

**BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY**

Meeting Date: May 22, 2012
Bulk Item: Yes No

Division: BOCC
Department: _____
Staff Contact Person/Phone #: Commissioner Murphy x8787

AGENDA ITEM WORDING: Discussion regarding the State of Florida Department of Economic Opportunity Hurricane Evacuation Clearance Time Work Group meetings and direction on the input variables and assumptions to include in the Memorandum of Understanding.

ITEM BACKGROUND: Rule 28-20.140, F.A.C., which was ratified by the Legislature in 2011, includes five Work Program Tasks that require the Department of Economic Opportunity (formerly DCA) to enter into a Memorandum of Understanding (MOU) with the Division of Emergency Management, Monroe County, Marathon, Islamorada, Key West, Key Colony Beach, and Layton regarding hurricane evacuation. The MOU will address the input variables and assumptions to depict hurricane evacuation clearance times for the permanent population of the Florida Keys, utilizing a hurricane evacuation model. The model will be the basis for DEO to complete an analysis of maximum build-out capacity for the entire County and to determine the remaining allocations and distribution of the remaining allocations (development potential). Pursuant to Rule 28-20.140, F.A.C., the hurricane evacuation related tasks have a due date of July 1, 2012.

The DEO has hosted three (3) Hurricane Evacuation Clearance Time Work Group meetings to discuss the requirements of Sections 380.05 and 380.0552, Florida Statutes, the Administration Commission Rules 28-18, 28-19, and 28-20, F.A.C., the Statewide Regional Evacuation Study Program model (hurricane model), model inputs [Census data, behavioral studies, hurricane forecasting, military evacuation procedures, traffic flow rates], private property rights and takings cases, and the draft MOU, etc. At the March 21, 2012 BOCC meeting, the BOCC discussed the materials presented during the January 30, 2012, and February 27, 2012 Work Group meetings. The BOCC also provided direction on the hurricane scenario requests to submit to DEO.

Attached are the materials presented by DEO during the April 30, 2012 meeting, including various model scenarios 1-26 and the resulting clearance times. Also, included in the attachments is a draft MOU, as proposed by DEO, dated April 17, 2012.

The next DEO Work Group meeting is scheduled for June 8, 2012, at the Marathon Government Center (9:30am to 5:00pm).

Staff has several issues to discuss with the BOCC including:

1. Category storm to be modeled: 5;
2. Evacuation timing of Mobile Homes (Phase I or Phase II);
3. Participation Rates (whether further study is needed to indicate appropriate assumptions);
4. FDOT Shoulder improvements;
5. Allocation Distribution;
6. Allocation Rates; and
7. Model results in 30 minute increments; high profile vehicles; Navy vehicle evacuation; Special Needs population; Regional Considerations
8. Future Scenarios

PREVIOUS RELEVANT BOCC ACTION: N/A

CONTRACT/AGREEMENT CHANGES: N/A

STAFF RECOMMENDATION: Staff recommends additional hurricane model scenarios be evaluated, as provided in the attached memo for the June 8, 2012 Work Group Meeting

TOTAL COST: ___ **INDIRECT COST:** _____ **BUDGETED:** Yes ___ No ___

DIFFERENTIAL OF LOCAL PREFERENCE: _____

COST TO COUNTY: _____ **SOURCE OF FUNDS:** _____

REVENUE PRODUCING: Yes ___ No ___ **AMOUNT PER MONTH** ___ **Year** ___

APPROVED BY: County Atty ___ OMB/Purchasing ___ Risk Management ___

DOCUMENTATION: Included X Not Required ___

DISPOSITION: _____ **AGENDA ITEM #** _____



MEMORANDUM

MONROE COUNTY PLANNING & ENVIRONMENTAL RESOURCES DEPARTMENT

We strive to be caring, professional and fair

To: Monroe County Board of County Commissioners

Through: Christine Hurley, AICP, Director of Growth Management

From: Mayté Santamaria, Assistant Director of Planning
Tyson Smith, Attorney, White & Smith, LLC

Date: May 10, 2012

Subject: Discussion items regarding the State of Florida Department of Economic Opportunity (DEO) Hurricane Evacuation Clearance Time Work Group meetings and assumptions included in the DEO proposed, draft Memorandum of Understanding.

