworded
8/24/2018	Vince Bacalan, EPA	Distinctive Lagoon Communities (Page 95)	This section seems similar to the vibrant communities section.	Kept separate
8/24/2018	Vince Bacalan, EPA	Distinctive Lagoon Communities (Page 96)	OEJ has the EJ screening tool you could incorporate into this section or as citation for highlighting communities with high needs.	Added to text
8/24/2018	Vince Bacalan, EPA	Emergency Preparation & Response (Page 99)	Outcomes: Things to consider: identify pre-disaster/emergency response plan/coordination; hazard mitigations; succession plan/continuity of operations.	Added to list of strategies
8/24/2018	Vince Bacalan, EPA	Emergency Preparation & Response (Page 99)	Citations: One resource to consider is the DHS National Disaster Recovery Framework as a guide.	Noted - this can be reviewed during development of the emergency response plan
8/24/2018	Vince Bacalan, EPA	Monitoring and Data Sharing (Page 100)	Are there considerations to match the color of the vital sign wheel with different categories and sub-categories? For example, One lagoon has one type of color, habitat has another, and each vital sign corresponds to a particular color scheme?	Added color coding to titles

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8/24/2018	Vince Bacalan, EPA	State of the Lagoon (Page 104)	A more recent guidance (2016) has replaced this version.	Corrected
8/24/2018	Vince Bacalan, EPA	Technology Innovation (Page 106)	Technology-3: Are nutrient sensors and various nutrient challenges being considered here?	These factors can be evaluated
8/24/2018	Vince Bacalan, EPA	CCMP Implementation and Financing (Page 107)	Strategies: 3rd bullet "targets and indicators" These need to be explicit and prominent throughout the document, where appropriate.	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	CCMP Implementation and Financing (Page 108)	Long-term: Include connections to the cost of/return on investments.	Added
8/24/2018	Vince Bacalan, EPA	Citizen Engagement and Education (Page 110)	Medium-term: Some metric to identify effective outreach/communication efforts (quantitative/qualitative) would be awesome?	Summarized in the Measuring Changes in IRL Vital Signs section
8/24/2018	Vince Bacalan, EPA	Citizen Engagement and Education (Page 110)	Long-term: Will these practices be documented throughout this time period?	Yes
8/24/2018	Vince Bacalan, EPA	Appendix G	Florida manatee federal status: Has the status been changed recently?	Manatees are now listed at threatened. This appendix was deleted.
8/25/2018	Lynne Phillips, KSC	Throughout	Fertilizer is one of the three direct sources of nutrients responsible for eutrophication of the IRL (the other two are human/animal waste and atmospheric deposition). Fertilizer is mentioned only 6 times in the entire document; as comparison, septic tanks and Onsite Sewage Treatment and Disposal System, a subcomponent of human/animal waste, are mentioned 45 times. Suggest a more detailed discussion of source reduction from fertilizer with identification of essential (agricultural) and non-essential (ornamental) uses by definition and a defined plan for addressing and reducing non-essential use. Fertilizer is never mentioned within an "Action Plan Output" and suggest this is a probable "Barrier to Success".	Added more information on fertilizers throughout; added a new strategy and barrier in the Stormwater Vital Sign section
8/25/2018	Lynne Phillips, KSC	Indian River Lagoon (Page 2)	Second paragraph: It firsts mentions the five inlets and how they are connected to the ocean. In the next sentence it mentions Port Canaveral and how its was specifically used for access for maritime vessels. This is a good point and separates the function of the inlets from the port. But later in the document (page 64) the function of the port is not clearly separated from the other inlets and may confuse the reader. Suggest making the distinction here as was done earlier in the document.	Clarified the text in the Connected Waters section
8/25/2018	Lynne Phillips, KSC	Measuring Changes in IRL Vital Signs (Page 12)	Water Quality: Atmospheric deposition and wastewater are listed as Vital Signs, but fertilizer is only implied under the Stormwater Vital Sign targets. Suggest adding an additional Vital Sign for Fertilizer Use with an "Indicator" of reduction measured in tons and "Targets" identified as annual percentage reduction from baseline year prior to fertilizer ordinance enactment to acceptable level determined by the total maximum daily load process.	Kept under stormwater but listed specifically in table

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Date	Name	Action (Page # From Draft)	Comment	Response
8/25/2018	Lynne Phillips, KSC	Wastewater (Page 20)	The discussion is only on domestic wastewater discharges, which is a known nutrient source. There is no mention of industrial wastewater discharges, also a Department of Environmental Protection regulated discharge that may contribute to nutrient loading to the Lagoon. There are approximately the same number of industrial wastewater permits as domestic wastewater permits discharging to IRL watershed. Suggest incorporating discussion on industrial wastewater discharges.	Added information about industrial WWTPs in this section
8/25/2018	Lynne Phillips, KSC	Legacy Loads and Healthy Sediments (Page 32)	Issue Summary, third paragraph: Some superscript formatting needed.	Corrected
8/25/2018	Lynne Phillips, KSC	Legacy Loads and Healthy Sediments (Page 34)	Barriers to Success 5th bullet: "Inefficiencies in removal of dissolved organic fraction in water returned to the lagoon during dredging". Ammonium does not fit in the dissolved organic category. Suggest editing sentence to read "Inefficiencies in removal of dissolved organic fraction and nutrients in water returned to the lagoon during dredging."	Added
8/25/2018	Lynne Phillips, KSC	Seagrass (Page 42)	Last paragraph: Recommend rewording as follows, "However since the 2011 superbloom, approximately 60% of the IRL coverage has been lost due to intense and extensive HABs. Some areas have lost up to 95% of their coverage."	Modified as suggested
8/25/2018	Lynne Phillips, KSC	Living Shorelines (Page 50)	Outcomes 3rd bullet: This sentence has a larger font than the rest of the body of the report.	Corrected
8/25/2018	Lynne Phillips, KSC	Wetlands and Impounded and Altered Marshes (Page 53)	In the table, the asterisk is used to highlight that most of the targeted wetlands are part of the KSC/MINWR complex. It would also be of interest to show what percentage of already reconnected wetlands are from that same area. (for best information on the status of wetlands on the IRL, I would contact Ron Brockmeyer at SJ)	Revised this table
8/25/2018	Lynne Phillips, KSC	Wetlands and Impounded and Altered Marshes (Page 54)	Action Plan Outputs: 4th row, 4th column: Suggest adding include Mosquito Control Districts and/or the Subcommittee on Managed Marshes	Added
8/25/2018	Lynne Phillips, KSC	Wetlands and Impounded and Altered Marshes (Page 54)	Suggest editing sentence to read "Work with IRLNEP partners, the Subcommittee on Managed Marshes (SOMM) and Mosquito Control Districts (MCD) to continue responsible wetland and impoundment management to benefit the IRL, support IRL biodiversity and protect human health from insects."	Modified as suggested
8/25/2018	Lynne Phillips, KSC	Land Conservation (Page 59)	Strategies 1st bullet: The word "Health" is misspelled (it is spelled as "heath" in the report).	Corrected

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Date	Name	Action (Page # From Draft)	Comment	Response
8/25/2018	Lynne Phillips, KSC	Connected Waters and Watershed (Page 63)	<p>Ocean Inlets: On page 2 it was made clear that the Port was a connection only for maritime vessel passage. Here it is treated more as an inlet than a navigational structure. In the paragraph on page 63 it may be helpful to the reader to include more information on the geology, history, type of inlet natural vs manmade and constant need for maintenance. Some suggested talking points; Of five inlets, only one can be described as “naturally stable”. The other four are either entirely human constructed or have been modified from naturally open and closed water ways. All have been artificially stabilized and are maintained at great expense. Ponce de Leon to the north is the most “natural” of the IRL inlets having been open since colonial times. The next “inlet” south is Port Canaveral, constructed between 1951 to 1955 in an area where no known inlet had previously existed. This “inlet” is closed from the IRL by a set of locks that allow navigation but prevents transfer of water to and from the IRL. Further south lies Sebastian Inlet, constructed in 1924, closed by natural forces in 1941 and reopened in 1947. Ft. Pierce inlet, next southward, is the near the site of the “Indian River Inlet”. This connection, described as a “natural meandering passage”, was dredged and stabilize in 1921. The southernmost inlet, St. Lucie, was also a natural passage routinely closed by natural forces until dredging and stabilization occurred beginning 1844.</p>	This information was added to this section
8/25/2018	Lynne Phillips, KSC	Connected Waters and Watershed (Page 64)	<p>Ocean Inlets: Suggest additional language: The natural opening and closing of these inlets is part of the coastal geological dynamics of eastern Florida. In this microtidal, high wave energy environment, natural sand transport favors “long, 30-100km” barrier islands with “abundant washover terraces and washover fans” and “infrequent” tidal inlets (ref). Temporary inlets, caused by overwash during storm events, are rapidly sealed by tidal and longshore current driven sand transport.</p> <p>(ref) Hayes, Miles. (1979). Barrier Island Morphology as a Function of Tidal and Wave Regime. Barrier islands: from the Gulf of St. Lawrence to the Gulf of Mexico. 1 - 27.</p>	Added language
8/25/2018	Lynne Phillips, KSC	Connected Waters and Watershed (Page 64)	<p>Ocean Inlets: On page 2 it was made clear that the Port was a connection only for maritime vessel passage. Here it is treated more as an inlet than a navigational structure. It should be described consistently throughout the document</p>	Corrected
8/25/2018	Lynne Phillips, KSC	Connected Waters and Watershed (Page 64)	<p>Ocean Inlets: Suggest you express values or at least a range for lagoon water residence time, so the reader can understand how long it takes to flush regions of the IRL under the present conditions. A small table listing and ranking inlets, by size, volume exchange and percent contribution to flushing would be helpful.</p>	Added a table of residence times

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8/25/2018	Lynne Phillips, KSC	Connected Waters and Watershed (Page 64)	Ocean Inlets: Present photo of the Port may just be a placeholder it does not represent the inlets, replace with a photo of one or all of the inlets. Even though it is difficult to show scale of the IRL in a single map, an inset of map showing spatial distribution of the IRL and inlets may be helpful.	Replaced photo
8/25/2018	Lynne Phillips, KSC	Species of Concern (Page 70); Appendix G	This section needs to be updated and Appendix G revised to reflect the recent FWC listing of Imperiled Species (2017) and USFWS Federal T & E Species listing (currently online).	Appendix G was removed from the document
8/25/2018	Lynne Phillips, KSC	Commercial and Recreational Fisheries (Page 78)	Issue Summary: When describing the March 2106 fish kill event "tens of thousands" is an extreme underestimation of the numbers. In the photo on page 98 there are easily 10,000 in just that photo and that does start to account for the overall extent of the event and account for smaller forage and cryptic fish. Recommend getting a better estimate.	Changed to hundreds of thousands
8/25/2018	Lynne Phillips, KSC	Harmful Algae Blooms (Pages 80-82)	References to HAB's and water releases from Lake Okeechobee during 2013 and 2016 should be updated to include the current events associated with the lake cyano-HAB, water discharges and red tide event in SW Florida	Discussion was updated to include 2018 blooms in IRL
8/25/2018	Lynne Phillips, KSC	Marinas and Boating (Page 92)	Issue Summary: "106102,803 boats" is missing a comma between the 6 and 1.	Corrected
8/25/2018	Kelli McGee	IRLNPEP Management Conference (Page 5)	Please add Dr. Greg Wilson with Riverside Conservancy to the list of individuals on the Management Board.	List has been updated
8/25/2018	Kelli McGee	Wastewater (Pages 21 and 22)	The graphics are excellent. The illustrations of nutrient reducing septic systems (p.21) and WWTPs (p. 22) are very helpful.	Thank you!
8/25/2018	Kelli McGee	Stormwater (Page 25)	Does the CCMP intend to restrict funding stormwater projects to the nine that SJRWMD identified in their 2017 report? This section begins on page 25. The City of Edgewater has a canal system that drains stormwater into the IRL, is interested in addressing the canal system, but does not have funding to proceed with restoration at this time. I recommend that this system and other similar systems be eligible for IRL Council funding.	The CCMP is not restricting stormwater projects. A separate Projects Plan is being developed that includes all projects submitted by stakeholders.
8/25/2018	Kelli McGee	Living Shorelines (Page 48)	The inclusion of NOAA's illustration on page 48 that identifies the unseen value of living shoreline is excellent.	Thank you!
8/25/2018	Kelli McGee	Land Conservation (Page 58)	The discussion of land conservation/acquisition is critically important. This section, beginning on page 58, along with the map is exceptional.	Thank you!
8/25/2018	Kelli McGee	Throughout	I encourage language that specifies nonprofit organization staff time is eligible for funding through the IRL Council. These grassroots groups are essential to the restoration of the IRL.	These organizations are noted as partners throughout the action tables
8/27/2018	Mitchell Roffer	Measuring Changes in IRL Vital Signs (Page 12)	Regarding to monitoring the IRL. I think that total chlorophyll along with chlorophyll_a, turbidity and colorized dissolved organic material (CDOM) should be included.	Noted. This can be considered in development of the Monitoring Plan

