

Hurricane Evacuation Clearance Time Member Comments and DEO Response

August 10, 2012

1. **Key West Comment:** The Memorandum of Understanding (MOU) fails to describe and apportion among the jurisdictions the 3,540 additional ROGO and/or BPAS allocations which the Hurricane Evacuation Modeling effort and Work Group determined could be accommodated in the Florida Keys in a ten year period while maintaining the state mandated 24-hour evacuation clearance time.

Response: The Work Group's recommendation of Scenario M5 is included in the "Whereas" section of the MOU and the scenario contains the allocation and distribution of building permits. We have no authority to include the allocation in the MOU until approved by the Administration Commission.

2. **Key West Comment:** (a) The 2012 Hurricane Evacuation Work Group Report needs to be an exhibit to the MOU. (b) Page 5 of the MOU, item H.1; City staff recommends that the word "should" be changed to "shall" with reference to the closure of state parks and the limitation of entry of non-residents into the Keys, at the 48-hour period preceding the landfall of tropical storm force winds.

Response: (a) The Work Group Recommendations is a staff report. (b) The phrasing is from the adopted comprehensive plans of the local governments.

3. **Key West Comment:** On page 6, the "Termination" clause provides that any party to the MOU may terminate with or without cause. It is the City staff's opinion that such language renders the reason for the entire MOU moot. Why have an agreement on which so much is reliant if any party can abandon the agreement at any time? The only way to remedy this weakness is to implement all its provisions in a rule of the Administration Commission that requires each jurisdiction to incorporate the principles, assumptions, data and variables into their respective Comprehensive Plans by a date certain to coincide with allocations of new BPAS/ROGO.

Response: The Comprehensive Plan controls the allocations assigned to each local government. If a local government wishes to terminate the MOU and amend the plan to change the allocation, the local government would need to present data and analysis which would supersede what has been presented to the Work Group and set forth in the MOU by both the Department of Economic Development (DEO) and the Florida Division of Emergency Management (DEM). According to Section 380.0552(9)(a)2., Florida Statutes, and Rules 28-18.400(5)(a)7., 28-19.310(5)(a)2., and 28-20.140(5)(a)11.,

Florida Administrative Code, the model used to depict hurricane evacuation clearance times for the Florida Keys must be acceptable to DEO, using only professionally acceptable methodology and sources of information as they are released.

In regards to “professionally acceptable methodology and sources of information”, the population data used in the Transportation Interface for Modeling Evacuations, or TIME, Model was based on the US Census and supplemented by the American Community Survey. The US Census, which contains the official population counts, only comes out every 10 years; there will be no new US Census data available prior to 2020. The American Community Survey is an annual survey which has three products: 1-year, 3-year and 5-year. Out of the three, the 5-year estimate is the most reliable in providing a projected characteristic trend for the population. The American Community Survey data, however, would also need to be anchored in US Census data since it only provides the characteristics of a population such as housing traits and vehicle ownership. Additionally, the TIME Model was created for the state of Florida and is based upon the best available data. Any new studies and their associated methodology to be used with the TIME Model would need to be reviewed and approved by DEM to ensure that statewide protocols for hurricane evacuation modeling are met and utilized. This is a substantial hurdle to overcome for a local government who would want to terminate and choose another model and/or data to represent them.

Finally, the intent of the hurricane evacuation work items under the Work Program was coordination not only between the local governments and the state, but also amongst the local governments who share the one evacuation route, US 1. The actions of one local government will have significant impacts on the others.

4. **Islamorada Comment:** Working Group Recommendation 8. Regarding Key West allocations: needs to clearly state that allocations must be both allocated and building permits must be issued and progressing; or if at any time such allocation or permit expires that allocation/permit is then removed from Key West and transferred to the other local governments otherwise allocations could simply be allocated with no other follow-up which clearly was not the intent or understanding of the other local governments. Unfortunately we must use the “trust but verify” approach here. If this does not occur I cannot guarantee that any other local governments will agree to Key West receiving their full allocation.

Response: We are not authorized to address this in the MOU. It is up to the Administration Commission or the City of Key West. However, a procedure will be developed to obtain the number of unused allocations annually and distribute the building permit allocations to the receiving local governments through a plan amendment. Key West would amend its plan to decrease the allocation at periodic intervals.

5. **Islamorada Comment:** In Part Two C. Participation Rates my notes state that mobile home units were to be amended to 95% based on the source of Florida Statewide Regional Evacuation Study Program, Regional Evacuation Transportation Analysis.

