

Gulf Coast Interfaith
The TDRA Weather Model Does Not Work

The Texas Department of Rural Affairs (TDRA) has published a Revised Plan for distributing \$2.7 Billion in federal CDBG funds to 5 regions in Texas impacted by Hurricanes Dolly and Ike. When TDRA published their Plan on September 15, their Executive Summary made two statements which are revealing:

“In the new model, no region receives less money than originally proposed. In fact, every region receives an increase in locally controlled funds.”

“TDRA has adjusted the model in two very important ways. The new model weighs surge more heavily and it prominently factors in the population of people who are most targeted to receive CDBG funds: the low to moderate income (LMI) population.”

GCI Analysis of the TDRA Revised Model :

- The TDRA Revised Plan is still based on their “weather report” model which generates “estimated damages” based on wind, rain and storm surge and does not attempt to determine “actual damages.”
- The Revised Plan simply shifts \$335 Million from state administered programs to the COGs and reduces state oversight of how much of those funds are used for restoring Housing versus Infrastructure.
- The new TDRA weight for storm surge adds only 1% more for surge over wind and 3% more over rain which does nothing to change the distribution of funds between the COGs.
- The new factor added by TDRA, the absolute number of LMI families, and the elimination of the “Impact Zone Factor” have a dramatic impact on the distribution of funds within H-GAC. These changes shift funds to counties with large numbers of LMI families and away from the coast.

1. TDRA “estimated damages” are not close to actual damages” reflected by FEMA, SBA

The “Weather Report Model” generates “estimated damages” based on wind, rain and storm surge which turn out not to be closely related to the “actual damages” reflected in FEMA, SBA and other data bases.

| | TDRA Estimated Damages | Final Percentage used to Allocate \$\$ | Percent of of all Homes with any level of damage | Total FEMA Housing & ONA grants | Total SBA Loans |
|---------------|-------------------------------|---|---|--|------------------------|
| H-GAC | 53.19% | 59.90% | 71.5% | 72.4% | 75.6% |
| SETRPC | 15.64% | 17.61% | 13.8% | 18.4% | 21.7% |
| DETCOG | 8.95% | 10.07% | 3.8% | 2.7% | 1.0% |
| LRGVDC | 7.69% | 8.67% | 10.4% | 6.1% | 1.5% |
| Pool | 14.56% | 3.75% | 0.5% | 0.2% | 0.1% |
| Total | 100% | 100% | 100% | 100% | 100% |

2. Pool Counties generate much more in “estimated damages” than they have in actual damage.

The 30 mostly inland counties in the Pool each generate small estimated damages for Hurricanes Ike, Dolly or both. Together these counties have a total of 14.56% of the TDRA “estimated damages” in the state. This damage factor would generate over \$400 Million for the Pool counties so TDRA used a “model calibration” to cap their percentage at 3.75% and re-distribute proportionally 10.8 percentage points to the 4 other COGs. This

redistribution determines the “Final Percentage” that TDRA uses to allocate funding. This still generates over \$100 Million for counties which have fewer than 1,500 damaged homes and less than 1% of the actual damages.

3. The TDRA Model accurately tracks weather, but not where the damage occurred

The TDRA model correctly reflects that the Ike storm surge was highest in Chambers and western Jefferson Counties. It generates a surge damage factor of 29.19% for Chambers County and 28.08% for Jefferson County while Galveston County has a surge factor of only 17.% and Orange County only 6.64%. But the model doesn’t take into account that much of Chambers and Western Jefferson Counties are pasture land. The model misses the fact that Chambers has about 3,700 damaged homes while Galveston County has about 37,000 damaged homes. It misses the fact that FEMA has awarded twice as much in housing assistance grants to families in Orange County as in Jefferson County. The TDRA model tracks weather, not where the damage occurred.