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Date	Name	Action (Page # From Draft)	Comment	Response
8/27/2018	Mitchell Roffer	Measuring Changes in IRL Vital Signs (Page 13)	Regarding an integrated sampling, monitoring, and data sharing: I think that you should mandate real-time availability of the data in digital format in terms of a user friendly electronic web. I also think that a goal should include a web portal capable of sending texts and/or emails to subscribers when certain measurements reach critical levels. Like a stock market watch listing. For example if oxygen levels become critical, then a notice should go out.	Noted. This can be considered in development of the Monitoring Plan
8/27/2018	Mitchell Roffer	General	I am unsure on where this belongs but it should be a goal of this plan to derive and publish the statistics and anomalies on the items measured. A IRL climatology should developed as part of this plan.	This will included in the State of the Lagoon Technical Report proposed in the CCMP
8/27/2018	Virginia Barker, Brevard County	Throughout	Wording edits throughout the document	Made edits throughout
8/27/2018	Virginia Barker, Brevard County	IRLNEP: Measuring Performance and Progress (Page 10)	NEP Performance Measures - Core Elements: I don't understand this without more context.	This section was reworted
8/27/2018	Virginia Barker, Brevard County	How to Use this Plan (Page 16)	Actions: "to achieve the goals" Are these included in each Action? Should they be separated?	Wording was modified
8/27/2018	Virginia Barker, Brevard County	Impaired Waters (Page 17)	2018 listings for iron impairments	Added text
8/27/2018	Virginia Barker, Brevard County	Impaired Waters (Page 19)	Need Janicki reference, too (#7 on page 31)	Added
8/27/2018	Virginia Barker, Brevard County	Wastewater (Page 22)	New Strategy: Reduce excess use of reclaimed water that supersaturates soils and pollutes groundwater within the IRL watershed.	Added new strategy
8/27/2018	Virginia Barker, Brevard County	Wastewater (Page 23)	New Deliverable: Reclaimed education, outreach, and enforcement	Added to Wastewater-2
8/27/2018	Virginia Barker, Brevard County	Stormwater (Page 26)	Need a map of agriculture not yet enrolled in FDACS BMP programs	Information provided by FDACS is included in Appendix C
8/27/2018	Virginia Barker, Brevard County	Legacy Loads and Healthy Sediments (Page 32)	"sediments that are not naturally occurring" Wouldn't they naturally occur in tiny areas under mangroves?	Deleted this part of the sentence
8/27/2018	Virginia Barker, Brevard County	Legacy Loads and Healthy Sediments (Page 32)	Trefry has barely looked south of the 192 Causeway [clarify that muck flux in northern IRL]	Text was clarified with information from Dr. Trefry
8/27/2018	Virginia Barker, Brevard County	Atmospheric Deposition (Page 35)	Aren't car emissions, ag, WWTPs, and power plants the largest local sources? Maybe you can find another less complicated image that focuses on atmospheric deposition sources.	Replaced figure
8/27/2018	Virginia Barker, Brevard County	Emerging Contaminants (Page 40)	New Barrier: Communication opportunities to reach a majority of the general public	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Seagrasses (Page 43)	Seagrass-1 and Seagrass-3: What do these costs cover because they seem very low. Chuck estimated \$700,000 for a pilot project.	Updated language on these costs. Pilot project in SOIRLPP included multiple planting techniques
8/27/2018	Virginia Barker, Brevard County	Filter Feeders (Page 46)	New Barrier: Availability of dry goods and supply chain for likely scale of restoration needed.	Added

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8/27/2018	Virginia Barker, Brevard County	Filter Feeders (Page 46)	New Citation: Casey Schmit's final report to Brevard County on denitrification and nutrient sequestration for restored oyster reefs in Mosquito Lagoon. Contact Jane Hart of citation.	Added text and citation
8/27/2018	Virginia Barker, Brevard County	Habitats (Page 48)	Add to Action: Incorporate living components into armored shorelines where a hybrid solution is feasible and amenable to the owner.	Added to actions
8/27/2018	Virginia Barker, Brevard County	Habitats (Page 49)	New Strategy: Where wave energy and shoreline configuration necessitate armor, a hybrid approach can combine living components with engineered armor. These hybrid combinations provide ecosystem services in addition to erosion protection. Recent mapping of the shoreline by UCF for Brevard County found approximately 60% of the shoreline is already armored. Hybrid solutions that adding living components to engineered shorelines are a necessary component of improving coastal resilience to erosion and species that require living shoreline habitat.	Added to strategies
8/27/2018	Virginia Barker, Brevard County	Living Shorelines (Page 50)	New Citation: UCF 2017 shoreline survey for Brevard County. Contact Jane Hart for citation.	Contacted Jane and the information has not yet been published so the citation was not added to this section
8/27/2018	Virginia Barker, Brevard County	Wetlands and Impounded and Altered Marshes (Page 52)	What about upland wetlands? They also provide a critical water storage and slow release function that is important to hydrologic and salinity regimes. They also filter nutrients and suspended solids. They are under increasing pressure from upland development. I think Strategies, Outputs, and Outcomes are written broadly enough to capture this if text is added in the Issue Summary.	Added text
8/27/2018	Virginia Barker, Brevard County	Wetlands and Impounded and Altered Marshes (Page 53)	Are there different regulations for public lands? I don't think so. There are some state and federal wetland protections that require mitigation of significant impacts but don't stop wetland development.	Text corrected as suggested
8/27/2018	Virginia Barker, Brevard County	Spoil Islands (Page 57)	New Barriers: Boat wakes erode shorelines. Human use of islands with bird rookeries conflicts with listed species protection.	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 63)	"discharges triggered a severe bloom of Microcystis" Repeat for 2018?	Added note about 2018
8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 63)	St. Johns River: What about redirection of C-54, C-10, C-1, and Crane Creek to restore freshwater flows to the St. Johns River and reduce freshwater discharges an associated pollutant load from reaching the IRL?	Added text
8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 64)	Separate bullets for Sebastian and Ft. Pierce Inlets since all inlets have own bullet	Created separate bullets
8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 64)	Suggest not using the word "flushing"	Changed as suggested
8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 65)	Connected Waters-3: Add costs for C-1, C-10 (\$27 mill), Crane Creek (\$9 mill)	Costs were added

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8/27/2018	Virginia Barker, Brevard County	Connected Waters (Page 65)	New Barriers: The need to balance rediversion and storage with maintaining flood protection. Climate change and increasing storm intensity add to the challenge.	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Biodiversity (Page 68)	New Barrier: Climate change, sea level rise, and invasive species are causing shifts that may permanently change biodiversity of the IRL.	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Species of Concern (Page 70)	New Strategy: Identify the habitat needs of species of concern and develop strategies to protect, restore, and maintain those habitats.	Added to list of strategies
8/27/2018	Virginia Barker, Brevard County	Species of Concern (Page 71)	New Barrier: Exotic species and climate change	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Species of Concern (Page 73)	New Output: Develop citizen science program and networks for early detection and control of invasive species.	Added to list of strategies
8/27/2018	Virginia Barker, Brevard County	Forage Fishes (Page 75)	Strategies: Do we need to restock any species?	Added to Forage Fishes-2
8/27/2018	Virginia Barker, Brevard County	Harmful Algal Blooms (Page 82)	New Barrier: Regime shifts to ecosystem domination by a lower trophic level are difficult and slow to overcome.	Added to list of barriers
8/27/2018	Virginia Barker, Brevard County	Climate Ready Estuary (Page 84)	Wastewater and stormwater infrastructure vulnerable to flooding and overflow to the IRL.	Added to list
8/27/2018	Virginia Barker, Brevard County	Vibrant 21st Century Communities (Page 87)	This list of eight factors seems to ignore climate change which does not seem consistent with prior vital sign text.	Added text about responding to climate change
8/27/2018	Virginia Barker, Brevard County	Vibrant 21st Century Communities (Page 88)	"next economic update will be due in 2025" Do we need one sooner? Or does 2025 provide time to implement plans and start to see change?	The next economic update is proposed for 2020 as show in the Role of the IRLNEP section. The 2025 date was deleted.
8/27/2018	Virginia Barker, Brevard County	Trash-Free Waters (Page 90)	Add a sentence or two about microfibers. They are more prevalent in the IRL than microbeads.	Added
8/27/2018	Virginia Barker, Brevard County	Distinctive Lagoon Communities (Page 96)	Add a paragraph on Stan Mayfield working waterfront grants and current locations within the IRL- Griffis Landing in Brevard, Sembler's in Sebastian...	Added text
8/27/2018	Virginia Barker, Brevard County	Emergency Preparation & Response (Page 98)	What about response to a storm-cut inlet? Would IRLNEP want to engage in emergency discussions about stabilizing it or maintaining it for a short duration versus closing it up ASAP? During Deepwater Horizon, there was coordination with north and south Florida Coast Guard about developing booms near inlets to keep oil entrained in the Gulf Stream from entering the IRL. PFOS and PFOA and other emerging chemicals of concern that may affect human uses of the IRL and marine health. Isn't there a role for IRLNEP to push more research and regulation of potential contaminants?	These items can be evaluated when developing the role of the IRLNEP in emergency response. The Board of Directors will need to IRLNEP staff approval to pursue these items.
8/27/2018	Virginia Barker, Brevard County	Monitoring and Data Sharing (Page 100)	Do you want to mention the need to monitor groundwater and measure seepage to better understand nutrient pathways and contributions to IRL stress?	This can be evaluated as part of the Monitoring Plan development

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8/27/2018	Virginia Barker, Brevard County	Monitoring and Data Sharing (Page 102)	Short-term: What 10 priorities?	From the Looking Ahead – Science 2030 Report. This reference was added to the text.
8/27/2018	Virginia Barker, Brevard County	Monitoring and Data Sharing (Page 102)	Medium-term: Are you sure you want this for all projects? May kill some project requests.	Changed to "as appropriate"
8/27/2018	Virginia Barker, Brevard County	State of the Lagoon (page 103)	Is 2025 soon enough? Is every 10 years often enough? I'm concerned that 10 years is too long to go without an update. That's longer than term limits. 5 years sounds more useful to me.	These reports will take several years to prepare. It may be possible to prepare a small update in 5 years with full report development every 10 years.
8/27/2018	Virginia Barker, Brevard County	Technology Innovation (Page 105)	New Strategy: Advance an incubator program to help commercialize the most promising technological opportunities that need pilot funding and 3rd party monitoring to leap from the lab and bench scale to field applications.	Added to list of strategies
8/27/2018	Virginia Barker, Brevard County	CCMP Implementation and Financing (Page 107)	New Strategy: Work with funding partners and investors to secure dedicated matching funds at a level commensurate with the needs of the lagoon.	Added to list of strategies
8/27/2018	Virginia Barker, Brevard County	Citizen Engagement and Education (Page 110)	This summary seems to focus on education and omits engagement. I'm sure other counties are also engaging the public, I just do not know the programs. How about FIT Mobile Seas Lab and Brevard Zoo's Lagoon Quest.	Added information
8/27/2018	Virginia Barker, Brevard County	Citizen Engagement and Education (Page 110)	Add language: Engaging citizens in data collection and restoration enhances their understanding of lagoon threats and opportunities for improvement. MRC engages citizens in water quality monitoring. FIO engages in the public in oyster restoration. Brevard County has invested in local not-for-profit organizations to build their capacity for engaging the public in citizen science. This includes instigating and funding a diverse array of programs such as oyster gardening and oyster restoration on projects through Brevard Zoo; rain barrel workshops coordinated by MRC; muck finders training and field data collection guided by FIT and coordinated by MRC; and muck toxicity measurement coordinated by MRC and guided by ORCA. Brevard County continues to look for ways to engage the public in meaningful citizen science coordinated by grass roots, non-profit organizations.	Added suggested text
8/27/2018	Virginia Barker, Brevard County	Citizen Engagement and Education (Page 110)	New Output: Do you want a citizen science action?	Included in Communicate-1
8/27/2018	Virginia Barker, Brevard County	Citizen Engagement and Education (Page 110)	Lagoon Friendly is about landscaping. What about all other lifestyle choices that affect the lagoon? Energy and water conservation, pick up after your pet, car care (fixing leaks, disposal of waste oil, car washing), boat maintenance and sanitation...IRLNEP should look beyond the lawn.	The IRLNEP Lagoon Friendly program does include these items. Added details in this section.

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8/27/2018	Virginia Barker, Brevard County	Federal, State, and Local Policy Opportunities (Page 113)	Medium-term: I think comp plans are updated every 7 years. 3-4 years may be optimistic.	Changed to "begin to incorporate"
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	IRL Council and Resolution (Page iv)	Goals: Add: To provide transparency of funded projects and programs, identify successful methodologies and products, and support innovative ideas for improvements to the IRL.	The vision, mission, promise, and goals were reviewed and approved by the Management Conference and cannot be changed in the CCMP.
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Pathway to IRL Restoration (Page 6)	"restoration of the IRL": Loss of taxa, i.e. zooplankton.	Added to list
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	"addresses inadequacies of past strategies for restoration and intervention": Failures?	Kept inadequacies instead of failures
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Responding to a Need for Integrated, Systematic, and Sustained Monitoring (Page 7)	"These reports": What reports?	The reports from the research mentioned at the start of this section. Changed wording to research
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Responding to a Need for Integrated, Systematic, and Sustained Monitoring (Page 7)	"shift of 2011 by decades": Improvements through in the 2000's (due to drought conditions?)	Added information
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Leveraging the Knowledge and Experience of the NEP Network (Page 8)	"with connections to a sewer system": Or enhanced treatment methodologies	Added
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Leveraging the Knowledge and Experience of the NEP Network (Page 8)	"decreasing residential and commercial": Yard waste disposal	Added
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Measuring Changes in IRL Vital Signs (Page 13)	One Lagoon Biodiversity: Grazers? Aquatic trophic cascade?	Added to list
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Role of the IRLNEP (Page 15)	One Community Technology: IRL^2	This list is for symposia that IRLNEP will help to sponsor
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Impaired Waters (Page 18)	Barriers: "Lack of incentives" Needs to be described in detail	Modified wording
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Stormwater (Page 27)	Table: IRLNEP Role: No funding source?	Added to Stormwater-2

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8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Stormwater (Page 28)	Barriers" "assumed reduction rates for pollutants" Encourage littoral zones, aeration	Added to list of strategies
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Legacy Loads and Healthy Sediments (Page 33)	Action Plan Outputs Legacy Loads-1: Aquatic vegetation harvesting	Added to list of strategies
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Legacy Loads and Healthy Sediments (Page 33)	Action Plan Outputs Legacy Loads-3: Upstream muck removal to prevent or minimize future transport to IRL, e.g. mechanical removal, aeration, bacteria introduction and enhancement.	Added to list of strategies
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Atmospheric Deposition (Page 35)	"emissions of ammonia": Increase in biofuels?	This relationship would need to be further investigated
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Seagrasses (Page 43)	Strategies: "innovative pilot projects" Kings Bay restoration?	This example can be evaluated for ideas for the IRL
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Living Shorelines (Page 46)	Action: What about tributaries and channels upstream?	Added to description
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Spoil Islands (Page 55)	"Erosion" Introduction of nutrients from soil?	This references loss of spoil island area from erosion
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Forage Fishes (Page 75)	"Assess zooplankton populations" Important. High priority.	Noted
8/28/2018	Mike McCabe, Melbourne-Tillman WCD	Harmful Algal Blooms (Page 81)	"benthic primary producer" Provide examples?	Added such as seagrasses
8/28/2018	Mel Bromberg	Overall	I particularly liked the formatting of the plan and the selected categories; making it very readable per vital element as to the uniformity of both scientific and technical information. The myriad "R's" contained within the CCMP serve as symbolic anthems and mantra's for citizen based community engagement and an ideology of sorts for creation of local and regional community based activity. Estuary engagement (via the R's) – are age blind and respect that every stakeholder has a different relationship to the estuary.	Thank you!

