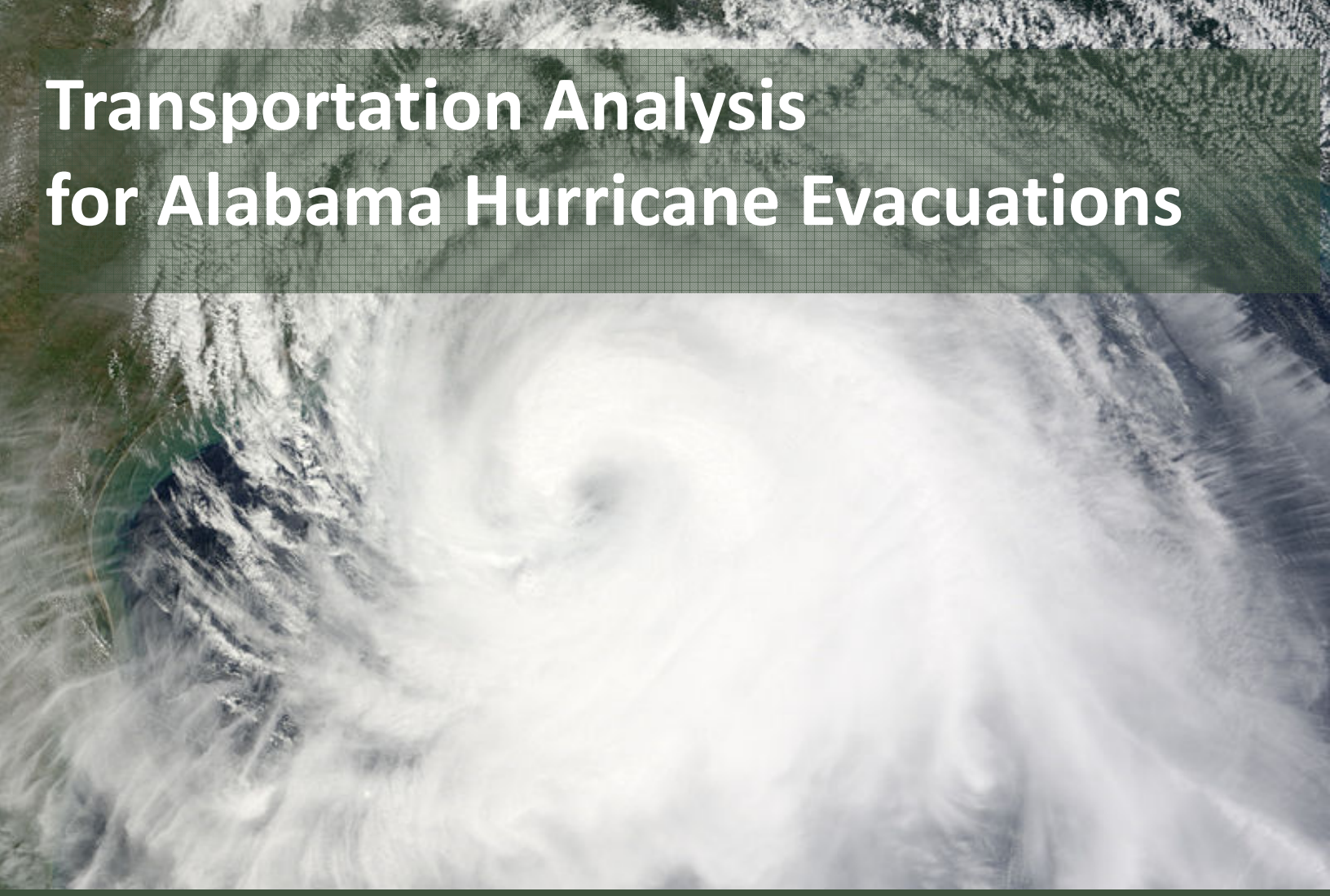
Transportation Analysis for Alabama Hurricane Evacuations



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Executive Summary

The Mobile District, U.S. Army Corps of Engineers (USACE) has undertaken this study to update hurricane evacuation clearance times for coastal Alabama. The most recent previous study was conducted in 1999 and relied upon 1990 U.S. Census data. Permanent and tourist populations along the Alabama coastline have grown significantly over the last two decades. In addition to these population changes, both counties have re-drawn their evacuation zone maps. The new maps incorporate a significantly greater number of evacuees in some scenarios, particularly in lower category storm events. These changes in growth and the re-plotting of the area at risk mean more potential evacuees in all storm scenarios and result in increases in evacuation clearance times.

The transportation analysis includes seven primary tasks: Identifying the Evacuation Roadway Network, Determining Evacuation Scenarios, Estimating Numbers of Evacuees and Vehicles, Estimating Trip Generation and Destinations, Calculating Vehicle Movements, Calculating of Clearance Times and Recommending Traffic Control Measures. The report includes a section on methodology, which details how the data was generated, and a section on results, which details the study findings.

Specific sets of hurricane evacuation clearance times are provided for four evacuation scenarios; one set for each county (Mobile and Baldwin) assuming they alone would evacuate, one set for Mobile, Baldwin and NW Florida evacuating, two sets for Mobile, Baldwin, NW Florida, Mississippi and Louisiana evacuating with and without I-65 contraflow. Each evacuation scenario evaluated tourist occupancy levels (low, medium, high, and maximum), county evacuation zones for storm categories 1 through 5, and evacuee response rates (slow, medium, rapid and immediate). This resulted in a total of 400 clearance times that have been modeled. The results are shown in the following table.

Clearance Times Summary

	Critical Roadway Segment	Cat 1 Range	Cat 2 Range	Cat 3 Range	Cat 4 Range	Cat 5 Range
Baldwin County	**Ala 59 thru Loxley** *Includes Mobile thru-traffic* *No Interstate impacts*	10 to 22 hours	15 to 29 hours	15 to 29 hours	22 to 36 hours	22 to 36 hours
Mobile County	**I-10 eastbound to Baldwin Co.** *Includes Baldwin thru-traffic* *No Interstate impacts*	15 to 20 hours	15 to 20 hours	17 to 23 hours	20 to 25 hours	20 to 25 hours
Additional States	**I-65 eastbound with FL w I-10 eastbound** (worst case) *Includes LA, MS (eastbound) and FL (westbound)*	15 to 25 hours	21 to 32 hours	25 to 36 hours	34 to 45 hours	36 to 47 hours
	I-65 eastbound with FL (w/o I-10 eastbound) *Includes only FL (westbound), no LA or MS (eastbound)*	15 to 25 hours	21 to 31 hours	24 to 35 hours	33 to 44 hours	34 to 45 hours
Contraflow	**I-65 eastbound with FL w I-10 eastbound** *Includes LA, MS (eastbound) and FL (westbound)*	15 to 22 hours	15 to 29 hours	17 to 29 hours	22 to 36 hours	23 to 36 hours
Note: *Contraflow benefits on I-65 will not generate clearance times lower than the highest time at the county critical roadway segment for Baldwin or Mobile County.*						

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I. Introduction

The State of Alabama is at significant risk to impact from hurricanes. Hurricanes Dennis and Ivan, as well as the peripheral effects from Hurricane Katina, underscore the vulnerability of both urban areas and beach communities. With two coastal counties, Baldwin and Mobile, a significant portion of the region's population is subject to the potential effects of storm surge. As recently as 2009, the remnants of Hurricane Ida brought voluntary evacuations to the Alabama coast.

The last major regional hurricane evacuation study completed by PBS&J, the *Alabama Hurricane Evacuation Restudy Transportation Analysis*, which included Alabama and northwest Florida, was conducted by the Mobile District, U.S. Army Corps of Engineers (USACE) in 1999. Other transportation studies related to this area completed by PBS&J include:

- *Hurricane Evacuation Benefit Analysis, AL Highway 113,* Escambia County Engineering Department (Florida), 2006; and the
- *Baldwin County Hurricane Evacuation Route Analysis Technical Memorandum*, Baldwin County Emergency Management Agency (Alabama), 2008.

The current study builds upon the foundation of the 1999 regional study effort and incorporates the findings and updates included in these more recent studies.

II. Project Scope

The overall project includes a transportation analysis. The primary purpose of the transportation analysis is to calculate the clearance times needed to conduct a safe and timely evacuation for a range of hurricane threats. Other purposes are to define the evacuation roadway network and to evaluate critical traffic links and potential control measures for improved traffic flow. Evacuation scenarios include an evaluation of the impacts of the I-65 contraflow plans developed by the Alabama Department of Transportation (ALDOT).

The transportation analysis includes the following seven tasks:

1) Identify the Evacuation Roadway Network,
2) Determine Evacuation Scenarios,
3) Estimate Numbers of Evacuees and Vehicles,
4) Trip Generation and Destinations,
5) Vehicle Movements,
6) Calculations of Clearance Times, and
7) Traffic Control Measures.

This report provides coverage of each of these sections and includes hurricane evacuation clearance times for Baldwin and Mobile Counties.

III. Study Methodology

The methodology employed in conducting a hurricane evacuation transportation analysis involves a series of the following sequential steps:

A) Delineate Hurricane Surge Areas
B) Establish Evacuation Zones and Scenarios
C) Identify Evacuation Roadway Network
D) Estimate Numbers of Evacuees and Vehicles
E) Conduct Trip Generation and Identify Destinations
F) Conduct Trip Distribution
G) Calculate Clearance Times

Each step is explained in further detail below.

A) Delineate Hurricane Surge Areas

The Mobile District, USACE used the newly generated Sea, Lake, and Overland Surge from Hurricanes (SLOSH) maps to determine what coastal areas would be inundated by category 1-5 storms hitting the coast from any angle, forward speed or landfall point. This procedure displays all areas that could be subject to flooding form any storm of a specific category. This ensures that all residents in any of the five storm category surge areas will be warned to evacuate if that storm category threatens to hit the area.

The first step in the hurricane evacuation planning process involves delineating areas subject to hurricane-related storm surge. The SLOSH model was used to estimate storm surge depths resulting from historical, hypothetical, or predicted hurricanes by taking into account a storm's pressure, size, forward speed, forecast track, wind speeds, and topographical data.

The Mobile Bay basin was remodeled by the USACE in 2008. The remodeling applied a new grid configuration. These grid cells are the building blocks of the SLOSH model. Smaller grid cells allow for a more geographically refined understanding of potential surge levels. In addition to grid size improvements, additional storm tracks were included in estimating the Maximum of Maximum (MOM), the combination of many storm tracks, or maximum of maximums, that is used to determine potential inundation extent for each storm category. These new tracks included storms with a range of forward speeds, as well as larger storms with a radius of maximum winds of up to 40 miles. The intent of these changes was to mirror recent observed storms and to provide a more accurate representation of storm surge.

SLOSH is used to evaluate the threat from storm surge, which is used in turn to help determine which areas must be evacuated. SLOSH output is used by the National Hurricane Program (NHP) when conducting Hurricane Evacuation Studies as a hazard analysis tool for assisting with the creation of state and local hurricane evacuation plans or zones. Based on the remodeling effort, new SLOSH maps were generated in 2009.

B) Establish Evacuation Zones and Scenarios

The next step in the evacuation planning process involves developing evacuation zones. Zones are based on the surge areas but must be easily communicated to the general public, and politically feasible. The State of Alabama and the two coastal study area counties, Baldwin and Mobile County, worked collaboratively to develop zones that met these criteria. These partners reviewed the newly developed SLOSH maps to determine the maximum extent of areas that could be subject to flooding in each category storm event. The counties then created evacuation zones based on the areas subject to storm surge flooding, but extending to match the boundaries of well known regional roads to aid in public communication. Mobile County developed two evacuation zones; one covering the Category 1 and 2 storm inundation areas, and a second covering the reminder of the county. This two zone approach is consistent with the approach used in the earlier 1999 transportation analysis. Baldwin County developed five evacuation zones, each corresponding with a specific storm category.

The storm surge inundation maps used in this study are shown in Figures 1 and 2.

The Evacuation Zones developed by the counties are shown in Figures 3 and 4.

After the county evacuation zones are developed, they are subdivided into smaller numbered traffic evacuation zones, or TEZs. These subunits allow for demographic data collection within their boundaries and form the building blocks of the modeling process. The TEZ maps used in this study are shown in Figures 5 and 6.

Mobile County had two evacuation zones, while Baldwin County had five evacuation zones. For each evacuation zone there are four (4) variations in tourist occupancy (low, medium, high and maximum), and four types of response rates (immediate, rapid, medium and slow).

