

MEETING M I N U T E S
Monroe County Climate Change Advisory Committee
March 15, 2012, Marathon Government Center, BOCC Chambers

Members Present

Chris Bergh (Vice Chair)
Harry Appel
Tom Genovese
Bill Hunter
Kelly McKinnon
Don Riggs

Members Not Present

Annalise Mannix (Chair)
John Forrer
David Tuttle

Advisory Agency Representatives:

Anne Morkill, USFWS
TJ Patterson, FL Keys Electric Cooperative

BOCC Liaison

Sylvia Murphy,

Staff present

Nat Cassel, Asst. County Attorney
Alicia Betancourt & Doug Gregory, UF Extension
Michael Roberts, Growth Management,
Environmental Resources
Rosa Washington & Colleen Murphy, Solid Waste

Chris Bergh, Vice Chair, called the meeting to order at 12:05 pm.

Doug Gregory suggested adding a discussion of the information on Policy and Nature from Chris Bergh and Risks and Vulnerabilities from Bill Hunter to the agenda under Other Business.

The agenda (Attachment 1) was adopted as modified and the minutes from January and February were adopted without change by a motion from Tom Genovese and seconded by Bill Hunter.

Overview of EECBG Grant Progress

Rhonda Haag, who was to give the overview was unable to attend due to pressing BOCC Agenda Item deadlines as explained by Nat Cassel. Doug Gregory gave an overview of the progress to date, indicating that most projects were near completion. The Energy Efficiency Conservation Strategy Project (EECS) had been completed and was being submitted to the BOCC for adoption this month. Chris Bergh suggested it should have been on this agenda so the CCAC could vote to support the EECS for the BOCC. Doug agreed and apologized for the oversight and suggested the CCAC could take such action today if desired.

Alicia Betancourt, as the PI for this particular project, explained the EECS project in more detail outlining how it would focus on governmental operations and use an employee team (the Energy Reduction Task Force) to identify energy efficiency goals and to implement projects under a methodical framework procedure. Nat Cassel indicated this was a good start. Doug promised to send the final document and agenda item to the CCAC.

Motion:

Bill Hunter made the motion to recommend: “The BOCC adopt and implement the Energy Efficiency Conservation Strategy as a critical starting point for climate mitigation and request that the CCAC receive regular updates on the progress of the initiative”. Motion was seconded by Chris Bergh and passed unanimously.

Discussion of the MC CAP Solid Waste Section

Doug introduced Rosa Washington and Colleen Murphy from the MC Solid Waste Department. Rosa has been the department director since 2008 and Colleen is the MC Recycling Educator. Their comments on the MC CAP Solid Waste Section was emailed earlier and distributed at the meeting (Attachment 2). Staff will work on incorporating their comments into our CAP.

Rosa Washington gave an overview of the curbside pickup and haul out contracts. The curbside pickup contracts expire in 2014 and the haul out contract with Waste Management expires in 2023. Alicia Betancourt asked if the recent Key West actions were appropriate for adoption by the County and if the Community CAP we were working on is congruent with what Key West is doing and wants to do. Rosa responded that the situation was more complicated and direct application from one entity to another was probably not possible. She highlighted the comments she and Colleen had provided to the MC Community CAP as their suggestions to improve congruency. She noted that HB 7243 provides an exception for low population counties to most of the recycling mandates. For Example, Monroe County is not required to meet the 75% recycling mandate. However, given the credits provided by sending all our waste to a waste-to-energy plant we are close to a 70%. Colleen Murphy pointed out that FDEP reports that Monroe County has achieved an overall 13% rate of overall recycling and a 20% rate for yard waste, not counting waste-to-energy credits. A concern with giving small cities and counties waste-to-energy credits is that it could be a disincentive for them to increase actual recycling.

Alicia Betancourt asked what aspects of recycling should be mandatory. Rosa Washington responded that ideally commercial entities and special events should have mandatory recycling. The collection contract should be changed to make rates more transparent to the customer. A disadvantage we have due to our location is we do not have the competition among waste companies that mainland communities have available and such competition encourages lower and more transparent rates. A MC business can save by recycling but only by reducing the number of waste pickups or by installing a smaller trash container.

Harry Appel asked if the County could put solid waste requirements in the Comp Plan. Michael Roberts responded that it was not feasible as the Comp Plan contained only policies but the Land Development Regulations could contain such requirements.

Bill Hunter stated he wanted the CCAC to be used to help effect the needed changes in waste contracts. Harry Apel noted the TDC, on which he serves, is now going to require recycling a part of their Special Events Funding process. It was noted that special events needed to have monitors stations at waste/recycling areas because the public, in general, do not make a big effort to separate their throw away items.

Alicia Betancourt offered to work with other staff to develop a 1-page list of items regarding solid waste.

