

2004 HURRICANE **NAME** POST-STORM ASSESSMENT LOCAL EMERGENCY MANAGEMENT COMPONENT

Date	Time	Jurisdiction	State	Conducted by

Participants (and positions)				
First	Last	Title	Phone	Email Address

*This assessment is designed to evaluate the effectiveness of the FEMA/US Army Corps of Engineers Hurricane Evacuation Study (HES) within your jurisdiction as it applied to your experience during the recent hurricane threat. It is also intended to identify any specific needs or recommendations that you may wish to share relating to FEMA's overall Hurricane Program. It is not designed to evaluate you nor your response to the event. Rather it is designed to help FEMA better serve you in the future. **Please complete this assessment prior to your scheduled interview.***

TECHNOLOGICAL

1. Please identify which tools/documents assisted you in making local decisions.

- | | | |
|--|--|---|
| <input type="checkbox"/> HURREVAC Products | <input type="checkbox"/> Storm Surge Maps | <input type="checkbox"/> HAZUS |
| <input type="checkbox"/> ETIS | <input type="checkbox"/> Wind Swath | <input type="checkbox"/> SLOSH Display Model |
| <input type="checkbox"/> Error Cone | <input type="checkbox"/> QPF Data | <input type="checkbox"/> Evacuation Zone Maps |
| <input type="checkbox"/> Shelter Locations | <input type="checkbox"/> National Flood Outlook | <input type="checkbox"/> Local Hurricane Plan |
| <input type="checkbox"/> Clearance Times | <input type="checkbox"/> River Gauge Observation | <input type="checkbox"/> Tides |
| <input type="checkbox"/> Decision Arcs | | <input type="checkbox"/> HES Study |
| <input type="checkbox"/> 5 Day Forecast | | <input type="checkbox"/> Other: _____ |

2. Of the tools utilized, how would you rate their performance?

		Unsatisfactory	-----	Excellent		Did Not Use
HURREVAC (Overall)	1	2	3	4	5	<input type="checkbox"/>
--ETIS	1	2	3	4	5	<input type="checkbox"/>
--Error Cone	1	2	3	4	5	<input type="checkbox"/>
--Shelter Locations	1	2	3	4	5	<input type="checkbox"/>
--Clearance Times	1	2	3	4	5	<input type="checkbox"/>
--Decision Arcs	1	2	3	4	5	<input type="checkbox"/>
--5 Day Forecast	1	2	3	4	5	<input type="checkbox"/>
--Storm Surge Maps	1	2	3	4	5	<input type="checkbox"/>
--Wind Swath	1	2	3	4	5	<input type="checkbox"/>
--QPF Data	1	2	3	4	5	<input type="checkbox"/>
--National Outlook	1	2	3	4	5	<input type="checkbox"/>
--River Gauge Obs	1	2	3	4	5	<input type="checkbox"/>
HAZUS	1	2	3	4	5	<input type="checkbox"/>
SLOSH Display Model	1	2	3	4	5	<input type="checkbox"/>
Evacuation Zone Maps	1	2	3	4	5	<input type="checkbox"/>
Local Hurricane Plan	1	2	3	4	5	<input type="checkbox"/>
Tides	1	2	3	4	5	<input type="checkbox"/>
HES Study	1	2	3	4	5	<input type="checkbox"/>
Other	1	2	3	4	5	<input type="checkbox"/>

3. Of the tools utilized, how would you rate their ease of use?

	Unsatisfactory	-----	-----	-----	-----	Excellent	Did Not Use
HURREVAC (Overall)	1	2	3	4	5		<input type="checkbox"/>
--ETIS	1	2	3	4	5		<input type="checkbox"/>
--Error Cone	1	2	3	4	5		<input type="checkbox"/>
--Shelter Locations	1	2	3	4	5		<input type="checkbox"/>
--Clearance Times	1	2	3	4	5		<input type="checkbox"/>
--Decision Arcs	1	2	3	4	5		<input type="checkbox"/>
--5 Day Forecast	1	2	3	4	5		<input type="checkbox"/>
--Storm Surge Maps	1	2	3	4	5		<input type="checkbox"/>
--Wind Swath	1	2	3	4	5		<input type="checkbox"/>
--QPF Data	1	2	3	4	5		<input type="checkbox"/>
--National Outlook	1	2	3	4	5		<input type="checkbox"/>
--River Gauge Obs	1	2	3	4	5		<input type="checkbox"/>
HAZUS	1	2	3	4	5		<input type="checkbox"/>
SLOSH Display Model	1	2	3	4	5		<input type="checkbox"/>
Evacuation Zone Maps	1	2	3	4	5		<input type="checkbox"/>
Local Hurricane Plan	1	2	3	4	5		<input type="checkbox"/>
Tides	1	2	3	4	5		<input type="checkbox"/>
HES Study	1	2	3	4	5		<input type="checkbox"/>
Other	1	2	3	4	5		<input type="checkbox"/>