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Date	Name	Action (Page # From Draft)	Comment	Response
8/28/2018	Mel Bromberg	Overall	<p>Notable within the CCMP are “plans within plans” as delineated in the deliverables sections of the CCMP plan. I would suggest that these sub-plans be highlighted within the CCMP and brought forward for at least the next 5 years as work products intrinsic to the both the internal and external work of the Lagoon Council; but also in helping to expand upon public engagement, attention and recognition of the estuary and the Lagoon Council itself. Furthermore recognizing the need for expansion of private sector partners and stakeholders in the CCMP is and will be especially critical to any financing endeavors within the estuary unable to be supported by governmental bodies and with reference to balancing responsibility within the estuary between public and private stakeholders. Also while the collection of environmental governance bodies is well established within the NEP program and in the IRLC, less established but tangential to estuary sustainable development and protection are national agencies such as the U.S. Coast Guard and their Merchant Marines who operate under the domains of the US Navy and Department of Defense. The Coast and Merchant Marines work to protect, monitor and pilot test innovative processes, equipment and activities within coastal water areas of the US , and as such would be useful to maintenance of the IRLC capacities in and around expansion of capacities in environmental monitoring of the coastal and recreational waters in Florida, testing of new scientific innovations, and of course in times of hydro –meteorological hazards, using the human power of this agency to enact rescue services for both human and wildlife species.</p>	<p>The "plans within plans" are highlighted in the Role of the IRLNEP section. Added additional stakeholders as leads and partners in the actions tables for the Vital Signs</p>

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Date	Name	Action (Page # From Draft)	Comment	Response
8/28/2018	Mel Bromberg	Emergency Preparation & Response (Page 99)	<p>Regarding the Emergency Response and Incident Preparedness Plan development, I believe that tying the actions in that plan to flood prevention and mitigation, along with sea level rise, hurricane preparedness, and climate change activities within the estuary will serve to bring forth new levels of citizen engagement within communities and with different sets of leaders and organizations including but not limited to: US NOAA and monitoring stations, US FEMA, US Coast Guard and Merchant Marines, US National Guard, Army and Navy departments, the FCC regarding emergency broadcast announcements, commercial restoration businesses and services, meteorological organizations, citizen based weather watcher” groups and more... all of which can be contributors to an ERIPP development plan within the estuary. Additionally, we should integrate ERIPP plan ideas from among the best in the world with flood protection, climate proofing and mitigation: that of the country of the Netherlands. Global learning exchanges with the Netherlands concerning the aforementioned subject areas will open up to the IRLC additional pathways for innovation and creation in responding to incident prevention and preparedness especially as it relates to existing infrastructure and ongoing hydrological threats to the estuary.</p>	Noted - these will be considered when evaluating the role of the IRLNEP in emergency management

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Date	Name	Action (Page # From Draft)	Comment	Response
8/28/2018	Mel Bromberg	CCMP Implementation and Financing (Page 108)	<p>Regarding the Financing Plan mentioned within the CCMP: Sustained financing and investment in water resources and accompanying infrastructure within the estuary, as well as the natural environment in which the estuary resides, serve as essential pillars to growing the economy within the watershed. Sequencing of investments within the estuary to yield a coherent pathway to sustainable financial stability for funding of projects and activities occurring within the estuary should respect the need to gain the greatest return on investments. Any multi-purpose based water infrastructure introduced or existing within the estuary presents specific kinds of financing problems for the IRLC and should be recognized as such as being more complicated than for example infrastructure designed for singular or limited purpose uses. Transparency as to cost-benefits for any capitalization projects, investor programs or cross-subsidies between any of the different components outlined in the CCMP should be explicit. The encouragement of both scientific and technological innovation within the estuary region requires strong capitalization as incentives for scientists and other and commercial inventors to pilot test their ideas. Additional, recognition of the need to price water at its value as extracted from the estuary will discourage waste of estuarine resources, but at the same time should respect that the most disadvantaged populations in the estuary community are able to afford and equally partake in the use of the estuary as a commons. Overcoming inefficiencies within the water sector, especially around any infrastructural services which need to be improved or made more attractive for use can contribute to the need for financial support and investment within the estuary and as such need to be incorporated into any financial plan. Energy inefficiencies around water usage and outputs also need to be examined as waste inefficiencies within the estuary and valued in monetary terms as debits for any financial plan.</p>	Noted - these items can be explored in CCMP implementation
8/28/2018	Mel Bromberg	IRLNEP Management Conference (Page 5)	<p>There is a need to update the current lists of names of members of various committees and advisory groups including the Management Board, STEM-AC boards, Citizen Engagement Boards and more. The lists at the time of printing are not reflective of the filling of new vacancies by the overall board since the plan was written. Updating of these lists to be current with final release of the plan will provide transparency around representation of individuals to boards and identify those who are in service within the IRLC organization.</p>	List has been updated

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Date	Name	Action (Page # From Draft)	Comment	Response
8/28/2018	Mel Bromberg	Appendices	The draft plan provided to Council members is without benefit of appendices—and as such gaps in information concerning specific areas within the plan will remain until the appendices are completed and released. In the final plan, I request that such appendices be made available for review by those so interested in reading such information.	The appendices are provided with the updated CCMP document
8/28/2018	Mel Bromberg	Citizen Engagement and Education (Page 109)	Much effort at engaging with the public concerning contents within the CCMP and underlying actions (which will prove beneficial to their engagement), should not be given “short shrift” within the plan. There are rich opportunities for new K-12 and institutions of higher learning and education within and around the lagoon. These educational and engagement opportunities should not be repetitive of old themes and concepts, but fresher newer ideas related to the CCMP plan should be utilized allowing for opportunities by educators to incorporate these into existing curricular development and instruction. Incentives to institutions of higher learning created in the form of academic and engineering challenges, can be instrumental in serving as institutional springboards to career development/ advancement along with singular job development and creation within this region in Florida. Nourishing the amount of financing available for both education, communication and engagement is critical in exposing all stakeholders to the vision, goals and mission of the IRLC and as such may be necessary to include as a “mandatory outreach” category within any RFP processes. Thus any “mandatory outreach” protocols within RFP’s should scored and intrinsic to the overall rubric for the funding of potential projects within the region. Additionally, efforts for promulgation of the CCMP throughout the 20-year period will require groups of interested citizens, educators, administrators, and faculty/staff to educate and open up their own pathways and springboards for creativity, innovation, development and hands-on engagement with the estuary used as a prospective backdrop to such educational activities and instruction. Environmental schools and camps solely re-created around the 32 vital signs outlined within the estuary can contribute to the CCMP’s plans to engage educational institutions more holistically while realizing that the estuary learning can be foundational for students who desire scientific, technical, environmental, business and financing, management and communications based careers. Such workforce development via the estuary should be capitalized upon within the education and communications based outputs for this CCMP.	Additional information was added to the Citizen Engagement and Education section. The concepts provided can be explored when developing the IRL Communications Plan and IRLNEP “One Community – One Voice” Initiative
8/29/2018	John Windsor	Overall	There is no historical context offered for Lagoon problems or concerns. Could be added as another appendix, although the history of the lagoon and the human impact issues did not start in 2011.	Added language in introduction

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Date	Name	Action (Page # From Draft)	Comment	Response
8/29/2018	John Windsor	How to Use this Plan (Page 16)	How to use this plan is on page 16. Maybe it should be placed earlier or in a more prominent location (back of front cover?)	Placed it before the details on the Vital Signs to explain the structure for the presentation of the Vital Signs
8/29/2018	John Windsor	The National Estuary Program (Page 1)	83.7% of US GDP? That seems too large. You may want to double check?	Clarified that this was for all coastal states
8/29/2018	John Windsor	IRL CCMP Planning Boundary (Page 3)	Expanded boundary discussion seems long and not very important to be here, especially since there is no discussion about why the original boundaries were set? If necessary, put into appendix?	This section is an EPA requirement for the CCMP
8/29/2018	John Windsor	Measuring Changes in IRL Vital Signs (Page 13)	How will MRC State of Lagoon Report fit or relate to IRLNEP State of Lagoon Report?	This can be determined moving forward
8/29/2018	John Windsor	IRL Health Concern Levels (Page 14)	Mgmt. Conference members are doing this ranking but no detail is given as to method. None of the action items are color coded currently. Please note that color blind people may have an issue with color coding. Will color code plus number be used?	The graphic has been adjusted to include the level number, in addition to color
8/29/2018	John Windsor	Impaired Waters (Page 17)	Acronym heavy. You lose a lot of public here. Nearly lost me. :)	Edited to remove some acronyms
8/29/2018	John Windsor	Contaminants of Emerging Concern (Page 40)	Barriers to success: In an attempt to make the topic understandable, I am afraid that my concerns for the effects of complex mixtures of organic chemicals are not known at all. The emphasis these days seems to be on the effects of a glyphosate or PFOs but what about the effect of a combination of hundreds of thousands of trace level synthetic organic molecules on plants and animals. I have referred to this previously as a potentially toxic soup.	Added to list of barriers
8/29/2018	John Windsor	Overall	Mixed units - muck discussion in feet and shoreline restoration in meters and kilometers.	Changed to inches, feet, and miles throughout
8/29/2018	John Windsor	Living Shorelines (Page 50)	Barriers to success: Lack of natural shell material for substrate?	Added to list of barriers
8/29/2018	John Windsor	Harmful Algal Blooms (Page 82)	Barriers to success: Interactions of trophic levels and their effects on naturally managing blooms is not well understood?	Added to list of barriers
8/29/2018	John Windsor	Distinctive Lagoon Communities (Page 97)	Barriers to success: Lack of shoreline access and other IRL resources among underrepresented and minority communities produces a lack of ownership. "it is not mine, why should I think or worry about it?"	Added to list of barriers
8/29/2018	John Windsor	Emergency Preparation and Response (Page 99)	There has never been an attempt to engage a volunteer community to prepare for an emergency until the emergency arises. Only agency people are listed here. Why not consider a volunteer fire department mentality?? Emergency response teams don't have to be just government employees??	Focus of this Vital Sign is how the IRLNEP can assist with emergency preparation and response
8/30/2018	Bill Tredik, SJRWMD	Message from the IRLNEP Executive Director (Page vii)	Paragraph 3 – change “the southern portion of” to “include”	Changed to suggested wording
8/30/2018	Bill Tredik, SJRWMD	Message from the IRLNEP Executive Director (Page vii)	Bullet 3 – language is a little unclear, recommend restructure of sentence	Reworded

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8/30/2018	Bill Tredik, SJRWMD	Indian River Lagoon (Page 2)	Paragraph 3 – recommend instead, “In fact, circulation of water in large portions of the IRL is driven primarily by wind. Because of the long residence times and restrictions from land-based development (i.e., causeways, wetland alterations, and past construction practice) in some locations, the IRL is highly sensitive to nutrient and pollutant loadings from the watershed. Inputs from the watershed have continued to increase during recent decades, causing declines in water quality and changes to the ecological and biological integrity of the ecosystem.[1]”	Changed to suggested wording
8/30/2018	Bill Tredik, SJRWMD	IRLNEP Management Conference (Page 5)	Tables – recommend using proper names instead of short versions.	List has been updated using the names as requested by each member
8/30/2018	Bill Tredik, SJRWMD	Pathway to IRL Restoration (Page 6)	Paragraph 2, recommend “Successful restoration of the IRL is not an easy target to identify, nor does it equate to reestablishing a single set of desired conditions. Broadly defined, ecosystem restoration attempts to remove or reduce human-induced stressors and return some measure of structural and functional integrity to the system. Due to shifting baseline stressors associated with factors such as human population growth, coastal urbanization, climate change (including sea level rise), restoration of the IRL to an idealized past reference status after removal of human-induced pressure may be difficult to achieve[2]. For this CCMP, a healthy IRL provides essential ecosystem functions that deliver sustainable ecosystem services to society. “	Changed to suggested wording
8/30/2018	Bill Tredik, SJRWMD	Pathway to IRL Restoration (Page 6)	Paragraph 3 and elsewhere. We should be consistent what we call the plan update (e.g. it is called CCMP revision, this CCMP, and this IRLNEP CCMP, etc.)	Made consistent throughout.
8/30/2018	Bill Tredik, SJRWMD	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	Paragraph 2 – Last sentence is a run on sentence. Recommend breaking it up.	Sentence was broken up.
8/30/2018	Bill Tredik, SJRWMD	Measuring Changing in IRL Vital Signs (Page 13)	Tables – What about other impairments such as fecal coliform	Added
8/30/2018	Bill Tredik, SJRWMD	Measuring Changing in IRL Vital Signs (Page 13)	Tables - Different measures have different methods for achieving reductions. Not sure the targets should be solely nutrient based. An example would be that septic to sewer has a more consistent nutrient reduction, compared to reducing wet weather discharges. Seem like we may need another column to discuss methods to targets.	Revised targets to include fecal coliform and metals
8/30/2018	Bill Tredik, SJRWMD	Measuring Changing in IRL Vital Signs (Page 13)	Tables – Habitat Quality – Maybe add a row for benthic habitats which are not seagrass	Added other benthic habitats as indicators under Seagrasses Vital Sign
8/30/2018	Bill Tredik, SJRWMD	How to Use this Plan (Page 16)	Here and other places – recommend not using the word “barriers” as barriers are sometime insurmountable and often intentional. Challenges may be a better choice.	Changed to Challenges throughout