Chris Bergh stated we needed a paragraph to explain how solid waste relates to climate change.

Break 2:35 – 2:45 pm

Review of SE Florida Regional Compact Draft Climate Action Plan

Doug Gregory noted that Michael Roberts was the point person for providing comments to the SE Fla Compact Steering Committee and that the deadline for formal input was tomorrow, March 16. He also noted that the Draft Regional CAP was presented to the CCAC in January but due to lack of input from the Committee at that time he suggested everyone comment individually to the Compact.

For this meeting, Chris Bergh and Bill Hunter provided some analyses comparing the two draft CAPs (Attachments 3 & 4).

Chris Bergh noted he wanted to integrate the SE Florida Draft CAP action items into the MC CAP to ensure nothing of importance in the regional plan that may be pertinent to Monroe County is overlooked. He also said he wanted to explore a reformatting of our CAP to more closely match that of the Regional CAP with each section having introductory material but without any analyses of the individual action items. His concern is that the analyses provided for each action item is inconsistent in depth of analysis.

Harry Appel stated he would like to see an action item to support educational opportunities for marine and oceanographic research.

Other Business

Date for July CCAC Meeting---June 25 was selected as the replacement date for the July meeting due to limited available dates due to the remodeling work going on at the EOC that month and Independence Day holiday.

Bill Hunter's rewrite of the "Identify and Monitor Risks and Vulnerabilities" – Doug noted that the document (Attachment 5) was mailed to the CCAC just the day before and handed out at this meeting. He suggested that unless any member had difficulty with replacing the old version with the new one he would go forward with the rewritten version as part of the revised draft CAP.

Next meeting is May 17. Potential topics include continuation of solid waste discussion, review of the nature and policy sections, and document formatting.

Meeting adjourned at 3:50 pm

Attachment 1 = CCAC March 15, 2012 Agenda

Attachment 2 = Draft MC CAP Solid Waste Section w/ Staff Comments

Attachment 3 = Bill Hunter "SEFRCC Draft CAP—General Comments, March 11, 2012"

Attachment 4 = Chris Bergh "SEFL Climate Action Plan Suggestions 3/41"

Attachment 5 = Bill Hunters Revised Section 2 (Identify and Monitor Risks and Vulnerabilities) of MC CAP

ATTACHMENT 1

Monroe County Climate Change Advisory Committee
Meeting
March 15, 2012
Marathon BOCC Meeting Room, 12:00 p.m. – 4:00 p.m.



- I. Review and Approval of Meeting Agenda and Minutes– Bergh (12:00 - 12:15)
- II. Overview of EECBG Grant Progress – Bergh / Haag (12:15 - 12:45)
- III. Discussion of the MC CAP Solid Waste Section – Bergh / Washington (12:45 - 1:30)
- IV. Review & Discuss Draft Regional Compact Climate Action Plan – Bergh (1:30 – 4:15)
- V. Other Business
 - a. Selection of a new July CCAC meeting date.

Appointed Members:

Harry Appel
Chris Bergh
John Forrer
Tom Genovese

William Hunter
Annalise Mannix
Kelly McKinnon
Don Riggs

David Tuttle
District 3 vacancy
District 4 vacancy

Staff / Office:

Nat Cassel / County Attorney
Doug Gregory & Alicia Betancourt / Extension Service
Rhonda Haag / County Administrator Office
Michael Roberts / Growth Management
Rosa Washington & Colleen Murphy / Solid Waste

ADA ASSISTANCE: If you are a person with a disability who needs special accommodations in order to participate in this proceeding, please contact the County Administrator's Office, by phoning (305) 292-4441, between the hours of 8:30 a.m. - 5:00 p.m., no later than five (5) calendar days prior to the scheduled meeting; if you are hearing or voice impaired, call "711"

ATTACHEMENT 2
Comments from Solid Waste Staff (March 2012)
on
Draft Monroe County Community Climate Action Plan
January 2012 V4.2

8: SOLID WASTE AND RECYCLING

Goal S-1: *Reduce solid waste disposal 75% by 2020 based on 2005 levels.*

Action S-1.1 Adopt a progressive phased in zero waste program designed to be end user friendly for residents and businesses.

Consider adoption of the Zero Waste 10-year Bridge Plan as developed by Eco-cycle in Colorado (www.ecocycle.org).

The Eco Cycle Colorado program is excellent. The reports from places like Boulder and Atlanta are IMPRESSIVE, however, Monroe County is a very different community model. My concern about adoption of out-of-area formats relates to the MANY unique facets of County/City operations in the Keys. The inclination to choose out-sourced formats that appear to offer “quick fixes” may lack crucial local insight and knowledge. The “costs & benefits” of Program “buy-ins” need to be carefully assessed. The required resources (cost) for County adoption of the Bridge Plan is not known, so I can’t really say more about the concept at this point.

