

Appendix 12

Consequences

Overview

All of the consequence data used in the risk analysis was provided by the IPET Consequence team whose work is reported in Volume VII of the IPET report. The following general discussion is a summary of their work as it applies to the risk analysis. For additional details concerning the procedures used to develop both the stage-damage and stage-fatality relationships used in the risk analysis, the reader is referred to Volume VII, “The Consequences.”

In order to best determine the reduction in pre-Katrina risks gained by improvements made to the current HPS, it was decided that the pre-Katrina consequences would be used in the June 2007 analysis. The primary reason for this is that risks in New Orleans have been significantly reduced due to a combination of changes in demographics of the population, reduced property values and improvements to the HPS. In addition, population is returning to the area and redevelopment has been occurring more rapidly as recovery continues so any prediction of post-Katrina consequences would be based on constantly changing factors. Therefore, the risks reductions gained solely due to HPS improvements would be difficult to identify if post-Katrina population and property values were used in the risk analysis. While the use of pre-Katrina property values and population levels in the risk analysis results in life and property risks that are overstated, it does show decision makers and residents of New Orleans how risks have been impacted by improvements to the HPS.

One of the primary outputs of the risk and reliability modeling of the IPET Risk Team are estimates of the probability distributions of life loss and direct physical damage relating to the performance of the Hurricane Protection System (HPS) in the Greater New Orleans area. The risk was estimated for the following two scenarios:

1. Pre-Katrina (August 28, 2005)
2. The Current HPS (June 1, 2007).

The Risk Team worked in close collaboration with Consequence Team to obtain estimates of life loss and property loss as a function of maximum inundation elevation in the 27 subbasins that comprise the following 10 basins of the New Orleans HPS:

East Bank

1. New Orleans Metro - Orleans East Bank
2. New Orleans East
3. St. Bernard Parish
4. Jefferson Parish
5. St. Charles Parish
6. Plaquemines

West Bank

1. Cataouache
2. Westwego to Harvey Canal
3. Harvey Canal to Algiers Canal
4. Algiers Canal to Hero Canal

The numbers of subbasins that are contained within portions of the following parishes are indicated in parentheses: Jefferson (7), Orleans (7), New Orleans East (5), Plaquemines (1), St. Bernard (5), and St. Charles (2) Parishes (See Figure 12-1).

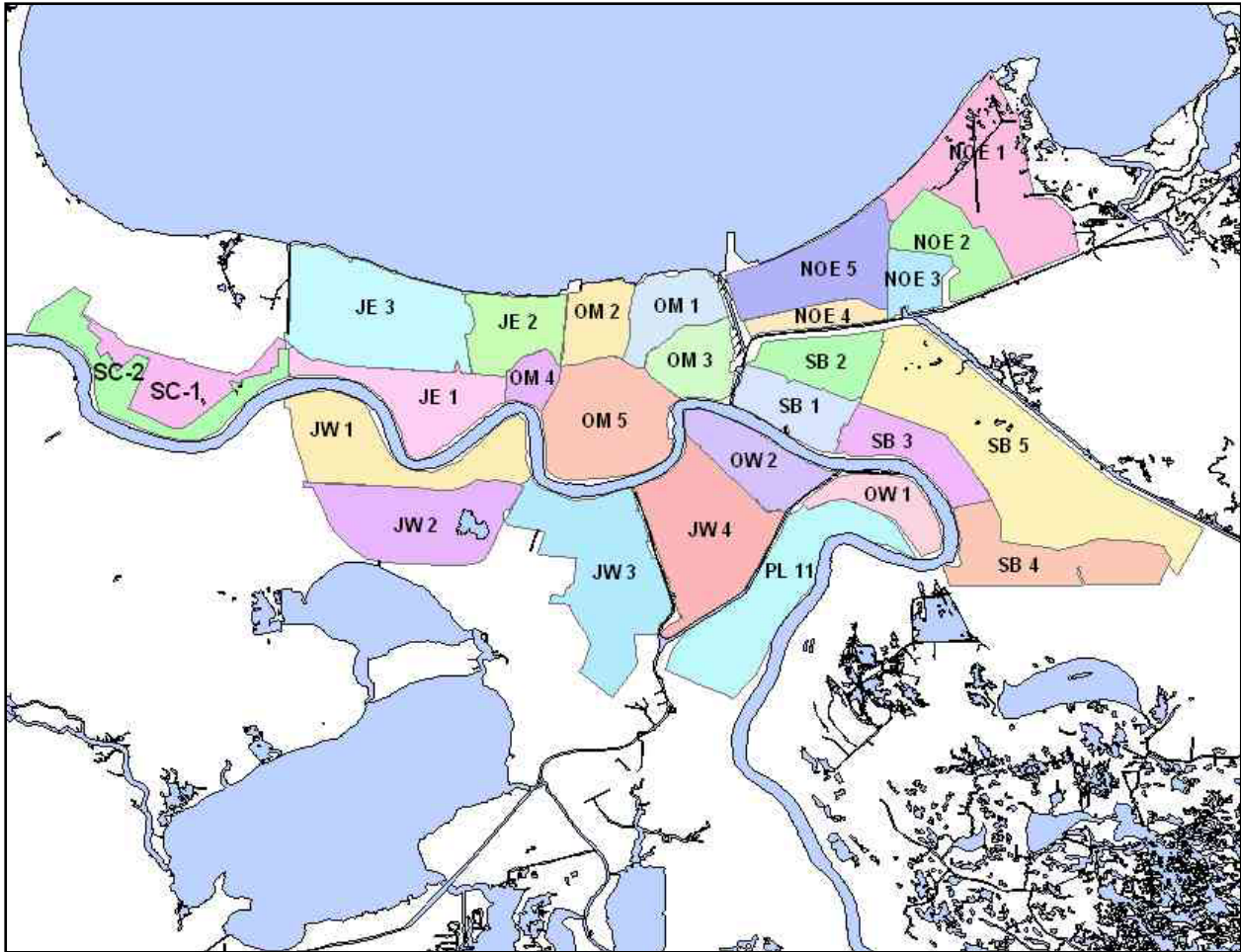


Figure 12 -1: Subbasin Map

The risk model was run for 76 hypothetical hurricanes that represent a wide range of hurricane events with different severities, directions, points of landfall, etc. For each of these hurricanes, the risk model determined the performance of the HPS and estimated the probability that inundation would result from insufficient internal drainage, overtopping of the levees, open road closures and levee breaching. The resulting estimates of inundation depths were used as a basis for interpolation of life loss and property loss estimates using the relationships provided by the Consequence Team. Estimates were made for the pre-Katrina and current scenarios for each of the 27 subbasins. Thus, it was necessary for the life loss and property loss estimates to cover a range of elevations associated with a range of expected flooding that could impact New Orleans from minor inundation to an elevation 36 ft above sea level.

The purpose of the risk analysis was to answer the following specific questions concerning the performance of the HPS:

- What was the reliability of the pre-Katrina HPS for preventing flooding of protected areas given the range of hurricanes expected to impact New Orleans?

- What is the reliability of the current post-Katrina HPS for preventing flooding of protected areas given the range of hurricanes expected to impact New Orleans? Specifically, what is the annual rate of occurrence of system failure due to the range of expected hurricane events?
- What are the annual rates of occurrence of economic consequences and loss of life resulting from failures of the HPS given the range of hurricanes expected to impact New Orleans?
- What is the uncertainty in these estimates of annual rates of occurrence?

These questions are answered in detail in Appendix 13 but can be summed up by asking: What were the risks to life and property before Katrina and how have improvements to the system reduced or mitigated those risks? In order to best determine the reduction in pre-Katrina risks gained by improvements made to the current HPS, it was decided that the pre-Katrina consequences would be used in the June 2007 analysis. The primary reason for this is that risks in New Orleans have been significantly reduced due to a combination of changes in demographics of the population, reduced property values and improvements to the HPS. Therefore, the risks reductions gained solely due to HPS improvements would be difficult to identify if post-Katrina population and property values were used in the risk analysis. While the use of pre-Katrina property values and population levels in the risk analysis results in life and property risks that are overstated, it does show decision makers and residents of New Orleans how risks have been impacted by improvements to the HPS.

It should be noted that the Consequence team conducted extensive studies to predict the repopulation and redevelopment after Katrina and that work may be used in future risk studies in New Orleans. Their work also included fatality estimates that included a range of effectiveness of evacuation prior to the arrival of a hurricane. Evacuation was considered as a distribution of the effectiveness in the fatality estimates developed for the risk team. The economic and fatality values used in the mapping and reporting of the risk analysis are mean values from the distribution.

The estimates of life loss were developed as probability distributions and the estimates of property loss were developed as best estimates with an associated 90 percent confidence interval rather than single-value or point estimates. The probability distributions for life loss and confidence intervals for property losses represent various types of uncertainties in the estimates, which are described below.

Life Loss Estimation

Life loss was estimated by the Consequence Team using two computer models as follows:

- LIFESim Modeling System¹ was developed: a) to estimate how the population in the flooded subbasins would redistribute vertically in relation to the depth of inundation; and b) to classify population into one of three flood lethality zones, which are defined in the LIFESim model and by McClelland and Bowles (2002), and an additional sub-zone for people who would be expected to be able to walk away from the inundation area following inundation. Thus, LIFESim was run without evacuation. Figure R28 illustrates how the LIFESim model considered safety zones within a structure.



Figure 12-2. Example of LIFESim architecture and definition of zones for estimating fatalities.

- A Monte Carlo Uncertainty Model, which was developed to take the vertically redistributed estimates of population in the three flood lethality zones from LIFESim, estimated: a) the immediate loss of life using fatality rate probability distributions from LIFESim and McClelland (2000) accounting for evacuation effectiveness as a random variable that varied according to a triangular probability distribution (65 percent, 80 percent, 95 percent); and b) delayed fatalities amongst those who survived the initial inundation but were not rescued, where the rescue effectiveness was accounted for a random variable that varied according to a uniform probability distribution between 99.5 percent and 100 percent in the Safe Flood

¹ Institute for Dam Safety Risk Management at Utah State University (Aboelata and Bowles 2005) LIFESim includes a simulation module for warning and evacuation, which was not used in this study.

Lethality Zone and between 95 percent and 100 percent in the Compromised and Chance Flood Lethality Zones.

The entire process is described in a report by Abt Associates, Inc. (2006) and involved the following steps:

- 1) Calibration of LIFESim to the Hurricane Katrina event.
- 2) Use of LIFESim and the Monte Carlo Uncertainty Model to estimate immediate and delayed life loss associated with the entire range of maximum inundation levels, given the population and housing stock that existed prior to Hurricane Katrina.
- 3) Use of LIFESim and the Monte Carlo Uncertainty Model to estimate immediate and delayed life loss associated with the entire range of maximum inundation levels, given the population and housing stock that were expected to exist June 1, 2006. The results of this aspect of the analysis were not used in the risk studies.

Various limitations in this approach and some potential future improvements are described in the report by Abt Associates, Inc. (2006). The distributions of life-loss estimates for each subbasin currently combine aleatory uncertainty associated with the fatality rates in each Flood Lethality Zone and epistemic uncertainties associated with evacuation and rescue effectiveness. In future work, epistemic and aleatory uncertainties will be treated separately. Table 12-1 provides the pre-Katrina fatality potential by stage for all subbasins flooded by Katrina. All stages are in NAVD88 (2004.65). The Stage-Fatality curves used in the risk analysis are shown in Table 12-1. The mean values in these tables were used in the analysis and the uncertainty bounds were used in the overall uncertainty analysis conducted by the risk team as described in Appendix 11. Note that the stage-fatality curves consider a mean value for evacuation effectiveness so the fatality numbers are considered to be “potential fatalities”. The actual experience during Katrina was that the evacuation was very effective in moving people who wanted to leave out of the area. Unfortunately, most of the Katrina fatalities were among the elderly, sick or disadvantaged who did not have the means to evacuate. The risk team decided not to consider a specific evacuation effectiveness based on an evaluation of the emergency action plans in place in New Orleans. This decision was due to the range of possible evacuation scenarios that are somewhat dependent upon the severity, path and timing of the approaching hurricane, as well as human factors such as the amount of warning time provided by local officials and preparation for the event by emergency responders. These are all factors that were not directly related to the performance of the HPS and are considered to be beyond the scope of the IPET mission. Instead, the mean value of effectiveness from the distribution generated by the Consequence Team was used.

Direct Economic Loss Estimation

The objective of the direct economic damage analysis was to develop stage-damage curves that represent the flood damage potential before Katrina devastated New Orleans on August 29, 2005. This required accounting for the severity of the Katrina. In some areas flooded by Katrina, where water depths were low, damage was minor. In other areas, where water depths were high,

damage was extensive and in some areas total. The June 2007 stage-damage tables and curves were estimated using the same subbasin definitions and damage tables as for the pre-Katrina analysis. The Katrina flooding depths were used to estimate the depth of flooding for each census block. For instance, within the Orleans Metro 5 subbasin, 1,535 census blocks had flooding of 1 foot or less while a total of 4,400 census blocks were flooded. Table 12-2 shows the complete estimate of the number of the census blocks flooded by Katrina by depth category.

From these selected census blocks, damages at each stage were aggregated to the subbasin level for each of the recovery category. This calculation determined the amount of the Katrina damage within each depth category. This was repeated for each of the Katrina flood depth categories.

The stage-damage curves used in the risk analysis are presented in Table 12-3. Figure 12-3 shows a graphic of a typical stage-damage curve for a sub-basin. Notice that, of the uncertainties quantified, the DEM error and error introduced by representing the elevation of a census block by a single value contribute the most. Only at high stages does the uncertainty in value contribute significantly to overall uncertainty. The vertical line shows the estimated Katrina peak stage in the sub-basin.

Consequences Not Considered

Table 12-4 shows the types of consequences that were provided by the Consequence Team. Of the consequences displayed in Table 12-4, the risk analysis did not quantify the risks associated with social-cultural or environmental impacts.