Figure 1: Storm Tide Inundation – Mobile County

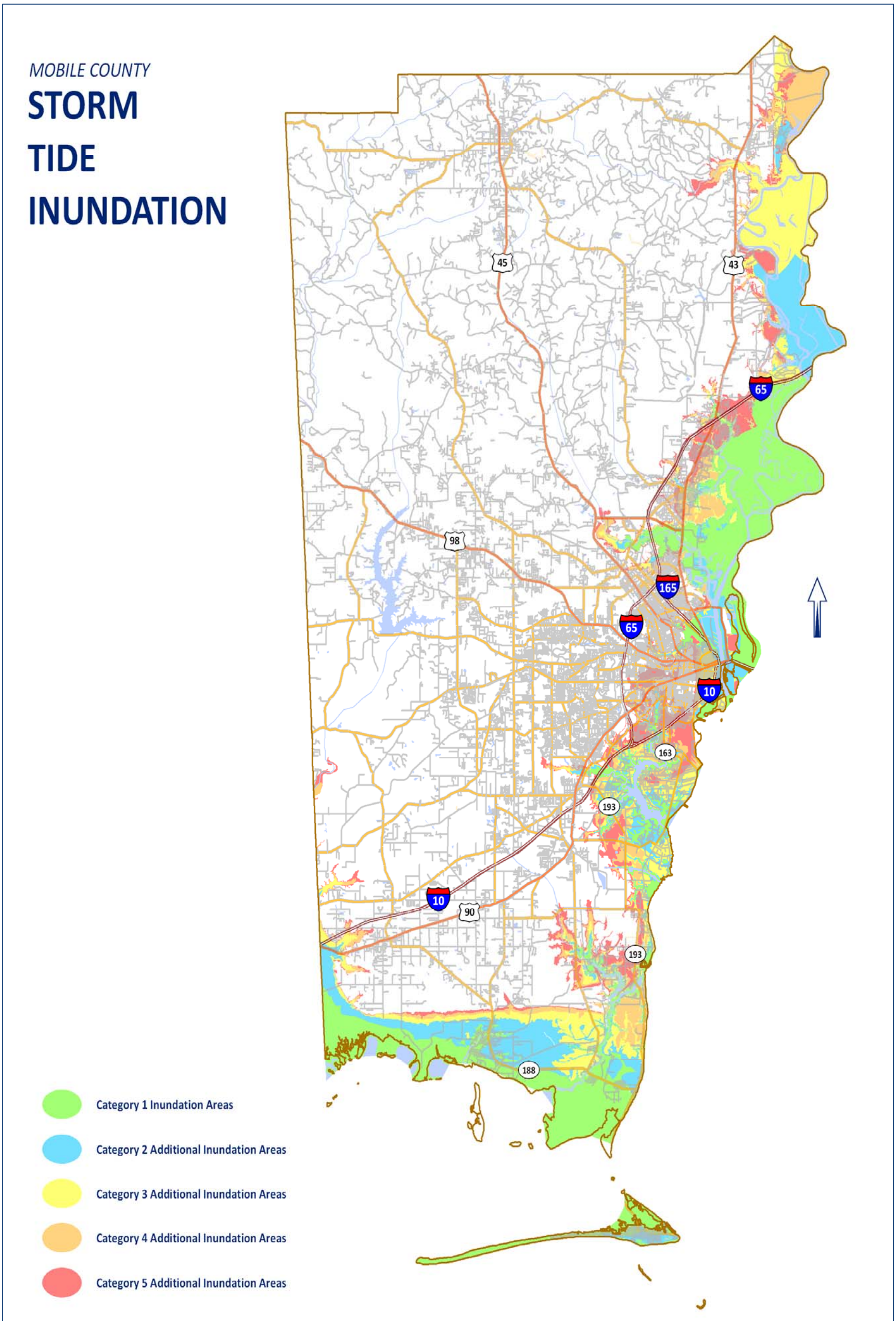


Figure 2: Storm Tide Inundation – Baldwin County

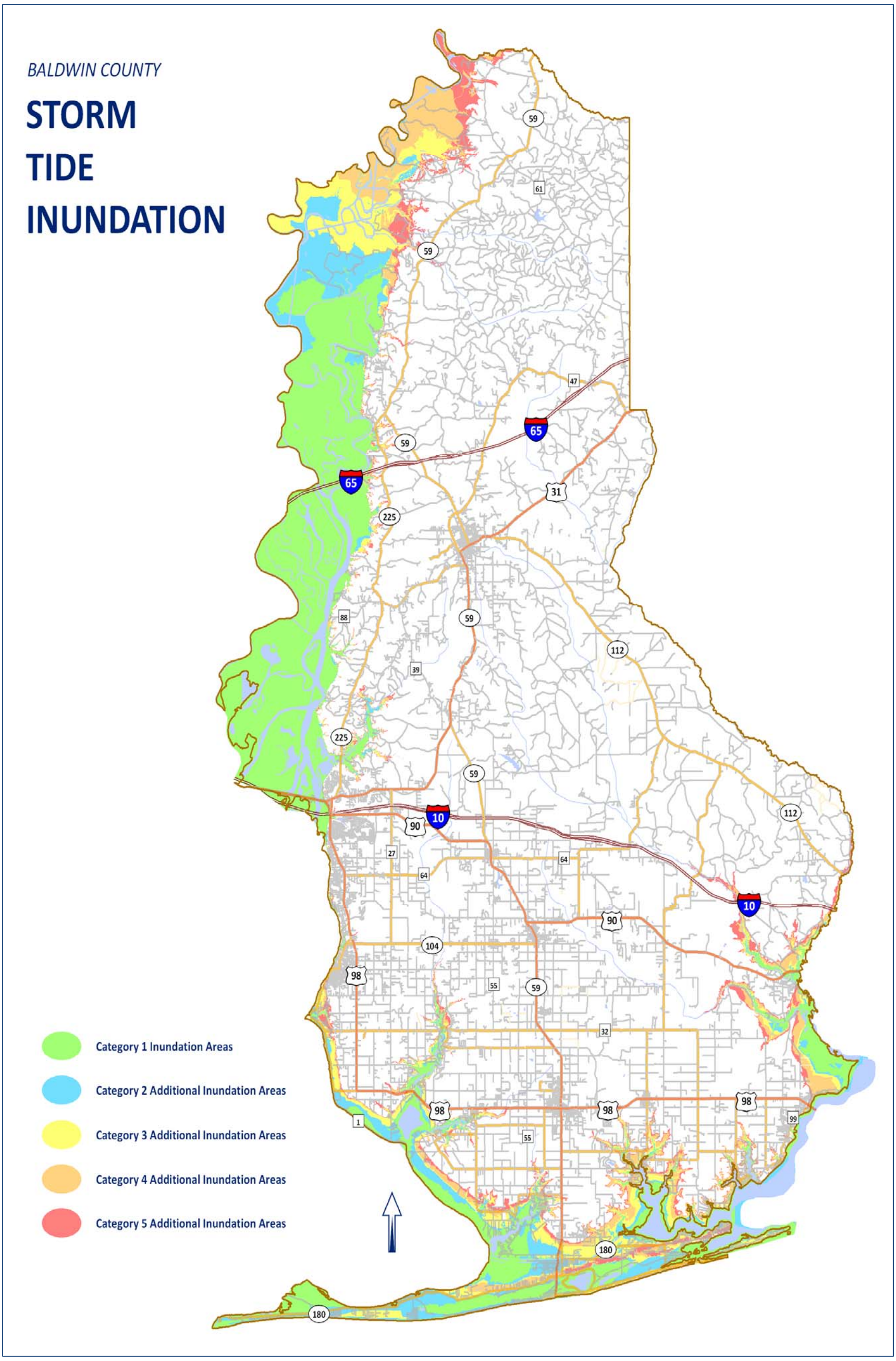


Figure 3: County Evacuation Scenario Zones – Mobile County

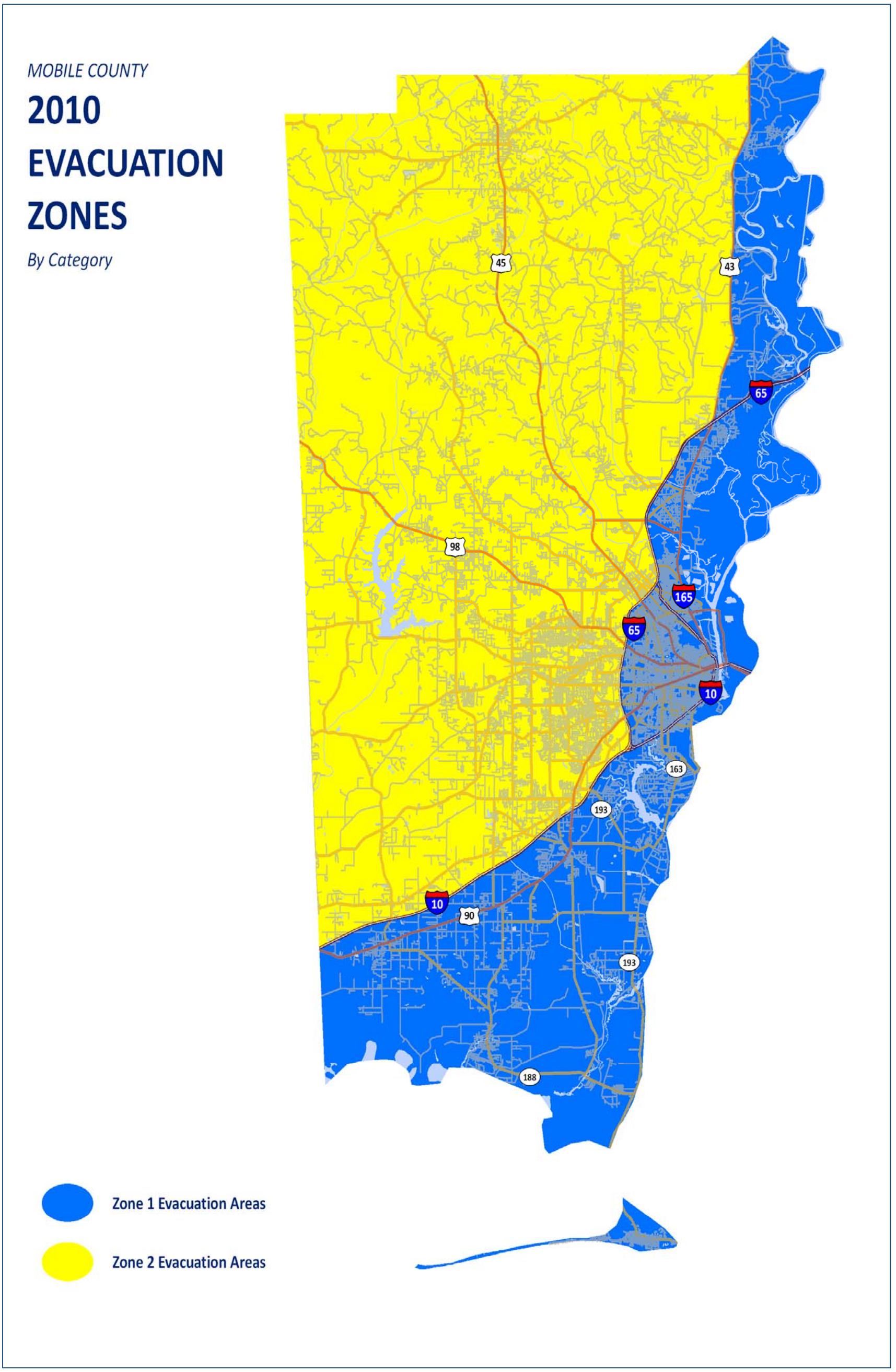


Figure 4: County Evacuation Scenario Zones – Baldwin County

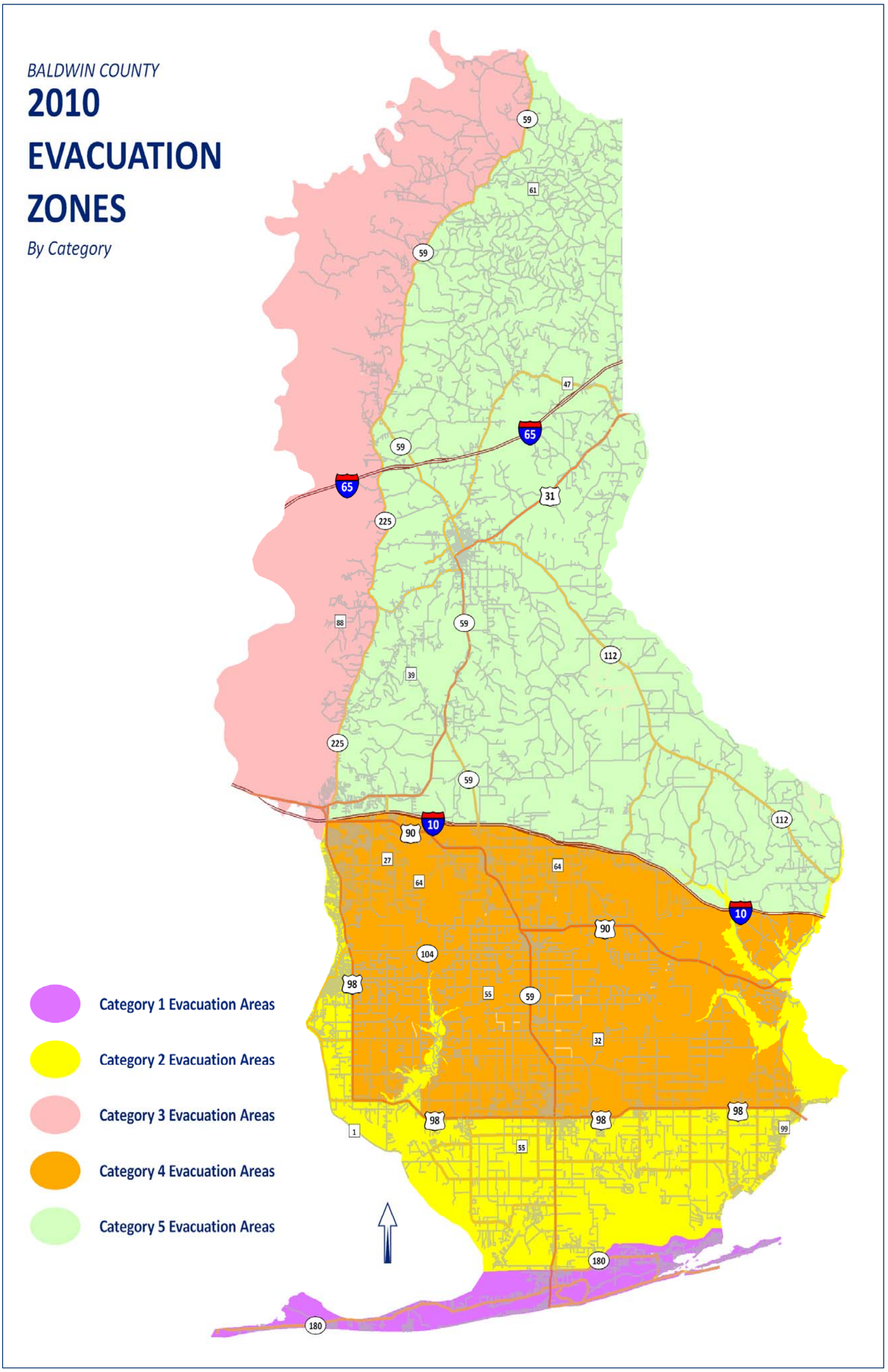


Figure 5: Traffic Evacuation Zones – Mobile County

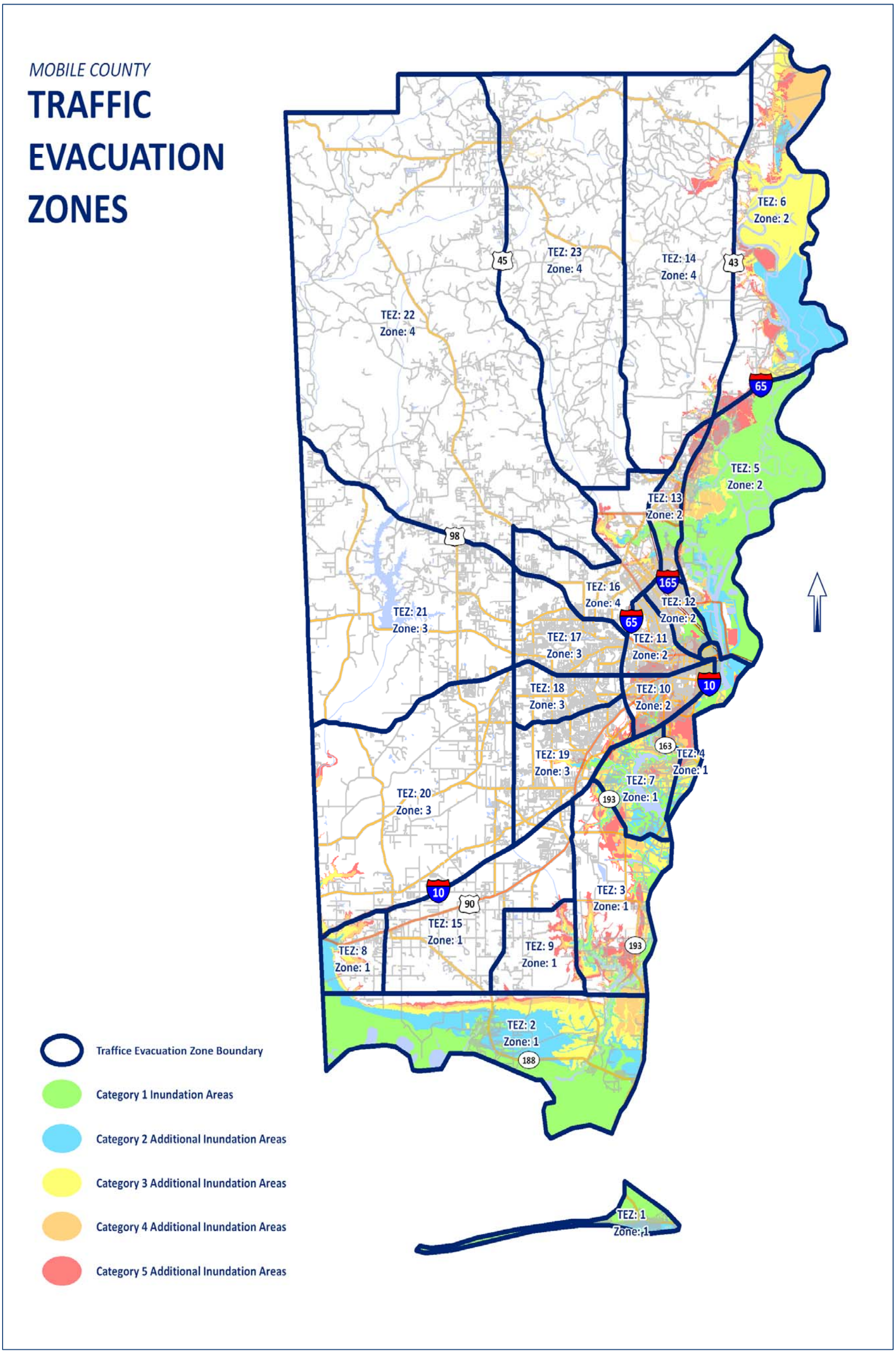
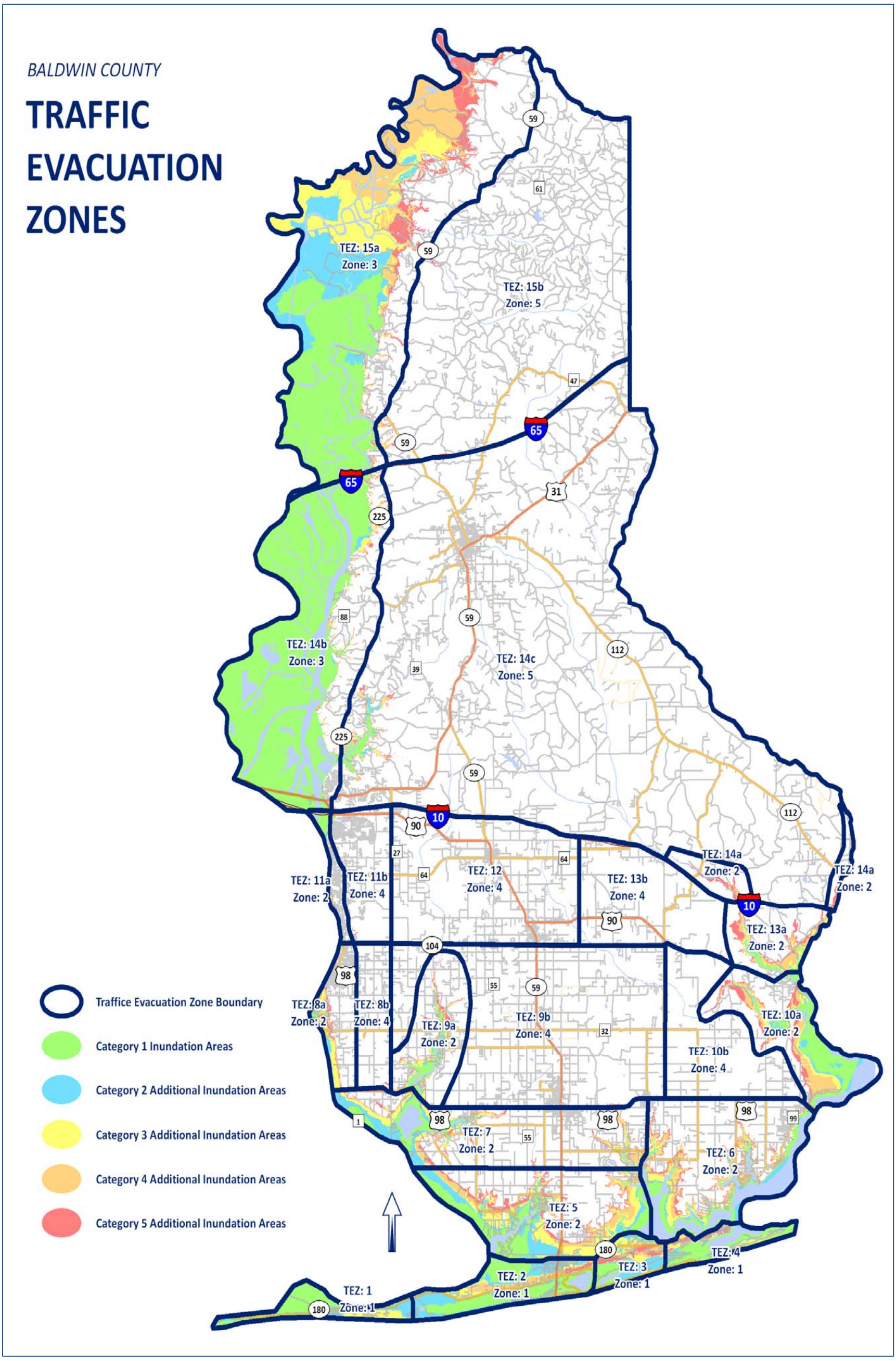


Figure 6: Traffic Evacuation Zones – Baldwin County



C) Identify Evacuation Roadway Network

The second stage in the evacuation modeling process involves identifying the evacuation roadway network. The network is limited to the primary evacuation routes that evacuees will use. The evacuation roadway network does not include local roads in the area since the modeling process includes an estimate for background traffic, which would include the loading of local traffic onto the evacuation network. The network used in this study was based on the previous studies conducted in the area. It was reviewed by area stakeholders and revisions and updates were made based on their comments.

Once established, the network is divided into a series of road segments, or road links. The segments are interspersed by nodes or critical links. As part of the modeling process data is collected at each of the nodes or critical links. These data include directional service volume, used to help determine roadway capacity, and average annualized daily trips (AADT), used in developing estimates of the background traffic component of clearance times. The data collected at the critical links is used to characterize the preceding adjacent roadway segments.

While modeling calculations are based on critical roadway links or nodes, the GIS data provided as part of this report is provided by roadway segment to facilitate network mapping. The evacuation roadway network maps are presented in Figures 7 and 8.

Figure 7: Evacuation Roadway Network – Mobile County

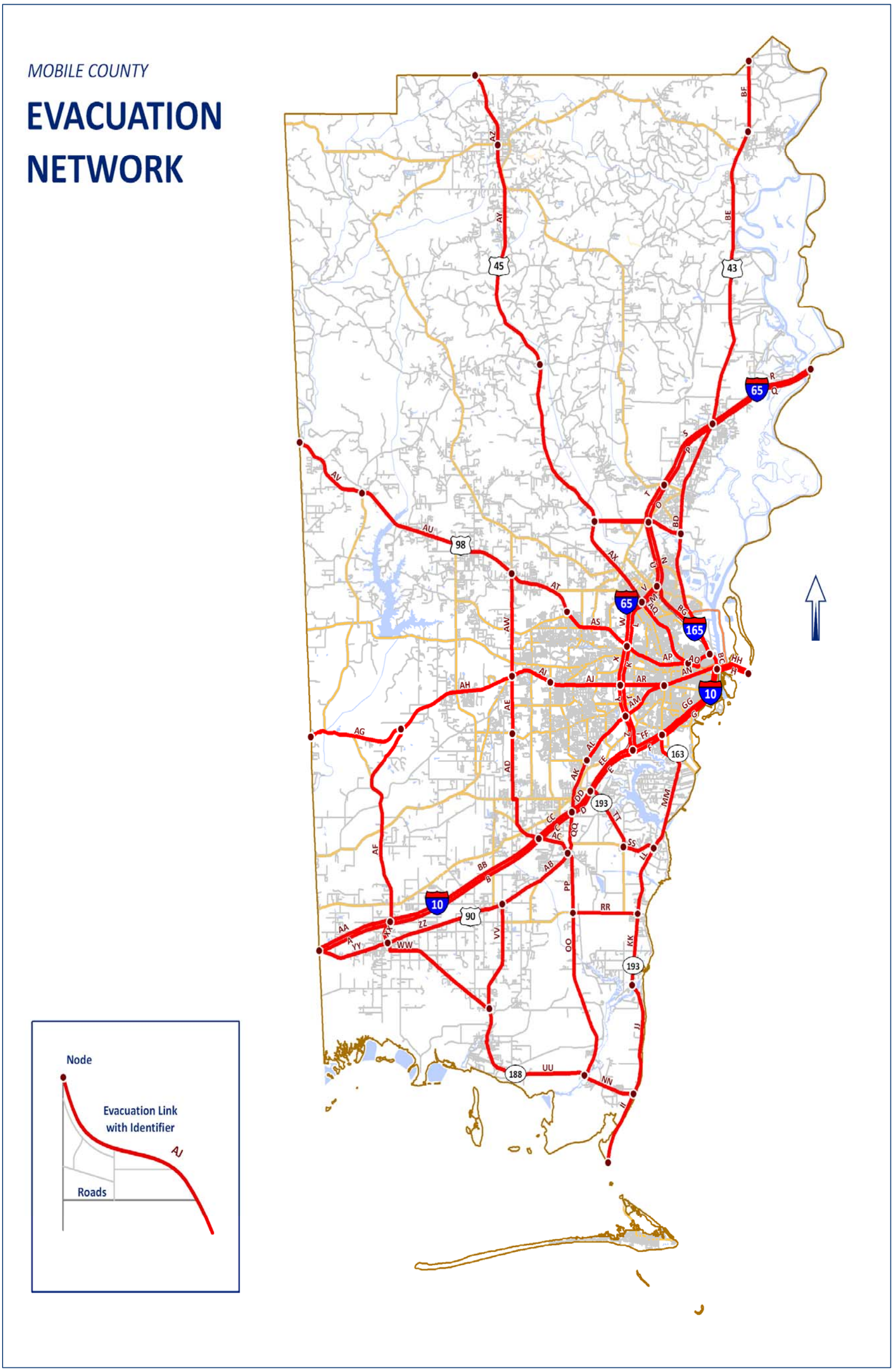
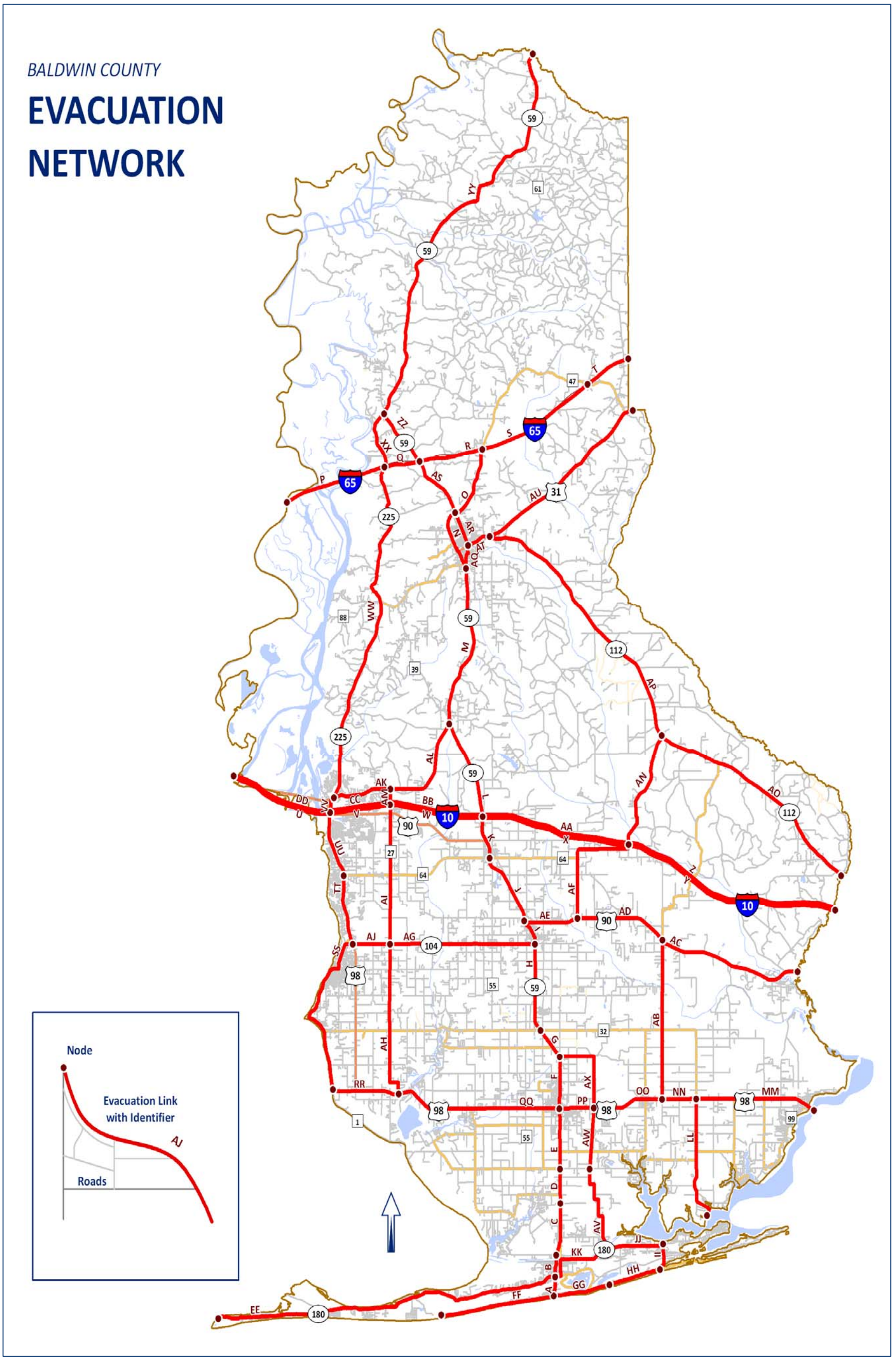


Figure 8: Evacuation Roadway Network – Baldwin County



D) Estimate Numbers of Evacuees and Vehicles

The third stage of the planning process involves determining who exactly will be evacuating. This is achieved by collecting demographic data on permanent residents and tourists from the U.S. Census and other state and local sources. This allows the modelers to identify the total number of individuals and vehicles in each numbered TEZ which may evacuate. Behavioral data is also collected to help determine the actual participation rates of individual and vehicle usage. The combination of base demographic data interpreted in light of behavioral assumptions allows the modelers to estimate the number of vehicles that will be loading the evacuation roadway network.

E) Conduct Trip Generation and Identify Destinations

The next stage of the process requires an understanding of where individual evacuees will evacuate. The modeling process identifies the following destinations; shelters, homes of friends or relatives, local hotels or motels, or out of the region. The percentage of individuals heading to each of these specific destinations is applied to the total number of individuals in each TEZ. This allows the total number of vehicles going to each destination to be calculated.

F) Conduct Trip Distribution

Once the total number of vehicles that will be evacuating from each zone in each scenario is identified, each individual trip must be routed along the evacuation roadway network. In the modeling process, each trip is meticulously routed through the entire evacuation roadway network. A specific TEZ may have individuals following different routes out, and these variations are recorded. In aggregate, the combination of these multiple different evacuation trips along the evacuation network allows for an estimation of the percentage of vehicles from each zone that will be travelling along each roadway segment. This percentage can be applied to the total number of evacuating vehicles in each scenario to determine the number of vehicles traveling though each bottleneck in each modeled scenario.

G) Calculate Clearance Times

The final and most important step in the planning process is the development of hurricane evacuation clearance times. Clearance time is the time from when the first vehicle leaves its county of origin until the last evacuating vehicle reaches its destination. It includes mobilization time and queuing time delay. The model developed for this project calculates clearance times at specific bottlenecks. In this study, bottlenecks were established for local out-routes, regional out-routes, as well as specific scenarios involving traffic from other states (LA/MS onto I-10 eastbound, FL onto I-10 westbound, and NW FL north into Escambia County, AL at I-65).

The roadway network functions like a pipe and the vehicles are like water passing through the pipe. In areas where the “pipe” is narrow, where the roadway has a low

service volume, clearance times will be higher. In areas where there is relatively more traffic, clearance times will also go up. The worst possible bottleneck that a county's traffic must pass through before reaching its external destination determines its clearance time.

IV. Analysis Assumptions and Results

A) Evacuation Roadway Network

The evacuation roadway network was developed from the network used in previous study efforts. The network was reviewed and revised as a result of a March 3, 2010 stakeholder meeting. The network includes the primary local out-routes within Mobile and Baldwin Counties, regional out-routes conveying evacuating traffic out of these counties, as well as segments of I-65 located in Escambia County, Alabama. The network is structured to be able to monitor the impacts of contraflow on I-65, as well as interstate traffic; including traffic heading northbound from Escambia County Florida at I-65, westbound thru-traffic along I-10 from Florida, and eastbound thru-traffic traffic from Louisiana and Mississippi along I-10. Figure 9 displays the regional evacuation network.

Table 1 lists the critical roadway segments and the estimated initial service volume at the commencement of the evacuation.