An alternative option would utilize existing data from successful programs in FL to guide BOCC/ staff development of a SW/R action plan. Hopefully, fiscal constraints will guide this decision. KW currently has spent around \$400,000 with another \$200,000 in consulting fees anticipated, not including fees to partner with Eco-Cycle. The County is at least 2X the population and 10+X the geographic area, so the cost to adopt their 10 year Bridge Plan will be significant.

**** If we want to achieve similar results, it is important to realize that many of the successful zero waste communities have infrastructure in place to drive those high recycling rates- mandatory ordinances, economic opportunities for recycling/reuse business ventures, regional bottle bills, inexpensive disposal options, and lots of open space for composting. We need to incorporate/support similar measures in the County Solid Waste/Recycling Plan as well as the CAP if we want to achieve a similar success.**

Priority: Medium or HIGH -

IF the BOCC is committed to this plan of action, it needs to be started NOW, BEFORE the contract is up for renewal, **and before additional changes are made to current services. Long range goals require long range planning.

With 2.5 years left on the COLLECTION contract, such a decision would require a commitment to such a plan in the near future. We also have to remember that we have a “HAUL-OUT” contract” with WM until 2023, with significant financial penalties if we don’t provide anticipated volumes. Existing contracts may prove problematic for Eco-Cycles program.

Planning Horizon:

Status of Action:

Resources Required:

Action S-1.2: Support extension of U.S. EPA’s WasteWise partnership or develop a similar program.

Support extension of U.S. EPA’s WasteWise partnership program to Monroe municipalities, educational institutions and businesses (<http://www.epa.gov/epawaste/partnerships/wastewise/index.htm>).

Priority: ~~Medium~~ **LOW** see next item.

Planning Horizon:

Status of Action:

Resources Required:

Action S-1.3: Recognize the EPA waste hierarchy for establishing waste handling priorities.

Officially recognize EPA Waste Hierarchy that designates priorities for handling waste: source reduction, reuse, recycling, waste-to-energy, disposal, and encourage all Monroe municipalities to adopt same (www.epa.gov/wastes/nonhaz/municipal/index.htm).

Priority: ~~Medium~~ **LOW**

These (Actions S-1.2 and 3) are academically great ideas conceptually, but require significant additional management and monitoring that may become a real burden for a small county...the challenges of managing the current energy grant is a good example. The EPA waste hierarchy also may not provide the desired rapid results we seek due to local economic and development constraints.

The SW/R companies we have contracts with would also have to embrace these priorities, and that can be difficult to control. The County’s SW/R “action plan” (i.e. what we want to put in place- our SW/R “wish list”) should be determined by the BOCC even before the EPA waste handling priorities are embraced because what works elsewhere in the US may not be applicable within the unique geographic and environmental constraints of the FL Keys.

Planning Horizon:

Status of Action:

Resources Required:

Same comments as above apply for this Action item.

Action S-1.4: Create an incentive program for citizens and businesses to participate in Extended Producer Responsibility programs.

Most hazardous producers and non-hazardous producers end of life programs are in place but the end users of these products must be educated to sort them out. Create a rewards or incentive program for all citizens and responsible parties. (for example: waste credits) Support is needed to encourage consumers to take advantage of Extended Producer Responsibility programs that make manufacturers of certain consumer products responsible for them at the end of life. (http://en.wikipedia.org/wiki/Extended_producer_responsibility).

Priority: ~~Medium~~ **LOW**

Planning Horizon:

Status of Action:

Resources Required:

Research on successful producer responsibility programs in other areas/nations indicates that this aspect of recycling is typically best managed on a national or statewide level. I would not be inclined to focus on local incentives related to EPR. Programs like the Green Dot in Europe and bottle bills in the US are good examples of successful programs because both channel recycling fees collected into local recycling efforts. Although some larger local stores may be willing to participate, the diverse nature of product purchases will

likely limit local extended producer responsibility programs; they may simply be beyond the scope of **local** government. I would assign low priority because of the more regional nature of this issue. Managing waste credits locally (aside from a PAYT system) could be a real challenge.

Goal S-2: Implement specific recycling plans for the residential, business & institutional and construction sectors.

We are 5 years now from base line of 2005 and are only at 13% county wide .
(http://www.dep.state.fl.us/waste/categories/recycling/SWreportdata/08_data.htm). To further achieve a recycling rate of 75-90%, Monroe County should consider the following measures, including those which ensure consistency with Monroe County's Comprehensive Plan Solid Waste element (www.monroecounty-fl.gov/DocumentView.aspx?DID=32).

Realistically, although unofficially, unincorporated Monroe is currently closer to 20-25% at this time (per Rosa Washington, MC Solid Waste Supervisor). It is essential to remember that in many situations we are dealing with old statistics. FL DEP has still not completely certified 2010 figures! We unfortunately do have to work within their statistical framework so all areas are reported in the same manner.