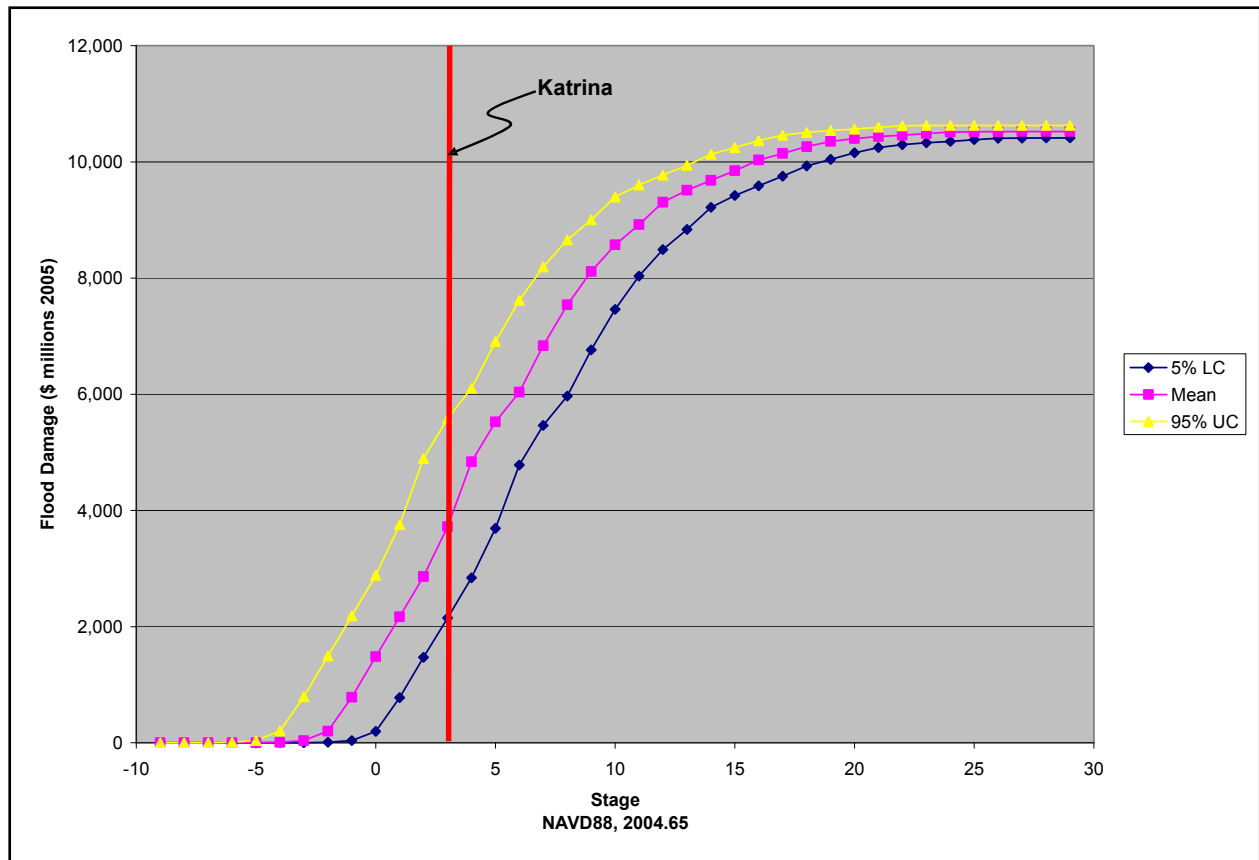


Figure 12-3. Typical Stage-Damage Curves with Uncertainty

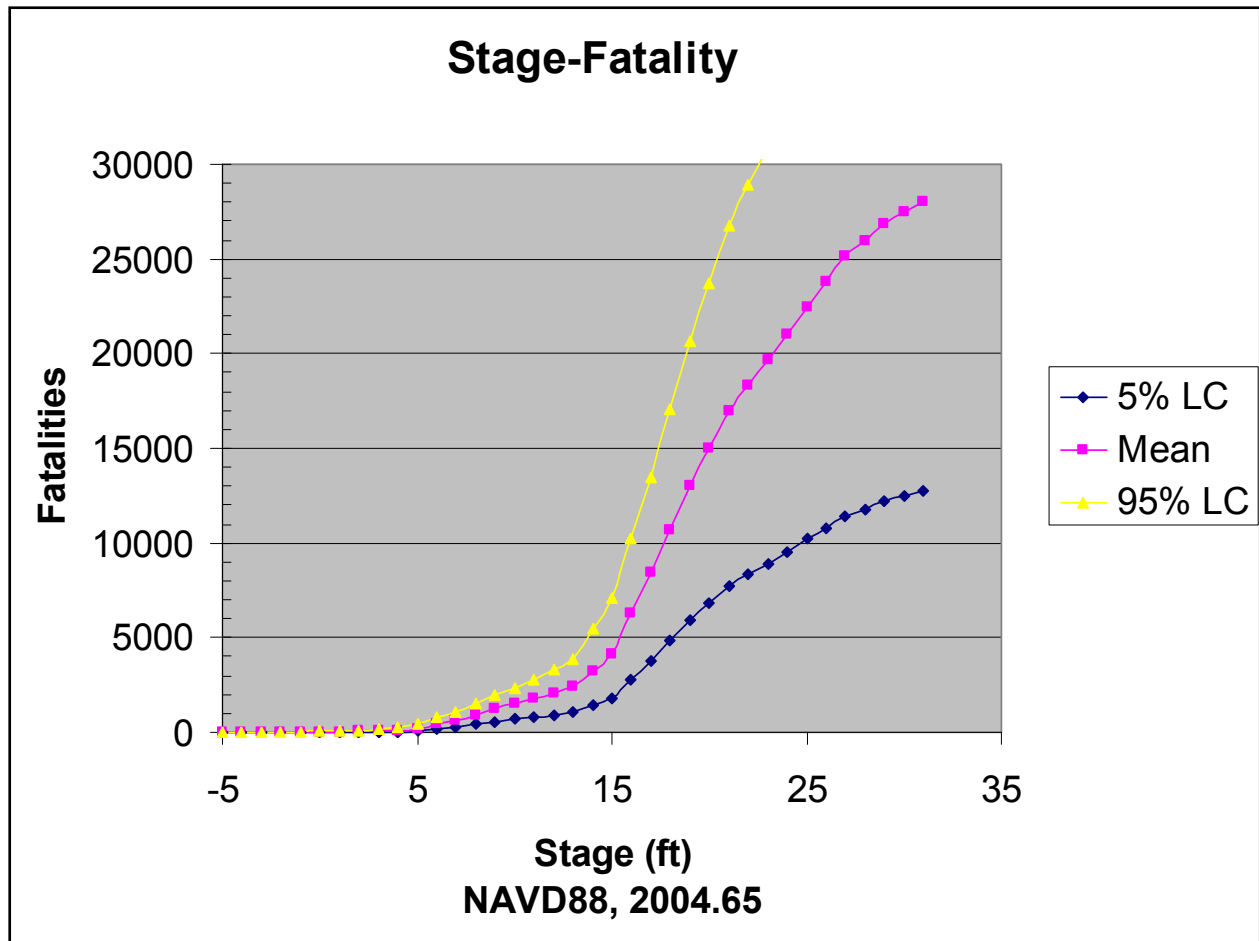


Figure 12-4. Typical Stage-Fatality Curve

Table 12-1 Pre-Katrina – Stage-Fatality

Elevation (ft)	OW1			OW2		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	8.720E-03	2.237E-01	1.010E-01
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	1.744E-02	4.473E-01	2.021E-01
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	1.188E-01	1.940E+00	8.842E-01
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	2.202E-01	3.433E+00	1.566E+00
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	1.176E+00	6.997E+00	3.671E+00
-3.000E+00	6.353E-05	1.630E-03	7.361E-04	2.132E+00	1.056E+01	5.776E+00
-2.000E+00	1.271E-04	3.259E-03	1.472E-03	3.266E+00	1.810E+01	9.616E+00
-1.000E+00	5.400E-04	1.385E-02	6.257E-03	4.399E+00	2.565E+01	1.346E+01
0.000E+00	9.529E-04	2.444E-02	1.104E-02	6.662E+00	3.478E+01	1.871E+01
1.000E+00	1.348E-03	3.458E-02	1.562E-02	8.925E+00	4.392E+01	2.397E+01
2.000E+00	1.744E-03	4.472E-02	2.020E-02	1.431E+01	7.348E+01	3.785E+01
3.000E+00	6.153E-03	1.485E-01	6.724E-02	1.969E+01	1.030E+02	5.173E+01
4.000E+00	1.056E-02	2.523E-01	1.143E-01	4.150E+01	1.878E+02	1.009E+02
5.000E+00	3.526E-02	7.662E-01	3.486E-01	6.332E+01	2.726E+02	1.500E+02
6.000E+00	5.996E-02	1.280E+00	5.829E-01	1.080E+02	4.066E+02	2.434E+02
7.000E+00	8.664E-02	1.399E+00	6.363E-01	1.526E+02	5.406E+02	3.367E+02
8.000E+00	1.133E-01	1.519E+00	6.896E-01	1.909E+02	6.699E+02	4.200E+02
9.000E+00	2.877E-01	2.529E+00	1.137E+00	2.292E+02	7.992E+02	5.032E+02
1.000E+01	4.620E-01	3.540E+00	1.584E+00	2.819E+02	9.969E+02	6.231E+02
1.100E+01	1.359E+00	6.906E+00	3.515E+00	3.347E+02	1.195E+03	7.429E+02
1.200E+01	2.256E+00	1.027E+01	5.447E+00	4.499E+02	1.670E+03	1.015E+03
1.300E+01	3.810E+00	1.438E+01	8.587E+00	5.652E+02	2.145E+03	1.287E+03
1.400E+01	5.364E+00	1.849E+01	1.173E+01	8.275E+02	2.997E+03	1.850E+03
1.500E+01	5.855E+00	2.018E+01	1.280E+01	1.090E+03	3.849E+03	2.413E+03
1.600E+01	6.346E+00	2.188E+01	1.388E+01	1.337E+03	4.678E+03	2.948E+03
1.700E+01	7.170E+00	2.823E+01	1.640E+01	1.584E+03	5.507E+03	3.483E+03
1.800E+01	7.993E+00	3.457E+01	1.893E+01	1.806E+03	6.274E+03	3.970E+03
1.900E+01	1.336E+01	6.909E+01	3.400E+01	2.027E+03	7.041E+03	4.458E+03
2.000E+01	1.873E+01	1.036E+02	4.908E+01	2.272E+03	7.895E+03	4.998E+03
2.100E+01	3.813E+01	1.518E+02	8.787E+01	2.516E+03	8.748E+03	5.538E+03
2.200E+01	5.753E+01	2.000E+02	1.267E+02	2.779E+03	9.660E+03	6.118E+03
2.300E+01	6.151E+01	2.139E+02	1.356E+02	3.042E+03	1.057E+04	6.698E+03
2.400E+01	6.550E+01	2.278E+02	1.445E+02	3.276E+03	1.138E+04	7.214E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	NOE1			NOE2		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	1.816E-03	4.659E-02	2.105E-02
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	3.633E-03	9.319E-02	4.210E-02
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	1.653E-02	4.239E-01	1.915E-01
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	2.942E-02	7.547E-01	3.409E-01
-3.000E+00	0.000E+00	0.000E+00	0.000E+00	5.422E-02	1.386E+00	6.259E-01
-2.000E+00	0.000E+00	0.000E+00	0.000E+00	7.902E-02	2.016E+00	9.110E-01
-1.000E+00	0.000E+00	0.000E+00	0.000E+00	9.187E-02	2.236E+00	1.012E+00
0.000E+00	8.338E-05	1.008E-03	4.802E-04	1.047E-01	2.456E+00	1.113E+00
1.000E+00	1.668E-04	2.016E-03	9.604E-04	1.445E-01	2.545E+00	1.172E+00
2.000E+00	1.089E-03	1.141E-02	5.518E-03	1.843E-01	2.635E+00	1.230E+00
3.000E+00	2.011E-03	2.081E-02	1.008E-02	3.056E-01	2.941E+00	1.425E+00
4.000E+00	3.734E-03	2.748E-02	1.324E-02	4.269E-01	3.247E+00	1.620E+00
5.000E+00	5.456E-03	3.415E-02	1.640E-02	5.362E-01	3.503E+00	1.793E+00
6.000E+00	1.003E-02	7.461E-02	3.152E-02	6.455E-01	3.760E+00	1.966E+00
7.000E+00	1.461E-02	1.151E-01	4.664E-02	9.045E-01	6.650E+00	2.922E+00
8.000E+00	4.229E-02	1.779E-01	9.972E-02	1.163E+00	9.541E+00	3.878E+00
9.000E+00	6.997E-02	2.407E-01	1.528E-01	4.001E+00	3.060E+01	1.236E+01
1.000E+01	7.640E-02	2.632E-01	1.669E-01	6.839E+00	5.165E+01	2.085E+01
1.100E+01	8.282E-02	2.857E-01	1.811E-01	2.188E+01	1.127E+02	5.578E+01
1.200E+01	9.133E-02	3.313E-01	2.032E-01	3.692E+01	1.738E+02	9.071E+01
1.300E+01	9.985E-02	3.769E-01	2.253E-01	6.715E+01	2.604E+02	1.538E+02
1.400E+01	1.302E-01	6.143E-01	3.196E-01	9.738E+01	3.471E+02	2.168E+02
1.500E+01	1.605E-01	8.517E-01	4.138E-01	1.170E+02	4.113E+02	2.592E+02
1.600E+01	3.306E-01	1.305E+00	7.606E-01	1.367E+02	4.756E+02	3.015E+02
1.700E+01	5.007E-01	1.759E+00	1.107E+00	1.388E+02	4.829E+02	3.061E+02
1.800E+01	5.832E-01	2.037E+00	1.288E+00	1.409E+02	4.902E+02	3.107E+02
1.900E+01	6.658E-01	2.316E+00	1.468E+00	1.436E+02	4.992E+02	3.164E+02
2.000E+01	6.735E-01	2.343E+00	1.485E+00	1.463E+02	5.083E+02	3.221E+02
2.100E+01	6.812E-01	2.369E+00	1.502E+00	1.523E+02	5.291E+02	3.353E+02
2.200E+01	6.847E-01	2.382E+00	1.510E+00	1.583E+02	5.499E+02	3.486E+02
2.300E+01	6.883E-01	2.395E+00	1.518E+00	1.646E+02	5.725E+02	3.629E+02
2.400E+01	6.984E-01	2.427E+00	1.538E+00	1.710E+02	5.951E+02	3.772E+02

