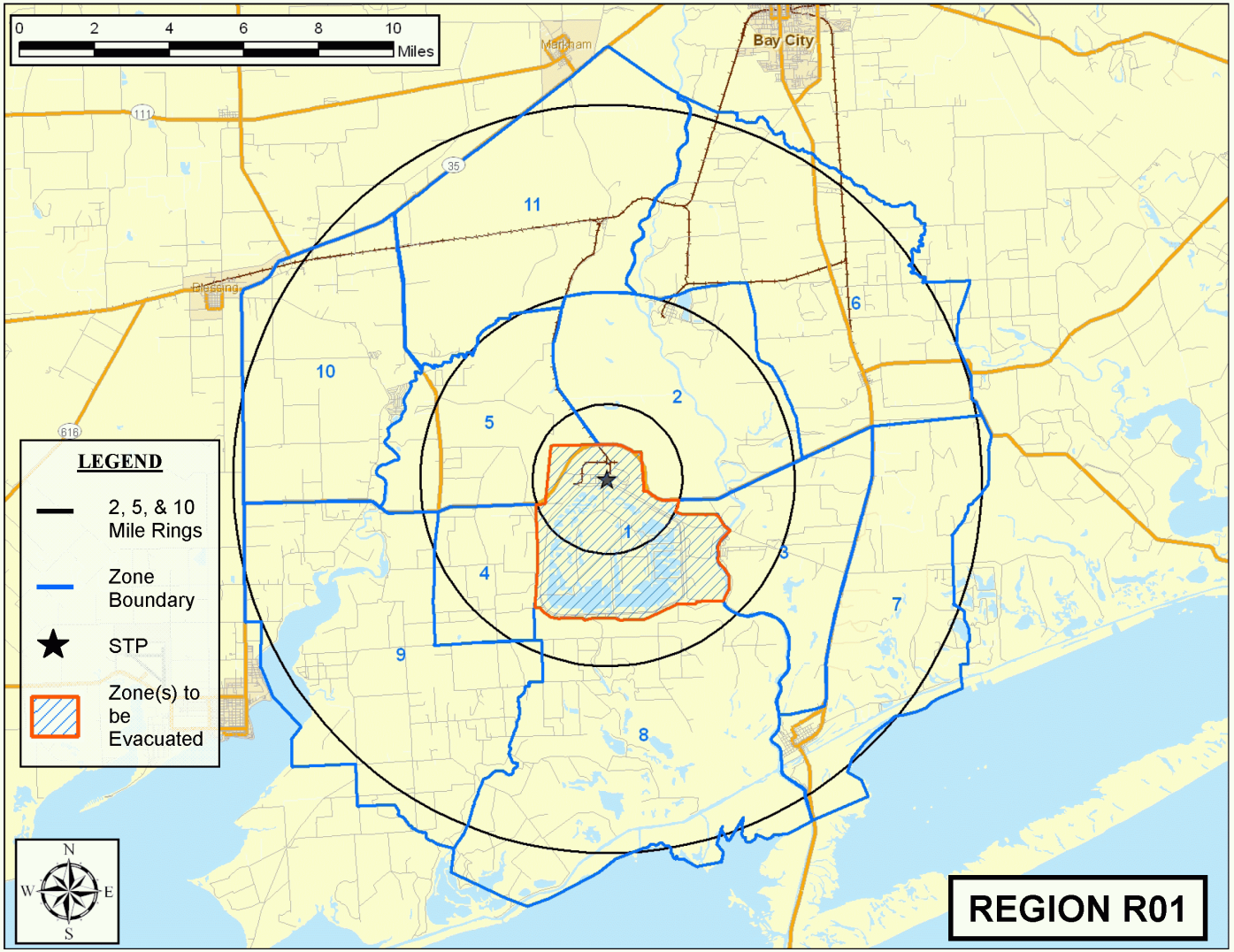
APPENDIX H

Evacuation Region Maps

APPENDIX H: EVACUATION REGION MAPS

This appendix presents maps of all Evacuation Regions.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Markham
Bay City
Blessing
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35
616
11
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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E
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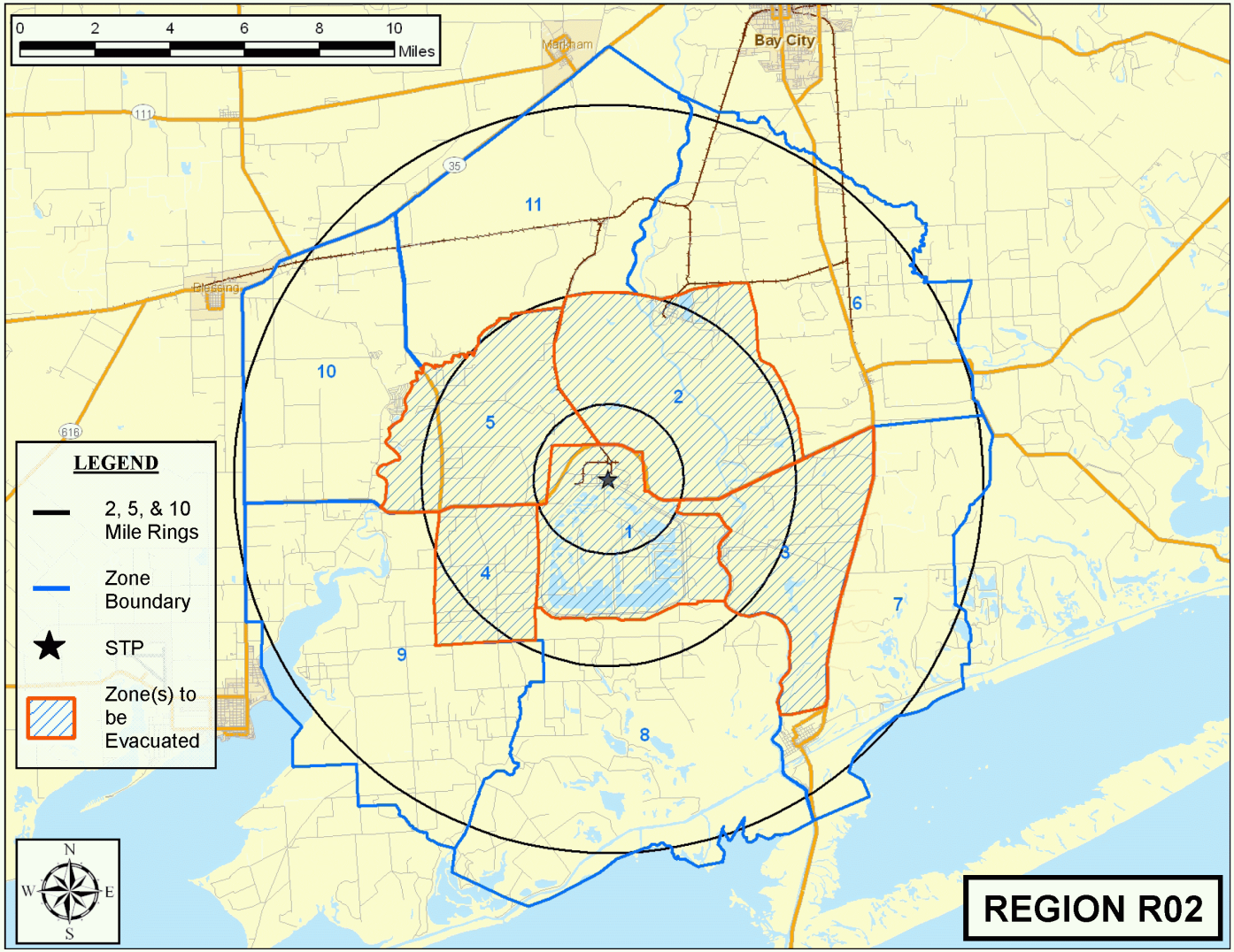
REGION R01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Zone(s) to be Evacuated
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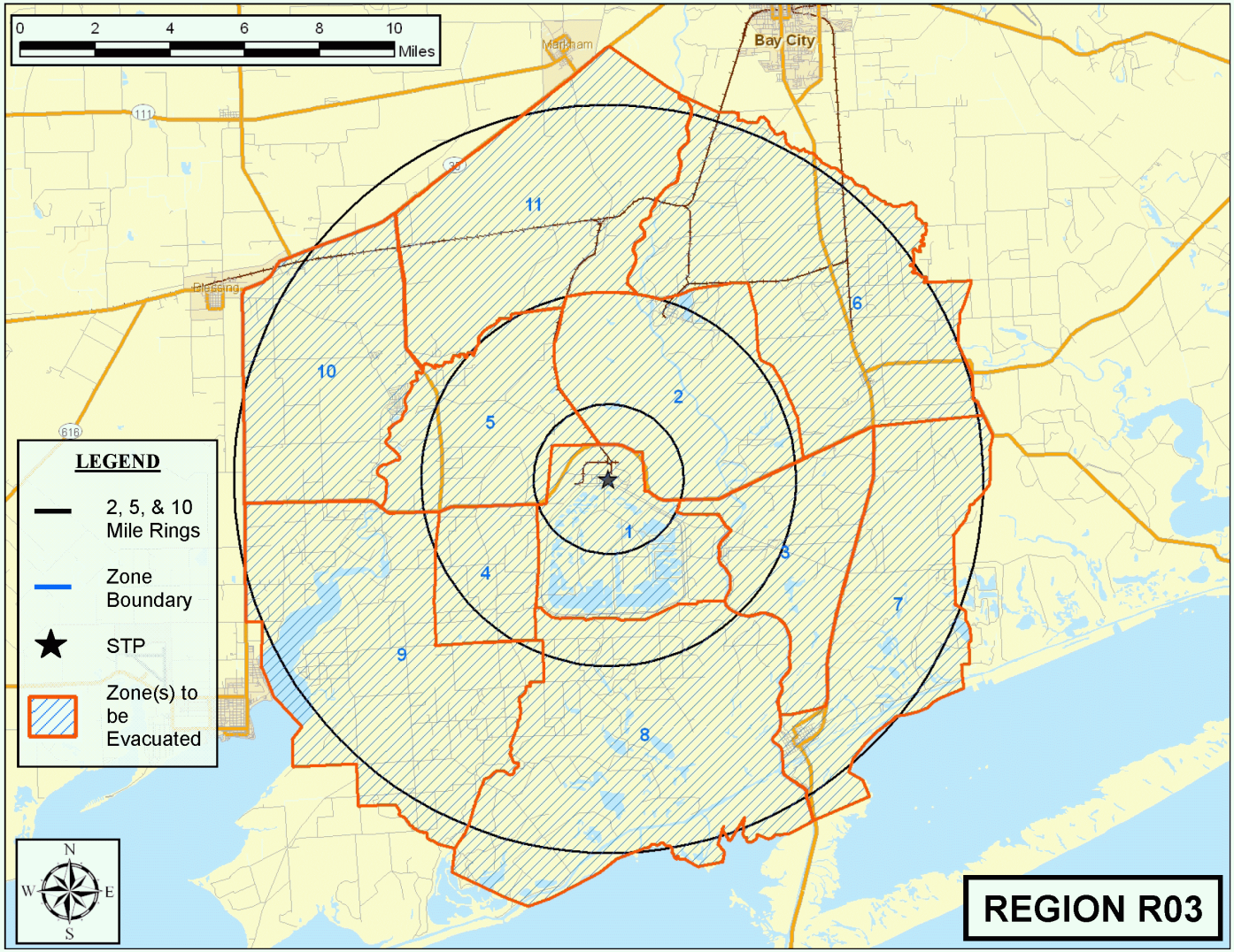
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2, 5, & 10 Mile Rings
Zone Boundary
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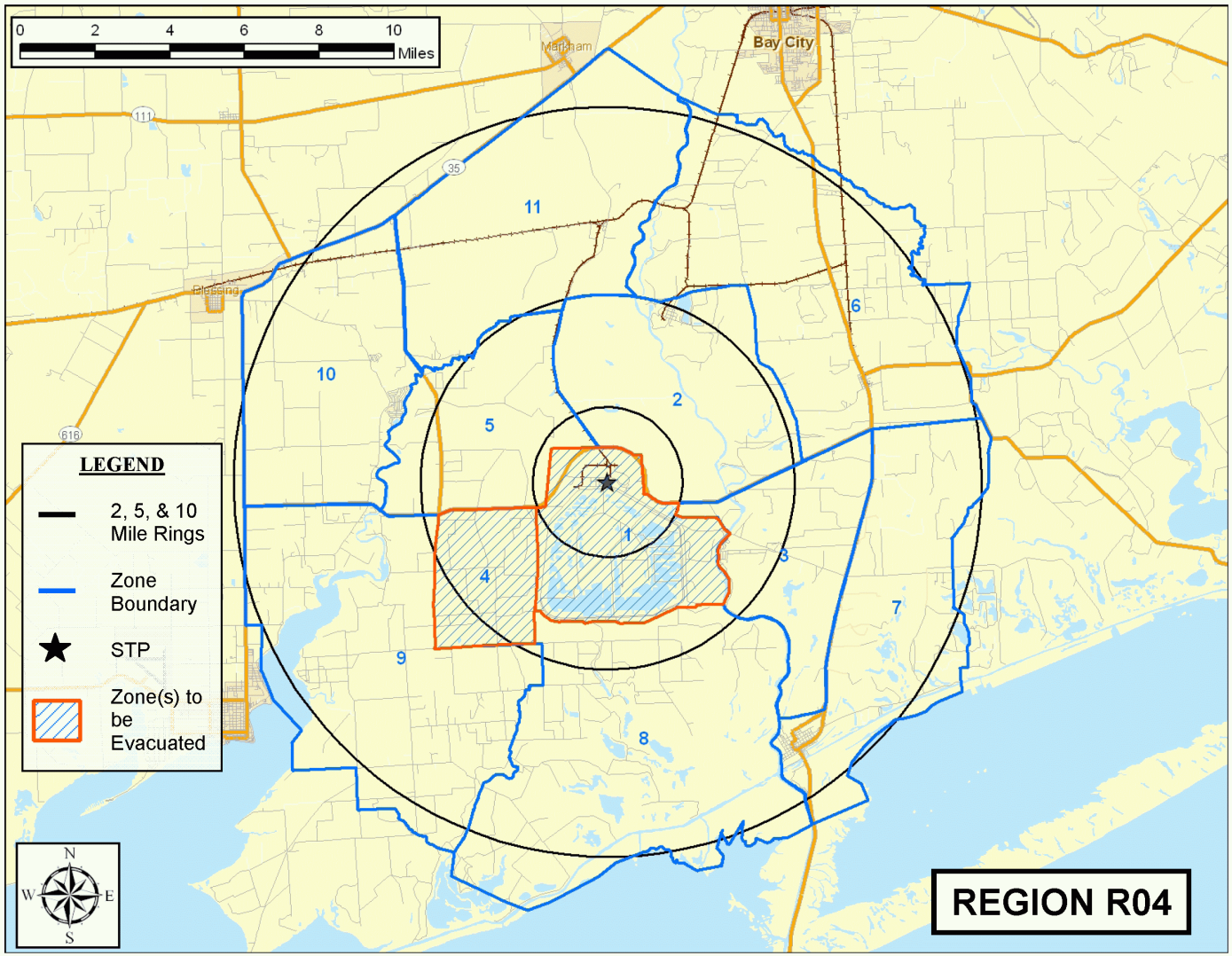
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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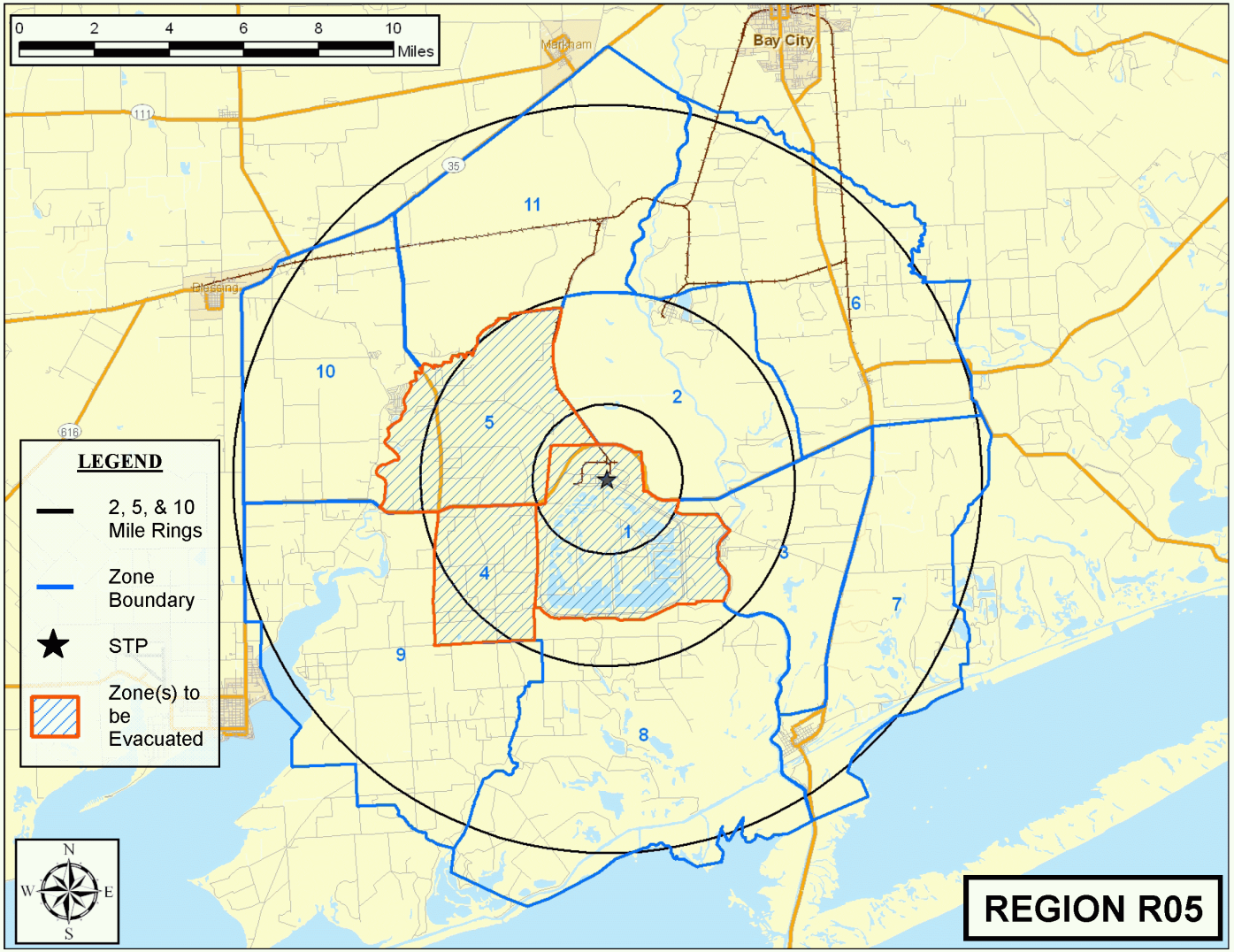
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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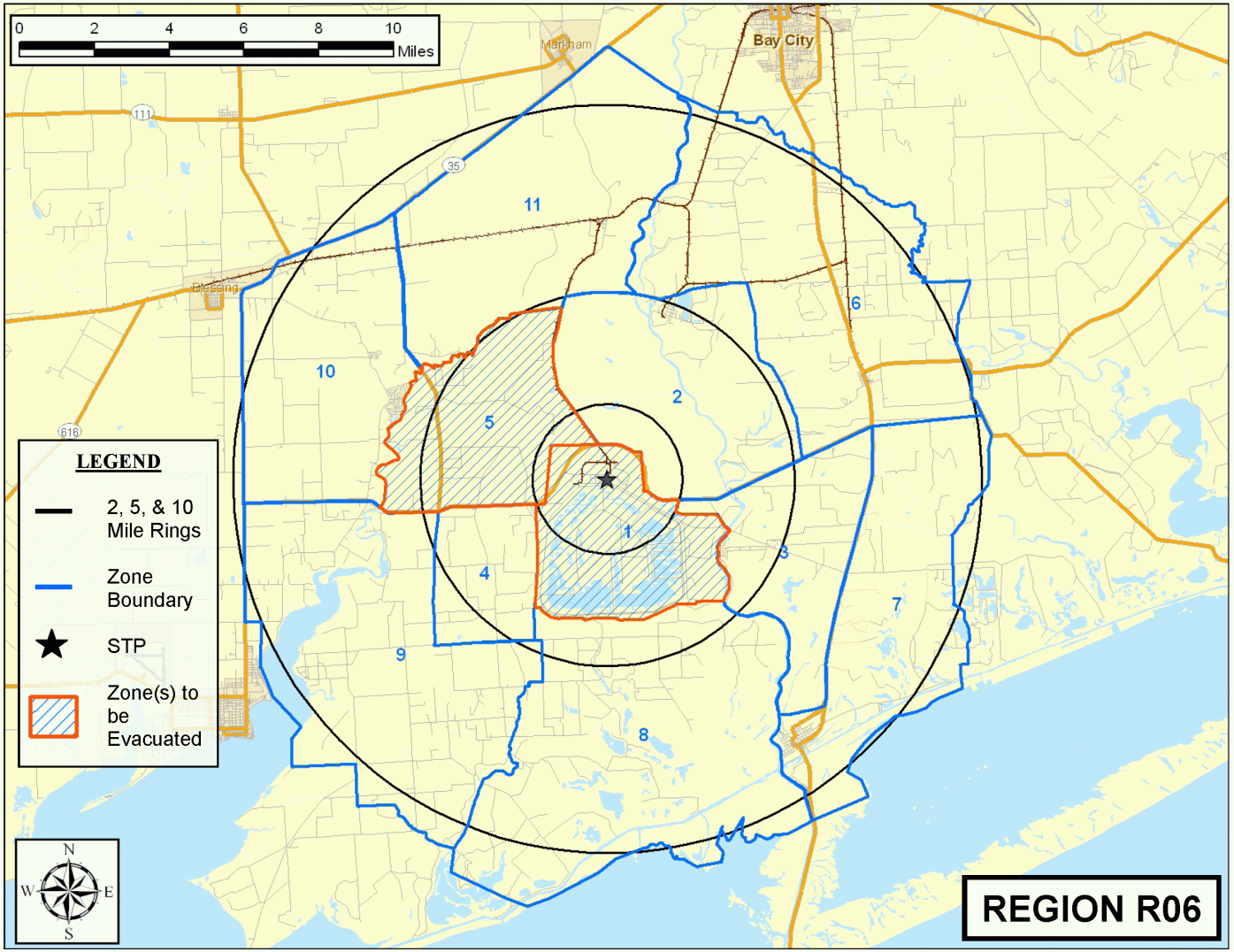
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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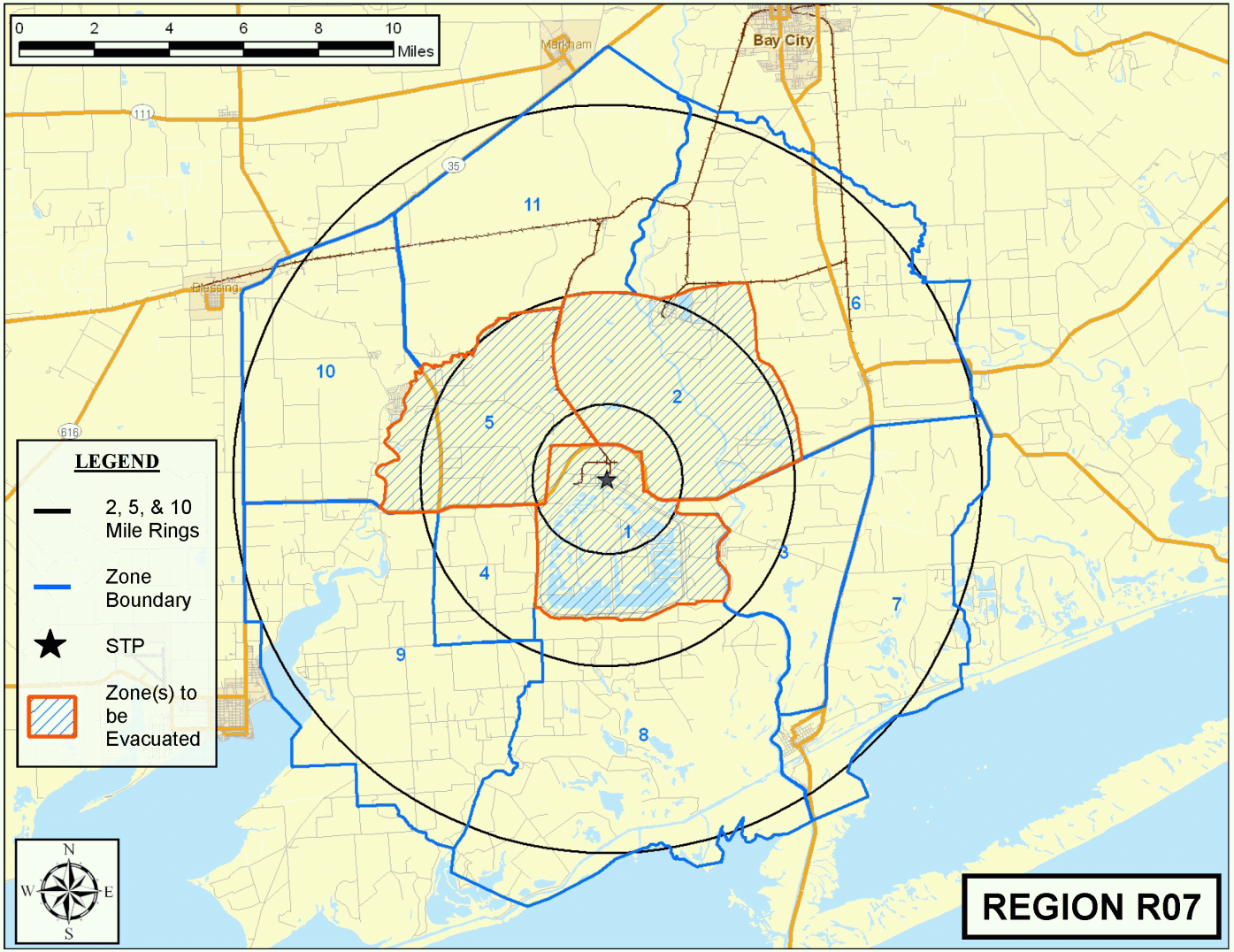
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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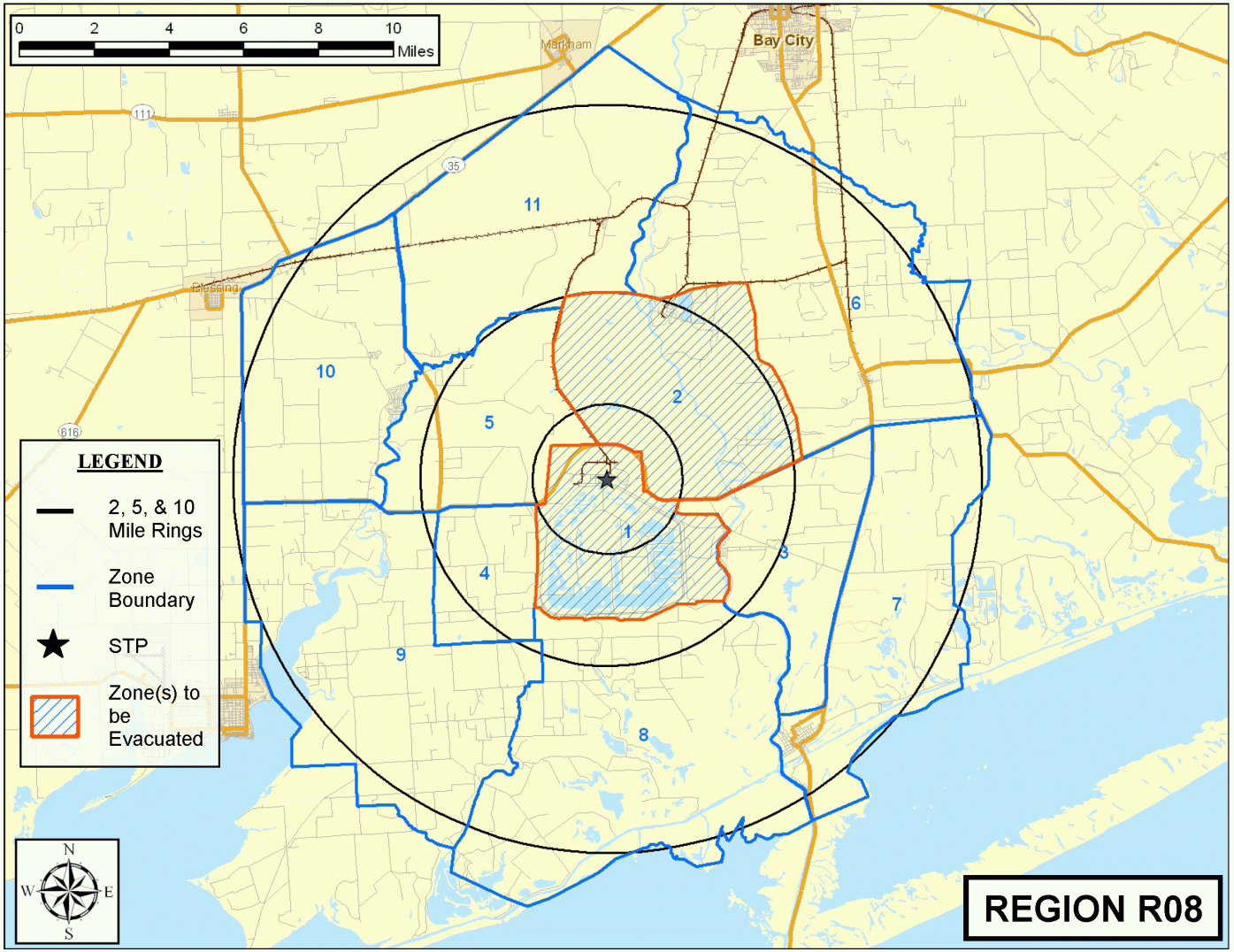