Action S-2.1 Implement a Pay-As-You-Throw residential solid waste program.

A pay-as-you-throw program will encourage residents to recycle and to conduct at-home yard waste and composting to avoid user fees for excessive solid waste of organics. An example of a pay-as-you-throw type program would be where each household gets 1 solid waste, 1 organic and compostable and 1 recyclable can pick-up per week (for a set annual or weekly fee?) Additional solid waste and organic containers allowed at extra cost. Additional Recycle containers ~~are~~ would be provided at no additional cost. An accompanying educational effort can greatly assist residents adapt to the program. The County can use the composted material in conjunction with construction debris (discussed below) for fill in sea level rise adaptation efforts. Flood control, erosion control, shoreline stabilization can also be aided by marketing or public distribution of the compost are typically essential elements of municipal composting in some areas. If intended for anticipated future sea level rise adaptations, major areas to stockpile the material would be required. Currently, even permitting for stockpiled mulch is very difficult to obtain from the FL DEP. In order to address climate change issues in our region, The County ~~needs to~~ will rebid through RFP process or renegotiate ion of franchise arrangements and contracts to maximize potential savings from a PAYT system. Savings will include reductions in fuel costs, lower emissions, and other related energy expenditures that ~~with the efforts to~~ are derived from reduced solid waste and recycling shipments to the-mainland disposal/processing facilities.

Priority: Low **High**

If you don't want to institute any mandatory provisions, we need something like PAYT to provide recycling incentives ASAP or the proposed goal will be unattainable.

Planning Horizon:

Status of Action:

Resources Required:

For starters, I would assign this with a moderate to high priority basis; any new contract (even the RFP) should move this into the high category. MANY areas with highly successful programs charge nothing (or next-to-nothing) for unlimited recycling, much more for trash.

Limiting compostables (organics-food/yard/soiled paper waste) with high fees would be problematic for many people. Yard projects typically produce larger volumes in batches, not one can per week. If you want to encourage people to landscape yards instead of promoting the flood/erosion-prone sterile pea rock yard, huge compostable waste bills may not achieve the desired end. Residents with larger, well-established yards could end up with astronomical bills. Even when I compost every leaf before I put larger woody material

curbside, I still have impressive volumes- on occasion. PAYT is great, but Monroe will need a collection and fee schedule that addresses the many unique aspects of our community.

MC SW/R is about to survey SW/R/C practices in all counties and some cities in FL. It will include several questions related to PAYT programs. We plan to share this information and use it to suggest guidelines for future planning, contracts, and program development.

Action S-2.2 ~~Evaluate the feasibility of~~ Determine best composting and/or fuel production methods for managing organic waste at system using existing transfer stations for a yard waste compost to energy program.

I'm afraid this is somewhat of a misnomer, and I'm not sure what type of system you are specifically referring to...see below

Some communities are using yard waste to generate energy and it may be possible in Monroe County.

Priority: ~~Medium~~ HIGH

Planning Horizon:

Status of Action:

Resources Required:

This is a great idea, but somewhat more complex than it may seem. It should be a high priority because food and yard waste are around 40-45% of our waste stream

Yard waste to energy technology for small communities is an untested concept at present, although Vero Beach is about to bring a new experimental system online. It is my understanding that these systems **must** utilize more than yard waste; most add food, sewage, sometimes all organics, sometimes all trash- to anaerobically produce compost plus fuel. This process often has some issues with odors and other pollution vectors that may be more problematic in a region with limited space away from developments. Other new technologies are being introduced constantly. It is important to thoroughly research all available **composting** options.

As we determine what type of composting system we prefer, we will also have to think long term and consider promised volumes to the incinerator per existing (or future) haul-out contracts; this would also have to be addressed up front if we consider **any** contract amendments or revisions. For example, we can't ask for bigger recycling bins now, plus new auto-lift trucks, and then simply change to a local waste-to-energy option when we discover a better solution. For example, if we stop trash haul outs to WM Wheelabrator before 2014 to fuel a local digester, we could owe up to \$417,000; we would also owe \$50,000 in penalties for each year we remove waste before 2023!

In-vessel composting is another option being used to manage food, yard, and sewage waste- but it does not also produce fuel. It is currently in use in large applications in FL and would be much less expensive and simpler to initiate in Monroe County. We currently are working with South Dade Soil and Water Management District to determine potential applications and cost estimates for establishment at our transfer stations.

In summary, priority for large-scale composting of some sort should be HIGH, but it has to be the right timing, the right technology, and it must be part of a well-thought out SW/R plan.

Action S-2.3 Implement a comprehensive commercial business²² and institutional recycling program.