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	NOE3			NOE4		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	1.412E-04	3.621E-03	1.636E-03
-4.000E+00	3.402E-02	8.725E-01	3.942E-01	1.412E-04	3.621E-03	1.636E-03
-3.000E+00	1.369E-01	3.512E+00	1.587E+00	1.412E-04	3.621E-03	1.636E-03
-2.000E+00	2.399E-01	6.152E+00	2.779E+00	1.412E-04	3.621E-03	1.636E-03
-1.000E+00	5.787E-01	8.104E+00	3.811E+00	1.421E-03	3.645E-02	1.647E-02
0.000E+00	9.176E-01	1.006E+01	4.843E+00	1.826E-03	4.604E-02	2.081E-02
1.000E+00	2.986E+00	1.772E+01	9.158E+00	2.230E-03	5.562E-02	2.515E-02
2.000E+00	5.055E+00	2.538E+01	1.347E+01	4.176E-03	9.278E-02	4.220E-02
3.000E+00	8.539E+00	4.074E+01	2.153E+01	6.122E-03	1.299E-01	5.925E-02
4.000E+00	1.202E+01	5.610E+01	2.960E+01	1.084E-02	1.533E-01	7.060E-02
5.000E+00	2.164E+01	8.393E+01	4.940E+01	1.556E-02	1.766E-01	8.194E-02
6.000E+00	3.125E+01	1.118E+02	6.920E+01	4.666E-02	3.673E-01	1.663E-01
7.000E+00	4.053E+01	1.426E+02	8.923E+01	7.775E-02	5.580E-01	2.506E-01
8.000E+00	4.980E+01	1.734E+02	1.093E+02	2.179E-01	1.157E+00	5.718E-01
9.000E+00	6.013E+01	2.177E+02	1.336E+02	3.580E-01	1.755E+00	8.929E-01
1.000E+01	7.045E+01	2.619E+02	1.580E+02	6.284E-01	2.425E+00	1.429E+00
1.100E+01	9.705E+01	4.081E+02	2.282E+02	8.987E-01	3.094E+00	1.964E+00
1.200E+01	1.236E+02	5.543E+02	2.983E+02	9.438E-01	3.251E+00	2.064E+00
1.300E+01	2.255E+02	9.105E+02	5.242E+02	9.888E-01	3.408E+00	2.163E+00
1.400E+01	3.273E+02	1.267E+03	7.502E+02	1.081E+00	4.033E+00	2.428E+00
1.500E+01	4.597E+02	1.662E+03	1.027E+03	1.174E+00	4.657E+00	2.694E+00
1.600E+01	5.921E+02	2.057E+03	1.304E+03	1.714E+00	7.458E+00	4.077E+00
1.700E+01	6.265E+02	2.178E+03	1.381E+03	2.255E+00	1.026E+01	5.459E+00
1.800E+01	6.608E+02	2.299E+03	1.457E+03	3.858E+00	1.467E+01	8.754E+00
1.900E+01	6.730E+02	2.341E+03	1.484E+03	5.460E+00	1.908E+01	1.205E+01
2.000E+01	6.851E+02	2.383E+03	1.511E+03	6.148E+00	2.143E+01	1.356E+01
2.100E+01	7.032E+02	2.444E+03	1.549E+03	6.835E+00	2.377E+01	1.507E+01
2.200E+01	7.213E+02	2.505E+03	1.588E+03	6.912E+00	2.403E+01	1.524E+01
2.300E+01	7.537E+02	2.620E+03	1.660E+03	6.988E+00	2.430E+01	1.540E+01
2.400E+01	7.861E+02	2.734E+03	1.733E+03	7.096E+00	2.466E+01	1.564E+01

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	NOE5		
	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	1.494E-01	3.832E+00	1.731E+00
-8.000E+00	3.232E-01	8.289E+00	3.744E+00
-7.000E+00	4.969E-01	1.275E+01	5.758E+00
-6.000E+00	8.620E-01	2.163E+01	9.776E+00
-5.000E+00	1.227E+00	3.052E+01	1.379E+01
-4.000E+00	2.650E+00	4.470E+01	2.071E+01
-3.000E+00	4.073E+00	5.888E+01	2.762E+01
-2.000E+00	1.262E+01	9.192E+01	4.507E+01
-1.000E+00	2.118E+01	1.250E+02	6.253E+01
0.000E+00	5.627E+01	2.518E+02	1.382E+02
1.000E+00	9.136E+01	3.786E+02	2.139E+02
2.000E+00	1.762E+02	6.590E+02	3.968E+02
3.000E+00	2.610E+02	9.394E+02	5.797E+02
4.000E+00	3.461E+02	1.217E+03	7.623E+02
5.000E+00	4.312E+02	1.496E+03	9.449E+02
6.000E+00	5.048E+02	1.779E+03	1.114E+03
7.000E+00	5.783E+02	2.062E+03	1.284E+03
8.000E+00	7.841E+02	3.100E+03	1.806E+03
9.000E+00	9.899E+02	4.138E+03	2.328E+03
1.000E+01	1.638E+03	6.196E+03	3.719E+03
1.100E+01	2.286E+03	8.255E+03	5.111E+03
1.200E+01	2.946E+03	1.041E+04	6.528E+03
1.300E+01	3.605E+03	1.256E+04	7.945E+03
1.400E+01	3.990E+03	1.387E+04	8.786E+03
1.500E+01	4.374E+03	1.519E+04	9.628E+03
1.600E+01	4.604E+03	1.600E+04	1.014E+04
1.700E+01	4.835E+03	1.681E+04	1.065E+04
1.800E+01	4.999E+03	1.738E+04	1.101E+04
1.900E+01	5.162E+03	1.794E+04	1.137E+04
2.000E+01	5.354E+03	1.861E+04	1.180E+04
2.100E+01	5.546E+03	1.929E+04	1.223E+04
2.200E+01	5.676E+03	1.974E+04	1.252E+04
2.300E+01	5.806E+03	2.020E+04	1.280E+04
2.400E+01	5.891E+03	2.050E+04	1.299E+04

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	OM1			OM2		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	7.508E-01	1.315E+01	6.061E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	1.064E+00	1.680E+01	7.794E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	2.865E+00	4.129E+01	1.549E+01
-9.000E+00	8.096E-02	2.986E-01	1.824E-01	4.666E+00	6.579E+01	2.318E+01
-8.000E+00	1.619E-01	5.972E-01	3.649E-01	2.644E+01	1.332E+02	6.798E+01
-7.000E+00	2.143E-01	8.507E-01	5.017E-01	4.822E+01	2.007E+02	1.128E+02
-6.000E+00	2.668E-01	1.104E+00	6.385E-01	7.812E+01	2.879E+02	1.747E+02
-5.000E+00	4.931E-01	3.167E+00	1.633E+00	1.080E+02	3.751E+02	2.367E+02
-4.000E+00	7.194E-01	5.229E+00	2.627E+00	1.227E+02	4.244E+02	2.687E+02
-3.000E+00	1.034E+00	1.004E+01	4.855E+00	1.374E+02	4.737E+02	3.006E+02
-2.000E+00	1.348E+00	1.486E+01	7.084E+00	1.500E+02	5.207E+02	3.292E+02
-1.000E+00	1.348E+00	1.486E+01	7.084E+00	1.627E+02	5.678E+02	3.578E+02
0.000E+00	1.348E+00	1.486E+01	7.084E+00	2.053E+02	8.081E+02	4.717E+02
1.000E+00	8.128E+00	5.889E+01	2.862E+01	2.480E+02	1.048E+03	5.856E+02
2.000E+00	1.990E+01	1.046E+02	5.426E+01	4.147E+02	1.552E+03	9.372E+02
3.000E+00	3.168E+01	1.504E+02	7.990E+01	5.814E+02	2.055E+03	1.289E+03
4.000E+00	5.795E+01	2.323E+02	1.346E+02	7.098E+02	2.486E+03	1.567E+03
5.000E+00	8.422E+01	3.142E+02	1.893E+02	8.382E+02	2.916E+03	1.845E+03
6.000E+00	1.173E+02	4.216E+02	2.602E+02	9.228E+02	3.207E+03	2.032E+03
7.000E+00	1.504E+02	5.290E+02	3.311E+02	1.007E+03	3.498E+03	2.218E+03
8.000E+00	1.894E+02	6.735E+02	4.189E+02	1.057E+03	3.670E+03	2.327E+03
9.000E+00	2.283E+02	8.179E+02	5.068E+02	1.106E+03	3.842E+03	2.436E+03
1.000E+01	3.027E+02	1.115E+03	6.803E+02	1.162E+03	4.037E+03	2.560E+03
1.100E+01	3.770E+02	1.412E+03	8.538E+02	1.218E+03	4.231E+03	2.683E+03
1.200E+01	5.509E+02	2.030E+03	1.241E+03	1.295E+03	4.498E+03	2.852E+03
1.300E+01	7.248E+02	2.648E+03	1.629E+03	1.372E+03	4.765E+03	3.021E+03
1.400E+01	9.938E+02	3.563E+03	2.217E+03	1.444E+03	5.015E+03	3.179E+03
1.500E+01	1.263E+03	4.479E+03	2.805E+03	1.515E+03	5.266E+03	3.338E+03
1.600E+01	1.574E+03	5.527E+03	3.480E+03	1.563E+03	5.434E+03	3.445E+03
1.700E+01	1.885E+03	6.576E+03	4.156E+03	1.610E+03	5.602E+03	3.551E+03
1.800E+01	2.141E+03	7.452E+03	4.718E+03	1.631E+03	5.675E+03	3.598E+03
1.900E+01	2.397E+03	8.327E+03	5.279E+03	1.652E+03	5.747E+03	3.644E+03
2.000E+01	2.553E+03	8.868E+03	5.622E+03	1.671E+03	5.814E+03	3.686E+03
2.100E+01	2.709E+03	9.409E+03	5.965E+03	1.690E+03	5.880E+03	3.727E+03
2.200E+01	2.830E+03	9.834E+03	6.233E+03	1.708E+03	5.944E+03	3.768E+03
2.300E+01	2.951E+03	1.026E+04	6.502E+03	1.727E+03	6.008E+03	3.809E+03
2.400E+01	3.046E+03	1.059E+04	6.712E+03	1.745E+03	6.075E+03	3.851E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	OM3			OM4		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	1.007E-03	2.583E-02	1.167E-02
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	2.014E-03	5.166E-02	2.334E-02
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	1.252E-02	3.492E-01	1.214E-01
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	2.302E-02	6.467E-01	2.194E-01
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	2.178E-01	1.814E+00	7.472E-01
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	4.127E-01	2.982E+00	1.275E+00
-5.000E+00	4.004E-02	5.220E-01	2.429E-01	1.170E+00	4.837E+00	2.746E+00
-4.000E+00	8.009E-02	1.044E+00	4.858E-01	1.928E+00	6.692E+00	4.216E+00
-3.000E+00	5.456E-01	5.165E+00	2.499E+00	2.362E+00	8.299E+00	5.197E+00
-2.000E+00	1.011E+00	9.287E+00	4.511E+00	2.797E+00	9.907E+00	6.177E+00
-1.000E+00	1.907E+00	2.050E+01	9.799E+00	3.471E+00	1.327E+01	7.884E+00
0.000E+00	2.802E+00	3.172E+01	1.509E+01	4.145E+00	1.663E+01	9.590E+00
1.000E+00	5.188E+00	4.896E+01	2.373E+01	6.205E+00	2.702E+01	1.478E+01
2.000E+00	7.574E+00	6.621E+01	3.237E+01	8.265E+00	3.740E+01	1.996E+01
3.000E+00	1.976E+01	1.280E+02	6.116E+01	1.507E+01	6.099E+01	3.488E+01
4.000E+00	3.194E+01	1.899E+02	8.995E+01	2.187E+01	8.458E+01	4.979E+01
5.000E+00	7.468E+01	3.231E+02	1.791E+02	3.390E+01	1.232E+02	7.557E+01
6.000E+00	1.174E+02	4.563E+02	2.683E+02	4.593E+01	1.618E+02	1.013E+02
7.000E+00	1.748E+02	6.341E+02	3.891E+02	5.789E+01	2.034E+02	1.276E+02
8.000E+00	2.323E+02	8.119E+02	5.100E+02	6.985E+01	2.449E+02	1.539E+02
9.000E+00	2.809E+02	9.771E+02	6.158E+02	8.648E+01	3.039E+02	1.908E+02
1.000E+01	3.295E+02	1.142E+03	7.216E+02	1.031E+02	3.630E+02	2.277E+02
1.100E+01	3.970E+02	1.450E+03	8.881E+02	1.294E+02	4.581E+02	2.866E+02
1.200E+01	4.645E+02	1.757E+03	1.055E+03	1.557E+02	5.533E+02	3.455E+02
1.300E+01	6.922E+02	2.586E+03	1.567E+03	1.980E+02	6.962E+02	4.376E+02
1.400E+01	9.199E+02	3.415E+03	2.079E+03	2.403E+02	8.391E+02	5.296E+02
1.500E+01	1.308E+03	4.718E+03	2.923E+03	2.847E+02	9.930E+02	6.271E+02
1.600E+01	1.696E+03	6.020E+03	3.767E+03	3.291E+02	1.147E+03	7.247E+02
1.700E+01	2.119E+03	7.431E+03	4.680E+03	3.807E+02	1.325E+03	8.379E+02
1.800E+01	2.542E+03	8.842E+03	5.593E+03	4.323E+02	1.503E+03	9.512E+02
1.900E+01	2.867E+03	9.965E+03	6.309E+03	4.849E+02	1.685E+03	1.067E+03
2.000E+01	3.192E+03	1.109E+04	7.025E+03	5.375E+02	1.868E+03	1.183E+03
2.100E+01	3.467E+03	1.204E+04	7.632E+03	5.827E+02	2.024E+03	1.283E+03
2.200E+01	3.742E+03	1.300E+04	8.239E+03	6.279E+02	2.180E+03	1.382E+03
2.300E+01	3.986E+03	1.385E+04	8.778E+03	6.567E+02	2.282E+03	1.446E+03
2.400E+01	4.231E+03	1.469E+04	9.316E+03	6.855E+02	2.383E+03	1.510E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	OM5		
	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00
-5.000E+00	0.000E+00	0.000E+00	0.000E+00
-4.000E+00	8.259E-01	3.053E+00	1.861E+00
-3.000E+00	1.652E+00	6.106E+00	3.721E+00
-2.000E+00	3.532E+00	2.417E+01	1.235E+01
-1.000E+00	5.412E+00	4.222E+01	2.097E+01
0.000E+00	7.129E+00	6.399E+01	3.118E+01
1.000E+00	8.845E+00	8.575E+01	4.140E+01
2.000E+00	1.223E+01	1.145E+02	5.566E+01
3.000E+00	1.562E+01	1.433E+02	6.992E+01
4.000E+00	3.979E+01	2.925E+02	1.325E+02
5.000E+00	6.397E+01	4.417E+02	1.950E+02
6.000E+00	1.752E+02	7.693E+02	4.227E+02
7.000E+00	2.865E+02	1.097E+03	6.504E+02
8.000E+00	4.201E+02	1.520E+03	9.339E+02
9.000E+00	5.537E+02	1.943E+03	1.217E+03
1.000E+01	6.791E+02	2.364E+03	1.490E+03
1.100E+01	8.045E+02	2.786E+03	1.762E+03
1.200E+01	9.419E+02	3.305E+03	2.075E+03
1.300E+01	1.079E+03	3.825E+03	2.389E+03
1.400E+01	1.436E+03	5.444E+03	3.262E+03
1.500E+01	1.794E+03	7.063E+03	4.134E+03
1.600E+01	2.786E+03	1.028E+04	6.275E+03
1.700E+01	3.777E+03	1.350E+04	8.415E+03
1.800E+01	4.850E+03	1.707E+04	1.073E+04
1.900E+01	5.923E+03	2.064E+04	1.305E+04
2.000E+01	6.808E+03	2.369E+04	1.499E+04
2.100E+01	7.694E+03	2.673E+04	1.694E+04
2.200E+01	8.312E+03	2.888E+04	1.831E+04
2.300E+01	8.930E+03	3.102E+04	1.967E+04
2.400E+01	9.564E+03	3.322E+04	2.106E+04