4. A few counties have Zero Ike Damage but still generate disaster funds:

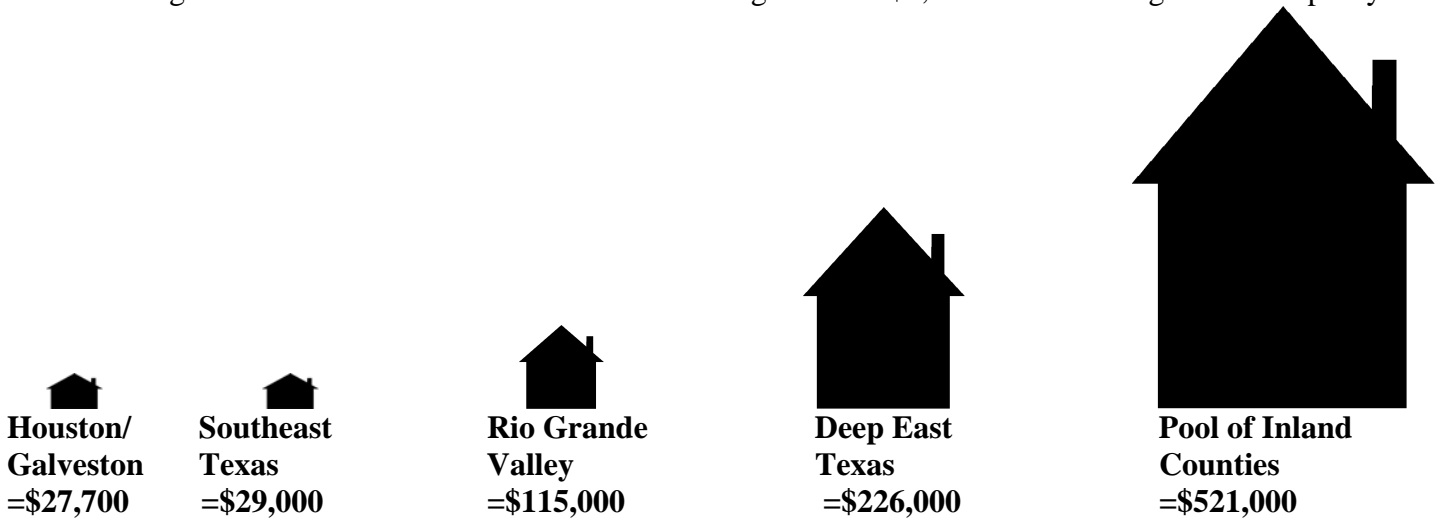
The revised TDRA weather model takes into account the total number of Low and Moderate Income families in each county as a factor which generates funding for the county. Aransas, Nueces and San Patricio Counties each had 0.00% damage from Wind, Storm Surge and Rainfall from Hurricane Ike but they do have a significant number of low income families—about 1.06% of all low income families in the Ike and Dolly disaster areas.

| | Wind Speed Funds | Surge Damage Funds | Rainfall Day1 Funds | Rainfall Day2 Funds | LMI | Adjusted DF/LMI |
|--------------|------------------|--------------------|---------------------|---------------------|-------|-----------------|
| CBCOG | | | | | | |
| Aransas | 0.00% | 0.00% | 0.00% | 0.00% | 0.26% | 0.06% |
| Nueces | 0.00% | 0.00% | 0.00% | 0.00% | 3.49% | 0.82% |
| San Patricio | 0.00% | 0.00% | 0.00% | 0.00% | 0.75% | 0.18% |
| Total | | | | | | 1.06% |

This 1.06% damage/LMI factor generates \$29.3 Million for the Pool from 3 counties with no Ike damage. Twenty four Pool counties increase their Damage/LMI factor under the revised model when the LMI factor is added and only 9 counties have decreased factors using the LMI. This is because most Pool counties have many more poor families than they have hurricane damage. But CDBG disaster funds are not granted to remedy poverty, they are intended to help families and jurisdictions recover from disaster losses.

5. The TDRA Model results in big disparities in funding per damaged home to each Region

Based on the number of homes suffering actual damages, the TDRA Model allocates much more money per home to some COGs and much less per home to others. If you take TDRA’s total allocation for each of the 5 COG areas and dedicate 50% to Housing, as the Original TDRA plan proposed, it is possible to compare the per home funding for each home which suffered serious damage of over \$8,000. There is a significant disparity:



per home per home per home per home per home
 Since the COG's now have the freedom to determine how much funding is dedicated to Housing restoration, it is likely that the Pool, DETCOG and even LRGVDC will dedicate much of their funding to Infrastructure.

6. New TDRA Weights in the Revised Plan cause dramatic shifts in funding within H-GAC

In response to public comment, TDRA wanted to push more money from state administered funds out to the Councils of Government, but they did not want to change the model in a way that would cause any region to lose funding. TDRA revised their model to accomplish that end, not improve the model so that it more accurately reflects the actual damages to and the needs of Texas families and communities.

The new weights adopted by TDRA are as follows:

| Factor | Weight |
|----------------|--------|
| Surge | 27% |
| Wind | 26% |
| Rain | 24% |
| LMI Population | 23% |

TDRA replaces the “Impact Zone Factor” with a “LMI population factor”

TDRA gives a minor extra weight to storm surge that doesn't change the split between regions significantly. But it also removes the “Impact Zone Factor” used in their original Weather Model and replaces it with their new LMI factor.