Develop a program with appropriate guidelines and incentives for commercial (i.e. non-residential) solid waste and recycling for businesses, government, agencies, and organizations. In order to encourage greater recycling, ~~by implementing the following-~~ the following measures will be implemented:

1. Provide a range of ~~dumpster sizes~~ **container sizes and types** for ~~each business~~ **all commercial recycling accounts**, priced accordingly to minimize the amount of solid waste generated. ~~to be determined by type and size of the business.~~ Pricing must provide comparisons for equivalent size/type/ collection frequency of recycling containers versus trash collection. (Very Important!)
2. Recycling for **commercial accounts** ~~businesses~~ will be free of charge. ~~Incorporate e~~ **Commercial recycle and service rates** ~~recycling and trash collection rates will be incorporated~~ into all franchise agreements. Income from the increased sale of recycled product (road base, asphalt additive, signage and utilities products.) should subsidize the recycling program.

This would assume that the County completely manages the C&D process and gets a share of income from the sale of recyclables. We do not currently receive money from WM for recyclables because we pay less for disposal of recyclables at WM Reuters facility than for disposal of trash at the WM Wheelabrator incinerator. Typically municipalities only get the profits for recyclables if they own and operate the sorting facilities. Unless we build and operate the recycling facilities within the County, profits from sales of recycled product will not likely happen based on current practices with WM. Future contracts would have to be modified to accomplish the flow of income from recyclable sales to the recycling program.

Free recycling for all **commercial** accounts is a big assumption; free collection would be especially hard to offer. We have to remember that if we offer free recycling to small businesses and non-profits, it must be offered to ALL, including all governmental agencies, utilities, and schools.

I happen to agree with the “free recycling” concept, but I believe few will agree in County government due to potential costs. If there is no charge for recycling, the only way to pay for the associated costs (collection, hauling, sorting, processing) would be a “pass-along” to the trash fees, i.e. no charge for recycling, lots higher fees for trash.

It is somewhat naïve to imagine big profits from recyclables unless they are processed locally and also resold and used locally. Infrastructure to do this is essentially non-existent at present. Because recyclables are commodities like corn or oil, it may be difficult to depend upon prices/profits to support “free” commercial recycling due to global market conditions.

Most municipalities do not regulate commercial rates, preferring to let private enterprise allow competition in the commercial sector. Monroe haulers currently enjoy a “de facto” monopoly as there is no local competition for commercial recycling and the contract sets prices.

3. Prevent private waste haulers from using **noncompliant recycling practices**. Definition???
4. Provide education about tax credits to businesses for recycling of all end-of-life products like furniture, appliances, fixtures, electronics to appropriate end of product life handlers and recyclers.

Aside from the Energy Star program, I’m not aware of these credits. I will investigate and welcome your guidance so I can include information for our newsletter.

5. ~~Establish~~ **Expand** ~~a community-based~~ **hazardous and electronic** waste program for commercial users with convenient drop off ~~places~~ **locations and hours**. ~~or regular Hazardous Waste Days.~~

Obviously, this is already in progress, but funding to expand “free” opportunities for the business sector is needed unless we pass those costs along to the non-residential users. How to pay for business disposal of these materials is an issue; it is an expensive activity that cannot be supported only through residential fees paid on property taxes. I hope that our statewide survey will provide some guidance/suggestions.

6. Provide ~~community~~ comprehensive commercial recycling education opportunities.
This is one area where recycling education services might be provided on a contract basis by non-profit or industry-based groups, primarily because of conflicts that may exist between government and industry. With an exemplary program within County operations and special incentives for businesses, like free recycling, this perception may improve.

Priority: ~~Medium~~ HIGH

Commercial recycling may be even more critical than residential recycling in the future. With over three million tourists per year and only 75,000 +/- residents in the cities and unincorporated County areas of the Keys, businesses have a huge impact on solid waste and recycling in our area. According to most recent FL DEP figures for Monroe County, the percentage recycled by the commercial sector was 3% compared to 15% for single family residences in 2009.

I am disappointed to see that nowhere in this document is mandatory recycling mentioned for any segment of the Monroe population. At the very least, it should be employed in the event that goals are not met within a specified timeframe. Even with free recycling for all, it may be difficult to achieve a 75-90% recycling goal without some type of provision to further encourage recycling- especially at more anonymous venues like large special events and public places. MC SW/R has suggested an ordinance limited to County facilities to “set the bar” for other commercial waste generators.

Planning Horizon:
Resources Required:

Status of Action:

Action S-2.4 Increase construction and demolition (C&D) debris recycling.

1. Require pre-processing of C&D in franchise/license agreements, building permits or ordinances with possible incentives (fee rebates).
2. Incentivize C&D recycling (on-site or off-site), and the use of recycled building materials.
3. Develop a partnership with in-county recycling companies to keep most construction debris in county for use in adaptation efforts to combat sea level rise.