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	SB1			SB3		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E+00	1.226E+00	2.429E+01	1.111E+01	5.927E-01	4.089E+00	2.070E+00
2.000E+00	2.453E+00	4.859E+01	2.222E+01	1.185E+00	8.178E+00	4.141E+00
3.000E+00	2.597E+00	4.999E+01	2.290E+01	3.716E+00	2.489E+01	1.267E+01
4.000E+00	2.742E+00	5.139E+01	2.358E+01	6.246E+00	4.159E+01	2.120E+01
5.000E+00	6.060E+00	1.307E+02	4.488E+01	7.259E+00	4.414E+01	2.292E+01
6.000E+00	9.377E+00	2.099E+02	6.618E+01	8.272E+00	4.668E+01	2.464E+01
7.000E+00	8.578E+01	4.743E+02	2.294E+02	3.417E+01	1.340E+02	8.054E+01
8.000E+00	1.622E+02	7.387E+02	3.926E+02	6.006E+01	2.213E+02	1.364E+02
9.000E+00	2.826E+02	1.072E+03	6.403E+02	1.576E+02	5.524E+02	3.486E+02
1.000E+01	4.031E+02	1.405E+03	8.879E+02	2.552E+02	8.836E+02	5.607E+02
1.100E+01	4.096E+02	1.424E+03	9.015E+02	2.552E+02	8.836E+02	5.607E+02
1.200E+01	4.162E+02	1.442E+03	9.151E+02	2.552E+02	8.836E+02	5.607E+02
1.300E+01	4.162E+02	1.442E+03	9.151E+02	2.624E+02	1.040E+03	6.035E+02
1.400E+01	4.162E+02	1.442E+03	9.152E+02	2.696E+02	1.197E+03	6.462E+02
1.500E+01	4.586E+02	2.103E+03	1.114E+03	4.215E+02	2.120E+03	1.061E+03
1.600E+01	5.009E+02	2.764E+03	1.312E+03	5.735E+02	3.043E+03	1.477E+03
1.700E+01	1.117E+03	4.493E+03	2.590E+03	1.077E+03	4.266E+03	2.479E+03
1.800E+01	1.733E+03	6.223E+03	3.867E+03	1.580E+03	5.490E+03	3.481E+03
1.900E+01	2.161E+03	7.627E+03	4.793E+03	1.624E+03	5.649E+03	3.580E+03
2.000E+01	2.590E+03	9.031E+03	5.718E+03	1.667E+03	5.808E+03	3.679E+03
2.100E+01	2.611E+03	9.101E+03	5.764E+03	1.667E+03	5.808E+03	3.679E+03
2.200E+01	2.632E+03	9.170E+03	5.809E+03	1.667E+03	5.808E+03	3.680E+03
2.300E+01	2.656E+03	9.237E+03	5.854E+03	1.675E+03	5.833E+03	3.695E+03
2.400E+01	2.679E+03	9.304E+03	5.899E+03	1.683E+03	5.859E+03	3.711E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	SB4			SB5		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E+00	1.997E-02	3.719E-01	1.711E-01	0.000E+00	0.000E+00	0.000E+00
2.000E+00	3.994E-02	7.439E-01	3.423E-01	0.000E+00	0.000E+00	0.000E+00
3.000E+00	2.766E-01	4.299E+00	1.992E+00	1.666E-05	6.477E-05	3.834E-05
4.000E+00	5.134E-01	7.855E+00	3.641E+00	3.333E-05	1.295E-04	7.668E-05
5.000E+00	1.277E+00	1.081E+01	5.174E+00	2.959E-03	7.356E-02	3.327E-02
6.000E+00	2.041E+00	1.376E+01	6.707E+00	5.884E-03	1.470E-01	6.647E-02
7.000E+00	4.988E+00	2.563E+01	1.312E+01	1.039E-02	1.924E-01	8.391E-02
8.000E+00	7.936E+00	3.749E+01	1.954E+01	1.490E-02	2.378E-01	1.014E-01
9.000E+00	1.495E+01	5.921E+01	3.437E+01	5.916E-01	2.146E+00	1.336E+00
1.000E+01	2.197E+01	8.092E+01	4.921E+01	1.168E+00	4.055E+00	2.571E+00
1.100E+01	2.976E+01	1.054E+02	6.568E+01	1.199E+00	4.157E+00	2.637E+00
1.200E+01	3.756E+01	1.298E+02	8.215E+01	1.229E+00	4.259E+00	2.703E+00
1.300E+01	4.235E+01	1.550E+02	9.445E+01	1.229E+00	4.259E+00	2.703E+00
1.400E+01	4.715E+01	1.801E+02	1.068E+02	1.229E+00	4.259E+00	2.703E+00
1.500E+01	4.965E+01	2.663E+02	1.282E+02	1.230E+00	4.260E+00	2.703E+00
1.600E+01	5.216E+01	3.525E+02	1.497E+02	1.230E+00	4.260E+00	2.703E+00
1.700E+01	6.059E+01	3.733E+02	1.666E+02	1.405E+00	8.264E+00	3.781E+00
1.800E+01	6.902E+01	3.941E+02	1.834E+02	1.580E+00	1.227E+01	4.859E+00
1.900E+01	1.457E+02	5.831E+02	3.365E+02	4.637E+00	1.971E+01	1.096E+01
2.000E+01	2.224E+02	7.721E+02	4.896E+02	7.694E+00	2.716E+01	1.705E+01
2.100E+01	2.299E+02	7.993E+02	5.066E+02	7.854E+00	2.754E+01	1.737E+01
2.200E+01	2.374E+02	8.265E+02	5.237E+02	8.014E+00	2.792E+01	1.769E+01
2.300E+01	2.381E+02	8.288E+02	5.251E+02	8.014E+00	2.792E+01	1.769E+01
2.400E+01	2.388E+02	8.311E+02	5.265E+02	8.014E+00	2.792E+01	1.769E+01

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	JE1			JE2		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	5.896E-02	1.512E+00	6.831E-01
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	6.633E-02	1.701E+00	7.685E-01
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	7.369E-02	1.890E+00	8.539E-01
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	5.672E-01	6.410E+00	2.458E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	1.061E+00	1.093E+01	4.062E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	5.702E+00	2.459E+01	1.362E+01
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	1.034E+01	3.825E+01	2.317E+01
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	1.636E+01	5.973E+01	3.658E+01
-3.000E+00	0.000E+00	0.000E+00	0.000E+00	2.237E+01	8.121E+01	4.998E+01
-2.000E+00	0.000E+00	0.000E+00	0.000E+00	2.781E+01	1.045E+02	6.323E+01
-1.000E+00	0.000E+00	0.000E+00	0.000E+00	3.326E+01	1.278E+02	7.647E+01
0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.322E+01	2.323E+02	1.129E+02
1.000E+00	0.000E+00	0.000E+00	0.000E+00	5.319E+01	3.368E+02	1.493E+02
2.000E+00	0.000E+00	0.000E+00	0.000E+00	1.432E+02	6.527E+02	3.477E+02
3.000E+00	1.666E-05	6.477E-05	3.834E-05	2.332E+02	9.686E+02	5.461E+02
4.000E+00	3.333E-05	1.295E-04	7.668E-05	3.702E+02	1.380E+03	8.331E+02
5.000E+00	2.959E-03	7.356E-02	3.327E-02	5.073E+02	1.792E+03	1.120E+03
6.000E+00	5.884E-03	1.470E-01	6.647E-02	6.136E+02	2.142E+03	1.350E+03
7.000E+00	1.039E-02	1.924E-01	8.391E-02	7.200E+02	2.491E+03	1.579E+03
8.000E+00	1.490E-02	2.378E-01	1.014E-01	7.843E+02	2.715E+03	1.720E+03
9.000E+00	5.916E-01	2.146E+00	1.336E+00	8.486E+02	2.939E+03	1.861E+03
1.000E+01	1.168E+00	4.055E+00	2.571E+00	9.899E+02	3.639E+03	2.223E+03
1.100E+01	1.199E+00	4.157E+00	2.637E+00	1.131E+03	4.339E+03	2.584E+03
1.200E+01	1.229E+00	4.259E+00	2.703E+00	1.658E+03	6.045E+03	3.716E+03
1.300E+01	1.229E+00	4.259E+00	2.703E+00	2.185E+03	7.752E+03	4.848E+03
1.400E+01	1.229E+00	4.259E+00	2.703E+00	2.664E+03	9.342E+03	5.886E+03
1.500E+01	1.230E+00	4.260E+00	2.703E+00	3.143E+03	1.093E+04	6.924E+03
1.600E+01	1.230E+00	4.260E+00	2.703E+00	3.416E+03	1.188E+04	7.524E+03
1.700E+01	1.405E+00	8.264E+00	3.781E+00	3.688E+03	1.282E+04	8.124E+03
1.800E+01	1.580E+00	1.227E+01	4.859E+00	3.845E+03	1.336E+04	8.469E+03
1.900E+01	4.637E+00	1.971E+01	1.096E+01	4.001E+03	1.390E+04	8.813E+03
2.000E+01	7.694E+00	2.716E+01	1.705E+01	4.164E+03	1.447E+04	9.171E+03
2.100E+01	7.854E+00	2.754E+01	1.737E+01	4.327E+03	1.503E+04	9.529E+03
2.200E+01	8.014E+00	2.792E+01	1.769E+01	4.504E+03	1.565E+04	9.923E+03
2.300E+01	8.014E+00	2.792E+01	1.769E+01	4.680E+03	1.627E+04	1.032E+04
2.400E+01	8.014E+00	2.792E+01	1.769E+01	4.779E+03	1.662E+04	1.054E+04

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	JE3		
	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	4.069E-02	7.390E-01	3.409E-01
-8.000E+00	8.138E-02	1.478E+00	6.818E-01
-7.000E+00	1.340E+00	1.135E+01	4.916E+00
-6.000E+00	2.599E+00	2.122E+01	9.151E+00
-5.000E+00	1.248E+01	5.682E+01	3.127E+01
-4.000E+00	2.235E+01	9.243E+01	5.338E+01
-3.000E+00	3.686E+01	1.641E+02	9.256E+01
-2.000E+00	5.137E+01	2.358E+02	1.317E+02
-1.000E+00	6.634E+01	3.098E+02	1.691E+02
0.000E+00	8.132E+01	3.838E+02	2.065E+02
1.000E+00	1.568E+02	8.388E+02	4.084E+02
2.000E+00	2.322E+02	1.294E+03	6.102E+02
3.000E+00	4.716E+02	1.963E+03	1.105E+03
4.000E+00	7.110E+02	2.631E+03	1.599E+03
5.000E+00	9.994E+02	3.541E+03	2.210E+03
6.000E+00	1.288E+03	4.450E+03	2.821E+03
7.000E+00	1.380E+03	4.775E+03	3.026E+03
8.000E+00	1.472E+03	5.100E+03	3.230E+03
9.000E+00	1.715E+03	6.406E+03	3.874E+03
1.000E+01	1.958E+03	7.712E+03	4.518E+03
1.100E+01	3.102E+03	1.189E+04	7.098E+03
1.200E+01	4.246E+03	1.607E+04	9.678E+03
1.300E+01	6.014E+03	2.155E+04	1.341E+04
1.400E+01	7.782E+03	2.703E+04	1.714E+04
1.500E+01	8.261E+03	2.872E+04	1.820E+04
1.600E+01	8.740E+03	3.040E+04	1.927E+04
1.700E+01	8.931E+03	3.106E+04	1.969E+04
1.800E+01	9.121E+03	3.173E+04	2.011E+04
1.900E+01	9.362E+03	3.254E+04	2.063E+04
2.000E+01	9.602E+03	3.335E+04	2.114E+04
2.100E+01	1.008E+04	3.504E+04	2.221E+04
2.200E+01	1.056E+04	3.673E+04	2.328E+04
2.300E+01	1.085E+04	3.773E+04	2.391E+04
2.400E+01	1.113E+04	3.872E+04	2.455E+04