Meeting: May 22, 2012

I. BACKGROUND INFORMATION

Rules 28-18, 28-19, and 28-20, F.A.C., which were ratified by the Legislature in 2011, include five Work Program Tasks that require the Department of Economic Opportunity (formerly DCA) to enter into a Memorandum of Understanding (MOU) with the Division of Emergency Management, Monroe County, City of Marathon, Village of Islamorada, City of Key West, City of Key Colony Beach, and City of Layton regarding hurricane evacuation, as follows:

Excerpt of Rule 28-20.140, F.A.C.

11. By July 1, 2012, Monroe County shall enter into a memorandum of understanding with the Department of Community Affairs, Division of Emergency Management, Marathon, Islamorada, Key West, Key Colony Beach, and Layton after a notice and comment period of at least 30 days for interested parties. The memorandum of understanding shall stipulate, based on professionally acceptable data and analysis, the input variables and assumptions, including regional considerations, for utilizing the Florida Keys Hurricane Evacuation Model or other models acceptable to the Department to accurately depict evacuation clearance times for the population of the Florida Keys.

12. By July 1, 2012, the Florida Keys Hurricane Evacuation Model shall be run with the agreed upon variables from the memorandum of understanding to complete an analysis of maximum build-out capacity for the Florida Keys Area of Critical State Concern, consistent with the requirement to maintain a 24-hour

evacuation clearance time and the Florida Keys Carrying Capacity Study constraints. This analysis shall be prepared in coordination with the Department of Community Affairs and each municipality in the Keys.

13. By July 1, 2012, the County and the Department of Community Affairs shall update the data for the Florida Keys Hurricane Evacuation Model as professionally acceptable sources of information are released (such as the Census, American Communities Survey, Bureau of Economic and Business Research, and other studies). The County shall also evaluate and address appropriate adjustments to the hurricane evacuation model within each Evaluation and Appraisal Report.

14. By July 1, 2012, the Department of Community Affairs shall apply the derived clearance time to assess and determine the remaining allocations for the Florida Keys Areas of Critical State Concern. The Department will recommend appropriate revisions to the Administration Commission regarding the allocation rates and distribution of allocations to Monroe County, Marathon, Islamorada, Key West, Layton and Key Colony Beach or identify alternative evacuation strategies that support the 24 hour evacuation clearance time. If necessary, the Department of Community Affairs shall work with each local government to amend the Comprehensive Plans to reflect revised allocation rates and distributions or propose rule making to the Administration Commission.

15. By July 1, 2013, if necessary, the Department of Community Affairs shall work with each local government to amend the Comprehensive Plan to reflect revised allocation rates and distribution or propose rule making to the Administration Commission.

The MOU will address the input variables and assumptions to depict hurricane evacuation clearance times for the population of the Florida Keys. Based on the assumptions in the MOU and the most recent U.S. Census data, DEO will complete its analysis of maximum build-out capacity and will determine the remaining allocations and distribution of the remaining development potential among the Florida Keys' jurisdictions, while allowing the permanent population to evacuate within 24 hours. Pursuant to Rule 28-20.140, F.A.C., the hurricane evacuation related tasks have a due date of July 1, 2012.

To complete the tasks listed above, DEO established a Hurricane Evacuation Clearance Time Work Group (work group) to discuss the requirements of the Administration Commission Rules, the Statewide Regional Evacuation Study Program model (hurricane model), model inputs, Census data, behavioral studies, hurricane forecasting, military evacuation procedures, traffic flow rates, private property rights and takings cases, the draft MOU, etc.

To date, **DEO recommends the following policy revisions for the Florida Keys:**

Policy 216.1.8

In the event of a pending major hurricane (category 3-5) Monroe County shall implement the following staged/phased evacuation procedures to achieve and maintain an overall 24-hour hurricane evacuation clearance time for the resident population.