Priority: Medium

Planning Horizon:
Resources Required:

Status of Action:

This section seems appropriately rated for priority and actions required.

****One sector I did not see addressed here was an incentive program to develop reuse, recovery, and light manufacturing activities in the Keys. This could help to decrease export of waste out of the County, increasing climate change mitigation efforts.**

ATTACHMENT 3

SEFRCC Draft CAP

Hunter - General Comments – March 11, 2012

Executive Summary:

Action Items-

Pg 5, pp 3 - One hundred action items to be accomplished over five years is very (too) ambitious. I think we should keep our three time frames - short, medium and long.

Commitments-

Pg 6, pp 3 – The compact set a charge to develop five emission baselines and strategies, but only one planning scenario. This mirrors the (admirable) goal of mitigation but short changes the (necessary) goal of adaptation. We need to maintain a focus on adaptation.

Policy & Advocacy-

Pg 7, pp 1 – “...securing enhanced levels of federal participation in regional adaptation projects.”

Monroe needs to get going. Identify and put some projects out front for funding! First in first served.

Pg7, pp 3 – Adaptation Action Areas – In the absence of other guidance, Monroe should create its own AAA definition and get some plans in place. We can always expand or shrink our AAAs to conform to state or federal definitions.

Pg 11, pp1 – “The southernmost counties are expected to experience the greatest direct impacts.” Pp 2

– Monroe County...with predicted building and infrastructure damage these critical resources...

This should be our rationale for leadership from and within Monroe County.

Specific linkage between CAPs:

(Regional first, Monroe second)

Adaption Action Areas:

- SP-2 (pg 14) “Identify and designate Adaptation Action Areas...”
- RR-2 (pg 28) “...policies etc. that reduce future risk & economic loss...”
- P-2.4 (pg 6) Incorporate AAAs into comp and planning documents.

Adaption Action Areas:

- SP-3 (pg 14) “...designate Adaptation Action Areas...”
- M-3.1 (pg 8) “...transportation related adaptation policies...”

Transportation

- SP-9b (pg 15) “...transportation infrastructure investments...”
- RR-5 (pg 29) “identify transportation infrastructure at risk...”
- B-4.1 (pg 16) Identify sections of roadway and critical structures

Transportation

- SP-11 (pg 16) “...support walking, biking and transit use...”
- EF-8 (pg 25) “...expands and connects networks of bicycle & pedestrian facilities...”
- B-4.2 (pg 16) Enhance bicycle and pedestrian safety

Transportation

- SP-17 (pg 17) “...new transportation infrastructure ...floodplain...”

- EF-9 (pg 25) “...amenities...shade, shelter, kiosks...”
- EF-12 (pg 26) “...promotes the use of Plug-In Electric Vehicles...”
- EF-17 (pg27) “...Development of truck parking with electrification facilities...”
- B-4.5 (pg 17) Raised commuter parking
- B-4.4 (pg 17) Electric highway – charging stations.

Water Supply

- WS-1 (pg 19) “...develops adaptation strategies for high risk utilities...”
- W- 3.2 (pg 21) Convert abandoned septic tanks to cisterns

Water Supply

- WS-8 (pg 19) “...prioritize capital improvement plans...”
- W- 3.1 (pg 21) reclaimed water
- W- 3.4 (pg 21) upgrade / expand reverse osmosis plants
- W- 3.5 (pg 21) upgrade / expand desalination plants

Natural Systems

- NS-24 (pg 24) “...Connect farmers with local users, ...restaurants, grocers, farmers markets...”
- B-1.3 (pg 13) “...create community gardens and produce markets.”

Energy & Fuel

- EF-4 (pg 25) “...five-year renewable energy goal, ...job creation...”
- P-3.1 (pg 6) Green workforce

Energy & Fuel

- EF-14 (pg 25) “...five-year renewable energy goal, ...job creation...”
- B-3.2 (pg 14) Promote renewable energy systems and projects

Risk Reduction – Emergency Management

- RR-1 (pg 28) “...vulnerability analysis ...additional & ongoing... further refine risk profile...”
- M-1.2 (pg 7) Improve Inundation mapping capabilities

Risk Reduction – Emergency Management

- RR-2 (pg 28) “...reduce future risk in AAAs through infrastructure improvement...”
- M-1.2 (pg 7) Improve Inundation mapping capabilities

Risk Reduction – Emergency Management

- RR-6 (pg 29) “Develop adaptation actions that prioritize...”
- P2.X (pg 6) We should consider including the regional goal. Monroe does not direct actions to be taken after vulnerabilities are identified.

Public Outreach

- PO-1 (pg 31) Public outreach to residents and elected officials...”
- E1.1 (pg 9) Educate community leaders

Public Outreach

- PO-2 (pg 31) “...increase public awareness about hazards...”