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	JW1			JW2		
	5%	95%	Mean	5%	25%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	8.314E-03	1.987E-01	8.998E-02	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	1.663E-02	3.974E-01	1.800E-01	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	2.193E-02	4.154E-01	1.903E-01	4.000E-05	1.936E-04	4.635E-04
-5.000E+00	2.722E-02	4.334E-01	2.007E-01	8.000E-05	3.872E-04	9.270E-04
-4.000E+00	9.473E-02	1.509E+00	6.987E-01	2.157E-03	9.819E-03	2.334E-02
-3.000E+00	1.622E-01	2.584E+00	1.197E+00	4.233E-03	1.925E-02	4.574E-02
-2.000E+00	2.833E-01	3.087E+00	1.476E+00	3.649E-02	1.518E-01	3.557E-01
-1.000E+00	4.044E-01	3.589E+00	1.754E+00	6.875E-02	2.843E-01	6.656E-01
0.000E+00	1.151E+00	8.715E+00	3.769E+00	2.192E-01	7.510E-01	1.694E+00
1.000E+00	1.897E+00	1.384E+01	5.783E+00	3.696E-01	1.218E+00	2.722E+00
2.000E+00	5.192E+00	2.445E+01	1.278E+01	6.380E-01	1.754E+00	3.725E+00
3.000E+00	8.486E+00	3.506E+01	1.978E+01	9.063E-01	2.290E+00	4.728E+00
4.000E+00	1.410E+01	5.164E+01	3.146E+01	1.538E+00	3.342E+00	6.310E+00
5.000E+00	1.971E+01	6.821E+01	4.315E+01	2.169E+00	4.395E+00	7.893E+00
6.000E+00	2.150E+01	7.447E+01	4.706E+01	5.709E+00	9.938E+00	1.586E+01
7.000E+00	2.330E+01	8.072E+01	5.097E+01	9.249E+00	1.548E+01	2.384E+01
8.000E+00	2.795E+01	1.052E+02	6.298E+01	1.742E+01	2.873E+01	4.037E+01
9.000E+00	3.260E+01	1.296E+02	7.499E+01	2.560E+01	4.198E+01	5.691E+01
1.000E+01	5.370E+01	2.170E+02	1.244E+02	3.374E+01	5.531E+01	7.424E+01
1.100E+01	7.481E+01	3.044E+02	1.739E+02	4.187E+01	6.864E+01	9.156E+01
1.200E+01	1.176E+02	4.309E+02	2.631E+02	4.548E+01	7.461E+01	1.002E+02
1.300E+01	1.605E+02	5.575E+02	3.524E+02	4.908E+01	8.058E+01	1.088E+02
1.400E+01	1.755E+02	6.083E+02	3.853E+02	6.463E+01	1.077E+02	1.555E+02
1.500E+01	1.905E+02	6.591E+02	4.183E+02	8.019E+01	1.348E+02	2.021E+02
1.600E+01	2.026E+02	7.021E+02	4.448E+02	1.652E+02	2.746E+02	3.846E+02
1.700E+01	2.147E+02	7.451E+02	4.713E+02	2.503E+02	4.144E+02	5.671E+02
1.800E+01	2.517E+02	8.863E+02	5.567E+02	3.424E+02	5.656E+02	7.617E+02
1.900E+01	2.888E+02	1.028E+03	6.421E+02	4.345E+02	7.167E+02	9.563E+02
2.000E+01	3.675E+02	1.291E+03	8.120E+02	4.547E+02	7.506E+02	1.002E+03
2.100E+01	4.462E+02	1.554E+03	9.820E+02	4.749E+02	7.844E+02	1.048E+03
2.200E+01	5.117E+02	1.779E+03	1.126E+03	4.803E+02	7.935E+02	1.059E+03
2.300E+01	5.772E+02	2.003E+03	1.270E+03	4.858E+02	8.026E+02	1.071E+03
2.400E+01	6.138E+02	2.132E+03	1.351E+03	4.989E+02	8.235E+02	1.099E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	JW3			JW4		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	4.917E-04	7.954E-03	3.705E-03
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	9.834E-04	1.591E-02	7.410E-03
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	1.237E-02	1.622E-01	7.666E-02
-7.000E+00	3.717E-04	9.533E-03	4.306E-03	2.376E-02	3.086E-01	1.459E-01
-6.000E+00	7.433E-04	1.907E-02	8.613E-03	1.144E-01	1.235E+00	5.928E-01
-5.000E+00	9.020E-03	1.982E-01	7.939E-02	2.050E-01	2.160E+00	1.040E+00
-4.000E+00	1.730E-02	3.774E-01	1.502E-01	6.534E-01	5.894E+00	2.883E+00
-3.000E+00	1.981E-01	1.797E+00	7.772E-01	1.102E+00	9.628E+00	4.727E+00
-2.000E+00	3.789E-01	3.217E+00	1.404E+00	3.240E+00	2.481E+01	1.240E+01
-1.000E+00	1.843E+00	9.844E+00	5.188E+00	5.377E+00	4.000E+01	2.006E+01
0.000E+00	3.307E+00	1.647E+01	8.973E+00	9.448E+00	6.187E+01	3.172E+01
1.000E+00	5.694E+00	3.084E+01	1.644E+01	1.352E+01	8.373E+01	4.337E+01
2.000E+00	8.081E+00	4.520E+01	2.390E+01	2.237E+01	1.188E+02	6.325E+01
3.000E+00	1.092E+01	6.322E+01	3.313E+01	3.122E+01	1.539E+02	8.313E+01
4.000E+00	1.376E+01	8.123E+01	4.237E+01	5.328E+01	2.417E+02	1.322E+02
5.000E+00	2.080E+01	1.179E+02	6.145E+01	7.534E+01	3.294E+02	1.813E+02
6.000E+00	2.785E+01	1.547E+02	8.053E+01	1.292E+02	5.222E+02	2.997E+02
7.000E+00	5.421E+01	2.563E+02	1.378E+02	1.830E+02	7.149E+02	4.181E+02
8.000E+00	8.058E+01	3.580E+02	1.951E+02	2.729E+02	9.888E+02	6.066E+02
9.000E+00	1.381E+02	5.400E+02	3.166E+02	3.627E+02	1.263E+03	7.952E+02
1.000E+01	1.957E+02	7.221E+02	4.381E+02	4.401E+02	1.547E+03	9.695E+02
1.100E+01	2.709E+02	9.742E+02	6.016E+02	5.174E+02	1.831E+03	1.144E+03
1.200E+01	3.461E+02	1.226E+03	7.650E+02	6.727E+02	2.430E+03	1.500E+03
1.300E+01	4.495E+02	1.604E+03	9.975E+02	8.281E+02	3.028E+03	1.856E+03
1.400E+01	5.529E+02	1.982E+03	1.230E+03	1.167E+03	4.479E+03	2.663E+03
1.500E+01	7.401E+02	2.653E+03	1.647E+03	1.506E+03	5.929E+03	3.470E+03
1.600E+01	9.274E+02	3.323E+03	2.064E+03	2.267E+03	8.265E+03	5.078E+03
1.700E+01	1.243E+03	4.558E+03	2.793E+03	3.029E+03	1.060E+04	6.687E+03
1.800E+01	1.558E+03	5.794E+03	3.523E+03	3.575E+03	1.246E+04	7.877E+03
1.900E+01	2.189E+03	7.862E+03	4.883E+03	4.121E+03	1.432E+04	9.067E+03
2.000E+01	2.821E+03	9.930E+03	6.243E+03	4.552E+03	1.581E+04	1.002E+04
2.100E+01	3.415E+03	1.194E+04	7.534E+03	4.982E+03	1.729E+04	1.096E+04
2.200E+01	4.009E+03	1.395E+04	8.825E+03	5.255E+03	1.824E+04	1.156E+04
2.300E+01	4.477E+03	1.556E+04	9.856E+03	5.528E+03	1.919E+04	1.217E+04
2.400E+01	4.945E+03	1.717E+04	1.089E+04	5.821E+03	2.022E+04	1.282E+04

Table 12-1 Pre-Katrina – Stage-Fatality (Continued)

Elevation (ft)	PL11		
	5%	95%	Mean
-1.200E+01	2.767E-01	1.212E+00	6.872E-01
-1.100E+01	3.432E-01	1.776E+00	9.593E-01
-1.000E+01	4.097E-01	2.341E+00	1.231E+00
-9.000E+00	4.555E-01	2.541E+00	1.345E+00
-8.000E+00	5.013E-01	2.740E+00	1.458E+00
-7.000E+00	7.744E-01	6.113E+00	2.544E+00
-6.000E+00	1.048E+00	9.487E+00	3.631E+00
-5.000E+00	4.072E+00	1.803E+01	9.811E+00
-4.000E+00	7.097E+00	2.657E+01	1.599E+01
-3.000E+00	1.002E+01	3.558E+01	2.214E+01
-2.000E+00	1.294E+01	4.459E+01	2.829E+01
-1.000E+00	1.413E+01	4.865E+01	3.089E+01
0.000E+00	1.532E+01	5.272E+01	3.349E+01
1.000E+00	1.690E+01	5.953E+01	3.729E+01
2.000E+00	1.848E+01	6.633E+01	4.109E+01
3.000E+00	2.597E+01	1.064E+02	6.045E+01
4.000E+00	3.346E+01	1.465E+02	7.980E+01
5.000E+00	5.770E+01	2.152E+02	1.298E+02
6.000E+00	8.193E+01	2.839E+02	1.798E+02
7.000E+00	9.195E+01	3.184E+02	2.017E+02
8.000E+00	1.020E+02	3.530E+02	2.237E+02
9.000E+00	1.127E+02	3.905E+02	2.474E+02
1.000E+01	1.235E+02	4.280E+02	2.710E+02
1.100E+01	1.384E+02	4.797E+02	3.037E+02
1.200E+01	1.533E+02	5.314E+02	3.364E+02
1.300E+01	1.744E+02	6.062E+02	3.833E+02
1.400E+01	1.955E+02	6.809E+02	4.301E+02
1.500E+01	2.253E+02	7.829E+02	4.956E+02
1.600E+01	2.551E+02	8.849E+02	5.611E+02
1.700E+01	2.709E+02	9.403E+02	5.959E+02
1.800E+01	2.868E+02	9.957E+02	6.307E+02
1.900E+01	3.195E+02	1.113E+03	7.038E+02
2.000E+01	3.523E+02	1.231E+03	7.770E+02
2.100E+01	4.088E+02	1.424E+03	9.008E+02
2.200E+01	4.653E+02	1.616E+03	1.025E+03
2.300E+01	4.964E+02	1.724E+03	1.093E+03
2.400E+01	5.275E+02	1.832E+03	1.162E+03

Table 12-1 Pre-Katrina – Stage-Fatality (Concluded)

Elevation (ft)	SC1			SC2		
	5%	95%	Mean	5%	95%	Mean
-1.200E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.100E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-9.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-8.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-7.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-6.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-5.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-4.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-3.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-2.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2.000E+00	0.000E+00	0.000E+00	0.000E+00	3.671E-03	9.415E-02	4.253E-02
3.000E+00	0.000E+00	0.000E+00	0.000E+00	7.341E-03	1.883E-01	8.506E-02
4.000E+00	0.000E+00	0.000E+00	0.000E+00	5.968E-02	1.521E+00	6.874E-01
5.000E+00	0.000E+00	0.000E+00	0.000E+00	1.120E-01	2.854E+00	1.290E+00
6.000E+00	9.412E-06	2.414E-04	1.091E-04	4.273E-01	4.618E+00	2.210E+00
7.000E+00	1.882E-05	4.828E-04	2.181E-04	7.426E-01	6.381E+00	3.130E+00
8.000E+00	1.604E-02	5.968E-02	3.687E-02	1.863E+00	1.486E+01	6.670E+00
9.000E+00	3.207E-02	1.189E-01	7.353E-02	2.984E+00	2.334E+01	1.021E+01
1.000E+01	3.867E-01	1.340E+00	8.474E-01	9.355E+00	4.333E+01	2.330E+01
1.100E+01	7.413E-01	2.561E+00	1.621E+00	1.573E+01	6.332E+01	3.638E+01
1.200E+01	1.766E+00	6.074E+00	3.856E+00	2.634E+01	1.005E+02	5.967E+01
1.300E+01	2.790E+00	9.587E+00	6.091E+00	3.695E+01	1.377E+02	8.296E+01
1.400E+01	2.940E+00	1.011E+01	6.419E+00	5.326E+01	1.896E+02	1.176E+02
1.500E+01	3.089E+00	1.063E+01	6.748E+00	6.957E+01	2.415E+02	1.523E+02
1.600E+01	3.298E+00	1.233E+01	7.408E+00	8.632E+01	3.043E+02	1.904E+02
1.700E+01	3.506E+00	1.404E+01	8.068E+00	1.031E+02	3.670E+02	2.285E+02
1.800E+01	5.428E+00	3.787E+01	1.583E+01	1.462E+02	5.658E+02	3.341E+02
1.900E+01	7.349E+00	6.170E+01	2.359E+01	1.893E+02	7.645E+02	4.398E+02
2.000E+01	2.279E+01	9.731E+01	5.392E+01	3.020E+02	1.115E+03	6.796E+02
2.100E+01	3.823E+01	1.329E+02	8.425E+01	4.147E+02	1.466E+03	9.194E+02
2.200E+01	3.917E+01	1.362E+02	8.636E+01	5.214E+02	1.840E+03	1.155E+03
2.300E+01	4.011E+01	1.396E+02	8.848E+01	6.281E+02	2.215E+03	1.391E+03
2.400E+01	4.044E+01	1.407E+02	8.918E+01	7.713E+02	2.696E+03	1.701E+03

Table 12-2: Number of Census Blocks within Each Subbasin Flooded by Katrina by Depth Category

Subbasin Name	Count Of Census Blocks within Katrina Flood Depth Category					
	0-1 feet	1 to 2 feet	2 to 4 feet	4 to 6 feet	6 to 8 feet	> 8 feet
JE2	5	6	8	1	1	1
NOE2	1	2	2	10	19	7
NOE3	7	8	12	8	59	7
NOE4	18	3	0	0	0	0
NOE5	27	31	156	173	371	99
OM1	37	37	107	126	163	361
OM2	24	24	46	56	121	321
OM3	301	136	387	358	219	61
OM4	63	51	72	50	9	1
OM5	1535	346	871	957	640	35
SB1	31	25	91	153	200	375
SB3	62	32	49	117	173	44
SB4	5	37	62	50	13	0

Table 12-3 shows the stage-damage relationship for total property direct damage computed using the uncertainty methodology described above.

