

# FLORIDA BUILDING COMMISSION

## FLORIDA PANHANDLE WINDBORNE DEBRIS REGION WORKSHOP

### REPORT TO THE FLORIDA BUILDING COMMISSION

*September 13, 2005*

*Okaloosa County Regional Airport, Florida*

Meeting Design & Facilitation By



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# **FLORIDA BUILDING COMMISSION**

## **PANHANDLE WINDBORNE DEBRIS REGION WORKSHOP REPORT SEPTEMBER 13, 2005**

### **OVERVIEW**

The 2005 Florida Legislature debated whether to revise the definition of the windborne debris region along the panhandle coast from Franklin County to the Alabama border and determined further study was warranted. It directed the Florida Building Commission to review the effects of Hurricane Ivan on damage caused by windborne debris and in conjunction with building officials from the impacted areas, to develop a recommendation for consideration by the 2006 Legislature.

The windborne debris region review is being conducted by the Commission who will consider the input of researchers who studied the effects of Hurricanes Ivan and Dennis, building officials of the impacted jurisdictions, and other interested parties is sought to assess the current knowledge of how hurricane winds impact this area of the State and to develop recommendations for changes to regulatory requirements and/or further investigations.

On September 13, 2005, The Florida Building Commission convened a workshop at the Okaloosa County Regional Airport, for the purpose of soliciting input from local building officials and other interested stakeholders, regarding whether the definition of the windborne debris region of the Florida Panhandle region should be revised.

The Workshop design provided a format for researchers to present the results of their studies related to recent Florida Hurricanes, and for local building officials to provide their observations and views resulting from the hurricanes. In addition, all interested stakeholder were provided an opportunity to comment on their observations and opinions.

### **REPORT OF THE SEPTEMBER 13, 2005 WORKSHOP**

#### **Opening**

Rick Dixon, Florida Building Commission Executive Director, opened the workshop and explained the scope of the workshop.

#### **DCA Staff Present**

Rick Dixon, Ila Jones, David Littlejohn, Mo Madani, Jim Richmond, and Betty Stevens.

#### **Meeting Facilitation**

The meeting was facilitated by Jeff Blair from the Florida Conflict Resolution Consortium at Florida State University. Information at: <http://consensus.fsu.edu/>

## **Project Webpage**

Information on the project, including agenda packets, workshop reports, and related documents may be found at the project webpage: <http://consensus.fsu.edu/FBC/wd.html>

## **Agenda Review**

Jeff Blair reviewed the agenda with workshop participants. The agenda included the following objectives:

- To Review the Charge to the Commission by Senate Bill 442.
- To Receive Reports on Windborne Debris from Hurricane Studies.
- To Receive Reports on Windborne Debris from Building Officials.
- To Consider Public Comment.
- To Evaluate Possible Options Regarding Windborne Debris Protection.

## **Presentation on DCA Triage Team Observations of Hurricanes Ivan and Dennis**

Rick Dixon presented a PowerPoint presentation on observations from Hurricanes Ivan and Dennis.

## **Presentation on Florida Coastal Monitoring Program Wind Surveillance and Survey Of Hurricanes Ivan and Dennis**

Kurt Gurley from the University of Florida presented findings on the results of the Florida Coastal Monitoring Program related to Hurricanes Ivan and Dennis.

## **Presentation on FEMA Mitigation Assessment Team Report on Hurricane Ivan**

Tom Smith, consultant to FEMA, discussed the FEMA Mitigation Assessment Team's report related to Hurricane Ivan.

## **Discussion of Building Officials Observations of Windborne Debris Damage**

Local building officials were invited to present their observations and opinions regarding windborne debris effects in the Panhandle region during Hurricanes Ivan and Dennis, as well as past hurricanes affecting the region. Members of the North West Florida Chapter and Panhandle Chapter of BOAF offered their observations and recommendations.