4. Of the tools utilized, what level of improvement is needed for each product?

	Significant	-----	-----	-----	-----	None	Did Not Use
HURREVAC (Overall)	1	2	3	4	5		<input type="checkbox"/>
--ETIS	1	2	3	4	5		<input type="checkbox"/>
--Error Cone	1	2	3	4	5		<input type="checkbox"/>
--Shelter Locations	1	2	3	4	5		<input type="checkbox"/>
--Clearance Times	1	2	3	4	5		<input type="checkbox"/>
--Decision Arcs	1	2	3	4	5		<input type="checkbox"/>
--5 Day Forecast	1	2	3	4	5		<input type="checkbox"/>
--Storm Surge Maps	1	2	3	4	5		<input type="checkbox"/>
--Wind Swath	1	2	3	4	5		<input type="checkbox"/>
--QPF Data	1	2	3	4	5		<input type="checkbox"/>
--National Outlook	1	2	3	4	5		<input type="checkbox"/>
--River Gauge Obs	1	2	3	4	5		<input type="checkbox"/>
HAZUS	1	2	3	4	5		<input type="checkbox"/>
SLOSH Display Model	1	2	3	4	5		<input type="checkbox"/>
Evacuation Zone Maps	1	2	3	4	5		<input type="checkbox"/>
Local Hurricane Plan	1	2	3	4	5		<input type="checkbox"/>
Tides	1	2	3	4	5		<input type="checkbox"/>
HES Study	1	2	3	4	5		<input type="checkbox"/>
Other	1	2	3	4	5		<input type="checkbox"/>

5. Of the tools utilized, please indicate the level of staff training conducted.

	Unsatisfactory	-----	-----	-----	-----	Excellent	Did Not Use
HURREVAC	1	2	3	4	5		<input type="checkbox"/>
HAZUS	1	2	3	4	5		<input type="checkbox"/>
Website(s)	1	2	3	4	5		<input type="checkbox"/>
Evacuation Maps	1	2	3	4	5		<input type="checkbox"/>
Local Hurricane Plan	1	2	3	4	5		<input type="checkbox"/>
Tides	1	2	3	4	5		<input type="checkbox"/>
HES Study	1	2	3	4	5		<input type="checkbox"/>
Other	1	2	3	4	5		<input type="checkbox"/>

6. Of the tools utilized, rank the level of importance of each.

	Least Important -----Most Important					Did Not Use
	1	2	3	4	5	
HURREVAC	1	2	3	4	5	<input type="checkbox"/>
--ETIS	1	2	3	4	5	<input type="checkbox"/>
--SLOSH	1	2	3	4	5	<input type="checkbox"/>
--Shelter Locations	1	2	3	4	5	<input type="checkbox"/>
--Clearance Times	1	2	3	4	5	<input type="checkbox"/>
--Decision Arcs	1	2	3	4	5	<input type="checkbox"/>
--5 Day Forecast	1	2	3	4	5	<input type="checkbox"/>
--Storm Surge Maps	1	2	3	4	5	<input type="checkbox"/>
--Wind Swath	1	2	3	4	5	<input type="checkbox"/>
--Error Cone	1	2	3	4	5	<input type="checkbox"/>
HAZUS	1	2	3	4	5	<input type="checkbox"/>
Website(s)	1	2	3	4	5	<input type="checkbox"/>
Evacuation Maps	1	2	3	4	5	<input type="checkbox"/>
Local Hurricane Plan	1	2	3	4	5	<input type="checkbox"/>
Tides	1	2	3	4	5	<input type="checkbox"/>
HES Study	1	2	3	4	5	<input type="checkbox"/>
Other	1	2	3	4	5	<input type="checkbox"/>

MITIGATION

1. Please identify initiated mitigation efforts prior to or during the event to protect public buildings, then rate the level of success of each effort. (Use additional sheets if necessary)

Project Name	Unsatisfactory -----Excellent					Undetermined
	1	2	3	4	5	
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>
_____	1	2	3	4	5	<input type="checkbox"/>