- 1. Approximately 48 hours in advance of tropical storm winds, a mandatory evacuation of non-residents, visitors, mobile home residents, special needs residents, hospital and nursing home patients, recreational vehicles (RV's), travel trailers, live-aboards (transient and non-transient), and military personnel from the Keys shall be initiated. State parks and campgrounds should be closed at this time or sooner and entry into the Florida Keys by non-residents should be strictly limited.*

2. ~~Approximately 36 hours in advance of tropical storm winds, a mandatory evacuation of mobile home residents, special needs residents, and hospital and nursing home patients from the Keys shall be initiated.~~

3. ~~Approximately 30 hours in advance of tropical storm winds, a mandatory phased evacuation of site built units ~~permanent residents~~ by evacuation zone (described below) shall be initiated. Existing evacuation zones are as follows...~~

In accordance with the policy revisions recommended by DEO, DEO stated the following scenarios, from the scenario results presented, would represent the proposed policy revisions:

		Category 5/ Level E
		Participation
		100%
PHASE 1 (Tourists & Mobile Home Units)		
9	Existing Hotel units, 100 hotel units in Marathon, Mobile homes, Military modeled using hotel occupancy rates for July (13,665 units + 100 units + 8,134 units + 2,025 vehicles)	16 hours & 30 minutes
		Participation
		90%
PHASE 2 (Site-Built Units)		
1	2010 Census site-built units (44,630)	23 hours

II. ASSUMPTION ISSUES/DISCUSSION ITEMS:

1. Category of Storm

DEO recommends that the basis for completing an analysis of maximum build-out capacity be based on a “worst case” scenario and, to that end, would determine the remaining allocations and distribution of the development potential in the Florida Keys based upon a **Category 5 storm** event. A **Category 5** storm event, has an associated participation rate of 90% (90% of the occupied units are expected to participate in the evacuation) in the model. The associated participation rate for a Category 3 storm is 70% and a Category 4 storm is 80%. The participation rates were developed for the Statewide Regional Evacuation Study Program and were based upon 400 phone surveys (only residences with land-lines telephones were called, as sampling was conducted by address) of the entire Florida Keys.

DEO is providing their recommendation based upon the provisions of Section 163.3178(9), F.S.

Section 163.3178 (9), Florida Statutes

(a) A proposed comprehensive plan amendment shall be found in compliance with state coastal high-hazard provisions if:

1. *The adopted level of service for out-of-county hurricane evacuation is maintained for a category 5 storm event as measured on the Saffir-Simpson scale;*
or

2. A 12-hour evacuation time to shelter is maintained for a category 5 storm event as measured on the Saffir-Simpson scale and shelter space reasonably expected to accommodate the residents of the development contemplated by a proposed comprehensive plan amendment is available; or

3. Appropriate mitigation is provided that will satisfy subparagraph 1. or subparagraph 2. Appropriate mitigation shall include, without limitation, payment of money, contribution of land, and construction of hurricane shelters and transportation facilities. Required mitigation may not exceed the amount required for a developer to accommodate impacts reasonably attributable to development. A local government and a developer shall enter into a binding agreement to memorialize the mitigation plan.

(b) For those local governments that have not established a level of service for out-of-county hurricane evacuation by July 1, 2008, by following the process in paragraph (a), the level of service shall be no greater than 16 hours for a category 5 storm event as measured on the Saffir-Simpson scale.

(c) This subsection shall become effective immediately and shall apply to all local governments. No later than July 1, 2008, local governments shall amend their future land use map and coastal management element to include the new definition of coastal high-hazard area and to depict the coastal high-hazard area on the future land use map.

Monroe County must also consider the provisions of Section 380.0552, F.S., Rule 28-20.410, F.A.C., and the Monroe County Comprehensive Plan.

Rule 28-20.140(4), F.A.C.

Policy 216.1.19. Hurricane Modeling. For the purposes of hurricane evacuation clearance time modeling purposes, clearance time shall begin when the Monroe County Emergency Management Coordinator issues the evacuation order for permanent residents for a hurricane that is classified as a **Category 3-5 wind event or Category C-E surge event**. The termination point shall be U.S. Highway One and the Florida Turnpike in Homestead/Florida City.

Monroe County Comprehensive Plan

Policy 216.1.8

In the event of a pending major hurricane (Category 3-5) Monroe County shall implement the following staged/phased evacuation procedures to achieve and maintain an overall 24-hour hurricane evacuation clearance time for the resident population.