Nine Building Officials from the Panhandle Region offered their opinions, and with one exception, agreed that changes were not warranted at this time to the definition of the windborne debris region of the Florida Panhandle region. The one exception expressed support for converting to the existing ASCE 7 definition. The other eight building officials' comments ranged from most damage was related to surge and not windborne debris, to the Panhandle is a unique environment that ASCE 7 does not adequately reflect, to extra windborne debris protection should be voluntary and not mandatory, to mandatory protection will increase the cost of already unaffordable housing in the region.

In addition, during the discussion and evaluation of options portion of the workshop, local building officials expressed support for conducting studies specific to the region that would evaluate the affects of the treed environment, other unique features of the region, and consider

recent wind data and research related to windspeed revisions, prior to considering changes to the existing windborne debris region definition.

### **Presentation on ARA Wind and Damage Modeling**

Larry Twisdale and Peter Vickery presented data on wind and damage modeling conducted by Applied Research Associates (ARA). In general, the presentation focused on a recommendation that an engineering based risk assessment of hurricane windborne debris protection options for the Panhandle should be conducted in order to analyze the risks, costs, and benefits of windborne debris protection. The research would focus on factors unique to the Panhandle region including treed areas inland of the coast, and consider historical wind data affects.

### **Process Overview**

Jeff Blair explained that based on the researchers and local building officials presentations, there were four basic options that the workshop participants should evaluate. The four options were reviewed, an extensive opportunity for public comment was provided, the four options were evaluated by all participants, and participants were provided an additional opportunity to express support and reservations related to the four options after the evaluation exercise. Participants were invited to express their views until there were no individuals wishing to speak further.

### **Options for Evaluation**

- Option 1. No Changes, leave the Panhandle WBD definition as is.**
- Option 2. Conduct additional studies on treed environment effects, and historical wind data affects prior to considering any changes.**
- Option 3. Covert to ASCE-7 definition immediately ( as soon as logistically possible).**
- Option 4. Define the Panhandle WBD region, using a hybrid definition.**

### **Comments Offered Prior to Evaluation of the Options**

- Leave the WBD definition as it is; only cosmetic damage in this region; tidal surge is the cause of damage; it is not acceptable to change the WBD definition.
- No personal experience with windows breaking in even 1930's houses; extending the WBD is unnecessary; I feel safe and do not board up or evacuate for hurricanes; need to keep housing costs as low as possible, revising the definition will increase house costs in this region; low wages in this region for construction and service workers makes affordable housing critical; the price of housing has doubled recently; people will not be able to afford to live here; affluent people on the coast can afford to pay for the protection and WBD protection is already required there and not necessary inland.

- One mile from the coast is the way it should stay; it should be voluntary elsewhere; there should be incentives such as reduced insurance premiums for voluntary use of WBD protection.
- IBHS survey indicates that 73% of homeowners contacted in the Panhandle support windborne debris protection requirements for the region; the Panhandle received 50% of the hurricanes in Florida and is the hurricane alley; there is a high probability the Panhandle will sustain a major storm in the future.
- State Farm spent over a billion dollars in damage resulting from hurricanes in the region; the Panhandle deserves the same protection as the rest of the State; I can't believe there is an exemption for this region!
- Damage in this regions was not from wind borne debris, but from water surge; FBC constructed buildings did not suffer major damage; WBD protection is not necessary; I would like to see treed environment study conducted.
- I have not seen WBD damage at my house; would like to see treed environment study, and what about the local continental shelf affects on storm damage, this should also be studied.
- Have not seen a design event in this region yet; should not have less stringent standards in the Panhandle; support adopting ASCE 7 for the Panhandle.
- University building in Pensacola is designed to withstand 200 mph; show me that ASCE 7 is correct; there are 3 ways to measure category strength of hurricanes, we have pressure but not high wind speed here; it is too expensive to build to higher standards that are not needed; something is different in the Panhandle region that lowers wind speeds.
- Need to consider cost effective alternatives for those in the WBD region in any studies conducted; costs should also be evaluated.
- Water intrusion resulting from WBD damage beyond 1 mile occurs; need to revise maps and protect people in this region.
- Broken glazing from WBD causes major structural damage, even 30 mile from the coast. Consumers in the Panhandle are largely unaware there are lower WBD protections requirements only 1 mile from the coast.