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8/30/2018	Bill Tredik, SJRWMD	Impaired Waters (Page 18)	Strategies: First three bullets - These talk about identifying projects, but not implementing improvements projects, only scientific research projects	Revised the first bullet to add implementing nutrient load reduction projects.
8/30/2018	Bill Tredik, SJRWMD	Impaired Waters (Page 18)	"Barriers to Success" – Still recommend changing to Challenges. Also It seems that lethargy could be a large challenge and the risk that the community may not fully realize how critical the lagoon is to their lives. Local government and stakeholders may also be reluctant to implement changes in areas where redevelopment or land use changes are needed. Also, loss of momentum toward the long-term goals should lagoon conditions improve in the short term due to climate variability. Finally, poorly understood and unvetted reactive solutions may pose the greatest long term risk to the lagoon's water quality.	Added additional barriers
8/30/2018	Bill Tredik, SJRWMD	Stormwater (Page 28)	Barriers... - As above the biggest challenge may be the desire to implement reactive and costly large scale projects which may provide an intermittent benefit versus more lower cost projects which provide a daily benefit.	Added additional barrier
8/30/2018	Bill Tredik, SJRWMD	Stormwater (Page 25)	1st bullet, last sentence - Probably true, but not really relevant. While there seems to be some indication that tropical events are getting larger, the impacts of climate change to future local rainfall patterns and frequency/intensity curves, I think, is less recognized. It seems that this sentence could be eliminated without harming the case. Saying "will likely complicate" may not be accurate.	Deleted this sentence
8/30/2018	Bill Tredik, SJRWMD	Stormwater (Page 26)	3rd paragraph, The holding capacity is not related to the IDF curves. Another reason to consider delating the last sentence from the 1st bullet above.	Noted
9/1/2018	Katie Tripp, Save the Manatee Club	IRLNEP Management Conference (Page 4)	Flow Chart- unclear how the bottom layer of the flow chart interacts with the 2nd layer from the bottom	The stakeholders in the bottom layer provide input to the committees in the next layer
9/1/2018	Katie Tripp, Save the Manatee Club	IRLNEP Management Conference (Page 6)	Table does not include professional titles for members of the CAC. Leesa Souto is Dr. Leesa Souto in STEMAC portion & just Leesa Souto in CAC. Dr. also not included with my name.	List has been updated
9/1/2018	Katie Tripp, Save the Manatee Club	IRLNEP: Core Values (Page 9)	2nd Goal, comma needed between "ecosystem" and "which"	Agreed upon wording
9/1/2018	Katie Tripp, Save the Manatee Club	IRLNEP: Measuring Performance and Progress (Page 10)	Graphic- why 3 empty columns?; "STATE" is confusing heading- do you mean Status?	This graphic was deleted
9/1/2018	Katie Tripp, Save the Manatee Club	IRL Vital Signs (Page 11)	Text hard to read in the outer rim of the wheel, particularly in the Communicate-Collaborate-Coordinate section	Noted

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9/1/2018	Katie Tripp, Save the Manatee Club	IRL Vital Signs (Page 12)	2nd paragraph has "lagoon", but since refers to IRL, should be "Lagoon"; use consistently throughout the doc	Kept lower case lagoon throughout
9/1/2018	Katie Tripp, Save the Manatee Club	Stormwater (Page 26)	#4, 2nd line, word "to" is missing between "allowed" and "enter"	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Hydrology and Hydrodynamics (Page 29)	Just want to be on the record as staunchly opposing oceanic exchange. The lagoon is supposed to be a low energy system- we need to reduce inputs & address legacy load, not change hydrology	Noted
9/1/2018	Katie Tripp, Save the Manatee Club	Hydrology and Hydrodynamics (Page 30)	Table- H1 Output Intent- change "if" to "of"	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Legacy Loads and Healthy Sediments (Page 32)	3rd paragraph- phantom numbers 5-8 throughout; after "8", change sentence to "The relationships among"; 2nd to last sentence of that paragraph, remove commas between "significant" and "but" and after "underappreciated"; final sentence of that paragraph, change "may" to "should"?	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Atmospheric Deposition (Page 35)	End of Issue Summary refers to "management of atmospheric deposition" but only the contributing sources can be managed	Changed wording to "management of atmospheric deposition sources."
9/1/2018	Katie Tripp, Save the Manatee Club	Atmospheric Deposition (Page 36)	2nd paragraph, 2nd sentence, change "restudy" to "study"; the table showing Atm. Dep. Seems inverted- language could be added to explain why the least developed region of the IRL sees the greatest amount of atmospheric dep.	Restudy was changed to study. There were a lot of questions about this table so it was deleted.
9/1/2018	Katie Tripp, Save the Manatee Club	Contaminants of Emerging Concern (Page 38)	Final paragraph, change "quantity" to "amount" since "quantified" is also in that sentence	Changed
9/1/2018	Katie Tripp, Save the Manatee Club	Contaminants of Emerging Concern (Page 39)	1st full paragraph, end of line 5, "chemicals" is repeated	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Seagrasses (Page 42)	Issue summary, 2nd "I" missing from "johnsonii"	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Seagrasses (Page 44)	Medium-term outcome, change "so" to "to"- "to assist with restoration"	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Filter Feeders (Page 45)	Having gone through the process of applying for restoration permits and having to complete the same application used for development projects, I believe a restoration-only permit app would be of great benefit to both applicants and the reviewing agencies. Perhaps that suggestion could be added to the listed strategies.	Added to last strategy

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9/1/2018	Katie Tripp, Save the Manatee Club	Spoil Islands (Page 57)	1st line, change "goals with" to "goals from"	Reworded
9/1/2018	Katie Tripp, Save the Manatee Club	Land Conservation (Page 59)	Final strategy bullet, "environmentally-sensitive"	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Forage Fishes (Page 75)	1st strategy bulled, add "of" - "populations of IRL forage..."	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	Harmful Algal Blooms (Page 80)	Need higher res version of the graphic	Replaced figure with higher resolution version
9/1/2018	Katie Tripp, Save the Manatee Club	Marinas and Boating (Page 92)	Actions- "safe boating practices" is listed twice	Corrected
9/1/2018	Katie Tripp, Save the Manatee Club	CCMP Implementation and Financing (Page 108)	Fix table formatting- runs off page	Reformatted
9/1/2018	Katie Tripp, Save the Manatee Club	Appendix G (Page 121)	Manatees are now listed as Threatened at both the state and federal levels	This appendix was deleted.
9/4/2018	Keith Winsten, Brevard Zoo	Overall	I think calling the first category in each of the Vital Signs "Actions" makes the document inherently confusing since the detailed actions come later for each Vital Sign. I would use language that reflects how we often approach these problems and call the first section for each vital sign "Goals." I believe they all fit the commonly used definition of "goals" since they are broad and directional.	Changed to Goals as suggested
9/4/2018	Keith Winsten, Brevard Zoo	Overall	I think you should consider color-coding the strategies into two types. Strategies that are unique to that Vital Sign and strategies that are primarily addressed under other Vital Signs but are still influential. Otherwise, the strategies get very redundant. Let me give you an example. On page 33 under the Legacy Load Vital Sign, the last five strategies are unique to this Vital Sign and are specifically about dealing with muck. The first strategy, "REDUCE organic and inorganic sources on land that contribute to muck in the IRL" is critical to the long term issue of muck build-up, but is really dealt with in the stormwater section. I would somehow indicate that that particular strategy is fleshed out in another section – maybe by using a different font or color.	Color coding the strategies was not done because it would be confusing

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9/4/2018	Keith Winsten, Brevard Zoo	Overall	This is my big concern about the current approach. It seems to imply that all 32 Vital Signs are equally important to the NEP. But I don't think that is the case. Some are really prime directives, like Monitoring and Data Sharing, and others are really the main concern of other groups (like trash free water). To really make this useful, you need to prioritize the 32 Vital Signs with a sense of which are being driven by the NEP and which are just factors which the NEP helps with or takes into account. This is sort of addressed on page 15 but not in enough detail or prominently enough.	Prioritization of the Vital Signs is underway and will be included in the updated CCMP document
9/4/2018	Keith Winsten, Brevard Zoo	Overall	It might make sense to also come up with some additive costs for fixing the IRL that combine numbers across the 32 Vital Signs.	Costs are estimates and were not added together across the Vital Signs
9/4/2018	Keith Winsten, Brevard Zoo	CCMP Revision: IRLNEP Responds To a Changing Lagoon (Page 8)	Implies that you only restore the ecosystem services supplied by filter feeders after the IRL reaches a certain level of health. Might not be possible to attain that level of health without filter feeders reducing turbidity.	Reworded this sentence
9/4/2018	Keith Winsten, Brevard Zoo	Legacy Loads and Healthy Sediments (Page 32)	Issue Summary, second paragraph – shouldn't you really call out stormwater specifically in this section as the culprit for making muck?	Reworded to say "stormwater systems"
9/4/2018	Keith Winsten, Brevard Zoo	Filter Feeders (Page 46)	Should mention supply chain issues for oyster restoration (shell and spat) in the barrier section	Added
9/4/2018	Keith Winsten, Brevard Zoo	Harmful Algal Blooms (Page 80)	Issue Summary first paragraph. Are HABs technically microscopic plants?	Using definition from NOAA
9/4/2018	Keith Winsten, Brevard Zoo	Marinas and Boating (Page 92)	Two big boating issues I didn't see called out specifically, derelict vessels and the lack of pump out stations.	Derelict vessels are covered under Trash-Free Waters. Additional text about pump-outs was added
9/4/2018	Clay Henderson, Stetson University	Indian River Lagoon (Page 2)	There should be a strong but concise statement as to significance of the IRL. Why should we care? What is at stake? Here is proposed language taken from the IRL website and the previous CCMP.	Added language
9/4/2018	Clay Henderson, Stetson University	IRL CCMP Planning Boundary (Page 3)	Last paragraph. I am aware of no evidence that this statement is true. Adding the Halifax River to the planning boundary was a political decision and does not result in greater social connections among our coastal communities.	Deleted last paragraph
9/4/2018	Clay Henderson, Stetson University	IRLNEP Management Conference (Page 4)	The first sentence is not correct. Insert the following as a more correct statement of the history of the designation: "On Earth Day 1989, President George H. W. Bush came to Florida for a fishing trip and announced the designation of Indian River Lagoon as an "Estuary of National Significance." On April 30, 1991, the Indian River Lagoon National Estuary Program was formally established and the first CCMP was adopted in 1996."	Modified this sentence

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9/4/2018	Clay Henderson, Stetson University	Pathway to IRL Restoration (Page 6)	Usually the fundamental question for a large scale ecosystem restoration is: "restore to what?" To be able to answer that question depends in part on an understanding of the major structural changes that have taken place in recorded history...The IRL is a dynamic ecosystem that changes over time in response to historic stressors such as precipitation and drought and now to changes in salinity related to sea level rise, and changes resulting from increased urbanization. I offer this for discussion: "The overarching goal for restoration of the Indian River Lagoon is to improve water quality and biodiversity evidenced by a stable range of indicators including achieving water quality targets, improving seagrass area and quality, improving habitat to support biodiversity, and increasing fish and shellfish landings, as evidence that the lagoon is no longer impaired, and that it demonstrably provides essential ecosystem services."	Added additional text
9/4/2018	Clay Henderson, Stetson University	Responding to a Need for Integrated, Systematic, and Sustained Monitoring (Page 8)	I think there is a need for an additional sentence to reinforce the need for ongoing scientific research: "There is also a need for ongoing scientific research to better understand the dynamics of the IRL in order to give policy makers better options to respond to HAB, fish kills, and other emerging issues."	Added this sentence
9/4/2018	Clay Henderson, Stetson University	Leveraging the Knowledge and Experience of the NEP Network (Page 8)	Buried in this paragraph is perhaps the most important statement in the CCMP: "Across the spectrum of external and internal sources of loads, a higher standard is required to rectify past loads, limit current loads, and prepare for the loads associated with growth of the human population that is yet to come." This statement is so important and profound it deserves a box and bold print.	Made this statement bold
9/4/2018	Clay Henderson, Stetson University	IRL Health Concern Levels (Page 14)	I don't understand how the Health Concern Levels relate to the CCMP. What am I missing here?	The health concern levels will be used to prioritize the Vital Signs in the CCMP
9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 17)	This section needs some work. First of all, there ought to be a definitive statement as to the problem: "As of 2018, all of the Indian River Lagoon is deemed impaired under the Clean Water Act of 1972 for violation of existing water quality standards."	Added text
9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 17)	In addition, there is no mention of the numeric criteria which has been adopted by rule: "As of 2016, nutrient numeric criteria regulations have been adopted for the entire IRL to address TN, TP, and Chlorophyll a."	Added text