1. Approximately 48 hours in advance of tropical storm winds, a mandatory evacuation of non-residents, visitors, recreational vehicles (RV's), travel trailers, live-aboards

(transient and non-transient), and military personnel from the Keys shall be initiated. State parks and campgrounds should be closed at this time or sooner and entry into the Florida Keys by non-residents should be strictly limited.

2. Approximately 36 hours in advance of tropical storm winds, a mandatory evacuation of mobile home residents, special needs residents, and hospital and nursing home patients from the Keys shall be initiated.

3. Approximately 30 hours in advance of tropical storm winds, a mandatory phased evacuation of permanent residents by evacuation zone (described below) shall be initiated. Existing evacuation zones are as follows...

2. Evacuation Timing of Mobile Home Units (Phase 1 or Phase 2 of the model)

DEO recommends modeling the mobile home units in Phase 1 (with Tourist Units) of the model to provide an additional layer of safety for residents living in *more* vulnerable dwelling units. DEO also recommends developing additional programs to ensure early evacuation by mobile home residents, including developing evacuation plans with each mobile home community to provide explanations of evacuation policies, public transportation and providing assistance in handling pets. Members of the Work Group did not reach consensus on how to model mobile home units.

The Monroe County Comprehensive Plan currently states that phased evacuations will occur, prior to the onset of tropical force winds, by land use and housing type, as follows:

<p>48 hours prior:</p> <ul style="list-style-type: none"> • Non-residents • Visitors • RVs • Travel trailers • Live-aboards (transient and non-transient) • Military personnel 	<p>36 hours prior:</p> <ul style="list-style-type: none"> • Mobile home residents • Special needs • Hospital and nursing homes 	<p>30 hours prior: “permanent residents”</p>
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The term “permanent residents” is not particularly descriptive. In fact, each phase includes what most regard as “permanent residents.” It appears his phasing policy reflects typical emergency management protocol and vulnerability concerns – not a distinction between “permanent residents” and non-permanent residents. In this hurricane model, the state uses the more accurate term “site built homes” instead.

DEO recommends revising this policy to include the mobile home units within the 48 hour evacuation phase (phase 1 of model) to account for behavioral studies that indicate people will not evacuate at night.

Again, DEO recommends the following policy revisions for the Florida Keys:

Policy 216.1.8

In the event of a pending major hurricane (category 3-5) Monroe County shall implement the following staged/phased evacuation procedures to achieve and maintain an overall 24-hour hurricane evacuation clearance time for the resident population.

- 1. Approximately 48 hours in advance of tropical storm winds, a mandatory evacuation of non-residents, visitors, mobile home residents, special needs residents, hospital and nursing home patients, recreational vehicles (RV's), travel trailers, live-aboards (transient and non-transient), and military personnel from the Keys shall be initiated. State parks and campgrounds should be closed at this time or sooner and entry into the Florida Keys by non-residents should be strictly limited.*
- 2. ~~Approximately 36 hours in advance of tropical storm winds, a mandatory evacuation of mobile home residents, special needs residents, and hospital and nursing home patients from the Keys shall be initiated.~~*
- 3. Approximately 30 hours in advance of tropical storm winds, a mandatory phased evacuation of site built units permanent residents by evacuation zone (described below) shall be initiated. Existing evacuation zones are as follows...*

In accordance with the policy revisions recommended by DEO, DEO stated the following scenarios, from the scenario results presented, would represent the proposed policy revisions:

		Category 5/ Level E
Participation		100%
PHASE 1 (Tourists & Mobile Home Units)		
9	Existing Hotel units, 100 hotel units in Marathon, Mobile homes, Military modeled using hotel occupancy rates for July (13,665 units + 100 units + 8,134 units + 2,025 vehicles)	16 hours & 30 minutes
Participation		90%
PHASE 2 (Site-Built Units)		
1	2010 Census site-built units (44,630)	23 hours

The BOCC may want to consider requesting additional scenario runs for the upcoming Work Group meeting to include:

- 1) all mobile home units in the Phase 1 evacuation;
- 2) include 25% of the mobile home units in Phase 2;
- 3) include 50% of the mobile home units in Phase 2.

3. Participation Rates

Participation rates for category 3, 4, and 5 storms are 70%, 80%, and 90% respectively, based on a Behavioral Study done by Dr. Earl J. Baker. These percentages were based on a Regional Behavioral Survey Report (see attached).