REGION R07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2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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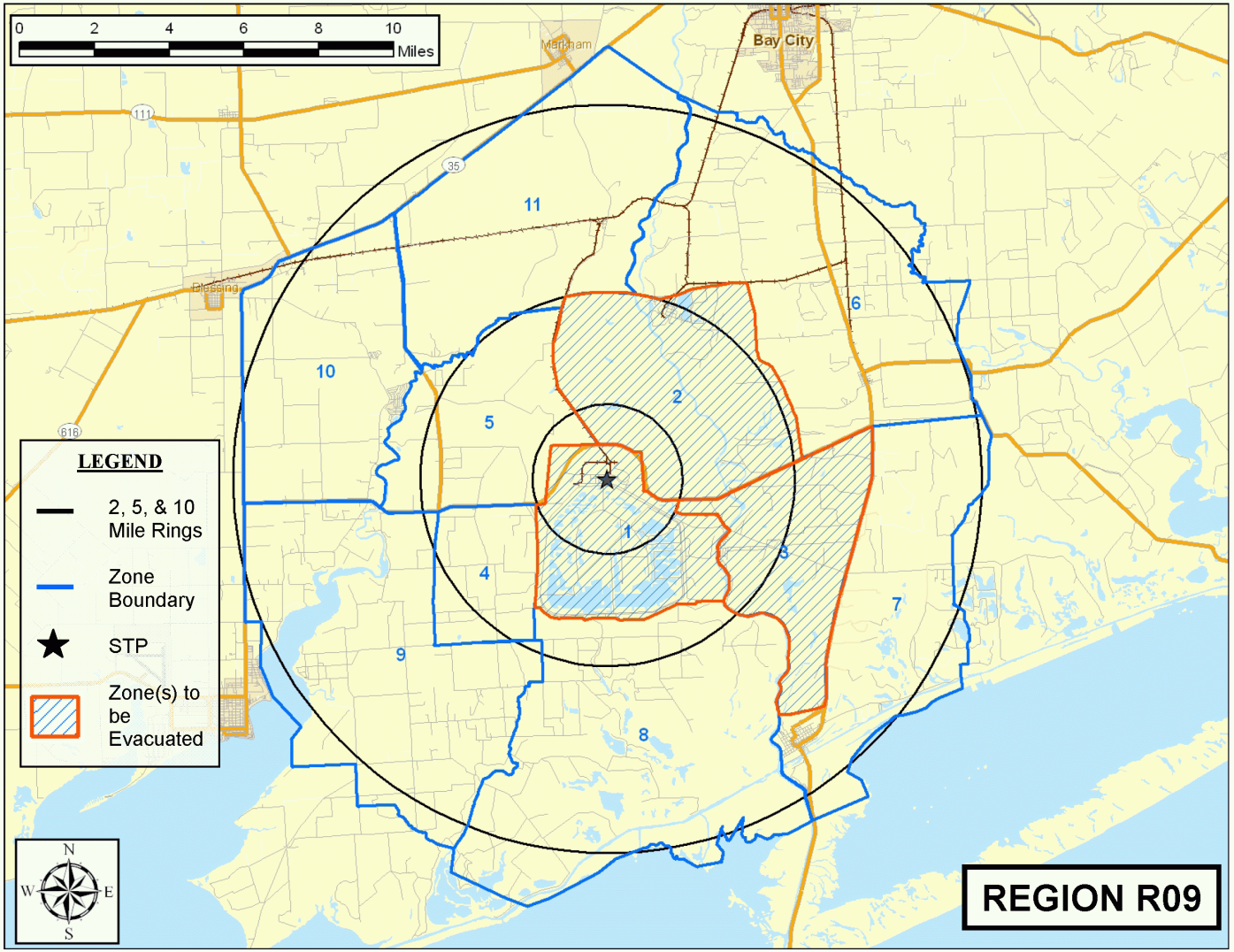
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2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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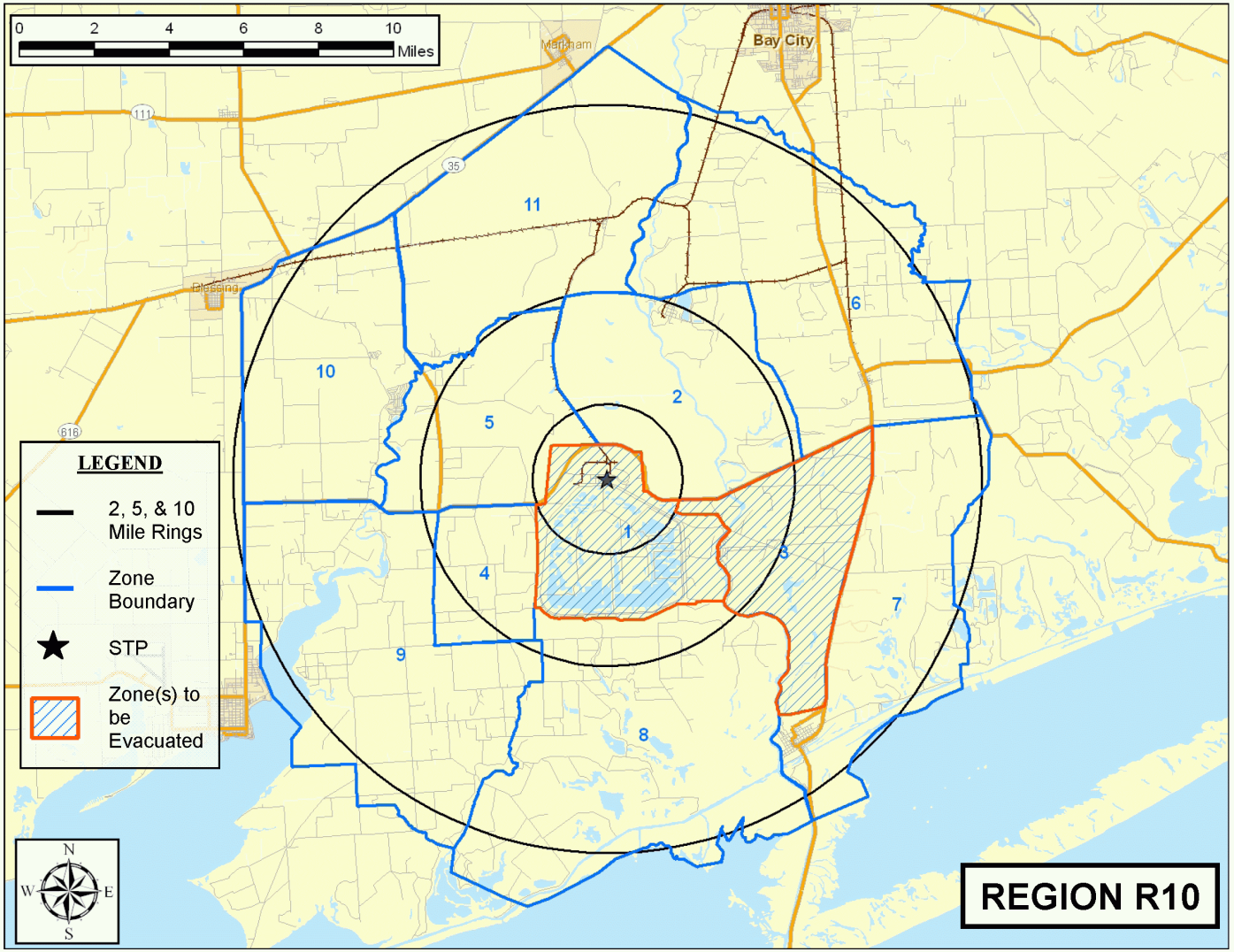
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2, 5, & 10 Mile Rings
Zone Boundary
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Zone(s) to be Evacuated
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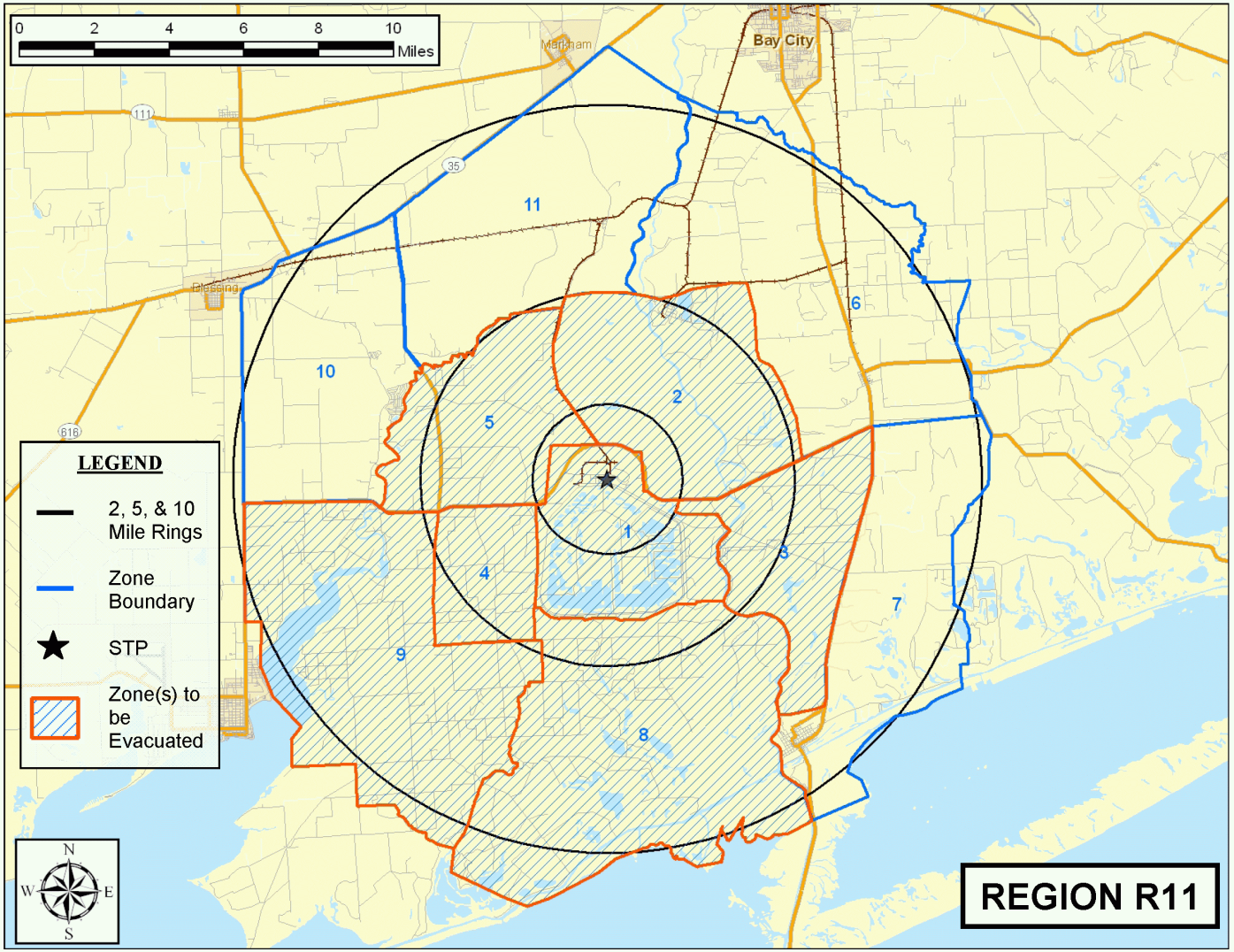
REGION R10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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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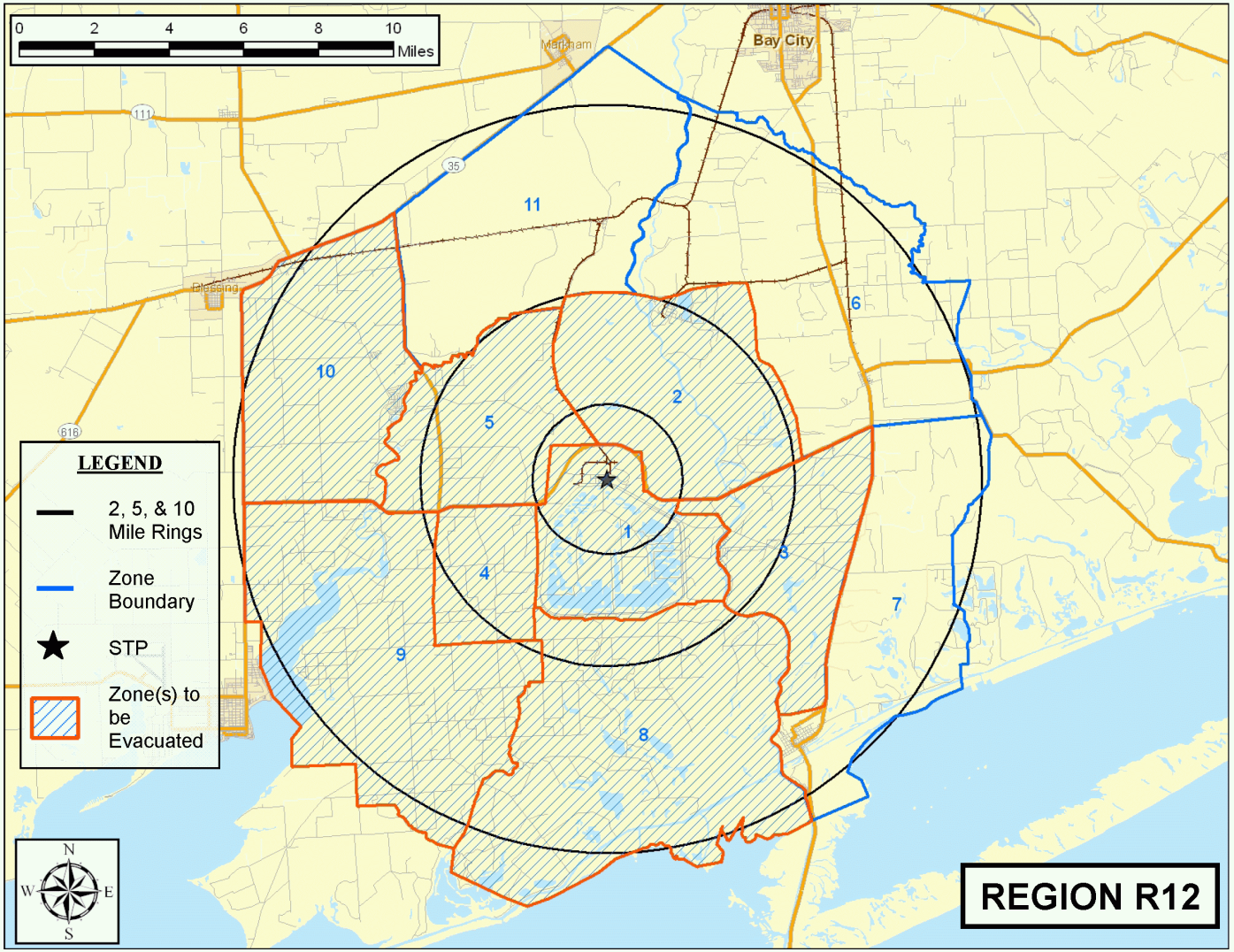
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
N
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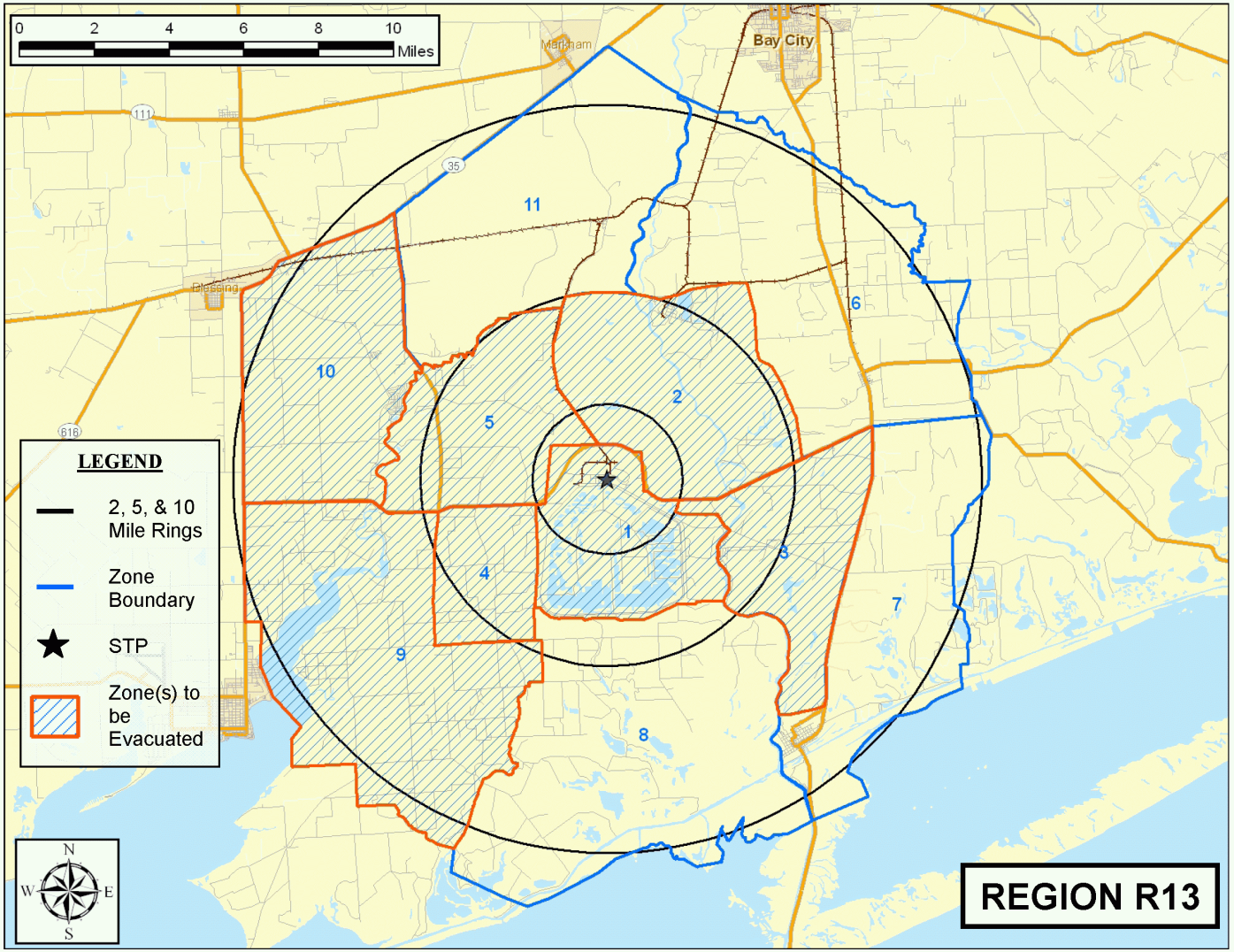
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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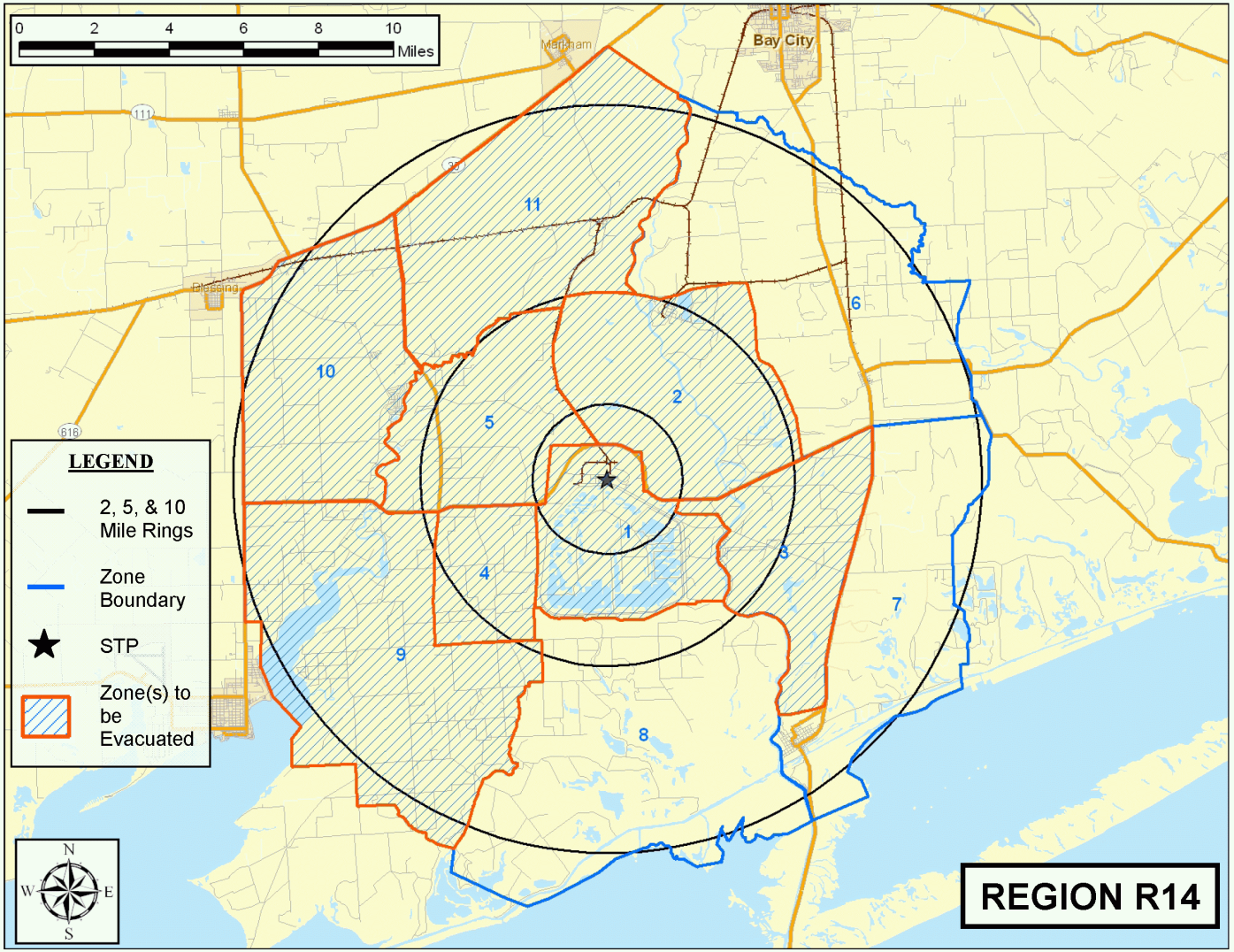
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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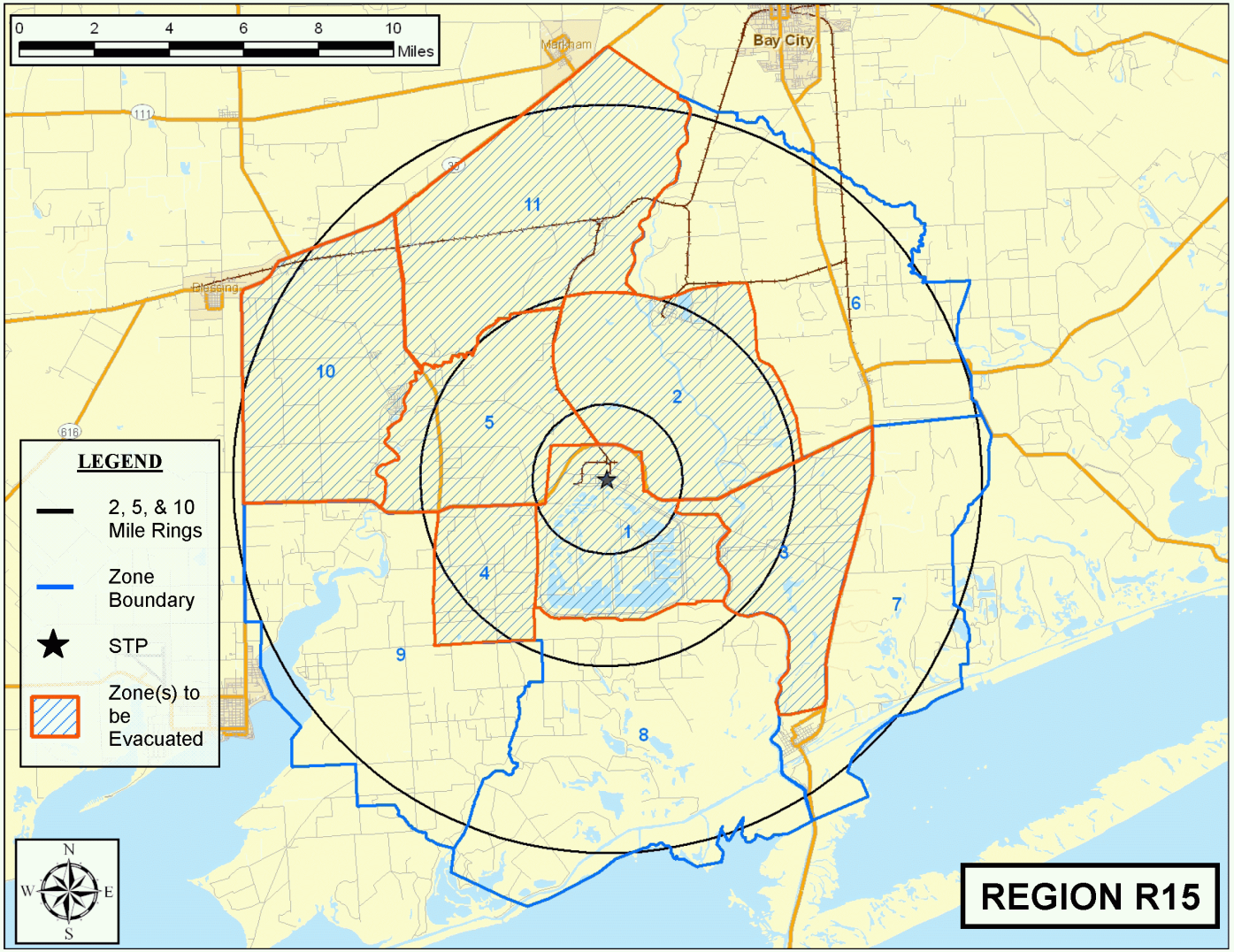
REGION R14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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
N
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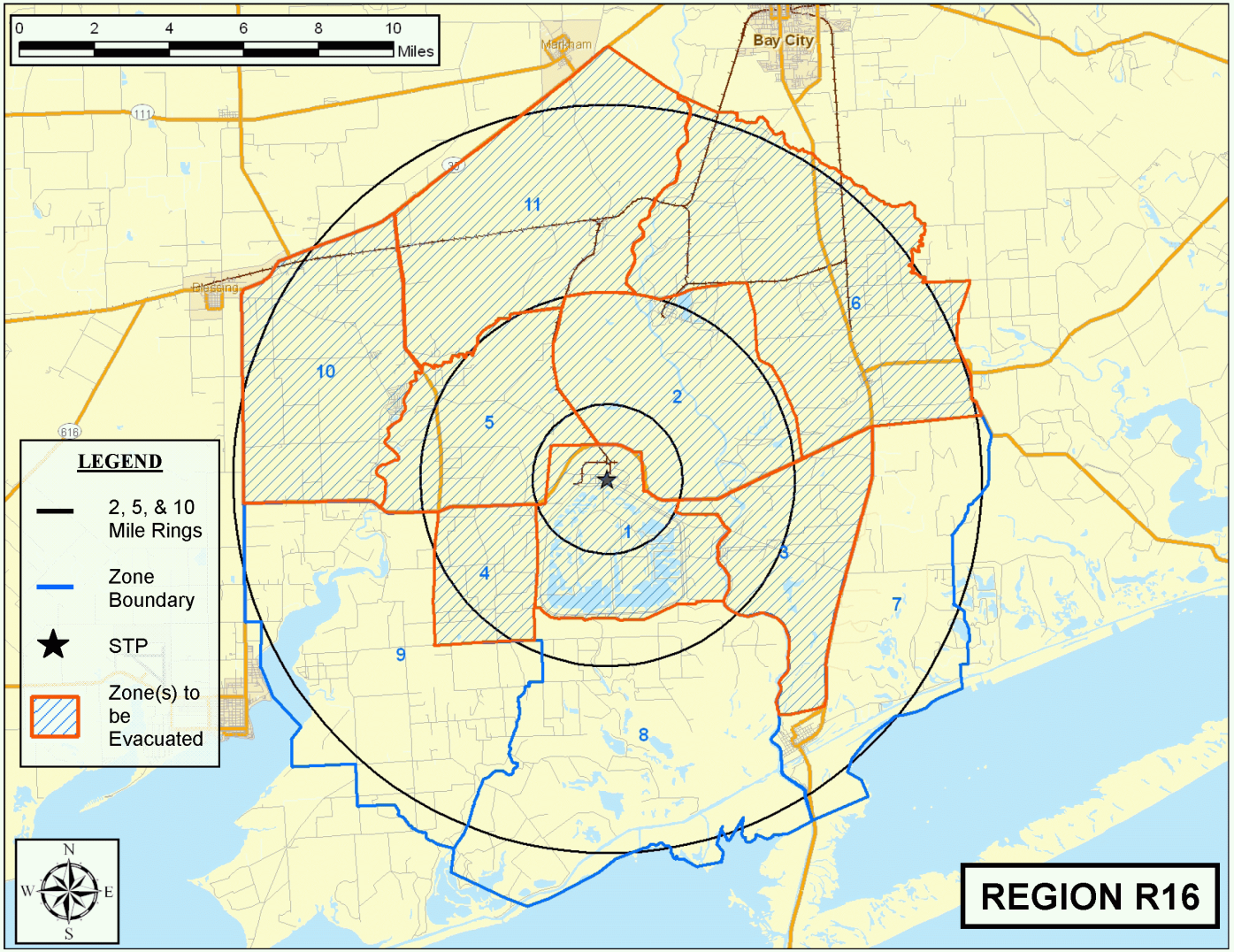