- E-1.3 (pg 10) Education programs...storm surge & SLR

ATTACHMENT 4

Initial Crosswalk of SEFL Climate Change Action Plan actions and MC Community CC Action Plan actions 3/15/12

SEFL Category	Item #	Consider for MC Plan	Notes
SP	1	x	
SP	2	x	Hunter suggested linkage with MC's P-2.4 in v4
SP	3	x	Hunter suggested linkage with MC's M-3.1 in v4
SP	4	x	
SP	5	x	Calling out "growth areas" outside AAAs seems like the purvue of other planning processes
SP	6	x	Move to natural areas section?
SP	7	x	Add a plug for "green infrastructue" along with "hardening" Directing future development and infrastructure out of AAAs seems like a rub with SP-3
SP	8	x	which promotes infrastructure investment in AAAs. Clarify.
SP	9	x	Hunter suggested linkage between SEFL 9B with MC's B-4.1 in v4.
SP	10		
SP	11	x	Hunter suggested linkage with MC's B-4.2 in v4.
SP	12		
SP	13		
SP	14		
SP	15		
SP	16		
SP	17	x	Hunter suggested linkage with MC's B-4.4 and/or B-4.5 in v4. SP 9-18 are about transportation.
SP	18		
WS	1	x	Hunter suggested linkage with MC's W-3.2 in v4. Conversion of septic tanks to cisterns.
WS	2		
WS	3	x	
WS	4		
WS	5		
WS	6		
WS	7		
WS	8	x	Hunter suggested linkage with MC's W-3.1, W-3.4 and/or W-3.5 in v4. Linkage to reclaimed water, upgrade RO and upgrade desalinization
WS	9	x	relates to other actions on monitoring, research, etc. Best to consolidate?
WS	10	x	add cisterns, rain barrels, etc.
WS	11		
WS	12	x	
NS	1	x	
NS	2	x	
NS	3	x	add "...preventing <u>hazardous</u> fuel load..."

NS	4	x	need to dejargonize this. How about "Quantify monetary values of coastal hazard mitigation and SLR impact reduction provided by natural systems and create a sustainable funding mechanism for the their protection, restoration and management.
			need to better explain. How about "Coordinate and implement regional invasive exotic species prevention, early detection/rapid response and control efforts to minimize the diversity and abundance of exotic plants and animals that will be favored by climate change and SLR and will hinder natural area and native species resilience to climate change and SLR."
NS	5	x	
NS	6	x	"Create and coordiante...". duplicative with NS10. Get notes from Harry Appel.
NS	7		
NS	8		
NS	9	x	duplicates NS-5
NS	10	x	Duplicative with NS 6. Change to "...storm surge <u>that also maintain</u> coastal biodiversity."
NS	11		
			Change to "Develop regulatory process that favors the use of compatible dredge material for us in restoration of..."
NS	12	x	
NS	13	x	
NS	14		
NS	15	x	
NS	16		
NS	17		
NS	18		
NS	19		
NS	20		
NS	21		
NS	22		
NS	23		
			Hunter suggested linkage with MC's B-1.3 in v4. "Support institutions..." is good language for MC but without specific mention of agriculture.
NS	24	x	
EF	1	x	
EF	2	x	
EF	3	x	
EF	4	x	Hunter suggested linkage with MC's P-3.1 in v4. Supports our green workforce item.
EF	5	x	
EF	6		
EF	7		
EF	8	x	Hunter suggested linkage with MC's B-4.2 in v4.
EF	9	x	Hunter suggested linkage with MC's B-4.4 and/or B-4.5 in v4.
EF	10		
EF	11		
EF	12	x	Hunter suggested linkage with MC's B-4.4 and/or B-4.5 in v4.
EF	13		
			Hunter suggested linkage with MC's B-3.2 in v4. Promote renewable energy systems and projects.
EF	14	x	
EF	15	x	
EF	16		
EF	17	x	Hunter suggested linkage with MC's B-4.4 and/or B-4.5 in v4.

RR	1	x	Hunter suggested linkage with MC's M-1.2 in v4. Improve inundation mapping capabilities.
RR	2	x	Hunter suggested linkage with MC's 1.2 and 2.4 from v4. 1.2 is improve inundation mapping capabilities and 2.4 is incorporate adaptation action areas into comp plan.
RR	3	x	
RR	4	x	
RR	5	x	Hunter suggested linkage with MC's B-4.1. Combine with transportation? Hunter suggested linkage with MC's 2.X (pg 6) in v4. "X" means it needs to be added as a new action for MC because we don't currently specify implementing actions that are identified.
RR	6	x	
RR	7	x	
RR	8		Fits better under natural systems?
RR	9		
PO	1	x	Hunter suggested linkage with MC's E-1.1. in v4. Educate community leaders.
PO	2	x	Hunter suggested linkage with MC's E-1.3 in v4. Education programs...storm surge and SLR.
PO	3	x	
PO	4		
PO	5		
PO	6		
PO	7	x	How about good old fashioned signs for those without smart phones? "Entering Tidal Flooding Zone"
PO	8	x	split bike safety and fuel efficient driving habits
PO	9		
PO	10		
PO	11		
PO	12	x	
PO	13		
PO	14		
PO	15	x	
PO	16		
PO	17		
PO	18		
PO	19		
PO	20	x	
PO	21	x	
PO	22		