Figure 9: Regional Evacuation Roadway Network

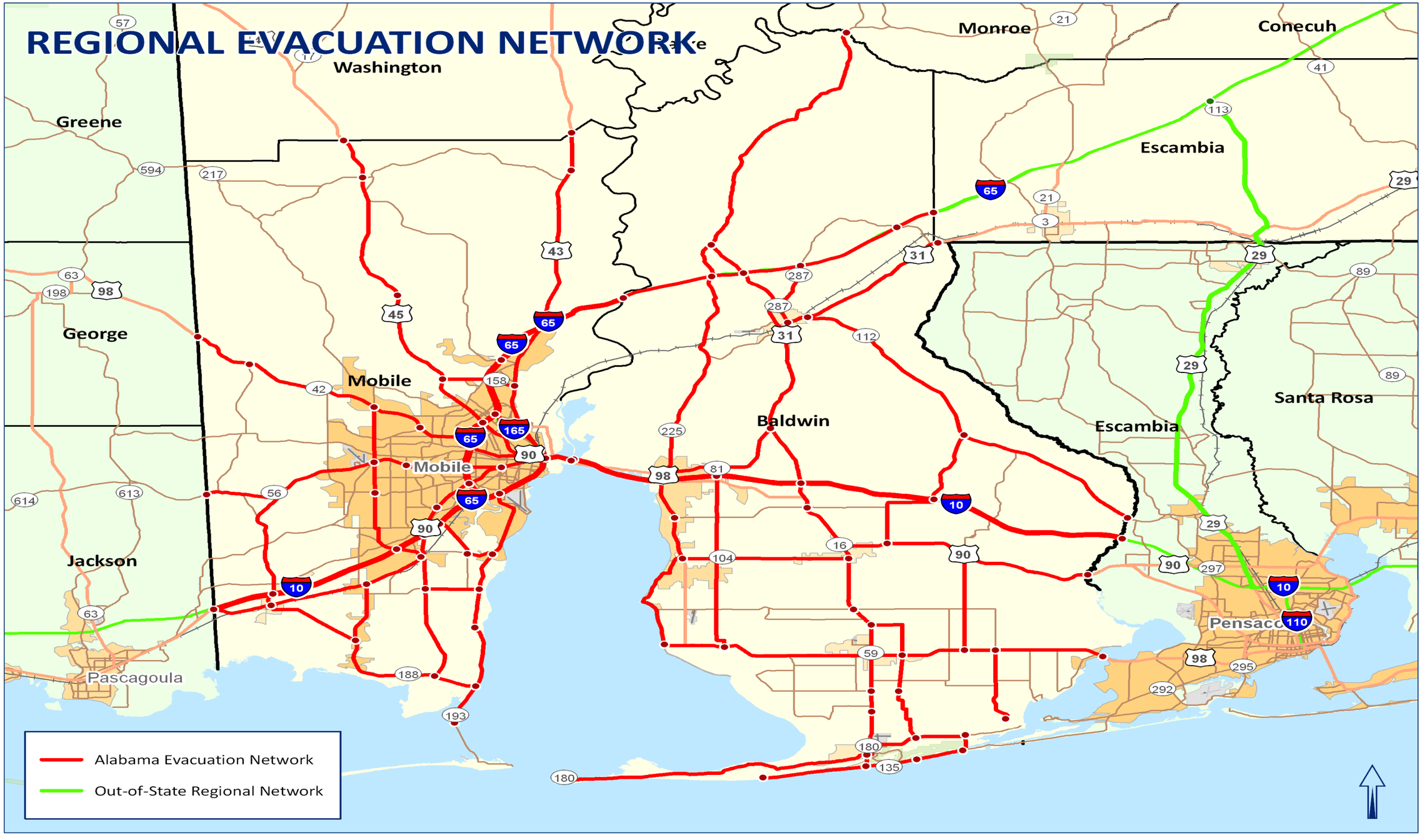


Table 1: Roadway Segments and Service Volume

Area Out-Routes	Modeled Critical Roadway Segment	Hourly Service Volume 1st Quarter of Evacuation
Baldwin County (local)	Ala 59 thru Foley	2,250
	Ala 59 thru Loxley	1,890
	Ala 59 at Bay Minette	1,890
	US 98 eastbound into FL	1,280
	US 90 eastbound into FL	1,280
	US 98A northbound at I-10	1,750
	I-10 into Mobile	3,200
	Ala 225 northbound at I-65	1,280
Mobile County (local)	I-10 eastbound to Baldwin Co.	3,200
	I-165 northbound at I-65	3,200
	I-65 near Satsuma	3,200
	I-65 northbound at US 45	3,200
	I-65 southbound at US 90	3,200
	US 98 westbound at Ala 31	880
	I-10 eastbound past US 90	3,200
Regional	I-10 eastbound into FL (AL only)	3,200
	US 31 eastbound out Baldwin Co.	1,280
	I-65 eastbound out Baldwin Co.	3,200
	Ala 59 northbound out Baldwin Co.	1,280
	US 43 northbound out Mobile Co.	1,850
	US 45 northbound out Baldwin Co.	1,280
	US 98 westbound into MS	1,280
	I-10 westbound into MS (AL only)	3,200
Additional States	I-65 eastbound with FL w I-10 eastbound	3,200
	I-65 eastbound with FL (no I-10)	3,200
	I-10 westbound into AL (includes FL)	3,200
	I-10 westbound into MS (includes FL & AL)	3,200

B) Evacuation Scenarios

Since the 1999 study, the evacuation zones for Baldwin and Mobile Counties have been revised. The new zones developed by Baldwin and Mobile counties are easy to understand and communicate and adequately reflect the risk.

In addition to clarifying the zonal maps, the counties have also worked to simplify the number and description of their evacuation zones. Baldwin County has 5 evacuation zones while Mobile County has two. Although Mobile County has only two evacuation zones (Category 1 and 2, Category 3, 4, and 5), clearance times were calculated for all five storm categories based on the varying impact of Baldwin County traffic on Mobile

County in each modeled scenario. For all scenarios it is assumed that Mobile and Baldwin Counties will always be evacuated for the same storm category.

Clearance times were calculated for the five following geographic scenarios:

1. Baldwin County – This scenario estimates the time it takes to clear Baldwin County. These times factor in Mobile County traffic impacts.

2. Mobile County – This scenario estimates the time it takes to clear Mobile County. These times factor in Baldwin County traffic impacts.

3. Out of State without I-10 Eastbound – This scenario estimates the time it takes to clear both Baldwin and Mobile Counties. This calculation models the additional impacts of westbound Florida traffic, which would be likely in a regional evacuation that would include Pensacola.

4. Out of State with I-10 Eastbound – This is a "worst case scenario" calculation. It estimates the time it takes to clear both Baldwin and Mobile Counties. This calculation models the additional impacts of both westbound Florida traffic as well as eastbound traffic originating from Louisiana and Mississippi. This scenario, which includes both east and west bound interstate traffic, would be likely in the event of a large coastal storm.

5. Contraflow – This scenario estimates the clearance time benefits afforded under the "worst case scenario" with the implementation of the ALDOT contraflow plan along I-65.

Clearance times have been developed based on maximum (100%), high (85%), medium (60%) and low (30%) tourist occupancy rates. Like many of the assumptions utilized in the transportation analysis, the occupancy rates were developed based on those used in past evacuation studies and behavioral research as well as professional judgment on the part of the modelers. Transportation analyses typically include only two variables; a high season tourist level, representing the average occupancy rate during the height of tourist season (which would be in the summer months in Alabama), as well as a low season tourist level, which represents the average occupancy during the winter months. By past practice and convention, average high season rates are typically around 85 percent for coastal areas. While it is understood that on some specific days – such as July 4 – the occupancy rates may be higher, 85 percent is a reliable high season average. This study also asked for a medium and a maximum level. While the maximum level was assumed to be 100 percent, the medium tourist level was set at 60 percent based on professional judgment. It should be noted that with the reduction in tourism associated with the impacts of the BP / Deepwater Horizon

oil well leak, the medium tourist occupancy levels may be more appropriate to refer to in determining hurricane evacuation clearance times for the remainder of the 2010 hurricane season.

Clearance times were provided for a slow, medium and rapid and immediate mobilization response time. A rapid response time was applied to the immediate mobilization scenario. Clearance time runs are generated based on a range of variables; differing intensity strengths of hurricanes, levels of background traffic, different tourist occupancy levels, and the rapidity of response by evacuees. As would be expected, the rapidity of response will affect clearance times. As a rule of thumb, standard adjustments can be applied to the calculated base clearance times. In this study, a calculation was made to approximate a rapid response. For a rapid response, for each roadway segment, a peak hour trip level was calculated. This number was calculated by taking the average annual daily trips, dividing by 8 to represent the highest hour or traffic and then dividing the result in half to address directionality. This result was then divided by the first quarter directional service volume to generate a mobilization factor which was added to the clearance time. The slow response was estimated by adding 5 hours to this time, and the medium response was calculated by adding the average of the rapid and slow reposes to the base clearance time. This approach generated times that are somewhat faster than what would be expected if the standard default response curve times were used. The approach, however, is based on actual regional roadway data and provided results that appear much more realistic for Alabama, where the degree of cross regional background traffic is limited.

Based on the five storm intensity categories, four response rates and four tourist occupancy levels, up to 80 different scenarios were tested for each of the five geographic scenarios. A total of 200 unique clearance time estimates were generated for the Alabama coastal region in this study.

The descriptions of the county evacuation zones are listed in Tables 2 and 3.

Tables 4 and 5 provide the evacuation zone data used for this study.

Table 2: Evacuation Zone Descriptions – Mobile County

County	Evacuation Zone	Description (Residents in the following areas will be advised to seek shelter further inland or move to higher ground:)
Mobile County	**Evacuation Zone 1 (Category 1 & 2)**	Consists of all areas of Mobile County south of Interstate 10. This includes Dauphin Island, residents of manufactured homes, low lying areas and flood prone areas anywhere in the County. Also all areas of Mobile County north of Interstate 10, and east of a line formed by Interstate 65 north to US Highway 43, then north to the county line.
	Evacuation Zone 2 (Category 3, 4 and 5)	All of Mobile County.

Table 3: Evacuation Zone Descriptions – Baldwin County

County	Evacuation Zone	Description
Baldwin County	**Evacuation Zone 1.1 (Category 1)**	Zone 1: All areas of Pleasure Island along with individuals living in manufactured homes, and those living in low lying flood prone areas countywide. (Pleasure Island consists of all areas south of the Intra-coastal Canal to include Fort Morgan, Gulf Shores, Orange Beach and Ono Island.)
	Evacuation Zone 1.2 (Category 2)	Zone 1 & 2: All areas south of State Highway 98 and the area on the Eastern Shore that is South of Interstate 10 and West of State Highway 98. Additionally, all individuals living in proximity to the Fish, Styx, Blackwater, and Perdido Rivers, and all individuals living in manufactured homes, and those living in low lying flood prone areas countywide.
	Evacuation Zone 1.3 (Category 3)	Zones 1 – 3: All areas south of State Highway 98, the area on the Eastern Shore west of State Highway 98, the area west of State Highway 225, and west of Highway 59 North of Stockton to the Baldwin / Monroe County line. Additionally, all individuals living in proximity to the Fish, Styx, Blackwater, and Perdido Rivers and all individuals living in manufactured homes, and those living in low lying flood prone areas countywide.
	Evacuation Zone 1.4 (Category 4 or 5)	Zones 1 – 4: All areas south of Interstate 10, the area on the Eastern Shore west of State Highway 225, and west of Highway 59 North of Stockton to the Baldwin / Monroe County line. Additionally, all individuals living in manufactured homes, and those living in low lying flood prone areas countywide.
	Scenario 2 will be used when Elected Officials deem a wider evacuation order is needed based on guidance issued by the National Weather Service and the National Hurricane Center.	
	Evacuation Zone 2.1 (Category 5)	Zones 1 – 5: Everyone in Baldwin County should evacuate.

Table 4: Evacuation Zone Data – Baldwin County

Baldwin County Evac Zones	Perm Pop by Zone	Permanent Occupied Housing Units	Mobile Home Units	Seasonal Hotel Units	People per Permanent Unit	People Per Mobile Home Unit	People per Tourist Unit	Veh Per Perm Occ Unit*	Veh Per Mob Home Unit*	Veh per Tourist Unit
1 TEZ 1	3,233	1,569	172	1,600	2.06	2.06	4	1.43	1.43	1.1
1 TEZ 2	7,182	3,485	303	5,297	2.06	2.06	4	1.43	1.43	1.1
1 TEZ 3	3,005	1,458	152	4,133	2.06	2.06	4	1.43	1.43	1.1
1 TEZ 4	2,345	1,138	152	3,945	2.06	2.06	4	1.43	1.43	1.1
2 TEZ 5	10,456	4,533	1,012	4,295	2.31	2.31	4	1.43	1.43	1.1
2 TEZ 6	10,084	4,501	809	238	2.24	2.24	4	1.45	1.45	1.1
2 TEZ 7	10,288	4,341	1,012	319	2.37	2.37	4	1.43	1.43	1.1
2 TEZ 8a	4,047	1,827	850	204	2.21	2.21	4	1.65	1.65	1.1
2 TEZ 9b	2,556	1,020	1,323	142	2.51	2.51	4	1.51	1.51	1.1
2 TEZ 10a	825	314	202	35	2.63	2.63	4	1.70	1.70	1.1
2 TEZ 11a	7,523	2,889	112	144	2.60	2.60	4	1.72	1.72	1.1
2 TEZ 13a	661	242	88	7	2.73	2.73	4	1.57	1.57	1.1
2 TEZ 14a	1,051	380	1,179	110	2.77	2.77	4	1.91	1.91	1.1
3 TEZ 14b	2,904	1,075	621	58	2.70	2.70	4	1.76	1.76	1.1
3 TEZ 15a	1,856	740	573	184	2.51	2.51	4	1.82	1.82	1.1
4 TEZ 8b	11,013	4,862	566	136	2.27	2.27	4	1.72	1.72	1.1
4 TEZ 9b	22,452	9,095	1,610	173	2.47	2.47	4	1.48	1.48	1.1
4 TEZ 10b	3,496	1,615	1,113	193	2.17	2.17	4	1.43	1.43	1.1
4 TEZ 11b	13,664	5,782	191	246	2.36	2.36	4	1.55	1.55	1.1
4 TEZ 12	28,561	10,606	405	519	2.69	2.69	4	1.55	1.55	1.1
4 TEZ 13b	3,143	1,150	418	35	2.73	2.73	4	1.57	1.57	1.1
5 TEZ 14c	30,790	11,590	1,336	125	2.66	2.66	4	1.66	1.66	1.1
5 TEZ 15b	3,062	1,221	945	303	2.51	2.51	4	1.82	1.82	1.1
Baldwin County Totals	**184,197**	**75,433**	**15,144**	**22,441**						

Legend:

- Category 1 Evacuation Areas
- Category 2 Evacuation Areas
- Category 3 Evacuation Areas
- Category 4 Evacuation Areas
- Category 5 Evacuation Areas

Table 5: Evacuation Zone Data – Mobile County

Mobile County Evac Zones	Perm Pop by Zone	Permanent Occupied Housing Units	Mobile Home Units	Seasonal Hotel Units	People per Permanent Unit	People Per Mobile Home Unit	People per Tourist Unit	Veh Per Perm Occ Unit*	Veh Per Mob Home Unit*	Veh per Tourist Unit
1 TEZ 1	4,303	1,727	24	6	2.49	2.49	4	1.43	1.43	1.1
1 TEZ 2	7,783	2,776	21	43	2.80	2.80	4	1.43	1.43	1.1
1 TEZ 3	5,750	2,087	63	5	2.76	2.76	4	1.52	1.52	1.1
1 TEZ 4	8,865	3,718	8	676	2.38	2.38	4	1.43	1.43	1.1
1 TEZ 7	14,128	5,462	433	18	2.59	2.59	4	1.43	1.43	1.1
1 TEZ 8	2,359	878	13	0	2.69	2.69	4	1.81	1.81	1.1
1 TEZ 9	9,405	3,435	96	23	2.74	2.74	4	1.83	1.83	1.1
1 TEZ 15	5,435	1,866	14	1	2.91	2.91	4	1.43	1.43	1.1
2 TEZ 5	9,050	3,542	24	333	2.56	2.56	4	1.43	1.43	1.1
2 TEZ 6	7,386	2,104	47	4	3.51	3.51	4	1.43	1.43	1.1
2 TEZ 10	39,624	16,380	254	760	2.42	2.42	4	1.54	1.54	1.1
2 TEZ 11	27,103	11,188	84	254	2.42	2.42	4	1.54	1.54	1.1
2 TEZ 12	50,207	20,309	378	144	2.47	2.47	4	1.78	1.78	1.1
2 TEZ 13	20,988	7,766	149	464	2.70	2.70	4	1.76	1.76	1.1
3 TEZ 17	30,109	10,510	2,553	1,828	2.86	2.86	4	1.99	1.99	1.1
3 TEZ 18	26,390	9,148	2,935	693	2.88	2.88	4	1.96	1.96	1.1
3 TEZ 19	20,964	7,317	1,344	821	2.87	2.87	4	2.03	2.03	1.1
3 TEZ 20	31,367	10,899	2,432	24	2.88	2.88	4	1.99	1.99	1.1
3 TEZ 21	20,990	7,201	1,538	23	2.91	2.91	4	2.03	2.03	1.1
4 TEZ 14	6,561	2,372	8	11	2.77	2.77	4	1.43	1.43	1.1
4 TEZ 16	22,123	8,711	254	193	2.54	2.54	4	1.57	1.57	1.1
4 TEZ 22	27,770	10,515	2,291	690	2.64	2.64	4	1.84	1.84	1.1
4 TEZ 23	7,269	2,555	643	423	2.85	2.85	4	1.82	1.82	1.1
Mobile County Totals	**405,931**	**152,466**	**15,606**	**7,437**						

Legend: Category 1 and 2 Evacuation Areas Category 3, 4, & 5 Evacuation Areas

C) Numbers of Evacuees and Vehicles

The number of evacuees and vehicles in this study was calculated based on best available data, including available behavioral data for previous regional evacuation studies.

The primary sources for demographic data included:

- The American Community Survey (ACS), U.S. Census,
- State and locally provided / validated populations (as a cross check for municipalities and counties),
- Alabama Gulf Coast Convention and Visitors Bureau (for updated tourist estimates).

The primary sources for behavioral data included:

- Previous state and regional evacuation studies,
- Hurricane Ivan Post Storm Assessment (2004), and
- Input from State and local governments.

To determine the number of evacuees and vehicles used in the study, the number of permanent dwelling units, mobile homes and tourist units (hotels and motels) were collected from the sources listed above. For modeling purposes, these data were summarized by TEZ. Since evacuation modeling at its most basic is a process that counts the number of cars expected to pass through specific points, the dwelling unit data collected from the referenced sources was converted into vehicles.

The primary data sources referenced above provided the average number of vehicles per unit by unit type by TEZ. For Baldwin County, the average number of vehicles per permanent and mobile home units ranged from 1.43 to 1.91, depending on their zone of origin. For Mobile County, the average number of vehicles per permanent and mobile home units ranged from 1.43 to 2.03, depending on their zone of origin. The estimated number of vehicles per tourist unit for both counties was estimated to be 1.1.

While the basic modeling process requires estimate of vehicles, population estimates are useful in determining shelter demand, motorist support needs and other emergency management related requirements. In order to determine the total evacuating population by TEZ, the total number of dwelling units was converted into population estimates. The primary data sources referenced above also provided the average number of people per unit by unit type by TEZ. For Baldwin County, the average number of people per permanent and mobile home units ranged from 2.06 to 2.77, depending on their zone of origin. For Mobile County, the average number of people per permanent and mobile home units ranged from 2.38 to 3.51, depending on their zone of origin. The estimated number of people per tourist unit for both counties was

estimated to be 4. While this tourist number may appear slightly high, it was used in the modeling process as it best approximated the total estimated maximum number of tourist based on the source data.

These calculations provide the total number of evacuee and vehicles by unit type by TEZ that could evacuate in any storm scenario. In the modeling process, these data are modified by expected occupancy levels, as well as behavioral assumptions. The study required clearance time estimates for four levels of tourist occupancy; low, medium, high and maximum tourists. A standard occupancy rate was applied to the total number of potential tourists from each TEZ. The following tourist occupancy rates used; low = 30%, medium = 60%, high = 85%, and maximum = 100%.

As far as participation, the modeling process assumes that 100% of the individuals in a zone that should evacuate will load the evacuation network and travel to a modeled destination, such as the home of a friend or relative, a shelter, or out-of-county. The assumption allows all those who should evacuate with the opportunity to do so. While there will always be some levels of non-compliance, this approach ensures that emergency managers know how long it will take to clear a bottleneck or a county should everyone who is asked to evacuate complies with evacuation orders.

While non-compliance is not modeled, over compliance is estimated. In every evacuation some percentage of individuals will evacuate from the region even if their specific location was not asked to evacuate. This “shadow evacuation” is more pronounced among mobile home residents and tourists than residents of permanent dwellings. It is also more intense in higher category storm events. Among residents of permanent dwellings, the number of shadow evacuees tapers off the further from an evacuation zone one resides. In all scenarios, shadow evacuation for permanent residents ranges from 1% to 10%. For mobile homes shadow evacuation ranges 50% to 80% and for tourist units it ranges from 50% to 90%. Past behavioral studies conducted for Alabama and the region, as well as the past experience and professional judgment of the modelers was consulted to validate these behavioral assumptions.

Out of state traffic is an important consideration for regional clearance times. Traffic from Florida will impact Alabama at two locations; westbound along I-10 and northbound along SR 113 (in Alabama), which influences congestion at I-65. While there is likely that there will be some minor traffic attenuation, in the modeling process it was assumed that all Florida traffic would transverse the state and impact bottlenecks only along these two routes. The vehicle counts used to represent Florida traffic were taken from the Escambia County Abbreviated Transportation Model (ATM), 2004.

Traffic from the west, which would include Louisiana and Mississippi also impact Alabama in two locations, along I-10 and also at I-65. It is assumed that of the traffic

entering Alabama along I-10, 15 percent will head northbound on I-65. These out of state vehicles are assumed to travel along and impact the bottlenecks on these two routes only. The vehicle counts used to represent Louisiana and Mississippi traffic were taken from the *Southeast Louisiana and Mississippi Clearance Times Update* for the 2006 hurricane season conducted by the Federal Emergency Management Agency and the U.S. Army Corps of Engineers, New Orleans District. In order to determine the number of out of state evacuees, a standard people per vehicle multiplier of 2.5 was applied to the vehicle numbers obtained from the other studies.

Table 6 identifies the additional total number of vehicles and evacuees on designated out of region routes, while Tables 7 through 12 identify the total number of evacuees and evacuating vehicles by traffic evacuation zone anticipated in each modeled scenario.

Table 6: Additional Vehicles and People on Out of Region Routes

		Cat 1 Low	Cat 1 High	Cat 2 Low	Cat 2 High	Cat 3 Low	Cat 3 High	Cat 4 Low	Cat 4 High	Cat 5 Low	Cat 5 High
Vehicles	FL west at I-10	1,189	1,904	3,303	4,252	3,303	4,252	5,012	6,026	5,012	6,026
	MS / LA	9,498	11,687	9,498	11,687	16,661	19,110	34,249	37,362	34,249	37,362
	East on I-10	1,425	1,753	1,425	1,753	2,499	2,866	5,137	5,604	5,137	5,604
	East on I-65	8,073	9,934	8,073	9,934	14,162	16,243	29,111	31,757	29,111	31,757
	FL north at I-65	7,623	9,102	13,873	15,857	13,873	15,857	19,682	21,802	19,682	21,802
People	FL west at I-10	2,973	4,760	8,256	10,631	8,256	10,631	12,531	15,065	12,531	15,065
	MS / LA	23,745	29,217	23,745	29,217	41,653	47,774	85,621	93,404	85,621	93,404
	East on I-10	3,562	4,383	3,562	4,383	6,248	7,166	12,843	14,011	12,843	14,011
	East on I-65	20,183	24,834	20,183	24,834	35,405	40,608	72,778	79,394	72,778	79,394
	FL north at I-65	19,057	22,754	34,683	39,642	34,683	39,642	49,205	54,505	49,205	54,505

Table 7: Total Number of Evacuating Vehicles and People – Baldwin County

County	Storm Category	Total Evacuating Vehicles				Total Evacuating People			
		Low	Med	High	Max	Low	Med	High	Max
Baldwin County	Cat 1	25,719	31,895	37,037	40,124	60,660	83,109	101,821	113,042
	Cat 2	46,843	53,921	59,821	63,360	103,871	129,615	151,069	163,943
	Cat 3	51,232	58,465	64,490	68,113	113,773	140,077	162,000	175,155
	Cat 4	82,105	89,494	95,657	99,351	184,753	211,629	234,026	247,467
	Cat 5	93,682	101,087	107,260	110,963	211,128	238,054	260,495	273,961
	Note: *Numbers represent the overall total number of evacuating vehicles and people.*								

Table 8: Total Number of Evacuating Vehicles and People – Mobile County

County	Storm Category	Total Evacuating Vehicles				Total Evacuating People			
		Low	Med	High	Max	Low	Med	High	Max
Mobile County	Cat 1	119,828	121,505	122,902	123,740	241,832	247,933	253,015	256,065
	Cat 2	126,024	127,924	129,509	130,457	255,058	261,970	267,733	271,188
	Cat 3	201,107	203,562	205,608	206,836	414,857	423,781	431,218	435,677
	Cat 4	201,108	203,560	205,607	206,833	414,857	423,781	431,218	435,677
	Cat 5	201,108	203,560	205,607	206,833	414,857	423,781	431,218	435,677
	Note: *Numbers represent the overall total number of evacuating vehicles and people.*								

Table 9: Evacuating Vehicles by Traffic Evacuation Zone / Category – Baldwin County

County	Storm Category	TEZ 1				TEZ 2				TEZ 3				TEZ 4				TEZ 5			
		Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Baldwin County	Cat 1	13,694	18,636	22,753	25,224	6,186	7,092	7,847	8,300	827	867	900	921	3,442	3,655	3,835	3,942	1,571	1,641	1,700	1,735
	Cat 2	13,694	18,636	22,753	25,224	26,121	27,934	29,446	30,351	1,141	1,182	1,215	1,235	4,069	4,284	4,463	4,570	1,815	1,886	1,944	1,980
	Cat 3	13,694	18,636	22,753	25,224	26,121	27,934	29,446	30,351	2,349	2,429	2,496	2,536	6,154	6,454	6,706	6,856	2,915	3,014	3,096	3,145
	Cat 4	13,694	18,636	22,753	25,224	26,121	27,934	29,446	30,351	2,349	2,429	2,496	2,536	36,384	36,813	37,172	37,387	3,555	3,682	3,788	3,851
	Cat 5	13,694	18,636	22,753	25,224	26,121	27,934	29,446	30,351	2,349	2,429	2,496	2,536	36,384	36,813	37,172	37,387	15,134	15,276	15,393	15,464