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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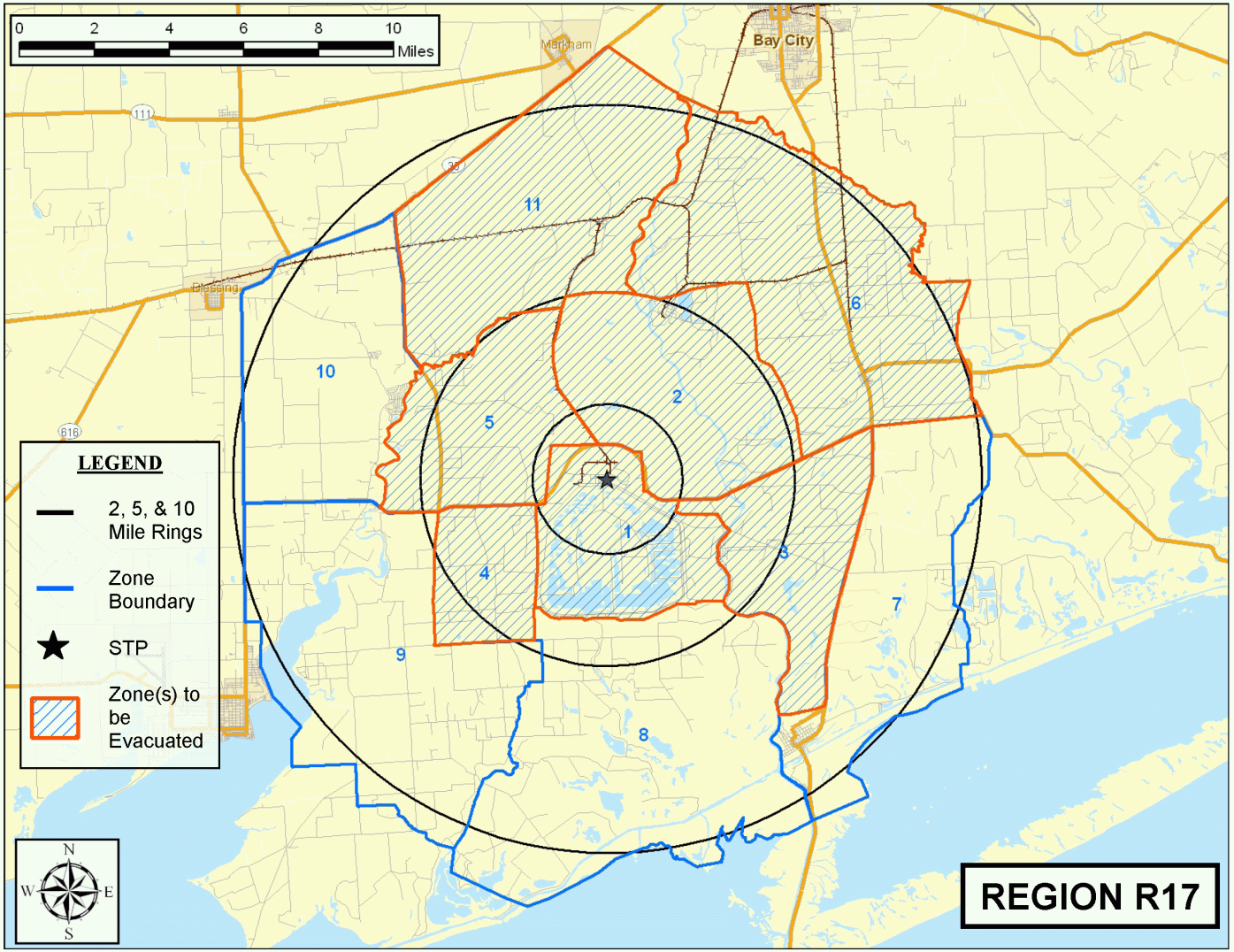
REGION R16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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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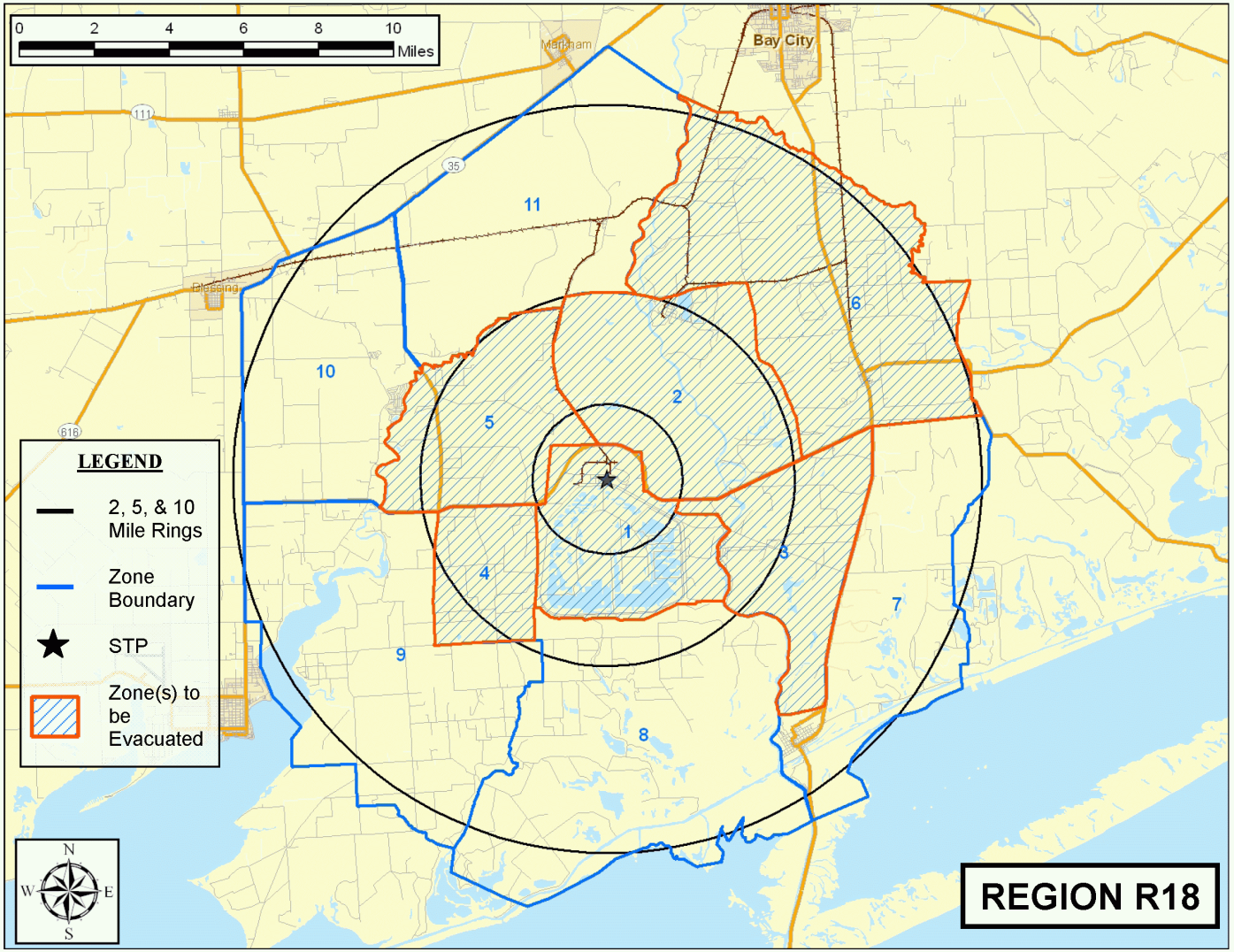
REGION R17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Blessing
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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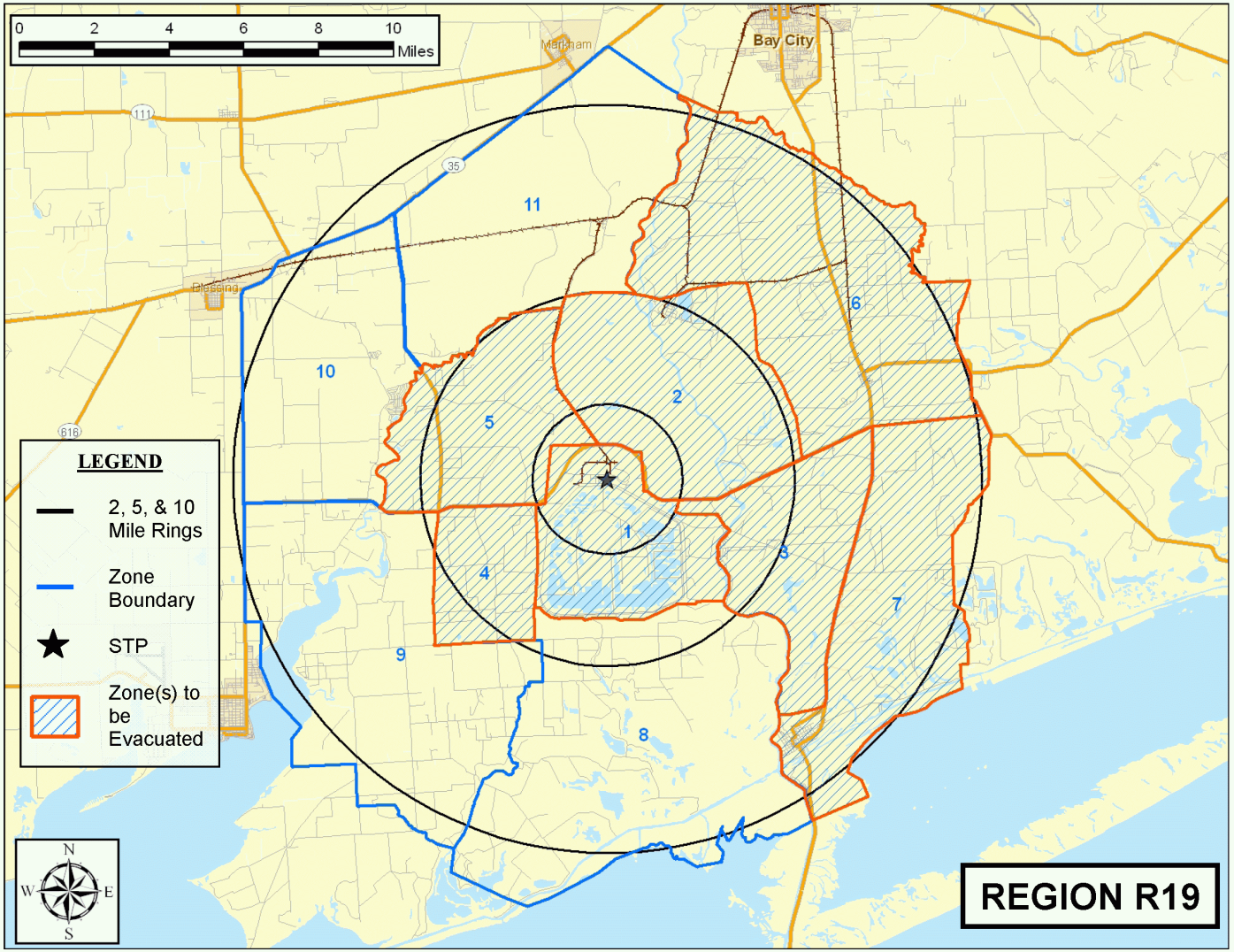
REGION R18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Merkham
Bay City
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616
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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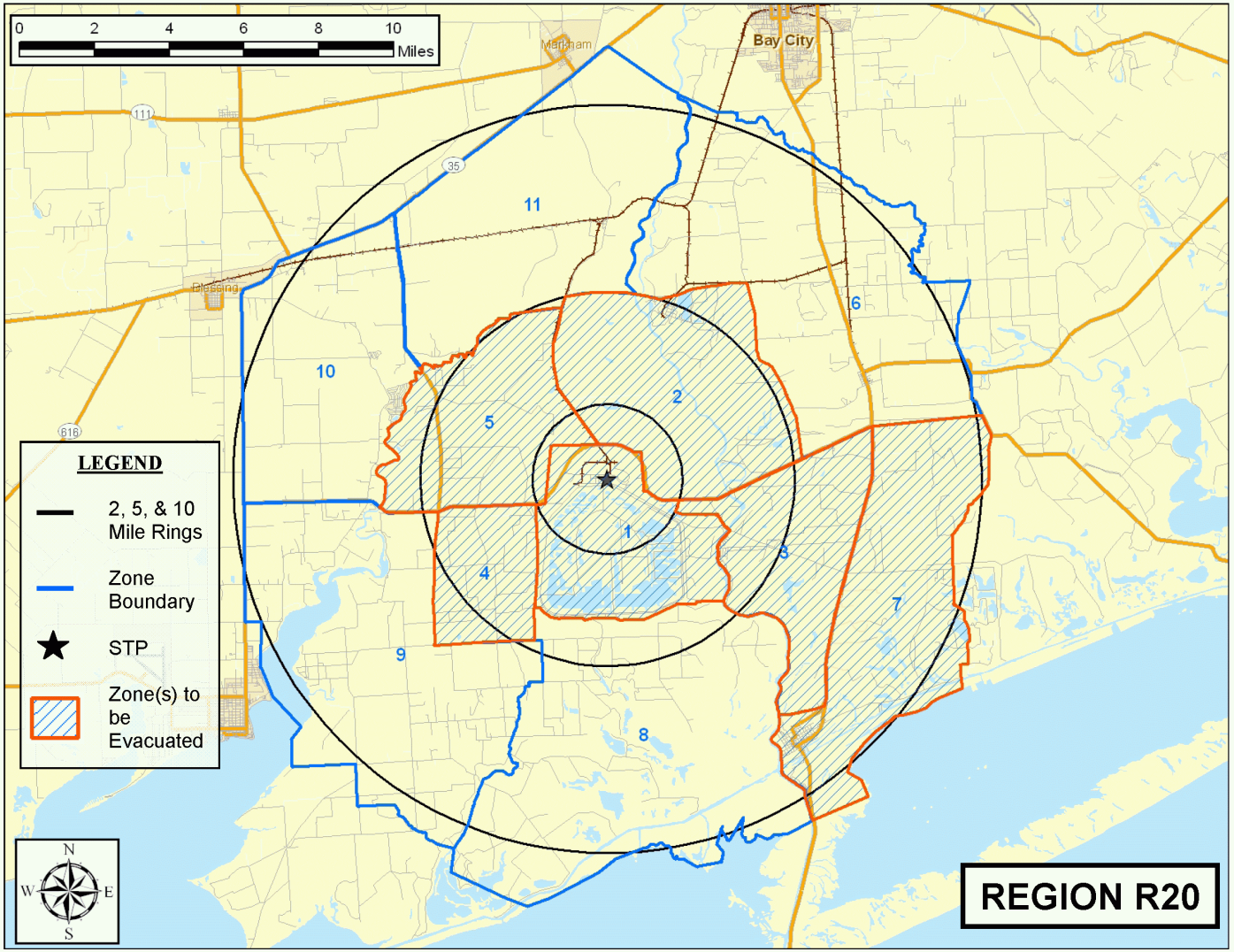
REGION R19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Markham
Bay City
Blessing
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616
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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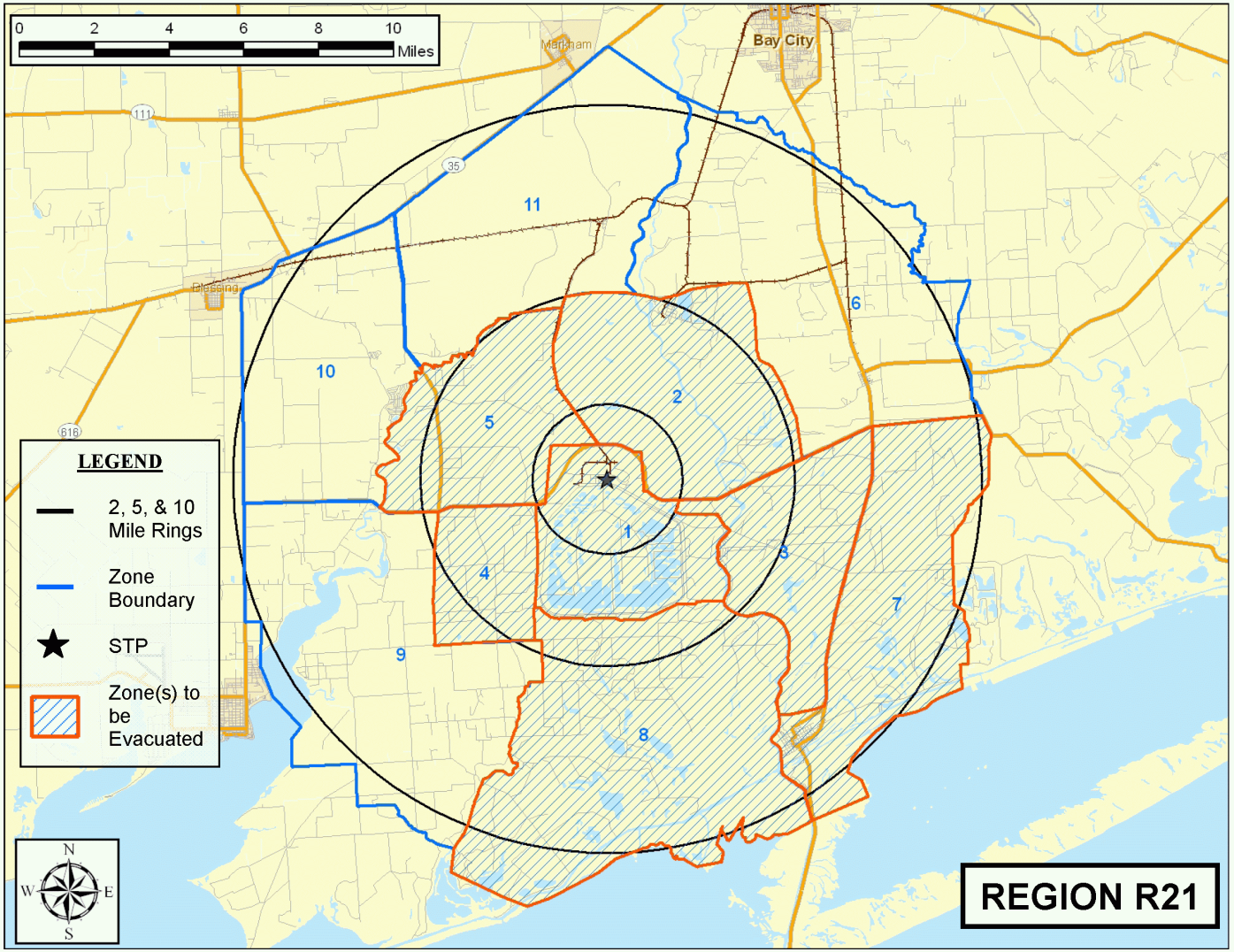
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
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Zone(s) to be Evacuated
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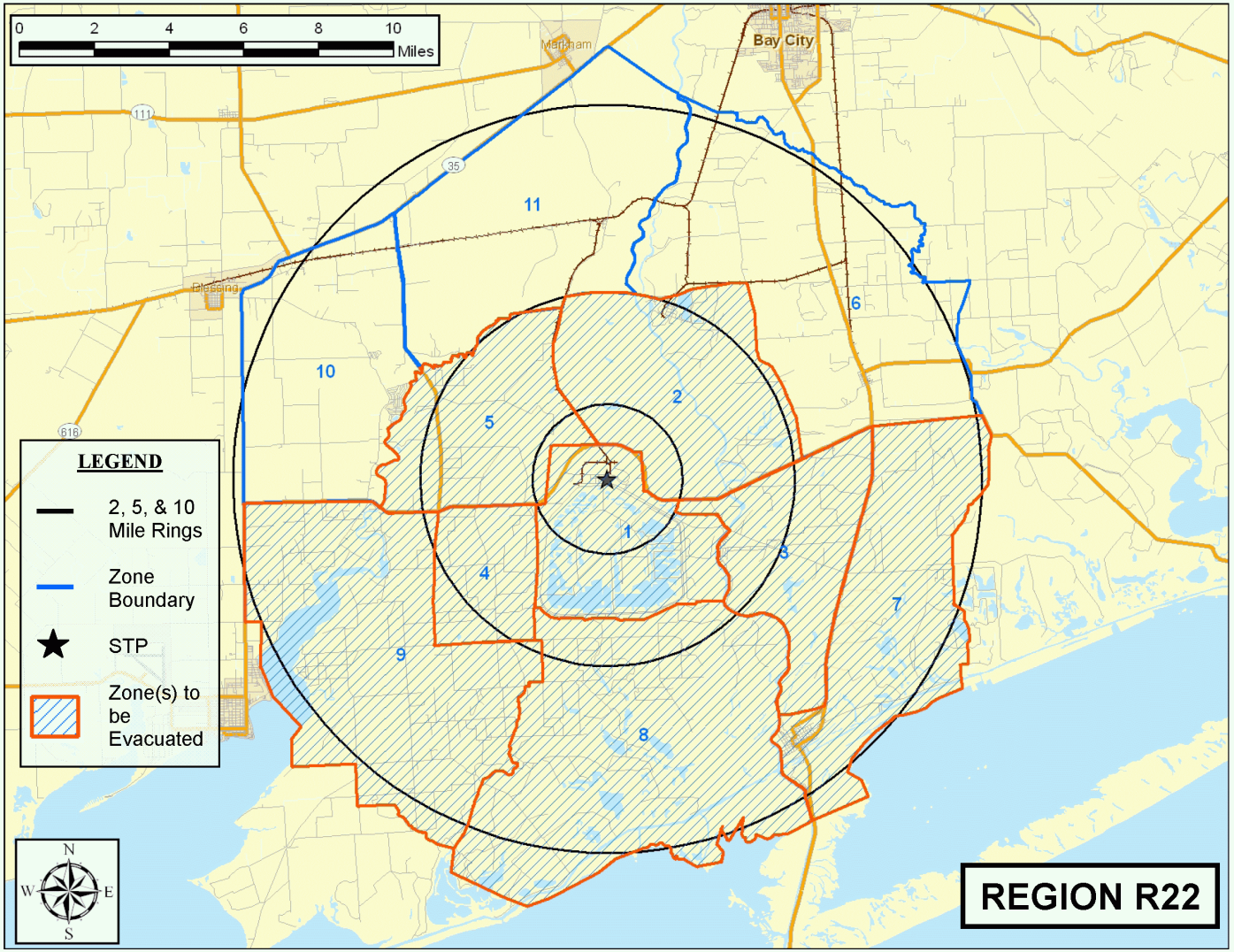
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LEGEND
2, 5, & 10 Mile Rings
Zone Boundary
STP
Zone(s) to be Evacuated
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REGION R22