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9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 17)	I don't think the BMAP section is entirely up to date. "Changes to the verified list in 2018 indicated that most of the lagoon has been deemed impaired for nutrients including TN and TP but other segments of the lagoon are impaired for chlorophyll, dissolved oxygen, metals, and fecal coliform." "Basin Management Action Plans (BMAPS) are adopted by Secretarial order and are enforceable." Honestly, I think there needs to be mention that the BMAPS by themselves will not achieve lagoon restoration. For instance, there is no discussion about septic tanks in any of the adopted BMAPS for the IRL.	Added text
9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 17)	As of this week, the Mosquito Lagoon RAP has been noticed for adoption. This paragraph needs to be tweaked a bit (see provided language)	Modified text as suggested
9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 18)	Under strategies should be a strong statement consistent with the statement in bold above: "Water quality standards for impaired segments of the IRL should not be relaxed until restoration goals are attained."	Added to list of strategies
9/4/2018	Clay Henderson, Stetson University	Impaired Waters (Page 18)	Under Outcomes: The Mosquito Lagoon RAP provides for a five-year outcome.	Clarified text
9/4/2018	Clay Henderson, Stetson University	Wastewater (Page 20)	Needs to be a clear and concise statement as to the IRL Act particularly since your first action item is "ensure compliance with act." (see suggested text)	Added information about the act
9/4/2018	Clay Henderson, Stetson University	Wastewater (Page 22)	The draft references advanced treatment septic tanks but without much discussion. Over the summer, DOH finally adopted new rules which should be referenced here (see suggested text)	Added text
9/4/2018	Clay Henderson, Stetson University	Wastewater (Page 24)	Short-term outcomes: "Survey permit data to establish current baseline for permitted wastewater discharges into the IRL." "Develop strategies and policies to identify areas not suitable for conventional septic tanks and where alternative systems would be more feasible." "Develop strategies and policies to incentivize or require advanced treatment septic tanks in areas where wastewater treatment is not available and where alternative systems would be more feasible."	Added to list of strategies
9/4/2018	Clay Henderson, Stetson University	Stormwater (Page 26)	There is now a list of stormwater projects developed through the Mosquito Lagoon RAP which should be referenced in the chart.	The list of Mosquito Lagoon RAP projects will be included in the separate Projects Plan
9/4/2018	Clay Henderson, Stetson University	Hydrology and Hydrodynamics (Page 29)	This third paragraph needs a comprehensive list: The watershed has been highly altered due to ditching, draining, and impounding for agricultural purposes, <u>control for mosquitoes, and flood control. In addition, man-made inlets, stabilized inlets, navigational canals, and causeways have also altered the hydrology.</u>	Added to text

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9/4/2018	Clay Henderson, Stetson University	Atmospheric Deposition (Page 36)	The report states there is only one continuous monitoring station for meteorological constitution and wet/dry deposition of TN and TP along the lagoon and it is located near Sebastian Inlet. If this is the case, how can there be a credible difference in rates of atmospheric deposition within different segments of the lagoon. While I am very familiar with the study referenced in the CCMP, it doesn't mean that the stakeholders as a whole accept the conclusion that nearly half of the TN in Mosquito Lagoon is from atmospheric deposition. It's fair to ask why Atmospheric Deposition is 46% of TN in Mosquito Lagoon while the adjacent segment Indian River North of only 24% and it is much closer to existing electrical power plants. Based on our discussions in the RAP, the only thing we could all agree on is that more research is needed to better understand this phenomenon.	Deleted this table
9/4/2018	Clay Henderson, Stetson University	Land Conservation (Page 58)	Suggested language: "Florida has a rich tradition in land conservation. Statewide programs such as Preservation 2000 and Florida Forever acquired 2.4 million acres statewide. Locally, Volusia, Brevard, Indian River, St. Lucie, and Martin County adopted tax supported land conservation programs in the 1990s. In 2014, Florida voters ratified the Florida's Water and Land Legacy amendment which dedicates over \$20 billion to land and water conservation over the next 20 years. Consistent with this, the Legislature re-initiated Florida Forever Funding in the 2018 Legislative Session. Among the Florida Forever projects is Indian River Lagoon Blueway which was placed on the list in 1998. The project area contains 27,451 acres in five counties. Over the last 20 years, 8,018 acres have been acquired at a cost of \$45 million leaving 19,433 remaining to be acquired. As more funding becomes available, a new effort should be made to continue acquisition of undeveloped lands within the Indian River Blueway project."	Added text
9/4/2018	Clay Henderson, Stetson University	Land Conservation (Page 58)	There should also be a statement concerning management of public conservation lands. "As a result of land conservation activities over multiple decades there are now tens of thousands of acres of publicly owned lands and waters managed for conservation purposes. This includes five national wildlife refuges, one national seashore, seven state parks, and numerous county and municipal parks and preserves. Management of these lands should incorporate restoration goals for the lagoon as well as provision for public access."	Added text
9/4/2018	Clay Henderson, Stetson University	Land Conservation (Page 60)	Short-term outcome: Identify available and priority remaining acquisitions within the Indian River Blueway Florida Forever Project and promote their ranking on the Florida Forever workplan.	Added to list of strategies
9/4/2018	Clay Henderson, Stetson University	Connected Waters (Page 63)	Everglades Restoration. There needs to be more detail on this section. It is of vital significance for a large segment of the population. http://141.232.10.32/pm/projects/proj_07_irl_south.Aspx	Added text

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9/4/2018	Clay Henderson, Stetson University	Connected Waters (Page 63)	St. Johns River. The headwaters of the St. Johns River are connected to the IRL through the C-54 Canal and a water control structure. Following tropical cyclone events in 2017 and 2008, the canal was opened to control flooding on the St. Johns River. Diversion of nutrient laden fresh water from the St. Johns to the IRL should only take place during emergency conditions as a last resort. Procedures should be adopted to implement this policy.	Noted
9/4/2018	Clay Henderson, Stetson University	Connected Waters (Page 63)	Ocean Inlets. The existing Fort Pierce Inlet is a man-made structure located south of the natural inlet which has been filled. The St. Lucie Inlet is not a natural inlet but was constructed in 1892. This is also probably a place to add: "Mosquito Lagoon is connected to the IRL through the man-made Haulover Canal constructed during the 19th Century."	Text was revised
9/4/2018	Clay Henderson, Stetson University	Connected Waters (Page 64)	See suggested wording edits on the strategies	Edited as suggested
9/4/2018	Clay Henderson, Stetson University	Biodiversity (Page 67)	In the IRL web site we tout the lagoon and one of the most biologically diverse estuaries in North America. The 1996 CCMP states the IRL has the greatest number of species of an estuary in North America. We say it over and again as a statement of overall significance, so why downplay it in this section of the CCMP. It is a fair statement that the IRL is the only estuary which spans the temperate to tropical climatic zones and thus would ordinarily have significant biodiversity. Let's have a clear statement that the IRL is among the most biologically diverse estuaries in North America.	Modified wording
9/4/2018	Clay Henderson, Stetson University	Biodiversity (Page 67)	Citizen science plays an important role in monitoring biodiversity. The Florida Audubon Society and its several chapters along the IRL have been conducting bird surveys in the lagoon since as early as 1900. Audubon wardens protected rookeries in the lagoon prior to the establishment of the fish and wildlife service. Merritt Island National Wildlife Refuge is one of the most significant migratory bird protected areas on the east coast with multiple data sets which span decades. Coordination with the USFWS, Merritt Island Wildlife Association, and Florida Audubon Society is important to establishing bird diversity within the lagoon.	Added to list of partners on Biodiversity-2

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9/4/2018	Clay Henderson, Stetson University	Species of Concern (Page 70)	I'm not a fan of the term "species of concern" as it is an informal term has no legal meaning under the ESA and often confused with "species of special concern." USFWS and NMS lists "species of concern" but it does not mean they will ever become threatened or endangered. Maybe we should call this "rare, listed, and imperiled species." We have rare species within the IRL that are not listed. We have a specific set of species listed under the ESA, and Florida has its own separate listing system called "imperiled species." I offer the following edits to the summary (see provided edits)	Made suggested edits but kept "species of concern" term
9/4/2018	Clay Henderson, Stetson University	Species of Concern (Page 70)	New Strategies: ". Consider multi-species recovery plan for listed species within the IRL." ". Consider critical habitat designation for certain listed species within the IRL."	Added to list of strategies
9/4/2018	Clay Henderson, Stetson University	Climate Ready Estuary (Page 82)	These comments include proposed comments and edits from Dr. Ben Tanner who is our focus group leader for climate adaptation and Dr. Jason Evans our Faculty Director. Both are engaged in climate related research in the lagoon and Dr. Evans in particular has been engaged in adaptation planning in many local governments in Florida and Coastal Georgia. An overarching comment to this section is that we should not focus solely on sea level rise. Sea level rise is mentioned as the example now multiple times and we agree that sea level rise is quite important, but emphasizing it in this way may diminish the importance of the other potential impacts, which may end up being just as important for the health of IRL. Climate change affects a range of issues both in the built and natural environment. (See suggested text edits)	Added suggested text
9/4/2018	Clay Henderson, Stetson University	Monitoring and Data Sharing (Page 100)	Missing in the draft CCMP is some statement about the role of academia and think this might be a good spot to include it: "Within the IRL are numerous institutions of higher learning and other research institutions which contribute to the body of scientific knowledge concerning the lagoon. Universities such as Florida Institute of Technology, University of Central Florida, Florida Atlantic University, Stetson University, Bethune-Cookman University, University of Florida, and others conduct faculty and student research and monitoring. Research entities such as Harbor Branch Oceanographic Institute, Smithsonian Marine Station, and Ocean Research and Conservation Association (O.R.C.A) conduct ongoing research and monitoring. The IRL Management Conference should continue to support funding research and monitoring projects and work to coordinate needed research."	Added text

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Date	Name	Action (Page # From Draft)	Comment	Response
9/4/2018	Clay Henderson, Stetson University	CCMP Implementation and Financing (Page 107)	There needs to be a strong statement as to the need for dedicated funding for IRL restoration. "In 2014, Florida voters approved the Water and Land Legacy Amendment often referred to as Amendment 1 (Art. X Sec.28 Fla. Const.). The amendment dedicates one third of the documentary stamp tax to the land acquisition trust fund for 20 years for land and water conservation including "restoration of natural systems." Current revenue estimates indicate the fund will general over \$20 billion over the 20-year life of the amendment. In 2016, the Florida Legislature passed the Florida Legacy Act which dedicates funds from Amendment 1 for restoration of the Everglades, Springs, and Lake Apopka. A portion of this now funds important portions of the Indian River Lagoon-South Project of CERP. The IRL Management Conference and partners should seek opportunities to fund IRL restoration from Amendment 1."	Added a new strategy for dedicated funding
9/4/2018	Clay Henderson, Stetson University	CCMP Implementation and Financing (Page 108)	Short-term Strategy: "Promote dedicated sufficient recurring source of revenue from Amendment 1 for restoration of Indian River Lagoon."	Added to list of strategies
9/4/2018	Clay Henderson, Stetson University	Citizen Engagement and Education (Page 109)	We need a stronger statement on role of local citizen groups and environmental education facilities for engaging the public and engaging on local restoration projects. "Local conservation organizations and environmental education facilities are an important part of engaging the public to learn more about the lagoon and to participate in local restoration projects and citizen science. Good examples are the Lagoon Academy, "shuck and share" oyster restoration projects, and "lagoon watch" citizen science program. Local facilities such as the Marine Discovery Center in New Smyrna Beach, Brevard Zoo, Marine Resources Council, Harbor Branch Oceanographic Institute, and Environmental Learning Center, promote environmental education, engage citizens, and promote citizen science. These facilities should be designated as regional restoration centers for the lagoon."	Added text
9/4/2018	Clay Henderson, Stetson University	Federal, State, and Local Policy Opportunities (Page 112)	See suggested text edits and new text	Suggested text added
9/4/2018	Clay Henderson, Stetson University	Acknowledgement	This summer we lost a long-time champion for the Indian River Lagoon. Nathaniel Reed, an environmental icon who lived along the lagoon in Martin County, passed away in July. He was deeply concerned about the state of the lagoon and we regularly discussed IRL policies and research needs. One of the last things we worked on together was a letter to Noah Valenstein on a long-term strategy for restoration of the lagoon, a portion of which is quoted below. I propose we include a personal tribute to Reed in the CCMP and include a Nat-worthy quote.	Acknowledgement was added to the CCMP'