Response: The Human Behavioral Surveys conducted for the Statewide Regional Evacuation Study Program indicated that 95% of mobile home residents would evacuate during a Category 5 hurricane storm event. However, because of the vulnerability of these structures as well as Florida Keys specific modifications that were made to the Model, mobile home residents were modeled at 100% participation for Phase 1.

6. **Islamorada Comment:** In Part Two H. Evacuation Procedures (last paragraph) it states "...in the appropriate County operational Emergency Plans..." Do you mean the County and each local municipality's Plans, or just Monroe County's?

Response: The revised language was as follows: *"The actual sequence of the evacuation by zones will vary depending on the individual storm. The concepts embodied in this staged evacuation procedures should be embodied in the appropriate ~~County~~ operational Emergency Management Plans."*

7. **Islamorada Comment:** On Exhibit 4 under "Tourist (based on July Occupancy)" "Total Vehicles" the total on the bottom should be 12,416 not 11,287. This error was not noticed on previous documents.

Response: Correction made.

8. **Islamorada Comment:** On Exhibit 5, I am questioning the 2,338 vehicle number, indicating that due to double-counting which was brought up by C. Hurley that the number should be the old number of 2,025 – 800 [sic] = 1,205, and not 2,338.

Response: 2,338 vehicles is a revised number provided by the Navy on June 7, 2012 and later confirmed on July 13, 2012. The 2,338 military **vehicles** included several site-built units which have been incorrectly modeled with the Phase 2 evacuation stream in the past. Scenarios presented during the June 8, 2012 meeting adjusted for this issue by removing those military site-built units from Phase 2 since they would have already evacuated in Phase 1. Originally, the Phase 2 evacuation stream was adjusted by the removal of 870 site-built units. Further correspondence with the Navy revised this number to 912. However, Peary Court units are modeled in Phase 2.

9. **Islamorada Comment:** Replace Village of Islamorada with Islamorada, Village of Islands and also change Part Three E. 6. To Director of Planning and Development Services it would be appreciated.

Response: Correction made.

10. **Monroe County Comment:** “**WHEREAS**, DEO has determined, based on its data, input variables, and assumptions as set forth herein, that the Florida Division of Emergency Management’s Transportation Interface for Modeling Evacuations (“TIME”) Model is the model acceptable to DEO to accurately depict evacuation clearance times for the population of the Keys ACSCs; and”

Response: The TIME Model was selected because it is the best available model and being used for uniformity across the state. Therefore, we are not including this change in the MOU.

11. **Monroe County Comment:** “**WHEREAS**, due to time constraints set forth by administrative rule, the Work Group accepted the participation rates recommended by DEO, including those for mobile homes, without further study at this time, and DEO will recommend that future hurricane evacuation model runs include a refined participation rate study, in particular for permanent mobile home residents; and,”

Response: The DEO believes that mobile home occupants live in vulnerable housing and should be encouraged to evacuate during Phase 1 and will seek funding to educate mobile home occupants regarding the need to evacuate early.

12. **Monroe County Comment:** “**WHEREAS**, the Local Governments recognize that the data, input variables, and assumptions DEO has incorporated into its hurricane evacuation model and this MOU are subject to change; and, the Local Governments will evaluate and address appropriate adjustments to the model within each Evaluation and Appraisal Report.”

Response: No new Census data will be available prior to 2020 and local governments will have incomplete data to analyze regarding future residential population, housing characteristics and occupancy.

13. **Monroe County Comment: Participation Rates:** The assumed Participation Rates, for purposes of the current MOU, are:

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|-----------------------|----------------------------|
| 1. Tourist units: | 100% |
| 2. Mobile home units: | 100% |
| 3. Site-built units: | 90% for a Category 5 event |

The participation rates are based upon the 2010 Statewide Regional Evacuation Study, Regional Behavioral Analysis Volumes 2-11, prepared for the South Florida Region, which DEO has determined reflects the best available data at this time. However, prior to imposing any further restrictions or other modifications to the distribution of residential allocations to or among the Local Governments, by rule or otherwise, DEO will engage in another hurricane evacuation modeling effort to address the concerns raised by the Local Governments with respect to the participation rates.

Response: DEO is unable to conduct additional participation studies prior to considering approval of comprehensive plan amendments for Key West and Key Colony Beach to set an annual building permit cap.

When Census data is available in 2020, it is anticipated that additional human behavioral studies regarding participation will be conducted. The Work Program anticipates the review and potential approval of comprehensive plan amendments and/or rulemaking in the next annual evaluation. Participation studies cannot be completed prior to that time.