Table 10: Evacuating Vehicles by Traffic Evacuation Zone – Mobile County

County	Storm Category	TEZ 1				TEZ 2				TEZ 3				TEZ 4			
		Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Mobile County	Cat 1	26,879	27,135	27,346	27,474	80,924	81,571	82,109	82,431	9,530	10,090	10,555	10,835	2,492	2,710	2,892	3,001
	Cat 2	26,879	27,135	27,346	27,474	80,924	81,571	82,109	82,431	15,233	16,016	16,669	17,058	2,986	3,204	3,385	3,494
	Cat 3	26,879	27,135	27,346	27,474	80,924	81,571	82,109	82,431	64,122	65,240	66,173	66,732	29,181	29,616	29,978	30,194
	Cat 4	26,879	27,135	27,346	27,474	80,924	81,571	82,109	82,431	64,122	65,240	66,173	66,732	29,181	29,616	29,978	30,194
	Cat 5	26,879	27,135	27,346	27,474	80,924	81,571	82,109	82,431	64,122	65,240	66,173	66,732	29,181	29,616	29,978	30,194

Table 11: Evacuating People by Traffic Evacuation Zone / Category – Baldwin County

County	Storm Category	TEZ 1				TEZ 2				TEZ 3				TEZ 4				TEZ 5			
		Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Baldwin County	Cat 1	33,734	51,705	66,680	75,665	13,529	16,826	19,574	21,221	1,785	1,930	2,051	2,123	8,116	8,896	9,549	9,938	3,496	3,752	3,967	4,095
	Cat 2	33,734	51,705	66,680	75,665	54,086	60,675	66,169	69,467	2,441	2,586	2,707	2,779	9,555	10,338	10,988	11,378	4,055	4,311	4,525	4,654
	Cat 3	33,734	51,705	66,680	75,665	54,086	60,675	66,169	69,467	5,050	5,340	5,582	5,728	14,412	15,506	16,418	16,965	6,491	6,851	7,151	7,330
	Cat 4	33,734	51,705	66,680	75,665	54,086	60,675	66,169	69,467	5,050	5,340	5,582	5,728	83,892	85,455	86,757	87,537	7,991	8,454	8,838	9,070
	Cat 5	33,734	51,705	66,680	75,665	54,086	60,675	66,169	69,467	5,050	5,340	5,582	5,728	83,892	85,455	86,757	87,537	34,366	34,879	35,307	35,564

Table 12: Evacuating People by Traffic Evacuation Zone – Mobile County

County	Storm Category	TEZ 1				TEZ 2				TEZ 3				TEZ 4			
		Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Mobile County	Cat 1	58,955	59,883	60,655	61,116	156,710	159,059	161,018	162,194	20,552	22,585	24,279	25,297	5,615	6,406	7,063	7,458
	Cat 2	58,955	59,883	60,655	61,116	156,710	159,059	161,018	162,194	32,673	35,520	37,892	39,315	6,720	7,508	8,168	8,563
	Cat 3	58,955	59,883	60,655	61,116	156,710	159,059	161,018	162,194	133,887	137,955	141,344	143,376	65,305	66,884	68,201	68,991
	Cat 4	58,955	59,883	60,655	61,116	156,710	159,059	161,018	162,194	133,887	137,955	141,344	143,376	65,305	66,884	68,201	68,991
	Cat 5	58,955	59,883	60,655	61,116	156,710	159,059	161,018	162,194	133,887	137,955	141,344	143,376	65,305	66,884	68,201	68,991

D) Trip Generation and Distribution

As noted in section C. above, a separate behavioral study was not conducted as part of this analysis. Trip generation and destination splits were derived from previous studies and available behavioral data. Destinations for evacuees may include travel in-county to local shelters, in-county to the homes of friends and relatives, in county to hotels and motels, and out-of-county. Based on the assumptions included in earlier studies and the location of hotels and motels relative to the areas being evacuated, an in county to hotels and motels destination was not considered for permanent residents. Further, tourist destinations were limited to two destination options; in county to public shelter and out of county.

The origination point of all evacuees is derived from the population in specific TEZs and destinations are based on expected evacuee behavior. It should be reiterated that a behavioral study was not conducted as part of this analysis. An assumption was made that previous studies conducted for Alabama included reliable representations of evacuee behavior. While these studies allowed for an estimation of evacuation volumes by destination, they provided insufficient information to make estimates of the number of evacuees originating from or travelling to specific cities in the region. This level of information must be obtained through future behavioral research including regional surveys of potential evacuees

The total number of individuals seeking public shelter vary depending on evacuee, although for both permanent residents and tourists, the total percentages are low. In all storm scenarios, permanent residents seek shelter between 1 and 9 percent. It was observed in past study data inputs that a relatively static number of permanent residents will seek out public shelters, with a higher percentage being represented by people living further away from the coast (areas of highest modeled risk). While this assumption may appear counterintuitive, it is based on past behavioral research. Individuals living closest to the coast have been observed to make the longest evacuation trips. This may be a result in part to higher economic levels of coastal residents, providing them with more options to seek destinations far removed from the risk zone.

Most tourists (99 percent) were expected to travel out of county. The percentages were slightly lower for permanent residents - with out of county destinations ranging from 30 to 75 percent. As storm categories increased, the number of permanent residents seeking destinations out of county also increased. Permanent residents traveling to the homes of friends and relatives in-county were estimated to range from 24 to 61 percent. As storm categories increased, the number of permanent residents seeking destinations in county decreased.

It should be remembered that behavioral assumptions are applied to the base socioeconomic data and evacuation scenarios. As an example, in the context of an evacuation in which all residents of an area have been requested to evacuate, a 100 percent participation rate is assumed. However, this participation rate is adjusted by destination determinations – which may include other in-county locations. This applies to all storm scenarios and is consistent with past modeling approaches.

Tables 13 through 17 identify the anticipated destination assumptions and number of evacuees and vehicles in each modeled scenario.

Table 13: Evacuee Destination Behavioral Assumptions Summary

		Evacuee Destination Behavioral Assumptions				
		Cat 1	**Cat 2**	**Cat 3**	**Cat 4**	**Cat 5**
Baldwin County	Public Shelter	1% to 9%	1% to 9%	1% to 9%	1% to 9%	1% to 9%
	Friends / Relatives	40% to 61%	40% to 61%	35% to 51%	24% to 51%	24% to 51%
	Out of County	30% to 55%	30% to 55%	40% to 60%	40% to 75%	40% to 75%
Mobile County	Public Shelter	1% to 9%	1% to 9%	1% to 9%	1% to 9%	1% to 9%
	Friends / Relatives	40% to 61%	40% to 61%	35% to 51%	24% to 51%	24% to 51%
	Out of County	30% to 55%	30% to 55%	40% to 60%	40% to 75%	40% to 75%

Table 14: Evacuating People by Destination / Traffic Evacuation Zone – Baldwin County

			Cat 1 Zone				Cat 2 Zone				Cat 3 Zone				Cat 4 Zone				Cat 5 Zone			
			Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Baldwin County	TEZ 1	Friends / Relatives (people)	6,937	6,937	6,937	6,937	6,937	6,937	6,937	6,937	6,149	6,149	6,149	6,149	3,784	3,784	3,784	3,784	3,784	3,784	3,784	3,784
		Out of County (people)	26,461	44,252	59,077	67,971	26,461	44,252	59,077	67,971	27,250	45,040	59,865	68,759	29,614	47,404	62,230	71,124	29,614	47,404	62,230	71,124
		Public Shelter (people)	338	517	668	756	338	517	668	756	338	517	668	756	338	517	668	756	338	517	668	756
		Total Evacuating People	**33,736**	**51,706**	**66,682**	**75,664**	**33,736**	**51,706**	**66,682**	**75,664**	**33,737**	**51,706**	**66,682**	**75,664**	**33,736**	**51,705**	**66,682**	**75,664**	**33,736**	**51,705**	**66,682**	**75,664**
	TEZ 2	Friends / Relatives (people)	4,299	4,299	4,299	4,299	19,947	19,947	19,947	19,947	17,571	17,571	17,571	17,571	12,824	12,824	12,824	12,824	12,824	12,824	12,824	12,824
		Out of County (people)	8,891	12,155	14,874	16,507	32,648	39,173	44,612	47,876	35,022	41,548	46,987	50,252	39,769	46,297	51,738	55,000	39,769	46,297	51,738	55,000
		Public Shelter (people)	340	373	401	416	1,489	1,556	1,612	1,643	1,489	1,556	1,612	1,643	1,489	1,556	1,612	1,643	1,489	1,556	1,612	1,643
		Total Evacuating People	**13,530**	**16,827**	**19,574**	**21,222**	**54,084**	**60,676**	**66,171**	**69,466**	**54,082**	**60,675**	**66,170**	**69,466**	**54,082**	**60,677**	**66,174**	**69,467**	**54,082**	**60,677**	**66,174**	**69,467**
	TEZ 3	Friends / Relatives (people)	656	656	656	656	918	918	918	918	1,666	1,666	1,666	1,666	1,666	1,666	1,666	1,666	1,666	1,666	1,666	1,666
		Out of County (people)	1,045	1,189	1,309	1,381	1,407	1,550	1,670	1,742	3,143	3,431	3,671	3,814	3,143	3,431	3,671	3,814	3,143	3,431	3,671	3,814
		Public Shelter (people)	83	85	86	87	116	118	119	119	241	244	246	248	241	244	246	248	241	244	246	248
		Total Evacuating People	**1,784**	**1,930**	**2,051**	**2,124**	**2,441**	**2,586**	**2,707**	**2,779**	**5,050**	**5,341**	**5,583**	**5,728**	**5,050**	**5,341**	**5,583**	**5,728**	**5,050**	**5,341**	**5,583**	**5,728**
	TEZ 4	Friends / Relatives (people)	3,888	3,888	3,888	3,888	4,651	4,651	4,651	4,651	5,727	5,727	5,727	5,727	35,401	35,401	35,401	35,401	35,401	35,401	35,401	35,401
		Out of County (people)	3,707	4,480	5,125	5,511	4,283	5,057	5,701	6,088	7,742	8,825	9,728	10,268	42,711	44,259	45,546	46,321	42,711	44,259	45,546	46,321
		Public Shelter (people)	521	529	537	538	622	630	636	641	944	954	964	969	5,778	5,794	5,808	5,814	5,778	5,794	5,808	5,814
		Total Evacuating People	**8,116**	**8,897**	**9,550**	**9,937**	**9,556**	**10,338**	**10,988**	**11,380**	**14,413**	**15,506**	**16,419**	**16,964**	**83,890**	**85,454**	**86,755**	**87,536**	**83,890**	**85,454**	**86,755**	**87,536**
	TEZ 5	Friends / Relatives (people)	1,976	1,976	1,976	1,976	2,316	2,316	2,316	2,316	3,128	3,128	3,128	3,128	3,839	3,839	3,839	3,839	17,265	17,265	17,265	17,265
		Out of County (people)	1,226	1,481	1,692	1,819	1,394	1,648	1,860	1,987	2,809	3,164	3,461	3,639	3,469	3,927	4,308	4,537	14,050	14,558	14,982	15,236
		Public Shelter (people)	294	297	298	300	344	347	349	351	555	559	562	564	682	686	691	693	3,052	3,057	3,061	3,064
		Total Evacuating People	**3,496**	**3,754**	**3,966**	**4,095**	**4,054**	**4,311**	**4,525**	**4,654**	**6,492**	**6,851**	**7,151**	**7,331**	**7,990**	**8,452**	**8,838**	**9,069**	**34,367**	**34,880**	**35,308**	**35,565**
	Baldwin County Totals		**60,662**	**83,114**	**101,823**	**113,042**	**103,871**	**129,617**	**151,073**	**163,943**	**113,774**	**140,079**	**162,005**	**175,153**	**184,748**	**211,629**	**234,032**	**247,464**	**211,125**	**238,057**	**260,502**	**273,960**

Table 15: Evacuating People by Destination / Traffic Evacuation Zone – Mobile County

			Cat 1 Zone				Cat 2 Zone				Cat 3 Zone				Cat 4 Zone				Cat 5 Zone			
			Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Mobile County	TEZ 1	Friends / Relatives (people)	24,906	24,906	24,906	24,906	24,906	24,906	24,906	24,906	22,005	22,005	22,005	22,005	14,868	14,868	14,868	14,868	14,868	14,868	14,868	14,868
		Out of County (people)	32,833	33,749	34,514	34,973	32,833	33,749	34,514	34,973	35,733	36,652	37,416	37,874	42,873	43,790	44,554	45,011	42,873	43,790	44,554	45,011
		Public Shelter (people)	1,216	1,226	1,233	1,239	1,216	1,226	1,233	1,239	1,216	1,226	1,233	1,239	1,216	1,226	1,233	1,239	1,216	1,226	1,233	1,239
		Total Evacuating People	**58,955**	**59,881**	**60,653**	**61,118**	**58,955**	**59,881**	**60,653**	**61,118**	**58,954**	**59,883**	**60,654**	**61,118**	**58,957**	**59,884**	**60,655**	**61,118**	**58,957**	**59,884**	**60,655**	**61,118**
	TEZ 2	Friends / Relatives (people)	64,410	64,410	64,410	64,410	64,410	64,410	64,410	64,410	56,694	56,694	56,694	56,694	43,357	43,357	43,357	43,357	43,357	43,357	43,357	43,357
		Out of County (people)	87,224	89,552	91,491	92,655	87,224	89,552	91,491	92,655	94,942	97,269	99,209	100,372	108,280	110,607	112,546	113,709	108,280	110,607	112,546	113,709
		Public Shelter (people)	5,074	5,098	5,118	5,129	5,074	5,098	5,118	5,129	5,074	5,098	5,118	5,129	5,074	5,098	5,118	5,129	5,074	5,098	5,118	5,129
		Total Evacuating People	**156,708**	**159,060**	**161,019**	**162,194**	**156,708**	**159,060**	**161,019**	**162,194**	**156,710**	**159,061**	**161,021**	**162,195**	**156,711**	**159,062**	**161,021**	**162,195**	**156,711**	**159,062**	**161,021**	**162,195**
	TEZ 3	Friends / Relatives (people)	7,407	7,407	7,407	7,407	11,931	11,931	11,931	11,931	45,437	45,437	45,437	45,437	45,437	45,437	45,437	45,437	45,437	45,437	45,437	45,437
		Out of County (people)	12,198	14,211	15,888	16,895	19,224	22,041	24,389	25,798	81,918	85,944	89,300	91,312	81,918	85,944	89,300	91,312	81,918	85,944	89,300	91,312
		Public Shelter (people)	947	967	983	993	1,520	1,548	1,571	1,587	6,532	6,572	6,606	6,626	6,532	6,572	6,606	6,626	6,532	6,572	6,606	6,626
		Total Evacuating People	**20,552**	**22,585**	**24,278**	**25,295**	**32,675**	**35,520**	**37,891**	**39,316**	**133,887**	**137,953**	**141,343**	**143,375**	**133,887**	**137,953**	**141,343**	**143,375**	**133,887**	**137,953**	**141,343**	**143,375**
	TEZ 4	Friends / Relatives (people)	2,895	2,895	2,895	2,895	3,523	3,523	3,523	3,523	30,203	30,203	30,203	30,203	30,203	30,203	30,203	30,203	30,203	30,203	30,203	30,203
		Out of County (people)	2,292	3,073	3,726	4,116	2,678	3,461	4,112	4,504	29,923	31,487	32,791	33,573	29,923	31,487	32,791	33,573	29,923	31,487	32,791	33,573
		Public Shelter (people)	430	437	445	449	519	526	533	537	5,177	5,193	5,207	5,214	5,177	5,193	5,207	5,214	5,177	5,193	5,207	5,214
		Total Evacuating People	**5,617**	**6,405**	**7,066**	**7,460**	**6,720**	**7,510**	**8,168**	**8,564**	**65,303**	**66,883**	**68,201**	**68,990**	**65,303**	**66,883**	**68,201**	**68,990**	**65,303**	**66,883**	**68,201**	**68,990**
	Mobile County Totals		**241,832**	**247,931**	**253,016**	**256,067**	**255,058**	**261,971**	**267,731**	**271,192**	**414,854**	**423,780**	**431,219**	**435,678**	**414,858**	**423,782**	**431,220**	**435,678**	**414,858**	**423,782**	**431,220**	**435,678**

Table 16: Evacuating Vehicles by Destination / Traffic Evacuation Zone – Baldwin County

			Cat 1 Zone				Cat 2 Zone				Cat 3 Zone				Cat 4 Zone				Cat 5 Zone			
			Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Baldwin County	TEZ 1	Friends / Relatives (people)	3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,851	3,414	3,414	3,414	3,414	2,100	2,100	2,100	2,100	2,100	2,100	2,100	2,100
		Out of County (people)	9,706	14,599	18,675	21,121	9,706	14,599	18,675	21,121	10,144	15,035	19,112	21,559	11,456	16,348	20,425	22,873	11,456	16,348	20,425	22,873
		Public Shelter (people)	136	187	227	252	136	187	227	252	136	187	227	252	136	187	227	252	136	187	227	252
		Total Evacuating People	**13,693**	**18,637**	**22,753**	**25,224**	**13,693**	**18,637**	**22,753**	**25,224**	**13,694**	**18,636**	**22,753**	**25,225**	**13,692**	**18,635**	**22,752**	**25,225**	**13,692**	**18,635**	**22,752**	**25,225**
	TEZ 2	Friends / Relatives (people)	2,217	2,217	2,217	2,217	10,210	10,210	10,210	10,210	8,993	8,993	8,993	8,993	6,564	6,564	6,564	6,564	6,564	6,564	6,564	6,564
		Out of County (people)	3,801	4,698	5,446	5,896	15,165	16,959	18,456	19,352	16,380	18,173	19,670	20,568	18,812	20,606	22,104	22,998	18,812	20,606	22,104	22,998
		Public Shelter (people)	167	177	185	188	748	765	779	790	748	765	779	790	748	765	779	790	748	765	779	790
		Total Evacuating People	**6,185**	**7,092**	**7,848**	**8,301**	**26,123**	**27,934**	**29,445**	**30,352**	**26,121**	**27,931**	**29,442**	**30,351**	**26,124**	**27,935**	**29,447**	**30,352**	**26,124**	**27,935**	**29,447**	**30,352**
	TEZ 3	Friends / Relatives (people)	315	315	315	315	441	441	441	441	795	795	795	795	795	795	795	795	795	795	795	795
		Out of County (people)	472	512	545	564	646	685	718	738	1,441	1,520	1,586	1,625	1,441	1,520	1,586	1,625	1,441	1,520	1,586	1,625
		Public Shelter (people)	40	40	41	41	56	56	56	56	114	115	116	116	114	115	116	116	114	115	116	116
		Total Evacuating People	**827**	**867**	**901**	**920**	**1,143**	**1,182**	**1,215**	**1,235**	**2,350**	**2,430**	**2,497**	**2,536**	**2,350**	**2,430**	**2,497**	**2,536**	**2,350**	**2,430**	**2,497**	**2,536**
	TEZ 4	Friends / Relatives (people)	1,711	1,711	1,711	1,711	2,043	2,043	2,043	2,043	2,517	2,517	2,517	2,517	15,460	15,460	15,460	15,460	15,460	15,460	15,460	15,460
		Out of County (people)	1,504	1,716	1,893	1,999	1,753	1,967	2,144	2,250	3,223	3,521	3,769	3,918	18,402	18,828	19,183	19,395	18,402	18,828	19,183	19,395
		Public Shelter (people)	228	230	231	234	272	273	277	277	413	416	417	420	2,522	2,525	2,529	2,532	2,522	2,525	2,529	2,532
		Total Evacuating People	**3,443**	**3,657**	**3,835**	**3,944**	**4,068**	**4,283**	**4,464**	**4,570**	**6,153**	**6,454**	**6,703**	**6,855**	**36,384**	**36,813**	**37,172**	**37,387**	**36,384**	**36,813**	**37,172**	**37,387**
	TEZ 5	Friends / Relatives (people)	915	915	915	915	1,064	1,064	1,064	1,064	1,436	1,436	1,436	1,436	1,748	1,748	1,748	1,748	7,646	7,646	7,646	7,646
		Out of County (people)	520	590	648	683	594	663	721	756	1,224	1,322	1,403	1,453	1,497	1,622	1,728	1,790	6,136	6,276	6,393	6,463
		Public Shelter (people)	136	137	137	137	158	158	159	159	254	256	256	257	310	311	313	313	1,350	1,352	1,353	1,354
		Total Evacuating People	**1,571**	**1,642**	**1,700**	**1,735**	**1,816**	**1,885**	**1,944**	**1,979**	**2,914**	**3,014**	**3,095**	**3,146**	**3,555**	**3,681**	**3,789**	**3,851**	**15,132**	**15,274**	**15,392**	**15,463**
	Baldwin County Totals		**25,719**	**31,895**	**37,037**	**40,124**	**46,843**	**53,921**	**59,821**	**63,360**	**51,232**	**58,465**	**64,490**	**68,113**	**82,105**	**89,494**	**95,657**	**99,351**	**93,682**	**101,087**	**107,260**	**110,963**

Table 17: Evacuating Vehicles by Destination / Traffic Evacuation Zone – Mobile County

			Cat 1 Zone				Cat 2 Zone				Cat 3 Zone				Cat 4 Zone				Cat 5 Zone			
			Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Mobile County	TEZ 1	Friends / Relatives (people)	11,421	11,421	11,421	11,421	11,421	11,421	11,421	11,421	10,092	10,092	10,092	10,092	6,830	6,830	6,830	6,830	6,830	6,830	6,830	6,830
		Out of County (people)	14,896	15,149	15,357	15,484	14,896	15,149	15,357	15,484	16,227	16,480	16,691	16,816	19,489	19,741	19,950	20,076	19,489	19,741	19,950	20,076
		Public Shelter (people)	563	565	567	568	563	565	567	568	563	565	567	568	563	565	567	568	563	565	567	568
		Total Evacuating People	**26,880**	**27,135**	**27,345**	**27,473**	**26,880**	**27,135**	**27,345**	**27,473**	**26,882**	**27,137**	**27,350**	**27,476**	**26,882**	**27,136**	**27,347**	**27,474**	**26,882**	**27,136**	**27,347**	**27,474**
	TEZ 2	Friends / Relatives (people)	33,498	33,498	33,498	33,498	33,498	33,498	33,498	33,498	29,484	29,484	29,484	29,484	22,550	22,550	22,550	22,550	22,550	22,550	22,550	22,550
		Out of County (people)	44,792	45,432	45,966	46,286	44,792	45,432	45,966	46,286	48,805	49,447	49,979	50,301	55,740	56,380	56,915	57,234	55,740	56,380	56,915	57,234
		Public Shelter (people)	2,633	2,640	2,646	2,648	2,633	2,640	2,646	2,648	2,633	2,640	2,646	2,648	2,633	2,640	2,646	2,648	2,633	2,640	2,646	2,648
		Total Evacuating People	**80,923**	**81,570**	**82,110**	**82,432**	**80,923**	**81,570**	**82,110**	**82,432**	**80,922**	**81,571**	**82,109**	**82,433**	**80,923**	**81,570**	**82,111**	**82,432**	**80,923**	**81,570**	**82,111**	**82,432**
	TEZ 3	Friends / Relatives (people)	3,589	3,589	3,589	3,589	5,780	5,780	5,780	5,780	22,051	22,051	22,051	22,051	22,051	22,051	22,051	22,051	22,051	22,051	22,051	22,051
		Out of County (people)	5,487	6,040	6,502	6,778	8,722	9,497	10,144	10,530	38,909	40,017	40,939	41,494	38,909	40,017	40,939	41,494	38,909	40,017	40,939	41,494
		Public Shelter (people)	455	460	464	468	731	738	745	749	3,162	3,172	3,182	3,187	3,162	3,172	3,182	3,187	3,162	3,172	3,182	3,187
		Total Evacuating People	**9,531**	**10,089**	**10,555**	**10,835**	**15,233**	**16,015**	**16,669**	**17,059**	**64,122**	**65,240**	**66,172**	**66,732**	**64,122**	**65,240**	**66,172**	**66,732**	**64,122**	**65,240**	**66,172**	**66,732**
	TEZ 4	Friends / Relatives (people)	1,368	1,368	1,368	1,368	1,650	1,650	1,650	1,650	13,705	13,705	13,705	13,705	13,705	13,705	13,705	13,705	13,705	13,705	13,705	13,705
		Out of County (people)	924	1,139	1,318	1,426	1,096	1,310	1,490	1,597	13,124	13,553	13,912	14,128	13,124	13,553	13,912	14,128	13,124	13,553	13,912	14,128
		Public Shelter (people)	202	204	206	206	242	244	245	246	2,352	2,356	2,360	2,362	2,352	2,356	2,360	2,362	2,352	2,356	2,360	2,362
		Total Evacuating People	**2,494**	**2,711**	**2,892**	**3,000**	**2,988**	**3,204**	**3,385**	**3,493**	**29,181**	**29,614**	**29,977**	**30,195**	**29,181**	**29,614**	**29,977**	**30,195**	**29,181**	**29,614**	**29,977**	**30,195**
	Mobile County Totals		**119,828**	**121,505**	**122,902**	**123,740**	**126,024**	**127,924**	**129,509**	**130,457**	**201,107**	**203,562**	**205,608**	**206,836**	**201,108**	**203,560**	**205,607**	**206,833**	**201,108**	**203,560**	**205,607**	**206,833**

E) Vehicle Movements

The calculation of vehicle movements involves referring to past studies, knowledge of the study area and professional judgment to determine the number of vehicles from each TEZ utilizing each modeled roadway segment. Decades of behavioral research suggest that evacuees behave in a non stochastic manner. Unlike travel to and from a workplace where a traveler would have the opportunity to test alternate routes and optimize, or shorten to the greatest extent possible, their trip in an evacuation, evacuees tend to behave in a standard fashion. Evacuees will tend to follow designated evacuation routes. They tend to "follow the leader," rather than testing alternate out routes. Likewise, evacuees tend to exit a region using the same path that was used to access the region.