Table 12-3 Pre-Katrina – Stage-Damage

Water Elevation	Polder Name	5%	Mean	95%
-4	JE1	0	0	0
-3	JE1	0	0	1
-2	JE1	0	0	10
-1	JE1	0	1	51
0	JE1	0	9	231
1	JE1	1	49	437
2	JE1	8	218	1,154
3	JE1	46	420	1,560
4	JE1	206	1,093	2,133
5	JE1	404	1,490	2,715
6	JE1	1,032	2,049	3,389
7	JE1	1,420	2,617	3,749
8	JE1	1,965	3,277	4,279
9	JE1	2,519	3,632	4,767
10	JE1	3,166	4,149	5,265
11	JE1	3,516	4,629	5,656
12	JE1	4,019	5,121	5,882
13	JE1	4,492	5,505	6,015
14	JE1	4,976	5,727	6,170
15	JE1	5,355	5,856	6,250

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
16	JE1	5,571	6,006	6,319
17	JE1	5,698	6,084	6,391
18	JE1	5,842	6,151	6,463
19	JE1	5,918	6,221	6,517
20	JE1	5,982	6,291	6,561
21	JE1	6,051	6,344	6,582
22	JE1	6,119	6,386	6,599
23	JE1	6,171	6,406	6,610
24	JE1	6,212	6,424	6,616
25	JE1	6,231	6,434	6,617
26	JE1	6,248	6,440	6,618
27	JE1	6,259	6,442	6,618
28	JE1	6,265	6,442	6,618
29	JE1	6,266	6,442	6,618
30	JE1	6,266	6,442	6,618
31	JE1	6,266	6,442	6,618
32	JE1	6,266	6,442	6,618
33	JE1	6,266	6,442	6,618
34	JE1	6,266	6,442	6,618
-14	JE2	0	0	0
-13	JE2	0	0	0
-12	JE2	0	0	0
-11	JE2	0	0	3
-10	JE2	0	0	4
-9	JE2	0	1	31
-8	JE2	0	1	52
-7	JE2	2	2	103
-6	JE2	3	8	535
-5	JE2	27	52	2,270
-4	JE2	46	470	3,478
-3	JE2	93	2,189	3,942
-2	JE2	499	3,393	4,320
-1	JE2	2,155	3,856	4,604
0	JE2	3,328	4,226	4,864
1	JE2	3,781	4,504	5,116
2	JE2	4,150	4,750	5,360
3	JE2	4,429	4,992	5,624
4	JE2	4,685	5,235	5,854
5	JE2	4,931	5,497	5,975

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
6	JE2	5,171	5,735	6,052
7	JE2	5,428	5,862	6,189
8	JE2	5,654	5,941	6,286
9	JE2	5,772	6,077	6,326
10	JE2	5,848	6,173	6,354
11	JE2	5,977	6,213	6,373
12	JE2	6,069	6,240	6,387
13	JE2	6,108	6,260	6,395
14	JE2	6,135	6,275	6,400
15	JE2	6,154	6,284	6,403
16	JE2	6,168	6,289	6,406
17	JE2	6,176	6,293	6,407
18	JE2	6,181	6,296	6,408
19	JE2	6,184	6,298	6,408
20	JE2	6,187	6,298	6,408
21	JE2	6,188	6,298	6,408
22	JE2	6,188	6,298	6,408
23	JE2	6,188	6,298	6,408
24	JE2	6,188	6,298	6,408
25	JE2	6,188	6,298	6,408
26	JE2	6,188	6,298	6,408
27	JE2	6,188	6,298	6,408
28	JE2	6,188	6,298	6,408
29	JE2	6,188	6,298	6,408
30	JE2	6,188	6,298	6,408
31	JE2	6,188	6,298	6,408
32	JE2	6,188	6,298	6,408
33	JE2	6,188	6,298	6,408
34	JE2	6,188	6,298	6,408
-14	JE3	0	0	0
-13	JE3	0	0	0
-12	JE3	0	0	0
-11	JE3	0	0	0
-10	JE3	0	0	4
-9	JE3	0	0	40
-8	JE3	0	4	124
-7	JE3	0	36	535
-6	JE3	3	116	2,390
-5	JE3	31	515	6,256

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
-4	JE3	109	2,335	8,438
-3	JE3	496	6,173	9,253
-2	JE3	2,281	8,345	9,731
-1	JE3	6,090	9,155	10,149
0	JE3	8,251	9,628	10,401
1	JE3	9,056	10,044	10,606
2	JE3	9,526	10,295	10,843
3	JE3	9,939	10,498	11,269
4	JE3	10,189	10,732	11,618
5	JE3	10,390	11,155	11,792
6	JE3	10,622	11,501	11,924
7	JE3	11,040	11,673	12,069
8	JE3	11,384	11,803	12,147
9	JE3	11,554	11,945	12,172
10	JE3	11,681	12,022	12,185
11	JE3	11,821	12,047	12,197
12	JE3	11,897	12,059	12,203
13	JE3	11,921	12,071	12,208
14	JE3	11,934	12,078	12,210
15	JE3	11,946	12,082	12,212
16	JE3	11,952	12,084	12,213
17	JE3	11,957	12,086	12,213
18	JE3	11,959	12,087	12,213
19	JE3	11,960	12,088	12,213
20	JE3	11,962	12,088	12,213
21	JE3	11,962	12,088	12,213
22	JE3	11,962	12,088	12,213
23	JE3	11,962	12,088	12,213
24	JE3	11,962	12,088	12,213
25	JE3	11,962	12,088	12,213
26	JE3	11,962	12,088	12,213
27	JE3	11,962	12,088	12,213
28	JE3	11,962	12,088	12,213
29	JE3	11,962	12,088	12,213
30	JE3	11,962	12,088	12,213
31	JE3	11,962	12,088	12,213
32	JE3	11,962	12,088	12,213
33	JE3	11,962	12,088	12,213
34	JE3	11,962	12,088	12,213

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
-13	OM1	0	0	0
-12	OM1	0	0	0
-11	OM1	0	0	0
-10	OM1	0	0	0
-9	OM1	0	0	9
-8	OM1	0	0	105
-7	OM1	0	8	409
-6	OM1	0	103	795
-5	OM1	8	402	1,025
-4	OM1	101	782	1,289
-3	OM1	395	1,008	1,553
-2	OM1	771	1,270	1,738
-1	OM1	994	1,531	1,893
0	OM1	1,252	1,713	2,042
1	OM1	1,510	1,864	2,238
2	OM1	1,690	2,012	2,371
3	OM1	1,840	2,208	2,491
4	OM1	1,986	2,339	2,563
5	OM1	2,180	2,458	2,610
6	OM1	2,309	2,526	2,638
7	OM1	2,426	2,574	2,663
8	OM1	2,493	2,602	2,688
9	OM1	2,540	2,625	2,713
10	OM1	2,568	2,650	2,728
11	OM1	2,590	2,674	2,740
12	OM1	2,614	2,689	2,756
13	OM1	2,637	2,702	2,765
14	OM1	2,652	2,717	2,770
15	OM1	2,664	2,725	2,776
16	OM1	2,679	2,731	2,778
17	OM1	2,687	2,737	2,779
18	OM1	2,692	2,738	2,779
19	OM1	2,698	2,739	2,779
20	OM1	2,699	2,739	2,779
21	OM1	2,700	2,739	2,779
22	OM1	2,700	2,739	2,779
23	OM1	2,700	2,739	2,779
24	OM1	2,700	2,739	2,779
25	OM1	2,700	2,739	2,779

Table 12-3 Pre-Katrina – Stage-Damage

Water Elevation	Polder Name	5%	Mean	95%
26	OM1	2,700	2,739	2,779
27	OM1	2,700	2,739	2,779
28	OM1	2,700	2,739	2,779
29	OM1	2,700	2,739	2,779
30	OM1	2,700	2,739	2,779
31	OM1	2,700	2,739	2,779
32	OM1	2,700	2,739	2,779
33	OM1	2,700	2,739	2,779
34	OM1	2,700	2,739	2,779
-12	OM2	0	0	0
-11	OM2	0	0	0
-10	OM2	0	0	0
-9	OM2	0	0	2
-8	OM2	0	0	72
-7	OM2	0	2	353
-6	OM2	0	70	687
-5	OM2	2	348	896
-4	OM2	68	677	1,054
-3	OM2	342	884	1,214
-2	OM2	667	1,040	1,279
-1	OM2	872	1,196	1,399
0	OM2	1,026	1,261	1,506
1	OM2	1,178	1,376	1,598
2	OM2	1,242	1,482	1,711
3	OM2	1,354	1,573	1,790
4	OM2	1,458	1,685	1,865
5	OM2	1,548	1,763	1,889
6	OM2	1,659	1,835	1,908
7	OM2	1,735	1,858	1,925
8	OM2	1,804	1,877	1,942
9	OM2	1,827	1,893	1,955
10	OM2	1,846	1,909	1,964
11	OM2	1,862	1,922	1,972
12	OM2	1,877	1,930	1,979
13	OM2	1,889	1,939	1,982
14	OM2	1,897	1,945	1,983
15	OM2	1,905	1,948	1,984
16	OM2	1,911	1,949	1,985
17	OM2	1,914	1,950	1,985

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
18	OM2	1,915	1,951	1,985
19	OM2	1,915	1,951	1,985
20	OM2	1,916	1,951	1,985
21	OM2	1,916	1,951	1,985
22	OM2	1,916	1,951	1,985
23	OM2	1,916	1,951	1,985
24	OM2	1,916	1,951	1,985
25	OM2	1,916	1,951	1,985
26	OM2	1,916	1,951	1,985
27	OM2	1,916	1,951	1,985
28	OM2	1,916	1,951	1,985
29	OM2	1,916	1,951	1,985
30	OM2	1,916	1,951	1,985
31	OM2	1,916	1,951	1,985
32	OM2	1,916	1,951	1,985
33	OM2	1,916	1,951	1,985
34	OM2	1,916	1,951	1,985
35	OM2	1,916	1,951	1,985
-13	OM3	0	0	0
-12	OM3	0	0	0
-11	OM3	0	0	0
-10	OM3	0	0	0
-9	OM3	0	0	0
-8	OM3	0	0	1
-7	OM3	0	0	10
-6	OM3	0	1	32
-5	OM3	0	9	68
-4	OM3	1	30	158
-3	OM3	8	66	384
-2	OM3	28	154	672
-1	OM3	63	376	1,044
0	OM3	150	662	1,380
1	OM3	368	1,030	1,726
2	OM3	651	1,364	2,049
3	OM3	1,017	1,708	2,303
4	OM3	1,349	2,029	2,459
5	OM3	1,690	2,280	2,605
6	OM3	2,010	2,436	2,721
7	OM3	2,257	2,580	2,818

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
8	OM3	2,412	2,695	2,885
9	OM3	2,555	2,792	2,936
10	OM3	2,670	2,858	2,979
11	OM3	2,765	2,909	3,012
12	OM3	2,831	2,951	3,038
13	OM3	2,881	2,983	3,058
14	OM3	2,923	3,009	3,074
15	OM3	2,954	3,028	3,090
16	OM3	2,979	3,044	3,098
17	OM3	2,998	3,059	3,102
18	OM3	3,014	3,068	3,105
19	OM3	3,029	3,072	3,106
20	OM3	3,037	3,074	3,107
21	OM3	3,041	3,075	3,107
22	OM3	3,043	3,076	3,107
23	OM3	3,045	3,076	3,107
24	OM3	3,045	3,076	3,107
25	OM3	3,045	3,076	3,107
26	OM3	3,045	3,076	3,107
27	OM3	3,045	3,076	3,107
28	OM3	3,045	3,076	3,107
29	OM3	3,045	3,076	3,107
30	OM3	3,045	3,076	3,107
31	OM3	3,045	3,076	3,107
32	OM3	3,045	3,076	3,107
33	OM3	3,045	3,076	3,107
34	OM3	3,045	3,076	3,107
35	OM3	3,045	3,076	3,107
-8	OM4	0	0	0
-7	OM4	0	0	3
-6	OM4	0	0	7
-5	OM4	0	3	10
-4	OM4	0	6	29
-3	OM4	2	9	73
-2	OM4	5	28	149
-1	OM4	8	68	229
0	OM4	26	142	319
1	OM4	64	219	434
2	OM4	135	308	636

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
3	OM4	209	420	811
4	OM4	297	618	902
5	OM4	407	790	980
6	OM4	600	880	1,009
7	OM4	770	954	1,041
8	OM4	858	982	1,063
9	OM4	929	1,013	1,084
10	OM4	955	1,034	1,105
11	OM4	986	1,055	1,126
12	OM4	1,006	1,076	1,141
13	OM4	1,026	1,096	1,150
14	OM4	1,046	1,111	1,163
15	OM4	1,066	1,119	1,171
16	OM4	1,080	1,131	1,178
17	OM4	1,089	1,139	1,184
18	OM4	1,099	1,145	1,186
19	OM4	1,107	1,151	1,188
20	OM4	1,113	1,153	1,188
21	OM4	1,118	1,155	1,189
22	OM4	1,120	1,155	1,189
23	OM4	1,122	1,155	1,189
24	OM4	1,122	1,155	1,189
25	OM4	1,122	1,155	1,189
26	OM4	1,122	1,155	1,189
27	OM4	1,122	1,155	1,189
28	OM4	1,122	1,155	1,189
29	OM4	1,122	1,155	1,189
30	OM4	1,122	1,155	1,189
31	OM4	1,122	1,155	1,189
32	OM4	1,122	1,155	1,189
33	OM4	1,122	1,155	1,189
34	OM4	1,122	1,155	1,189
35	OM4	1,122	1,155	1,189
-10	OM5	0	0	0
-9	OM5	0	0	0
-8	OM5	0	0	1
-7	OM5	0	0	1
-6	OM5	0	1	10
-5	OM5	0	1	39