2. What is the total cost of local mitigation efforts?

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Less than \$10K | <input type="checkbox"/> \$10K – \$50K | <input type="checkbox"/> \$50K – \$100K | <input type="checkbox"/> \$100K – \$150K |
| <input type="checkbox"/> \$150K – \$200K | <input type="checkbox"/> \$200K – \$250K | <input type="checkbox"/> \$250K – \$300K | <input type="checkbox"/> \$300K – \$350K |
| <input type="checkbox"/> \$350K – \$400K | <input type="checkbox"/> \$400K – \$450K | <input type="checkbox"/> \$450K – \$500K | <input type="checkbox"/> \$500K – \$750K |
| <input type="checkbox"/> \$750K – \$1Mill | <input type="checkbox"/> Greater than \$1 Mill | | |

3. Have any classes on retrofitting techniques for homeowners and builders been offered?

- Yes No

4. Is there a future need for these types of classes?

- Yes No

HURRICANE LIAISON TEAM (HLT)

1. If you used the services of the HLT during this event, please indicate your level of satisfaction.

	Unsatisfactory	-----	-----	-----	-----	Excellent	Did Not Use
Phone Conferencing	1	2	3	4	5		<input type="checkbox"/>
Video Conferencing	1	2	3	4	5		<input type="checkbox"/>
Phone Inquiries	1	2	3	4	5		<input type="checkbox"/>
HLT Website	1	2	3	4	5		<input type="checkbox"/>
Advance Notifications	1	2	3	4	5		<input type="checkbox"/>
HLT Meteorologists	1	2	3	4	5		<input type="checkbox"/>
HLT Hydrologist	1	2	3	4	5		<input type="checkbox"/>
Overall Service	1	2	3	4	5		<input type="checkbox"/>

EMERGENCY OPERATIONS CENTER

1. Please indicate the time and level of your local EOC Activation

Not Activated
 Partial Activation
 Full Activation
 Date _____ Date _____
 Time _____ Time _____

EVACUATION AND DECISION MAKING

1. Did your jurisdiction issue evacuation orders? (If not, go to next category)

Jurisdiction Name	Voluntary		Recommended		Mandatory	
	Date	Time	Date	Time	Date	Time

2. Did you utilize Hurricane Evacuation Zones?

Yes
 No (Please Explain): _____

3. Do you feel the Hurricane Evacuation Zones were:

Insufficient for the Threat
 Sufficient for the Threat
 Excessive for the Threat

4. Do you feel the HES Clearance Times were:

Insufficient for the Threat
 Sufficient for the Threat
 Excessive for the Threat

5. How were evacuation areas determined?

HES Products/Storm Surge Maps
 History of Wind Damage
 FIRM Maps
 Political Decision
 History of Flooding
 Other: _____

6. If evacuation orders were issued, please indicate which areas were targeted.

(Please use "V" for Voluntary, "M" for Mandatory, and "R" for Recommended)

Category 1 Evacuation Zone
 Mobile Homes/Manufactured Homes
 Category 2 Evacuation Zone
 Healthcare Facilities
 Category 3 Evacuation Zone
 River/Lake Fronts
 Category 4 Evacuation Zone
 Islands
 Category 5 Evacuation Zone
 Beach Fronts
 Other: _____
 Flood Prone Areas
 Countywide

7. Indicate the level of importance in making the evacuation decision with the following entities:

	Minimal	-----	-----	-----	-----	Significant	Did Not Use
State EMA	1	2	3	4	5		<input type="checkbox"/>
Neighboring EMAs	1	2	3	4	5		<input type="checkbox"/>
FEMA HLT	1	2	3	4	5		<input type="checkbox"/>
American Red Cross	1	2	3	4	5		<input type="checkbox"/>
School Board	1	2	3	4	5		<input type="checkbox"/>
Other: _____	1	2	3	4	5		<input type="checkbox"/>

TRANSPORTATION

1. What is the estimated number of people and vehicles evacuating for this event.

	Estimated People	Estimated Vehicles
Evacuating WITHIN your Community	_____	_____
Evacuating THROUGH or TO your Community	_____	_____

2. Of the population asked to evacuate, please estimate the percentage of the population who complied.

<input type="checkbox"/> 0 – 10%	<input type="checkbox"/> 25 – 30 %	<input type="checkbox"/> 45 – 50 %	<input type="checkbox"/> 65 – 70 %
<input type="checkbox"/> 10 – 15 %	<input type="checkbox"/> 30 – 35 %	<input type="checkbox"/> 50 – 55 %	<input type="checkbox"/> 70 – 75 %
<input type="checkbox"/> 15 – 20 %	<input type="checkbox"/> 35 – 40 %	<input type="checkbox"/> 55 – 60 %	<input type="checkbox"/> 75 – 80 %
<input type="checkbox"/> 20 – 25 %	<input type="checkbox"/> 40 – 45 %	<input type="checkbox"/> 60 – 65 %	<input type="checkbox"/> 80+ %