Because it appears the sampling size of the participation rates may have been based on a small sampling survey; it may be beneficial to do a more comprehensive survey of the Florida Keys residents to ensure accurate participation rates.

4. FDOT Shoulder improvements (10 foot paved shoulders)

The Work Group members discussed the inclusion of the FDOT shoulder improvements as a “functional evacuation lane” which could provide additional roadway capacity in the model. The Emergency Management Officials from the Florida Divisions of Emergency Management, Monroe County Emergency Management and Monroe County Sheriff’s Office in attendance at the meeting stated that the shoulders would mainly be used for emergency vehicles and damaged vehicles during an evacuation event. Additionally, Monroe County Sheriff’s Office and the Monroe County Emergency Management Department stated that the shoulder may be used under “worst case” scenarios and that the **Sheriff’s Office could support the use of shoulders north of Jew Fish Creek Bridge**. Members of the Work Group did not reach consensus on how to model the shoulders.

Staff has requested additional scenario runs for the upcoming June 8, 2012, Work Group meeting to include scenarios with the inclusion of the shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.”

5. Allocation Distribution and Rates utilized in the model scenarios.

The current scenario results are based upon the current allocation distribution (for example, Monroe County receiving 197 allocations, Marathon receiving 30 allocations, Key West receiving 90 allocations, etc.) as shown below in the table

Current Allocations	
Layton	3
Key Colony Beach	6
Islamorada	28
Marathon	30
Key West	90
Monroe County	197
TOTAL	354

The distribution and location of future allocations is a factor in the clearance time results produced by the hurricane model. Monroe County staff would like to consider other options for the distribution of future allocations; in particular, reducing the total amount of allocations modeled at the farthest point in the County for hurricane evacuation, which may impact the clearance time results.

Staff would like to request additional scenario runs for the upcoming Work Group meeting to include allocations distributed by the percentage of vacant lands within each jurisdiction (as shown in the Tables 1, 2 and 3 below). Additionally, staff would like to request additional scenario runs with reduced allocations rate, including a 10% reduction of the total allocation, 25% reduction of the total allocation and 50% reduction of the total allocation (also shown in Tables 1, 2, and 3 below).

Table 1: Allocations distribution based on vacant and percentage

				A	B	C
Local Government	Number of Vacant Parcels	% of Total Vacant Parcels	Allocations if based on percent of vacant lots left in each local government	Allocations if cut by 10%	Allocations if cut by 25%	Allocations if cut by 50%
Islamorada	1,109	9.78%	35	31.5	26.25	17.5
Key Colony Beach	92	0.81%	3	2.7	2.25	1.5
Key West	84	0.74%	3	2.7	2.25	1.5
Layton	13	0.11%	1 (0.41)	0.9	0.75	0.5
Marathon	1,281	11.30%	40	36	30	20
Unincorporated Monroe	8,758	77.25%	273	245.7	204.75	136.5
Total	11,337		355	319.5	266.25	177.5

Table 2: Other Allocation distribution (Option 1)

		A	B	C
Local Government	Option 1	Allocations if cut by 10%	Allocations if cut by 25%	Allocations if cut by 50%
Islamorada	35	32	26	18
Key Colony Beach	6	5	5	3
Key West	15	14	11	8
Layton	3	3	2	2
Marathon	40	36	30	20
Unincorporated Monroe	256	230	192	128
Total	355	320	266	178
<i>Distribution basis idea – start w/vacant land distribution & adjusted to address takings liability</i>				

Table 3: Other Allocation distribution (Option 2)

		A	B	C
Local Government	Option 2	Allocations if cut by 10%	Allocations if cut by 25%	Allocations if cut by 50%
Islamorada	32	29	24	16
Key Colony Beach	6	5	5	3
Key West	30	27	23	15
Layton	3	3	2	2
Marathon	33	30	25	17
Unincorporated Monroe	251	226	188	126
Total	355	320	266	178
<i>Distribution basis idea – start w/vacant land distribution & adjusted to address takings liability</i>				

6. Other Issues Which May Impact Model Scenario Results

- The model provides results in 30 minute increments. For example, a 24 hour result may be 24 hours and 1 minute or 24 hours and 29 minutes or anything in between. A 23 hour and 30 minute result may be 23 hour and 31 minutes or 23 hour and 59 minutes or anything in between.
 - This may be a significant item to consider when reviewing the clearance time results.