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9/4/2018	Salvador Almagro-Moreno, UCF	Overall	<p>My specialty are marine bacterial pathogens and their interactions with other aquatic dwellers. After reading the Draft I found out that the only bacteria that are mentioned are cyanobacteria. These organisms are undoubtedly of great concern, however, a more holistic vision where the entire bacterial communities are monitored would ensure a long lasting and proactive effect rather than reactive. Cyanobacteria interact with many bacterial members of their natural environment. For instance, we recently published that the exact same species that's causing the HAB in the IRL serves as "food" for the growth of other harmful microorganisms such as the agent of cholera (<i>Vibrio cholerae</i>) and, based on preliminary data, <i>Vibrio vulnificus</i> (the flesh-eating bacterium that has caused problems in Florida before). Further more, it is possible that the changes in the IRL are not only directly fostering growth of cyanobacteria but also affecting negatively the survival or prevalence of bacterial species that might establish an antagonistic relationship with the cyanos thus basically letting the HAB grow like a "wildfire". To summarize, a) changes in the microbial community could be fostering the growth of HABs and b) the HABs could foster the proliferation of human pathogens, thus, I would kindly suggest that monitoring of the bacterial communities in the IRL is routinely performed to potentially predict and prevent this from happening.</p>	Added text to the HABs section to address this
9/7/2018	William Embrey	Commercial and Recreational Fisheries (Page 77 and 78)	<p>As a life long resident of Martin County and a commercial fisherman I have watched the destruction of St Lucie River and IRL. Discharges from Lake Okeechobee is our biggest issue. Any steps to improve the water quality is greatly needed. This is also affecting offshore waters. More needs to be done ASAP. would like to see more representatives from commercial fishing industry on panel. I would be willing to join.</p>	Noted and thank you
9/7/2018	Mike Conneen, Anglers for Conservation	Pathway to IRL Restoration (Page 6)	<p>Second to last paragraph-remove 'and' from (including and sea level rise). Maybe it's supposed to be 'any'?</p>	Corrected
9/7/2018	Mike Conneen, Anglers for Conservation	Legacy Loads and Healthy Sediments (Page 32)	<p>Second to last paragraph- It mentions there are 5 stressors. Other should not be lowercase and I only counted 4 stressors in there. The numbers make is confusing to comprehend or maybe I'm lost.</p>	Fixed the numbering, which should have been superscript for the references
9/7/2018	Mike Conneen, Anglers for Conservation	Connected Waters and Watersheds (Page 63)	<p>Ocean Inlets: Last paragraph- "allowing for animal migration" or reworded. It reads kind of funny.</p>	Corrected
9/7/2018	Mike Conneen, Anglers for Conservation	Connected Waters and Watersheds (Page 64)	<p>Ocean Inlets: It talks about the inlets and Port C is labeled as man made but it says Sebastian is a "naturally unstable" when Sebastian is man-made. This might confuse some people</p>	The text was corrected

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Date	Name	Action (Page # From Draft)	Comment	Response
9/7/2018	Mike Conneen, Anglers for Conservation	Marinas and Boating (Page 92)	Last paragraph-comma before FWC	Added a comma
9/7/2018	Rich Paperno, FWC	Species of Concern (Page 70)	I agree with the wording in the Actions on Page 70, but when you get to the wording in the strategies and action plan outputs at the bottom of Page 70 and continuing on page 71, I believe a specific action of recovery progress for species of concern is somewhat misleading. Not all species are listed because they are in decline, for some fish species the problem is a potential loss of habitat and the impacts of climate change that may lead to population loss. For those fish species listed referred to collectively as 'tropical peripherals' there is no 'recovery'. These taxa are existing at the limit of their physiological tolerance. Any decline in habitat (particularly in the NIRL) or water quality (may be more important in the SIRL) could potentially lead to a loss of these taxa from the IRL. (Wording in Action Plan Outputs for Species of Concern-1)	Changed wording in the Strategies section and Species of Concern-1
9/7/2018	Rich Paperno, FWC	Exotic and Invasive Species (Page 73)	I believe that the wording of the Long-term Outcome sounds as if it is setting the program up for failure. It may be overly-optimistic to believe we will have much "success" against exotic invaders. Possibly use the word "progress"	Changed to progress
9/7/2018	Rich Paperno, FWC	Forage Fishes (Page 75)	I partially agree with the final barrier listed on Page 75. FWRI does lagoon-wide monitoring of fish populations and we can and do develop status/trend reports on several species. We do not do all species, but we could on most species, if needed. The piece that is still incomplete is the monitoring of young-of-the-year recruitment in the southern portion of the IRL. That will take additional support.	Modified wording of this item
9/8/2018	Bob Day	Overall	On review of the CCMP, I must say it is an ambitious document (as are most, if not all CCMPs) that covers a broad range of issues affecting the IRL. I really do not have any major comments/edits on the document other than perhaps some minor stylistic thoughts which are truly a matter of individual preference rather than substantive issues. These thoughts are rather trivial and not worth sharing at this point in the process. The document is comprehensive, addressing virtually every facet of the IRL. Prioritization of this broad spectrum of actions will be key to successful implementation of this document.	Thank you!
9/8/2018	John Trefry, FIT	Legacy Loads and Healthy Sediments (Page 32)	See wording edits provided throughout Issues Section	Made suggested edits
9/8/2018	John Trefry, FIT	Legacy Loads and Healthy Sediments (Page 32)	I prefer only 2 significant figures, based on present estimates. I guess we can leave the 582; however, the estimate is easily ± 100 tons. FYI, estimate is for Central IRL, North IRL and BRL.	Updated as suggested
9/8/2018	John Trefry, FIT	Legacy Loads and Healthy Sediments (Page 34)	New Barrier: Continued inputs of muck from incomplete dredging and upland sources.	Added new barrier

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9/8/2018	John Trefry, FIT	Contaminants of Emerging Concern (Page 39)	Mention of POPs and trace metals seems inadequate. A few sentences about what we know could help. However, I do not think that a focus on emerging contaminants should displace the more "traditional" contaminants such as Hg, Pb, Cd, PAH and so on. Perhaps I am just missing something here. No references to metal or classic organic contaminants.	Text was added about traditional contaminants
9/8/2018	John Trefry, FIT	Contaminants of Emerging Concern (Page 40)	In Barriers, change "levels" to "concentrations."	Corrected
9/8/2018	John Trefry, FIT	Seagrasses (Page 43)	1st Strategy: Seems like epiphytes would be a good addition here.	Added
9/8/2018	John Trefry, FIT	Marinas and Boating (Page 92)	Copper from anti-fouling paints is probably the largest trace metal issue in the lagoon. Some really high Cu concentrations in sediment and water of marinas.	Added copper
9/9/2018	Judy Orcutt	Indian River Lagoon (Page 2)	Highlighted a phrase that is not clear to me: "in some compartments"	Changed this wording.
9/9/2018	Judy Orcutt	Indian River Lagoon (Page 2)	Never heard the inlet identified as anything other than Ponce Inlet – even on State websites	The Ponce de Leon Inlet is the official name
9/9/2018	Judy Orcutt	Impaired Waters (Page 17)	The Chesapeake was finally able to achieve the necessary nutrient reductions when Ag was held accountable for reducing their nutrient contribution to the system. BMP's are just not good enough.	By Florida statute, individual agricultural producers are only required to implement BMPs. Additional reductions may be needed.
9/9/2018	Judy Orcutt	Impaired Waters (Page 17)	I wouldn't want to give the impression to the public that if the current TMDL's are met then the estuary will no longer be impaired and everything will be honky-dory. Maybe it should be explained that if a healthy estuary is not achieved when TMDL reduction is met then another target will be set.	Changed wording to note that need to meet water quality standards and the goal is to surpass these standards
9/9/2018	Judy Orcutt	Measuring Changes in IRL Vital Signs (Page 13)	What about setting the target for Boat/Marinas to be No Discharge Zone throughout the IRL	Added
9/9/2018	Judy Orcutt	IRL Health Concern Levels (Page 14)	Just wondered if the IRL Health Concerns Rating info should be moved to just prior to One Lagoon	Kept the current order
9/9/2018	Judy Orcutt	Wastewater (Page 20)	treat <u>and</u> transport increased wastewater	Changed
9/9/2018	Judy Orcutt	Legacy Loads and Healthy Sediments (Page 34)	Isn't there research that indicates that a major source of muck is from sod? It makes sense – it is grown in muck fields and transported to the IRL basin where is washes in. Why not inform citizens about that?	Muck forms from a variety of upstream sources, not just sod
9/9/2018	Judy Orcutt	Contaminants of Emerging Concern (Page 39)	Word "chemical" duplicated in sentence - 2nd Paragraph	Corrected
9/9/2018	Judy Orcutt	Spoil Islands (Page 56)	The Stick Marsh is in IRC and Fellsmere is very proud of it!	Wording was modified
9/9/2018	Judy Orcutt	Distinctive Lagoon Communities (Page 95)	Pretty sure Sebastian is a working waterfront community	Added
9/9/2018	Anne Birch, The Nature Conservancy	IRLNEP Management Conference (Page 6)	capitalize 'The' in The Nature Conservancy	Corrected

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9/10/2018	Anne Birch, The Nature Conservancy	IRLNEP: Measuring Performance and Progress (Page 10)	The logic model graphic is not intuitive to interpret and there's no text referencing and explaining it, which would be helpful. Is the graphic necessary/does it add value?	This graphic was deleted
9/10/2018	Patrick Dayan, St. Lucie County	Overall	Congratulations to the IRLNEP on a very well written and all-inclusive draft CCMP that has been written in a format that is digestible by experts and non-industry professionals alike. Thank you for considering all potential threats, opportunities, and clearly scheduling deliverables in a time-based format for each of the categories.	Thank you!
9/10/2018	Patrick Dayan, St. Lucie County	Stormwater (Page 26)	The table on pg. 26 appears to reference a Halifax River project - not familiar with this watershed; maybe a misprint.	This watershed is in Volusia County. This table has been removed and the projects will be included in a separate Projects Plan.
9/11/2018	Anne Birch, The Nature Conservancy	IRL Vital Signs (Page 11)	None in the wheel have "new". The statement sounds like 'new' will be noted in the wheel. Since it's not, in this sentence state where it is noted in the document.	Text was revised
9/12/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 12)	Replacing 'express' with 'convey' reads easier in this sentence	Changed as suggested
9/13/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 12)	I like the tables, easy to understand and a good quick reference	Thank you!
9/14/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 12)	Target for Filter Feeders: Will depend on objectives for restoration, which will be different for commercial versus conservation. Condition is a more important indicator than acreage, while acreage is easier to measure	Noted - this will be considered as the IRLNEP refines the targets over time
9/15/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 12)	Miles of shoreline does not give any indication of the performance and ecological outcome. This is the type of indicator that can lead to lots of projects being implemented and the feeling that there's conservation progress being made but may not be any real conservation value in the long run. The indicator is dependent on the goal for living shorelines throughout the lagoon. If it's primarily for erosion control then could be a general one such as decrease in erosion rate from baseline or control site conditions. The one stated will not give or is the primary reason for Living Shorelines in the lagoon to increase natural wetlands habitats. If so, then a target could be X% of wetland habitat cover above current condition by X date. See this document as one reference to use for setting appropriate monitoring/metrics for those wanting to conduct living shoreline projects: https://www.conservationgateway.org/ConservationPractices/Marine/crr/library/Documents/Framework-Coastal-Wetland-Shoreline-Projects-New-Jersey.pdf	Additional text was added

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9/16/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 13)	Exotic and Invasive Species: Target for X% of reduction	Reworded
9/17/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 13)	Distinctive Lagoon Communities: unclear what this means	Details are included in the Vital Sign section
9/18/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 13)	Emergency Response: To what? Anything in particular need to be called out?	To be determined based on IRLNEP role, once defined
9/19/2018	Anne Birch, The Nature Conservancy	Measuring Changes in IRL Vital Signs (Page 13)	Wording edits	Made suggested edits
9/20/2018	Anne Birch, The Nature Conservancy	Role of the IRLNEP (Page 15)	Maybe I'm being dense. I don't see a clear connection of this section to the above indicators/actions table. Is there supposed to be?	This section outlines the deliverables that the IRLNEP is responsible for as part of the CCMP implementation
9/21/2018	Anne Birch, The Nature Conservancy	Role of the IRLNEP (Page 15)	What is meant by this? What is the role of the centers? Are they the existing centers?	These would be new centers throughout the IRL
9/22/2018	Anne Birch, The Nature Conservancy	Role of the IRLNEP (Page 15)	One Community-One Voice Initiative: Where is it defined? I missed it	This is included in the Citizen Engagement and Education Vital Sign section
9/23/2018	Anne Birch, The Nature Conservancy	How to Use this Plan (Page 16)	Does it make more sense to move the Vital Signs section above to here so there's a connection and flow between the two?	The introductory sections were reorganized
9/24/2018	Anne Birch, The Nature Conservancy	Filter Feeders (Page 45)	Wording edits	Made suggested edits

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9/10/2018	Rich Paperno, FWC	Commercial and Recreational Fisheries (Page 77)	Because much of the document is about water and habitat quality after reading this I felt that this section on the commercial fisheries decline is misleading in that it doesn't adjust for the immediate impact of the net ban in 1995 or management restrictions that have been implemented during the period described in the text (the restriction is mentioned in the forage fish section). This may be a spot where you can take the opportunity to educate your stakeholders that it is not only the environmental decline that has affected landings on the commercial side but also stricter, necessary management decisions. The biggest decline in landings may not be due to loss of fish from the system it was most likely due to fisherman's inability to land large quantities once gillnets and similar gear types were made illegal. What some commercial fishermen see as overly restrictive catch limits also added to the decline – fishermen cannot land enough fish daily to cover costs (rising fuel prices didn't help either), so many decided to leave the industry.	Added text to discuss this issue
9/10/2018	Gary Ritter, Florida Farm Bureau	General	The current population in Florida is growing by approximately 1,100 people, net, a day. Perhaps I've overlooked this outside of the wastewater section in the report, hence, my curiosity about how to better address the challenges of population growth spilling into our efforts to restore the state's sensitive ecosystems. When I pose that question to state and federal staff dealing with BMAPs, Lake Okeechobee Restoration, and CERP I get this general answer that it's all incorporated in the model. I think it's crucial since the charge will be to educate millions of individual uninformed people to do the right thing.	This is an important consideration for the public education and outreach actions
9/10/2018	Gary Ritter, Florida Farm Bureau	Stormwater (Page 26)	Agricultural Stormwater: Third sentence down Agricultural BMPs are guidelines to assist producers in managing... consider using the word guide versus advise.	Modified wording as suggested
9/10/2018	Gary Ritter, Florida Farm Bureau	Hydrology and Hydrodynamics (Page 29)	The 3rd paragraph down starting with...The watershed has been highly altered...for agricultural purposes as well as for control of mosquitos... Although you mentioned the causeways, in keeping consistent with comments throughout the report I would also mention that urban and commercial development has also contributed to the hydrologic alteration of the watershed. See Page 52 for similar reference language.	Added language as suggested
9/10/2018	Gary Ritter, Florida Farm Bureau	Land Conservation (Page 59)	Under strategies, 3rd bullet, we speak of opportunities for dispersed water management on public and privately owned lands. If you look two paragraphs above, perhaps we should consider some language that stresses the importance and encourages a consideration for a dedicated source of state funding for such projects implemented in the private sector.	Added funding to strategy list