APPENDIX I

Evacuation Sensitivity Studies

APPENDIX I: EVACUATION SENSITIVITY STUDIES

A sensitivity study was performed to determine whether changes in the estimated trip generation time have an effect upon the Evacuation Time Estimates (ETE) for the entire EPZ. The case considered was Scenario 1, Region 3; a summer, midweek, midday, good weather evacuation of the entire EPZ. Table I-1 presents the results of this study.

Table I-1. Evacuation Time Estimates for Trip Generation Sensitivity Study

	Evacuation Time Estimate		
Trip Generation Period	**2-Mile Region**	**5-Mile Region**	**Entire EPZ**
3 Hours	1:00	3:10	3:20
6 Hours (Base)	1:00	6:10	6:20

As the mobilization time is reduced, the ETE for 2-mile, 5-mile, and the full EPZ reduce accordingly. The results confirm the importance of accurately estimating the trip generation times. The evacuation time estimates closely mirror the values for the time the last evacuation trip is generated. The reason for this is the lack of significant traffic congestion during an evacuation. The results indicate that programs to educate the public, to encourage faster responses to a radiological emergency, can considerably reduce ETE.

A sensitivity study was also conducted to determine the effects on ETE of changes in the percentage of people who decide to relocate from the Shadow Region. The movement of people in the shadow region has the potential to impede vehicles evacuating from an Evacuation Region within the EPZ. The case considered was Scenario 3, Region 3; a summer, weekend, midday, good weather evacuation of the entire EPZ.

Table I-2 presents the evacuation time estimates for each of these cases. The ETE for the 2-mile, 5-mile and Entire EPZ regions remain unchanged as the percentage of people who decide to relocate from areas within the shadow region increases from 15% to 60%. These results indicate that the ETE are not impacted by the "shadow effect" and further illustrates that the ETE are dictated by the mobilization time of the evacuating populous.

Table I-2. Evacuation Time Estimates for Shadow Sensitivity Study

	Evacuation Time Estimate		
Percent Shadow Evacuation	**2-Mile Region**	**5-Mile Region**	**Entire EPZ**
15	1:00	5:10	5:50
30 (Base)	1:00	5:10	5:50
60	1:00	5:10	5:50

APPENDIX J

Evacuation Time Estimates for All Evacuation Regions and Scenarios
And
Evacuation Time Graphs for Region R03, for all Scenarios

APPENDIX J: EVACUATION TIME ESTIMATES FOR ALL EVACUATION REGIONS AND SCENARIOS

AND

EVACUATION TIME GRAPHS FOR REGION R3, FOR ALL SCENARIOS

This appendix presents the ETE Results for all 22 Regions and all 12 Scenarios (Tables J-1A through J-1D).