ATTACHMENT 5

2: IDENTIFY AND MONITOR RISKS AND VULNERABILITIES

Monroe County should take advantage of all available tools and resources to complete their task of determining where the impacts of climate change will first occur, and what should be done to assure sustainability.

Goal M-1: Coordinate with peer organizations and assure availability of up-to-date scientific and technical information.

Action M-1.1: Encourage and participate in long-term regional modeling.

Monroe County should participate in the long-term and regional modeling efforts including: tide gauges; hydrologic, geologic, and groundwater quality and levels; water quality (including temperature); precipitation; and groundwater withdrawals.

Encourage and seek dedicated local, state and federal funding for modeling efforts and data gathering including monitoring of scientific data that improves our knowledge of climate change impacts for Southeast Florida and the down-scaling of global climate models to enable increased awareness of climate change predictions for Monroe County.

Priority: High

Planning Horizon: Immediate

Status of Action: Ongoing

Resources Required:

Action M-1.2: Seek technical support from state and federal agencies and universities for development of climate change scenarios appropriate for Monroe County.

Monroe County should engage the support of state and federal agencies (e.g., FDEP, FDOT, SFWMD, NOAA, USGS, FEMA, USFWS, USACE), and universities that can provide technological and logistical support and work with state, county, and local planning bodies to develop regional scenarios of climate change and analyze potential changes in vulnerability.

Priority: High

Planning Horizon:

Status of Action:

Resources Required:

Goal M-2: Identify the most vulnerable areas and facilities that will be affected by sea level rise in Monroe County.

Action M-2.1: Improve inundation mapping and modeling.

Improve current analysis and mapping capabilities to identify small areas of the county vulnerable to sea level rise by utilizing the best available LiDAR (Light Detection and Ranging) elevation data, GIS, aerial photography and other appropriate data, including direct observation at spring high tides. Initial analyses should focus on levels of sea level rise projected by the Southeast Florida Regional Climate Change Compact Counties, Technical Working Group report, "A unified sea level rise projection for South Florida", April 2011. Those projections included a range of sea level rise of 3-7 inches by 2030 and 9-24 inches by 2050. Similar ranges have been adopted by the USACOE and the SFWMD.

Priority: High

Planning Horizon:

Status of Action:

Resources Required:

Action M-2.2: Use improved inundation mapping to identify the sections of roadways, and critical structures that will be affected by sea level rise projections.

Now that airports, hospitals, schools etc. have been mapped, expand the mapping of potential sea level rise impacts to the natural and built environments. Identify critical elements of our residential and business community infrastructure (natural areas, county roads, community centers, shopping areas, etc.) that will be affected by the increased flooding caused by sea level rise impacts during regular and extreme high tides.

Priority: High

Planning Horizon:

Status of Action:

Resources Required:

Goal M-3: Create a countywide sea level rise monitoring and adaptation process.

Action M-3.1: Develop a monitoring program to evaluate and observe climate change impacts and responses on the natural and built environments within Monroe County.

An ongoing monitoring program to document climate change related impacts on the built and natural area is needed to identify best management practices for improving adaptation responses to protect both the natural and built environments. Particular emphasis, obviously, will be on monitoring the amount and rate of sea level rise, but temperatures, rainfall and drinking water availability are also important. Monroe County should seek data being collected by other agencies and supplement it, where needed, with in-house monitoring.

Priority: High

Planning Horizon:

Status of Action:

Resources Required:

Action M-3.2: Develop plans with service providers for the delivery of routine and emergency services to areas impacted by each of the current SLR projections.

Maintain a database of critical roads and infrastructure vulnerable to sea level rise according to the various sea level rise projections. To maintain maximum functionality within the communities of Monroe County as sea levels increase, Monroe County needs to provide leadership to the business community in developing strategic plans for the delivery of routine and emergency services.

Priority: Medium

Planning Horizon:

Status of Action:

Resources Required:

Action M-3.3: Create a framework to evaluate vulnerabilities and prioritize them for adaptation actions.

Effective adaptation options will be limited, as will the funding necessary to implement them. Some vulnerability will severely impact the residential quality of life and sustainability of business. These should be prioritized and adaptation options should be planned.

Priority: Medium

Planning Horizon:

Status of Action:

Resources Required: