

WORKSHOP MINUTES
Monroe County Climate Change Advisory Committee
February 16, 2012, Marathon Government Center, BOCC Chambers

Members Present

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

Members Not Present

John Forrer
Chris Belland

Advisory Agency Representatives:

Julie Cheon, Florida Keys Aqueduct Authority
TJ Patterson, FL Keys Electric Cooperative

BOCC Liaison

None

Staff present

Natileene Cassel, Asst. County Attorney
Alicia Betancourt & Doug Gregory, UF Extension
Michael Roberts, Growth Management,
Environmental Resources

Annalise Mannix, Chair, called the meeting to order at 1:05 pm.

The agenda (**Attachment 1**) was adopted without change.

Identify Action Plan Recommendations for MC Comp Plan Review

The CCAC started review of the document: *Draft Climate Action Plan Action Items Related to the Monroe County Comprehensive Plan* that was drafted by Michael Roberts with input from Extension staff.

C. Bergh asked how the CCAC can provide input to the proposed Energy Conservation and Climate Element of the Comprehensive Plan Update. M. Roberts responded that the goals, policies and objectives will come after the Evaluation and Assessment Review. No time frame has been identified for that effort.

C. Bergh noted that Adaptation Action Areas (AAAs) are required to be included into the Coastal Element of the Comp Plan as well as in the Climate Element. M. Roberts agreed it had to be in the Coastal Element but that, as yet, the Energy and Conservation Element did not exist, but rather has been proposed. He also pointed out the Adaptation Action Area concept had not been vetted by staff so it is too early to determine how it will be handled. He noted that the County chose the add climate and energy as a separate element rather than amend all the relevant elements. It is expected that AAAs will be difficult to define and they depend on the scale of concern; for example, the entire county could be listed as an AAA or smaller particularly vulnerable areas of the Keys could be identified as AAAs.

A. Mannix inquired as to the consequences of placing the entire Keys into an AAA. C. Bergh suggested it could result in overall county-wide restrictions not unlike the effect of the Area of Critical Concern designation.

B. Hunter inquired what was the implication of the AAAs being in the Coastal Element. M. Roberts responded that since the entire Keys were considered coastal, AAA designations were not restricted by being in that element. He suggested the AAA concept should be recommended and then staff and consultants can determine language issues.

C. Bergh suggested that it might be helpful to hold a workshop simply to address AAA development and implications. A. Mannix indicated that the AAA concept was developed for leverage in getting federal funding directly for AAA climate and hazard adaptations.

M. Roberts suggest Action Items 3, 4 and 5 be combined and include the phrase: “Develop goals, objectives and policies to” because the Comp Plan is basically a list of goals, objectives and policies to address specific issues.

The remainder of the discussion focused on specific Action Items and the cumulative changes are included in **Attachment 2**.

Review & Discuss Draft MC Community Climate Action Plan

The Committee discussed how to proceed with completion of the draft Climate Action Plan. It was noted that it may be best to proceed with 15 or so selected items to focus on. D. Gregory stated he wanted to start adding other introductory and background information to develop the full extent of the CAP.

New/Other Business

None

Meeting adjourned at 4:15 pm

Attachment 1 = CCAC February 16, 2012 Agenda

Attachment 2 =CCAC Action Items Pertinent to the MC Comprehensive Plan.

Monroe County Climate Change Advisory Committee
Workshop
February 16, 2012
Marathon BOCC Meeting Room, 1:00 p.m. – 4:00 p.m.



- I. Review and Approval of Workshop Agenda
- II. Identify Action Plan Recommendations for MC Comp Plan Review
- III. Review & Discuss Draft MC Community Climate Action Plan
- IV. Other Business – EECBG Update

Appointed Members:

Harry Appel
Chris Belland
Chris Bergh
John Forrer

Tom Genovese
William Hunter
Annalise Mannix
Kelly McKinnon

Sherry Popham
Don Riggs
David Tuttle

Staff / Office:

Nat Cassel / County Attorney
Doug Gregory & Alicia Betancourt / Extension Service
Rhonda Haag / County Administrator Office
Michael Roberts / Growth Management

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**Draft Climate Action Plan Action Items Related to the
Monroe County Comprehensive Plan
Taken from the Draft Monroe County Community Climate Action Plan
Monroe County Climate Change Advisory Committee (CCAC)
February 16, 2012**

The following action items taken from the Draft Monroe County Community Climate Action Plan have been considered a priority by the CCAC or are related to existing Comp Plan goals objectives or policies.

***Goal:** Amend the County Comprehensive Plan to ensure that Monroe County is prepared to address climate change impacts through the creation of a Climate Change Element which will provide for a sustainable environment and reflect the best available data and strategies for adapting to future climate change impacts.*

The Energy Conservation and Climate Element in the amended Comprehensive Plan should include goals, objectives, and policies to address appropriate mitigation and/or adaptation activities in land use, construction and redevelopment related to the potential impacts of climate change and sea level rise on Monroe County's economy and infrastructure.

Action 1: Provide advocacy and leadership for adoption of climate change policies and legislation with local, state, and federal entities.

Encourage all agencies, utilities and franchisees operating within Monroe County to adopt climate change mitigation plans to minimize greenhouse gas emissions and adaptation plans to minimize potential impacts of sea level rise. Monroe County should collaborate with local municipalities and other public and private entities to coordinate, develop, and implement a suite of planning tools to address climate change mitigation and adaptation strategies.

Monroe County should continue to demonstrate leadership in advocacy for climate change issues and legislation to the National Association of Counties, Florida Association of Counties, the Florida League of Cities, and federal and state governments. The purpose is to support proactive environmental and climate change public policies and standards to further adaptation funding to meet those needs.

An example of such an effort might be to work with local utilities to research incorporation of "smart metering", "smart load management" devices and the potential benefits of solar power as distributed generators and electric cars as household storage systems. The electric utilities could consider implementation of aggressive "demand-side" energy conservation incentive programs. Similarly, the water management agencies could be encouraged to implement innovation measures for increasing their energy efficiencies and reducing water withdrawals for consumptive uses.

Action 2: Revise Monroe County Comprehensive Plan to address strategic planning related to climate change mitigation and adaptation needs.

The Monroe County Comprehensive Plan should include goals, objectives and policies to address the impacts of climate change. Adaptive management principles should be used to

continually review and revise climate mitigation and adaptation policies, objectives, and Land Development Regulations. Revisions to the Plan should include:

- Creating a Climate Change Element within the Monroe County Comprehensive Plan which can be a model to other local government efforts.
- Address greenhouse gas reduction and energy conservation strategies that promote compact, bicycle and pedestrian-friendly development; increase public transportation; reduce reliance on automobiles, the construction of energy efficient buildings; and address the potential effects of rising sea levels and other climate change issues.
- Consider climate change impacts as a factor in determining appropriate levels and types of development in vulnerable areas.
- Consider including climate change mitigation and adaptation in all relevant elements of the Comprehensive Plan including; future land use, transportation, infrastructure, coastal management, conservation, recreation and open space, intergovernmental coordination, and capital improvements.

Action 3: Develop goals, objectives and policies related to sea level rise and climate change to identify vulnerable areas and appropriate responses for the natural and built environments within Monroe County, including:

- **A monitoring and reporting program,**
- **Improved vulnerability mapping and**
- **Use best available data to identify sections of roadways, and other critical structures that will be affected by sea level rise, ranging from 3 to 24 inches.**

Monitoring: 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. Regular reporting of monitoring results is necessary for management purposes.

Mapping: Monroe County will improve analysis and mapping capabilities to identify areas of the county vulnerable to sea level rise by utilizing the most recent elevation data, aerial photography and other appropriate data, such as ground-truthing at spring high tides. Map potential impacts of sea level rise to the natural and built environments of Monroe County at projected levels of increase and use this information in long-term planning. Acquire updated state-of-the-art elevation data as it becomes available to provide opportunities to update decisions regarding adaptation efforts to address sea level rise.

Vulnerability: It is important to identify those critical elements of our community infrastructure that will be affected directly by sea level rise by increased flooding caused by regular and extreme high tides as well as those areas and facilities susceptible to permanent flooding as sea levels increase. Initial analyses should logically be focused on those levels of sea level rise predicted 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 2060. Similar ranges have been adopted by the US Army Corps of Engineers and the South Florida Water Management District.

Action 4: Incorporate “Adaptation Action Area” designation into local comprehensive plans and regional planning documents to identify those areas deemed most vulnerable to sea level rise and other climate change impacts.

According to the Florida Statutes, "Adaptation action area" or "adaptation area" means a designation in the coastal management element of a local government's comprehensive plan which identifies one or more areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning.” §163.3164(1), F.S. (2011).

Adaptation Action Areas may include developed and natural areas and may be used as a tool to guide policies that will serve to reduce future risk and economic losses associated with sea level rise.

Action 5: Adopt goals, objectives and policies to develop and implement adaptive planning and zoning policies, regulations and programs to ensure that appropriate land use, construction and redevelopment activities address the potential impacts of sea level rise on Monroe County’s infrastructure.

Monroe County will ensure that new, renovated and replacement residential and commercial buildings are designed in a manner which takes into consideration the impacts from global climate change, including rising sea level and storm surge, to assure resilience and sustainability.

Establish an ongoing process to review local and regional zoning and building code requirements implemented by other counties, determine their applicability to Monroe County, and adopt as a local code when appropriate regarding the need for resilience of existing and proposed structures in areas at risk to inundation and climate change.

Action 6: Create policies for future development to incorporate sea level rise inundation vulnerabilities for the life expectancy of the infrastructure.

1. Require one or two feet of freeboard on all structures typically designed to the NFIP 100-year flood elevation. This provides a significant discount on flood insurance in addition to improving climate and storm readiness.
2. All new and significantly renovated county roads parks, pump stations, filled lots, towers, etc. should have the grade elevated to above the land's projected sea level for the expected life of the infrastructure.
3. All storm water infrastructure permitted shall be designed with the engineering assumptions of projected sea level rise for the mean high water and mean low water during the expected life of the infrastructure.
4. Consideration shall be given for residential and commercial development, including parking areas to be designed, at a minimum, to the level of the highest projected sea level for the life expectancy of the structure.

Action 7: Support and develop goals, objectives & policies that lead to increased storm readiness.

Storm readiness is obviously important due to the geography of Monroe County and the vulnerability of the Florida Keys to hurricane impacts. Any measures that can reduce the negative impacts of hurricane winds and floods will save lives and reduce the financial burden on families, businesses and government agencies. The need for storm readiness becomes even greater once the impacts of rising sea level are considered and the effects climate change can have on storm intensities and flooding.

Action 8: Develop goals, objectives and policies that lead to increased energy efficiency of new and remodeled residential and commercial structures, including promotion of renewable energy systems and projects that achieve net-zero energy buildings or energy efficiencies that exceed the Florida Building Code requirements.

Homeowners, businesses and builders need guidance and assistance in creating homes and offices that minimize the use of non-renewable energy. The creation of net-zero energy buildings is the right goal Monroe County and which can best be facilitated by appropriate policies and assistance from local governments, , and utilities.

Create goals, objectives and policies to reduce barriers to implementation of energy efficient project.

Develop an incentive program within the Monroe County Building Department permit fee schedule to reduce permit fees for renewable and alternative energy installations as a pilot program for a minimum of 2 years. Identify and reduce any permitting issues that may inhibit development of renewable energy installations.

Action 9: Develop goals, objectives and policies that promote green construction practices.

Incorporate energy efficient design, construction, maintenance and waste reduction standards through the use of regulation, education and incentives. Monroe County should encourage greener, more efficient, and more durable construction practices locally by establishing an ongoing process to address local zoning and building code requirements that recommend the following:

1. Adopt a municipal green building ordinance similar in scope to the Florida State Green Building Model Ordinance which addresses incentives for green building and adaptation for climate change (www.southernbuildings.org/resources/pdfs/Model_Green_Building_Ord.pdf).
2. Encourage builders to construct all new and renovated buildings to meet green building standards to be developed in the green building ordinance;
3. Encourage each municipal building department to have at least one "green" accredited official on staff;
4. Encourage licensed personnel in each building department to have continuing education units (CEUs) of emerging energy efficiency and renewable energy technologies Incorporate RFP specifications that will require accredited individuals on design teams and incorporation of green building practices.

Action 10: Develop goals, objectives and policies to encourage green workforce development within the County.

Local tradesmen and contractors need training in green technologies if appropriate construction techniques are to be implemented. Green industries grow the local economy. Therefore, green job training and retraining must be priority issues for the County.

Monroe County should look for technical training opportunities to enhance the local workforce. This enhancement can be accomplished directly through collaboration with the FKCC and the MC School Board to develop green job training. Pursue funding opportunities to support curriculum development to train students in energy management and installation of renewable energy systems.

Action 11: Advance livable communities as identified in the Communi-Keys Master Plan through adoption of Land Development Regulations policies.

Monroe County should continue to support the livable communities concept which promotes functional, walk-able mixed use development designs and projects by providing flexibility in development review for these projects, revising the zoning and land development codes to allow and encourage these projects, establishing incentives for this type of development, and adopting specific goals in the Monroe County Comprehensive Plan to support and establish sustainable development patterns (www.monroecounty-fl.gov/DocumentView.aspx?DID=173).

Action 12: Develop goals, objectives and policies to facilitate planning with service providers for the delivery of routine and emergency services to areas impacted by each of the current SLR projections: 3, 7, 9, & 24 inches.

Monroe County will 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.

Action 13: Develop goals, objectives and policies to increase recycling of recoverable waste from all construction sites throughout Monroe County.

1. Encourage 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.

Action 14: Develop goals, objectives and policies to support protections and restoration programs in potential climate change affected natural habitats.

Key habitats include the Keys' freshwater lenses (groundwater), and both freshwater and intertidal wetlands to stave off saltwater intrusion driven by SLR, storm surges and highest tides of the year and to absorb/filter storm water. Restoration may include filling or plugging ditches, installing culverts to allow storm surge to run off, and fire management (Create or maintain high frequency, low intensity fire regime in fire-dependent uplands and wetlands of the lower Keys to stave off succession from pine/herbaceous vegetation to broadleaf vegetation dominance).

Action 15: Develop goals, objectives and policies to create a functional county wide public transportation system and coordinate transportation-related adaptation policies across jurisdictional boundaries.

1. Pursue funding opportunities for public mass transit, at the local, state and federal level.
2. Coordinate with the municipalities and the South Florida Regional Transportation Authority to improve the mass transit system functions on a regional level to allow Keys residents effective mass transit within the entire county and to the mainland.
3. Encourage vehicle ride sharing where mass transportation is not practical.
4. Provide the infrastructure and support facilities to encourage and enhance the use of mass transportation and ride sharing.
 - a. Establishing commuter-parking facilities in each island community.
 - b. Provide electric charging stations (preferably solar powered) at each of these parking facilities.
 - c. Raise parking facilities above high water levels.

Action 16: Develop goals, objectives and policies Reduce solid waste disposal 75% by 2020 based on 2005 levels.

We are 5 years now from base line of 2005 and are at a 13% recycling rate 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).