For this model, as was noted, a manual routing process was used. This process follows the trends described above and is based on the many years of experience of the modelers and follows a fundamental logic in making route choice determinations. Physical roadway characteristics such as service volume, end route destinations, and travel away from areas of risk are all considered in this process. The routing percentages by out route are provided in Tables 18 and 19. Table 20 shows the evacuating vehicles by road calculated using these percentages. It should be noted that automated traffic optimization modeling is not recommended for use in clearance time estimates as such processes could yield artificially low clearance times, subjecting evacuees to potential peril from storm surge. Routing determination, when viewed in the context of total demand versus capacity, allows for an understanding of congestion by modeled roadway segment. The underlying data, including a GIS map layer of the roadway network by segment, as well as a data table that contains directional service volumes and the total number of vehicles by roadway segment in each modeled scenario, has been provided as part of this report. Figures 10 and 11 display the relative congestion by roadway segment by county in a worst case evacuation scenario.

Table 18: Out Route Percentages – Baldwin County

	Percent of Vehicles Utilizing Specific (Local) Routes								Percent of Vehicles Utilizing Specific (Local) Routes							Percent of Out Vehicles Exiting Area by Specific Route										
Baldwin County Evac Zones	Ala 59 thru Foley	Ala 59 thru Loxley	Ala 59 at Bay Minette	US 98 eb into FL	US 90 eb into FL	US 98A nb at I-10	I-10 into Mobile	Ala 225 nb at I-65	I-10 eb to Baldwin Co.	I-165 nb at I-65	I-65 near Satsuma	I-65 nb at US 45	I-65 sb at US 90	US 98 wb at Ala 31	I-10 eb past US 90	I-10 eb into FL	US 31 eb out Baldwin Co.	I-65 eb out Baldwin Co.	Ala 59 nb out Baldwin Co.	US 43 nb out Mobile Co.	US 45 nb out Mobile Co.	US 98 wb into MS	I-10 wb into MS	I-65 eb with FL	I-10 wb with FL	I-10 eb with LA & MS	Out Routes
1 TEZ 1	80%	80%	75%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
1 TEZ 2	80%	80%	75%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
1 TEZ 3	75%	75%	75%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
1 TEZ 4	60%	60%	60%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 5	60%	60%	60%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 6	10%	10%	10%	75%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 7	60%	60%	60%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 8a	0%	0%	0%	0%	0%	95%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 9b	0%	50%	50%	10%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 10a	0%	30%	30%	75%	75%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 11a	0%	0%	0%	0%	0%	95%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 13a	0%	10%	10%	0%	60%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
2 TEZ 14a	0%	0%	75%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
3 TEZ 14b	0%	0%	75%	0%	0%	0%	15%	85%	0%	5%	0%	0%	0%	1%	5%	5%	5%	85%	5%	0%	0%	0%	0%	90%	17%	3%	100%
3 TEZ 15a	0%	0%	0%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	3%	2%	85%	10%	0%	0%	0%	0%	90%	17%	1%	100%
4 TEZ 8b	0%	0%	0%	0%	0%	95%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
4 TEZ 9b	0%	50%	50%	10%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
4 TEZ 10b	0%	30%	30%	75%	75%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
4 TEZ 11b	0%	0%	0%	0%	0%	95%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
4 TEZ 12	0%	50%	50%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
4 TEZ 13b	0%	10%	10%	0%	60%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	10%	1%	80%	2%	0%	0%	0%	7%	85%	17%	7%	100%
5 TEZ 14c	0%	0%	75%	0%	0%	0%	15%	25%	0%	5%	0%	0%	0%	1%	5%	0%	5%	85%	10%	0%	0%	0%	0%	90%	17%	1%	100%
5 TEZ 15b	0%	0%	0%	0%	0%	0%	15%	0%	0%	5%	0%	0%	0%	1%	5%	0%	5%	85%	10%	0%	0%	0%	0%	90%	17%	1%	100%

Legend:

- Category 1 Evacuation Areas
- Category 2 Evacuation Areas
- Category 3 Evacuation Areas
- Category 4 Evacuation Areas
- Category 5 Evacuation Areas

Table 19: Out Route Percentages – Mobile County

	Percent of Vehicles Utilizing Specific (Local) Routes								Percent of Vehicles Utilizing Specific (Local) Routes							Percent of Out Vehicles Exiting Area by Specific Route										
Mobile County Evac Zones	Ala 59 thru Foley	Ala 59 thru Loxley	Ala 59 at Bay Minette	US 98 eb into FL	US 90 eb into FL	US 98A nb at I-10	I-10 into Mobile	Ala 225 nb at I-65	I-10 eb to Baldwin Co.	I-165 nb at I-65	I-65 near Satsuma	I-65 nb at US 45	I-65 sb at US 90	US 98 wb at Ala 31	I-10 eb past US 90	I-10 eb into FL	US 31 eb out Baldwin Co.	I-65 eb out Baldwin Co.	Ala 59 nb out Baldwin Co.	US 43 nb out Mobile Co.	US 45 nb out Mobile Co.	US 98 wb into MS	I-10 wb into MS	I-65 eb with FL	I-10 wb with FL	I-10 eb with LA & MS	**Out Routes**
1 TEZ 1	0%	0%	0%	0%	0%	0%	0%	5%	50%	0%	25%	25%	0%	0%	0%	10%	0%	10%	0%	0%	0%	0%	80%	15%	1%	15%	**100%**
1 TEZ 2	0%	0%	0%	0%	0%	0%	0%	5%	50%	0%	0%	25%	0%	0%	0%	10%	0%	10%	0%	0%	0%	0%	80%	15%	1%	15%	**100%**
1 TEZ 3	0%	0%	0%	0%	0%	0%	0%	5%	25%	0%	15%	15%	0%	0%	50%	10%	0%	5%	0%	0%	0%	10%	75%	10%	55%	15%	**100%**
1 TEZ 4	0%	0%	0%	0%	0%	0%	0%	5%	75%	10%	50%	25%	0%	0%	75%	15%	0%	5%	0%	0%	0%	25%	55%	10%	80%	15%	**100%**
1 TEZ 7	0%	0%	0%	0%	0%	0%	0%	5%	15%	0%	0%	0%	0%	0%	95%	5%	0%	25%	0%	0%	0%	15%	55%	30%	95%	10%	**100%**
1 TEZ 8	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	1%	1%	**100%**
1 TEZ 9	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	95%	0%	1%	5%	**100%**
1 TEZ 15	0%	0%	0%	0%	0%	0%	0%	5%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	1%	1%	**100%**
2 TEZ 5	0%	0%	0%	0%	0%	0%	0%	5%	75%	10%	85%	0%	0%	0%	0%	15%	0%	0%	0%	15%	0%	0%	70%	0%	1%	15%	**100%**
2 TEZ 6	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	5%	0%	0%	50%	0%	50%	0%	0%	0%	55%	7%	1%	**100%**
2 TEZ 10	0%	0%	0%	0%	0%	0%	0%	5%	85%	0%	75%	75%	75%	0%	85%	15%	0%	20%	0%	0%	0%	15%	50%	25%	85%	15%	**100%**
2 TEZ 11	0%	0%	0%	0%	0%	0%	0%	5%	85%	0%	75%	75%	75%	50%	50%	25%	0%	25%	0%	15%	10%	10%	15%	30%	55%	25%	**100%**
2 TEZ 12	0%	0%	0%	0%	0%	0%	0%	5%	85%	75%	75%	50%	0%	0%	0%	25%	0%	50%	0%	25%	0%	0%	0%	55%	1%	25%	**100%**
2 TEZ 13	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	90%	0%	0%	0%	0%	0%	0%	75%	0%	25%	0%	0%	0%	80%	1%	1%	**100%**
3 TEZ 17	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	90%	50%	0%	0%	0%	0%	0%	5%	85%	10%	5%	55%	1%	**100%**
3 TEZ 18	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	30%	0%	0%	0%	0%	70%	35%	55%	1%	**100%**
3 TEZ 19	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	75%	0%	0%	25%	0%	0%	0%	0%	75%	30%	80%	1%	**100%**
3 TEZ 20	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	70%	0%	1%	1%	**100%**
3 TEZ 21	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	30%	0%	1%	1%	**100%**
4 TEZ 14	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	25%	0%	75%	0%	0%	0%	30%	1%	1%	**100%**
4 TEZ 16	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	85%	0%	75%	0%	0%	0%	0%	0%	0%	50%	50%	0%	5%	1%	1%	**100%**
4 TEZ 22	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	1%	1%	**100%**
4 TEZ 23	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	35%	65%	0%	0%	0%	1%	1%	**100%**

Legend: Category 1 and 2 Evacuation Areas Category 3, 4, & 5 Evacuation Areas

Table 20: Evacuating Vehicles by Road

	Modeled/Critical Roadway Segment	New Year/New Assumptions Evacuating Traffic																			
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ
Baldwin County	Ala 59 thru Foley	15,091	21,337	26,541	29,663	23,182	30,266	36,166	39,707	23,847	30,927	36,829	40,371	25,505	32,588	38,490	42,032	25,505	32,588	38,490	42,032
	Ala 59 thru Loxley	15,806	21,782	26,761	29,748	24,580	31,421	37,120	40,538	25,997	32,880	38,617	42,060	37,958	44,909	50,703	54,179	37,958	44,909	50,703	54,179
	Ala 59 at Bay Minette	13,488	18,605	22,868	25,425	19,854	25,650	30,479	33,376	22,075	27,921	32,793	35,718	31,695	37,605	42,531	45,484	38,853	44,768	49,698	52,655
	US 98 eastbound into FL	1,531	1,870	2,151	2,320	4,514	4,897	5,216	5,407	5,032	5,428	5,757	5,956	6,262	6,677	7,024	7,231	6,262	6,677	7,024	7,231
	US 90 eastbound into FL	836	876	908	928	1,182	1,227	1,265	1,288	1,579	1,637	1,686	1,715	2,499	2,577	2,643	2,683	2,499	2,577	2,643	2,683
	US 98A northbound at I-10	1,520	1,676	1,806	1,885	6,739	6,967	7,160	7,274	7,557	7,820	8,041	8,172	17,110	17,424	17,685	17,840	17,110	17,424	17,685	17,840
	I-10 into Mobile	3,686	4,912	5,933	6,546	6,522	7,927	9,098	9,801	7,423	8,859	10,056	10,774	11,846	13,313	14,537	15,270	13,121	14,591	15,817	16,551
	Ala 225 northbound at I-65	3,147	3,207	3,257	3,286	3,383	3,443	3,492	3,523	4,674	4,751	4,815	4,853	5,353	5,433	5,501	5,541	9,207	9,290	9,359	9,400
Mobile County	I-10 eastbound to Baldwin Co.	41,792	42,455	43,005	43,337	42,101	42,776	43,336	43,673	49,057	49,760	50,343	50,694	55,783	56,484	57,068	57,418	55,783	56,484	57,068	57,418
	I-165 northbound at I-65	19,339	19,798	20,179	20,408	20,299	20,814	21,242	21,499	26,020	26,569	27,027	27,303	29,253	29,810	30,275	30,554	29,485	30,043	30,508	30,788
	I-65 near Satsuma	41,760	42,478	43,075	43,435	42,075	42,804	43,411	43,775	49,389	50,156	50,792	51,176	54,938	55,704	56,342	56,724	54,938	55,704	56,342	56,724
	I-65 northbound at US 45	30,276	30,720	31,088	31,310	30,649	31,104	31,482	31,709	40,524	41,034	41,457	41,712	44,998	45,506	45,930	46,184	44,998	45,506	45,930	46,184
	I-65 southbound at US 90	21,045	21,528	21,929	22,170	21,770	22,323	22,783	23,060	30,350	31,021	31,578	31,914	32,910	33,580	34,138	34,473	32,910	33,580	34,138	34,473
	US 98 westbound at Ala 31	6,005	6,424	6,773	6,982	7,132	7,667	8,113	8,380	21,383	22,129	22,748	23,122	22,265	23,011	23,633	24,007	22,311	23,058	23,679	24,053
	I-10 eastbound past US 90	28,233	29,354	30,288	30,849	30,299	31,598	32,681	33,331	46,286	47,805	49,070	49,830	50,925	52,452	53,724	54,487	51,157	52,684	53,957	54,720
Regional	I-10 eastbound into FL (AL only)	10,596	11,320	11,922	12,284	11,765	12,578	13,255	13,662	12,925	13,747	14,433	14,845	16,516	17,351	18,048	18,465	16,516	17,351	18,048	18,465
	US 31 eastbound out Baldwin Co.	193	257	311	343	319	392	453	490	412	489	553	591	615	694	761	800	847	927	994	1,034
	I-65 eastbound out Baldwin Co.	32,256	37,441	41,761	44,354	42,118	48,048	52,990	55,954	50,794	56,889	61,970	65,021	68,764	74,985	80,174	83,283	72,707	78,941	84,139	87,255
	Ala 59 northbound out Baldwin Co.	388	518	627	692	640	789	912	986	821	977	1,107	1,186	1,227	1,388	1,523	1,604	1,690	1,854	1,990	2,071
	US 43 northbound out Mobile Co.	7,772	7,876	7,964	8,016	7,791	7,896	7,983	8,035	9,781	9,912	10,020	10,086	10,893	11,022	11,131	11,196	10,893	11,022	11,131	11,196
	US 45 northbound out Baldwin Co.	1,325	1,465	1,582	1,652	1,445	1,590	1,713	1,786	7,487	7,759	7,986	8,122	7,625	7,897	8,124	8,260	7,625	7,897	8,124	8,260
	US 98 westbound into MS	6,216	6,648	7,007	7,223	7,512	8,046	8,492	8,759	24,356	25,118	25,752	26,133	25,088	25,850	26,484	26,865	25,088	25,850	26,484	26,865
	I-10 westbound into MS (AL only)	23,357	24,351	25,177	25,673	25,780	26,923	27,873	28,442	42,901	44,177	45,240	45,878	48,144	49,428	50,497	51,139	48,144	49,428	50,497	51,139
Additional States	I-65 eastbound with FL / MS / LA	44,927	50,485	56,923	59,702	61,742	68,100	75,712	78,890	73,143	79,692	87,503	90,781	100,967	107,650	115,812	119,151	105,142	111,839	120,010	123,357
	I-65 eastbound with FL only	43,502	49,060	55,170	57,949	60,317	66,676	73,959	77,137	70,643	77,193	84,636	87,915	95,829	102,513	110,208	113,547	100,004	106,701	114,406	117,753
	I-10 westbound into AL (includes FL)	45,992	47,830	27,081	27,577	29,082	30,225	32,125	32,695	46,204	47,480	49,492	50,130	53,156	54,440	56,523	57,165	53,156	54,440	56,523	57,165
	I-10 eastbound into MS (includes FL & AL)	17,576	20,735	23,609	23,971	21,262	22,076	24,942	25,349	29,586	30,408	33,543	33,955	50,764	51,600	55,410	55,827	50,764	51,600	55,410	55,827

Figure 10: Worst Case Evacuation Network Congestion – Mobile County

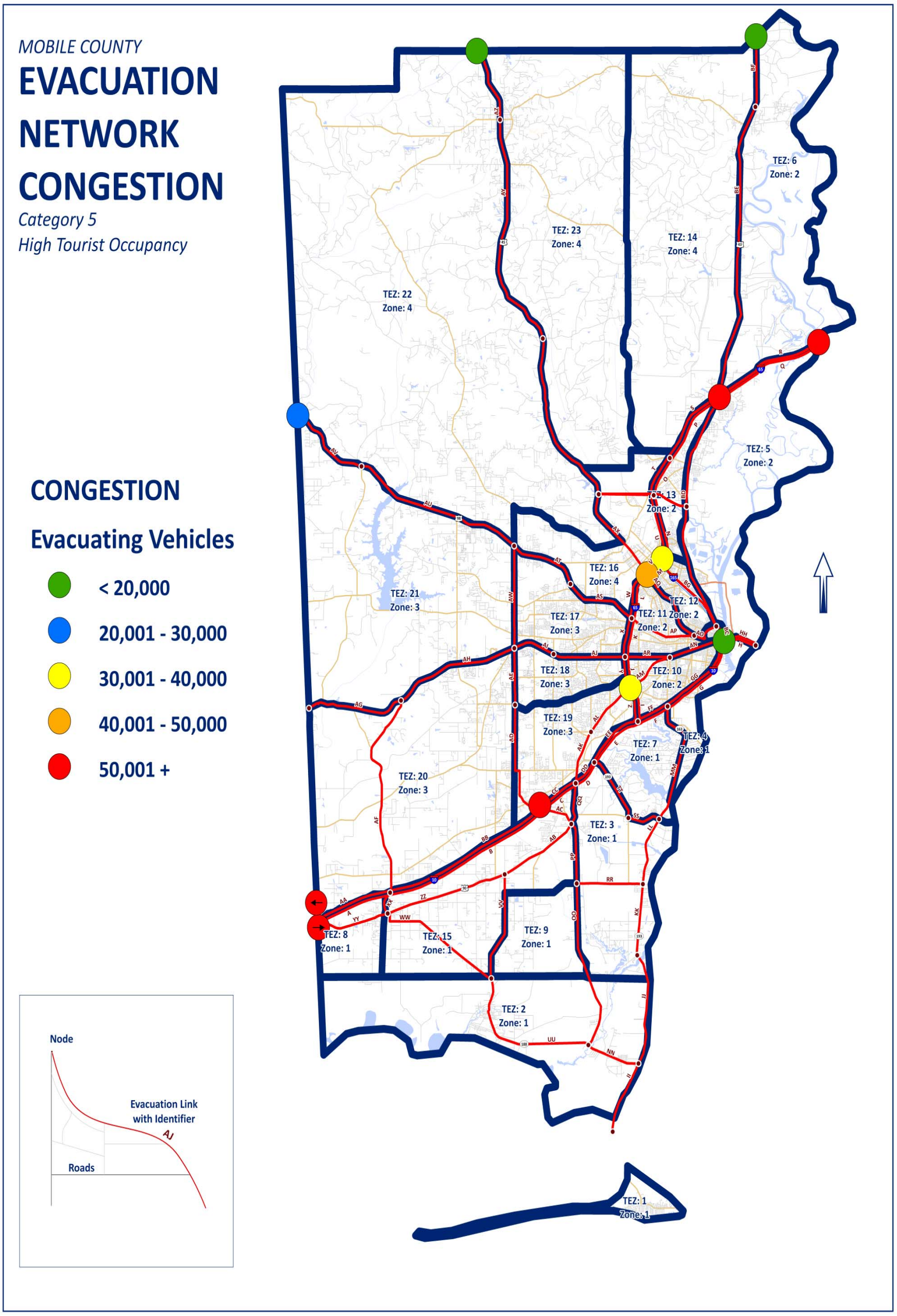
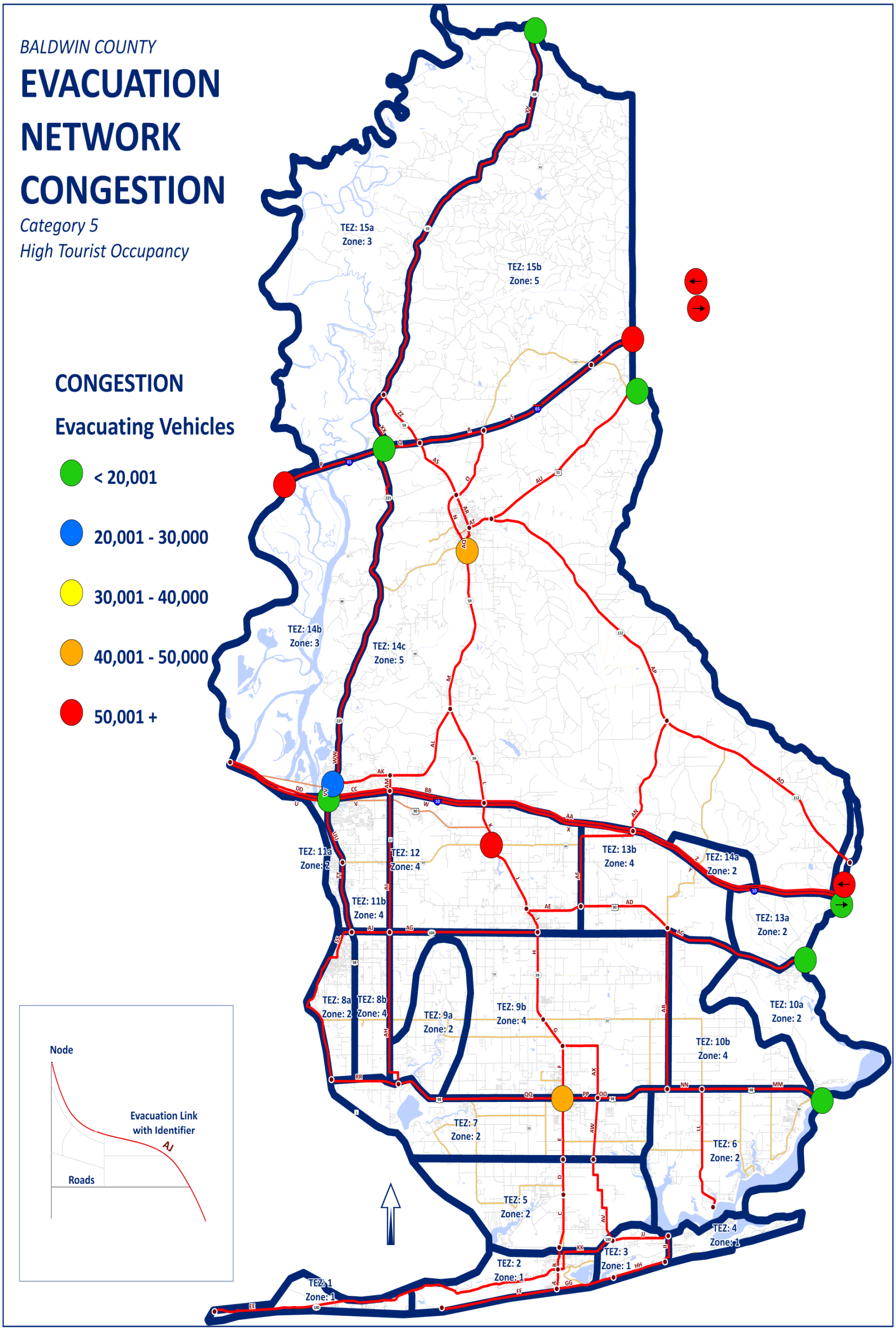


Figure 11: Worst Case Evacuation Network Congestion – Baldwin County



F) Calculation of Clearance Times

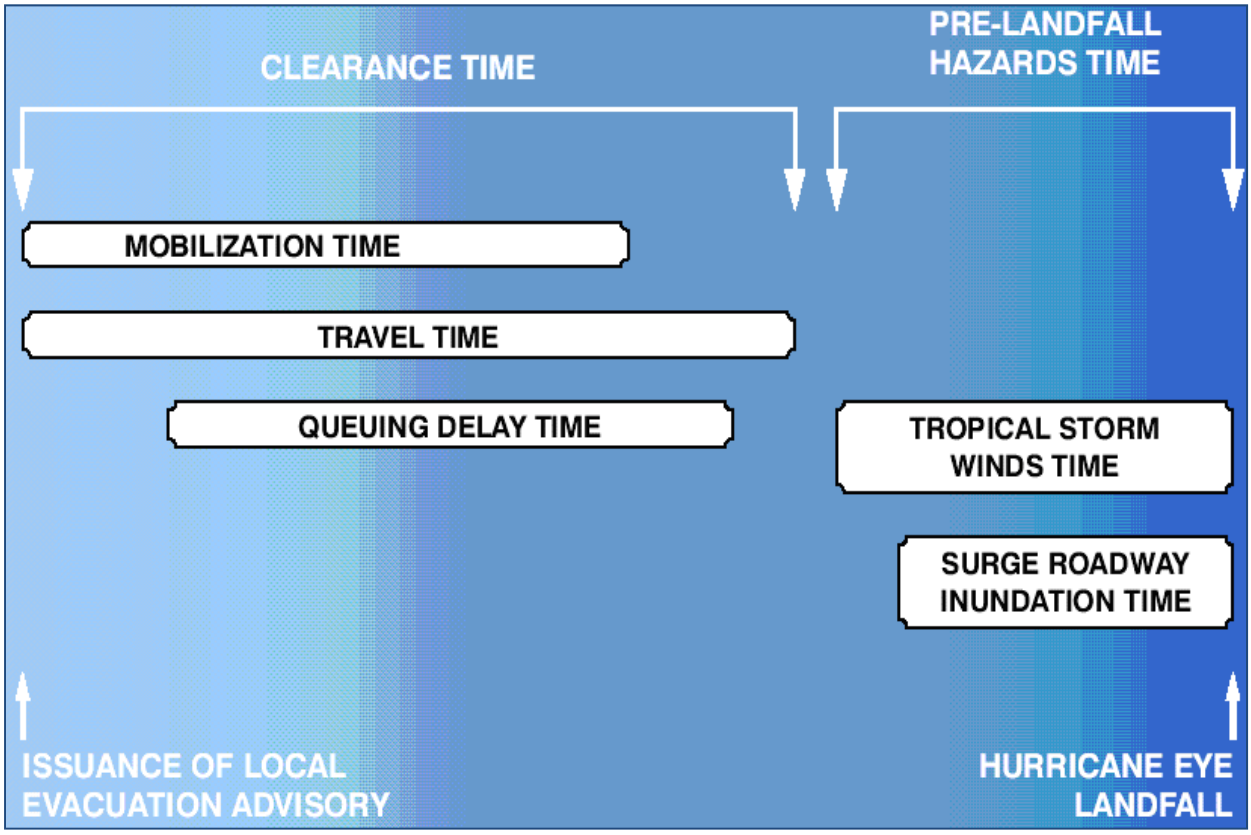
As noted in the Methodology section of this report, evacuation travel times have been calculated for each roadway segment based on expected vehicle movements, the hourly capacity of each roadway segment, the hourly traffic volume routed along the link, and the resolution of queuing time and background traffic. Evacuation clearance times are based on the time it takes the first vehicle to depart a county until the last vehicle reaches its final destination. This time is derived from time it takes traffic to clear the worst regional bottleneck.