Plots of Evacuating vehicles vs. Elapsed Time leaving the 2-mile and 5-mile circular areas around STP, and the entire EPZ (Region R03), for all 12 scenarios are presented (Figures J-1 through J-12). Each plot has points indicating the evacuation times corresponding to the 50th, 90th, and 95th percentiles of evacuated vehicles.

J.1 Guidance on Using ETE Tables

Tables J-1A through J-1D present the ETE values for all 22 Evacuation Regions and all 12 Evacuation Scenarios. They are organized as follows:

Table	Contents
J-1A	ETE represents the elapsed time required for 50 percent of the vehicles within a Region, to evacuate from that Region.
J-1B	ETE represents the elapsed time required for 90 percent of the vehicles within a Region, to evacuate from that Region.
J-1C	ETE represents the elapsed time required for 95 percent of the vehicles within a Region, to evacuate from that Region.
J-1D	ETE represents the elapsed time required for 100 percent of the vehicles within a Region, to evacuate from that Region.

The user first determines the percentile of vehicles for which the ETE is sought. The applicable value of ETE within the chosen Table may then be identified using the following procedure:

1. Identify the applicable **Scenario**:
    - The Season
        - Summer
        - Winter (also Autumn and Spring)

- The Day of Week
  - Midweek
  - Weekend
- The Time of Day
  - Midday
  - Evening
- Weather Condition
  - Good Weather
  - Rain
- Special Event
  - Holiday Beach Weekend
  - New Plant Construction

While these Scenarios are designed, in aggregate, to represent conditions throughout the year, some further clarification is warranted:

- The conditions of a summer evening (either midweek or weekend) and rain are not explicitly identified in Tables J-1A through J-1D. For these conditions, Scenario (4) applies.
- The conditions of a winter evening (either midweek or weekend) and rain are not explicitly identified in Tables J-1A through J-1D. For these conditions, Scenario (9) applies.
- The seasons are defined as follows:
  - Summer implies that public schools are *not* in session.
  - Winter, Spring, and Autumn imply that public schools *are* in session.
- Time of Day: Midday implies the time over which most commuters are at work.

2. With the Scenario identified, now identify the **Evacuation Region**:
   - Determine the projected azimuth direction of the plume, as dictated by the wind direction. The wind direction is expressed in degrees, clockwise from North and represents the direction *from which* the wind originates.
   - Determine the distance that the Evacuation Region will extend from the South Texas Project. The applicable distances and their associated candidate Regions are given below:
     - 2 Miles (Region R1)
     - 5 Miles (Regions R2 and R4 through R10)
     - To EPZ Boundary (Regions R3 and R11 through R22)
   - Enter Table 7-2 and identify the applicable group of candidate Regions based on the distance that the selected Region extends from STP. Select the Evacuation Region identifier in that row from the first column of the Table

3. Determine the **ETE for the Scenario** identified in Step 1 and the Region identified in Step 2, as follows:
    - The columns of Table J-1 are labeled with the Scenario numbers. Identify the proper column in the selected Table using the Scenario number determined in Step 1.
    - Identify the row in this table that provides ETE values for the Region identified in Step 2.
    - The unique data cell defined by the column and row so determined contains the desired value of ETE expressed in Hours:Minutes.

Example

It is desired to identify the ETE for the following conditions:

- Sunday, August 10th at 4:00 AM.
- The weather is good.
- Wind direction is from 300°.
- Wind speed is such that the distance to be evacuated is judged to be 10 miles (to EPZ boundary).
- The desired ETE is that value needed to evacuate 95 percent of the population from within the impacted Region.

Table J-1C is applicable because the 95-percentile population is desired. Proceed as follows:

1. Identify the Scenario as summer, weekend, evening and good weather. Entering Table J-1C these descriptors identify this combination of circumstances as being Scenario 5.

2. Enter Table J-1C and locate the group entitled "Evacuate 5-Mile Ring and Downwind to EPZ Boundary". Under "Wind Direction", identify the 287° to 331° azimuth and read REGION R10 in the first column of that row.

3. Enter Table J-1C to locate the data cell containing the value of ETE for Scenario 5 and Region R10. This data cell is in column (5) and in the row for Region R10; it contains the ETE value of **4:00**.

Table J-1A. Time To Clear The Indicated Area of 50 Percent of the Affected Population

	Summer		Summer		Summer		Winter		Winter		Winter		Summer	Summer
	Midweek		Weekend		Midweek Weekend		Midweek		Weekend		Midweek Weekend		Holiday	Midweek
Scenario:	(1)	(2)	(3)	(4)	(5)	Scenario:	(6)	(7)	(8)	(9)	(10)	Scenario:	(11)	(12)
Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday	Midday
	Good Weather	Rain	Good Weather	Rain	Good Weather		Good Weather	Rain	Good Weather	Rain	Good Weather		Beach Holiday	New Plant Construction
Entire 2-Mile Region, 5-Mile Region, and EPZ														
R01 2-mile ring	0:40	0:40	0:40	0:40	0:40	R01 2-mile ring	0:40	0:40	0:40	0:40	0:40	R01 2-mile ring	0:40	0:55
R02 5-mile ring	0:55	0:55	1:05	1:05	1:05	R02 5-mile ring	0:55	0:55	1:05	1:05	1:10	R02 5-mile ring	2:05	1:00
R03 Entire EPZ	1:10	1:10	1:15	1:15	1:15	R03 Entire EPZ	1:10	1:10	1:15	1:15	1:25	R03 Entire EPZ	1:50	1:20
2-Mile Ring and Downwind to 5 Miles														
R04 29° to 50°	0:40	0:45	0:45	0:45	0:45	R04 29° to 50°	0:40	0:45	0:45	0:45	0:45	R04 29° to 50°	0:45	0:55
R05 51° to 106°	0:45	0:45	0:50	0:50	0:50	R05 51° to 106°	0:45	0:45	0:50	0:50	0:50	R05 51° to 106°	0:50	0:55
R06 107° to 140°	0:45	0:45	0:45	0:50	0:45	R06 107° to 140°	0:45	0:45	0:45	0:50	0:45	R06 107° to 140°	0:45	0:55
R07 141° to 174°	0:50	0:50	0:50	0:50	0:50	R07 141° to 174°	0:50	0:50	0:50	0:50	0:50	R07 141° to 174°	0:50	0:60
R08 175° to 230°	0:45	0:45	0:45	0:45	0:45	R08 175° to 230°	0:45	0:45	0:45	0:45	0:45	R08 175° to 230°	0:45	0:55
R09 231° to 286°	0:50	0:55	1:00	1:05	1:00	R09 231° to 286°	0:50	0:50	1:05	1:05	1:05	R09 231° to 286°	2:05	1:00
R10 287° to 331°	0:50	0:50	1:00	1:05	1:00	R10 287° to 331°	0:50	0:50	1:00	1:05	1:05	R10 287° to 331°	2:05	0:60
R01 332° to 28°	0:40	0:40	0:40	0:40	0:40	R01 332° to 28°	0:40	0:40	0:40	0:40	0:40	R01 332° to 28°	0:40	0:55
5-Mile Ring and Downwind to EPZ Boundary														
R11 355° to 50°	1:00	1:00	1:10	1:10	1:10	R11 355° to 50°	1:00	1:00	1:15	1:15	1:20	R11 355° to 50°	2:05	1:05
R12 51° to 61°	1:00	1:00	1:05	1:05	1:05	R12 51° to 61°	1:05	1:05	1:10	1:10	1:15	R12 51° to 61°	1:35	1:05
R13 62° to 95°	1:00	1:00	1:05	1:05	1:05	R13 62° to 95°	1:05	1:05	1:10	1:10	1:15	R13 62° to 95°	1:35	1:05
R14 96° to 129°	1:00	1:00	1:05	1:05	1:05	R14 96° to 129°	1:05	1:05	1:10	1:10	1:20	R14 96° to 129°	1:35	1:10
R15 130° to 163°	1:00	1:00	1:00	1:00	1:05	R15 130° to 163°	1:00	1:00	1:05	1:05	1:15	R15 130° to 163°	1:35	1:05
R16 164° to 174°	1:05	1:05	1:05	1:05	1:05	R16 164° to 174°	1:05	1:10	1:15	1:15	1:20	R16 164° to 174°	1:40	1:15
R17 175° to 219°	1:05	1:05	1:15	1:15	1:15	R17 175° to 219°	1:05	1:05	1:15	1:20	1:20	R17 175° to 219°	2:10	1:15
R18 220° to 230°	1:00	1:05	1:15	1:15	1:10	R18 220° to 230°	1:00	1:00	1:15	1:15	1:20	R18 220° to 230°	2:10	1:10
R19 231° to 286°	1:05	1:10	1:25	1:25	1:15	R19 231° to 286°	1:00	1:05	1:15	1:15	1:20	R19 231° to 286°	2:25	1:15
R20 287° to 298°	1:00	1:00	1:05	1:05	1:05	R20 287° to 298°	0:55	0:55	1:05	1:10	1:10	R20 287° to 298°	2:20	1:05
R21 299° to 343°	1:00	1:00	1:15	1:15	1:05	R21 299° to 343°	0:55	0:55	1:05	1:10	1:10	R21 299° to 343°	2:20	1:05
R22 344° to 354°	1:05	1:05	1:20	1:20	1:10	R22 344° to 354°	1:00	1:00	1:15	1:15	1:20	R22 344° to 354°	2:15	1:10

Table J-1B. Time To Clear The Indicated Area of 90 Percent of the Affected Population

	Summer		Summer		Summer		Winter		Winter		Winter		Summer	Summer
	Midweek		Weekend		Midweek Weekend		Midweek		Weekend		Midweek Weekend		Holiday	Midweek
Scenario:	(1)	(2)	(3)	(4)	(5)	Scenario:	(6)	(7)	(8)	(9)	(10)	Scenario:	(11)	(12)
Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday	Midday
	Good Weather	Rain	Good Weather	Rain	Good Weather		Good Weather	Rain	Good Weather	Rain	Good Weather		Beach Holiday	New Plant Construction
Entire 2-Mile Region, 5-Mile Region, and EPZ														
R01 2-mile ring	0:55	0:55	0:50	0:50	0:50	R01 2-mile ring	0:55	0:55	0:50	0:50	0:50	R01 2-mile ring	0:50	1:35
R02 5-mile ring	2:10	2:20	3:00	3:00	3:00	R02 5-mile ring	2:40	2:40	2:50	2:50	3:00	R02 5-mile ring	3:40	1:50
R03 Entire EPZ	3:00	3:00	2:30	2:40	2:50	R03 Entire EPZ	3:30	3:30	3:20	3:20	3:30	R03 Entire EPZ	4:30	2:30
2-Mile Ring and Downwind to 5 Miles														
R04 29° to 50°	0:55	1:00	1:40	1:40	1:40	R04 29° to 50°	1:00	1:00	1:50	1:50	1:50	R04 29° to 50°	1:40	1:35
R05 51° to 106°	1:00	1:00	2:30	2:30	2:30	R05 51° to 106°	1:00	1:05	2:30	2:30	2:30	R05 51° to 106°	2:30	1:40
R06 107° to 140°	1:00	1:00	2:00	2:00	2:00	R06 107° to 140°	1:00	1:00	2:00	2:00	2:00	R06 107° to 140°	2:00	1:40
R07 141° to 174°	1:05	1:05	2:10	2:10	2:10	R07 141° to 174°	1:05	1:05	2:10	2:10	2:10	R07 141° to 174°	2:10	1:40
R08 175° to 230°	0:55	0:60	1:00	1:00	1:00	R08 175° to 230°	0:60	1:00	1:00	1:00	1:00	R08 175° to 230°	1:00	1:35
R09 231° to 286°	2:10	2:10	3:00	3:00	3:00	R09 231° to 286°	2:20	2:20	2:40	2:40	2:50	R09 231° to 286°	3:40	1:45
R10 287° to 331°	2:00	2:10	2:50	2:50	2:50	R10 287° to 331°	2:20	2:20	2:40	2:40	2:50	R10 287° to 331°	3:40	1:45
R01 332° to 28°	0:55	0:55	0:50	0:50	0:50	R01 332° to 28°	0:55	0:55	0:50	0:50	0:50	R01 332° to 28°	0:50	1:35
5-Mile Ring and Downwind to EPZ Boundary														
R11 355° to 50°	2:50	2:50	3:00	3:00	3:00	R11 355° to 50°	3:10	3:10	3:30	3:30	3:40	R11 355° to 50°	3:50	2:00
R12 51° to 61°	2:40	2:40	2:20	2:20	2:40	R12 51° to 61°	3:10	3:10	3:10	3:10	3:30	R12 51° to 61°	3:40	2:10
R13 62° to 95°	2:40	2:40	2:20	2:20	2:40	R13 62° to 95°	3:10	3:10	3:10	3:10	3:30	R13 62° to 95°	3:40	2:10
R14 96° to 129°	2:50	2:50	2:20	2:20	2:40	R14 96° to 129°	3:20	3:20	3:10	3:10	3:30	R14 96° to 129°	3:40	2:10
R15 130° to 163°	2:30	2:30	2:10	2:10	2:30	R15 130° to 163°	3:00	3:00	3:00	3:00	3:10	R15 130° to 163°	3:40	2:00
R16 164° to 174°	2:50	2:50	2:20	2:20	2:40	R16 164° to 174°	3:20	3:20	3:00	3:10	3:20	R16 164° to 174°	4:00	2:10
R17 175° to 219°	3:00	3:00	3:30	3:30	3:30	R17 175° to 219°	3:20	3:20	3:20	3:20	3:30	R17 175° to 219°	4:10	2:10
R18 220° to 230°	2:50	2:50	3:30	3:30	3:30	R18 220° to 230°	3:10	3:10	3:20	3:20	3:30	R18 220° to 230°	4:10	2:10
R19 231° to 286°	2:50	2:50	2:30	2:40	2:50	R19 231° to 286°	3:10	3:10	3:10	3:20	3:30	R19 231° to 286°	4:40	2:10
R20 287° to 298°	2:20	2:20	2:10	2:10	2:50	R20 287° to 298°	2:40	2:50	2:50	2:50	3:10	R20 287° to 298°	4:15	1:55
R21 299° to 343°	2:20	2:20	2:10	2:10	2:20	R21 299° to 343°	2:40	2:50	2:50	2:50	3:10	R21 299° to 343°	4:15	1:55
R22 344° to 354°	2:40	2:40	2:30	2:30	2:50	R22 344° to 354°	3:10	3:10	3:20	3:20	3:40	R22 344° to 354°	4:15	2:05

Table J-1C. Time To Clear The Indicated Area of 95 Percent of the Affected Population

	Summer		Summer		Summer		Winter		Winter		Winter		Summer	Summer
	Midweek		Weekend		Midweek Weekend		Midweek		Weekend		Midweek Weekend		Holiday	Midweek
Scenario:	(1)	(2)	(3)	(4)	(5)	Scenario:	(6)	(7)	(8)	(9)	(10)	Scenario:	(11)	(12)
Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday	Midday
	Good Weather	Rain	Good Weather	Rain	Good Weather		Good Weather	Rain	Good Weather	Rain	Good Weather		Beach Holiday	New Plant Construction
Entire 2-Mile Region, 5-Mile Region, and EPZ														
R01 2-mile ring	0:55	0:55	0:50	0:50	0:50	R01 2-mile ring	0:55	0:55	0:50	0:50	0:50	R01 2-mile ring	0:50	1:40
R02 5-mile ring	3:10	3:10	4:10	4:10	4:10	R02 5-mile ring	3:40	3:40	3:50	3:50	4:10	R02 5-mile ring	3:55	2:10
R03 Entire EPZ	4:00	4:00	3:40	3:40	4:00	R03 Entire EPZ	4:20	4:20	4:10	4:10	4:20	R03 Entire EPZ	4:50	3:30
2-Mile Ring and Downwind to 5 Miles														
R04 29° to 50°	1:00	1:00	2:30	2:30	2:50	R04 29° to 50°	1:00	1:00	2:50	2:50	2:50	R04 29° to 50°	2:30	1:45
R05 51° to 106°	1:50	1:50	3:30	3:30	3:30	R05 51° to 106°	1:50	1:50	3:40	3:40	3:40	R05 51° to 106°	3:30	1:50
R06 107° to 140°	1:30	1:40	2:50	2:40	2:50	R06 107° to 140°	1:30	1:30	2:50	2:50	2:50	R06 107° to 140°	2:50	1:45
R07 141° to 174°	1:50	1:50	2:50	2:40	2:40	R07 141° to 174°	1:50	1:50	2:50	2:50	2:50	R07 141° to 174°	2:50	1:50
R08 175° to 230°	1:00	1:00	1:30	1:30	1:30	R08 175° to 230°	1:00	1:00	1:30	1:30	1:30	R08 175° to 230°	1:30	1:45
R09 231° to 286°	3:00	3:00	4:00	4:00	4:00	R09 231° to 286°	3:30	3:30	3:40	3:40	4:00	R09 231° to 286°	3:55	2:00
R10 287° to 331°	3:00	3:00	4:00	4:00	4:00	R10 287° to 331°	3:30	3:30	3:40	3:40	4:00	R10 287° to 331°	3:55	2:00
R01 332° to 28°	0:55	0:55	0:50	0:50	0:50	R01 332° to 28°	0:55	0:55	0:50	0:50	0:50	R01 332° to 28°	0:50	1:40
5-Mile Ring and Downwind to EPZ Boundary														
R11 355° to 50°	3:50	3:50	3:50	3:50	4:00	R11 355° to 50°	4:10	4:10	4:20	4:20	4:30	R11 355° to 50°	4:05	2:50
R12 51° to 61°	3:40	3:40	3:20	3:30	3:50	R12 51° to 61°	4:10	4:10	4:10	4:10	4:20	R12 51° to 61°	4:00	3:00
R13 62° to 95°	3:40	3:40	3:20	3:30	3:50	R13 62° to 95°	4:10	4:10	4:10	4:10	4:20	R13 62° to 95°	4:00	3:00
R14 96° to 129°	3:50	3:50	3:30	3:30	3:50	R14 96° to 129°	4:10	4:10	4:10	4:10	4:20	R14 96° to 129°	4:00	3:10
R15 130° to 163°	3:30	3:30	3:00	3:00	3:30	R15 130° to 163°	4:00	4:00	4:00	4:00	4:10	R15 130° to 163°	4:00	2:50
R16 164° to 174°	3:50	3:50	3:20	3:30	3:50	R16 164° to 174°	4:10	4:10	4:10	4:10	4:20	R16 164° to 174°	4:20	3:10
R17 175° to 219°	4:00	4:00	4:20	4:20	4:20	R17 175° to 219°	4:10	4:10	4:10	4:10	4:20	R17 175° to 219°	4:25	3:00
R18 220° to 230°	3:50	3:50	4:20	4:20	4:20	R18 220° to 230°	4:10	4:10	4:10	4:20	4:20	R18 220° to 230°	4:25	2:50
R19 231° to 286°	3:50	3:50	3:30	3:40	3:50	R19 231° to 286°	4:10	4:10	4:10	4:20	4:20	R19 231° to 286°	4:55	3:00
R20 287° to 298°	3:20	3:20	3:00	3:00	3:30	R20 287° to 298°	3:50	3:50	4:00	4:00	4:10	R20 287° to 298°	4:30	2:30
R21 299° to 343°	3:20	3:20	3:00	3:00	3:30	R21 299° to 343°	3:50	3:50	4:00	4:00	4:10	R21 299° to 343°	4:30	2:30
R22 344° to 354°	3:50	3:50	3:40	3:40	3:50	R22 344° to 354°	4:10	4:10	4:20	4:20	4:20	R22 344° to 354°	4:30	3:00

Table J-1D. Time To Clear The Indicated Area of 100 Percent of the Affected Population