- High Profile Vehicles are ordered to evacuate early (within Phase 1). As stated by Irene Toner, Monroe County Emergency Management Director, after winds reach 45mph, the Sheriff’s office does not allow high profile vehicles on the roadway and bridges.
 - Research could be conducted to determine the number of licensed trailers in Monroe County and, potentially, discount these vehicles (units) from the Phase 2 evacuation.
- DEO and the Navy are conducting further research to determine the appropriate vehicles figures to include in the model.
 - There are 870 units and associated vehicles include in the model for NASKW. It appears 2025 vehicles were added to the model scenarios. This may be double counting vehicles.
- It is not clear that if the special needs population was included in Phase 1 or Phase 2 of the model.
 - If the special needs were included in the Phase 2 evacuation, this should be revised.
- Regional Considerations is part of the rule – but the rule doesn’t specify how this should be considered; however, the rule does specify the termination point for evacuation measurement related to growth management is at US1 and Florida Turnpike in Florida City.

III. Staff Recommendation

Staff recommends the following additional scenarios request:

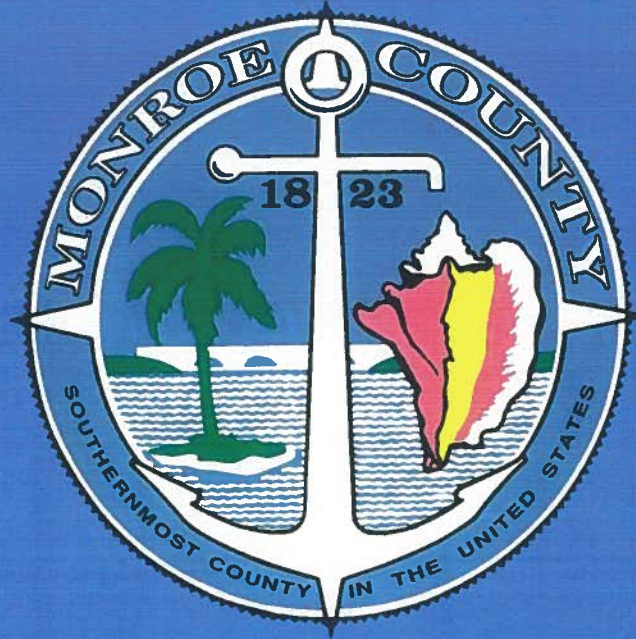
		Category 5/ Level E
Participation		90%
A1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column A). Include the <u>10ft shoulders north of Jew Fish Creek Bridge</u>, as a “functional evacuation lane.”</p>	
A2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column B). Include the <u>10ft shoulders north of Jew Fish Creek Bridge</u>, as a “functional evacuation lane.”</p>	
A3	<p>Phase 2. 2010 Census <u>site-built units</u> with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column C). Include the <u>10ft shoulders north of Jew Fish Creek Bridge</u>, as a “functional evacuation lane.”</p>	

		Category 5/ Level E
Participation		90%
B1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 25% of <u>mobile home units (2,033 units)</u></p>	
B2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 25% of <u>mobile home units (2,033 units)</u></p>	
B3	<p>Phase 2. 2010 Census <u>site-built units</u> with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column C). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 25% of <u>mobile home units (2,033 units)</u></p>	
C1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 50% of <u>mobile home units (4,067 units)</u></p>	
C2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 50% of <u>mobile home units (4,067 units)</u></p>	
C3	<p>Phase 2. 2010 Census <u>site-built units</u> with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 1, Column C). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 50% of <u>mobile home units (4,067 units)</u></p>	
D1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.”</p>	

		Category 5/ Level E
Participation		90%
D2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.”</p>	
D3	<p>Phase 2. 2010 Census <u>site-built units</u> with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column C). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.”</p>	
E1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 25% of <u>mobile home units (2,033 units)</u></p>	
E2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 25% of <u>mobile home units (2,033 units)</u></p>	
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F1	<p>Phase 2. 2010 Census <u>site-built units</u> with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 50% of <u>mobile home units (4,067 units)</u></p>	
F2	<p>Phase 2. 2010 Census <u>site-built units</u> with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.” Include 50% of <u>mobile home units (4,067 units)</u></p>	
F3	<p>Phase 2. 2010 Census <u>site-built units</u> with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 2, Column C). Include the 10ft shoulders north of Jew Fish Creek Bridge, as a “functional evacuation lane.”</p>	