Clearance times are predicated upon all evacuation movements occurring before the advent of tropical storm force winds. It is the arrival of tropical storm force winds that are assumed to bring with them storm surge effects. Based on this modeling assumption, evacuation movements occurring within the prescribed clearance times would not be impacted by surge related roadway flooding.

Recent Gulf hurricanes, including Hurricane Ike, have resulted in storm surge impacts arriving before the arrival of tropical storm force winds, most specifically in Texas. While the model from which the Alabama transportation analysis is based on a typical storm scenario, as illustrated in Figure 12, it is critical that emergency managers monitor storm conditions and National Weather Service advisories to determine if information regarding a higher than expected or more rapid rise of storm surge is predicted. To err on the side of caution, emergency managers can refer to the slow response time to build in a safety factor that would account for the scenario where some storm surge impacts may arrive slightly before tropical storm force winds.

Along specific potions of the Texas coast, due to bathymetry and coastal elevations, surge may arrive earlier than tropical storm force winds. HURREVAC 2000 includes plug ins for both Texas and Alabama to allow users to determine modified clearance time data in these specific locations or instances where surge may arrive earlier than tropical storm force winds. These conditions, while possible in Alabama, are not normally expected to occur.

Figure 12: Components of Clearance Time



Clearance time estimates include several components, including mobilization time, travel time and queuing delay time. The mobilization time is the time required by evacuees to prepare for evacuation and enter the road network, travel time is the time needed to travel along the road network and queuing delay time is the cumulative time added for all stops caused by traffic congestion.

In the modeling process, evacuation movements along each roadway segment were divided by quarters. The first quarter assumes all roadway segments will be able to clear vehicles at a Level of Service D service volume. This capacity is decreased slightly in quarters two (to 92 percent) and three (to 85 percent), resuming to 100% at quarter four. This technique is used to approximate capacity degradation and restoration throughout the life cycle of the evacuation.

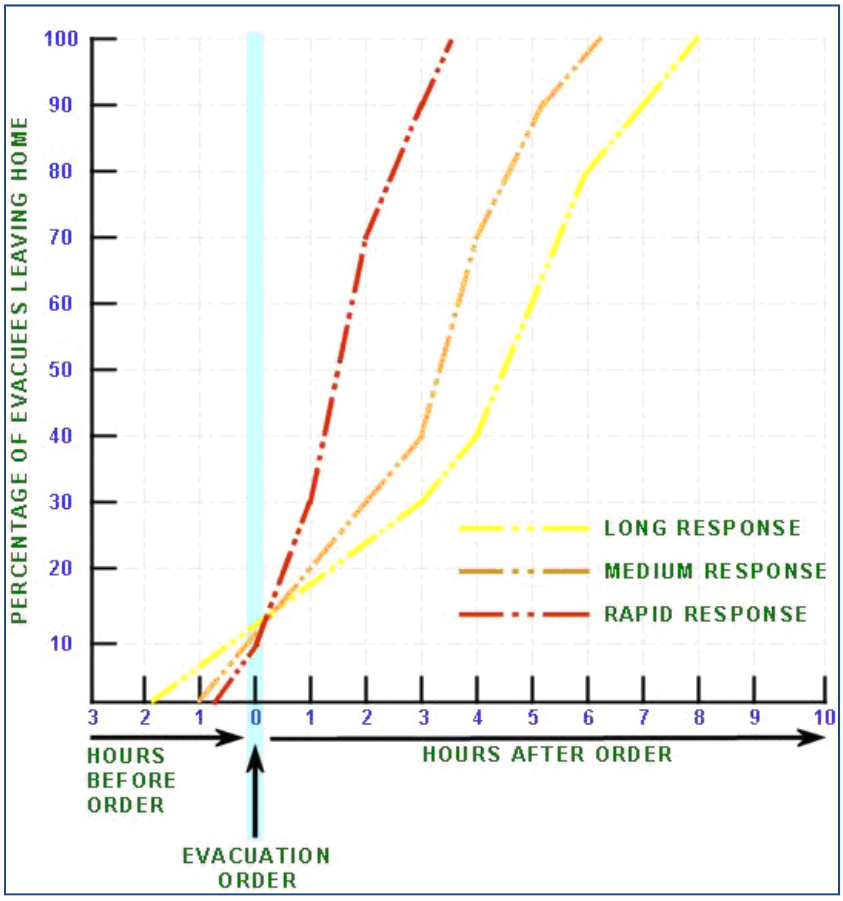
Part of queuing delay is the result of resolving background traffic. Background traffic for each critical roadway segment was calculated at the closest adjacent downstream node. The average annual daily trips (AADT) were collected for these nodes from data obtained from the Alabama Department of Transportation. Following the approaches used in other evacuation studies, the AADT was divided by 8 to provide a peak hour travel estimate and then multiplied by .55 percent to account for directionality in order to calculate estimated peak hour trips. The AADT for each segment were divided by the

calculated peak hour trips to provide an estimate in hours of the time it would take to clear background traffic.

Clearance time estimates are also modified by the rapidity of evacuation response by the evacuating population, or how quickly the vulnerable population will respond to an evacuation order or advisory. Behavioral data from past hurricane evacuation research demonstrates that mobilization and actual departures of the evacuating population can occur over a very brief time, or over a period of many hours. The response curves below reflect rapid, medium and long responses and are designed to include the range of mobilization times that may be experienced in a hurricane evacuation situation.

While the chart below shows mobilization delays of up to 3, 6 and 8 hours, these delays appeared somewhat high when compared to previous evacuation studies. It was assumed for Alabama, given the defined two county area to be evacuated, that even in a long response, delays of more than one 6-hour operational period would not be likely. As such, the mobilization time for a long or slow response would be 5 hours, for a medium response 2.5 hours. No response time delays were assumed in the rapid response scenario.

Figure 13: Evacuation Response Curve



While these basic assumptions were used in this study, other factors may affect evacuation response rates, including the timing of a hurricane evacuation order. Reaching people when they can be reached is an important factor. Hurricanes are by nature unpredictable. Storms can rapidly intensify or increase their forward motion. Windows of opportunity exist for enhanced or more rapid evacuation responses from the public. During weekdays, evacuation orders issued in the early morning (5 am – 7 am) or during dinner hours (5 pm – 7 pm) may reach a broader audience and result in more rapid responses although during the weekend when less people are at work there may be less of a difference. On any day of the week, the issuance of an evacuation order at 3 am when people are generally asleep may also result in a slower evacuation response rate than one issued at 7 am as people are beginning to start their day.

The background traffic calculated for each unique bottleneck was added to the response delay time to provide an overall mobilization adjustment factor. The base clearance times at each bottleneck were adjusted by adding this adjustment factor to their time. This approach, coupled with the recognition of the quarterly variation in service volume capacity, helps to ensure that the clearance times reflect mobilization, queuing delays and travel time.

The evacuation modeling process, as with all modeling efforts, transforms complex real world events into a series of numbers. While the modeling approach used in this study has been accepted for generations and validated through numerous post storm assessments, like any modeling process, it involves a radical simplification of complex real world systems and as such may include an inherent margin of error. Evacuation modeling results – including clearance times – are only as good as the available inputs. The model relies on sets of objective data on populations, behaviors, roadway characteristics and other elements. It also includes subjective components, including routing and destination choices. All of the data is subject to change over time due to changing conditions. Model results that are ten or more years old would be less accurate than more recently estimated results.

A wide range of clearance times are provided for each storm scenario. These times are designed to guide emergency managers in making the critical decision of when to call an evacuation. While the model can produce times that include 6 minute variations (tenths of hours), this level of differentiation is not particularly relevant to decision makers who will be basing their actions on 6 hour incident action periods. For this analysis, clearance times were rounded up to the closest whole hour.

While the clearance time estimates provided in the study can stand alone, a margin of error may exist due to the range of different modeled inputs as well as actual conditions leading up to an evacuation. The time difference between the slow and rapid response time provides an adequate band of confidence for the listed clearance times. In lieu of

this calculated expected range, a 6 hour band of confidence (+/- 3 hours), which would be based on the accepted incident action period and would likely correspond to real time storm updates from the National Hurricane Center, may be applied around the medium response time.

Separate clearance time tables have been prepared to show overall county clearance times, both with and without two levels of interstate traffic (with Florida only, and with Florida plus Louisiana and Mississippi), as well as with contraflow on I-65, and are included as an Appendix to this report. The Appendix also includes other useful tables that compare the newly generated clearance times with the previous HURREVAC times that were estimated more than a decade ago.

The Clearance Times Appendix includes following tables:

- An Alabama Clearance Times Summary Table
- Baldwin County 2010 HURREVAC Clearance Times
- Baldwin past study comparison – County only
- Baldwin past study comparison – with NW FL / I-65 only
- Baldwin past study comparison – with NW FL / I-65 w/ I-10 eastbound
- Baldwin past study comparison – with I-65 contraflow
- Baldwin past study comparison – County only – No percentage comparisons
- Baldwin past study comparison – with NW FL / I-65 only – No percentage comparisons
- Baldwin past study comparison – with NW FL / I-65 w/ I-10 eastbound – No percentage comparisons
- Baldwin past study comparison – with I-65 contraflow – No percentage comparisons
- Mobile County 2010 HURREVAC Clearance Times
- Mobile past study comparison – County only
- Mobile past study comparison – with NW FL / I-65 only
- Mobile past study comparison – with NW FL / I-65 w/ I-10 eastbound
- Mobile past study comparison – with I-65 contraflow
- Mobile past study comparison – County only – No percentage comparisons
- Mobile past study comparison – with NW FL / I-65 only – No percentage comparisons
- Mobile past study comparison – with NW FL / I-65 w/ I-10 EB – No percentage comparisons
- Mobile past study comparison – with I-65 contraflow – No percentage comparisons

Tables 21 through 23 identifies the clearance times at the each of the primary modeled bottlenecks.

Table 24 abbreviates the more expansive data provided in the Clearance Times Appendix, showing only the best and worst clearance time for each evacuation scenario as a range regardless of response rate or tourist occupancy.

Table 21: Clearance Times by Bottleneck – Fast Response

FAST RESPONSE	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (FAST)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
Baldwin County	Ala 59 thru Foley	7.8	10.8	13.3	14.8	11.7	15.1	18.0	19.7	12.0	15.4	18.3	20.0	12.8	16.2	19.1	20.8	12.8	16.2	19.1	20.8	2250	2070	1913	2,250	0.6
	Ala 59 thru Loxley	9.5	12.9	15.8	17.5	14.5	18.4	21.7	23.6	15.3	19.2	22.5	24.5	22.1	26.1	29.4	31.4	22.1	26.1	29.4	31.4	1890	1739	1607	1,890	0.5
	Ala 59 at Bay Minette	8.2	11.2	13.6	15.0	11.9	15.2	17.9	19.6	13.1	16.5	19.3	20.9	18.6	22.0	24.8	26.5	22.7	26.1	28.9	30.6	1890	1739	1607	1,890	0.5
	US 98 eastbound into FL	1.6	1.9	2.2	2.3	4.1	4.5	4.7	4.9	4.6	4.9	5.2	5.4	5.6	6.0	6.3	6.4	5.6	6.0	6.3	6.4	1280	1178	1088	1280	0.3
	US 90 eastbound into FL	0.9	0.9	0.9	0.9	1.2	1.2	1.2	1.2	1.5	1.5	1.6	1.6	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.4	1280	1178	1088	1280	0.2
	US 98A northbound at I-10	1.6	1.7	1.8	1.8	4.8	5.0	5.1	5.2	5.3	5.5	5.6	5.7	11.2	11.4	11.6	11.7	11.2	11.4	11.6	11.7	1750	1610	1488	1750	0.7
	I-10 into Mobile	2.0	2.4	2.8	3.0	3.0	3.4	3.8	4.1	3.3	3.8	4.2	4.4	4.8	5.3	5.7	5.9	5.2	5.7	6.1	6.3	3200	2944	2720	3200	0.8
	Ala 225 northbound at I-65	2.7	2.8	2.8	2.8	2.9	3.0	3.0	3.0	4.0	4.1	4.1	4.1	4.6	4.6	4.7	4.7	7.8	7.9	7.9	8.0	1280	1178	1088	1280	0.1
Mobile County	I-10 eastbound to Baldwin Co.	14.9	15.1	15.3	15.4	15.0	15.2	15.4	15.5	17.3	17.5	17.7	17.9	19.6	19.8	20.0	20.1	19.6	19.8	20.0	20.1	3200	2944	2720	3200	0.8
	I-165 northbound at I-65	7.3	7.5	7.6	7.7	7.6	7.8	8.0	8.1	9.6	9.8	9.9	10.0	10.7	10.9	11.0	11.1	10.7	10.9	11.1	11.2	3200	2944	2720	3200	0.8
	I-65 near Satsuma	14.4	14.6	14.8	14.9	14.5	14.7	14.9	15.0	16.9	17.2	17.4	17.5	18.8	19.1	19.3	19.4	18.8	19.1	19.3	19.4	3200	2944	2720	3200	0.3
	I-65 northbound at US 45	11.1	11.2	11.3	11.4	11.2	11.3	11.5	11.5	14.5	14.7	14.8	14.9	16.0	16.2	16.3	16.4	16.0	16.2	16.3	16.4	3200	2944	2720	3200	0.8
	I-65 southbound at US 90	8.2	8.3	8.5	8.5	8.4	8.6	8.7	8.8	11.3	11.5	11.7	11.8	12.2	12.4	12.6	12.7	12.2	12.4	12.6	12.7	3200	2944	2720	3200	1.1
	US 98 westbound at Ala 31	7.7	8.2	8.6	8.9	9.0	9.7	10.3	10.6	26.5	27.4	28.2	28.7	27.6	28.5	29.3	29.7	27.7	28.6	29.3	29.8	880	810	748	880	0.3
	I-10 eastbound past US 90	10.3	10.7	11.0	11.2	11.0	11.4	11.8	12.0	16.4	16.9	17.3	17.6	17.9	18.4	18.9	19.1	18.0	18.5	18.9	19.2	3200	2944	2720	3200	0.8
Regional	I-10 eastbound into FL (AL only)	3.9	4.2	4.4	4.5	4.3	4.6	4.8	4.9	4.7	5.0	5.2	5.3	5.9	6.2	6.4	6.6	5.9	6.2	6.4	6.6	3200	2944	2720	3200	0.3
	US 31 eastbound out Baldwin Co.	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1280	1178	1088	1280	0.1
	I-65 eastbound out Baldwin Co.	11.1	12.9	14.3	15.2	14.5	16.5	18.1	19.1	17.4	19.4	21.1	22.2	23.4	25.5	27.3	28.3	24.8	26.9	28.6	29.7	3200	2944	2720	3200	0.3
	Ala 59 northbound out Baldwin Co.	0.4	0.5	0.6	0.6	0.6	0.7	0.8	0.9	0.7	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1280	1178	1088	1280	0.0
	US 43 northbound out Mobile Co.	4.8	4.9	4.9	4.9	4.8	4.9	4.9	4.9	6.0	6.0	6.1	6.1	6.6	6.7	6.8	6.8	6.6	6.7	6.8	6.8	1850	1702	1573	1850	0.3
	US 45 northbound out Baldwin Co.	1.3	1.4	1.5	1.5	1.4	1.5	1.6	1.6	6.4	6.7	6.9	7.0	6.6	6.8	7.0	7.1	6.6	6.8	7.0	7.1	1280	1178	1088	1280	0.1
	US 98 westbound into MS	5.5	5.9	6.2	6.4	6.6	7.1	7.4	7.7	20.8	21.4	22.0	22.3	21.4	22.1	22.6	22.9	21.4	22.1	22.6	22.9	1280	1178	1088	1280	0.3
	I-10 westbound into MS (AL only)	8.4	8.8	9.0	9.2	9.2	9.6	9.9	10.1	15.0	15.4	15.8	16.0	16.8	17.2	17.6	17.8	16.8	17.2	17.6	17.8	3200	2944	2720	3200	0.5
Addl States	I-65 eastbound with FL w I-10 eastbound	15.4	17.3	19.4	20.4	21.1	23.2	25.8	26.8	24.9	27.1	29.7	30.9	34.3	36.5	39.3	40.4	35.7	38.0	40.7	41.8	3200	2944	2720	3200	0.2
	I-65 eastbound with FL (no I-10)	14.9	16.8	18.8	19.8	20.6	22.7	25.2	26.3	24.1	26.3	28.8	29.9	32.6	34.8	37.4	38.5	34.0	36.2	38.8	39.9	3200	2944	2720	3200	0.2
	I-10 westbound into AL (includes FL)	15.8	16.5	9.5	9.6	10.1	10.5	11.2	11.4	15.9	16.3	17.0	17.2	18.3	18.7	19.4	19.6	18.3	18.7	19.4	19.6	3200	2944	2720	3200	0.3
	I-10 westbound into MS (includes FL & AL)	6.5	7.5	8.5	8.6	7.7	8.0	9.0	9.1	10.5	10.8	11.9	12.0	17.7	17.9	19.2	19.4	17.7	17.9	19.2	19.4	3200	2944	2720	3200	0.5
Reverse Lane	*CLEARANCE TIMES WITH REVERSE LANE OPERATION ON I-65 NORTHBOUND (assumes worst case w/ FL w I-10 eastbound)*																									
	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (FAST)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
	I-65 northbound Contra Flow	9.9	11.1	12.5	13.1	13.5	14.9	16.5	17.2	16.0	17.4	19.1	19.8	22.0	23.4	25.2	25.9	22.9	24.3	26.1	26.8	5,000	4,600	4,250	5,000	0.2
	Time Savings from Normal Traffic Operations	5.5	6.2	7.0	7.3	7.5	8.3	9.2	9.6	8.9	9.7	10.7	11.1	12.3	13.1	14.1	14.5	12.8	13.6	14.6	15.0					