	Summer		Summer		Summer		Winter		Winter		Winter		Summer	Summer
	Midweek		Weekend		Midweek Weekend		Midweek		Weekend		Midweek Weekend		Holiday	Midweek
Scenario:	(1)	(2)	(3)	(4)	(5)	Scenario:	(6)	(7)	(8)	(9)	(10)	Scenario:	(11)	(12)
Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday		Midday		Evening	Region Wind From:	Midday	Midday
	Good Weather	Rain	Good Weather	Rain	Good Weather		Good Weather	Rain	Good Weather	Rain	Good Weather		Beach Holiday	New Plant Construction
Entire 2-Mile Region, 5-Mile Region, and EPZ														
R01 2-mile ring	1:00	1:00	1:00	1:00	1:00	R01 2-mile ring	1:00	1:00	1:00	1:00	1:00	R01 2-mile ring	1:00	2:00
R02 5-mile ring	6:10	6:10	5:10	5:10	5:10	R02 5-mile ring	6:10	6:10	5:10	5:10	5:10	R02 5-mile ring	5:10	6:10
R03 Entire EPZ	6:20	6:20	5:50	5:50	5:50	R03 Entire EPZ	6:20	6:20	5:50	5:50	5:50	R03 Entire EPZ	5:50	6:20
2-Mile Ring and Downwind to 5 Miles														
R04 29° to 50°	4:50	4:50	4:50	4:50	4:50	R04 29° to 50°	5:00	5:00	4:50	4:50	4:50	R04 29° to 50°	4:50	4:50
R05 51° to 106°	4:50	4:50	5:00	5:00	5:00	R05 51° to 106°	5:00	5:00	5:00	5:00	5:00	R05 51° to 106°	5:00	5:00
R06 107° to 140°	4:50	4:50	5:00	5:00	5:00	R06 107° to 140°	4:50	4:50	5:00	5:00	5:00	R06 107° to 140°	5:00	4:50
R07 141° to 174°	4:50	4:50	5:00	5:00	5:00	R07 141° to 174°	4:50	4:50	5:00	5:00	5:00	R07 141° to 174°	5:00	4:50
R08 175° to 230°	3:50	3:50	2:50	2:50	2:50	R08 175° to 230°	3:50	3:50	3:00	3:00	2:50	R08 175° to 230°	2:50	3:50
R09 231° to 286°	6:10	6:10	5:10	5:10	5:10	R09 231° to 286°	6:10	6:10	5:10	5:10	5:10	R09 231° to 286°	5:10	6:10
R10 287° to 331°	6:10	6:10	5:10	5:10	5:10	R10 287° to 331°	6:10	6:10	5:10	5:10	5:10	R10 287° to 331°	5:10	6:10
R01 332° to 28°	1:00	1:00	1:00	1:00	1:00	R01 332° to 28°	1:00	1:00	1:00	1:00	1:00	R01 332° to 28°	1:00	2:00
5-Mile Ring and Downwind to EPZ Boundary														
R11 355° to 50°	6:10	6:10	5:50	5:50	5:50	R11 355° to 50°	6:10	6:10	5:50	5:50	5:50	R11 355° to 50°	5:50	6:10
R12 51° to 61°	6:10	6:10	5:50	5:50	5:50	R12 51° to 61°	6:10	6:10	5:50	5:50	5:50	R12 51° to 61°	5:50	6:10
R13 62° to 95°	6:10	6:10	5:50	5:50	5:50	R13 62° to 95°	6:10	6:10	5:50	5:50	5:50	R13 62° to 95°	5:50	6:10
R14 96° to 129°	6:10	6:10	5:50	5:50	5:50	R14 96° to 129°	6:10	6:10	5:50	5:50	5:50	R14 96° to 129°	5:50	6:10
R15 130° to 163°	6:10	6:10	5:10	5:10	5:10	R15 130° to 163°	6:10	6:10	5:10	5:10	5:10	R15 130° to 163°	5:10	6:10
R16 164° to 174°	6:10	6:10	5:20	5:20	5:20	R16 164° to 174°	6:20	6:20	5:20	5:20	5:20	R16 164° to 174°	5:20	6:10
R17 175° to 219°	6:10	6:10	5:20	5:20	5:20	R17 175° to 219°	6:20	6:20	5:20	5:20	5:20	R17 175° to 219°	5:20	6:10
R18 220° to 230°	6:10	6:10	5:20	5:20	5:20	R18 220° to 230°	6:20	6:20	5:20	5:20	5:20	R18 220° to 230°	5:20	6:10
R19 231° to 286°	6:20	6:20	5:20	5:20	5:20	R19 231° to 286°	6:20	6:20	5:20	5:20	5:20	R19 231° to 286°	5:20	6:20
R20 287° to 298°	6:10	6:10	5:10	5:10	5:10	R20 287° to 298°	6:10	6:10	5:10	5:10	5:10	R20 287° to 298°	5:10	6:10
R21 299° to 343°	6:10	6:10	5:10	5:10	5:10	R21 299° to 343°	6:10	6:10	5:10	5:10	5:10	R21 299° to 343°	5:10	6:10
R22 344° to 354°	6:10	6:10	5:50	5:50	5:50	R22 344° to 354°	6:10	6:10	5:50	5:50	5:50	R22 344° to 354°	5:50	6:10

Table J-2 Description of Evacuation Regions

Region	Description	ZONE										
		1	2	3	4	5	6	7	8	9	10	11
R01	2 mile ring	■										
R02	5-mile ring	■	■	■	■	■						
R03	Full EPZ	■	■	■	■	■	■	■	■	■	■	■
Evacuate 2 mile ring and 5 miles downwind												
Region	**Wind Direction (From) in Degrees**	ZONE										
		1	2	3	4	5	6	7	8	9	10	11
R04	29 - 50	■			■							
R05	51 - 106	■			■	■						
R06	107 - 140	■				■						
R07	141 - 174	■	■			■						
R08	175 - 230	■	■									
R09	231 - 286	■	■	■								
R10	287 - 331	■		■								
R01*	332 - 28	■										
Evacuate 5 mile ring and downwind to EPZ boundary												
Region	**Wind Direction (From) in Degrees**	ZONE										
		1	2	3	4	5	6	7	8	9	10	11
R11	355 - 50	■	■	■	■	■			■	■		
R12	51 - 61	■	■	■	■	■			■	■	■	
R13	62 - 95	■	■	■	■	■				■	■	
R14	96 - 129	■	■	■	■	■				■	■	■
R15	130 - 163	■	■	■	■	■					■	■
R16	164 - 174	■	■	■	■	■	■				■	■
R17	175 - 219	■	■	■	■	■	■					■
R18	220 - 230	■	■	■	■	■	■					
R19	231 - 286	■	■	■	■	■	■	■				
R20	287 - 298	■	■	■	■	■		■				
R21	299 - 343	■	■	■	■	■		■	■			
R22	344 - 354	■	■	■	■	■		■	■	■		

Residents and Transients in the Matagorda beach area are always evacuated.

* Note that evacuating the 2-mile ring, and evacuating the 5-mile ring with wind from 332° to 28°, both result in the evacuation of Region1. Thus, R01 is shown twice in the table above.

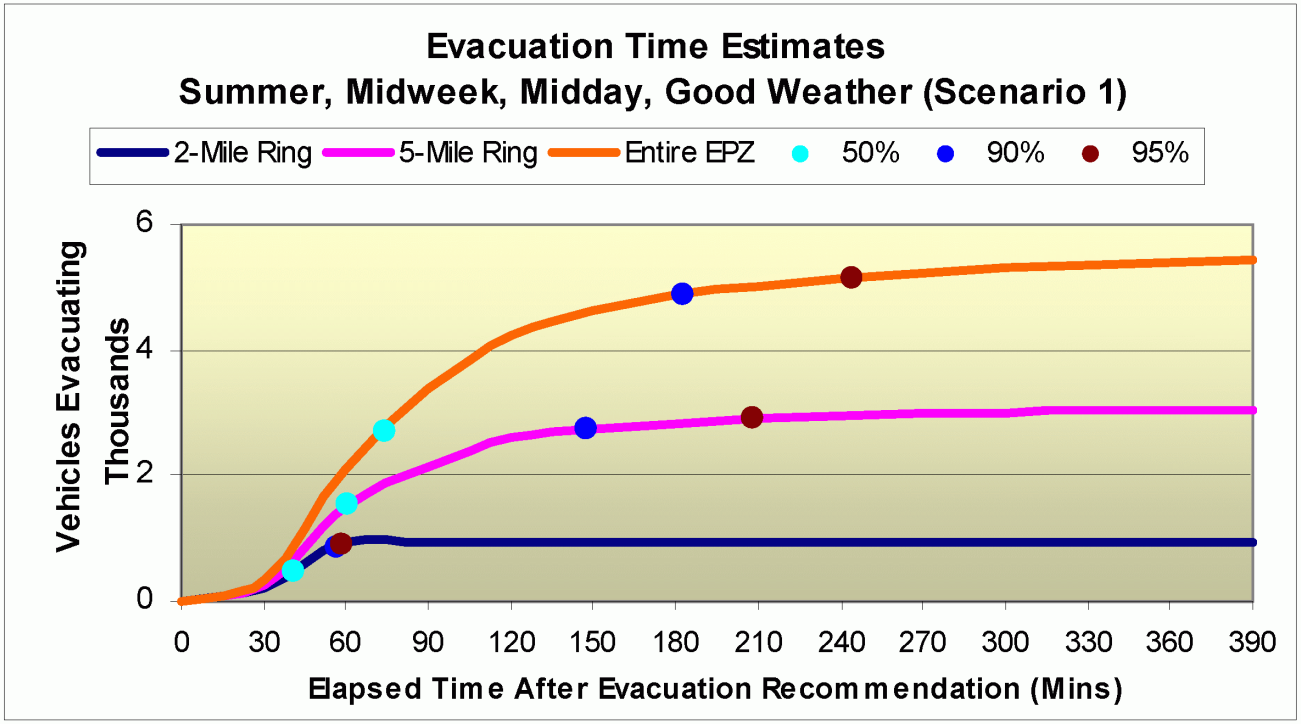

Figure J-1. Evacuation Time Estimates – Scenario 1 for Region R3 (Entire EPZ)

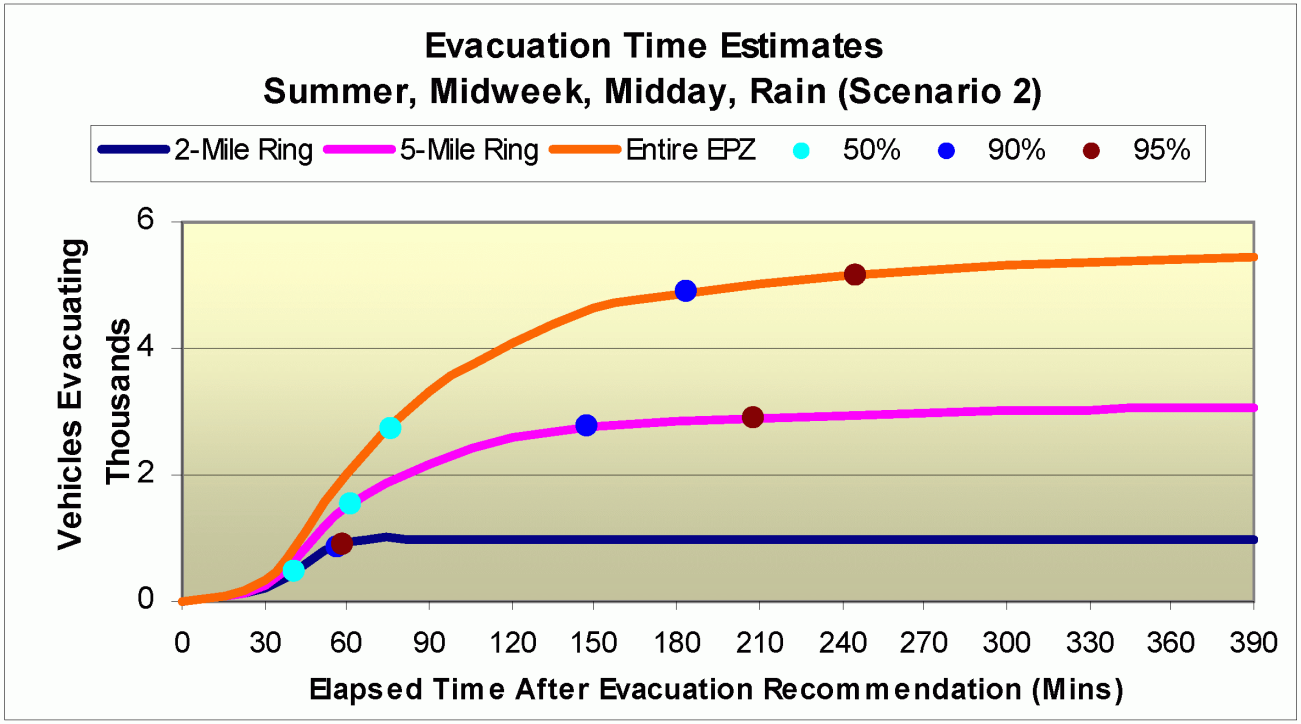

Figure J-2. Evacuation Time Estimates – Scenario 2 for Region R3 (Entire EPZ)

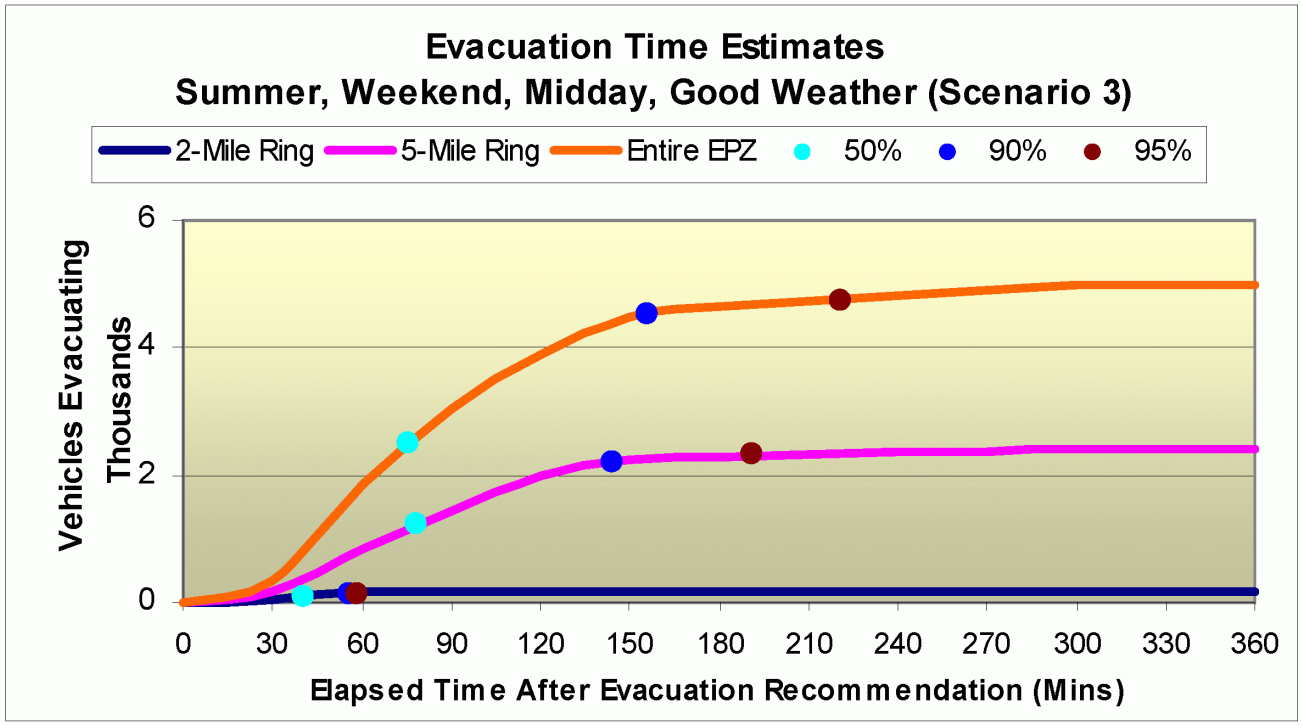

Figure J-3. Evacuation Time Estimates – Scenario 3 for Region R3 (Entire EPZ)

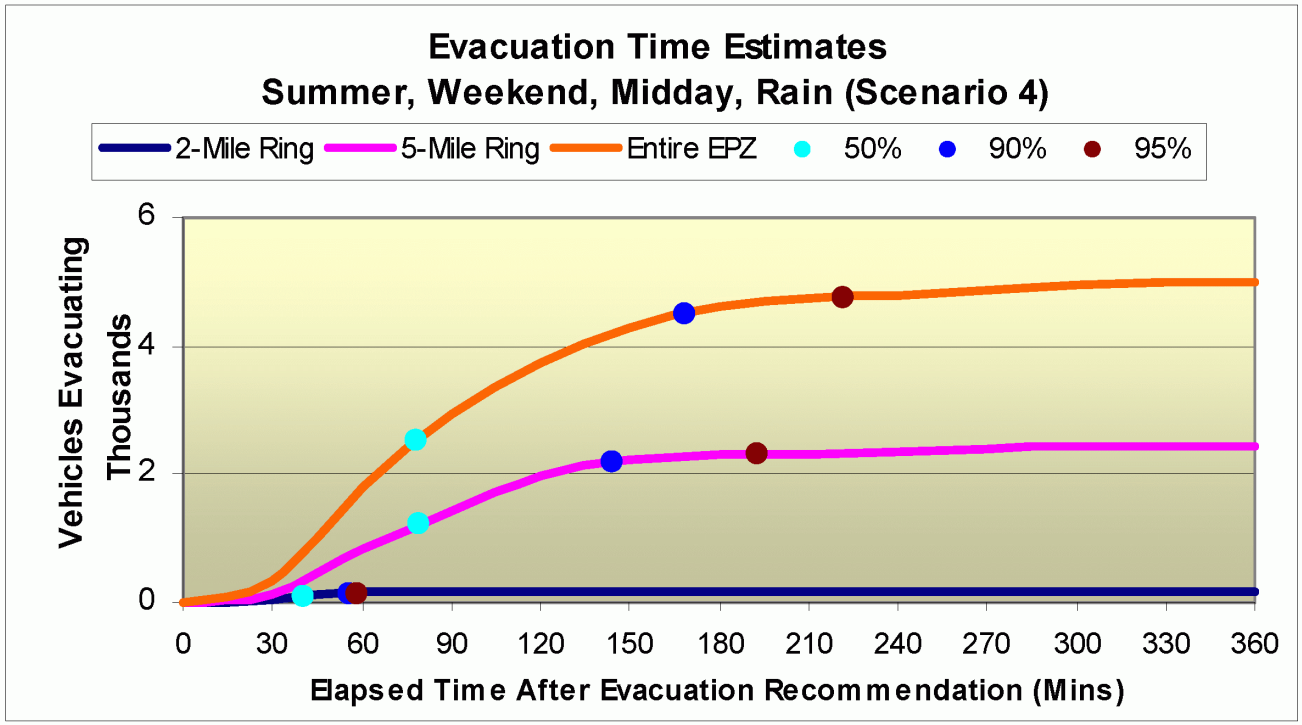

Figure J-4. Evacuation Time Estimates – Scenario 4 for Region R3 (Entire EPZ)

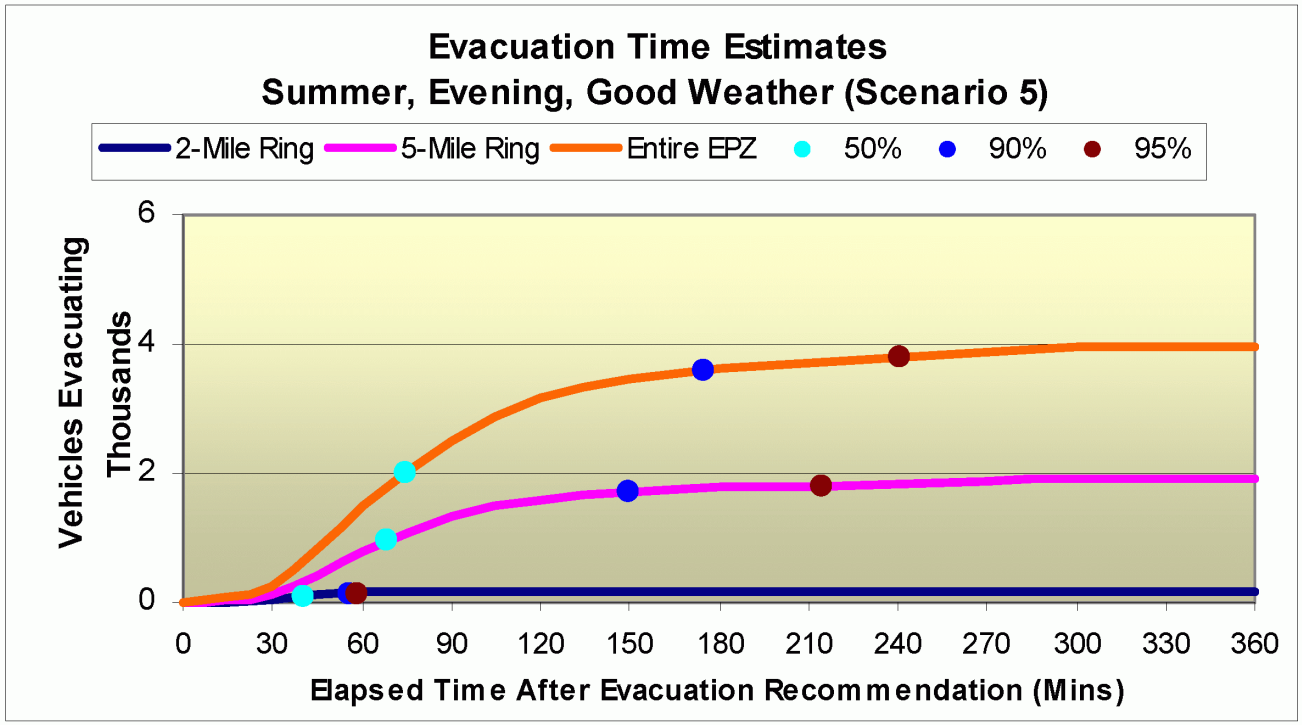

Figure J-5. Evacuation Time Estimates – Scenario 5 for Region R3 (Entire EPZ)