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
-4	OM5	1	7	205
-3	OM5	1	38	800
-2	OM5	8	200	1,504
-1	OM5	41	784	2,199
0	OM5	195	1,482	2,902
1	OM5	768	2,165	3,779
2	OM5	1,460	2,858	4,923
3	OM5	2,132	3,719	5,615
4	OM5	2,813	4,834	6,133
5	OM5	3,658	5,518	6,944
6	OM5	4,744	6,030	7,654
7	OM5	5,421	6,830	8,233
8	OM5	5,926	7,533	8,701
9	OM5	6,715	8,106	9,051
10	OM5	7,411	8,568	9,442
11	OM5	7,979	8,913	9,651
12	OM5	8,434	9,299	9,820
13	OM5	8,776	9,504	9,991
14	OM5	9,155	9,672	10,183
15	OM5	9,358	9,839	10,297
16	OM5	9,524	10,024	10,416
17	OM5	9,688	10,136	10,512
18	OM5	9,865	10,252	10,560
19	OM5	9,975	10,346	10,596
20	OM5	10,088	10,393	10,617
21	OM5	10,179	10,428	10,649
22	OM5	10,226	10,450	10,674
23	OM5	10,260	10,480	10,679
24	OM5	10,282	10,504	10,682
25	OM5	10,311	10,509	10,682
26	OM5	10,334	10,512	10,682
27	OM5	10,339	10,512	10,682
28	OM5	10,342	10,512	10,682
29	OM5	10,342	10,512	10,682
30	OM5	10,342	10,512	10,682
31	OM5	10,342	10,512	10,682
32	OM5	10,342	10,512	10,682
33	OM5	10,342	10,512	10,682
34	OM5	10,342	10,512	10,682

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
35	OM5	10,342	10,512	10,682
-3	NOE1	0	0	0
-2	NOE1	0	0	0
-1	NOE1	0	0	7
0	NOE1	0	0	9
1	NOE1	0	6	11
2	NOE1	0	8	12
3	NOE1	5	9	13
4	NOE1	7	11	13
5	NOE1	7	11	13
6	NOE1	9	11	13
7	NOE1	9	11	14
8	NOE1	9	11	14
9	NOE1	9	12	14
10	NOE1	9	12	14
11	NOE1	10	12	14
12	NOE1	10	12	15
13	NOE1	10	12	15
14	NOE1	10	12	15
15	NOE1	10	12	15
16	NOE1	10	12	15
17	NOE1	10	12	15
18	NOE1	10	12	15
19	NOE1	10	12	15
20	NOE1	10	12	15
21	NOE1	10	12	15
22	NOE1	10	12	15
23	NOE1	10	12	15
24	NOE1	10	12	15
25	NOE1	10	12	15
-8	NOE2	0	0	0
-7	NOE2	0	0	1
-6	NOE2	0	0	23
-5	NOE2	0	1	33
-4	NOE2	0	19	109
-3	NOE2	0	29	126
-2	NOE2	16	98	128
-1	NOE2	25	114	133
0	NOE2	87	116	136

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
1	NOE2	103	121	136
2	NOE2	104	123	139
3	NOE2	109	124	140
4	NOE2	111	126	148
5	NOE2	112	127	152
6	NOE2	113	134	154
7	NOE2	115	139	155
8	NOE2	121	140	156
9	NOE2	125	141	157
10	NOE2	126	142	157
11	NOE2	127	142	157
12	NOE2	128	142	157
13	NOE2	128	143	157
14	NOE2	128	143	157
15	NOE2	128	143	157
16	NOE2	128	143	157
17	NOE2	128	143	157
18	NOE2	128	143	157
19	NOE2	128	143	157
20	NOE2	128	143	157
21	NOE2	128	143	157
22	NOE2	128	143	157
23	NOE2	128	143	157
24	NOE2	128	143	157
25	NOE2	128	143	157
-9	NOE3	0	0	0
-8	NOE3	0	0	0
-7	NOE3	0	0	0
-6	NOE3	0	0	9
-5	NOE3	0	0	43
-4	NOE3	0	8	199
-3	NOE3	0	40	381
-2	NOE3	7	189	416
-1	NOE3	36	366	433
0	NOE3	179	400	538
1	NOE3	350	416	559
2	NOE3	383	510	597
3	NOE3	399	528	613
4	NOE3	482	563	630

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
5	NOE3	498	577	656
6	NOE3	530	594	667
7	NOE3	542	618	675
8	NOE3	558	629	689
9	NOE3	581	636	709
10	NOE3	591	649	710
11	NOE3	598	666	713
12	NOE3	609	668	720
13	NOE3	624	671	722
14	NOE3	626	677	724
15	NOE3	628	679	724
16	NOE3	633	680	724
17	NOE3	635	680	724
18	NOE3	636	680	724
19	NOE3	636	680	724
20	NOE3	636	680	724
21	NOE3	636	680	724
22	NOE3	636	680	724
23	NOE3	636	680	724
24	NOE3	636	680	724
25	NOE3	636	680	724
-3	NOE4	0	0	0
-2	NOE4	0	0	0
-1	NOE4	0	0	0
0	NOE4	0	0	28
1	NOE4	0	0	36
2	NOE4	0	25	39
3	NOE4	0	33	54
4	NOE4	22	35	59
5	NOE4	29	49	61
6	NOE4	31	54	62
7	NOE4	44	56	63
8	NOE4	49	57	63
9	NOE4	51	57	65
10	NOE4	52	58	66
11	NOE4	52	59	66
12	NOE4	53	60	67
13	NOE4	54	61	69
14	NOE4	55	62	69

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
15	NOE4	55	63	71
16	NOE4	56	64	72
17	NOE4	57	65	72
18	NOE4	58	66	72
19	NOE4	59	66	72
20	NOE4	60	66	72
21	NOE4	60	66	72
22	NOE4	60	66	72
23	NOE4	60	66	72
24	NOE4	60	66	72
25	NOE4	60	66	72
-14	NOE5	0	0	0
-13	NOE5	0	0	0
-12	NOE5	0	0	0
-11	NOE5	0	0	1
-10	NOE5	0	0	6
-9	NOE5	0	1	47
-8	NOE5	0	5	255
-7	NOE5	1	43	997
-6	NOE5	4	241	2,382
-5	NOE5	38	962	3,154
-4	NOE5	228	2,316	3,559
-3	NOE5	927	3,082	4,202
-2	NOE5	2,249	3,483	4,647
-1	NOE5	3,011	4,120	5,030
0	NOE5	3,407	4,559	5,159
1	NOE5	4,037	4,939	5,278
2	NOE5	4,472	5,065	5,529
3	NOE5	4,847	5,182	5,696
4	NOE5	4,971	5,428	5,776
5	NOE5	5,085	5,593	5,883
6	NOE5	5,327	5,672	5,986
7	NOE5	5,490	5,776	6,054
8	NOE5	5,568	5,876	6,084
9	NOE5	5,669	5,943	6,104
10	NOE5	5,766	5,972	6,118
11	NOE5	5,832	5,992	6,132
12	NOE5	5,861	6,005	6,136
13	NOE5	5,879	6,019	6,139

Table 12-3 Pre-Katrina – Stage-Damage

Water Elevation	Polder Name	5%	Mean	95%
14	NOE5	5,893	6,024	6,146
15	NOE5	5,907	6,026	6,148
16	NOE5	5,911	6,032	6,148
17	NOE5	5,913	6,035	6,148
18	NOE5	5,919	6,035	6,148
19	NOE5	5,921	6,035	6,148
20	NOE5	5,922	6,035	6,148
21	NOE5	5,922	6,035	6,148
22	NOE5	5,922	6,035	6,148
23	NOE5	5,922	6,035	6,148
24	NOE5	5,922	6,035	6,148
25	NOE5	5,922	6,035	6,148
-6	JW1	0	0	0
-5	JW1	0	0	0
-4	JW1	0	0	0
-3	JW1	0	0	0
-2	JW1	0	0	0
-1	JW1	0	0	0
0	JW1	0	0	5
1	JW1	0	0	64
2	JW1	0	4	158
3	JW1	0	61	239
4	JW1	4	151	307
5	JW1	57	230	394
6	JW1	144	296	486
7	JW1	221	381	560
8	JW1	285	471	651
9	JW1	368	542	728
10	JW1	455	631	786
11	JW1	524	707	825
12	JW1	611	764	853
13	JW1	686	803	874
14	JW1	742	830	887
15	JW1	780	851	901
16	JW1	807	863	912
17	JW1	827	877	927
18	JW1	840	887	959
19	JW1	852	902	969
20	JW1	862	930	977

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
21	JW1	876	940	984
22	JW1	902	947	984
23	JW1	910	953	985
24	JW1	917	953	985
25	JW1	922	954	986
26	JW1	923	954	988
27	JW1	923	955	989
28	JW1	923	957	990
29	JW1	924	957	991
30	JW1	925	958	991
31	JW1	926	959	991
32	JW1	927	959	992
33	JW1	927	960	992
34	JW1	928	960	992
35	JW1	928	960	992
36	JW1	928	960	992
-9	JW2	0	0	0
-8	JW2	0	0	0
-7	JW2	0	0	0
-6	JW2	0	0	1
-5	JW2	0	0	6
-4	JW2	0	1	51
-3	JW2	0	5	123
-2	JW2	1	44	189
-1	JW2	4	114	275
0	JW2	38	178	337
1	JW2	105	262	373
2	JW2	168	321	400
3	JW2	248	356	411
4	JW2	305	383	417
5	JW2	340	393	425
6	JW2	365	399	434
7	JW2	376	407	445
8	JW2	381	416	453
9	JW2	389	426	459
10	JW2	397	433	463
11	JW2	407	439	466
12	JW2	414	443	467
13	JW2	419	445	467

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
14	JW2	423	446	468
15	JW2	425	447	468
16	JW2	426	447	468
17	JW2	426	447	468
18	JW2	427	447	468
19	JW2	427	447	468
20	JW2	427	447	468
21	JW2	427	447	468
22	JW2	427	447	468
23	JW2	427	447	468
24	JW2	427	447	468
25	JW2	427	447	468
26	JW2	427	447	468
27	JW2	427	447	468
28	JW2	427	447	468
29	JW2	427	447	468
30	JW2	427	447	468
31	JW2	427	447	468
32	JW2	427	447	468
33	JW2	427	447	468
34	JW2	427	447	468
35	JW2	427	447	468
36	JW2	427	447	468
-8	JW3	0	0	0
-7	JW3	0	0	0
-6	JW3	0	0	0
-5	JW3	0	0	0
-4	JW3	0	0	18
-3	JW3	0	0	128
-2	JW3	0	16	327
-1	JW3	0	122	654
0	JW3	15	314	1,232
1	JW3	117	635	1,975
2	JW3	301	1,206	2,805
3	JW3	616	1,933	3,726
4	JW3	1,180	2,750	4,624
5	JW3	1,892	3,660	5,239
6	JW3	2,694	4,550	5,549
7	JW3	3,593	5,158	5,711

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
8	JW3	4,475	5,466	5,830
9	JW3	5,077	5,625	5,940
10	JW3	5,382	5,743	6,037
11	JW3	5,540	5,851	6,141
12	JW3	5,656	5,947	6,253
13	JW3	5,762	6,049	6,331
14	JW3	5,856	6,159	6,398
15	JW3	5,957	6,236	6,444
16	JW3	6,065	6,301	6,465
17	JW3	6,140	6,345	6,480
18	JW3	6,204	6,366	6,485
19	JW3	6,246	6,380	6,488
20	JW3	6,266	6,385	6,489
21	JW3	6,280	6,388	6,489
22	JW3	6,285	6,389	6,489
23	JW3	6,288	6,389	6,489
24	JW3	6,289	6,389	6,489
25	JW3	6,289	6,389	6,489
26	JW3	6,289	6,389	6,489
27	JW3	6,289	6,389	6,489
28	JW3	6,289	6,389	6,489
29	JW3	6,289	6,389	6,489
30	JW3	6,289	6,389	6,489
31	JW3	6,289	6,389	6,489
32	JW3	6,289	6,389	6,489
33	JW3	6,289	6,389	6,489
34	JW3	6,289	6,389	6,489
35	JW3	6,289	6,389	6,489
36	JW3	6,289	6,389	6,489
-10	JW4	0	0	0
-9	JW4	0	0	0
-8	JW4	0	0	0
-7	JW4	0	0	0
-6	JW4	0	0	26
-5	JW4	0	0	92
-4	JW4	0	23	449
-3	JW4	0	83	1,326
-2	JW4	19	426	2,757
-1	JW4	74	1,288	3,646

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
0	JW4	402	2,701	4,287
1	JW4	1,250	3,582	4,838
2	JW4	2,646	4,216	5,317
3	JW4	3,518	4,762	5,635
4	JW4	4,144	5,235	5,917
5	JW4	4,686	5,549	6,133
6	JW4	5,153	5,827	6,367
7	JW4	5,464	6,040	6,535
8	JW4	5,737	6,270	6,656
9	JW4	5,946	6,435	6,746
10	JW4	6,173	6,553	6,834
11	JW4	6,334	6,643	6,906
12	JW4	6,451	6,729	6,958
13	JW4	6,539	6,800	7,000
14	JW4	6,624	6,851	7,032
15	JW4	6,694	6,891	7,051
16	JW4	6,744	6,923	7,062
17	JW4	6,783	6,941	7,068
18	JW4	6,814	6,953	7,071
19	JW4	6,832	6,959	7,072
20	JW4	6,843	6,961	7,074
21	JW4	6,849	6,963	7,075
22	JW4	6,851	6,964	7,075
23	JW4	6,853	6,965	7,076
24	JW4	6,854	6,965	7,076
25	JW4	6,855	6,966	7,076
26	JW4	6,855	6,967	7,077
27	JW4	6,856	6,967	7,077
28	JW4	6,857	6,967	7,077
29	JW4	6,857	6,967	7,077
30	JW4	6,857	6,967	7,077
31	JW4	6,857	6,967	7,077
32	JW4	6,857	6,967	7,077
33	JW4	6,857	6,967	7,077
34	JW4	6,857	6,967	7,077
35	JW4	6,857	6,967	7,077
36	JW4	320	323	327
-5	OW1	0	0	0
-4	OW1	0	0	0

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
-3	OW1	0	0	1
-2	OW1	0	0	26
-1	OW1	0	0	32
0	OW1	0	23	43
1	OW1	0	28	48
2	OW1	20	39	62
3	OW1	25	43	159
4	OW1	35	57	187
5	OW1	39	143	191
6	OW1	52	166	198
7	OW1	126	170	209
8	OW1	146	176	212
9	OW1	149	187	214
10	OW1	155	190	216
11	OW1	165	192	226
12	OW1	167	194	231
13	OW1	170	203	233
14	OW1	172	207	235
15	OW1	179	209	237
16	OW1	183	210	237
17	OW1	184	211	238
18	OW1	185	212	238
19	OW1	186	213	238
20	OW1	187	213	238
21	OW1	188	213	238
22	OW1	188	213	238
23	OW1	188	213	238
24	OW1	188	213	238
25	OW1	188	213	238
26	OW1	188	213	238
27	OW1	188	213	238
28	OW1	188	213	238
29	OW1	188	213	238
30	OW1	188	213	238
31	OW1	188	213	238
32	OW1	188	213	238
33	OW1	188	213	238
34	OW1	188	213	238
35	OW1	188	213	238