Table 22: Clearance Times by Bottleneck – Medium Response

MEDIUM RESPONSE	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (MEDIUM)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
Baldwin County	Ala 59 thru Foley	10.7	13.6	16.1	17.6	14.5	17.9	20.8	22.5	14.9	18.2	21.1	22.8	15.6	19.0	21.9	23.6	15.6	19.0	21.9	23.6	2250	2070	1913	2,250	3.4
	Ala 59 thru Loxley	12.2	15.7	18.5	20.2	17.3	21.2	24.4	26.4	18.1	22.0	25.3	27.2	24.9	28.9	32.2	34.1	24.9	28.9	32.2	34.1	1890	1739	1607	1,890	3.2
	Ala 59 at Bay Minette	11.0	13.9	16.4	17.8	14.6	17.9	20.7	22.4	15.9	19.2	22.0	23.7	21.4	24.8	27.6	29.3	25.5	28.9	31.7	33.4	1890	1739	1607	1,890	3.3
	US 98 eastbound into FL	4.3	4.6	4.8	5.0	6.8	7.1	7.4	7.6	7.3	7.6	7.9	8.0	8.3	8.6	8.9	9.1	8.3	8.6	8.9	9.1	1280	1178	1088	1280	3.0
	US 90 eastbound into FL	3.4	3.5	3.5	3.5	3.7	3.8	3.8	3.8	4.1	4.1	4.2	4.2	4.8	4.9	5.0	5.0	4.8	4.9	5.0	5.0	1280	1178	1088	1280	2.7
	US 98A northbound at I-10	4.5	4.6	4.6	4.7	7.7	7.8	7.9	8.0	8.2	8.3	8.5	8.6	14.1	14.3	14.4	14.5	14.1	14.3	14.4	14.5	1750	1610	1488	1750	3.5
	I-10 into Mobile	4.9	5.3	5.6	5.9	5.8	6.3	6.7	7.0	6.2	6.6	7.0	7.3	7.6	8.1	8.5	8.8	8.1	8.6	9.0	9.2	3200	2944	2720	3200	3.6
	Ala 225 northbound at I-65	5.2	5.3	5.3	5.4	5.4	5.5	5.5	5.6	6.5	6.6	6.6	6.7	7.1	7.2	7.2	7.3	10.3	10.4	10.5	10.5	1280	1178	1088	1280	2.6
Mobile County	I-10 eastbound to Baldwin Co.	17.7	18.0	18.1	18.3	17.8	18.1	18.3	18.4	20.2	20.4	20.6	20.7	22.4	22.7	22.9	23.0	22.4	22.7	22.9	23.0	3200	2944	2720	3200	3.6
	I-165 northbound at I-65	10.2	10.4	10.5	10.6	10.6	10.7	10.9	11.0	12.5	12.7	12.8	12.9	13.6	13.8	13.9	14.0	13.6	13.8	14.0	14.1	3200	2944	2720	3200	3.7
	I-65 near Satsuma	17.0	17.2	17.4	17.6	17.1	17.3	17.5	17.7	19.6	19.8	20.0	20.2	21.4	21.7	21.9	22.0	21.4	21.7	21.9	22.0	3200	2944	2720	3200	2.9
	I-65 northbound at US 45	14.0	14.1	14.3	14.3	14.1	14.3	14.4	14.5	17.4	17.6	17.8	17.8	18.9	19.1	19.3	19.3	18.9	19.1	19.3	19.3	3200	2944	2720	3200	3.8
	I-65 southbound at US 90	11.2	11.4	11.5	11.6	11.4	11.6	11.8	11.9	14.3	14.6	14.7	14.9	15.2	15.4	15.6	15.7	15.2	15.4	15.6	15.7	3200	2944	2720	3200	4.1
	US 98 westbound at Ala 31	10.3	10.8	11.3	11.5	11.7	12.4	12.9	13.2	29.2	30.1	30.8	31.3	30.3	31.2	31.9	32.4	30.3	31.2	32.0	32.4	880	810	748	880	3.0
	I-10 eastbound past US 90	13.2	13.5	13.8	14.0	13.8	14.3	14.7	14.9	19.2	19.8	20.2	20.4	20.8	21.3	21.7	22.0	20.9	21.4	21.8	22.1	3200	2944	2720	3200	3.6
Regional	I-10 eastbound into FL (AL only)	6.6	6.8	7.0	7.1	7.0	7.2	7.5	7.6	7.4	7.6	7.9	8.0	8.6	8.9	9.1	9.2	8.6	8.9	9.1	9.2	3200	2944	2720	3200	3.0
	US 31 eastbound out Baldwin Co.	2.9	2.9	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.2	3.3	3.4	3.4	3.4	3.5	3.6	3.6	1280	1178	1088	1280	2.7
	I-65 eastbound out Baldwin Co.	13.8	15.5	17.0	17.8	17.1	19.1	20.7	21.7	20.0	22.1	23.8	24.8	26.1	28.2	29.9	31.0	27.4	29.5	31.2	32.3	3200	2944	2720	3200	2.9
	Ala 59 northbound out Baldwin Co.	2.9	3.0	3.1	3.1	3.1	3.2	3.3	3.4	3.2	3.4	3.5	3.5	3.6	3.7	3.8	3.9	4.0	4.1	4.2	4.3	1280	1178	1088	1280	2.5
	US 43 northbound out Mobile Co.	7.4	7.5	7.5	7.6	7.4	7.5	7.5	7.6	8.6	8.7	8.7	8.8	9.2	9.3	9.4	9.4	9.2	9.3	9.4	9.4	1850	1702	1573	1850	2.9
	US 45 northbound out Baldwin Co.	3.8	3.9	4.0	4.1	3.9	4.0	4.1	4.2	9.0	9.2	9.4	9.6	9.1	9.4	9.6	9.7	9.1	9.4	9.6	9.7	1280	1178	1088	1280	2.7
	US 98 westbound into MS	8.1	8.5	8.8	9.0	9.2	9.7	10.1	10.3	23.4	24.1	24.6	24.9	24.1	24.7	25.2	25.6	24.1	24.7	25.2	25.6	1280	1178	1088	1280	2.9
	I-10 westbound into MS (AL only)	11.2	11.5	11.8	12.0	12.0	12.4	12.7	12.9	17.8	18.2	18.6	18.8	19.5	20.0	20.3	20.6	19.5	20.0	20.3	20.6	3200	2944	2720	3200	3.3
Addl States	I-65 eastbound with FL w I-10 eastbound	18.0	19.9	22.1	23.0	23.7	25.8	28.4	29.5	27.5	29.7	32.4	33.5	36.9	39.2	41.9	43.0	38.3	40.6	43.3	44.5	3200	2944	2720	3200	2.9
	I-65 eastbound with FL (no I-10)	17.5	19.4	21.5	22.4	23.2	25.3	27.8	28.9	26.7	28.9	31.4	32.5	35.2	37.4	40.0	41.2	36.6	38.8	41.4	42.6	3200	2944	2720	3200	2.9
	I-10 westbound into AL (includes FL)	18.5	19.1	12.1	12.3	12.8	13.2	13.8	14.0	18.6	19.0	19.7	19.9	20.9	21.4	22.1	22.3	20.9	21.4	22.1	22.3	3200	2944	2720	3200	3.0
	I-10 westbound into MS (includes FL & AL)	9.2	10.3	11.3	11.4	10.5	10.8	11.7	11.9	13.3	13.6	14.6	14.8	20.4	20.7	22.0	22.1	20.4	20.7	22.0	22.1	3200	2944	2720	3200	3.3
Reverse Lane	*CLEARANCE TIMES WITH REVERSE LANE OPERATION ON I-65 NORTHBOUND (assumes worst case w/ FL w I-10 eastbound)*																									
	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (MEDIUM)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
	I-65 northbound Contra Flow	12.6	13.8	15.2	15.8	16.2	17.6	19.2	19.9	18.7	20.1	21.8	22.5	24.7	26.1	27.9	28.6	25.6	27.0	28.8	29.5	5,000	4,600	4,250	5,000	2.9
	Time Savings from Normal Traffic Operations	5.4	6.1	6.9	7.2	7.5	8.2	9.2	9.5	8.8	9.6	10.6	11.0	12.2	13.0	14.0	14.4	12.7	13.5	14.5	14.9					

Table 23: Clearance Times by Bottleneck – Slow Response

SLOW RESPONSE	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (SLOW)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
Baldwin County	Ala 59 thru Foley	12.8	15.8	18.3	19.8	16.7	20.1	23.0	24.7	17.0	20.4	23.3	25.0	17.8	21.2	24.1	25.8	17.8	21.2	24.1	25.8	2250	2070	1913	2,250	5.6
	Ala 59 thru Loxley	14.5	17.9	20.8	22.5	19.5	23.4	26.7	28.6	20.3	24.2	27.5	29.5	27.1	31.1	34.4	36.4	27.1	31.1	34.4	36.4	1890	1739	1607	1,890	5.5
	Ala 59 at Bay Minette	13.2	16.2	18.6	20.0	16.9	20.2	22.9	24.6	18.1	21.5	24.3	25.9	23.6	27.0	29.8	31.5	27.7	31.1	33.9	35.6	1890	1739	1607	1,890	5.5
	US 98 eastbound into FL	6.6	6.9	7.2	7.3	9.1	9.5	9.7	9.9	9.6	9.9	10.2	10.4	10.6	11.0	11.3	11.4	10.6	11.0	11.3	11.4	1280	1178	1088	1280	5.3
	US 90 eastbound into FL	5.9	5.9	5.9	5.9	6.2	6.2	6.2	6.2	6.5	6.5	6.6	6.6	7.3	7.3	7.4	7.4	7.3	7.3	7.4	7.4	1280	1178	1088	1280	5.2
	US 98A northbound at I-10	6.6	6.7	6.8	6.8	9.8	10.0	10.1	10.2	10.3	10.5	10.6	10.7	16.2	16.4	16.6	16.7	16.2	16.4	16.6	16.7	1750	1610	1488	1750	5.7
	I-10 into Mobile	7.0	7.4	7.8	8.0	8.0	8.4	8.8	9.1	8.3	8.8	9.2	9.4	9.8	10.3	10.7	10.9	10.2	10.7	11.1	11.3	3200	2944	2720	3200	5.8
	Ala 225 northbound at I-65	7.7	7.8	7.8	7.8	7.9	8.0	8.0	8.0	9.0	9.1	9.1	9.1	9.6	9.6	9.7	9.7	12.8	12.9	12.9	13.0	1280	1178	1088	1280	5.1
Mobile County	I-10 eastbound to Baldwin Co.	19.9	20.1	20.3	20.4	20.0	20.2	20.4	20.5	22.3	22.5	22.7	22.9	24.6	24.8	25.0	25.1	24.6	24.8	25.0	25.1	3200	2944	2720	3200	5.8
	I-165 northbound at I-65	12.3	12.5	12.6	12.7	12.6	12.8	13.0	13.1	14.6	14.8	14.9	15.0	15.7	15.9	16.0	16.1	15.7	15.9	16.1	16.2	3200	2944	2720	3200	5.8
	I-65 near Satsuma	19.4	19.6	19.8	19.9	19.5	19.7	19.9	20.0	21.9	22.2	22.4	22.5	23.8	24.1	24.3	24.4	23.8	24.1	24.3	24.4	3200	2944	2720	3200	5.3
	I-65 northbound at US 45	16.1	16.2	16.3	16.4	16.2	16.3	16.5	16.5	19.5	19.7	19.8	19.9	21.0	21.2	21.3	21.4	21.0	21.2	21.3	21.4	3200	2944	2720	3200	5.8
	I-65 southbound at US 90	13.2	13.3	13.5	13.5	13.4	13.6	13.7	13.8	16.3	16.5	16.7	16.8	17.2	17.4	17.6	17.7	17.2	17.4	17.6	17.7	3200	2944	2720	3200	6.1
	US 98 westbound at Ala 31	12.7	13.2	13.6	13.9	14.0	14.7	15.3	15.6	31.5	32.4	33.2	33.7	32.6	33.5	34.3	34.7	32.7	33.6	34.3	34.8	880	810	748	880	5.3
	I-10 eastbound past US 90	15.3	15.7	16.0	16.2	16.0	16.4	16.8	17.0	21.4	21.9	22.3	22.6	22.9	23.4	23.9	24.1	23.0	23.5	23.9	24.2	3200	2944	2720	3200	5.8
Regional	I-10 eastbound into FL (AL only)	8.9	9.2	9.4	9.5	9.3	9.6	9.8	9.9	9.7	10.0	10.2	10.3	10.9	11.2	11.4	11.6	10.9	11.2	11.4	11.6	3200	2944	2720	3200	5.3
	US 31 eastbound out Baldwin Co.	5.3	5.4	5.4	5.4	5.4	5.5	5.5	5.6	5.5	5.6	5.6	5.6	5.7	5.7	5.8	5.8	5.9	5.9	6.0	6.0	1280	1178	1088	1280	5.1
	I-65 eastbound out Baldwin Co.	16.1	17.9	19.3	20.2	19.5	21.5	23.1	24.1	22.4	24.4	26.1	27.2	28.4	30.5	32.3	33.3	29.8	31.9	33.6	34.7	3200	2944	2720	3200	5.3
	Ala 59 northbound out Baldwin Co.	5.4	5.5	5.6	5.6	5.6	5.7	5.8	5.9	5.7	5.9	6.0	6.0	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8	1280	1178	1088	1280	5.0
	US 43 northbound out Mobile Co.	9.8	9.9	9.9	9.9	9.8	9.9	9.9	9.9	11.0	11.0	11.1	11.1	11.6	11.7	11.8	11.8	11.6	11.7	11.8	11.8	1850	1702	1573	1850	5.3
	US 45 northbound out Baldwin Co.	6.3	6.4	6.5	6.5	6.4	6.5	6.6	6.6	11.4	11.7	11.9	12.0	11.6	11.8	12.0	12.1	11.6	11.8	12.0	12.1	1280	1178	1088	1280	5.1
	US 98 westbound into MS	10.5	10.9	11.2	11.4	11.6	12.1	12.4	12.7	25.8	26.4	27.0	27.3	26.4	27.1	27.6	27.9	26.4	27.1	27.6	27.9	1280	1178	1088	1280	5.3
	I-10 westbound into MS (AL only)	13.4	13.8	14.0	14.2	14.2	14.6	14.9	15.1	20.0	20.4	20.8	21.0	21.8	22.2	22.6	22.8	21.8	22.2	22.6	22.8	3200	2944	2720	3200	5.5
Addl States	I-65 eastbound with FL w I-10 eastbound	20.4	22.3	24.4	25.4	26.1	28.2	30.8	31.8	29.9	32.1	34.7	35.9	39.3	41.5	44.3	45.4	40.7	43.0	45.7	46.8	3200	2944	2720	3200	5.2
	I-65 eastbound with FL (no I-10)	19.9	21.8	23.8	24.8	25.6	27.7	30.2	31.3	29.1	31.3	33.8	34.9	37.6	39.8	42.4	43.5	39.0	41.2	43.8	44.9	3200	2944	2720	3200	5.2
	I-10 westbound into AL (includes FL)	20.8	21.5	14.5	14.6	15.1	15.5	16.2	16.4	20.9	21.3	22.0	22.2	23.3	23.7	24.4	24.6	23.3	23.7	24.4	24.6	3200	2944	2720	3200	5.3
	I-10 westbound into MS (includes FL & AL)	11.5	12.5	13.5	13.6	12.7	13.0	14.0	14.1	15.5	15.8	16.9	17.0	22.7	22.9	24.2	24.4	22.7	22.9	24.2	24.4	3200	2944	2720	3200	5.5
Reverse Lane	*CLEARANCE TIMES WITH REVERSE LANE OPERATION ON I-65 NORTHBOUND (assumes worst case w/ FL w I-10 eastbound)*																									
	Modeled/Critical Roadway Segment	Times																				Evacuation Service Volume				Mobilization Response Factor (SLOW)
		Cat 1 low occ	Cat 1 med occ	Cat 1 high occ	Cat 1 max occ	Cat 2 low occ	Cat 2 med occ	Cat 2 high occ	Cat 2 max occ	Cat 3 low occ	Cat 3 med occ	Cat 3 high occ	Cat 3 max occ	Cat 4 low occ	Cat 4 med occ	Cat 4 high occ	Cat 4 max occ	Cat 5 low occ	Cat 5 med occ	Cat 5 high occ	Cat 5 max occ	1st Quarter of Evacuation	2nd Quarter of Evacuation	3rd Quarter of Evacuation	4th Quarter of Evacuation	
	I-65 northbound Contra Flow	14.9	16.1	17.5	18.1	18.5	19.9	21.5	22.2	21.0	22.4	24.1	24.8	27.0	28.4	30.2	30.9	27.9	29.3	31.1	31.8	5,000	4,600	4,250	5,000	5.2
	Time Savings from Normal Traffic Operations	5.5	6.2	7.0	7.3	7.5	8.3	9.2	9.6	8.9	9.7	10.7	11.1	12.3	13.1	14.1	14.5	12.8	13.6	14.6	15.0					

Table 24: Clearance Times Summary

	Critical Roadway Segment	Cat 1 Range	Cat 2 Range	Cat 3 Range	Cat 4 Range	Cat 5 Range
Baldwin County	**Ala 59 thru Loxley** *Includes Mobile thru-traffic* *No Interstate impacts*	10 to 22 hours	15 to 29 hours	15 to 29 hours	22 to 36 hours	22 to 36 hours
Mobile County	**I-10 eastbound to Baldwin Co.** *Includes Baldwin thru-traffic* *No Interstate impacts*	15 to 20 hours	15 to 20 hours	17 to 23 hours	20 to 25 hours	20 to 25 hours
Additional States	**I-65 eastbound with FL w I-10 eastbound** (worst case) *Includes LA, MS (eastbound) and FL (westbound)*	15 to 25 hours	21 to 32 hours	25 to 36 hours	34 to 45 hours	36 to 47 hours
	I-65 eastbound with FL (w/o I-10 eastbound) *Includes only FL (westbound), no LA or MS (eastbound)*	15 to 25 hours	21 to 31 hours	24 to 35 hours	33 to 44 hours	34 to 45 hours
Contraflow	**I-65 eastbound with FL w I-10 eastbound** *Includes LA, MS (eastbound) and FL (westbound)*	15 to 22 hours	15 to 29 hours	17 to 29 hours	22 to 36 hours	23 to 36 hours
Note: *Contraflow benefits on I-65 will not generate clearance times lower than the highest time at the county critical roadway segment for Baldwin or Mobile County.*						

G) Traffic Control Measures

The movement of evacuating vehicles during a hurricane evacuation requires extensive traffic control efforts to make maximum use of the roadway capacity and to expedite safe escape from hurricane hazards. This study identified the critical roadway segments that determined the clearance times for each county and regionally.

Some general recommendations concerning traffic control are as follows:

- Where the state and counties have sufficient personnel resources, officers should be stationed at critical intersections to facilitate traffic flow; Where intersections will continue to have signalized control, signal patterns providing the most "green time" for the northbound evacuation travel should be activated.

- If possible, arrangements should be made with tow truck operators so that they are pre-positioned along key travel corridors and critical roadway facilities such as bridges.

- All draw/swing bridges needed for evacuation should be locked in the "down" position before the arrival of hazardous conditions, if possible; Boat owners must be made aware of flotilla plans and time requirements for securing vessels.

- The state and counties should jointly work on a statewide evacuation and shelter monitoring system which would monitor travel flow at key locations, report traffic tie-ups and shelter and hotel availability to the general public as they evacuate.

- High level bridges must be monitored for early wind vulnerability as sustained tropical storm winds will arrive earlier on these structures than at ground level; Trucks, RV's and other high profile vehicles will be especially vulnerable to these conditions.

- All evacuations that would need to utilize the ferries should be completed prior to the arrival of sustained tropical storm winds (39 mph).

Roadway measures can be classified into three groups:

Structural Improvements, including lane widening, designed to increase roadway capacity.

Maintenance of Traffic, including signage, designed to improve the maximum Level of Service D hourly service volume.

Operational Intervention, including implementing traffic diversions or executing a contraflow plan, which will improve service volumes on specific facilities or route traffic along less utilized facilities.

Baldwin County provided a more detailed list of scheduled projects, ALDOT programmed projects, and future county project requests for inclusion in this analysis. Projects from the Baldwin County Transportation Plan include the following:

1. Extend and improve County Road 83 from the current end of the Foley Beach Expressway to I-10. The roadway should be constructed as a four-lane median divided cross-section (Foley Beach Expressway Extension).
2. Connect County Road 13 between Alabama Highway 104 and Corte Road. This roadway should be a two-lane cross section.
3. Construct a two-lane roadway from 1-10 to 1-65. (ALDOT)
4. Construct a two-lane frontage road along the north side of 1-10 from U.S. Highway 98 to Alabama Highway 181.
5. Construct a three lane roadway and bridge from Alabama Highway 161 to Interstate 10. This project will include the improvement and extension of County Road 95 and County Road 87.
6. Correct the County Road 55 off-set at its intersection with County Road 32.
7. Extend and improve County Road 65 from County Road 32 to County Road 48. The roadway should be constructed as a two-lane cross-section.
8. Widen County Road 8 to three-lanes from Alabama Highway 59 to Foley Beach Expressway.
9. Extend and improve County Road 65 from County Road 24 to County Road 32. The roadway should be constructed to a two-lane cross-section.
10. Extend Johnson Road from its current end to County Road 13.
11. Extend Jimmy Faulkner Drive from Bromley Road to CR 39 and improve CR 39 from Alabama 59 to Alabama 225, and Intersection Improvements at Alabama 225. The roadway should be constructed to a two-lane cross-section.
12. Extend County Road 20 from its current end to County Road 65. The roadway should be constructed to a three-lane cross section.
13. Widen County Road 4 from the end of the current three-lane section to the Foley Beach Expressway. The roadway should be constructed as a three-lane cross-section.
14. Widen and extend County Road 24 from its current end to the Foley Beach Expressway. The roadway should be constructed to a three-lane cross-section
15. Widen County Road 32 to three lanes from Alabama Highway 59 to Scenic 98.
16. Widen County Road 64 to three lanes from Alabama Highway 59 to Alabama Highway 181.

17. Widen County Road 32 to three lanes from County Road 95 to Alabama Highway 59.
18. Extend Jimmy Faulkner Drive from CR 39 to U.S. Highway 31/Alabama 59.
19. Widen County Road 20 to a three-lane cross section from South Hickory Street to Alabama 59 and from Foley Beach Express to CR 83. To connect existing five lane section of CR 20 from Alabama 59 to Foley Beach Express.
20. Extend and improve C.C. Road from U.S. Highway 98 to U.S. Highway 90. The roadway should be constructed as a three lane cross-section.
21. Widen and improve County Road 64 from I-10 to County Road 112. This roadway should be constructed to a standard two-lane cross-section
22. Widen County Road 87 to a three-lane cross-section from U.S. Highway 98 to U.S. Highway 90.
23. Realign and improve Barraneau Park Road to a standard two lane cross-section from the Florida State Line to County Road 112.
24. Improve Woerner Road to a standard two-lane cross-section from the Foley Beach Express to County Road 87.
25. Extend Sibley Creek Road to connect with D'Olive Road. The roadway should be constructed to a two-lane cross section.
26. Extend Buzbee Road from its current end to Alabama Highway 225. The roadway should be constructed to a standard two-lane cross-section.
27. Widen County Road 64 to three lanes from Alabama Highway 59 to 1-10.
28. Construct a two-lane roadway from U.S. Highway 31 to Truck Route 17.
29. Widen and Improve Truck Route 17 to a standard two-lane cross-section from Alabama Highway 59 to Project #27.

The ALDOT projects identified for the area include the following:

1. Widen AL 181 to a four-lane (with median) cross-section from I-10 to US-98.
2. Construct an interchange at I-10 and CR-83.
3. Construct an interchange at 1-10 and CR-13.
4. Construct an interchange at 1-65 and Project 3.
5. Widen AL 180 to a five-lane cross-section from AL 59 to AL 161.
6. Widen U.S. Highway 31 to a four-lane median divided cross-section from the existing four-lane in Spanish Fort to AL 59.
7. Construct an interchange at I-10 and CR-87.

In addition to these programmed efforts, Baldwin County identified the following additional future request projects:

1. Widen U.S. Highway 98 to a 4 lane cross section from Foley to Lillian.
2. Widen U.S. Highway 59 to a 4 lane cross section from AL 287 to Interstate 65.
3. Extend the Foley Beach Express from AL 180 to AL 182.

4. Widen U.S. Highway 90 to a 4 lane cross section from U.S. Highway 98 to AL 181.
5. Relocate (2 blocks north) AL 182 in Gulf Shores from U.S. Highway 59 to approximately one (1) mile east.

Specific traffic control measures and roadway modifications may help alleviate anticipated congestion in these areas.

For Mobile County, the determining bottleneck for estimating the county clearance time is along I-10 eastbound into Baldwin County (on the eastern side of the Bayway bridge). While there is not much that can be done structurally at this bottleneck, short of a major bay-wide widening of the I-10 bridge, this bottleneck should be closely monitored. Traffic may be diverted northward from the I-10 corridor onto US 98, US 45 or US 43. This would relieve congestion on I-10 without increasing the volume of evacuating traffic on I-65.

For Baldwin County, the determining bottleneck for estimating the county clearance time is along Ala 59 through Loxley, Alabama. Significant effort has gone into structural improvements along Ala 59. As a result of these improvements, the governing bottleneck along Ala 59 has been moved northward from Foley to Loxley. Continued improvements along Ala 59 that would result in enhanced service volumes through Bay Minette would allow for traffic to be diverted along I-10 east or westbound, reducing traffic on Ala 59 north of I-10. This would also reduce worst case clearance times by providing an alternate outroute and reducing the number of vehicles using I-65.

For both counties, with the addition of interstate traffic in a worst case scenario, the determining bottleneck for estimating the clearance time for both counties is along I-65 at US 113 Escambia County, Alabama. Potential structural improvement along I-65 may reduce clearance times somewhat, but contraflow appears to be the best time saving measure. Contraflow in combination with aggressive traffic monitoring and possible re-routing of eastbound out of state traffic off of the I-65 corridor onto US 98, US 45 or US 43, would further reduce clearance times. As illustrated in this analysis, the evacuation transportation modeling process incorporates a host of socioeconomic, behavioral and physical roadway characteristics. The model developed to generate the clearance times published in this study may be manipulated to test alternative service volumes at specific bottlenecks. This would provide a general assessment of the impact that improvements along the segments of the regional evacuation route would have on clearance times. The model would be able to represent alternate impacts based on the timing (season) of the roadwork, as well as other factors, including increased construction-related background traffic at specific locations.