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9/10/2018	Gary Ritter, Florida Farm Bureau	Connected Waters and Watersheds (Page 63)	Everglades Restoration...headwaters comment. The Central and Southern Florida Flood Control Network starts in the Kissimmee upper chain of Lakes and thus they are considered the headwaters of the Everglades not Lake Okeechobee. I have always characterized Lake Okeechobee as the kidney in the Kissimmee, Okeechobee, Everglades system.	Deleted reference to headwaters
9/10/2018	Gary Ritter, Florida Farm Bureau	Connected Waters and Watersheds (Page 63)	St. Johns River... Question: In the early 1970's were canals constructed to divert water from the basin to the east into the IRL for urban development?	Added language
9/10/2018	Gary Ritter, Florida Farm Bureau	Exotic and Invasive Species (Page 72)	Barriers to success...Questions: Is there a need for further study concerning the impact of treating exotic and invasive plant species on Lagoon water quality? I ask that because I sense the Lake Okeechobee aquatic plant management program contributes to the nutrient enrichment of the Lake by continuously recycling biomass and nutrients internally. Could this also be a problem in the Lagoon?	This is a potential issue and was added to the list of barriers
9/12/2018	FDACS	Filter Feeders (Page 46)	Filter Feeder-3 Responsible Lead Agencies: Has a particular contact in FDACS Aquaculture program been established to help "Identify goals for management and restoration of filter feeder habitat"?	Not yet but if you have a contact please let us know
9/12/2018	FDACS	Question	Where will the citrus renovation and HWTT projects we provided in the project collection form be included?	Projects provided by stakeholders will be included in a separate Projects Plan
9/12/2018	FDACS	Biosolids (Page 21)	Would you consider adding language describing recently created Biosolids Technical Advisory Committee (TAC)? DEP recognizes that there may be an issue and is seeking input from other agencies. Info on this committee is available at https://floridadep.gov/water/domestic-wastewater/content/dep-biosolids-technical-advisory-committee	Added information
9/12/2018	FDACS	Land Conservation	Would you consider including the FDACS Rural and Family Lands Protection Program as a means for conservation in the Land Conservation section?	Information was added about this program
9/12/2018	FDACS	Stormwater (Page 26)	We would like to see the Agriculture Stormwater Section be expanded to include the narrative provided on 09/06 or that Agriculture be described in its own subsection within the One Lagoon - Water Quality section. For the latter suggestion I can provide a draft.	The information provided is too detailed for this section and will be included in an appendix

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9/12/2018	Randal Richmond	Connected Waters and Watersheds	<p>I sent an email to a Brevard County Commissioner about my idea, she responded by saying that they did not have the political pull to get the job done. I am a commercial fisherman and know the importance of the lagoon ecosystem to all wildlife and the fishery both inshore and offshore. Here is my idea, I know it will be decades to stop the run off and the dumping of effluent into the lagoon by our coastal communities. There are 3 inlets that transfer water water from Ft. Pierce to Ponce Inlet, not enough flushing for that distance. How about putting pipes under the barrier island from the lagoon to the ocean, we have the technology, look at the cooling water for the Hutchinson Island power plant. Put gates on the pipes in the lagoon side so the can be open and closed as needed. A scientist can monitor the water quality and salinity since the lagoon is not totally salt water. Install the pipes at the areas where the barrier island is the thinnest for starters to see how the plan works. This is my idea, hope it helps, no one will want to cross the causeways of a dead lagoon to get to their homes, the ecological and economic effects of this lagoon dying will be catastrophic. Thank you for reading, Randal.</p>	Evaluations for potential connections are ongoing
9/14/2018	Dennis Hanisak, FAU	Overall	<p>I am very comfortable with the scope of the plan and how it is laid out. As I was reviewing, I realized several things: The scope of what needs to be done in the IRL is truly enormous ...it would be easy to get overwhelmed, but ... I think this document points to a way forward that is much more thought out, complete, and integrated than anything that we have written down before ...I think that the costs will be enormous ... and we are not likely to do it all on the stated timelines ...But that is what needs to be done, and we should definitely try to do it!</p>	Noted and thank you

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9/14/2018	Laurilee Thompson	Commercial and Recreational Fisheries (Page 78)	The last sentence of the text is not strong enough. I suggest that you start a new paragraph after the following sentence: The long-term impacts of these recurring algal blooms, loss of seagrasses and fish mortality events are not well understood. This is a suggestion on how the final paragraph of the text could be worded: "Saltwater recreational fishing in Florida is estimated at \$8.0 billion annually and supports 114,898 jobs. ³ For both the recreational fishing guide and commercial fisher making a living on the IRL, water quality and high-quality fishing are the foundation of their businesses. These small business pursuits are challenging in the best of times. Ten years ago, the IRL was known as the "Redfish Capital of the World." Many redfish tournaments were held every year and the IRL was featured on numerous televised fishing shows. It has been years since a redfish tournament was held in the IRL. Television's celebrity fishing guides have moved on to more productive areas, as have many of the local fishing guides. Most of the commercial fishers have been forced out of work, no longer able to make a living plying the once productive waters. The IRL will never regain its reputation as one of the world's premier recreational fishing destinations, nor will it support commercial fishers if IRL restoration does not prove successful in restoring fisheries."	Added suggested text
9/14/2018	Laurilee Thompson	Forage Fishes (Page 74)	Add a phrase to the last sentence of the first paragraph of the text so that it reads: Of these species, many forage fish species serve as an essential food resource for commercially and recreationally important predatory fish and other species of IRL wildlife, including many species of resident and migratory birds.	Added text as suggested
9/14/2018	Laurilee Thompson	Forage Fishes (Page 74)	Consider adding an additional sentence to the last paragraph of the text: Restoring healthy forage fish populations will also ensure that the IRL region remains a world-class destination for viewing birds and wildlife.	Added
9/14/2018	Laurilee Thompson	Forage Fishes and Commercial and Recreational Fisheries	What I see as missing in both this forage fish section as well as the fisheries section is a reference to the biggest factor in degradation of water quality -- too many nutrients in the water. Should there be a mention in strategies about working with city and county partners to improve their wastewater treatment facilities, pipes, and septic to sewer projects? Would that be redundant or will repeatedly including those references in nearly every section of the CCMP help to drive the message that the nutrient loads going into the IRL must be dramatically reduced? In Barriers you could include lack of funding for large scale improvements to wastewater facilities and septic to sewer projects.	Both sections mention water quality as a factor and water quality is listed in the barriers sections. Specifics for wastewater and septic systems are included in the Wastewater Vital Sign
9/14/2018	Sara Davis, DEP	IRLNEP Management Conference (Page 5)	Not sure where Sara Davis should be listed.	List has been updated
9/14/2018	Sara Davis, DEP	Impaired Waters (Page 17)	Wording edits	Made suggested edits

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9/14/2018	Sara Davis, DEP	Wastewater (Page 21)	It would probably be helpful to specify which class of biosolids is being discussed here. There is often confusion about the treatment requirements and tracking of Class B vs. Class AA biosolids, so the specificity will help with that confusion.	Added information
9/14/2018	Sara Davis, DEP	Monitoring and Data Sharing (Page 100)	Somewhere in this section it would be useful to include a recommendation to upload data to the DEP WIN if possible.	Added text
9/14/2018	Aaron Adams and Mitchell Roffer	Overall	While muck is important we think that we must first fix the plumbing and runoff, otherwise we will be pulling muck from the lagoon forever while the nutrient pollution continues and gets worse. My solution to the muck is that I think that a few well placed, i.e. scientifically selected, permanent or near-permanent, sediment traps should be placed in deep holes and have muck extracted as it settles and fills in these deeper holes on a routine basis. In my opinion spending money to scrape relatively thin layers of muck is not the highest priority. Even the dredging itself is not as effective as envisioned and perhaps sold publicly for many reasons including permitting delays, biosolids storage and leaching, and return of the muck to the dredged areas due to re-settling. Yes it helps deepen the bottom and improve oxygen substantially. However, scraping thin layers of muck also damages the near surface layers of bottom that are biologically active and not 100 % anoxic is not productive. Again the primary key is to greatly reduce the sources of muck into the lagoon from sewage - "water treatment," facilities, septic leachate (zero is possible), sod, urban and agricultural runoff so that the water quality can improve to support other biologically active remediation like oysters, clams or other bivalves, grasses and mangroves, etc. and then fish.	Added a new strategy for sediment traps to the Legacy Loads and Healthy Sediments Vital Sign; wastewater recommendations are included in the Wastewater Vital Sign
9/14/2018	Erich Marzolf, SJRWMD	IRL Council Resolution and Adoption (Page iv)	Spell out USEPA	Corrected
9/14/2018	Erich Marzolf, SJRWMD	Indian River Lagoon (Page 2)	Text box: Seems odd to point out U.S. in 4th bullet	Deleted U.S.
9/14/2018	Erich Marzolf, SJRWMD	Indian River Lagoon (Page 2)	Text box: Real property values?	Added a new bullet
9/14/2018	Erich Marzolf, SJRWMD	IRLNEP: Measuring Performance and Progress (Page 10)	Any link to EPA function?	This section was reworded
9/14/2018	Erich Marzolf, SJRWMD	Impaired Waters (Page 18)	Add WMDs to funding source for Impaired Waters-2	Added
9/14/2018	Erich Marzolf, SJRWMD	Wastewater (Page 20)	How is AWT known to be adequate?	AWT is a high level of treatment for wastewater and should achieve necessary goals for WWTFs
9/14/2018	Erich Marzolf, SJRWMD	Wastewater (Page 21)	No plan to communicate need for fertilizer use when irrigating with reclaimed water?	Added text

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9/14/2018	Erich Marzolf, SJRWMD	Wastewater (Page 22)	Strategy: "add implement concomitant fertilizer reductions."	Added to list of strategies
9/14/2018	Erich Marzolf, SJRWMD	Wastewater (Page 24)	Last barrier: "and/or BMPs"	This barrier was reworded
9/14/2018	Erich Marzolf, SJRWMD	Stormwater (Page 27)	Strategies: Isn't FDACS required to see that all ag producers sign BMP papers?	FDACS is required to sign producers up for BMPs in BMAP areas. This is described in Appendix C.
9/14/2018	Erich Marzolf, SJRWMD	Stormwater (Page 28)	Barriers: Aren't ag BMPs required in all BMAP areas?	Specific ag BMPs are required for each commodity type in a BMAP area. Additional projects may be needed to treat the agricultural loads.
9/14/2018	Erich Marzolf, SJRWMD	Legacy Loads and Healthy Sediments (Page 32)	Actions: add "and associated communities"	Added
9/14/2018	Erich Marzolf, SJRWMD	Legacy Loads and Healthy Sediments (Page 33)	Legacy Loads-3: Why is DEP not a lead organization from nutrient perspective?	DEP is listed as a supporting agency for this role.
9/14/2018	Erich Marzolf, SJRWMD	Legacy Loads and Healthy Sediments (Page 34)	New Barrier: Permitting limitations	Added
9/14/2018	Erich Marzolf, SJRWMD	Contaminants of Emerging Concern (Page 40)	New Barrier: Uncertainty in CEC effects	Added to list of barriers
9/14/2018	Erich Marzolf, SJRWMD	Seagrasses (Page 43)	Add WMDs to funding source for Seagrass-2	Added
9/14/2018	Erich Marzolf, SJRWMD	Filter Feeders (Page 45)	New Strategy: Manage harvests	Added
9/14/2018	Erich Marzolf, SJRWMD	Wetlands and Impounded and Altered Marshes (Page 53)	Does the second strategy include drag-line ditched wetlands?	Yes, added text
9/14/2018	Erich Marzolf, SJRWMD	Spoil Islands (Page 57)	Who owns the spoil islands?	IRL Aquatic Preserves manages the islands
9/14/2018	Erich Marzolf, SJRWMD	Land Conservation (Page 58)	Confused by "When possible, use land conservation to restore natural hydroperiods."	Reworded
9/14/2018	Erich Marzolf, SJRWMD	Land Conservation (Page 58)	Redo map to focus on IRL	This map will be refined for the final CCMP.
9/14/2018	Erich Marzolf, SJRWMD	Land Conservation (Page 59)	New Strategy: Review and update Florida Forever Plans within the IRL watershed.	Added to list of strategies
9/14/2018	Erich Marzolf, SJRWMD	Land Conservation (Page 61)	Change estimated cost to TBD for Land-4 because storage is not how all projects are funded	Modified
9/14/2018	Erich Marzolf, SJRWMD	Exotic and Invasive Species (Page 72)	Add contributing waters to Actions	Added
9/14/2018	Erich Marzolf, SJRWMD	Vibrant 21st Century Communities (Page 89)	Connection and coordination with elected officials?	Added to list of strategies