## EVALUATION OF OPTIONS, RESERVATIONS, AND ADDITIONAL COMMENTS

### Option 1. No Changes, leave Panhandle WBD definition as is.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Ranking</i> <i>9/13/05</i>	<b>0</b>	<b>10</b>	<b>6</b>	<b>17</b>

### Reservations and Comments:

- What does the study say, need a study first.
- Need more information.
- We are less stringent than the minimum national standards, we will see more storms, want to get something done right away to increase WBD requirements.

- ASCE 7 has Arbitrary lines, and has no scientific meaning.
- Difference between 120 and 150 mph winds is exponential, and 5 x more likely to suffer debris damage at increased wind speeds.
- Florida is the highest risk state in the nation, need to provide protections.

**Option 2. Conduct additional studies on treed environment effects and historical wind data affects prior to considering any changes**

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Ranking 9/13/05</i>	<b>14</b>	<b>13</b>	<b>4</b>	<b>1</b>

**Reservations and Comments:**

- Concerned about the time required to conduct studies, we need to act now.
- The problem with modeling with treed area is that it is a moving target since trees are cut and development continually alters the environment and will affect the model.
- We also loose trees from storms, can't count on trees remaining in the region.
- The forests n Eglin Air Force base protects Crestview, and that will never change.
- National standards should be the basis for changes, ASCE 7 is a consensus standard and should be required in the Panhandle region.

**Option 3. Covert to ASCE-7 definition immediately (as soon a logistically possible).**

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Ranking 9/13/05</i>	<b>16</b>	<b>4</b>	<b>5</b>	<b>9</b>

**Reservations and Comments:**

- Don't want to have a knee jerk reaction, we need further study to justify revisions to the definition.
- Change in the next session, when the ASCE 7 lines change. Wood is an inexpensive way to provide protection.
- Partially enclosed option will be allowed until January 08 when the ICC changes are adopted.

**Option 4. Define the Panhandle WBD region, using a hybrid definition.**

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Ranking 9/13/05</i>	<b>5</b>	<b>6</b>	<b>14</b>	<b>8</b>

**Reservations and Comments:**

- Don't make adjustments without rational data, strong winds cause damage, trees fall and degrade forest areas, make change based on a study.

- ASCE 7 is a living document, it changes every 3 years, and is updated with new data.
- This option will leave us in the same place we are right now, different from the rest of the State, with a political solution and not a science based decision.
- Don't want to see hybrid definitions, need to go through national consensus standards, this will apply to other similar areas.
- Support national consensus standards as the basis for WBD requirements; base on the coastal monitoring project data and results.

### **Additional Comments**

- We see hurricane damage as natural disasters when they are man made events since we put buildings in areas that are vulnerable to storms.
- Trees are a factor with the winds, population in Panhandle is not same as in other areas of the State; based on a review of permits issued in Charlotte County, older buildings are damaged and data indicates we will save lives and property with newer buildings, need to mitigate now to safe lives and money later.
- We hear the same comments over the years, that homes not affordable if we provide protection. This is not true, home builders can not build fast enough to meet demand. They will continue to sell if WBD protection is provided.
- Height of trees in relation to height of buildings can be compensated for in studies, even in new developments where trees are planted. Model consider the relative height of trees to buildings, ASCE 7 development will require a 3 or 6 year duration. Our study could use recently collected data, and be completed in 6 months. The 120 line is a judgment call, the work is not yet finished, tall tree environments may affect wind speeds, and the 120 line will probably will be compressed once historical data is analyzed and incorporated into the standards.
- The ASCE 7 committee would look at the study and consider as part of their deliberation, 05 is being printed, we may go to 5 year cycle. I recommend that we proceed to adopt ASCE 7 now and make adjustments later.
- Could the study be completed in time for the Commission to make recommendations to the 2006 legislature. Answer: it is possible.
- I became homeless from Charley, make sure you are protecting people.