		Category 5/ Level E
Participation		90%
	Include 50% of mobile home units (4,067 units)	
G1	Phase 2. 2010 Census site-built units with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 3, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge , as a “functional evacuation lane.”	
G2	Phase 2. 2010 Census site-built units with 25% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 3, Column B). Include the 10ft shoulders north of Jew Fish Creek Bridge , as a “functional evacuation lane.”	
G3	Phase 2. 2010 Census site-built units with 50% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 3, Column C). Include the 10ft shoulders north of Jew Fish Creek Bridge , as a “functional evacuation lane.”	
H1	Phase 2. 2010 Census site-built units with 10% decrease in current allocation for 10 years. Allocation distribution based upon percentage of vacant lands (see Table 3, Column A). Include the 10ft shoulders north of Jew Fish Creek Bridge , as a “functional evacuation lane.” Include 25% of mobile home units (2,033 units)	
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		Category 5/ Level E
		90%
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Growth Management
Protecting the
Florida Keys

MONROE COUNTY

Alternative Hurricane Evacuation Scenarios

- ▣ Change Rate & Distribution of Allocations
 - ▣ Distribution based on percentage of vacant land in each Keys jurisdiction?
 - ▣ Change annual allocation rate
- ▣ Road Improvements (capacity)
 - ▣ Long term projects & costly
 - ▣ Controversial – 4 lane the keys – conflicts w/ community character
- ▣ Adopt CP Policies to allow the transfer of units between jurisdictions/sub areas?
 - ▣ Based on current allocation and evacuation level of service (24 hours)
 - ▣ Affordable housing remains a challenge

Alternative Hurricane Evacuation Scenarios

- ▣ Re-designate vacant platted lots close to US 1 for other uses such as commercial/office, etc.
 - ▣ provides alternative and additional uses of property
 - ▣ Implements some planning policies

- ▣ Federal Government's designation of Coastal Barrier Resource Units (CBRS) has affected growth pressure
 - ▣ alleviates eligibility to obtain federal funds or subsidies for development (such as flood insurance)

Alternative Hurricane Evacuation Scenarios

- ▣ Statutory, Rule and Comp Plan revisions to clearance time threshold
 - ▣ 24 hours appropriate?
 - ▣ Increase based on forecasting improvements?
 - ▣ Revise Staged/Phased CP Policies

POLICY 216.1.8 OF MONROE COUNTY COMPREHENSIVE PLAN
IN THE EVENT OF A PENDING MAJOR HURRICANE (CATEGORY 3-5) MONROE COUNTY SHALL IMPLEMENT THE FOLLOWING STAGED/PHASED EVACUATION PROCEDURES TO ACHIEVE AND MAINTAIN AN OVERALL 24-HOUR HURRICANE EVACUATION CLEARANCE TIME FOR THE RESIDENT POPULATION.

1. APPROXIMATELY **48 HOURS** IN ADVANCE OF TROPICAL STORM WINDS, A MANDATORY EVACUATION OF **NON- RESIDENTS, VISITORS, RECREATIONAL VEHICLES (RV'S), TRAVEL TRAILERS, LIVE-ABOARDS (TRANSIENT AND NON- TRANSIENT), AND MILITARY PERSONNEL FROM THE KEYS** SHALL BE INITIATED. STATE PARKS AND CAMPGROUNDS SHOULD BE CLOSED AT THIS TIME OR SOONER AND ENTRY INTO THE FLORIDA KEYS BY NON-RESIDENTS SHOULD BE STRICTLY LIMITED.

2. APPROXIMATELY **36 HOURS** IN ADVANCE OF TROPICAL STORM WINDS, A MANDATORY EVACUATION OF **MOBILE HOME RESIDENTS, SPECIAL NEEDS RESIDENTS, AND HOSPITAL AND NURSING HOME PATIENTS FROM THE KEYS** SHALL BE INITIATED.