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
36	OW1	188	213	238
-14	OW2	0	0	0
-13	OW2	0	0	0
-12	OW2	0	0	0
-11	OW2	0	0	0
-10	OW2	0	0	0
-9	OW2	0	0	0
-8	OW2	0	0	0
-7	OW2	0	0	7
-6	OW2	0	0	64
-5	OW2	0	6	171
-4	OW2	0	58	432
-3	OW2	5	157	816
-2	OW2	51	412	1,203
-1	OW2	144	784	1,506
0	OW2	392	1,165	1,782
1	OW2	751	1,464	2,038
2	OW2	1,126	1,736	2,252
3	OW2	1,422	1,991	2,454
4	OW2	1,691	2,204	2,656
5	OW2	1,943	2,404	2,845
6	OW2	2,155	2,603	3,020
7	OW2	2,353	2,791	3,161
8	OW2	2,551	2,964	3,276
9	OW2	2,736	3,104	3,379
10	OW2	2,908	3,217	3,491
11	OW2	3,046	3,319	3,547
12	OW2	3,159	3,430	3,581
13	OW2	3,260	3,485	3,606
14	OW2	3,368	3,518	3,626
15	OW2	3,422	3,543	3,642
16	OW2	3,455	3,563	3,653
17	OW2	3,479	3,579	3,662
18	OW2	3,499	3,590	3,669
19	OW2	3,515	3,598	3,682
20	OW2	3,526	3,605	3,683
21	OW2	3,534	3,617	3,683
22	OW2	3,541	3,619	3,688
23	OW2	3,553	3,619	3,688

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
24	OW2	3,554	3,623	3,689
25	OW2	3,554	3,624	3,689
26	OW2	3,558	3,624	3,689
27	OW2	3,559	3,624	3,689
28	OW2	3,559	3,624	3,689
29	OW2	3,559	3,624	3,689
30	OW2	3,559	3,624	3,689
31	OW2	3,559	3,624	3,689
32	OW2	3,559	3,624	3,689
33	OW2	3,559	3,624	3,689
34	OW2	3,559	3,624	3,689
35	OW2	3,559	3,624	3,689
36	OW2	3,559	3,624	3,689
-7	PL1	0	0	0
-6	PL1	0	0	0
-5	PL1	0	0	0
-4	PL1	0	0	4
-3	PL1	0	0	35
-2	PL1	0	4	94
-1	PL1	0	33	159
0	PL1	3	90	227
1	PL1	31	152	257
2	PL1	86	217	305
3	PL1	146	245	378
4	PL1	207	293	455
5	PL1	234	365	496
6	PL1	280	440	556
7	PL1	351	481	582
8	PL1	425	539	608
9	PL1	466	565	630
10	PL1	523	591	639
11	PL1	549	612	648
12	PL1	573	620	662
13	PL1	593	629	669
14	PL1	601	642	675
15	PL1	610	649	678
16	PL1	622	654	681
17	PL1	629	658	683
18	PL1	634	660	685

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
19	PL1	637	662	686
20	PL1	640	665	686
21	PL1	642	665	686
22	PL1	644	665	686
23	PL1	644	666	686
24	PL1	645	666	686
25	PL1	645	666	686
26	PL1	645	666	686
27	PL1	645	666	686
28	PL1	645	666	686
29	PL1	645	666	686
30	PL1	645	666	686
31	PL1	645	666	686
32	PL1	645	666	686
33	PL1	645	666	686
34	PL1	645	666	686
35	PL1	645	666	686
-7	SB1	0	0	0
-6	SB1	0	0	0
-5	SB1	0	0	0
-4	SB1	0	0	9
-3	SB1	0	0	55
-2	SB1	0	9	201
-1	SB1	0	54	485
0	SB1	8	196	894
1	SB1	52	477	1,286
2	SB1	192	877	1,523
3	SB1	468	1,262	1,752
4	SB1	859	1,496	2,020
5	SB1	1,239	1,722	2,198
6	SB1	1,470	1,983	2,346
7	SB1	1,693	2,159	2,444
8	SB1	1,945	2,305	2,522
9	SB1	2,120	2,403	2,585
10	SB1	2,265	2,480	2,626
11	SB1	2,361	2,541	2,661
12	SB1	2,437	2,581	2,696
13	SB1	2,498	2,616	2,722
14	SB1	2,537	2,650	2,740

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
15	SB1	2,571	2,676	2,754
16	SB1	2,604	2,693	2,764
17	SB1	2,629	2,707	2,772
18	SB1	2,647	2,717	2,777
19	SB1	2,660	2,725	2,778
20	SB1	2,670	2,729	2,779
21	SB1	2,677	2,731	2,780
22	SB1	2,681	2,731	2,780
23	SB1	2,683	2,732	2,780
24	SB1	2,684	2,732	2,780
25	SB1	2,684	2,732	2,781
26	SB1	2,685	2,733	2,781
27	SB1	2,685	2,733	2,781
28	SB1	2,685	2,733	2,781
29	SB1	2,685	2,733	2,781
30	SB1	2,685	2,733	2,781
31	SB1	2,685	2,733	2,781
32	SB1	2,685	2,733	2,781
33	SB1	2,685	2,733	2,781
34	SB1	2,685	2,733	2,781
35	SB1	2,685	2,733	2,781
36	SB1	2,685	2,733	2,781
0	SB2	0	0	0
1	SB2	0	0	0
2	SB2	0	0	0
3	SB2	0	0	0
4	SB2	0	0	0
5	SB2	0	0	0
6	SB2	0	0	0
7	SB2	0	0	22
8	SB2	0	0	24
9	SB2	0	19	27
10	SB2	0	20	29
11	SB2	15	22	29
12	SB2	17	24	29
13	SB2	18	24	30
14	SB2	20	24	30
15	SB2	20	25	31
16	SB2	20	25	31

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
17	SB2	21	26	32
18	SB2	21	26	32
19	SB2	22	27	34
20	SB2	22	27	34
21	SB2	22	29	34
22	SB2	22	29	34
23	SB2	24	29	34
24	SB2	24	29	34
25	SB2	24	29	34
26	SB2	24	29	34
27	SB2	24	29	34
28	SB2	24	29	34
29	SB2	24	29	34
30	SB2	24	29	34
31	SB2	24	29	34
32	SB2	24	29	34
33	SB2	24	29	34
34	SB2	24	29	34
35	SB2	24	29	34
36	SB2	24	29	34
-8	SB3	0	0	0
-7	SB3	0	0	0
-6	SB3	0	0	0
-5	SB3	0	0	0
-4	SB3	0	0	0
-3	SB3	0	0	0
-2	SB3	0	0	4
-1	SB3	0	0	77
0	SB3	0	4	228
1	SB3	0	71	652
2	SB3	3	218	1,174
3	SB3	64	634	1,553
4	SB3	207	1,150	1,753
5	SB3	615	1,525	1,867
6	SB3	1,126	1,724	1,971
7	SB3	1,497	1,836	2,112
8	SB3	1,694	1,939	2,227
9	SB3	1,806	2,077	2,337
10	SB3	1,907	2,191	2,434

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
11	SB3	2,043	2,298	2,497
12	SB3	2,154	2,394	2,533
13	SB3	2,260	2,456	2,552
14	SB3	2,353	2,491	2,567
15	SB3	2,414	2,510	2,583
16	SB3	2,449	2,524	2,598
17	SB3	2,467	2,540	2,607
18	SB3	2,482	2,554	2,612
19	SB3	2,497	2,563	2,617
20	SB3	2,511	2,568	2,621
21	SB3	2,520	2,574	2,623
22	SB3	2,524	2,577	2,624
23	SB3	2,530	2,579	2,624
24	SB3	2,533	2,580	2,625
25	SB3	2,535	2,580	2,625
26	SB3	2,536	2,581	2,625
27	SB3	2,537	2,581	2,625
28	SB3	2,537	2,581	2,625
29	SB3	2,537	2,581	2,625
30	SB3	2,537	2,581	2,625
31	SB3	2,537	2,581	2,625
32	SB3	2,537	2,581	2,625
33	SB3	2,537	2,581	2,625
34	SB3	2,537	2,581	2,625
35	SB3	2,537	2,581	2,625
36	SB3	2,537	2,581	2,625
-1	SB4	0	0	0
0	SB4	0	0	0
1	SB4	0	0	0
2	SB4	0	0	8
3	SB4	0	0	35
4	SB4	0	7	94
5	SB4	0	33	200
6	SB4	6	90	308
7	SB4	30	190	402
8	SB4	85	295	454
9	SB4	180	388	481
10	SB4	283	439	507
11	SB4	373	465	513

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
12	SB4	423	491	520
13	SB4	450	497	533
14	SB4	475	504	545
15	SB4	481	516	556
16	SB4	487	528	563
17	SB4	499	538	568
18	SB4	510	545	571
19	SB4	520	549	572
20	SB4	527	553	573
21	SB4	531	554	573
22	SB4	534	554	573
23	SB4	535	554	573
24	SB4	536	555	573
25	SB4	536	555	573
26	SB4	536	555	573
27	SB4	536	555	573
28	SB4	536	555	573
29	SB4	536	555	573
30	SB4	536	555	573
31	SB4	536	555	573
32	SB4	536	555	573
33	SB4	536	555	573
34	SB4	536	555	573
35	SB4	536	555	573
36	SB4	536	555	573
-1	SB5	0	0	0
0	SB5	0	0	0
1	SB5	0	0	0
2	SB5	0	0	2
3	SB5	0	0	13
4	SB5	0	2	33
5	SB5	0	11	38
6	SB5	1	30	43
7	SB5	9	33	45
8	SB5	26	38	46
9	SB5	29	40	46
10	SB5	33	40	47
11	SB5	34	41	48
12	SB5	35	41	50

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
13	SB5	35	42	50
14	SB5	36	44	51
15	SB5	37	44	52
16	SB5	38	45	53
17	SB5	38	46	53
18	SB5	39	47	53
19	SB5	39	47	53
20	SB5	40	47	53
21	SB5	41	47	53
22	SB5	41	47	53
23	SB5	41	47	53
24	SB5	41	47	53
25	SB5	41	47	53
26	SB5	41	47	53
27	SB5	41	47	53
28	SB5	41	47	53
29	SB5	41	47	53
30	SB5	41	47	53
31	SB5	41	47	53
32	SB5	41	47	53
33	SB5	41	47	53
34	SB5	41	47	53
35	SB5	41	47	53
36	SB5	41	47	53
-1	SC1	0	0	0
0	SC1	0	0	0
1	SC1	0	0	22
2	SC1	0	0	95
3	SC1	0	19	125
4	SC1	0	85	134
5	SC1	17	113	141
6	SC1	75	121	144
7	SC1	101	127	145
8	SC1	108	130	145
9	SC1	113	130	147
10	SC1	116	131	151
11	SC1	116	132	155
12	SC1	117	136	157
13	SC1	118	139	159

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
14	SC1	121	141	160
15	SC1	124	143	162
16	SC1	126	144	162
17	SC1	127	145	162
18	SC1	128	146	162
19	SC1	129	146	162
20	SC1	129	146	162
21	SC1	130	146	162
22	SC1	130	146	162
23	SC1	130	146	162
24	SC1	130	146	162
25	SC1	130	146	162
26	SC1	130	146	162
27	SC1	130	146	162
28	SC1	130	146	162
29	SC1	130	146	162
30	SC1	130	146	162
31	SC1	130	146	162
32	SC1	130	146	162
33	SC1	130	146	162
34	SC1	130	146	162
35	SC1	130	146	162
36	SC1	130	146	162
-2	SC2	0	0	0
-1	SC2	0	0	0
0	SC2	0	0	12
1	SC2	0	0	182
2	SC2	0	10	306
3	SC2	0	169	409
4	SC2	9	290	508
5	SC2	156	390	689
6	SC2	274	485	862
7	SC2	370	661	1,006
8	SC2	463	833	1,189
9	SC2	634	973	1,399
10	SC2	803	1,151	1,584
11	SC2	940	1,355	1,674
12	SC2	1,114	1,532	1,748
13	SC2	1,311	1,619	1,806

Table 12-3 Pre-Katrina – Stage-Damage				
Water Elevation	Polder Name	5%	Mean	95%
14	SC2	1,480	1,690	1,848
15	SC2	1,563	1,746	1,869
16	SC2	1,633	1,787	1,892
17	SC2	1,685	1,807	1,925
18	SC2	1,726	1,830	1,948
19	SC2	1,746	1,861	1,964
20	SC2	1,768	1,883	1,975
21	SC2	1,797	1,898	1,982
22	SC2	1,818	1,908	1,987
23	SC2	1,832	1,915	1,989
24	SC2	1,842	1,920	1,990
25	SC2	1,848	1,922	1,991
26	SC2	1,853	1,923	1,992
27	SC2	1,854	1,923	1,992
28	SC2	1,856	1,924	1,992
29	SC2	1,856	1,925	1,992
30	SC2	1,857	1,925	1,992
31	SC2	1,857	1,925	1,992
32	SC2	1,858	1,925	1,992
33	SC2	1,858	1,925	1,992
34	SC2	1,858	1,925	1,992
35	SC2	1,858	1,925	1,992
36	SC2	1,858	1,925	1,992

Probabilistic risk scenarios as modeled by the Risk & Reliability Assessment Team	Economic	Probabilistic stage-damage functions provided to the Risk & Reliability Team for use in evaluating economic risk as of August 2005	Probabilistic stage-damage functions provided to the Risk & Reliability Team for use in evaluating economic risk as of June 2006
	Human Health	Probabilistic stage-fatality functions provided to the Risk & Reliability Team for use in evaluating mortality risk as of August 2005	Probabilistic stage-fatality functions provided to the Risk & Reliability Team for use in evaluating mortality risk as of June 2006
	Social-Cultural	Characterization of communities and institutions at risk	Description of impacts on communities and institutions with repeat of Katrina flood conditions
	Environmental	Characterization of ecological resources at risk	Description of impacts on ecological resources with repeat of Katrina flood conditions

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