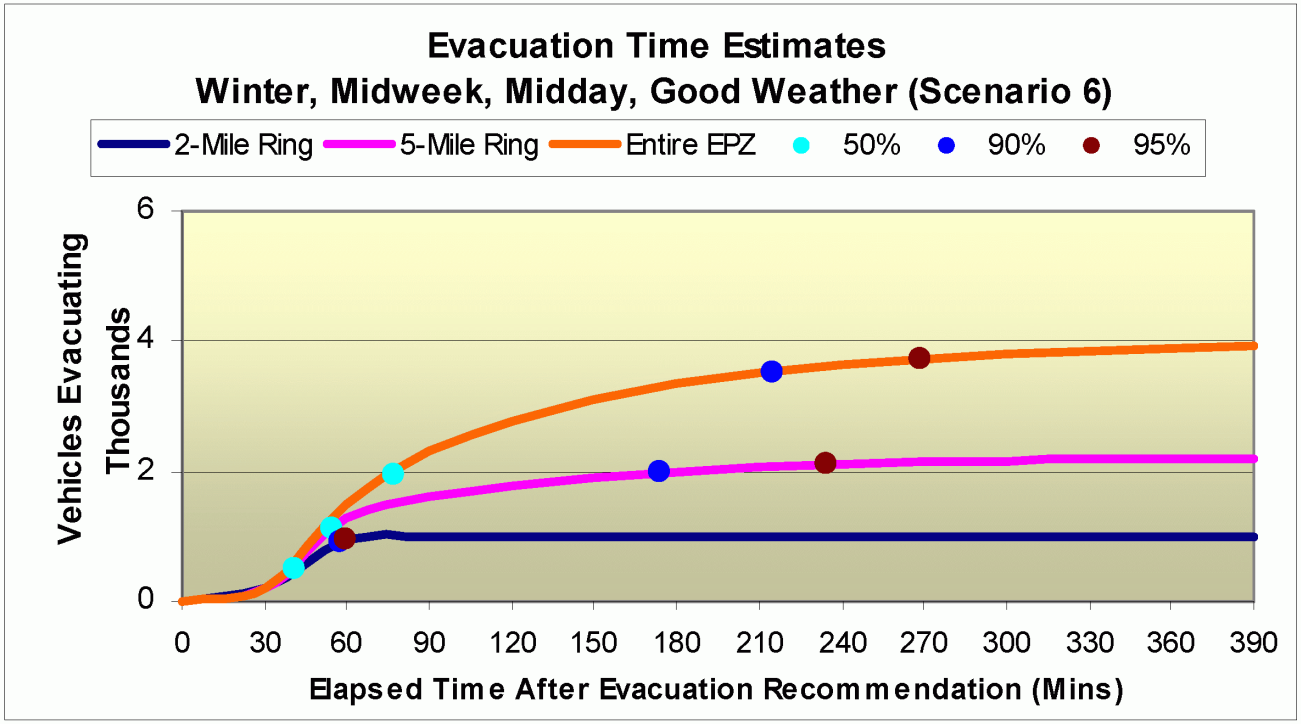

Figure J-6. Evacuation Time Estimates – Scenario 6 for Region R3 (Entire EPZ)

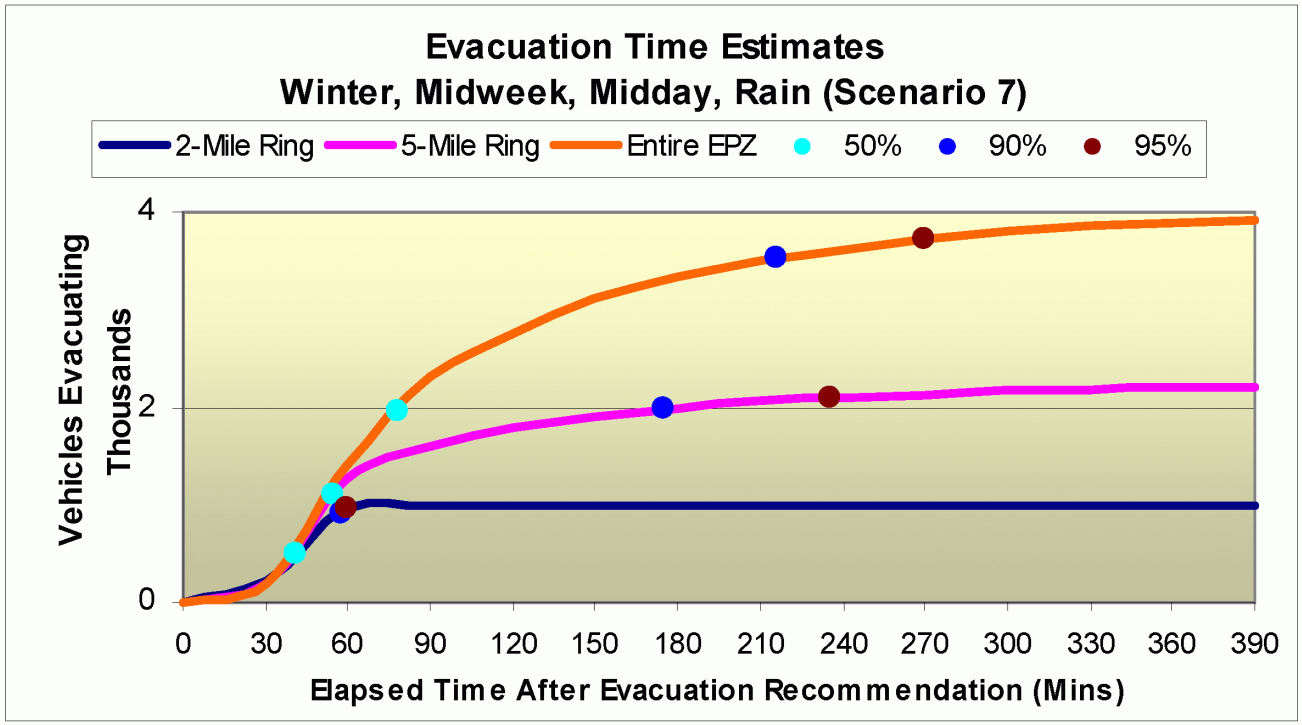

Figure J-7. Evacuation Time Estimates – Scenario 7 for Region R3 (Entire EPZ)

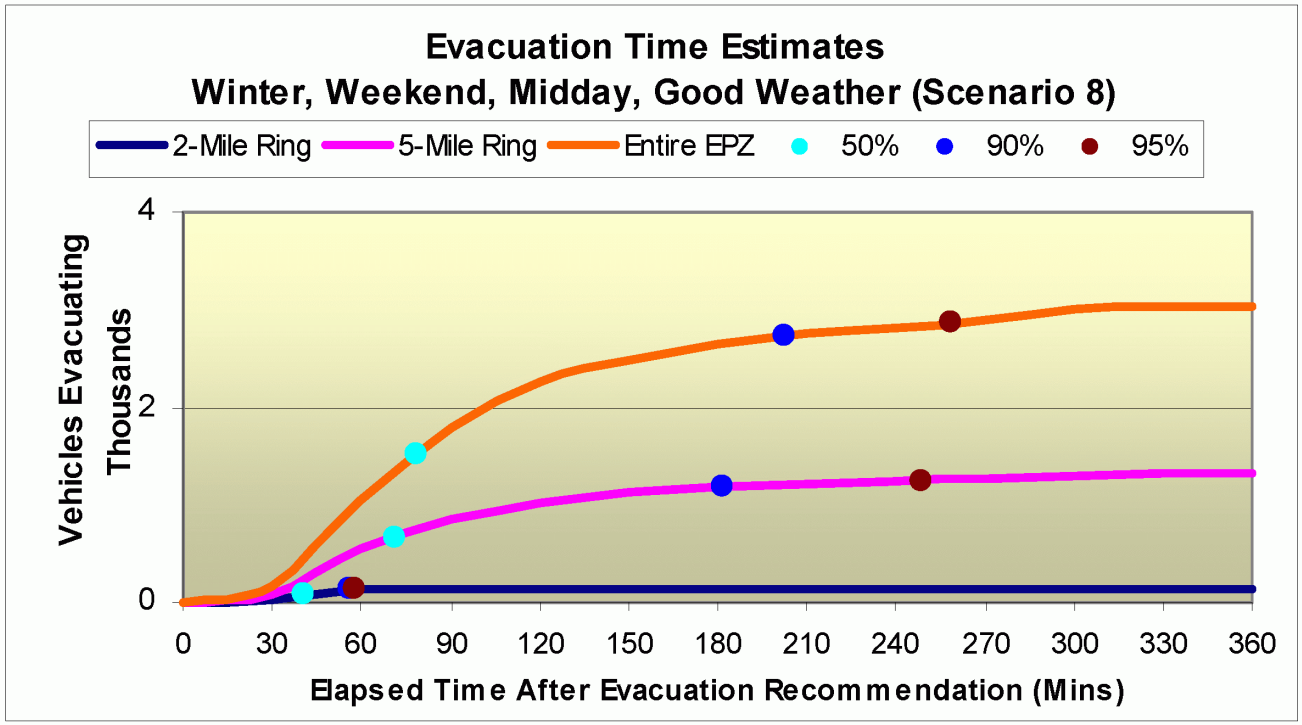

Figure J-8. Evacuation Time Estimates – Scenario 8 for Region R3 (Entire EPZ)

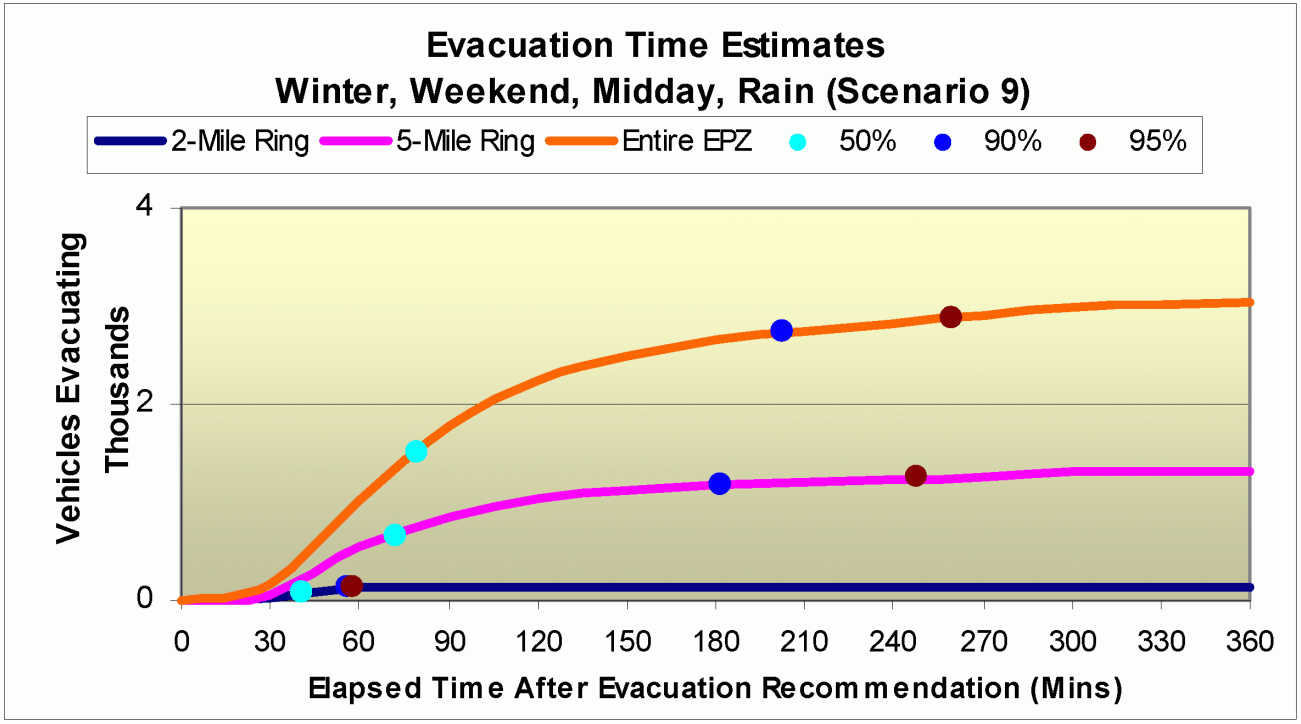

Figure J-9. Evacuation Time Estimates – Scenario 9 for Region R3 (Entire EPZ)

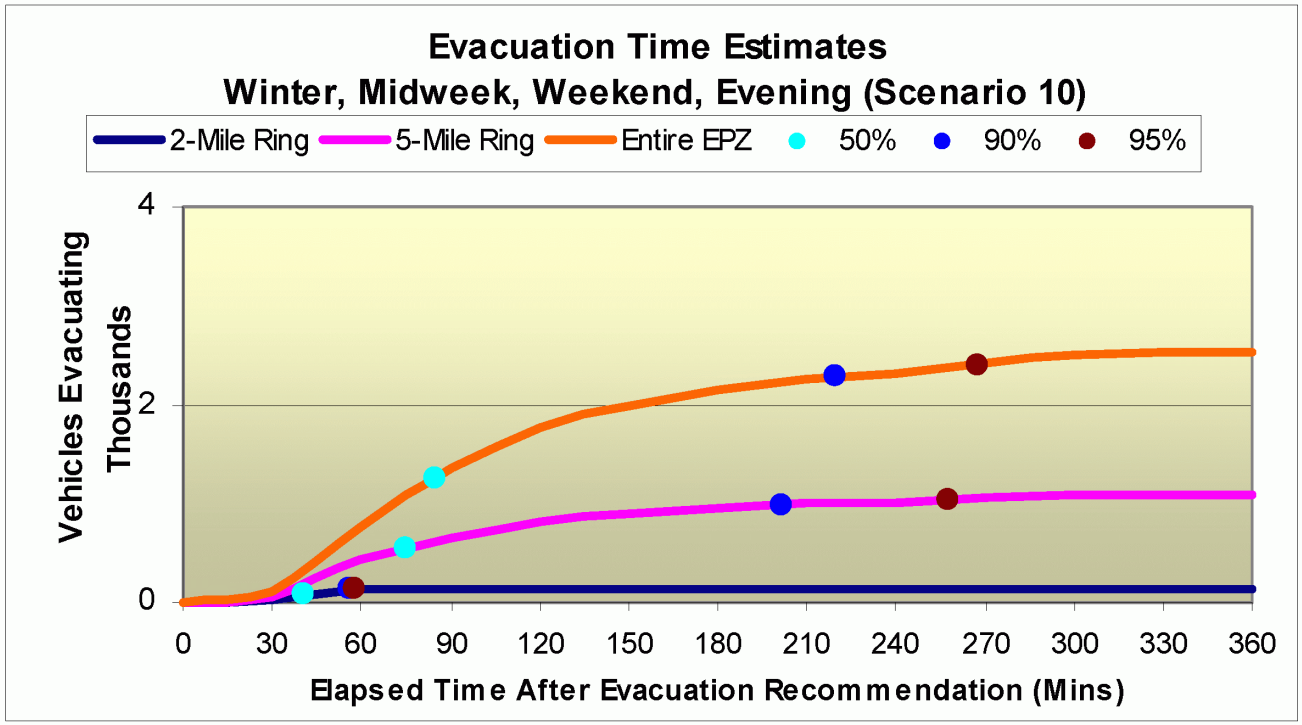

Figure J-10. Evacuation Time Estimates – Scenario 10 for Region R3 (Entire EPZ)

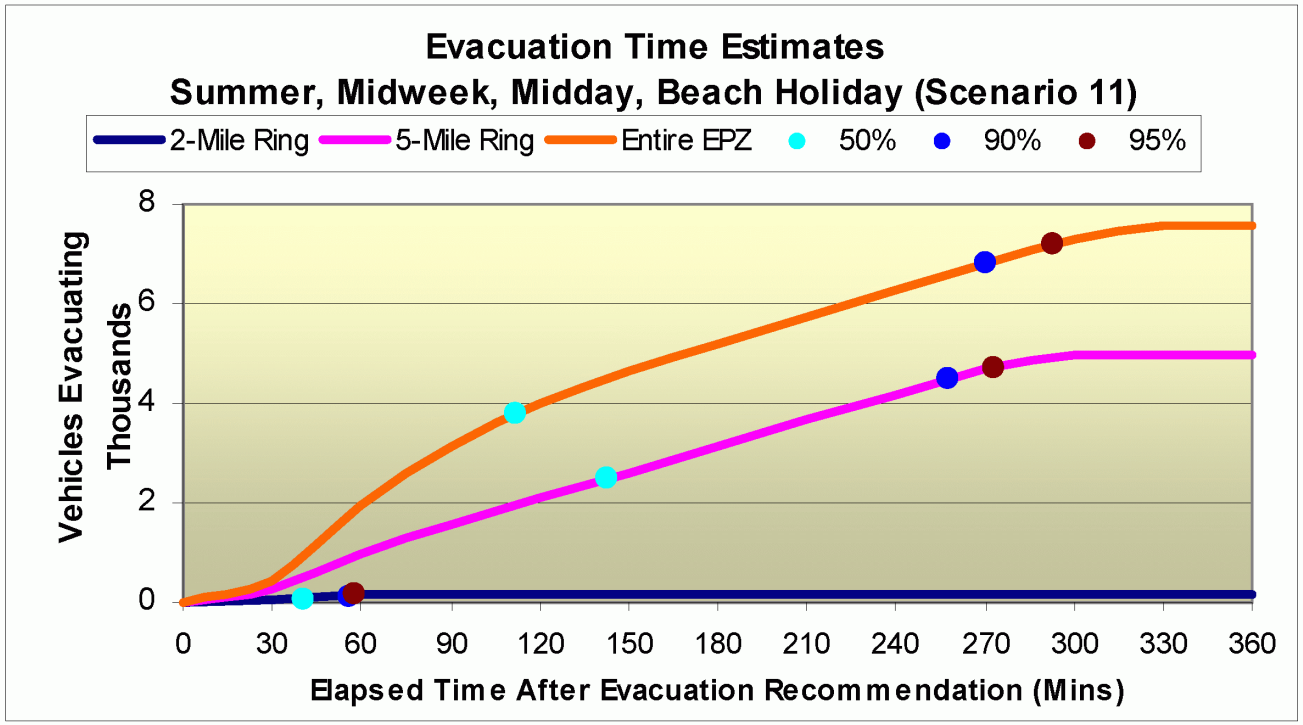

Figure J-11. Evacuation Time Estimates – Scenario 11 for Region R3 (Entire EPZ)

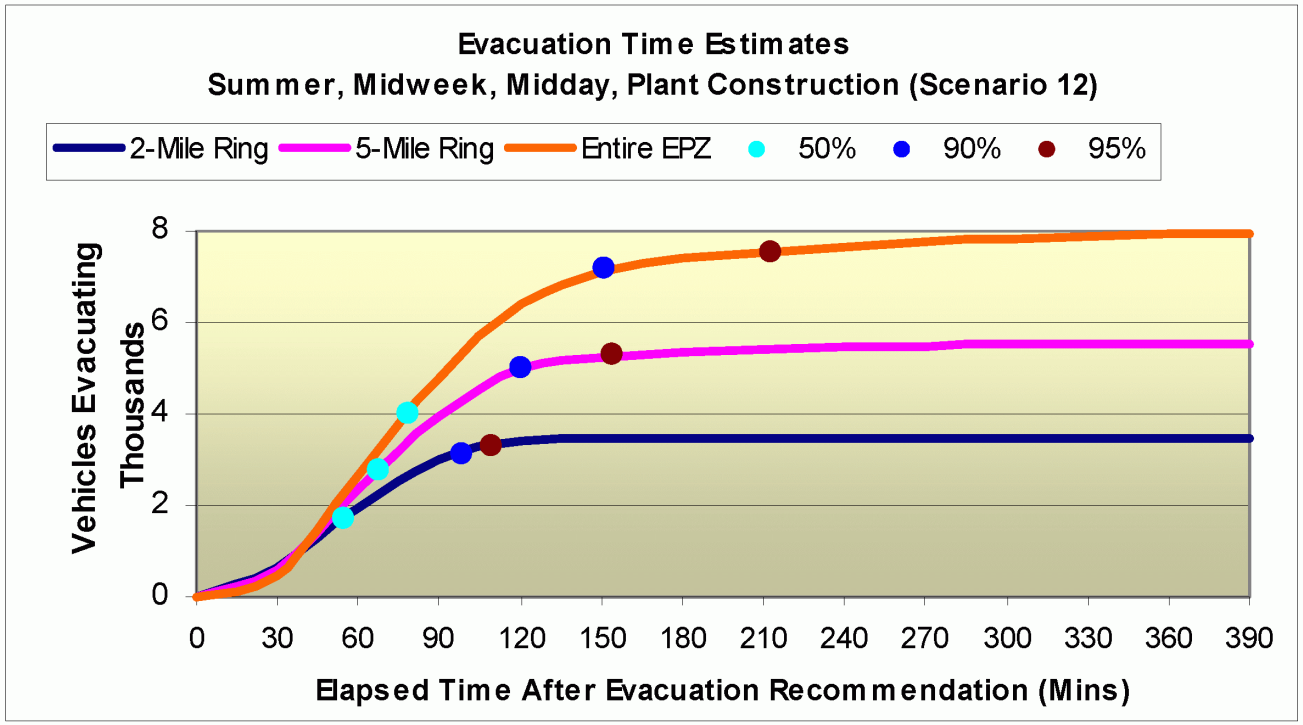

Figure J-12. Evacuation Time Estimates – Scenario 12 for Region R3 (Entire EPZ)

APPENDIX K

Evacuation Roadway Network Characteristics

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
40	41	111	1	1714	50
40	1133	21	1	1714	50
41	40	111	1	1714	50
41	42	55	1	1714	55
42	41	55	1	1714	50
42	700	71	1	1714	65
50	60	95	1	1714	50
50	1133	42	1	1714	50
60	50	95	1	1714	50
60	61	42	1	1714	50
61	60	42	1	1714	50
61	62	92	1	1714	50
62	61	92	1	1714	50
62	70	49	1	1714	70
70	62	49	1	1714	60
70	71	76	1	1714	70
71	70	76	1	1714	70
71	72	15	1	1714	70
72	71	15	1	1714	70
72	80	12	1	1714	70
80	72	12	1	1714	70
80	81	31	1	1714	70
81	80	31	1	1714	70
81	82	30	1	1714	70
82	81	30	1	1714	70
82	83	74	1	1714	70
83	82	74	1	1714	70
83	84	95	1	1714	65
84	83	95	1	1714	70
84	85	15	1	1714	70
84	1110	102	1	1714	55
85	84	15	1	1714	65
85	86	66	1	1714	70
86	85	66	1	1714	70
86	90	127	1	1714	40
90	86	127	1	1714	70
90	91	16	1	1714	45
91	90	16	1	1714	40
91	92	5	1	1714	45
92	91	5	1	1714	45
92	98	67	1	1714	45

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
93	94	12	1	1714	45
93	98	26	1	1714	45
94	93	12	1	1714	45
94	100	23	1	1714	45
98	92	67	1	1714	45
98	93	26	1	1714	45
100	94	23	1	1714	45
100	101	66	1	1714	45
100	1228	111	1	1714	55
101	110	214	1	1714	55
110	111	15	1	1714	45
111	120	22	1	1714	30
120	121	9	1	1714	35
121	122	38	1	1714	45
122	123	73	1	1714	50
123	130	67	1	1714	55
130	131	61	1	1714	55
131	140	213	1	1714	55
140	141	135	1	1714	55
150	120	79	1	1714	45
161	150	8	1	1714	30
170	161	104	1	1714	45
170	180	43	1	1714	30
180	170	43	1	1714	30
180	1231	38	1	1714	45
190	180	71	1	1714	30
200	190	110	1	1714	50
210	200	323	1	1714	50
211	210	146	1	1714	50
212	211	22	1	1714	50
213	212	29	1	1714	50
214	213	26	1	1714	45
215	214	13	1	1714	45
216	215	60	1	1714	45
220	230	108	1	1714	55
221	1178	77	1	1714	70
230	240	71	2	1714	55
230	250	60	1	1714	55
240	241	77	2	1714	55
241	280	87	2	1714	55
242	241	41	1	1500	40

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
250	260	40	1	1714	50
260	270	206	1	1500	40
270	460	23	1	1714	30
270	1227	25	1	1500	30
280	310	44	2	1500	30
310	320	22	2	1500	30
310	1226	64	1	1500	30
310	1227	77	1	1500	30
320	310	22	2	1500	30
320	340	37	2	1500	40
320	370	21	1	1500	30
320	400	23	1	1500	30
340	320	37	2	1500	30
340	350	42	1	1500	40
350	340	42	1	1500	40
350	990	26	1	1500	40
350	1101	177	1	1714	50
370	320	21	1	1500	30
370	510	44	1	1500	30
400	320	23	1	1500	30
400	430	57	1	1500	30
430	400	57	1	1500	30
430	460	22	1	1714	30
430	1227	23	1	1500	30
460	430	22	1	1500	30
460	461	83	1	1500	30
460	470	76	1	1714	50
461	460	83	1	1714	30
461	1100	41	1	1714	40
470	460	76	1	1714	30
470	480	74	1	1714	65
470	490	141	1	1714	65
480	470	74	1	1714	65
480	481	45	1	1714	65
481	480	45	1	1714	65
490	491	41	1	1714	65
510	370	44	1	1500	30
510	1226	22	1	1500	30
510	1266	43	1	1714	45
530	531	21	2	1714	70
530	1265	14	2	1714	70

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
531	530	21	2	1714	70
531	532	35	2	1500	70
532	531	35	2	1714	70
532	1264	128	2	1500	70
550	560	15	1	1500	30
550	610	30	1	1500	30
550	1263	51	1	1714	40
560	550	15	1	1500	30
560	570	31	1	1500	30
560	590	34	1	1500	30
570	560	31	1	1500	30
570	580	34	1	1500	30
580	570	34	1	1500	30
580	590	30	1	1500	30
590	560	34	1	1500	30
590	580	30	1	1500	30
590	600	32	1	1500	30
590	1344	63	1	1714	50
600	590	32	1	1500	30
600	610	46	1	1500	30
610	550	30	1	1714	30
610	600	46	1	1500	30
610	611	19	1	1714	45
611	612	788	1	1714	60
612	620	45	1	1714	50
620	621	191	1	1714	50
620	622	212	1	1714	50
630	620	131	1	1714	50
640	1168	225	1	1714	70
640	1216	52	1	1714	70
650	651	20	2	1714	65
650	1217	9	2	1714	65
650	1218	8	1	1895	30
651	650	20	2	1714	65
651	652	31	2	1714	60
652	651	31	2	1714	65
652	653	76	1	1714	60
653	652	76	1	1895	65
653	660	18	1	1714	50
660	653	18	1	1714	60
660	1267	10	1	1714	50

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
661	662	362	1	1714	55
661	1269	9	1	1714	50
662	661	362	1	1714	50
662	730	189	1	1800	70
670	1220	167	1	1714	65
680	1189	64	1	1714	65
681	1188	57	1	1714	60
690	681	191	1	1714	60
690	710	139	1	1714	55
691	690	35	1	1714	65
700	42	71	1	1714	65
700	691	217	1	1714	70
710	1190	46	1	1714	50
730	662	189	1	1714	60
730	1338	115	1	1714	70
731	1250	168	1	1714	70
731	1338	133	1	1714	70
740	770	85	1	1714	40
740	1248	6	1	1714	35
740	1249	6	1	1895	30
750	810	84	1	1500	40
750	1249	94	1	1895	40
750	1251	92	1	1714	50
760	830	85	1	1714	55
760	1252	13	1	1714	50
770	740	85	1	1714	70
770	780	15	1	1500	35
770	800	61	1	1500	35
780	770	15	1	1714	40
780	790	60	1	1500	35
790	780	60	1	1500	35
790	800	15	1	1500	35
800	770	61	1	1714	40
800	790	15	1	1500	35
800	810	39	1	1500	40
810	750	84	1	1714	30
810	800	39	1	1500	35
810	820	99	1	1714	40
820	810	99	1	1500	40
820	821	79	1	1714	45
821	820	79	1	1714	40

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
821	1251	9	1	1714	40
821	1252	5	1	1714	40
830	760	85	1	1714	50
830	831	25	1	1714	30
830	840	46	1	1714	55
831	830	25	1	1714	55
840	830	46	1	1714	55
840	841	30	1	1714	40
841	840	30	1	1714	40
841	842	35	1	1714	55
842	841	35	1	1714	55
842	843	21	1	1714	45
843	842	21	1	1714	45
843	844	49	1	1714	55
844	843	49	1	1714	55
850	851	93	1	1714	45
851	1179	80	1	1714	55
852	90	134	1	1714	50
860	861	86	1	1500	35
861	850	39	1	1714	35
870	860	26	1	1500	30
880	870	16	1	1500	30
880	890	25	1	1714	50
890	880	25	1	1500	30
890	900	8	1	1714	50
900	890	8	1	1714	50
900	901	56	1	1714	35
901	902	25	1	1714	35
902	850	74	1	1714	35
902	1232	40	1	1500	45
910	911	98	1	1714	35
911	900	36	1	1714	50
920	910	102	1	1714	45
930	931	151	1	1714	45
931	920	269	1	1714	45
940	950	48	1	1500	30
940	970	41	1	1714	45
940	1268	45	1	1714	50
950	940	48	1	1500	30
950	960	39	1	1500	30
960	950	39	1	1500	30

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
960	970	50	1	1500	30
970	940	41	1	1714	45
970	960	50	1	1500	30
970	971	63	1	1714	50
971	970	63	1	1714	50
971	980	109	1	1714	50
980	971	109	1	1714	50
980	981	96	1	1714	55
980	983	394	1	1714	55
981	980	96	1	1714	50
981	982	123	1	1714	55
982	981	123	1	1714	55
983	980	394	1	1714	50
983	984	122	1	1714	55
984	983	122	1	1714	50
984	1343	60	1	1714	50
990	350	26	1	1500	30
990	1000	48	1	1714	40
1000	990	48	1	1500	40
1000	1100	20	1	1714	40
1100	461	41	1	1500	30
1100	1000	20	1	1714	40
1100	1102	71	1	1714	55
1101	1103	30	1	1714	50
1110	1173	40	1	1714	55
1120	1122	43	1	1714	55
1122	1229	58	1	1714	55
1124	1176	78	1	1714	60
1126	1128	179	1	1714	65
1128	1130	59	1	1714	60
1130	1132	142	1	1714	65
1132	230	118	1	1714	55
1133	40	21	1	1714	50
1133	50	42	1	1714	50
1133	1134	31	1	1714	65
1134	1135	42	1	1714	65
1135	1136	30	1	1714	65
1136	1137	20	1	1714	65
1137	1138	56	1	1714	65
1138	1139	20	1	1714	65
1139	1140	40	1	1714	65

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1140	1141	38	1	1714	65
1141	1142	32	1	1714	65
1142	1143	5	1	1714	65
1142	1185	29	1	1714	40
1143	1144	45	1	1714	65
1144	1145	35	1	1714	65
1145	1146	29	1	1714	65
1146	1147	28	1	1714	65
1147	1148	49	1	1714	65
1148	1149	27	1	1714	65
1149	1150	9	1	1714	65
1150	1151	57	1	1714	65
1151	1152	22	1	1714	65
1152	1153	11	1	1714	65
1153	1154	43	1	1714	65
1154	1155	62	1	1714	65
1155	1156	17	1	1714	65
1156	1157	45	1	1714	65
1157	1158	31	1	1714	65
1158	1159	53	1	1714	65
1159	1160	30	1	1714	65
1160	1161	53	1	1714	65
1161	1162	17	1	1714	65
1162	1258	46	1	1714	70
1163	1262	25	1	1714	45
1166	1167	157	1	1714	70
1166	1262	74	2	1714	70
1167	1166	157	1	1714	70
1167	1168	140	1	1714	70
1168	640	225	1	1714	70
1168	1167	140	1	1714	70
1169	1170	21	1	1714	30
1170	93	33	1	1714	30
1171	1169	39	1	1714	30
1172	1171	71	1	1895	45
1173	1120	116	1	1714	55
1173	1172	69	1	1714	45
1174	1177	91	1	1714	50
1175	1174	58	1	1714	50
1176	1126	38	1	1714	60
1177	1176	96	1	1714	40

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1178	220	192	1	1714	70
1179	1238	241	1	1714	65
1180	1181	70	1	1714	50
1180	1187	61	1	1714	45
1181	1180	70	1	1714	50
1181	1182	56	1	1714	30
1182	1181	56	1	1714	50
1182	1186	17	1	1714	30
1183	1184	17	1	1714	30
1183	1186	123	1	1714	50
1184	1183	17	1	1895	30
1184	1185	45	1	1714	40
1185	1142	29	1	1714	30
1185	1184	45	1	1714	40
1186	1182	17	1	1714	30
1186	1183	123	1	1895	50
1187	680	6	1	1714	55
1187	1180	61	1	1714	50
1188	1187	62	1	1714	60
1189	670	87	1	1714	65
1190	1191	16	1	1714	50
1191	1192	171	1	1714	60
1191	1193	51	1	1714	50
1192	730	158	1	1895	40
1193	1191	51	1	1714	40
1193	1194	36	1	1714	55
1194	1193	36	1	1714	50
1194	1195	28	1	1714	55
1195	1194	28	1	1714	55
1195	1196	102	1	1714	55
1196	1195	102	1	1714	55
1196	1197	23	1	1714	55
1197	1196	23	1	1714	55
1197	1198	18	1	1714	50
1198	1197	18	1	1714	55
1198	1199	17	1	1714	45
1199	1198	17	1	1714	50
1199	1200	12	1	1714	45
1200	1199	12	1	1714	45
1200	1204	9	1	1714	50
1201	1205	31	1	1714	60

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1202	1200	11	1	1500	30
1203	1202	16	1	1500	30
1204	1201	40	1	1714	60
1205	1206	26	1	1714	60
1206	1207	21	1	1714	60
1207	1208	29	1	1714	60
1208	1209	17	1	1714	50
1209	1210	29	1	1714	50
1210	1211	34	1	1714	50
1211	1212	87	1	1714	65
1212	1213	55	1	1714	65
1213	1214	52	1	1714	55
1214	1215	68	1	1714	55
1215	661	39	1	1714	30
1216	640	52	1	1714	70
1216	1217	244	2	1714	65
1217	650	9	2	1714	65
1217	1216	244	2	1714	70
1217	1218	12	1	1895	60
1218	1219	93	1	1714	60
1219	630	167	1	1714	60
1220	640	193	1	1714	40
1221	221	220	1	1714	70
1222	1223	39	1	1500	30
1223	1224	62	1	1500	30
1224	1308	107	1	1714	60
1225	690	356	1	1714	60
1226	310	64	1	1500	30
1226	510	22	1	1500	30
1227	270	25	1	1500	30
1227	310	77	1	1500	30
1227	430	23	1	1500	30
1228	100	111	1	1714	45
1228	1221	40	1	1714	55
1229	1124	74	1	1714	60
1229	1230	192	1	1714	40
1230	1228	55	1	1714	40
1231	123	160	1	1714	45
1232	902	40	1	1714	35
1232	1270	101	1	1714	45
1233	1234	129	1	1500	45

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1233	1271	69	1	1714	45
1234	1246	30	1	1500	30
1235	1236	18	1	1500	30
1236	1237	142	1	1500	35
1237	1240	30	1	1500	40
1238	852	199	1	1714	55
1239	1241	89	1	1500	45
1240	1239	97	1	1500	45
1241	1242	95	1	1500	45
1242	1243	81	1	1500	45
1243	1244	86	1	1500	45
1244	170	37	1	1500	30
1245	1233	23	1	1714	30
1246	1235	33	1	1500	30
1247	700	43	1	1714	30
1248	740	6	1	1895	30
1248	1249	7	1	1895	30
1248	1250	96	1	1714	70
1249	740	6	1	1895	30
1249	750	94	1	1714	40
1250	731	168	1	1714	70
1250	1248	96	1	1714	60
1251	750	92	1	1714	40
1251	1252	8	1	1714	50
1252	760	13	1	1714	45
1252	821	5	1	1714	40
1252	1251	8	1	1714	50
1258	1163	45	1	1714	50
1261	1263	39	2	1714	70
1261	1264	138	2	1500	70
1262	1166	74	2	1714	70
1262	1263	15	2	1714	70
1263	550	51	1	1714	40
1263	1261	39	2	1714	70
1263	1262	15	2	1714	70
1264	532	128	2	1500	70
1264	1261	138	2	1714	70
1265	530	14	2	1714	70
1265	1266	137	2	1714	45
1266	510	43	1	1714	30
1266	1265	137	2	1714	70

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1267	1268	12	1	1714	50
1267	1269	13	1	1714	50
1268	940	45	1	1714	45
1268	1269	14	1	1714	45
1269	660	20	1	1714	50
1269	661	9	1	1714	50
1269	1267	13	1	1714	30
1270	1232	101	1	1714	50
1270	1271	29	1	1714	45
1271	1233	69	1	1714	30
1271	1270	29	1	1714	45
1272	1223	74	1	1714	50
1272	1296	155	1	1714	50
1273	1272	188	1	1714	60
1274	1273	44	1	1714	60
1275	1274	89	1	1714	60
1276	1275	86	1	1714	60
1277	1276	102	1	1714	60
1278	1277	79	1	1714	60
1279	1278	59	1	1714	60
1280	1281	50	1	1714	45
1280	1287	77	1	1714	45
1281	1280	50	1	1714	45
1281	1282	205	1	1714	45
1282	1281	205	1	1714	45
1282	1283	44	1	1714	40
1283	1282	44	1	1714	40
1283	1284	39	1	1714	45
1284	1283	39	1	1714	40
1284	1285	254	1	1714	45
1285	1284	254	1	1714	45
1285	1286	52	1	1714	40
1286	1285	52	1	1714	45
1286	1290	36	1	1714	40
1286	1291	52	1	1714	30
1287	1280	77	1	1714	45
1287	1288	86	1	1714	45
1287	1336	29	1	1714	35
1288	1287	86	1	1714	45
1288	1289	205	1	1714	45
1288	1334	20	1	1714	30

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1289	1288	205	1	1714	45
1289	1290	192	1	1714	45
1290	1286	36	1	1714	40
1290	1289	192	1	1714	45
1291	1292	45	1	1714	30
1292	1293	35	1	1714	30
1293	1320	179	1	1714	50
1294	1295	122	1	1714	50
1295	1225	171	1	1714	50
1296	1308	124	1	1714	50
1297	1296	186	1	1714	50
1298	1297	89	1	1714	60
1299	1300	25	1	1714	40
1300	1301	18	1	1714	45
1301	1302	28	1	1714	45
1302	1303	28	1	1714	45
1303	1304	44	1	1714	45
1304	1305	37	1	1714	45
1305	1306	25	1	1714	45
1306	1329	20	1	1714	45
1307	1297	103	1	1714	50
1308	1225	82	1	1714	50
1309	1298	94	1	1714	60
1310	1294	31	1	1714	45
1311	1310	81	1	1714	50
1311	1324	34	1	1714	40
1312	1311	96	1	1714	45
1313	1312	29	1	1714	45
1314	1313	44	1	1714	45
1314	1315	54	1	1714	45
1314	1328	30	1	1714	45
1315	1314	54	1	1714	45
1315	1316	77	1	1714	40
1316	1315	77	1	1714	45
1316	1327	54	1	1714	45
1320	1294	129	1	1714	50
1324	1325	17	1	1714	35
1325	1326	67	1	1714	40
1326	1295	123	1	1714	45
1327	1326	80	1	1714	50
1328	1314	30	1	1714	40

Upstream Node Number	Downstream Node Number	Length (miles * 100)	Full Lanes	Saturation Flow Rate (Veh/hr/ln)	Free Flow Speed (MPH)
1329	1330	32	1	1714	45
1330	1307	28	1	1714	50
1331	1299	47	1	1714	45
1332	1331	30	1	1714	45
1333	1316	40	1	1714	40
1334	1335	25	1	1714	45
1335	1337	28	1	1714	45
1336	41	51	1	1714	45
1337	61	28	1	1714	45
1338	730	115	1	1714	70
1338	731	133	1	1714	70
1338	1339	148	1	1714	55
1339	1340	181	1	1714	50
1340	1341	21	1	1714	35
1341	1342	195	1	1714	55
1342	1343	114	1	1714	40
1343	984	60	1	1714	50
1343	1347	22	1	1714	50
1344	1345	221	1	1714	50
1346	880	16	1	1500	30
1347	1343	22	1	1714	50

APPENDIX L

Zone Boundaries

APPENDIX L: Zone Boundaries

Zone 1

This area includes the site of the South Texas Project. It is defined by the following boundaries:

- East of CR 392
- Southwest of FM 521,with the north western boundary extending over FM521
- West of the Colorado River
- North of the STP Station southern property boundary

Zone 2

This is an area generally northeast of the South Texas Project, which includes Celanese. It is defined by the following boundaries:

- East of FM 1468
- South of FM 3057
- West of FM 2668
- North of FM 521

Zone 3

This is an area generally southeast of the South Texas Project which includes Selkirk Island, Exotic Isle, and Equistar. It is defined by the following boundaries:

- East of the Colorado River and Kelly Lake
- South of FM 521
- West of SH 60
- North of the protection levee at Matagorda

Zone 4

This is an area generally west of the South Texas Project which includes Tin Top and Citrus Grove Community. It is defined by the following boundaries:

- East of FM 1095
- South of FM 521
- West of CR 392
- North of CR 391

Zone 5

This is an area generally northwest of the South Texas Project, defined by the following boundaries:

- East of the Tres Palacios River
- South of Wilson Creek
- West of FM 1468
- North of FM 521

Zone 6

This is an area generally northeast of the South Texas Project which includes Riverside Park, Hales Acres, and Meadowbrook Estates. It is defined by the following boundaries:

- East of the Colorado River
- South and west of Live Oak Creek
- West of CR 262
- North of FM 521 and FM 3057

Zone 7

This is an area generally east and southeast of the South Texas Project which includes the town of Matagorda and the Intracoastal Waterway east of the Colorado River. It is defined by the following boundaries:

- East of SH 60
- South of CR 237 and the protection levy at Matagorda
- West of CR 262, CR241, CR 248, and CR 247 (Chinquapin, Brimsteader, Bear Ranch, and North Gulf Road)
- North of the Intracoastal Waterway

Zone 8

This is an area generally south of the South Texas Project defined by the following boundaries:

- East of Mad Island Slough
- South of the STP Station southern property boundary
- West of the Colorado River
- North of West Matagorda Bay

Zone 9

This is an area generally southwest of the South Texas Project which includes Collegeport and the northern portion of Tres Palacios Bay. It is defined by the following boundaries:

- East of SH35
- South of FM 521
- West of FM 1095 and Mad Island Slough
- North of CR 372

Zone 10

This is an area generally northwest of the South Texas Project which includes Tidewater Oaks and Tres Palacios Oaks. It is defined by the following boundaries:

- East and south of SH35
- West of the northern portion of FM 1095 and the Tres Palacios River
- North of FM 521

Zone 11

This is an area generally north of the South Texas Project which includes El Maton and Buckeye. It is defined by the following boundaries:

- East of the northern portion of FM 1095
- South of SH35
- West of the northern portion of the Colorado River
- North of Wilson Creek and the 5 mile ring