3. APPROXIMATELY **30 HOURS** IN ADVANCE OF TROPICAL STORM WINDS, A MANDATORY PHASED EVACUATION OF **PERMANENT RESIDENTS BY EVACUATION ZONE (DESCRIBED BELOW)** SHALL BE INITIATED.

Vacant land within unincorporated Monroe

	I	II	III	III-A	0	Vacant acres in Tier	Net Parcels and Acres
Lower Keys							
Vacant Parcels	3,288	411	1,724	31	17	N/A	5,471
Acres	6,338.7	78.1	573.7	11.5	52.2	7,002.0	7,054.2
Percent Vacant Acres	89.9%	1.1%	8.1%	0.2%	0.7%	N/A	N/A
Middle Keys							
Vacant Parcels	20	0	284	0	N/A	N/A	304
Acres	147.6	0.0	63.6	0.0	N/A	211.2	211.2
Percent Vacant Acres	69.9%	0.0%	30.1%	0.0%	N/A	N/A	N/A
Upper Keys							
Vacant Parcels	835	0	1,658	265	225	N/A	2,983
Acres	1,501.1	0.0	316.3	79.9	261.3	1,897.3	2,158.6
Percent Vacant Acres	69.5%	0.0%	14.7%	3.7%	12.1%	N/A	N/A
Total Parcels	4,143	411	3,666	296	242	N/A	8,758
Total Acres	7,987.4	78.1	953.6	91.4	313.5	9,110.5	9,424.0
Percentage of Tier	84.8%	0.8%	10.1%	1.0%	3.3%	N/A	100%

Alternative Hurricane Evacuation Scenarios

▣ Land acquisition priorities

Powers of Land Authority - 380.0666. F.S.

(2) To undertake and carry out studies and analyses of county land planning needs within areas of critical state concern and ways of meeting those needs.

(3) To acquire and dispose of real and personal property or any interest therein when such acquisition is necessary or appropriate to protect the natural environment, provide public access or public recreational facilities, preserve wildlife habitat areas, provide affordable housing

The land authority shall make such acquisition only if:

- Such acquisition is consistent with land development regulations and local comprehensive plans adopted
- The property acquired is within an area of critical state concern
- The property to be acquired has not been selected for purchase through another local, regional, state, or federal public land acquisition program.

Alternative Hurricane Evacuation Scenarios

County Comprehensive Plan Land Authority Ordinance

Sec. 2-396 Article adopted for the purpose of establishing a land acquisition program in the county as a means of implementing the goals, policies and objectives of the county comprehensive plan, including, but not limited to:

- protection of property rights of small landowners;
- consolidation of substandard lots;
- provision of land for the development of affordable housing;
- preservation of environmentally sensitive lands;
- preservation of the habitats of rare, threatened or endangered species of plants and animals;
- enhancement of the community character of the county; and
- protection of open space, scenic corridors and viewsheds

Alternative Hurricane Evacuation Scenarios

Use Federal, State, and Land Authority land acquisition programs to purchase undeveloped parcels.

PROS:

- ▣ Relief to property owners
- ▣ History of voluntary sales for conservation by the combined efforts of federal, state, and Land Authority acquisition programs.

CONS:

- ▣ Loss in taxable value (approximately \$300,000,000)
- ▣ The number of remaining undeveloped parcels is still very large.
- ▣ Land acquisition creates long-term land stewardship responsibilities.
- ▣ Not all the vacant parcels (particularly Tier 3 parcels) will be appropriate for public ownership.
- ▣ Funding limitations.

Additional Funding Ideas:

- ▣ Include land acquisition as an allowed use for the extension of the infrastructure sales tax.
- ▣ Establish dependent taxing authority by referendum for land acquisition

Alternative Hurricane Evacuation Scenarios

- ▣ Build Shelters (OUTSIDE CHHA)
- ▣ Establish a fee in lieu for constructing shelters
 - ▣ individuals COULD pay into a fund for Local Government to use for shelter development
 - ▣ Areas in county where land is not within the coastal high-hazard area (CHHA) are where a shelter could be located
 - CHHA is the area below the elevation of the category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model
 - See Maps of parcels outside CHHA boundary (excludes Tier I parcels) - since those would not be targets for areas where a shelter could be constructed





**OTHER
IDEAS????**