Appendix

Clearance Times

Alabama Clearance Times Summary Table

FINAL Analysis
June 7, 2010

	Critical Roadway Segment		Cat 1				Cat 2				Cat 3				Cat 4				Cat 5			
			Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max	Low	Med	High	Max
Baldwin	**Ala 59 thru Loxley**	IMMEDIATE	10	13	16	17	15	18	22	24	15	19	23	24	22	26	29	31	22	26	29	31
		RAPID	10	13	16	17	15	18	22	24	15	19	23	24	22	26	29	31	22	26	29	31
	Includes Mobile thru-traffic	MED	12	16	18	20	17	21	24	26	18	22	25	27	25	29	32	34	25	29	32	34
	No Interstate impacts	SLOW	15	18	21	22	20	23	27	29	20	24	28	29	27	31	34	36	27	31	34	36
		IMMEDIATE	15	15	15	15	15	15	15	15	17	18	18	18	20	20	20	20	20	20	20	20
Mobile	**I-10 eb to Baldwin Co.**	RAPID	15	15	15	15	15	15	15	15	17	18	18	18	20	20	20	20	20	20	20	20
	Includes Baldwin thru-traffic	MED	18	18	18	18	18	18	18	18	20	20	21	21	22	23	23	23	22	23	23	23
	No Interstate impacts	SLOW	20	20	20	20	20	20	20	20	22	23	23	23	25	25	25	25	25	25	25	25
		IMMEDIATE	15	17	19	20	21	23	26	27	25	27	30	31	34	37	39	40	36	38	41	42
Additional State	**I-65 eb with FL w I-10 EB**	RAPID	15	17	19	20	21	23	26	27	25	27	30	31	34	37	39	40	36	38	41	42
	(worst case)	MED	18	20	22	23	24	26	28	29	28	30	32	33	37	39	42	43	38	41	43	44
	Includes LA, MS (EB) and FL (WB)	SLOW	20	22	24	25	26	28	31	32	30	32	35	36	39	42	44	45	41	43	46	47
		IMMEDIATE	15	17	19	20	21	23	25	26	24	26	29	30	33	35	37	39	34	36	39	40
	I-65 eb with FL	RAPID	15	17	19	20	21	23	25	26	24	26	29	30	33	35	37	39	34	36	39	40
	(w/o I-10 EB)	MED	18	19	21	22	23	25	28	29	27	29	31	33	35	37	40	41	37	39	41	43
	Includes only FL (WB), no LA or MS (EB)	SLOW	20	22	24	25	26	28	30	31	29	31	34	35	38	40	42	44	39	41	44	45
Contraflow	**I-65 eb with FL w I-10 EB**	IMMEDIATE	15	15	16	17	15	18	22	24	17	19	23	24	22	26	29	31	23	26	29	31
		RAPID	15	15	16	17	15	18	22	24	17	19	23	24	22	26	29	31	23	26	29	31
	Includes LA, MS (EB) and FL (WB)	MED	18	18	18	20	18	21	24	26	20	22	25	27	25	29	32	34	26	29	32	34
		SLOW	20	20	21	22	20	23	27	29	22	24	28	29	27	31	34	36	28	31	34	36

Note: Contraflow benefits on I-65 will not generate clearance times lower than the highest time at the county critical roadway segment for Baldwin or Mobile

Coastal Alabama Clearance Times

Hurrevac Update Summary

June 7, 2010

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	13	16	17
Rapid	10	13	16	17
Medium	12	16	18	20
Slow	15	18	21	22
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	17	21	24	26
Slow	20	23	27	29
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	19	23	24
Rapid	15	19	23	24
Medium	18	22	25	27
Slow	20	24	28	29
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36

Includes Mobile thru-traffic
No Interstate impacts

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	33	35	37	39
Rapid	33	35	37	39
Medium	35	37	40	41
Slow	38	40	42	44
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Includes Mobile thru-traffic
Includes only FL (WB), no LA or MS (EB)

WORST CASE SCENARIO

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Includes Mobile thru-traffic
Includes LA, MS (EB) and FL (WB)

I-65 CONTRAFLOW ANALYSIS

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Contraflow benefits on I-65 will not generate clearance times lower than the highest time at the county critical roadway segment for Baldwin or Mobile County

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	16	17	18	18
Rapid	16	17	18	18
Medium	16	17	18	18
Slow	17	18	19	19
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	19	19
Rapid	17	18	19	19
Medium	17	18	20	20
Slow	18	19	20	20
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	21	21
Slow	20	21	22	22

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	13	16	17
Rapid	10	13	16	17
Medium	12	16	18	20
Slow	15	18	21	22
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	17	21	24	26
Slow	20	23	27	29
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	19	23	24
Rapid	15	19	23	24
Medium	18	22	25	27
Slow	20	24	28	29
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	4	7	9
Rapid	1	4	7	9
Medium	3	6	9	11
Slow	4	7	10	12
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	10	13	15
Rapid	6	10	13	15
Medium	8	12	15	17
Slow	9	13	16	18
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	0	2	5	7
Rapid	0	2	5	7
Medium	2	5	7	9
Slow	4	6	9	11
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	8	10	12
Rapid	5	8	10	12
Medium	8	10	13	15
Slow	9	12	14	16
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	3	6	9	11
Rapid	3	6	9	11
Medium	6	9	11	13
Slow	7	10	13	15

Clearance Time Comparisons - Percent

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12%	52%	85%	105%
Rapid	12%	52%	85%	105%
Medium	32%	68%	99%	117%
Slow	38%	71%	98%	114%
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	71%	117%	155%	178%
Rapid	71%	117%	155%	178%
Medium	85%	127%	162%	183%
Slow	86%	123%	154%	173%
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	0%	15%	27%	38%
Rapid	0%	15%	27%	38%
Medium	13%	29%	40%	51%
Slow	21%	36%	46%	57%
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	32%	46%	55%	65%
Rapid	32%	46%	55%	65%
Medium	44%	57%	65%	75%
Slow	53%	65%	72%	82%
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	18%	32%	41%	51%
Rapid	18%	32%	41%	51%
Medium	31%	43%	51%	60%
Slow	37%	50%	58%	67%

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	39	41	43	45
Slow	41	43	46	47
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	7	8	9	10
Rapid	7	8	9	10
Medium	9	10	11	12
Slow	10	12	13	14
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	14	16	17
Rapid	13	14	16	17
Medium	15	16	18	19
Slow	16	17	19	20
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	6	7	9
Rapid	5	6	7	9
Medium	7	8	10	11
Slow	9	10	12	13
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	14	14	15	17
Rapid	14	14	15	17
Medium	16	16	18	19
Slow	18	19	20	21
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	14	15
Slow	14	15	16	17

Clearance Time Comparisons - Percent

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	91%	94%	98%	108%
Rapid	91%	94%	98%	108%
Medium	111%	112%	115%	124%
Slow	110%	113%	117%	125%
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	164%	163%	165%	176%
Rapid	164%	163%	165%	176%
Medium	180%	177%	178%	189%
Slow	169%	170%	174%	184%
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	28%	31%	35%	40%
Rapid	28%	31%	35%	40%
Medium	38%	42%	46%	51%
Slow	47%	50%	54%	59%
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	61%	60%	61%	66%
Rapid	61%	60%	61%	66%
Medium	69%	67%	70%	75%
Slow	76%	78%	76%	80%
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	40%	41%	44%	48%
Rapid	40%	41%	44%	48%
Medium	48%	49%	52%	56%
Slow	54%	55%	58%	62%

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	11
Rapid	8	9	10	11
Medium	10	11	12	13
Slow	11	12	13	14
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	15	16	17
Rapid	13	15	16	17
Medium	15	17	18	19
Slow	17	18	20	21
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	8	10
Rapid	6	7	8	10
Medium	8	9	11	12
Slow	10	11	13	14
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	13	14	15
Rapid	12	13	14	15
Medium	14	15	16	18
Slow	16	17	18	19
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	11	12	14	15
Rapid	11	12	14	15
Medium	14	15	16	17
Slow	15	16	18	19

Clearance Time Comparisons - Percent

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	97%	100%	105%	114%
Rapid	97%	100%	105%	114%
Medium	117%	117%	121%	130%
Slow	115%	117%	122%	131%
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	170%	168%	171%	183%
Rapid	170%	168%	171%	183%
Medium	185%	182%	184%	195%
Slow	174%	175%	180%	189%
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	32%	35%	40%	45%
Rapid	32%	35%	40%	45%
Medium	43%	46%	51%	56%
Slow	51%	54%	58%	63%
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	54%	54%	55%	60%
Rapid	54%	54%	55%	60%
Medium	62%	61%	64%	69%
Slow	69%	71%	70%	75%
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	47%	48%	51%	55%
Rapid	47%	48%	51%	55%
Medium	55%	56%	59%	63%
Slow	61%	62%	64%	68%

I-65 CONTRAFLOW ANALYSIS

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

I-65 Contraflow Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Clearance Time Improvements - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	2	4	3
Rapid	1	2	4	3
Medium	0	2	4	3
Slow	1	2	4	3
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	5	4	3
Rapid	6	5	4	3
Medium	6	5	4	3
Slow	6	5	4	3
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	8	7	6
Rapid	8	8	7	6
Medium	7	8	7	6
Slow	8	8	7	6
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	10	10	9
Rapid	12	10	10	9
Medium	12	10	10	9
Slow	12	10	10	9
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	12	11	10
Rapid	13	12	11	10
Medium	13	12	11	10
Slow	13	12	11	10

Clearance Time Improvements - Percentage

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	4%	13%	19%	14%
Rapid	4%	13%	19%	14%
Medium	2%	10%	16%	12%
Slow	3%	10%	15%	11%
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	29%	21%	16%	12%
Rapid	29%	21%	16%	12%
Medium	25%	18%	14%	11%
Slow	23%	17%	13%	10%
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	31%	29%	24%	21%
Rapid	31%	29%	24%	21%
Medium	27%	26%	22%	19%
Slow	25%	24%	21%	18%
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36%	29%	25%	22%
Rapid	36%	29%	25%	22%
Medium	33%	26%	23%	21%
Slow	31%	25%	22%	20%
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36%	31%	28%	25%
Rapid	36%	31%	28%	25%
Medium	33%	29%	26%	23%
Slow	31%	28%	25%	22%

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	16	17	18	18
Rapid	16	17	18	18
Medium	16	17	18	18
Slow	17	18	19	19
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	19	19
Rapid	17	18	19	19
Medium	17	18	20	20
Slow	18	19	20	20
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	21	21
Slow	20	21	22	22

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	13	16	17
Rapid	10	13	16	17
Medium	12	16	18	20
Slow	15	18	21	22
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	17	21	24	26
Slow	20	23	27	29
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	19	23	24
Rapid	15	19	23	24
Medium	18	22	25	27
Slow	20	24	28	29
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Baldwin County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	4	7	9
Rapid	1	4	7	9
Medium	3	6	9	11
Slow	4	7	10	12
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	10	13	15
Rapid	6	10	13	15
Medium	8	12	15	17
Slow	9	13	16	18
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	0	2	5	7
Rapid	0	2	5	7
Medium	2	5	7	9
Slow	4	6	9	11
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	8	10	12
Rapid	5	8	10	12
Medium	8	10	13	15
Slow	9	12	14	16
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	3	6	9	11
Rapid	3	6	9	11
Medium	6	9	11	13
Slow	7	10	13	15

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	39	41	43	45
Slow	41	43	46	47
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	7	8	9	10
Rapid	7	8	9	10
Medium	9	10	11	12
Slow	10	12	13	14
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	14	16	17
Rapid	13	14	16	17
Medium	15	16	18	19
Slow	16	17	19	20
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	6	7	9
Rapid	5	6	7	9
Medium	7	8	10	11
Slow	9	10	12	13
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	14	14	15	17
Rapid	14	14	15	17
Medium	16	16	18	19
Slow	18	19	20	21
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	14	15
Slow	14	15	16	17

Base Year Study Clearance Times as reflected in Hurrevac

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Clearance Time Comparisons - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	11
Rapid	8	9	10	11
Medium	10	11	12	13
Slow	11	12	13	14
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	15	16	17
Rapid	13	15	16	17
Medium	15	17	18	19
Slow	17	18	20	21
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	8	10
Rapid	6	7	8	10
Medium	8	9	11	12
Slow	10	11	13	14
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	13	14	15
Rapid	12	13	14	15
Medium	14	15	16	18
Slow	16	17	18	19
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	11	12	14	15
Rapid	11	12	14	15
Medium	14	15	16	17
Slow	15	16	18	19

I-65 CONTRAFLOW ANALYSIS

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

I-65 Contraflow Clearance Times

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Clearance Time Improvements - Hours

COUNTY:	Baldwin, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	2	4	3
Rapid	1	2	4	3
Medium	0	2	4	3
Slow	1	2	4	3
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	5	4	3
Rapid	6	5	4	3
Medium	6	5	4	3
Slow	6	5	4	3
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	8	7	6
Rapid	8	8	7	6
Medium	7	8	7	6
Slow	8	8	7	6
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	10	10	9
Rapid	12	10	10	9
Medium	12	10	10	9
Slow	12	10	10	9
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	12	11	10
Rapid	13	12	11	10
Medium	13	12	11	10
Slow	13	12	11	10

Coastal Alabama Clearance Times

Hurrevac Update Summary

June 7, 2010

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	18	18
Rapid	17	18	18	18
Medium	20	20	21	21
Slow	22	23	23	23
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25

Includes Baldwin thru-traffic
No Interstate impacts

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	33	35	37	39
Rapid	33	35	37	39
Medium	35	37	40	41
Slow	38	40	42	44
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Includes Baldwin thru-traffic
Includes only FL (WB), no LA or MS (EB)

WORST CASE SCENARIO

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Includes Baldwin thru-traffic
Includes LA, MS (EB) and FL (WB)

I-65 CONTRAFLOW ANALYSIS

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Contraflow benefits on I-65 will not generate clearance times lower than the highest time at the county critical roadway segment for Baldwin or Mobile County

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	16	17	18	18
Rapid	16	17	18	18
Medium	16	17	18	18
Slow	17	18	19	19
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	19	19
Rapid	17	18	19	19
Medium	17	18	20	20
Slow	18	19	20	20
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	21	21
Slow	20	21	22	22

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
Category of Storm:			**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
Category of Storm:			**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	18	18
Rapid	17	18	18	18
Medium	20	20	21	21
Slow	22	23	23	23
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
Category of Storm:			**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	7	7
Rapid	6	7	7	7
Medium	8	9	9	9
Slow	9	10	10	10
Category of Storm:			**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	7	7
Rapid	6	7	7	7
Medium	9	9	9	9
Slow	9	10	10	10
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	1	0	0
Rapid	1	1	0	0
Medium	4	3	3	3
Slow	5	5	4	4
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	3	2	1	1
Rapid	3	2	1	1
Medium	5	4	3	3
Slow	7	6	5	5
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	0	0	0
Rapid	1	0	0	0
Medium	3	3	2	2
Slow	5	4	3	3

Clearance Time Comparisons - Percentage

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
Category of Storm:			**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	75%	77%	80%	81%
Rapid	75%	77%	80%	81%
Medium	91%	93%	95%	96%
Slow	89%	91%	93%	94%
Category of Storm:			**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	76%	79%	81%	82%
Rapid	76%	79%	81%	82%
Medium	92%	94%	96%	97%
Slow	90%	92%	94%	95%
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9%	4%	0%	0%
Rapid	9%	4%	0%	0%
Medium	26%	20%	15%	15%
Slow	33%	27%	21%	22%
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	16%	11%	5%	6%
Rapid	16%	11%	5%	6%
Medium	30%	23%	17%	18%
Slow	38%	31%	25%	26%
Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	4%	0%	0%	0%
Rapid	4%	0%	0%	0%
Medium	18%	13%	7%	8%
Slow	24%	19%	15%	15%

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	33	35	37	39
Rapid	33	35	37	39
Medium	35	37	40	41
Slow	38	40	42	44
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	7	8	9	10
Rapid	7	8	9	10
Medium	9	10	11	12
Slow	10	12	13	14
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	14	16	17
Rapid	13	14	16	17
Medium	15	16	18	19
Slow	16	17	19	20
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	6	7	9
Rapid	5	6	7	9
Medium	7	8	10	11
Slow	9	10	12	13
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	15	16
Slow	14	16	16	18
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	14	15
Slow	14	15	16	17

Clearance Time Comparisons - Percentage

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	91%	94%	98%	108%
Rapid	91%	94%	98%	108%
Medium	111%	112%	115%	124%
Slow	110%	113%	117%	125%
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	164%	163%	165%	176%
Rapid	164%	163%	165%	176%
Medium	180%	177%	178%	189%
Slow	169%	170%	174%	184%
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	28%	31%	35%	40%
Rapid	28%	31%	35%	40%
Medium	38%	42%	46%	51%
Slow	47%	50%	54%	59%
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	46%	46%	48%	52%
Rapid	46%	46%	48%	52%
Medium	54%	53%	57%	61%
Slow	61%	64%	63%	67%
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	40%	41%	44%	48%
Rapid	40%	41%	44%	48%
Medium	48%	49%	52%	56%
Slow	54%	55%	58%	62%

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:			**1**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:			**2**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:			**3**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:			**4**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:			**5**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**Mobile (1 & 2), Baldwin (1)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:			**Mobile (1 & 2), Baldwin (2)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**Mobile (1 & 2), Baldwin (1)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	11
Rapid	8	9	10	11
Medium	10	11	12	13
Slow	11	12	13	14
	Category of Storm:			**Mobile (1 & 2), Baldwin (2)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	15	16	17
Rapid	13	15	16	17
Medium	15	17	18	19
Slow	17	18	20	21
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	8	10
Rapid	6	7	8	10
Medium	8	9	11	12
Slow	10	11	13	14
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	13	14	15
Rapid	12	13	14	15
Medium	14	15	16	18
Slow	16	17	18	19
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	11	12	14	15
Rapid	11	12	14	15
Medium	14	15	16	17
Slow	15	16	18	19

Clearance Time Comparisons - Percentage

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:			**Mobile (1 & 2), Baldwin (1)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	97%	100%	105%	114%
Rapid	97%	100%	105%	114%
Medium	117%	117%	121%	130%
Slow	115%	117%	122%	131%
	Category of Storm:			**Mobile (1 & 2), Baldwin (2)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	170%	168%	171%	183%
Rapid	170%	168%	171%	183%
Medium	185%	182%	184%	195%
Slow	174%	175%	180%	189%
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (3)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	32%	35%	40%	45%
Rapid	32%	35%	40%	45%
Medium	43%	46%	51%	56%
Slow	51%	54%	58%	63%
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (4)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	54%	54%	55%	60%
Rapid	54%	54%	55%	60%
Medium	62%	61%	64%	69%
Slow	69%	71%	70%	75%
	Category of Storm:			**Mobile (3, 4 & 5), Baldwin (5)**
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	47%	48%	51%	55%
Rapid	47%	48%	51%	55%
Medium	55%	56%	59%	63%
Slow	61%	62%	64%	68%

I-65 CONTRAFLOW ANALYSIS

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

I-65 Contraflow Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Clearance Time Improvements - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	2	4	3
Rapid	1	2	4	3
Medium	0	2	4	3
Slow	1	2	4	3
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	5	4	3
Rapid	6	5	4	3
Medium	6	5	4	3
Slow	6	5	4	3
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	8	7	6
Rapid	8	8	7	6
Medium	7	8	7	6
Slow	8	8	7	6
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	10	10	9
Rapid	12	10	10	9
Medium	12	10	10	9
Slow	12	10	10	9
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	12	11	10
Rapid	13	12	11	10
Medium	13	12	11	10
Slow	13	12	11	10

Clearance Time Improvements - Percentage

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	4%	13%	19%	14%
Rapid	4%	13%	19%	14%
Medium	2%	10%	16%	12%
Slow	3%	10%	15%	11%
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	29%	21%	16%	12%
Rapid	29%	21%	16%	12%
Medium	25%	18%	14%	11%
Slow	23%	17%	13%	10%
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	31%	29%	24%	21%
Rapid	31%	29%	24%	21%
Medium	27%	26%	22%	19%
Slow	25%	24%	21%	18%
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36%	29%	25%	22%
Rapid	36%	29%	25%	22%
Medium	33%	26%	23%	21%
Slow	31%	25%	22%	20%
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36%	31%	28%	25%
Rapid	36%	31%	28%	25%
Medium	33%	29%	26%	23%
Slow	31%	28%	25%	22%

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	9	9	9	9
Rapid	9	9	9	9
Medium	9	9	9	9
Slow	11	11	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	16	17	18	18
Rapid	16	17	18	18
Medium	16	17	18	18
Slow	17	18	19	19
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	19	19
Rapid	17	18	19	19
Medium	17	18	20	20
Slow	18	19	20	20
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	21	21
Slow	20	21	22	22

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	15	15
Rapid	15	15	15	15
Medium	18	18	18	18
Slow	20	20	20	20
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	18	18	18
Rapid	17	18	18	18
Medium	20	20	21	21
Slow	22	23	23	23
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	20	20	20	20
Rapid	20	20	20	20
Medium	22	23	23	23
Slow	25	25	25	25

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile County			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	7	7
Rapid	6	7	7	7
Medium	8	9	9	9
Slow	9	10	10	10
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	7	7
Rapid	6	7	7	7
Medium	9	9	9	9
Slow	9	10	10	10
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	1	0	0
Rapid	1	1	0	0
Medium	4	3	3	3
Slow	5	5	4	4
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	3	2	1	1
Rapid	3	2	1	1
Medium	5	4	3	3
Slow	7	6	5	5
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	0	0	0
Rapid	1	0	0	0
Medium	3	3	2	2
Slow	5	4	3	3

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	19	21	22
Slow	20	22	24	25
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	25	26
Rapid	21	23	25	26
Medium	23	25	28	29
Slow	26	28	30	31
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	29	30
Rapid	24	26	29	30
Medium	27	29	31	33
Slow	29	31	34	35
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	33	35	37	39
Rapid	33	35	37	39
Medium	35	37	40	41
Slow	38	40	42	44
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	36	39	40
Rapid	34	36	39	40
Medium	37	39	41	43
Slow	39	41	44	45

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 (no I-10)			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	7	8	9	10
Rapid	7	8	9	10
Medium	9	10	11	12
Slow	10	12	13	14
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	14	16	17
Rapid	13	14	16	17
Medium	15	16	18	19
Slow	16	17	19	20
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	5	6	7	9
Rapid	5	6	7	9
Medium	7	8	10	11
Slow	9	10	12	13
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	15	16
Slow	14	16	16	18
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	10	11	12	13
Rapid	10	11	12	13
Medium	12	13	14	15
Slow	14	15	16	17

2009 Clearance Times as reflected in Hurrevac

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65			
	Category of Storm:		**1**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**2**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	10
Rapid	8	9	10	10
Medium	8	9	10	10
Slow	10	10	11	11
	Category of Storm:		**3**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	19	20	21	21
Rapid	19	20	21	21
Medium	19	20	22	22
Slow	20	21	22	22
	Category of Storm:		**4**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	24	25	25
Rapid	22	24	25	25
Medium	23	24	26	26
Slow	23	24	26	26
	Category of Storm:		**5**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	24	26	27	27
Rapid	24	26	27	27
Medium	25	26	27	27
Slow	25	27	28	28

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

Clearance Time Comparisons - Hours

COUNTY:	Mobile, AL			
SCENARIO:	Mobile / Baldwin & NW FL I-65 w I-10 EB			
	Category of Storm:		**Mobile (1 & 2), Baldwin (1)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	9	10	11
Rapid	8	9	10	11
Medium	10	11	12	13
Slow	11	12	13	14
	Category of Storm:		**Mobile (1 & 2), Baldwin (2)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	15	16	17
Rapid	13	15	16	17
Medium	15	17	18	19
Slow	17	18	20	21
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (3)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	7	8	10
Rapid	6	7	8	10
Medium	8	9	11	12
Slow	10	11	13	14
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (4)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	13	14	15
Rapid	12	13	14	15
Medium	14	15	16	18
Slow	16	17	18	19
	Category of Storm:		**Mobile (3, 4 & 5), Baldwin (5)**	
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	11	12	14	15
Rapid	11	12	14	15
Medium	14	15	16	17
Slow	15	16	18	19

I-65 CONTRAFLOW ANALYSIS

New 2010 Coastal Alabama Study Clearance Times

COUNTY:	**Mobile, AL**			
SCENARIO:	**Mobile / Baldwin & NW FL I-65 w I-10 EB**			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	17	19	20
Rapid	15	17	19	20
Medium	18	20	22	23
Slow	20	22	24	25
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	21	23	26	27
Rapid	21	23	26	27
Medium	24	26	28	29
Slow	26	28	31	32
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	25	27	30	31
Rapid	25	27	30	31
Medium	28	30	32	33
Slow	30	32	35	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	34	37	39	40
Rapid	34	37	39	40
Medium	37	39	42	43
Slow	39	42	44	45
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	36	38	41	42
Rapid	36	38	41	42
Medium	38	41	43	44
Slow	41	43	46	47

I-65 Contraflow Clearance Times

COUNTY:	**Mobile, AL**			
SCENARIO:	**Mobile / Baldwin & NW FL I-65 w I-10 EB**			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	15	16	17
Rapid	15	15	16	17
Medium	18	18	18	20
Slow	20	20	21	22
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	15	18	22	24
Rapid	15	18	22	24
Medium	18	21	24	26
Slow	20	23	27	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	17	19	23	24
Rapid	17	19	23	24
Medium	20	22	25	27
Slow	22	24	28	29
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	22	26	29	31
Rapid	22	26	29	31
Medium	25	29	32	34
Slow	27	31	34	36
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	23	26	29	31
Rapid	23	26	29	31
Medium	26	29	32	34
Slow	28	31	34	36

Clearance Time Improvements - Hours

COUNTY:	**Mobile, AL**			
SCENARIO:	**Mobile / Baldwin & NW FL I-65 w I-10 EB**			
Category of Storm:	**Mobile (1 & 2), Baldwin (1)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	1	2	4	3
Rapid	1	2	4	3
Medium	0	2	4	3
Slow	1	2	4	3
Category of Storm:	**Mobile (1 & 2), Baldwin (2)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	6	5	4	3
Rapid	6	5	4	3
Medium	6	5	4	3
Slow	6	5	4	3
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (3)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	8	8	7	6
Rapid	8	8	7	6
Medium	7	8	7	6
Slow	8	8	7	6
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (4)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	12	10	10	9
Rapid	12	10	10	9
Medium	12	10	10	9
Slow	12	10	10	9
Category of Storm:	**Mobile (3, 4 & 5), Baldwin (5)**			
	OCCUPANCY			
	Low	Med	High	Worst
RESPONSE				
Immediate	13	12	11	10
Rapid	13	12	11	10
Medium	13	12	11	10
Slow	13	12	11	10