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Date	Name	Action (Page # From Draft)	Comment	Response
9/14/2018	Erich Marzolf, SJRWMD	Technology Innovation (Page 105)	Who decides what is included in the directory and how? Potential new Strategy: Create new tech review panel to evaluate proposals. Perhaps fee-based	Added a new strategy
9/14/2018	Derek Busby, SJRWMD	The National Estuary Program (Page 1)	Figure #? And for all following.	Did not number figures throughout the document
9/14/2018	Derek Busby, SJRWMD	IRLNEP Management Conference (Page 4)	Do the two advisory committees direct information to affiliated scientists, innovators and citizens or do they only receive information from these groups/folks? The arrows indicate the latter.	The two advisory committees receive information that is conveyed to the Management Board and then Board of Directors
9/14/2018	Derek Busby, SJRWMD	IRLNEP Management Conference (Page 5)	Table #? And for all following.	Did not number tables throughout the document
9/14/2018	Derek Busby, SJRWMD	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 7)	I might have missed it but this sort of comes out of no where. What is a lagoon vital sign?	Refer to Vital Signs section
9/14/2018	Derek Busby, SJRWMD	IRNEP: Core Values (Page 9)	Graphic: I like this but it kind of looks like it was from some event. Is that the intent?	The graphic was created for the CCMP
9/14/2018	Derek Busby, SJRWMD	Vital Signs (Page 11)	Graphic: Healthy Communities shows a photo of a fisherman but direct recreational activities (like fishing and swimming) aren't named. The closest item would be boating and marinas.	There is limited space for pictures in the graphic but additional photos are provided throughout
9/14/2018	Derek Busby, SJRWMD	Measuring Changes in IRL Vital Signs (Page 11)	Old Adage: Peter Drucker?	Added
9/14/2018	Derek Busby, SJRWMD	Impaired Waters (Page 17)	Graphic: Will be color coded later?	Yes, we are gathering feedback to color code the graphic for each vital sign
9/14/2018	Derek Busby, SJRWMD	Impaired Waters (Page 17)	Is this really needed? Waterbodies may be removed from the list some of which have nothing to do with whether the designated uses have been met.	This has been reworded
9/14/2018	Derek Busby, SJRWMD	Impaired Waters (Page 17)	This appears to give the similarities between BMAPs and RAPs but not the differences. The portion after "...;however sounds like it leading to a difference between the two.	This has been reworded
9/14/2018	Derek Busby, SJRWMD	Impaired Waters (Page 18)	Strategies: So, I am not specifically familiar with the (three?) lagoon BMAPs but if they do not have specific allocations I would suggest that the NEP should press for these.	The North IRL, Banana River Lagoon, and St. Lucie BMAPs have specific allocations. The Central IRL BMAP currently does not
9/14/2018	Derek Busby, SJRWMD	Wastewater (Page 22)	Strategies: Requiring property owners to connect is a local government responsibility allowed under Florida law. They can pass an ordinance requiring connection within a stated time period (usually an year) of the infrastructure being made available and being notified of its availability. Suggest NEP utilize existing (I think) or develop model ordinances for use by local governments and take a stance that they be put in place.	Added to list of strategies

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9/14/2018	Derek Busby, SJRWMD	Wastewater (Page 22)	Strategies: Also, a problem we are running into in Doctors Lake where new technology septic tanks are proposed for areas where sewer is not available is that the utility does not have legal authority to enter properties for maintenance. Additionally, these tanks are considered waste treatment centers and, as of now, it appears that FDEP would require certified wwp operators to conduct maintenance on these systems if they were installed. That creates a significant burden on the utility to hire and then pay for additional operators. Suggest the NEP work with utilities to develop legal framework for allowing them access to property and work with FDEP on addressing the (possible) requirement for certified operators to provide maintenance.	Added to list of strategies
9/14/2018	Derek Busby, SJRWMD	Wastewater (Page 22)	FYI, we are implementing a pilot project at Fleming Island (Doctors Lake) with CCUA to test technology to further reduce reclaimed from AWT. The bi-product is used in the concrete industry as an additive so the economics of this technology are actually promising. If interested, suggest you speak with John Hendrickson and Rob Zammataro.	Noted
9/14/2018	Derek Busby, SJRWMD	Wastewater (Page 22)	Isn't there a biosolids working group or something like that already? Ask Casey, Dean D. and/or Erich, they've been very involved. I thought that we had already done a good amount of quantification in this arena. Perhaps the IRLNEP could support efforts to develop better treatment methods that produce less or less nutrient rich byproducts etc.	Information on biosolids TAC has been added to this section
9/14/2018	Derek Busby, SJRWMD	Stormwater (Page 27)	Agricultural BMP compliance is not well tracked. The growers gain a "presumption of compliance" when they enroll to utilize these BMPs but actual resulting pollutant load reductions are not monitored. Perhaps the NEP could support random monitoring efforts or some such check on the actual reductions resulting from the voluntary compliance effort.	FDACS has an implementation verification program which is described in Appendix C
9/14/2018	Derek Busby, SJRWMD	Seagrasses (Page 43)	Need citation? Who is doing this work? Doesn't seem to show up in the table below.	This section was reworded
9/14/2018	Derek Busby, SJRWMD	Distinctive Lagoon Communities (Page 97)	Why photo after citation and not closer to issue discussion?	Document format has been modified throughout
9/14/2018	Derek Busby, SJRWMD	Technology Innovation (Page 105)	Is the term cluster development defined/explained anywhere prior to this?	Added a definition
9/17/2018	Matthew Ajemian	Species of Concern (Page 70)	Rare threatened or endangered species has no mention of sharks or rays. These animals comprise key trophic positions in the IRL, have complex and drastically different life histories than other bony fishes (more aligned to turtles/mammals), and in some cases include federally listed species (e.g., smalltooth sawfish), which appears in the Appendix G, but not in text. Also the text mentions "sea" otters under this section, but I think "river" otters is what was intended and more appropriate.	Noted. Reference to sea otters was modified

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Date	Name	Action (Page # From Draft)	Comment	Response
9/19/2018	Stephen English	Overall	I'm a full time inland fisherman have been for many years. Never have I complained about ther river damage till this year. In the past we have been able to travel north or south of the red freshwater this year it hit the whole coast from Sebastian to Jupiter and it came earlier than normal. The algae is what you see. The real damage in my opinion is the constant push of freshwater before the algae. The grass flats are non existent anymore. Tt started about 5 years ago we could find grass so thick you couldn't close a cast net now all those areas are barren sandbars. The new problem we have seen this year from Stuart to Ft Pierce is the water will not settle and clean. We haven't seen the bottom since early spring a constant mud pit. May be due to no grass I don't know our river catches have been in a downward spiral for a couple of years now and don't see them getting any better. The algae is a nasty problem we can move away from it we can't get away from the red bad water that doesn't have algae. If you want more feedback I will be happy to talk. Thank you.	The need to address these issues are included in the Commercial and Recreational Fisheries and Harmful Algal Blooms sections
9/30/2018	Rebecca Schreiber	CCMP Revision: IRLNEP Responds to a Changing Lagoon (Page 8)	Reduce fertilizer/chemical used by commercial / residential - What to do about Sugar Cane farming?	Added agriculture to the list
9/30/2018	Rebecca Schreiber	Stormwater (Page 26)	Water quality: using chemical processes to clean water...the affect on different species of plant and animal? invertebrates?	Impacts on species will need to be considered when implementing treatment projects
9/30/2018	Rebecca Schreiber	Marinas and Boating (Page 92)	All boating and marinas need to have a free oil waste disposal area...including a trash can for rags and buckets...the waste oil then needs to be refined to be used for power of government buildings or refined for other uses if possible (common process in Alaska - if a reference is needed)	This option can be considered as part of implementing Boating-1 to reduce waste to the IRL
9/30/2018	Rebecca Schreiber	Emergency Preparation and Response (Page 98)	Most emergency response including oil spills is slow due to preparation time for vessel response....First Responders should be trained and paid for help...Fishermen especially are the perfect first responders because they already have the necessary vessels, vessels are already near the site, and have knowledge of the area...this speeds up clean up time and boost the local economy. (Reference: Alaska oil SERVS program)	Noted - this section is focused on the potential IRLNEP role in emergency mangement

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9/30/2018	Rebecca Schreiber	Citizen Engagement and Education (Page 109)	Port Salerno Seafood Festival is one of the largest seafood festivals in Florida. All put on by the commercial fisherman for free to raise money for docks. I believe that Fish and Wildlife should have a presence there to help push for cleaner water. Also, before the festival Fish and Wildlife can have a yearly meeting with the commercial fishermen (these individuals that notices the overall of the changes in the lagoon's ecosystem) about projects being worked on, complaints, suggestions, and how fisherman / FWC can help one another reach this goal....Overall, finally create some sort of dialogue between fishermen and FWC while helping with community outreach.	Noted
9/30/2018	Rebecca Schreiber	Citizen Engagement and Education	Easy way to keep everyone informed? - Online forum for the community to report sightings and for FWC to post a monthly water quality report to the forum. The information to access the forum posted at all marinas and docks.	Noted
10/1/2018	Rebecca Schreiber	Exotic and Invasive Species	To remove invasive species: Pay commercial fishermen to remove invasive species and this will reduce these species dramatically.	Noted - this can be considered as a strategy
10/2/2018	John Maehl, Martin County	Connected Waters and Watersheds (Page 64)	The only comment we have at this time is that the St. Lucie Inlet is NOT a natural inlet.	This bullet was reworded
10/3/2018	Mark Perry, Florida Oceanographic Society	Overall	The Draft Indian River Lagoon NEP Comprehensive Conservation Management Plan (CCMP) is a remarkable accomplishment. The outline under the "One Lagoon, One Community, One Voice" structure of the CCMP is easy to follow and understand for the reader. The 32 "vital signs" appear to be well described with each having very doable "Action Plan Outputs" identifying the responsible lead agency or organization, costs, funding source and IRLNEP role. The estimated "Outcomes" seem reasonable within the short, medium and long range goals to complete. Besides Water Quality, Habitats and Living Resources are addressed in detail and should set the stage for the desired healthy Lagoon.	Thank you!
10/3/2018	Zack Jud, Florida Oceanographic Society	Overall	For the final CCMP, I believe that it is important to include a strong focus on the effects of harmful algae blooms, nutrient reduction, Lake Okeechobee discharges, and Everglades restoration – and the intrinsic links between these four critical issues – on the overall health of the IRL.	Text was added throughout the document on these items
10/3/2018	Zack Jud, Florida Oceanographic Society	Wastewater	I believe that the wastewater vital sign needs to include a greater emphasis on the role of mechanical failures at wastewater treatment plants, lift stations, and conveyance pipes, as it is increasingly clear that these infrastructure failures represent an important source of nutrient input for the IRL. I am happy to see that biosolids are included in the CCMP, but I think this area needs further development and may qualify as its own vital sign, since it straddles several of the other water quality-related vital signs.	Additional text was added for wastewater and biosolids, biosolids was kept with wastewater

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Date	Name	Action (Page # From Draft)	Comment	Response
10/3/2018	Zack Jud, Florida Oceanographic Society	Commercial and Recreational Fisheries	Under the fisheries vital sign, it is essential to emphasize the economic impact of recreational fishing in the IRL. The current language suggests that most of the economic benefits of fishing are restricted to commercial harvest. Recreational fishing is more than just a pastime – it is an important economic driver in our community. I would even suggest that commercial fisheries and recreational fisheries represent separate vital signs.	Additional text was added, these were kept together in one Vital Sign
10/3/2018	Zack Jud, Florida Oceanographic Society	Seagrasses	Under the seagrasses vital sign, I think there is a need to more accurately identify the underlying factors responsible for seagrass decline in the IRL. While many speculative causes have been outlined, none fully explain the estuary-wide decline in seagrass cover. Seagrass losses have been documented in sections of the lagoon that aren't affected by prolonged algae blooms or Lake Okeechobee discharges. Why are seagrasses disappearing from those parts of the IRL? This questions should be directly addressed in the CCMP.	The loss of seagrass is still being studied and all the reasons for decline are not yet known
10/3/2018	Zack Jud, Florida Oceanographic Society	Overall	Habitat restoration is absolutely critical to the health of the IRL, but it is essential that habitat restoration strategies are sound. In some cases, efforts to restore habitats may fail because they are prioritized over efforts to restore water quality (i.e., restoring habitats in areas where water quality does not yet support the focal organism). I think the CCMP should overtly discuss this issue, and it should be recognized in the ranking of vital signs.	Additional text was added to the habitat restoration sections
10/3/2018	Zack Jud, Florida Oceanographic Society	Overall	In addition to the actual act of habitat restoration, I believe there is also a need for additional habitat restoration research (i.e., research focused on developing restoration technologies, techniques, and strategies that will have the maximum impact within the IRL).	Text was added
10/5/2018	Jason Brown, Indian River County	Overall	The County is currently reviewing the draft Comprehensive Conservation and Management Plan (CCMP) for the Indian River Lagoon. We are working to get our comments to you as soon as possible. Based upon the level of detail and importance of this document, County staff wants to ensure that we have thoroughly and thoughtfully prepared our comments. We will continue to work on these comments in an effort to provide them to you as soon as we can.	Noted
10/15/2018	Anthony Gubler, Brevard County	Wastewater (Pages 20-24)	Good Synopsis and Conclusions. Septic-to-sewer is also constrained in some parts of Brevard Co by limited capacity. Though you may have captured this issue within the "WWTP upgrades."	This is included in the WWTPs section
10/15/2018	Anthony Gubler, Brevard County	Hydrology and Hydrodynamics (Page 30)	(Spelling Error): Hydrology 1 - Improve understanding OF...	Corrected
10/15/2018	Anthony Gubler, Brevard County	Legacy Loads and Healthy Sediments (Page 32)	Citations 5-8 are not in superscript format.	Corrected
10/15/2018	Ed Fielding, Martin County	Introduction	Add information about the history of the six IRL counties coming together before the formation of the IRL Council.	Added information to the IRL Management Conference section