The Impact Zone Factor was intended to take into account intense damage from the Ike Eye Wall

The Original TDRA weather model lays out the necessity for the “Impact Zone Factor” on pages 8 and 9 saying “[w]ithin the eyewall, the high winds and the extremely high storm surge caused tremendous damage that was more typical of a Category 4 hurricane than the Category 2 hurricane designation received by Ike.” TDRA said the factor is necessary “in order to take into account the exponential damage caused by the eye of the storm's impact to the Texas coastline and to adequately estimate storm damage.” This factor was based on how many acres of land were inside the 40 mile eye wall in each county where Hurricane Ike made landfall. TDRA offers no explanation in its Revised Plan or Executive Summary about why this factor is no longer needed

The addition of the LMI factor and the elimination of the Impact Zone Factor cause significant changes to the Damage factors in some H-GAC counties

| County | LMI Factor is introduced | Impact Zone Factor is eliminated | Original Model County Factor | Revised Model County Factor | Percent Change |
|-----------|--------------------------|----------------------------------|------------------------------|-----------------------------|----------------|
| Harris | 40.73% | .0000684 | 10.11% | 18.04% | 78% |
| Galveston | 2.78% | .78631 | 12.43% | 6.74% | (46%) |
| Brazoria | 2.52% | .02516 | 5.88% | 5.50% | (6%) |
| Chambers | .26% | .06468 | 12.51% | 10.38% | (17%) |

The TDRA changes cause 3 coastal counties to lose ground and one to gain dramatically. The Damage/LMI Factor for Galveston County decreases by 46%, Chambers County decreases by 17% and Brazoria County decreases by 6% while the Harris County Damage/LMI factor increases by a staggering 78%.

7. TDRA Converts Revised Damage Factors into Funding Percentages for each COG

TDRA distributes the damage factors taken from the Pool to the other 4 COGs and then converts Damage Factors into Percentages that are used to allocate CDBG funds

| | Sum of County Damage Factors | | Damage Factors Taken from the Pool | = | Percent of Total \$2.7 Billion Allocation to the COG's |
|----------------------|---------------------------------|---|---------------------------------------|---|---|
| H-GAC | 53.19% | + | 6.71% | = | 59.90% |
| SETRPC | 15.64% | + | 1.97% | = | 17.61% |
| DETCOG | 8.95% | + | 1.12% | = | 10.07% |
| LRGDC | 7.69% | + | 0.98% | = | 8.67% |
| Pool Counties | 14.56% | - | 10.78% | = | 3.75% |
| Ike Total | 9.29% | | | | |
| Dolly Total | 5.27% | | | | |
| Total | 100.0% | | | | 100.00% |

Since the Funding Percentage for each COG is the sum of the counties in that region, the TDRA model also indicates what each county deserves based on the “estimated damages” generated by the weather report model. Indeed TDRA says that their model “provides a way of estimating the allocation for each county and COG using available data to associate damage with wind speed, storm surge, and rainfall.”

| | Revised Damage Factor | Final Allocation Percent | Round One Allocation | Funding deserved by each county from TDRA model | % of Funding to H- GAC |
|--------------|-----------------------------|--------------------------------|-------------------------|---|---------------------------------|
| Austin | 0.33% | 0.4% | \$ 77,508.00 | \$ 10,286,105.99 | 0.6% |
| Brazoria | 5.50% | 6.2% | \$ 17,409,490.00 | \$ 171,435,099.85 | 10.3% |
| Chambers | 10.38% | 11.7% | \$ 69,738,606.00 | \$ 323,544,788.44 | 19.5% |
| Fort Bend | 1.69% | 1.9% | \$ 2,636,845.00 | \$ 52,677,330.68 | 3.2% |
| Galveston | 6.74% | 7.6% | \$433,226,218.00 | \$ 210,085,922.36 | 12.7% |
| Harris | 18.04% | 20.3% | \$249,763,778.00 | \$ 562,307,127.51 | 33.9% |
| Liberty | 4.87% | 5.5% | \$ 21,898,771.00 | \$ 151,797,988.41 | 9.2% |
| Matagorda | 0.57% | 0.6% | \$ 5,984,150.00 | \$ 17,766,910.35 | 1.1% |
| Montgomery | 3.17% | 3.6% | \$ 11,515,395.00 | \$ 98,808,957.55 | 6.0% |
| Walker | 0.77% | 0.9% | \$ 1,555,801.00 | \$ 24,000,913.98 | 1.4% |
| Waller | 0.67% | 0.8% | \$ 325,698.00 | \$ 20,883,912.16 | 1.3% |
| Wharton | <u>0.46%</u> | <u>0.5%</u> | <u>\$ 1,232.00</u> | \$ 14,338,208.35 | 0.9% |
| Total | 53.19% | 59.9% | \$814,133,492.00 | \$ 1,657,933,265.63 | |

Impact of the TDRA Revised Plan in H-GAC region:

According to the TDRA weather report model:

- Harris County deserves \$562 Million or 34% of the funding in the region. That is a \$312 Million increase over the Harris County allocation when H-GAC used actual damages to divide the first \$814 Million in CDBG funds
- Galveston County deserves \$210 Million or 12.7% of the funding in the region. That is a \$233 Million reduction from the Galveston County allocation in Round 1.

- Galveston County has over 16,000 homes with more than \$8,000 in damage, or 46% of the state-wide total of homes with that level of damage.