3. How would you rate the public's response to the evacuation notice?

Slow Response Normal Response Fast Response

4. Please identify the primary and secondary evacuation routes and the traffic volumes for each.

Evacuation Routes	Light	Normal	Heavy	Congested	Gridlock
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				
_____	<input type="checkbox"/>				

4. What problems, if any, were reported in the opened shelters?
- | | | |
|---|---|---|
| <input type="checkbox"/> Location Confusion | <input type="checkbox"/> Overcrowding | <input type="checkbox"/> Shortage of Staff |
| <input type="checkbox"/> Flooding | <input type="checkbox"/> Wind Damage | <input type="checkbox"/> Loss of Utilities |
| <input type="checkbox"/> Lack of Security | <input type="checkbox"/> Shortage of Shelters | <input type="checkbox"/> Unanticipated Medical Issues |
| <input type="checkbox"/> Shortage of Food | <input type="checkbox"/> Shortage of Supplies | <input type="checkbox"/> Other: _____ |

5. Were any shelters damaged during this event?
- Yes No

6. For local shelters, how successful were prior mitigation projects?

	Unsatisfactory	-----	Excellent	Undetermined		
Shutters	1	2	3	4	5	<input type="checkbox"/>
Roof Strengthening	1	2	3	4	5	<input type="checkbox"/>
Generators	1	2	3	4	5	<input type="checkbox"/>
Elevation	1	2	3	4	5	<input type="checkbox"/>
Other	1	2	3	4	5	<input type="checkbox"/>

POST STORM RECOVERY

1. What significant traffic problems occurred during the re-entry for this event?
- | | | |
|---|--|--|
| <input type="checkbox"/> Unanticipated Volumes | <input type="checkbox"/> Congestion and Traffic Jams | <input type="checkbox"/> Accidents and Stalled Autos |
| <input type="checkbox"/> Inadequate Traffic Control | <input type="checkbox"/> Uncoordinated Traffic Signals | <input type="checkbox"/> Uncoord Re-entry Timing |
| <input type="checkbox"/> Diversions from Others | <input type="checkbox"/> Flooded Roads | <input type="checkbox"/> Construction |
| <input type="checkbox"/> Inadequate Signage | <input type="checkbox"/> Damaged Roads | <input type="checkbox"/> County Roads Blocked |
| <input type="checkbox"/> Downed Trees | <input type="checkbox"/> Fuel Availability | <input type="checkbox"/> Other: _____ |

COMPREHENSIVE HURRICANE PREPAREDNESS STUDY (CHiPs)

FEMA is broadening the role of the Hurricane Evacuation Study into a more comprehensive approach called the Comprehensive Hurricane Preparedness Study or CHiPS for short. The HES will now become a component of the more comprehensive program.

1. Define what components of the *Hurricane Evacuation Study* need improvement.

	Significant	-----	None	Did Not Use		
Transportation Analysis	1	2	3	4	5	<input type="checkbox"/>
Behavioral Analysis	1	2	3	4	5	<input type="checkbox"/>
Vulnerability Analysis	1	2	3	4	5	<input type="checkbox"/>
Hazards Analysis	1	2	3	4	5	<input type="checkbox"/>
Shelter Analysis	1	2	3	4	5	<input type="checkbox"/>
Decision Making	1	2	3	4	5	<input type="checkbox"/>

2. Define what components of a *Re-entry Analysis* would benefit the community.

	No Benefit	-----	Significant	Undetermined		
Decision Making	1	2	3	4	5	<input type="checkbox"/>
Communication Process	1	2	3	4	5	<input type="checkbox"/>
Storm Damage Impacts	1	2	3	4	5	<input type="checkbox"/>
Roadway Network	1	2	3	4	5	<input type="checkbox"/>
Consideration/Alternatives						

3. Define what components of a *Business Mitigation and Recovery Analysis* would benefit the community.

	No Benefit	-----	Significant	Undetermined		
Mitigation Assessment	1	2	3	4	5	<input type="checkbox"/>
Impact Assessment	1	2	3	4	5	<input type="checkbox"/>
Economic Impact	1	2	3	4	5	<input type="checkbox"/>
Recovery Analysis	1	2	3	4	5	<input type="checkbox"/>
Post Storm Planning	1	2	3	4	5	<input type="checkbox"/>

