KANAWHA COUNTY - CITY OF CHARLESTON

Evacuation Plan

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

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An effective emergency response represents a multitude of interconnected, simultaneously implemented functions, all with the intention of protecting human life. Emergency situations may necessitate the ordering of "public protective actions", including evacuation.

Evacuation planning encompasses not only the movement of people, but also warnings, crisis communications, and mass care. Given these needs, it is important that such planning efforts consider communications to the public, traffic management, special needs populations, sheltering, and alternative transportation.

This document presents guidelines for emergency services agencies in Kanawha County to ensure a coordinated evacuation of the population. The plan relies on a "common sense" approach to meeting the basic needs of an evacuating population that originates in Kanawha County as well as a population that may be evacuating through the county. Considerations for incident-specific, localized, and mass evacuations are included.

The *Kanawha County Evacuation Plan* is developed with the knowledge that other materials maintained by emergency services organizations in Kanawha County may be utilized to support the evacuation. Such materials include (but are not limited to) the county emergency management plan, local resource manuals, and agency-specific operating guidelines. References are included throughout this document in an attempt to demonstrate the coordination between these various resources.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
DISTRIBUTION LIST

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Chief, South Charleston FD	Date
Chief, Tornado VFD	Date
Chief, Tyler Mountain VFD	Date
Chief, West Side VFD	Date
Kanawha County Sheriff	Date
Chief, Charleston PD	Date
Chief, Dunbar PD	Date
Chief, Nitro PD	Date
Chief, Saint Albans PD	Date
Chief, South Charleston PD	Date
West Virginia State Police	Date

Kanawha County Emergency Ambulance Authority	Date
Kanawha Valley Regional Transit	Date
Charleston Area Medical Center	Date
St. Francis Hospital	Date
Thomas Hospital	Date
Highland Hospital	Date
Superintendent, Kanawha County Schools	Date
Kanawha County Humane Association	Date
American Red Cross	Date
Chair, Kanawha Putnam Emergency Planning Committee	Date
University of Charleston	Date
West Virginia State University	Date
West Virginia University Tech	Date

Other agencies receive courtesy copies of the plan. Those agencies, along with the control number of the copy they receive, are as follows.

Control Number	Recipient Agency
1	Boone County Emergency Management Agency
2	Clay County Office of Emergency Services
3	Fayette County Office of Emergency Services
4	Jackson County Office of Emergency Services
5	Lincoln County Office of Emergency Management
6	Putnam County Office of Emergency Management
7	Raleigh County Emergency Services
8	Roane County Office of Emergency Services
9	WV Division of Homeland Security & Emergency Management

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
RECORD OF CHANGES

In order for any plan document to remain viable and effective, frequent revisions and updates are needed. This document serves as a record of the changes made to the *Kanawha County Evacuation Plan*. All significant revisions should be logged in this section (with the exception of the correction of typographical and other such errors and the updating/addition of personnel names and contact information).

Date	Description of the Change	Initials
2010	• Complete plan development • Build from concepts contained in former *KPEPC Emergency Management Plan* • Review and approval by county/city emergency managers and focus group • Initial plan adoption and implementation	Kanawha Co. Emergency Mgmt., Charleston Homeland Security & Emergency Mgmt., JH Consulting

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

BASIC PLAN

Related Federal ESFs	• ESF #1: Transportation • ESF #6: Mass Care, Housing, and Human Services • Mass Evacuation Incident Annex
Related State Annexes	• Annex E: Evacuation and Re-Entry • Annex Y: Urban to Rural Migration
Purpose	The Kanawha County Evacuation Plan is developed as a companion to the Kanawha-Putnam Emergency Management Plan. This purpose of this document is to describe the agreed-upon strategy for the county's response to emergencies that involve the evacuation of persons from an impacted area to a safe area.
Primary Agencies	• Kanawha County Commission • Local Municipalities • Kanawha County Emergency Management • City of Charleston Office of Homeland Security & Emergency Mgmt.
Support Agencies	• Central WV Chapter, American Red Cross (ARC) • Community Emergency Response Team (CERT) • EMS Providers • Fire Service Providers • Hospitals • Kanawha-Charleston Health Department • Kanawha County Humane Association • Kanawha County Schools • Kanawha Valley Regional Transportation Authority (KRT) • Law Enforcement Providers • Metro 911 • WV Department of Health and Human Resources (WVDHHR) • WV Division of Homeland Security and Emergency Mgmt. (WVDHSEM) • WV Division of Highways (WVDOH) • US Department of Homeland Security / FEMA
Authorities	• WV Code, Chapter 15, Article 5, as amended. • WV Executive Order 20-04, December 23, 2004. • Post-Katrina Emergency Management Reform Act. • Americans with Disabilities Act of 1990. • 42 USC §§5121-5206: The Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 92-288, as amended. • 6 USC 317: The role of FEMA includes evacuating disaster victims. • 42 USC 960(23): Temporary housing and evacuation of threatened persons are to be included in the scope of hazardous substance removal.
References	• *National Incident Management System*, USDHS, as amended. • *National Response Framework* (NRF), USDHS, as amended. • *Local and Tribal NIMS Integration: Integrating the NIMS Into Local and Tribal Emergency Plans and Standard Operating Procedures*, Version 1.0, USDHS, 2005. • *A Guide for…Emergency Operations Planning*, CPG-101, FEMA, as amended. • *Special Needs Planning*, CPG-301, FEMA, as amended. • *WV Enhanced State Hazard Mitigation Plan*, WVDHSEM. • *WV Emergency Operations Plan*, WVDHSEM, as amended. • *Kanawha Putnam Emergency Management Plan*, KPEPC, as amended. • *Kanawha Interstate Traffic Diversion Plan*, Kanawha County OEM, as amended. • *Kanawha County Hazard Mitigation Plan*, Kanawha County OEM, as amended. • *Kanawha-Putnam Commodity Flow Study*, KPEPC, as amended. • *Kanawha-Putnam Vulnerability Assessment*, KPEPC, as amended.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
BASIC PLAN

I. SCOPE

This document is intended to provide evacuation strategy and guidelines for medium to high-level (catastrophic) evacuation events in the county and is developed with consideration to predominant threats and hazards in Kanawha County. This plan provides overall operational guidance for public alert and warning, movement of evacuees, and care and shelter; it provides a concept of operations for a medium or large-scale evacuation event; and provides the roles of key departments and agencies during an evacuation. It does not provide or replace operational plans for specific departments or specific functions, such as shelter management.

In small-scale evacuations, such as those occurring during local fires, at crime scenes, or due to a localized hazardous materials spill, this plan assumes that such events are managed by local first responders in the field Incident Command Post (ICP), typically without an activation of an Emergency Operations Center (EOC). It is significant to note, though, that building capabilities to respond to medium and large-scale evacuations would, by default, strengthen capabilities to implement small, localized evacuations. It is further significant to note that several elements of this plan may be employed during small-scale evacuations, such as the use of the same evacuation routes, pick-up points, etc.

II. SITUATION AND ASSUMPTIONS

A. Situation

1. General

a. This plan should apply in the event of a major emergency that necessitates the evacuation of all or part of Kanawha County and the municipalities therein.

b. The number of persons requiring evacuation may range from only a few dozen to thousands and the length of time an evacuation is in effect may last from a few hours to an indefinite period of time.

c. As with any emergency occurring in the county, management of an evacuation should be organized in accordance with the National Incident Management System (NIMS) in accordance with Homeland Security Presidential Directive (HSPD)-5 and the US Department of Homeland Security (USDHS).

d. Participating Jurisdictions (with Populations)

Table 1
Kanawha County Evacuation Planning
Jurisdictional Population and Household Numbers (Source: US Census Bureau)

Jurisdiction	Total Population	80% of Population	20% of Population	Number of Households
Unincorporated Kanawha County*	97,787	78,230	19,557	36,532
Belle	1,259	1,007	252	569
Cedar Grove	862	690	172	368
Charleston	53,421	42,737	10,684	27,131
Chesapeake	1,643	1,314	329	750
Clendenin	1,116	893	223	475
Dunbar	8,154	6,523	1,631	3,744
East Bank	933	746	187	373
Glasgow	783	626	157	327
Handley	362	290	72	147
Marmet	1,693	1,354	339	853
Nitro	6,842	5,474	1,368	3,217
Pratt	551	441	110	239
St. Albans	11,567	9,254	2,313	5,185
South Charleston	13,100	10,480	2,620	6,316
TOTAL	**200,073**	**160,058**	**40,015**	**86,226**

The totals for unincorporated areas were derived from the total county values

2. Threat Analysis
    a. Several types of hazards could necessitate an evacuation in Kanawha County. These hazards could occur at varying levels of severity in themselves, and vary widely in severity in comparison to each other. For this reason, a "leveled" approach to evacuation planning could be helpful.
    b. The following hazards could force an evacuation.
        i. **Hazmat – Roadway Incident**: Kanawha County contains a vast roadway network, ranging from small, rural routes to major divided thoroughfares. Interstate 64 is widely regarded as a major east-west corridor connecting portions of the Midwest to the Tidewater area of Virginia. I-77/79 also leads from the Kanawha Valley to other industrialized points north and south. These corridors pass through the most densely populated and congested portion of the county. Further, Kanawha-Putnam Emergency Planning Committee's (KPEPC's) most recent commodity flow study indicates that materials from all nine of the US Department of Transportation's hazard classes are transported via the roadways of the county.
        ii. **Hazmat – Rail Incident**: Kanawha County contains two rail lines: Norfolk Southern and CSX. Both of these rail lines run parallel to the Kanawha River (CSX to the south and Norfolk Southern to the north of the river). Both CSX and Norfolk Southern reported the transport of hazardous materials in the KPEPC's latest commodity flow study, including several US Environmental Protection Agency (USEPA)-designated Extremely Hazardous Substances (EHSs).
        iii. **Hazmat – Fixed Facility Incident**: Though its presence has declined somewhat in recent years, the Kanawha Valley is still the home of numerous industrial operations, including three major chemical plants. All three of these facilities are located along major transportation corridors; two of the three are located in heavily-populated areas. The KPEPC's latest vulnerability analysis focusing on fixed facilities identified large potential plume dispersion models based on the worst-case scenario at these (and other) sites throughout the county; many of these plume models covered a significant portion of the metro area. There has also been a history of mitigated incidents at the facilities.

iv. **Localized Flooding**: While flooding could occur along the Kanawha River, the county and municipalities see more frequent flooding along the smaller tributaries to the Kanawha. The Federal Emergency Management Agency (FEMA) lists numerous repetitive loss properties throughout the county, many of which are clustered together, indicating a periodic flooding hazard that could necessitate an evacuation of those communities.

v. **Fires (Urban or Wildland)**: Kanawha County has both rural, sparsely populated areas and densely populated urban areas. Wildland fires could cause evacuations near urban interface areas. Additionally, a rapidly-spreading urban fire could force an evacuation.

vi. **Terrorist Incident**: In addition to serving as the state's capitol, Kanawha County (and many of its municipalities) is home to numerous industrial operations. Some of these facilities could be targets; many are located in/near densely populated areas.

vii. **Civil Disturbance**: Given Charleston and Kanawha County's position as the home of West Virginia's government as well as the presence of several higher education facilities, festivals, and other special events, a large-scale civil disturbance could occur.

viii. **Dam Failure**: The Kanawha Valley is protected by three flood-control dams: Bluestone, Summersville, and Sutton. A failure of any one of these three facilities could affect Kanawha County. Together, these three facilities control 57% of the total water drainage in the Kanawha Valley. Additionally, the US Army Corps of Engineers (USACE) is undertaking major repairs to the Bluestone Dam. Given the nature of these repairs, communities downstream have been tasked with planning for a failure of the dam, which would include an evacuation of potential inundation areas.

ix. **Urban to Rural Evacuation**: Due to West Virginia's proximity to the National Capital Region (NCR) as well as other metropolitan areas such as Pittsburgh, PA, Columbus, OH, and Cincinnati, OH, the counties around the state have undertaken on-going planning efforts to support a population evacuating into and through West Virginia from these areas. By virtue of Interstates 64 and 77, Kanawha County

could face this type of situation.

x. It is significant to note that these situations are not the only ones that could render an evacuation or other public protective action necessary. Extreme temperature events, winter storms, utility failures, etc. could also necessitate localized evacuations. The hazards listed above were chosen due to the probability that they could force a larger scale evacuation.

B. Assumptions

1. General

a. The primary responsibility for planning and responding to an evacuation resides with the community in which the incident has occurred.

b. **Each member of the community, whether residents of, or workers within the community, is responsible for preparing their own personal emergency plans.** Topics should include the possible need to evacuate on short notice. The county and other local jurisdictions may provide public education to assist in preparing personal emergency plans.

c. This plan has been designed such that the evacuation guidance advocated herein is consistent and compatible with the evacuation planning of the local jurisdictions in Kanawha County.

d. Coordination of medium and large-scale evacuation efforts in Kanawha County will be managed from the Kanawha County Emergency Operations Center (EOC). The City of Charleston will also coordinate efforts from the EOC.

e. Most instances that would require a “High-Level” evacuation in Kanawha County will have some warning and therefore some pre-event activities may be accomplished. These may include: early EOC activation due to a potential flood or dam failure, warning that large wildfires could escape containment due to predictable weather changes. Terrorism/intentional attacks, however, might not be preceded with any warnings.

f. Shelter-in-place may be the better decision for some types of emergencies, as mass evacuations pose inherent risks, especially in moving those who are medically fragile. Decisions to evacuate or shelter-in-place will be made based on the circumstances of the individual

incident, with factors including the type and duration of the threat, roadway conditions, health and safety issues, and sheltering capacity.

2. Notification and Warning
   a. Metro 911 and the Kanawha County EOC will coordinate with the primary agencies that will notify the public of an evacuation.
   b. Most people will evacuate if given clear directions and warnings. Some, however, will not evacuate no matter how dangerous the situation.
   c. No one system exists that can quickly warn every citizen. Effective notification will be accomplished with the use of multiple systems.

3. Health and Medical
   a. The Kanawha-Charleston Health Department is the primary agency for health and medical services during emergencies. This plan may need to be implemented in concert with the health department's existing plans.
   b. Hospital facilities undertake their own response planning initiatives. This plan should maintain consistency with those documents, as well.

4. Transportation and Movement
   a. Locally, law enforcement will bear the primary responsibility for managing the movement of people.
   b. Roadways (i.e. ground transport) will be the primary mode of evacuation.
   c. It is anticipated that major roadways will remain intact for some period following the emergency.
   d. Day-to-day mass transit resources will need supplementation to meet the needs of a high-level evacuation.
   e. 80% of those needing to evacuate will self-evacuate in personal vehicles.
   f. 20% of evacuees will need some kind of transportation assistance.
   g. To encourage evacuation, public and private property must be protected against fire, looting, other hazards, and willful destruction.

5. Sheltering
   a. The Central West Virginia Chapter of the American Red Cross will be the primary agency responsible for sheltering.

b. Red Cross capabilities may be supplemented by local capabilities.
c. Regular means of disseminating public information will be used to notify the public of the locations of shelters.
d. The county has a population of over 200,000 people in 903 square miles. Most of the county's citizens will act in their own interest and evacuate a dangerous area when advised to do so by authorities. Based on studies conducted around the country, up to 90% of evacuees will likely seek shelter with friends or relatives or use hotels outside of the hazard area, rather than seeking shelter in a public shelter. Provision should be made to shelter up to 10% of the affected population (up to 19,000 people).[1]
e. A list of potential shelters exists that outlines sheltering resources.
f. Evacuees will be provided with public information in the shelter concerning the emergency.
g. Depending on the area and impact of the incident, many potential shelters may also be affected by the incident and will not be available.

6. Special Needs (Vulnerable Populations)
   a. People with disabilities are not necessarily in the "vulnerable populations" / "special needs" categories, as many disabled are completely self-sufficient and/or prepared to evacuate.
   b. Many people who are otherwise self-sufficient may have special needs due to short-term issues, such as physical or mental health issues, temporary resource shortages (e.g. fuel, transportation), etc.
   c. Schools, medical facilities, and care facilities will utilize their own resources to the extent possible, but the assumption is that they will rely primarily on governmental or public resources.

7. Pets and Large Animals
   a. The American Red Cross does not allow pets in shelters.
   b. The county animal shelter may be susceptible to a variety of hazards.
   c. There may be some issues with large animals in portions of Kanawha County (regarding access to stables).
   d. For estimated numbers of pets, see section III.I.3 below (pg. 47).

III. CONCEPT OF OPERATIONS

A. General

1. Small, site-specific evacuations that do not necessitate activation of this plan should be managed by an on-scene Incident Commander (IC). If this plan is activated to any level, coordination of the evacuation should transition to the EOC. Field units should then organize as an "area command" and work in concert with the EOC. (See V. Direction and Control below – pg. 63.)
2. Procurement of Resources
    a. Agencies participating in the implementation of the evacuation should fully exhaust their own resources before requesting support.
    b. If an agency's resources become exhausted (or the situation requires resources it does not possess), support should first be procured via pre-established mutual aid agreements. The county and/or city emergency manager as well as the EOC should be notified.
    c. The county EOC should utilize the State Emergency Operations Center (SEOC) as a coordinator and/or clearinghouse for any resource requests beyond Kanawha County. This statement, however, would not prohibit the local EOC from directly contacting a *known* resource outside of Kanawha County (in which case, the SEOC would be notified as a courtesy).
    d. When notifying the SEOC to request resources, it would always be helpful to estimate the quantities of resources needed.

B. Evacuation Considerations

1. There are several factors that should be taken into account when considering an evacuation, beginning with the characteristics of the hazard. Other principle factors include the following:
    a. The speed of on-set, magnitude, duration, and intensity of the threat (will determine the number of people who will need to be evacuated),
    b. The time and distance required to travel to a safe location (will determine the affected area),
    c. The road conditions (will also determine the affected area),
    d. The means of transport and vulnerability of the routes to the hazard (will create resource concerns), and

e. The availability of shelters and/or mass feeding facilities (may create the need for external assistance from neighboring counties or states).

2. The City of Charleston is the home of West Virginia's state government. Further, its central business district is the largest in the county. For these reasons, Charleston sees a large influx of workers during the day that return home in other parts of Kanawha County or neighboring counties following regular work hours.
   a. This influx of people adds to the challenge of evacuating the Charleston area during work hours.
   b. Population Estimates
      i. Estimated Population During Evening Hours (i.e., Normal Resident Population): 53,421 (Source: US Census Bureau)
      ii. Estimated Population During Work Hours: 105,930 (Source: City of Charleston Office of Homeland Security & Emergency Management)

   c. The population of Charleston may also increase significantly when large-scale events are held at the Charleston Civic Center or during festivals and other celebrations held downtown. The population for any one of these events could increase by 12,000.
   d. Roadway Capacity Estimates (with Revised Times)
      i. As evacuation routes are discussed later in this document (i.e., Appendix 6), the estimated capacities of those roadways are listed. Based on those estimates, the amount of time to evacuate a given area is estimated. Following are estimates for Charleston during day and evening hours.
      ii. Roadway Capacities
         - The primary evacuation routes out of the city are I-64 west, I-77 north, I-64/77 east, and US 119 south.
         - These populations were divided equally by four (4), which represents use of evacuation routes in all four (4) directions – north, east, west, and south.
         - The peak capacity figure of 4,169 vehicles per hour on interstate highways in the city was utilized (see Attachment 1 of Appendix 6

for the methodology of deriving peak capacity on interstates).

- The regular population was divided into three (3) persons per vehicle; the visitor/commuter population was taken a single person per vehicle.

iii. Estimated Time per Work Hours Population (105,930): 2.12 hours
iv. Estimated Time per Evening Hours Population (53,421): 1.07 hours*
v. Estimated Time per Special Event Population (65,421): 1.31 hours
vi. All estimates are applicable *once evacuees reach primary routes*.

**This figure appears slightly different in Appendix 6 because the appendix accounts for the population distribution of the city.*

3. The potential time that it would take for a total county evacuation would be a helpful planning tool; unfortunately, it is difficult to determine with any accuracy. The entire county (and City of Charleston) were divided into "evacuation areas" in an effort to route traffic in multiple directions to shorten the amount of time it would take for the evacuation. For the purposes of providing an estimated "total county evacuation time", the longest potential estimated evacuation time for any of the city evacuation areas (i.e., 1.7 hours) was added to the longest estimated time for a county area (i.e., 7.2 hours). As such, it would take at least 8.9 hours to evacuate the county. (*NOTE: This estimate is applicable *once evacuees reach primary evacuation routes*; it does not include the time it would take to prepare and leave one's home. During "work hours", this time could increase to nearly 18 hours (assuming Charleston's population has increased as described above).
4. Shelter-in-Place
   a. The evacuation of a population poses some inherent safety concerns associated with the rapid movement of large numbers of people (especially vulnerable populations) away from their resources, support facilities, and familiar surroundings. Moving them to areas that may lack the level and quality of support and resources needed could be life-threatening.
      i. For these reasons, an evacuation should be considered a "last-resort" solution and shelter-in-place should be encouraged if possible.

ii. If people are not directly impacted by the incident, shelter-in-place provides the advantage of over evacuation in that it allows families to stay together in familiar surroundings, with easy access to media reports, phones, the internet, food, water, and medicines.
iii. Sheltering can only be maintained, however, as long as personal and emergency supplies last.

b. Shelter-in-place operations may also provide the advantage of reducing congestion on major roadways and reducing the strain on mass transportation systems.
c. If a shelter-in-place is implemented, emergency officials should continue frequent monitoring of the situation to ensure that the shelter-in-place action adequately protects the affected population.

5. Legal Considerations
   a. Evacuations may be issued as either voluntary or mandatory.
   b. If a mandatory evacuation is ordered, law enforcement should not use force to remove persons who choose to remain in the affected area.
   c. Responders should clearly inform people that failure to evacuate may result in physical injury or death and that a future opportunity to evacuate may not exist. People should be informed that there is no guarantee that resources to rescue them will be available. Law enforcement or other emergency authorities should attempt to document the locations of people that refuse to leave.
   d. Once an evacuation order is given, it is critical that the public information system provide clear instruction through all available notification and warning systems.

C. Levels of Evacuation

Table 2
Kanawha County Evacuation Planning
Evacuation Levels, Parameters, and Examples

Level	Key Parameters	Examples
Low-Level, Localized	• Involving less than 1,000 persons • Less than eight (8)-hour expected duration • Evacuation zone < 20 miles	• Local fire • Localized flooding • Crime scene (e.g. hostage) • Building bomb or fire • Local hazmat release • Pandemic/infectious disease control
Medium-Level, Area-Wide	• Involving more than 1,000 persons • More than eight (8)-hour expected duration • Potential evacuation zone > 20 miles	• Widespread flooding • Planned evacuation per imminent Bluestone Dam failure • Large wildfire • Area terror threat • Industrial accident/release
High-Level, Catastrophic	• Most or all of county population relocating to points of safety outside of county • Depending on time constraints, an evacuation of 10,000 or more people could be a high-level evacuation	• Immediate evacuation per Bluestone Dam failure • Realistic nuclear or conventional attack or realistic threat

D. Ordering an Evacuation and Activating the Plan

1. An evacuation order may be issued by a variety of individuals, depending on the circumstances of the incident.
2. Immediate Evacuations
   a. Site-specific immediate activations of populations in and around an incident site can be ordered on the authority of the Incident Commander (IC). Based on the severity of threat to human life, immediate evacuation may be initiated by any duly recognized emergency response force (e.g. police, fire, emergency services, etc.).
   b. The IC should see that the appropriate emergency manager is quickly notified of the issuance of an immediate evacuation order. (Coordination of the conduct of the overall evacuation should remain with the appropriate emergency manager, who would support on-scene operations through the EOC, if necessary, and make additional notifications to government and other officials.)

3. Planned Evacuations
   a. Planned evacuations can be considered "precautionary" evacuations (if the threat is strongly anticipated but not yet imminent) or evacuations to imminent hazard threats.
   b. An official denotation that an evacuation is planned is normally unnecessary. An on-scene IC, jurisdictional Chief Elected Official (CEO), emergency manager, etc. may always choose to evacuate a population that is "more" at risk from a hazard prior to evacuating any portion of the populace that is "less" at risk. Doing so would be considered a prudent public safety measure.

4. Considerations for Both Immediate and Planned Evacuations
   a. If the evacuation extends to anything beyond a site-specific evacuation, the EOC should be activated.
   b. The IC would normally manage the tactical elements of the evacuation on-scene. Additionally, if a site-specific emergency triggered the evacuation, an on-scene ICS structure would still be in place to manage those response operations. The EOC, however, coordinates operations beyond the incident site, such as coordinating traffic control along evacuation routes, arranging for the activation of shelter and mass care facilities, and on-going information sharing with other jurisdictions (both within and outside of Kanawha County).
   c. The notification requirements for immediate and planned evacuations would be basically the same. As such, this plan does not present specific notification guidelines based on either an immediate or planned evacuation; a collective set of notification guidelines is presented in section III.E.1 below (pg. 19).
   d. An immediate or planned evacuation is likely to trigger local officials to declare a local "state of emergency". States of emergency are discussed in greater detail in Section V. Direction and Control.

5. Evacuation Indicators
    a. The following tables (Tables 3 through 5) are intended to provide "condition indicators" for activating this plan and, consequently, the EOC.
    b. The indicators listed in the table are meant as guidance and are not absolutes. They do not replace the judgment of emergency management professionals who must decide the level of activation and level of staffing based on real-time information regarding the situation.
    c. For flooding, indicators are provided which include landmarks in the City of Charleston. These indicators also indicate that flooding evacuations may need to be considered in the other portions of the county. If these conditions are met in the city, local officials should assess the situation in other parts of the county to determine evacuation needs.
    d. Finally, one should consider the cascading events that may necessitate very small-scale or even individual evacuations as a result of the hazards listed below. As an example, a utility outage may result from a civil disturbance or flood. Further, respiratory health concerns may arise during or immediately after a fire. These types of situations may require an evacuation of an individual or household, but would not necessitate the evacuation of an entire area.

Table 3

Kanawha County Evacuation Planning
Condition Indicators – Low-Level

Threat / Hazard	Indicator Details
Flood	• Kanawha River levels reach "action stage" (i.e. 26') ▪ Portions of Magic Island underwater (22') ▪ Backwater effects become apparent in the Elk River portions of Charleston (22') ▪ Old North Charleston Fire Department basement begins to flood at 26th Street (23.6') ▪ Riverbank sidewalk near South Side Bridge and Haddad Park is flooded (26') ▪ NOAA hydrology forecast guidance
Fire / Wildland Fire	Fire impacting urban interface area, potential to continue to grow.
Hazmat Incident	• Localized hazmat release occurred. Sheltering-in-place and/or transport corridors impacted. Self-evacuation of local residents expected. • Human exposure to hazardous substances in an area creating a localized level of concern. • Localized explosion involving facility or transportation requires some level of sheltering, evacuation, and area control.
Dam Failure	Dam integrity reported as "in question" at any one of the following dams: Bluestone, Summersville, and Sutton.
Civil Disturbance	Localized disturbance or crime scene requires potential for evacuating or sheltering-in-place of citizens until potential violent situation is contained; situation intensity may yet expand.
Terrorism	Confirmed terror-related intention of violence in the region. No crime yet committed, but heavy news coverage involved.
Utility Outage	Utility companies experiencing some outages due to storm, mechanical failure, high demands for services, and other reasons. Vulnerable persons affected.

**Condition indicators do not replace judgments by emergency officials based on actual incident conditions.*

Table 4

Kanawha County Evacuation Planning
Condition Indicators – Medium-Level

Threat / Hazard	Indicator Details
Flood	• Kanawha River levels reach "flood stage" (i.e. 30') ▪ Iowa Street at Fifth Avenue begins to flood (27') ▪ Underpass at MacCorkle Avenue and US 119 is flooded (29') ▪ Grant Street at Elm Street begins to flood (29.3') ▪ Crescent Road at Magazine Branch begins to flood (29.5') • Kanawha River levels reach "moderate flood stage" (i.e. 35') ▪ Bigley Avenue at Magazine Branch begins to flood (31.5') ▪ Patrick Street at Sixth Avenue begins to flood (31.6') ▪ US 60, Patrick Street, and US 119 in Charleston begins to flood (32') • NOAA hydrology forecast guidance
Fire / Wildland Fire	Wildfire expanded due to season and unfavorable weather conditions resulting in urban area evacuations within and out of county. Fires throughout the region likely given conditions.
Hazmat Incident	• Hazmat release is sustained with major impact to urban areas and transportation corridors. • Impact to vulnerable persons is high, causing severe and detrimental health concerns and need to evacuate and possibly decontaminate evacuees. • Impact to critical facilities (e.g. hospitals, health care, higher education, schools) causing need to evacuate large numbers of vulnerable peoples.
Dam Failure	• Serious threat of dam failure at any one of the following dams: Bluestone, Summersville, and Sutton. Emergency repairs in progress. Possible large water release as part of dam protection measure. • Either the Summersville or Sutton Dam has failed on some level.
Civil Disturbance	• General civil disturbance causing long-term service shut-downs, significant need for law enforcement and support, and the need to support the safe movement of persons through the area of disturbance. • Civil disturbance at higher education campus.
Terrorism	A terrorist-related act has taken place in the region: • Threats have been made targeting Kanawha Co. and specific critical services/vulnerable populations in the county. • Persons from outside the county are evacuating to and through Kanawha County.
U2R Evacuation	Persons from outside the county are evacuating to and through Kanawha County.

**Condition indicators do not replace judgments by emergency officials based on actual incident conditions.*

Table 5

Kanawha County Evacuation Planning
Condition Indicators – High-Level

Threat / Hazard	Indicator Details
Flood	• Kanawha River levels reach "major flood stage" (i.e. 40') ▪ CSX tracks, Kanawha Boulevard, and Park Avenue on West Side begins to flood (38') ▪ Water is to bottom of Haddad Park restrooms, most of park is flooded (38.7') ▪ South Side Bridge parking lot along Kanawha Boulevard is flooded (40.4') ▪ Water at base of Union Building on Kanawha Boulevard (43') ▪ Water reaches base of homes on Kanawha Boulevard west of the interstate bridge (44') ▪ Portions of MacCorkle Avenue are flooded near the WV Lottery Building (44') ▪ Kanawha Boulevard near South Side Bridge is flooded (47') • NOAA hydrology forecast guidance
Hazmat Incident	• Hazard release is sustained with major impact to multiple urban areas and transportation corridors. • Impact to vulnerable persons is high, causing severe and detrimental health concerns and need to evacuate and decontaminate evacuees. • Impact to critical facilities (e.g. hospitals, health care, higher education, schools) causing need to evacuate large numbers of vulnerable peoples.
Dam Failure	Bluestone Dam has failed at some level.
Terrorism	A terrorist-related act has taken place in Kanawha County.
Urban to Rural Evacuation	Persons from outside the county are evacuating to and through Kanawha County.

**Condition indicators do not replace judgments by emergency officials based on actual incident conditions.*

E. Functional Considerations Regarding Evacuation

1. Warning and Notification

a. General

i. It is significant to note that there is a difference between what is considered a "warning" and what is considered "emergency public information". Warnings provide the initial notification of the presence (or impending presence) of an emergency and may include the initial action to take. Public information provides more detail on the emergency situation, including its magnitude and duration, longer-term instructions, etc. (Public information is discussed in section III.E.3 below – pg. 21.)

ii. Notifying the public should be done clearly and consistently (i.e., non-conflicting). Clarity and consistency are necessary for orderly evacuations.

iii. All notifications should indicate whether an evacuation is mandatory or voluntary.

iv. Additional information on each of the warning systems identified below (such as capacity and activation protocols) is included in Appendix 5: Warning and Public Information Systems.

v. For additional, general information regarding the public warning function, refer to Annex FA-A01 of the *Kanawha Putnam Emergency Management Plan*.

b. Notification of Response Agencies

i. Response agencies are those with direct responsibilities to implement the evacuation on-scene.

ii. 911 dispatchers are normally responsible for warning response agencies. Once activated, the EOC may also provide warning information.

iii. Means of Notification

- Tone alert receivers
- Radios
- Outdoor warning siren system
- Appropriate mass notification (i.e. "reverse 911") system

c. Notification of External Agencies
   i. External agencies include local emergency preparedness partners who may play a support role in implementing the evacuation, local government officials, neighboring jurisdictions, state resources, etc.
   ii. The appropriate (i.e., city or county) Emergency Manager is normally responsible for providing warning to external agencies.
   iii. Means of Notification
      - Telephone
      - Paging systems
      - Appropriate mass notification (i.e. “reverse 911”) system
      - NOAA all-hazard radio
      - Eteam
      - Email
      - Facsimile

d. Notification of the Public
      - NOAA all-hazard radio (also Emergency Alert System [EAS])
      - Outdoor warning siren system
      - Reverse 911
      - Public address systems
      - Television
      - Radio

2. Communications
   a. As an entity that coordinates and supports the evacuation effort, all emergency communications related to the evacuation should be directed to the EOC.
      i. As such, EOC staff can have access to incident-specific information in a timely manner and the load on the 911 center can be lessened (thereby freeing dispatchers to address any other emergency that occurs during the evacuation).

ii. Kanawha County's emergency manager maintains an EOC staff that includes trained communications officers.

b. The county's emergency manager should designate a communications channel for each incident scene to allow for coordination between the EOC and incident command.
c. A Memorandum of Understanding (MOU) with amateur radio operators is maintained by the Kanawha County Emergency Management Director. Amateur radio operators serve as supplemental personnel and provide supplemental communications circuits and equipment. An amateur radio operator reports to the EOC any time it is activated.
d. Field Communications
    i. Notices should be issued via radio when an evacuation is ordered and when an area is cleared so that all on-scene units are notified as to current status (and so that the information they provide to the public is consistent and accurate).
    ii. Segments of on-scene responders (e.g. those controlling traffic) should utilize tactical channels to avoid channel congestion.
    iii. The on-scene IC should update the EOC as to operational status every 15 minutes or when there is a significant change in status.
    iv. An on-scene IC can request the use of the Kanawha County Mobile Command Post from the EOC, which can support on-scene communications.

e. Annex A03 of the *Kanawha Putnam Emergency Management Plan* outlines guidance in case of failure of a portion of the communications system. Amateur radio operators, runners, and face-to-face meetings can be utilized while the communications system can be restored.

3. Emergency Public Information
    a. As mentioned above, this section does not describe information that should be disseminated via warning mechanisms. This information should be provided on an on-going basis throughout an evacuation.

b. Key Information to Be Provided
   i. Identification of threatened areas
   ii. Evacuation route information
   iii. Road closure information
   iv. Detour information
   v. Pick-up point information and locations
   vi. Shelter locations
   vii. Information on school and business closures (as available)
   viii. Identify how security will be provided in evacuated areas
   ix. Instructions for getting in touch with loved ones
   x. Other information deemed essential

c. Means of Providing Information
   i. Local media (e.g. television, radio)
   ii. Websites
   iii. Reverse 911-style mass notification systems
   iv. Public address systems
   v. Locally-available fixed message boards
   vi. Dynamic mobile message boards via the WVDOH
   vii. Depending on the scope of the evacuation, other, non-traditional resources can be accessed via the SEOC. These include the West Virginia Turnpike Authority and appropriate agencies in neighboring states (primarily Virginia and Kentucky).

4. On-Going Incident Assessment
   a. Evacuation decisions (even ad hoc decisions made as the evacuation is being implemented) should be based on the circumstances of the incident. As such, on-going incident assessment is very important.
   b. An on-going incident assessment should be maintained by establishing communications and status checks with on-scene personnel. Cameras along interstates that can be monitored by Metro 911 may also be used.
   c. Things to Monitor
      i. Traffic flow information (estimate of heavy/light traffic)

ii. Traffic counts per EOC requests (duration specified by EOC)
iii. Presence of any emergency or military vehicles.
iv. Identification of potential problems
v. Status of problem resolution (if applicable)
vi. Other general observations

F. Evacuation-Specific Response Considerations
1. Transportation and Evacuation Control
a. Evacuation Areas
i. Evacuation areas have been designated in an effort to break planning for evacuations into smaller "chunks". Additionally, the designation of these areas was intended to be intuitive, so that the EOC can quickly mobilize resources to evacuate all or part of an evacuation area.
ii. The following are the evacuation areas in Kanawha County:
- Municipalities (except for Charleston) are included as a part of the appropriate county evacuation area
- Charleston: West Side
- Charleston: East End
- Charleston: South Hills
- Charleston: Kanawha City
- County: Kanawha West
- County: Kanawha North
- County: Kanawha Northeast
- County: Kanawha East
- County: Kanawha South

iii. Appendix 6 lists detailed information for each evacuation area, including the primary and alternate evacuation routes, estimated population, resource agencies considered "first-due" in that area, and the number and location of potential shelters.
iv. Additionally, pre-emergency public information campaigns should include the distribution of the brochures attached in Appendix 6. These brochures identify the primary and alternate evacuation routes through these areas.

b. Most citizens will evacuate using their private vehicles. As such, officials should determine the safest direction for evacuating traffic at the time of the event, based on an analysis of actual or potential impacts of the event (as well as the conditions of the routes themselves).

c. Evacuation Routes
   i. These routes provide a baseline consideration for the movement of people from hazardous areas to safe areas. The actual designation of these routes may need to be changed based on incident conditions.
   ii. Evacuation routes, listed by evacuation area, are as follows:
      - Kanawha West
        - Primary: Interstate 64
        - Secondary: US 60, SR 25, and SR 3
        - Feeder: 10th Street (Dunbar), SR 25, and SR 622

      - Kanawha North
        - Primary: Interstate 77
        - Secondary: SR 622, SR 21, and Tuppers Creek Road

      - Kanawha Northeast
        - Primary: Interstate 79
        - Secondary: US 119 and SR 4
        - Feeder: Frame Road and SR 114

      - Kanawha East
        - Primary: Interstate 64/77 (US 60 may also serve as a primary route for some populations north of Kanawha River.)
        - Secondary: US 60, SR 61, and SR 94
        - Feeder: Paint Creek Road

      - Kanawha South
        - Primary: US 119 (Corridor G)
        - Secondary: SR 214
        - Feeder: Jefferson Road

- West Side
  - Primary: Interstate 64, Interstate 77/79
  - Secondary: US 60 (Washington Street), SR 25 (7th Avenue), and Route 21 (Sissonville Drive)
  - Feeder: Miscellaneous City Streets

- East End
  - Primary: Interstate 64/77, Interstate 77/79
  - Secondary: US 60 (Kanawha Boulevard/Washington Street) and SR 114 (Greenbrier Street)
  - Feeder: Miscellaneous City Streets

- South Hills
  - Primary: Interstate 64 and US 119 (Corridor G)
  - Secondary: SR 214 (Jefferson Road) and SR 61 (MacCorkle Avenue, SE/SW)
  - Feeder: Miscellaneous City Streets

- Kanawha City
  - Primary: Interstate 64/77
  - Secondary: SR 61 (MacCorkle Avenue, SE)
  - Feeder: Miscellaneous City Streets

iii. Evacuation routes are shown graphically via mapping in Appendix 2.

d. Contraflow on I-64, I-77, and I-79 may be considered as one strategy to enhance capacity under certain extreme evacuation scenarios.
   i. Advance and on-going coordination with the West Virginia Department of Transportation (WVDOT) and local emergency, transportation, and law enforcement authorities should address:
      - Extent of contraflow operation,
      - Criteria for implementation,
      - Contraflow route access points,

- Traffic management plans,
- Allocation of traffic control assessment and labor, and
- Contraflow driver/passenger needs (e.g. signage, access to food/fuel, etc.).

ii. Other contraflow considerations include the following:

- **Contraflow Routes**: The most likely routes, as mentioned above, for contraflow would be the interstates through Kanawha County (I-64, 77, and 79). Additionally, though, local officials and WVDOT representatives may consider contraflowing such routes as US 60 and US 119 should transportation on the interstates alone not facilitate a fast enough evacuation for the impending hazard. Finally, routes such as US 60 and 119 may be designated as "emergency access routes" if the interstates are contraflowing to allow access for emergency services providers.
- **Jurisdictional Cohesion**: Contraflow decisions should be made in accordance with appropriate officials in Putnam, Fayette, Jackson, and Roane Counties (depending on the routes in contraflow and the direction of travel for the evacuating population). These jurisdictions (obviously along with the WVDOT) should jointly determine where access points would be, termination points, etc.
- **Resumption of Normal Flow**: New traffic patterns may be necessary at the termination points to support the resumption of normal flow. Resources from the jurisdiction in which the termination point is located would most likely report to the site to facilitate direction of traffic. Traffic diversion equipment such as cones, barricades, etc. would need to be procured.
- **Motorist Needs**: Drivers and passengers in the contraflow direction will likely need information traditionally provided to motorists to prevent disorientation and confusion. Information such as mile markers, exit numbers, general service signs, and travel time estimates should be provided using such resources as mobile message boards.

e. Public Transportation
   i. Public transportation may be needed to evacuate special needs populations (which includes those who need transportation assistance).
   ii. Kanawha Region Transit's (KRT's) fleet of 57 active buses can form the backbone of evacuation transportation resources. KRT assets may be supplemented by county school buses, ambulances, and other vehicles. (*NOTE: Kanawha County Schools' bus fleet is comprised of 152 buses. Approximately 120 of these vehicles could carry up to 50 passengers; the other 30+ buses could carry an average of 25 passengers.)
   iii. Individuals requiring public transportation should be directed to report to a pick-up point, if able. (A list of pick-up points follows and are shown on a map in Appendix 2.) Traffic control and security at pickup points can be provided by the local law enforcement agency having jurisdiction in that area.
   iv. Pick-Up Points
      - Table 6 below depicts several general pick-up points that may be established. Pick-up points generally correspond to regular KRT stops.
      - Additionally, the hazard-specific considerations in Appendix 7 below list pick-up points meant specifically for the evacuation of the area addressed by that section. *NOTE: Some of the pick-up points listed in Appendix 7 may be in addition to regular KRT stops *and* those listed in Table 6.

Table 6

Kanawha County Evacuation Planning
Pick-Up Points by Evacuation Area

Area	Pick-Up Points
Charleston: West Side	• Randolph St. and Tennessee Ave. • K-Mart at Patrick St. • Big Lots at Patrick St. • Lee St. at Kroger's between Delaware Ave. & Maryland Ave. • 7th Ave. in North Charleston • 29th St. in North Charleston at Susie's
Charleston: East End	• Quarrier St. at Sears • Washington St. westbound at CAMC General • Washington St. & 36th St. Bridge ramp • Northgate at Bone and Joint Surgeons • Washington St. at Reynolds St. • California Ave. & Washington St. • California Ave. & Washington St. • Pennsylvania Ave. at CAMC Women and Children's Hospital
Charleston: South Hills	• Southridge at regional jail • Dudley Farms at RHL Blvd.
Charleston: Kanawha City	• 31st St. at CAMC Memorial • 35 St. at Trivillians • 36th St. at foot of bridge ramp • 37th St. at City National Bank • MacCorkle Ave. & 47th St. • MacCorkle Ave. & 56th St. • Kanawha Mall at Gabriel's • MacCorkle Ave. at Kroger's • Lowes • K-Mart at East Kanawha Estates
County: Kanawha West	• Kanawha Terrace & Walnut St. • Kanawha Terrace & Park Ave. • Sixth Ave. & 9th St. across from IGA • Sixth Ave. across from BB&T • So. Washington St. & Kanawha Terrace • Dunbar Ave. Across from Dunbar Plaza • 12th Street Dunbar Ave. • 12th Street Dunbar Ave. • 16th Street at Fas Check • 16th St. at Fletcher Ave., Dunbar • Rt. 25 & 22nd St. • Valley Dr. • Rt. 25 at WV State University • Rt. 25 Nitro at 18th St. • 22nd Street at 2nd Ave. Tyler Mt. Turnaround • on Rt. 25 at 22nd Street • Rt. 25 Nitro at 40th St. • W. Washington St. at WVDHHR • Fairlawn Ave. & King Street in Dunbar • 40th Street Nitro at Crossroads village Apts. • Nitro Marketplace at corner of Heavenly Ham. • Fairlawn Ave. & Willow Dr. in Dunbar

Area	Pick-Up Points
County: Kanawha North	• Pocatalico Rite Aid*
County: Kanawha Northeast	• Maywood Avenue at turn-around, Clendenin
County: Kanawha East	• MacCorkle Ave. across from Post Office in Marmet • Marmet Kroger's • Town of Pratt • Town of Chelyan • Midland Trail at Furman Ave. • Midland Trail at Clemson Ave. • Midland Trail at Davidson Ave. • Midland Trail at Harvard Ave. • Midland Trail at Bluefield Ave. • Dupont Ave. at Kanawha St. in Belle • DuPont Ave. at 6th St. in Belle • Route 60 at Melrose Dr. in Glasgow • 3rd Ave. under bridge in Montgomery • Montgomery Station • 7th Ave. in Belle (across from Go-Mart).
County: Kanawha South	• MacCorkle Ave. at Rite Aid & Mound • MacCorkle Ave. at Mound • MacCorkle Ave. at Riverwalk • Kenna Drive at MacCorkle Ave. • River Walk Plaza • MacCorkle Ave. at Thomas Hospital • Trace Fork at Skating Rink • Trace Fork across from Chinese Rest. (RHL BLVD.)

**Not a regular KRT stop. Added so that a pick-up point would be available in the Kanawha North area.*

v. The location of pick-up points should be broadcast as part of other public information releases.

vi. Special populations who cannot report to a pick-up point are addressed in section III.H below – pg. 46.

f. The mass evacuation of downtown Charleston during a normal business day will likely be the most demanding transportation scenario.

i. If the size or location of an incident prevents people from evacuating from any part of downtown Charleston by automobile, residents, workers, and visitors should be directed to report to the pick-up points located on the outskirts of the city. Mass transit resources can pick them up at these locations.

ii. Due to the population density in Charleston, a more detailed, graphic evacuation plan has been created (see Chart #4 in Appendix 7).

g. Note that a variety of resources would be required to support both the private vehicle and public transit evacuations. Such resources include fuel, tow trucks, mechanical services, food and water, sanitary facilities, etc. Certain scenarios, such as a major power outage, could create significant problems with fuel supplies, both for private vehicles and transit. General resource availability is listed in the *Kanawha County Resource Database* (separately from this document).

2. Special Facilities
   a. For the purposes of this subsection, "special facilities" include those that serve the public's interest during an emergency and, as such, need focused consideration as to how they are managed in an emergency.
   b. In the numbered items below are the special evacuation considerations for "special facilities" not traditionally considered part of the county's first response organization. All of these facilities contain populations that need additional support to evacuate. These same facilities also provide amenities that may support evacuee sheltering, transfer areas for evacuees, and/or staging areas for evacuation operations support.
      i. Health Care Facilities
         - For a Bluestone Dam failure, representatives from the West Virginia Department of Health and Human Resources (WVDHHR) have indicated that the WVDHHR will coordinate the resources to assist in the evacuation of medical facilities, including hospitals and nursing homes, so that local agencies can concentrate on an evacuation of the county's general populace. The resources that the WVDHHR anticipates using could come from out of state EMS agencies, military assets, and other federal resources. It is significant to note that this offer is extended only to an evacuation necessitated by a failure of the Bluestone Dam.

- Charleston Area Medical Center (CAMC) was founded in 1972 and has over 6,000 employees. The hospital is a non-profit, 893-bed, regional-referral and academic medical center. CAMC includes three (3) locations: General Hospital, Memorial Hospital, and Women and Children's Hospital.
  - CAMC maintains a comprehensive emergency operations manual for its facilities. That document contains guidelines for an evacuation of their facilities. According to the CAMC plan, the transport of patients will be coordinated through incident command, "Med Base", and "Charleston emergency services". (*NOTE: "Charleston emergency services" is assumed to mean law enforcement and fire service providers in Charleston as well as the city's office of emergency management.) In addition to its ambulances, CAMC plans to use bus services as outlined in the *Kanawha Putnam Emergency Management Plan*.
  - Other operational items common to each of CAMC's three (3) facilities include the following. These items change daily based on the census of patients in the hospital. For planning purposes, it is important to know that these items will be under consideration and that the entire patient count at the hospital will not need to be addressed by community resources.
    - Some patients can be discharged to the care of their family
    - Some patients can be transferred to an alternate care site
    - Critical patients will need transported to another hospital
    - Elective surgeries could be cancelled/re-scheduled

  - CAMC General
    - Total Potential Patients: 186
    - Potential Critical Care Patients: 40
    - Potential Patients in Intermediate Care: 6
    - Potential Patients in Overflow Unit: 59

- CAMC Memorial
  - Total Potential Patients: 435
  - Potential Critical Care Patients: 53
  - Potential Patients in Post Cardiac Care Unit: 48
  - Potential Patients in Emergency Department: 6
  - Potential Patients in Overflow Unit: 117

- CAMC Women and Children's
  - Total Potential Patients: 154
  - Potential Critical Care Patients: 40
  - Potential Pediatric Care Patients: 30
  - Potential Patients in Labor and Delivery: 51
  - Potential Patients Post-Delivery: 24
  - Potential Patients in Overflow Unit: 33

- Highland Hospital
  - Highland maintains an average patient count of 36, one (1) of which could be bedridden (again, on average).
  - According to Highland's evacuation procedures, the Executive Director and Medical Director may choose to evacuate the facility horizontally or vertically; suspend or curtail clinical operations; take actions to protect equipment, supplies, and records; move equipment and supplies to secondary sites; back up and secure computer files; or perform other measures they may find appropriate to reduce risk.
  - If a complete evacuation is necessary, the hospital should establish patient assembly areas and/or patient transport areas. All scheduled appointments would be cancelled. Highland would likely rely on local ambulatory resources to transport patients. A minimum of ten (10) transport units would be needed (optimum 15+).

- Extra Resources
  - Additional therapists
  - Basic medical supplies
  - Pharmaceuticals

- St. Francis Hospital
  - St. Francis is registered for 150 beds; however, according to hospital officials, 88 beds are in operation. Average patient census is approximately 74 to 80.
  - St. Francis also contracts with a Select specialty hospital on-site. Select is a long-term acute care hospital with 29 beds; almost all patients are on ventilators and they usually operate at 99% capacity.
  - Should an evacuation be necessary, all patients able to be discharged would be discharged so that they could evacuate with their families. Estimates on those patients still needing inpatient care and thus requiring hospital resources to evacuate are listed below.
    - Skilled Nursing Unit: Approximately four (4) patients to evacuate; estimated three (3) hours necessary for evacuation
    - 4 East (Ortho): Approximately 12 patients to evacuate; estimated three (3) hours necessary for evacuation
    - 4 West (Telemetry): Approximately ten (10) patients to evacuate; estimated four (4) hours necessary for evacuation
    - Intensive Care Unit: Approximately eight (8) patients to evacuate; estimated six (6) hours necessary for evacuation, contingent upon available transport resources
    - PCU-ICU Step Down: Approximately seven (7) patients to evacuate; estimated four (4) hours necessary for evacuation

  - Select Specialty Hospital: Approximately 29 patients to evacuate; estimated eight (8) hours necessary for evacuation

  - Hospital officials plan to evacuate the ICU/PCU and Select Specialty first. Remaining patients would be evacuated based on their acuity. St. Francis anticipates adequate personnel resources to coordinate the evacuation, but would need transportation resources. A minimum of ten (10) transport units would be needed (optimum – 20+).
  - St. Francis has identified certain unit-specific supplies that could be sent along with patients to sustain them for a 72-hour period should they need to evacuate.

- Thomas Memorial Hospital
  - The average daily census of inpatient medical-surgical patients is 120. Approximately 25 to 30% (30 to 36 patients) could *not* be discharged and would have to be evacuated by the facility. Additionally, the facility averages 12 ICU patients, 75 to 80% of which would need to be evacuated by the facility. Finally, approximately four (4) neonatal ICU patients are in the facility, all of which would need to be evacuated by the facility. (Total patients to be evacuated by Thomas: 43 to 50 patients.)
  - Personnel numbers at the hospital range between 100 and 400; many of these staff members would likely be unavailable as they would be evacuating with their families (should a region-wide evacuation be necessary).
  - Thomas relies heavily on external resources to evacuate patients. As such, a minimum of 25 transport units would be necessary (assuming those units would be available to make two [2] trips for Thomas).

- Other Issues/Concerns at Thomas Memorial Hospital
  - At any given time, the hospital may have one (1) to five (5) pregnant women in labor.
  - The facility contains a 17-bed newborn nursery; however, most of those patients would be healthy and could be discharged to evacuate with their parents.
  - The facility contains a 9-bed pediatric unit; however, the hospital rarely has pediatric patients.
  - The facility contains a 20-bed inpatient behavioral med unit and a 10-bed med-psych unit. These patients would need to go to a facility with behavioral/psychological capabilities.

ii. Primary Schools

- The Kanawha County Board of Education should be notified of evacuations since it is likely that some of its facilities will be in the affected area.
  - For site-specific evacuations, the on-scene IC will likely make the notification directly to the principal of the affected school. For larger evacuations necessitating the activation of this plan, the notification should come from the EOC.
  - It is assumed that the school system will use its own bus network to transport students (and faculty and staff, if necessary). As such, the notification should include information as to whether children can be transported home per normal protocols or if they need to be evacuated to a pick-up point in a non-affected area. Such a decision would need to be made early since Kanawha County Schools is listed as a mass transit resource (i.e., if buses are being utilized to transport school populations, emergency officials will need to be notified early so as to procure other resources).
  - If only a portion of the county schools should evacuate (i.e. not a countywide evacuation), an inquiry can be made as to bus availability to assist in transportation efforts associated with the evacuation.

- The school system should be encouraged to cancel school for the duration of any long-term evacuation.

iii. Colleges

- Adult college students, unlike primary school students who are still minors, will typically have more resources to support their self-evacuation. Nevertheless, many college students and campuses will need time to support student evacuations and for implementation of business continuity guidelines.
- Notifications should come from either the on-scene IC or the EOC. (*NOTE: If a college must be evacuated, this plan should be activated to a low-level evacuation.)
- Colleges should be encouraged to cancel classes on days when an evacuation order is in effect.
- **West Virginia State University**: WVSU is located along Fairlawn Drive (WV Route 25) in Institute, near I-64. Enrollment is approximately 3,500. The school is adjacent to the Bayer Crop Science facility. Although the southern portions of the campus are along the Kanawha River, the main campus is not located in the flood hazard area (Source: DFIRM). Hazards that could necessitate an evacuation include a fixed facility hazmat incident in Institute, a transportation hazmat incident along I-64, or an on-campus civil disturbance.
- **University of Charleston**: UC is located at 2300 MacCorkle Avenue, SE in Charleston. The campus is on the south bank of the Kanawha River, across from the State Capitol Complex. Enrollment is approximately 1,400 students. The campus is in the flood hazard area, but not the "floodway" (Source: DFIRM). Hazards that could necessitate an evacuation include heavy flooding, a terrorist-type incident at the Capitol Complex, a civil disturbance, or rail/water transportation accidents. Depending on wind direction and intensity, a transportation hazmat incident along I-64 could affect the school.

- **Marshall University Graduate College**: The MU Graduate College is located just south of I-64 in South Charleston. The campus is also south of the South Charleston Industrial Park and not located in the flood hazard area (Source: DFIRM). A fixed facility hazmat incident in the industrial park, a transportation hazmat incident along I-64, or an on-campus civil disturbance could necessitate an evacuation.
- **WVU Tech**: WVU Tech is located along Second Avenue in Montgomery, south of the Kanawha River. The campus runs parallel to a CSX rail line. Enrollment is approximately 1,200 students. It is not in the flood hazard area (Source: DFIRM), although major flooding could isolate portions of Montgomery. Hazards that could force an evacuation include a transportation hazmat incident along US 60 or the CSX line or an on-campus civil disturbance.

iv. Airports

- **Yeager Airport**: Yeager Airport is located in the East End of Charleston, three (3) miles east of the city's central business district. It is the home of the 130th Airlift Wing of the WV Air National Guard. It is comprised of one (1) runway, 5/23, which is 6,302" in length. Hazards that could necessitate an evacuation of the airport include a terrorist-type incident or an aircraft accident. Yeager Airport is often used as a major resource during emergencies due to the West Virginia National Guard's presence there. Yeager and its resources have been used to assist in removing critical care patients from the area. Consequently, evacuation routing considerations for the East End should consider the need to keep ingress/egress available to the airport.

v. Correctional Facilities

- **South Central Regional Jail**: The South Central Regional Jail is located at 1001 Centre Way near Charleston. It is one (1) of ten

(10) regional jails in the state. Currently, inmates from Kanawha, Jackson, Lincoln, and Putnam Counties are housed at the facility. The facility contains approximately 82 uniformed correctional officers and 30 non-uniformed staff members. The actual population of the jail ranges between 450 and 520 inmates (its designed capacity is 480 inmates). It is projected that the facility could house as many as 700 to 800 inmates by 2012-2013. The jail is located south of Charleston, near the Southridge shopping centers. US 119 is the primary thoroughfare near the jail. Due to the close proximity of US 119 and several congested intersections, the jail may need to shelter-in-place or evacuate due to a hazardous material incident.

- **Mount Olive Correctional Complex**: The Mount Olive facility is actually located in Fayette County, but resources from Kanawha County may need to assist in an evacuation of the facility. It is located seven (7) miles east of Montgomery on Cannelton Hollow Road. It is the state's only maximum security facility. The maximum security portion of the facility exceeds 1,000 beds. There is also a minimum security work camp on-site.

vi. Recreation

- Several recreational opportunities are available in Kanawha County, including destinations such as the Kanawha State Forest, and events such as Riverfest (St. Albans); Festivall (Charleston); Mountain Stage (Charleston); West Virginia Power baseball games (Charleston); Coonskin Park; concerts, basketball games, expositions, conferences at the Charleston Civic Center (Charleston); Multi Fest (Charleston); etc.
- Local officials indicate that the population of the area may increase by as many as 15,000 persons during one of these events.

3. Re-Entry
   a. Re-entry should be approved by the position that originally ordered the evacuation (e.g., mayor, county commission, etc.), based on information and recommendations from on-scene personnel. Often, such officials would be working as the "Executive Section" in the county EOC.
   b. The decision to allow re-entry should be based on whether the following steps have been completed:
      i. Damage assessments to buildings and infrastructure (with unsafe structures posted),
      ii. Gas leaks and/or downed power lines repaired,
      iii. Water and sewer lines repaired (and drinking water has been deemed safe),
      iv. Hazardous material releases and residual contamination have been (at least) contained,
      v. Debris has been removed from major transportation routes, and
      vi. Trees and other overhead structures are safe.

   c. Implementing Re-Entry Activities
      i. Once re-entry is deemed safe, the same warning and public information venues used to announce and guide the evacuation effort should be used to disseminate information regarding the opening and re-accessibility of evacuated areas.
      ii. **The EOC should notify shelters of the re-entry schedule prior to releasing it through media venues.** (If shelters in neighboring or other host counties were activated, the EOC should notify the Point of Contact [POC] in that jurisdiction and instruct him/her to notify shelters.)
      iii. Resources that coordinated security and traffic control during the evacuation should be directed to establish re-entry points to ensure that legitimately returning residents, contractors, and insurance adjustors are granted access to evacuated neighborhoods. The location of re-entry points should be determined at the time re-entry is deemed safe and publicized via public information channels.

iv. Again, the majority of transportation during re-entry would be achieved by personal vehicle. If transportation assistance was provided during the initial evacuation, though, it should also be provided for re-entry – see transportation resources in section III.F.1 above – pg. 23. (Transportation can be provided back to pick-up points or directly into neighborhoods. Such a decision should be made jointly by on-scene personnel and the EOC.)

d. Some evacuees may have evacuated a great distance from Kanawha County (some may have even gone into other states). As such, websites and Web 2.0 technologies should also be used to disseminate re-entry instructions. Access to and use of these systems is described in Appendix 5: Warning and Public Information Systems.
e. Vulnerable populations, such as those with disabilities, may have lost needed support infrastructure (e.g. ramps) or may find that once easy terrain is now damaged and too difficult to navigate. As such, short-term housing (e.g. hotels, apartments) may be identified that can accommodate their needs until damage is fully repaired. (*NOTE: Various resources for vulnerable populations are included in the *Kanawha County Resource Database*, maintained by Kanawha County Emergency Management, and the special needs resource database distributed by Volunteer West Virginia.)
f. Volunteer resources can be extremely helpful during a re-entry. Such organizations as Community Emergency Response Teams (CERTs) and the "neighborhood assistance" officers through the Charleston Police Department should be used to collect data, provide literature and information, direct traffic, and provide other support as directed by the EOC and on-scene personnel.

G. Sheltering
1. American Red Cross Role
a. The American Red Cross (ARC) is the primary agency to coordinate sheltering in Kanawha County (insofar as capabilities permit).

b. It is significant to note, though, other religious and volunteer groups may open shelters. Some of these groups may coordinate their operations with the ARC and others may not, assuming full responsibility for their shelters.
c. If sheltering operations are necessary, the appropriate (i.e., city and/or county) Emergency Management Director should notify the ARC via telephone.
d. If sheltering operations are undertaken, the ARC should provide a representative to the EOC.

2. Potential Shelter List
   a. Potential shelter locations are shown graphically on Map #5 in Appendix 2. They are also listed in the Evacuation Area Profiles contained in Appendix 6.
   b. Special (Medical) Needs Shelter
      i. At least one (1) shelter established as a result of an evacuation should be a special needs shelter. (According to the *Kanawha Putnam Emergency Management Plan*, the ARC is the lead authority for the management of a special needs shelter and the health department is the lead agency for the management of medical and public health care in a special needs shelter.)
      ii. Recommendations for Special Populations Shelters (Source: The Arc of West Virginia)
         - Shelter Registration
            - Be aware that it is not always obvious to tell, just by looking at a person, what type of assistance would be needed. Simply ask how you can help when you are unsure what assistance might be useful or required.
            - Needs that May Be Identified
               - Prescription medications (Is there a need for emergency medication replacement? Do the medications need to be refrigerated? Do the medications need to be taken with food?)

- Personal care assistance (e.g., assistance with eating, dressing, showering, etc.)
- Communication needs
- Dietary needs

- Misleading Assumptions
  - **Confusion:** Persons with a hearing loss may appear disoriented and confused when all that is really "wrong" is that they cannot hear.
  - **Slurred Speech:** May be due to a medical condition and not drunkenness.

- **Shelter Orientation:** Some special populations may need assistance adjusting to the shelter environment.
  - Provide a walk-through of areas within the shelter (i.e., bathrooms, sleeping and eating areas, etc.)
  - Provide a verbal mapping of the shelter facility
  - Guide techniques

- **Personal Care Considerations:** Some persons with disabilities are fully independent, while others may need moderate assistance within the shelter. Types of assistance include (but are not necessarily limited to) the following.
  - People with Mobility Disabilities:
    - Transfer assistance,
    - Meals (i.e., assistance going through feeding lines),
    - Cot space (i.e., ensuring that access to facilities like eating areas and restrooms does not take a person through an obstructed area),
    - Sleeping accommodations, and
    - Battery charging (for motorized wheelchairs or scooters).

  - People with Visual Disabilities:
    - Reading and mobility assistance, and

- Cot space (i.e., locating sleeping areas along a wall or in a corner makes it easier to find; also keep doors wide open or closed).

- **People with Developmental or Cognitive Disabilities:** Establish a buddy system.
- **People Who are Deaf or Hearing Impaired:** Volunteers can help with basic communications needs (e.g., writing or slowly repeating instructions).
- **Visible Tension and Anxiety:** If a person within the shelter becomes agitated, help them find a quiet corner (see below) away from the confusion to reduce stress. Keep communication simple, clear, and brief. Be empathetic and reassuring.
- **Persons Dependent on Medical Equipment or Home Health Care:** Ensure that Emergency Public Information (EPI) notifying the public of shelter locations encourages those with this type of equipment to bring it with them.
- **Privacy Area:** Create a section of the shelter that is separate from other shelter residents for privacy. Some persons with disabilities must change catheter bags and attend to other personal hygiene needs. Additionally, some shelter residents (e.g., elderly persons, persons with psychiatric disabilities, very young children, etc.) may benefit from a quieter space.
- **Shelter Isolation Area:** Designate a separate room or space within the facility for people who have asthma, multiple chemical sensitivities, or allergies. Consider a "no scent" policy within the shelter. People with seriously weakened immune systems may also require isolation within shelters.

- Consider the following shelter accessibility issues when selecting a "special populations" shelter.
  - Parking that is close to the building entrance with appropriate curb cuts

- An accessible entrance to the shelter
- Access to all shelter service areas
- Restrooms that allow for free access
- Navigable isles

- Consider the following shelter modifications if necessary:
  - Portable ramps,
  - Accessible portable toilets and showers,
  - Rearrange chairs, tables, vending machines, and other furniture,
  - Make a desktop telephone or cellular phone available if telephones on walls are too high,
  - Rearrange toilet partitions to increase maneuvering space,
  - Install a raised toilet seat, and
  - Consider leaving some doors open or stationing a volunteer near doors to ensure accessibility.

3. Reception in Neighboring or Other Jurisdictions
   a. If it appears as though sheltering a portion of Kanawha County's population in a neighboring or other county will be necessary, the EOC should contact the SEOC to see that such a message is disseminated.
   b. Determination of Host Counties (or Jurisdictions)
      i. In most cases (all low and some medium-level evacuations), the evacuated population can take refuge in other parts of Kanawha County. Exceptions may include incidents (i.e. fixed facility or transportation-based hazardous material incidents) that occur near the Putnam or Fayette County lines along I-64 and US 60 or near the Jackson County line along I-77 and the Boone County line along US 119. Other hazards, such as floods and fires, that could occur near county lines may see a portion of the evacuated population go into a neighboring county.
         - If such an incident were to occur, the EOC should notify the appropriate neighboring county as to the situation.

- If shelter sites are established in Kanawha and the neighboring county, public information materials should include locations and routes (jointly determined by officials in both counties).

ii. Most generally, host areas would be the counties immediately neighboring Kanawha County (so long as they are safe from the effects of the hazard affecting Kanawha County and have a capability to shelter the incoming population).
   - The EOC should contact the potential host county to inquire about sheltering capabilities.
   - The ARC may be able to provide some information (as the Central West Virginia Chapter serves many of the neighboring counties).

iii. In general, direction of travel on evacuation routes would be contingent on the hazard (e.g. if a hazardous material incident occurs and the wind is blowing east, travel on the evacuation route should be in the opposite direction to avoid sending an evacuating population into the hazard zone. As such, the potential host county may be determined by the direction(s) in which the evacuating population is being sent.

iv. Potential Sheltering Capacities in Neighboring Counties
   - Sheltering capacities are based on records kept on file with the American Red Cross. It should be noted that all of these are "soft" estimates. Other agencies in each of these counties may have compiled plans for their own sheltering operations.
   - Boone County: 2,800
   - Clay County: 1,200
   - Fayette County: 21,245
   - Jackson County: 9,191
   - Lincoln County: 8,388
   - Putnam County: 2,700
   - Raleigh County: 1,762
   - Roane County: 11,286

c. Information to Convey
   i. Brief description of the emergency
   ii. Estimate of the evacuating population destined for the host jurisdiction
   iii. Estimated duration of the evacuation
   iv. Identification of any assistance that can be offered
   v. Instructions to bring personal and/or family emergency kits

d. Once notification is made, it is assumed that sheltering plans in the host county would activate. Shelter operations in the host county would thus be managed in accordance with those plans.

H. Special Populations Considerations

1. Special populations planning in Kanawha County has consisted of considerations for the following types of special needs:
   a. Non-English speaking and/or foreign residents (and the need for them to contact their home country);
   b. Have challenges due to the following disabilities:
      i. Hearing or sight impairment,
      ii. Mobility impairment,
      iii. Mental or developmental disability, or
      iv. Any person declared by a medical doctor or governmental agency to be disabled;

   c. Minor children whose parents are not able to take care of them;
   d. Aged residents who need assistance with mobility or personal care; and
   e. Indigent citizens who lack basic resources (e.g. transportation or ability to self-evacuate, financial resources, and temporary lodging arrangements).

2. Pre-disaster public information campaigns can encourage special populations to pre-register with the Kanawha County or City of Charleston emergency management offices. Such registration, though, would be voluntary and may not be relied upon as “complete”.

3. If an evacuation is ordered, warnings and initial public information releases should direct special populations that can arrange their own transportation to report to a special needs shelter.
    a. This information should also direct those with special needs that can walk (or are caregivers that can walk their patient safely) to one of the pre-determined pick-up points to await the arrival of public transportation.
    b. Finally, this information should direct those with special needs that have no transportation and cannot reach a pick-up point to contact the EOC, which should coordinate transportation assistance resources for that area.

I. Handling of Pets
    1. Officials in the EOC should address pet concerns as part of the implementation of an evacuation.
    2. In general, domestic animals that are lost, stray, are incapable of being cared for by their owners, and/or are a danger to themselves or the public should be the responsibility of the Kanawha County Humane Association.
        a. These animals may be sheltered, fed, and (if possible) returned to their owners. If animals cannot be returned to their owners, disposition should be handled in accordance with existing animal control guidelines. During times of emergency though, holding periods may be extended to allow for location of owners.
        b. The Kanawha County Humane Society has access to temporary shelters that can be located at alternate sites or close to evacuation “people” shelters. The county and/or city emergency manager can coordinate their location with the humane society.

    3. Estimated Numbers of Animals
        a. Pets (Source: Humane Society of the United States)
            i. Number of Households: 86,226
            ii. Estimated Number of Dogs: 47,838
            iii. Estimated Number of Cats: 51,955
            iv. Potential Number of Pets: 99,793

b. Large Animals (Source: US Census of Agriculture)
   i. Cattle and Calves: 1,362
   ii. Horses and Ponies: 816
   iii. Goats (all): 246

4. Pre-emergency public information campaigns should encourage pet owners to make arrangements for their pets during emergencies.
5. Initial public information releases during an evacuation should include instructions for people with pets, to include the location of pet shelters, items to take with their pet to a shelter (e.g. food, medicines, toys, etc.), and other information deemed necessary.
6. Additional Sheltering Resources
   a. The sheltering capabilities in Kanawha County alone – even with supplemental temporary shelters – are not likely to satisfy the entire need should a large segment of Kanawha County's population need to evacuate.
   b. In general, the animal hospitals in Kanawha County can shelter animals for a short duration.
   c. Sheltering Capabilities in Neighboring Counties
      i. Under extreme circumstances, emergency managers in Kanawha County may be able to coordinate with neighboring counties to arrange for temporary animal sheltering in those counties.
      ii. Boone County – The dog pound is county-operated and only accepts dogs.
      iii. Clay County – The county does not have an animal shelter.
      iv. Fayette County – The shelter is a county-operated shelter and accepts dogs and cats.
      v. Jackson County – The shelter is a county-operated shelter and accepts dogs and cats.
      vi. Lincoln County – The county does not have an animal shelter.
      vii. Putnam County – The shelter is a county-operated shelter and accepts dogs and cats.
      viii. Raleigh County – The shelter is a county-operated shelter and accepts dogs and cats.

ix. Roane County – The shelter is a county-operated shelter and accepts dogs and cats.

7. Additional, general information is listed in Annex A28 of the *Kanawha Putnam Emergency Management Plan*.

J. State and Federal Assistance

1. State

a. State assistance may come in many forms during an evacuation.

b. Because local resources are limited to implement a full-scale evacuation, WVSP units may assist local law enforcement to ensure an orderly traffic flow and to provide perimeter security at the affected area.

c. The WVDOH may be available to assist in implementing road closures, including the identification of roads that can be closed, erecting barricades, and providing manpower to enforce road closures.

d. The WVDHSEM should act as a liaison between the EOC and other state resources around the state as well as federal resources.

e. All state assistance is coordinated through the county EOC.

i. Mutual aid provided by the WVSP may be requested and coordinated by local law enforcement agencies.

ii. The on-scene IC makes formal requests for state assistance to the EOC.

f. Many state resources will act under the authorities outlined in the *West Virginia Emergency Operations Plan*.

2. Federal

a. Federal support for evacuations is generally described in Emergency Support Functions (ESFs) 1 and 8 as well as the “Mass Evacuation Incident Annex” of the *National Response Framework*.

b. In accordance with the Mass Evacuation Incident Annex, the US Department of Homeland Security's Federal Emergency Management Agency (DHS/FEMA) can provide transport for persons, including individuals with special needs, provided they meet the following criteria:
   i. Evacuees can be accommodated at both embarkation points and at destination general population shelters;
   ii. Evacuees can travel on commercial long-haul buses, aircraft, passenger trains, or lift-equipped buses; and
   iii. Evacuees do not have medical needs indicating that they should be transported by ESF #8 resources.

c. Consistent with the Mass Evacuation Incident Annex and the Post-Katrina Emergency Management Reform Act, DHS/FEMA is also responsible for supporting the evacuation of service and companion animals.
d. DHS/FEMA can support ESF #8 efforts to evacuation medical patients by providing limited bus evacuations between medical facilities within the limitations and capabilities of the assets and drivers.
e. The full scope of ESF #1 services can support the Mass Evacuation Incident Annex in cases where state and local authorities are overwhelmed. Such assistance may include:
   i. Monitoring and reporting the status of and damage to the transportation system and infrastructure;
   ii. Identification of temporary alternative transportation solutions that can be implemented by others when systems or infrastructure are damaged, unavailable, or overwhelmed; and
   iii. Coordination of the restoration and recovery of transportation systems and infrastructure.

f. Federal assets are accessed through state authorities. Local officials request state assistance through the EOC to the WVDHSEM in the SEOC. WVDHSEM personnel distribute requests, as necessary.

IV. ROLES AND RESPONSIBILITIES

A. Roles

1. Evacuation tasks (see Table 7, next page) can be divided into “primary” and “support” roles. The “Primary” role implies that the agency (or type of agency) may be asked to coordinate operations within a given function. The “Support” role implies that the agency (or type of agency) assists with the function, but does not usually coordinate it.

Table 7

Kanawha County Evacuation Planning
Evacuation Tasks

	Kanawha County Commission	Mayors	Kanawha County Emergency Mgmt.	Charleston Emergency Mgmt.	Central WV Chapter, Red Cross	Community Emergency Response Team	EMS Providers	Fire Service Providers	Hospitals	Kanawha-Charleston Health Dept.	Kanawha County Humane Association	Kanawha County Schools	Kanawha Valley Regional Transportation Authority (KRT)	Law Enforcement Providers	Metro 911	WVDHHR	WVDHSEM	WVDOH	WVSP	USDHS/FEMA
Direction & Control – EOC	**P**	**P**	**P**	**P**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**S**	**X**	**S**	**X**	**X**	**S**
Direction & Control – ICS	**X**	**X**	**X**	**X**	**X**	**S**	**S**	**P**	**S**	**S**	**S**	**S**	**S**	**P**	**S**	**S**	**S**	**S**	**S**	**S**
Communications (ESF 2)	**S**	**S**	**P**	**P**	**S**	**S**	**S**	**S**	**S**	**S**	**S**	**S**	**S**	**S**	**P**	**S**	**S**	**S**	**S**	**S**
Notification/Warning (ESF 2)	**S**	**S**	**P**	**P**	**X**	**S**	**S**	**S**	**X**	**X**	**X**	**S**	**X**	**S**	**P**	**X**	**S**	**S**	**S**	**S**
Public Information (ESF 15)	**P**	**P**	**P**	**P**	**S**	**X**	**X**	**S**	**X**	**S**	**X**	**X**	**X**	**S**	**S**	**X**	**S**	**S**	**X**	**S**
Traffic Control	**X**	**X**	**S**	**S**	**X**	**S**	**S**	**S**	**X**	**X**	**X**	**S**	**S**	**P**	**S**	**X**	**X**	**S**	**S**	**X**
Security (ESF 13)	**X**	**X**	**S**	**S**	**X**	**S**	**X**	**S**	**S**	**X**	**X**	**X**	**X**	**P**	**S**	**X**	**X**	**S**	**S**	**X**
Resource Management (ESF 7)	**S**	**S**	**P**	**P**	**S**	**X**	**X**	**X**	**X**	**S**	**X**	**S**	**S**	**X**	**S**	**X**	**S**	**X**	**X**	**S**
Transportation (ESF 1)	**X**	**X**	**S**	**S**	**X**	**S**	**S**	**X**	**S**	**X**	**X**	**S**	**P**	**S**	**S**	**S**	**X**	**S**	**S**	**X**

P = Primary

S = Support

X = Not Applicable (*in the local context*)

2. Incident (Area) Command Positions
   a. Incident/Area Commander
      i. If a small, site-specific evacuation, issues immediate evacuation order.
      ii. If a small, site-specific evacuation, notifies the appropriate emergency manager of the evacuation and the affected area.
      iii. Relays incident objectives and priorities from the EOC to general staff section chiefs.
      iv. Relays field-level resource requests to the EOC.
      v. Manages tactical operations on-scene.
      vi. Recommends changes to evacuation routes, as and if needed, to the EOC.
      vii. Estimates the number of persons affected by the emergency/evacuation order. (The IC may require assistance doing this.)

   b. Safety Officer
      i. Identifies and mitigates hazardous situations.
      ii. Oversees the creation of an on-scene "Safety Plan" in coordination with the IC, Planning Section Chief, and Operations Section Chief.
      iii. Ensures safety messages and briefings are made.
      iv. Exercises emergency authority to stop and prevent unsafe acts.
      v. Reviews the Incident Action Plan (IAP) for safety implications.
      vi. Assigns assistants qualified to evaluate special hazards, if necessary.
      vii. Initiates a preliminary investigation of accidents within the incident area.
      viii. Reviews and approves the "Medical Plan".
      ix. Participates in planning meetings to address anticipated hazards associated with future operations.

   c. Liaison Officer
      i. Acts as a POC for agency representatives responding to the on-scene staging area.

ii. Maintains a listing of assisting and cooperating agencies and agency representatives.
iii. Assists in setting up and coordinating interagency contacts.
iv. Monitors incident operations to identify current or potential inter-organizational problems.
v. Participates in planning meetings, providing current resource status, including limitations and capabilities of agency resources.
vi. Provides agency-specific demobilization information and requirements.

d. Public Information Officer
   i. Serves as a liaison between the ICS Public Information Officer and information released by the EOC.
   ii. Ensures that the IC is aware of (and approves, if necessary) public information that is released by the EOC.
   iii. Other responsibilities as delegated by the IC.

e. Operations Section Chief
   i. Ensures safety of tactical operations.
   ii. Manages tactical operations.
   iii. Develops operations portions of the IAP.
   iv. Supervises the execution of operations portions of the IAP.
   v. Requests additional resources to support tactical operations.
   vi. Approves the release of resources from active operational assignments.
   vii. Makes or approves expedient changes to the IAP.
   viii. Maintains close contact with the IC, subordinate operations personnel, and other agencies involved in the incident.

f. Planning Section Chief
   i. Collects and manages all incident-relevant operational data.
   ii. Supervises the preparation of the IAP.
   iii. Provides input to the IC and Operations Section in preparing the IAP.

iv. Incorporates Traffic, Medical, and Communications Plans and other supporting material into the IAP.
v. Conducts/facilitates planning meetings.
vi. Re-assigns out-of-service personnel within the Incident Command System (ICS) organization already on-scene, as appropriate.
vii. Compiles and displays incident status information.
viii. Establishes information requirements and reporting schedules for units.
ix. Determines the need for specialized resources.
x. Establishes specialized data collection systems as necessary (e.g. weather).
xi. Assembles information on alternative strategies.
xii. Provides periodic predictions on incident potential.
xiii. Reports significant changes in incident status.
xiv. Oversees preparation of the Demobilization Plan.

g. Logistics Section Chief
   i. Provides all facilities, transportation, communications, supplies, equipment maintenance and fueling, food, and medical services for incident personnel, and all off-incident resources (i.e. those at staging area[s]).
   ii. Manages all incident logistics.
   iii. Provides logistics input to the IAP.
   iv. Briefs logistics staff as needed.
   v. Identifies anticipated and known incident service and support requirements.
   vi. Requests additional resources, as needed.
   vii. Ensures and oversees development of Traffic, Medical, and Communications Plans, as required.
   viii. Oversees demobilization of Logistics Section and associated resources.

h. Finance/Administration Section Chief
   i. Manages all financial aspects of an incident.

ii. Provides financial and cost analysis information, as requested.
iii. Ensures compensation and claims functions are being addressed relative to the incident.
iv. Gathers pertinent information from briefings with responsible agencies.
v. Develops an operational plan for the Finance/Administration function.
vi. Determines the need to set up and operate an incident commissary.
vii. Meets with assisting and cooperating agency representatives, as needed.
viii. Maintains daily contact with agency(s) headquarters on finance matters.
ix. Ensures that personnel time records are completed accurately and transmitted to home agencies.
x. Ensures that all obligation documents initiated at the incident are properly prepared and completed.
xi. Briefs agency administrative personnel on all incident-related financial issues needing attention or follow-up.
xii. Provides input to the IAP.

3. The responsibilities of EOC staff positions are listed in the Standard Operating Guidelines (SOGs) for the EOC.

B. Responsibilities

1. Primary Agencies

a. Kanawha County Commission

i. Issues evacuation order.
ii. Oversees the development of in-depth evacuation plans during pre-incident periods.
iii. Provides overall direction and control of evacuation efforts from areas under the county's jurisdiction.
iv. Coordinates with governing bodies of neighboring or other jurisdictions regarding reception.
v. Designates county personnel to assist in implementing the evacuation, as necessary.

b. Mayors
   i. Issues an evacuation order for their jurisdiction.
   ii. Provides overall direction and control of evacuation efforts from areas under their jurisdiction.
   iii. Coordinates with the county or neighboring jurisdictions regarding reception.
   iv. Designates municipal personnel to assist in implementing the evacuation, as necessary.

c. Kanawha County Emergency Management
   i. Assists in disseminating evacuation instructions.
   ii. Activates the EOC to coordinate all evacuations within Kanawha County.
   iii. Coordinates resource requests and recovery efforts with on-scene personnel.
   iv. Coordinates public information efforts.
   v. Coordinates with on-scene personnel and pertinent agencies regarding suitable evacuation routes (and route amendments).
   vi. Coordinates with the ARC to determine shelters to be opened.
   vii. Coordinates with KRT regarding pick-up for those in need of transportation assistance.

d. City of Charleston Office of Homeland Security & Emergency Management
   i. Assists in disseminating evacuation instructions.
   ii. Activates the EOC to coordinate all evacuations within the City of Charleston.
   iii. Coordinates resource requests and recovery efforts with on-scene personnel.
   iv. Coordinates public information efforts.
   v. Coordinates with on-scene personnel regarding suitable evacuation routes (and route amendments).
   vi. Coordinates with the ARC to determine shelters to be opened.

vii. Coordinates with KRT regarding pick-up for those in need of transportation assistance.

2. Support Agencies
   a. Central WV Chapter, American Red Cross (ARC)
      i. Identifies potential shelter locations and negotiates agreements for their use.
      ii. Coordinates with the EOC to determine which potential shelter facilities should be opened on an incident-specific basis.
      iii. Prepares shelters for operation.
      iv. Staffs and operates shelter facilities.
      v. Coordinates with the EOC periodically to ensure that shelters have adequate resources.
      vi. Facilitates the deactivation of operations at shelter facilities.

   b. Community Emergency Response Team (CERT)
      i. Assists, in coordination with other response agencies, in the collection of damage assessment and other incident-related information at the scene (primarily to determine when and if re-entry should be implemented).
      ii. Assists in the provision of information and other instructions to returning residents upon re-entry.
      iii. Assists in the flow of traffic during a re-entry.

   c. EMS Providers
      i. Provides emergency medical services in the field during emergencies.
      ii. Assists in the transport of evacuees with medical needs (via ambulances).
      iii. Assumes an appropriate role within the ICS.

   d. Fire Service Providers
      i. Provides fire suppression and rescue services, as per normal protocols.

ii. Assists in the dissemination of warnings and public information via public address systems, if necessary and requested.
iii. Assists law enforcement in ensuring the flow of traffic along evacuation routes, if requested.
iv. Assists with security in evacuated areas, if necessary and requested.

e. Hospitals
i. Provides acute medical care during emergency incidents that necessitate an evacuation of a portion of the county (but not the hospital itself).
ii. Ensures the evacuation of patients, if necessary.
iii. Maintains internal emergency operations plans, to include provisions for evacuation.
iv. Assigns a liaison to the EOC, if necessary.

f. Kanawha-Charleston Health Department
i. Coordinates all public health services in the jurisdiction.
ii. Inspects, for purity and usability, all foodstuffs, water, and other consumables that were exposed to the hazard.
iii. Provides epidemiological surveillance, case investigation, and follow-up.
iv. Coordinates laboratory services through the West Virginia Office of Lab Services for identification required to support emergency health and medical services.
v. Coordinates immunizations or quarantine procedures if required.
vi. Establishes preventive health services, including the control of communicable diseases such as influenza, particularly in shelters.
vii. Monitors food handling and mass feeding sanitation service in emergency facilities, including increased attention to sanitation in commercial feeding and facilities that are used to feed disaster victims.
viii. Provides for the monitoring and evaluation of environmental health risks or hazards as needed and ensures the appropriate actions are taken to protect the health and safety of disaster victims, responders,

and the general public.

ix. Implements actions to prevent or control vectors such as flies, mosquitoes, and rodents.
x. Detects and inspects sources of contamination.
xi. Provides information for assessment of damaged buildings for health hazards.
xii. Coordinates with the water, public works, and/or sanitation departments to ensure the availability of potable water, an effective sewage system, and sanitary garbage disposal.
xiii. Coordinates with the animal care and control agency to dispose of dead animals.
xiv. Ensures that adequate sanitary facilities are provided in emergency shelters and for response personnel.

g. Kanawha County Humane Association
   i. Assists in the shelter of lost or stray animals, or those that cannot be cared for by their owners.
   ii. Establishes temporary shelters that can be located at alternate sites or close to “people” shelters.
   iii. Coordinates with the county and/or city emergency manager regarding the location of temporary pet shelters.
   iv. Assigns a liaison to the EOC, if necessary.

h. Kanawha County Schools
   i. Ensures the safety of students during an evacuation.
   ii. Provides buses and drivers for evacuation efforts.
   iii. Assists the ARC in establishing shelters at schools, if necessary.
   iv. Assigns a liaison to the EOC, if necessary.

i. Kanawha Valley Regional Transportation Authority (KRT)
   i. Provides buses and drivers for evacuation efforts.
   ii. Coordinates the use of regular KRT stops as pick-up points.
   iii. Assigns a liaison to the EOC, if necessary.

j. Law Enforcement Providers
   i. Coordinates appropriate components of the on-scene evacuation effort within one's jurisdiction.
   ii. Assists in ensuring the orderly flow of evacuees from the affected area.
   iii. Maintains law and order.
   iv. Assists in providing security for the evacuated area (including perimeter and traffic control).

k. Metro 911
   i. Dispatches emergency response agencies per normal protocols during situations necessitating an evacuation.
   ii. Supports the communications needs of on-scene resources.
   iii. Coordinates with and supports the EOC in the dissemination of warnings and public information as well as overall communications.

l. WV Department of Health and Human Resources (WVDHHR)
   i. Assists in the evacuation of medical facilities *if it is necessary because of a failure of the Bluestone Dam*.
   ii. Assists in the evacuation of nursing homes *if it is necessary because of a failure of the Bluestone Dam*.

m. WV Division of Homeland Security and Emergency Management (WVDHSEM)
   i. Receives resource requests from the county.
   ii. Coordinates the resources of state agencies through the SEOC.

n. WV Division of Highways (WVDOH)
   i. Assists in the maintenance of the transportation infrastructure.
   ii. Provides access to and use of mobile, variable message boards as an aid to public information efforts, if necessary and requested.
   iii. Assists in the provision of security by erecting barricades along roadways, if necessary and requested.
   iv. Considers the designation of contraflow during an evacuation.

o. WV State Police (WVSP)
   i. Assists in coordinating the components of the on-scene evacuation effort.
   ii. Assists in ensuring the orderly flow of evacuees from the affected area.
   iii. Maintains law and order.
   iv. Assists in providing security for the evacuated area (including perimeter and traffic control).

p. US Department of Homeland Security / FEMA
   i. Assists in providing transport for persons, including individuals with special needs, if they meet the following criteria:
      - Evacuees can be accommodated at both embarkation points and the designation,
      - Evacuees can travel on commercial long-haul buses, aircraft, passenger trains, or lift-equipped buses, and
      - Evacuees do not have medical needs.

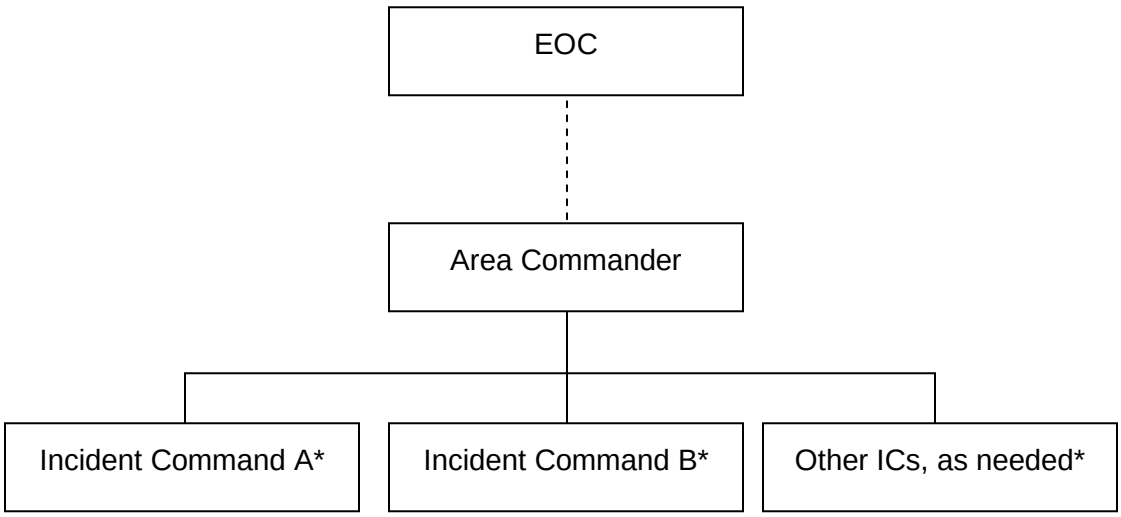
   ii. Supports the evacuation of service and companion animals.
   iii. Provides limited bus evacuations between medical facilities.
   iv. NOTE: A federal declaration is required before federal assistance can be granted. Local authorities should understand that there is likely to be a “time lag” between when assistance is requested and when it can be provided.

V. DIRECTION AND CONTROL

A. Incident Command Structure

1. Traditional Incident Command or Unified Command structures should be used to manage small, site-specific evacuations (often smaller than what would necessitate activation of this plan).
2. These command structures are discussed in the Basic Plan portion of the *Kanawha Putnam Emergency Management Plan*.
3. Field Transition to Area Command
    a. According to the US Department of Homeland Security (USDHS), area command is particularly relevant to incidents that are typically not site-specific, are geographically dispersed, and evolve over longer periods of time. An evacuation could be considered as such.
    b. The responsibilities of the field area command should not be confused with those of the EOC.
        i. The EOC coordinates the “macro” elements of the evacuation and serves as a liaison with the numerous local, regional, state, and federal partners that could be affected by or support the evacuation. The EOC provides resources to the area command.
        ii. The area command, on the other hand, should manage resources that are deployed to implement the evacuation (e.g. traffic control, crowd control, security, etc.).

c. Potential Area Command Structure (Figure 1)



The dotted line connecting the EOC to the Area Commander represents the coordination and communication that should occur.

**** "Incident Command A" and "Incident Command B" could each represent an evacuation in a given area or a function within the overall evacuation (e.g. traffic control, security, etc.).***

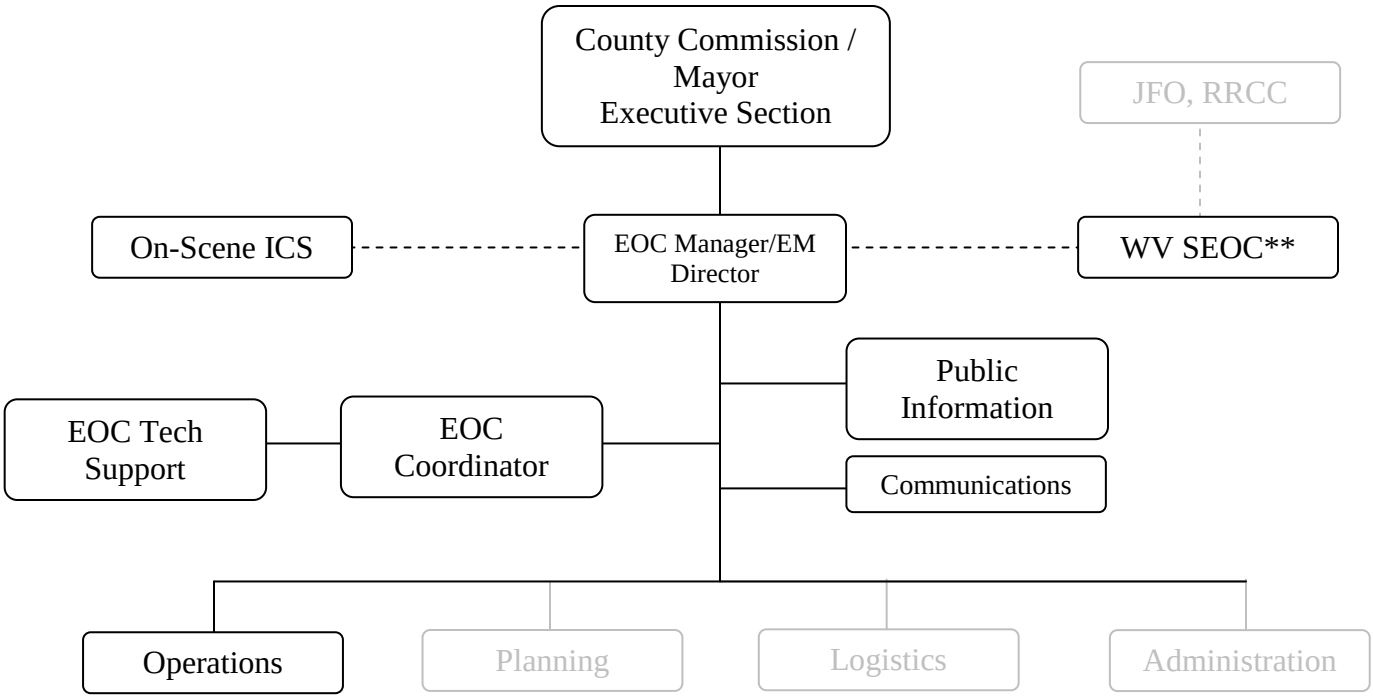
B. Multi-Agency Coordination Systems (MACS)

1. **Definition:** A system that provides the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination. MACS assist agencies and organizations responding to an incident. The elements of a MACS include facilities, equipment, personnel, procedures, and communications.
2. The county EOC functions as an element in an overall MACS.
3. If this plan is activated, the overall coordination of the evacuation should transition to the EOC.
   a. EOC Responsibilities and Potential Staffing Structure
      i. EOC activities should expand as the activation level of this plan expands (i.e. low to medium to high-level activations). This section lists responsibilities based on those levels. As an accompaniment to the responsibilities list, a potential staffing structure is shown that highlights what portions of the EOC would be most active. (Reference Tables 3-5 in section III.D.5 above [pg. 15] for a description of the activation levels.)

ii. Low-Level Evacuation

- Key Activities
  - Notify local agencies/resources that would be necessary to implement the evacuation.
  - Notify and coordinate information through state and federal partners.
  - Disseminate media releases to support self-evacuation and control rumors.
  - EOC staff should activate their own family emergency plans to ensure that their family members are supported (and, if necessary, evacuated to safety).
  - Identify special needs populations in the affected area. Deploy resources to assist those populations.
  - Coordinate with the ARC to open shelters for an estimated 200 evacuees (i.e. 20% of 1,000 people).
  - Coordinate resources for animal care.
  - Coordinate traffic control resources for up to 1,000 self-evacuating people.
  - Encourage businesses and local governments to implement continuity plans.
  - Recommend to local government officials to declare local states of emergencies.

- Potential Staffing Structure (Figure 2)*



Possible Functions/Positions

- Law Enforcement (ESF 13)
- Fire (ESF 4)
- Health/EMS (ESF 8)
- Public Works (ESF 3)
- Shelter (ESF 6)
- Transportation (ESF 1)
- Industry (ESF 15)
- Utilities (ESF 3)

Possible Functions/Positions

- Damage Assessment (ESF 5)
- Situational Status (ESF 5)
- Documentation (ESF 5)
- Mapping (ESF 5)
- Advance Planning (ESF 5)

Possible Functions/Positions

- Procurement (ESF 7)
- Volunteer Management (ESF 7)

Possible Functions/Positions

- Approve Expenditures (ESF 5)
- Track Expenditures (ESF 5)
- Cost Recovery (ESF 14)

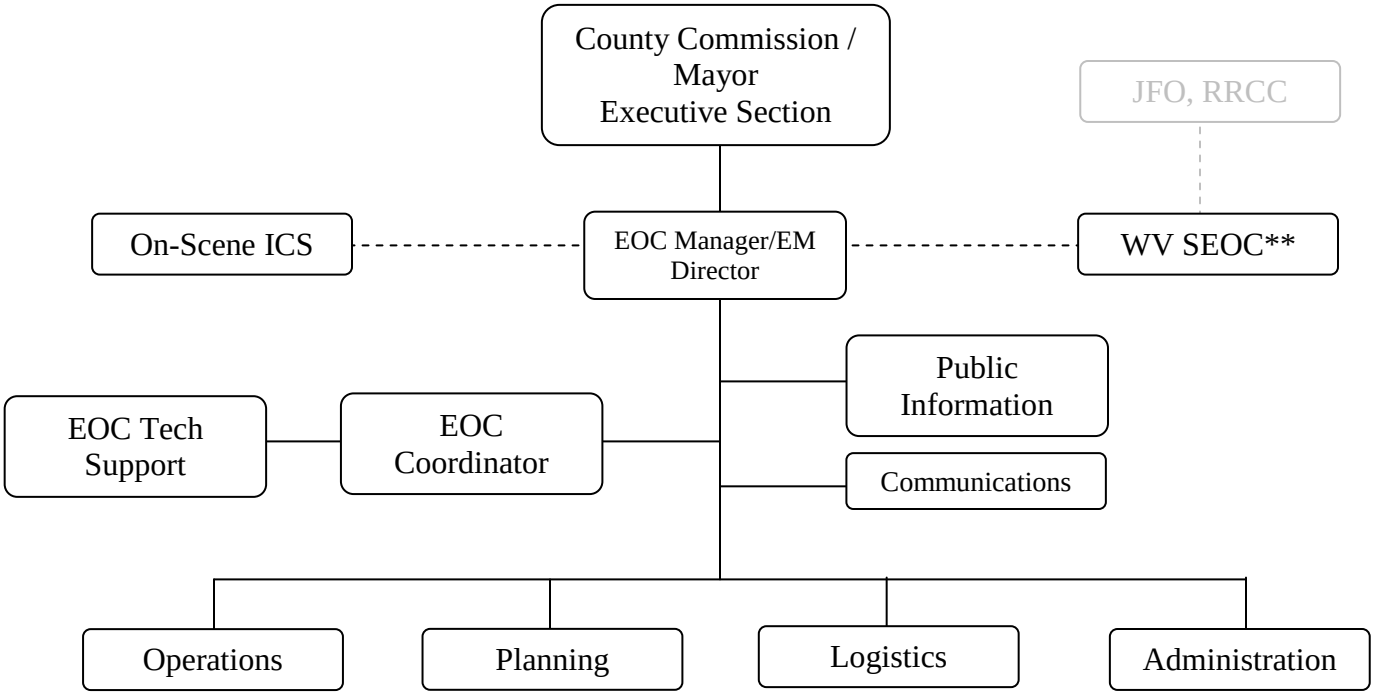
**** Actual staffing would be incident-contingent.***

***** A local support-based activation of the SEOC. It may have been activated prior to the local request.***

iii. Medium-Level Evacuation

- Key Activities
  - EOC staff and activities expand.
  - Notify local agencies/resources that would be necessary to implement the evacuation.
  - Notify and coordinate information through state and federal partners.
  - Begin collecting status reports from field personnel every 15 minutes.
  - EOC staff should activate their own family emergency plans to ensure that their family members are supported (and, if necessary, evacuated to safety).
  - Disseminate media releases to support mandatory and/or voluntary evacuations.
  - Encourage field responders to transition to area command.
  - Activate pick-up points.
  - Coordinate the use of mass transit and other transportation resources.
  - Coordinate with the ARC to open shelters for an estimated 2,000 evacuees (i.e. 20% of 10,000 people).
  - Coordinate resources for animal care.
  - Coordinate traffic control resources for up to 10,000 self-evacuating people.
  - Encourage businesses and local governments to implement continuity plans.
  - Coordinate with school officials regarding potential school closure in the affected area.
  - Recommend to local government officials to declare local states of emergencies.
  - Request declaration of a state of emergency from the Governor through the SEOC.

- Potential Staffing Structure (Figure 3)*



Possible Functions/Positions

- Law Enforcement (ESF 13)
- Fire (ESF 4)
- Health/EMS (ESF 8)
- Public Works (ESF 3)
- Shelter (ESF 6)
- Transportation (ESF 1)
- Industry (ESF 15)
- Utilities (ESF 3)

Possible Functions/Positions

- Damage Assessment (ESF 5)
- Situational Status (ESF 5)
- Documentation (ESF 5)
- Mapping (ESF 5)
- Advance Planning (ESF 5)

Possible Functions/Positions

- Procurement (ESF 7)
- Volunteer Management (ESF 7)

Possible Functions/Positions

- Approve Expenditures (ESF 5)
- Track Expenditures (ESF 5)
- Cost Recovery (ESF 14)

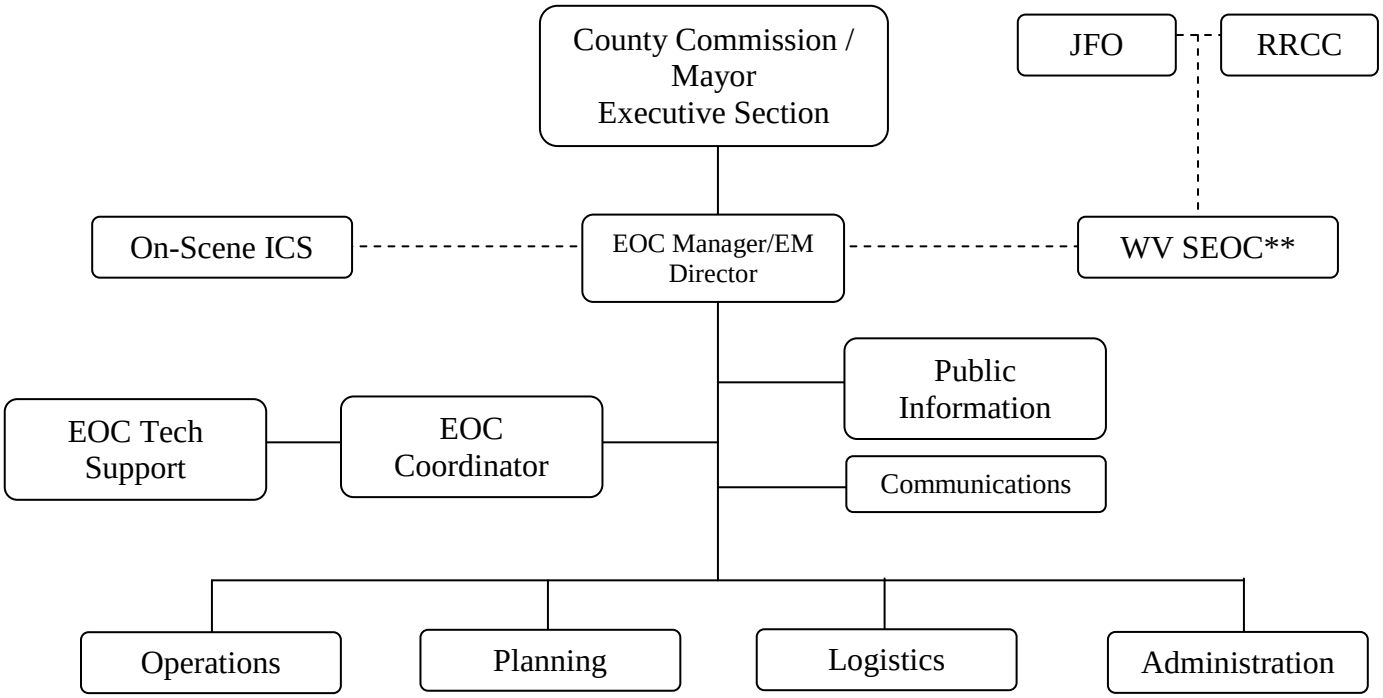
**** Actual staffing would be incident-contingent.***

***** A local support-based activation of the SEOC. It may have been activated prior to the local request.***

iv. High-Level Evacuation

- Key Activities
  - During high-level evacuations, actual responsibilities would be much the same as during medium-level activations; however, the volume of activity that would be necessary increases.
  - High-level evacuations represent the fullest activation of the EOC that is possible.
  - Additionally, a high level of technical expertise and coordination with state and federal agencies would likely be necessary.

- Potential Staffing Structure (Figure 4)*



Possible Functions/Positions

- Law Enforcement (ESF 13)
- Fire (ESF 4)
- Health/EMS (ESF 8)
- Public Works (ESF 3)
- Shelter (ESF 6)
- Transportation (ESF 1)
- Industry (ESF 15)
- Utilities (ESF 3)

Possible Functions/Positions

- Damage Assessment (ESF 5)
- Situational Status (ESF 5)
- Documentation (ESF 5)
- Mapping (ESF 5)
- Advance Planning (ESF 5)

Possible Functions/Positions

- Procurement (ESF 7)
- Volunteer Management (ESF 7)

Possible Functions/Positions

- Approve Expenditures (ESF 5)
- Track Expenditures (ESF 5)
- Cost Recovery (ESF 14)

**** Actual staffing would be incident-contingent.***

***** A local support-based activation of the SEOC. It may have been activated prior to the local request.***

C. ICS – EOC Interface

1. Objectives change depending on the context in which one is operating. Objectives are tactically-driven in the ICS and area command contexts. Objectives are support-driven in the EOC context. In this support context, the EOC prioritizes resource requests from tactical elements.
2. Information sharing between on-scene command posts and the EOC is critical during the implementation of an evacuation. The EOC should regularly provide on-scene personnel with information as to incident objectives, evacuation routes, shelter locations, resource deployment, etc. Conversely, on-scene personnel should disseminate incident status, problems anticipated or encountered, etc. to the EOC to facilitate on-going coordination of the response.
3. The public switched telephone network and cellular network should serve as the first communications link between on-scene command posts and the primary EOC. The alternate should be radio channels as designated by the EOC.
4. In the event that operations are transitioned to an alternate EOC, a switch to the West Virginia IRP may be necessary.
5. The Kanawha County OES repeater system should be utilized for on-going coordination between on-scene command posts and the EOC.

D. EOC – External MACS Interface

1. Extensive coordination would be necessary between the Kanawha County EOC and the EOCs of neighboring counties and the SEOC to ensure access to resources and to alert potential host areas of the influx of evacuees (as well as when re-entry can be initiated).
2. Interface between the Kanawha County EOC and neighboring county EOCs and the SEOC should be by Eteam (and supplemented/backed up by telephone and the Interoperable Radio Project [IRP] system). Amateur radio voice modes can serve as a fourth means of communication.

VI. ADMINISTRATION AND LOGISTICS

A. Administration

1. Records

a. Accurate records are necessary so that requests for any reimbursement that may be available can be made following an emergency. Records are also necessary to ensure that correct reimbursement for any expendable resources can be made efficiently (per usage agreements).

b. The Kanawha County EOC should ensure that proper and accurate records are maintained on emergency management activities throughout an evacuation. Such records may include (but not be limited to) the following:

i. The number, timing, and dissemination venues of evacuation routes,
ii. The number of people evacuated,
iii. The number of activated shelters, and
iv. The number of evacuees in shelters.

c. The local emergency manager acts as a local “clearinghouse” to compile requests for reimbursement from the USDHS. As such, records regarding reimbursement should be submitted to department or agency heads in a timely manner so that appropriate information can be provided to the emergency manager within ten (10) days of the conclusion of response operations. Documentation should include personnel and equipment hours expended, materials and supplies consumed, and any damages incurred. Emergency managers should submit the paperwork to the County Commission or City Manager, as appropriate.

2. Mutual Aid Agreements

a. Response agencies throughout Kanawha County are encouraged to formalize mutual aid agreements with one another. Such support can include equipment, materials, and personnel.

b. Since the implementation of a medium or high-level activation is likely to require more resources than any one agency has available, these mutual aid agreements are of critical importance.

c. Copies of MOUs should be kept on file with the Kanawha County and City of Charleston emergency managers.

3. Use of Eteam (https://wveteam.wvdhsem.gov)
   a. Eteam is the preferred status reporting mechanism from Kanawha County to the WVDHSEM.
   b. Eteam should be utilized to maintain the status of all evacuations in Kanawha County (via the "Jurisdictional SITREP" function).
   c. Eteam also provides an outlet for EOC staff to post resource requests and procure resources from neighboring and other counties throughout West Virginia (via the "Resource Request" function).

B. Logistics
   1. The EOC should be activated to assist in the coordination of and provide support to all evacuation efforts in Kanawha County.
   2. Resource Management
      a. To implement any level of evacuation, resources in addition to those normally carried by first responders will likely be necessary.
      b. Many types of resources, such as personnel, response equipment, etc., could be provided by other emergency response agencies in Kanawha County through mutual aid.
         i. The hazard-specific sections of this plan (see Appendix 7) reference specific resources as "LE/DOH Units". These units assist in traffic control should the areas under consideration need to be evacuated.
         ii. The label "LE/DOH Unit" was derived from the *Kanawha Interstate Traffic Diversion Plan*. In that document, specific law enforcement departments were listed, along with the WVDOH, as primarily responsible for maintaining traffic control.
         iii. To mimic that presentation, this document generalized the specific law enforcement departments to simply "LE". As such, IC and EOC personnel are free to assign available law enforcement units to traffic control should the emergencies in Appendix 7 occur.

c. For resources that cannot be procured through mutual aid, requests should be relayed through the EOC from on-scene personnel (namely, the IC).
d. The Kanawha County and Charleston emergency managers either maintain extensive information or have access to information regarding the resources available locally and throughout the region.
e. Resource requests should be processed by EOC staff in the order they are received unless on-scene personnel indicate high-priority need.
f. Once resources are procured, EOC staff should coordinate with the on-scene IC regarding deployment of said resources.
g. External resources responding to Kanawha County should be required to maintain their own records regarding personnel and equipment hours as well as supplies consumed and damage incurred.
h. External resources should serve at the direction and control of the on-scene IC.

3. Public Information
   a. Public information efforts should be in accordance with Function Annex A2 of the *Kanawha Putnam Emergency Management Plan*.
   b. Public information *during an action period* (i.e., once an evacuation is necessary and/or has been implemented) for all evacuations should be managed at the county Information Center in coordination with the EOC. Examples of information types are listed in section III.E.3 above (pg. 21-22).
   c. An evacuation is an event that would also benefit from significant pre-emergency public information initiatives. These initiatives should be a part of the county's existing public education program through such channels as Kanawha County Emergency Management, the Charleston Office of Homeland Security & Emergency Management, KPEPC, etc.
   d. Examples of pre-emergency public information include the following.
      i. The evacuation area profiles in Appendix 6 contain a brochure that can be distributed to the residents of that area. This brochure lists the primary and secondary evacuation routes, emergency contact information, and citizen instructions.

ii. It is critically important that residents realize the role they have to play in the successful implementation of an evacuation. Pre-emergency information campaigns should convey the following:

- Residents should assemble a disaster supplies kit (see family disaster plan note below) with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and Automatic Teller Machines (ATMs) are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

iii. Residents should be encouraged to compile a family disaster plan. USDHS/FEMA's guidance can be referenced. Such resources as http://myfamilysdisasterplan.com/ and http://www.wvdhsem.gov/WV_Disaster_Library/Library/FLOODS/FEMA%20Your%20Family%20Disaster%20Plan.htm.

iv. Residents should be encouraged to plan for their pets during emergencies.

4. The EOC is fully outfitted with the equipment and supplies necessary to coordinate an evacuation. These capabilities include adequate communications equipment, space for government officials to provide direction and control, mapping, computer hardware and software, etc.
5. Transportation for essential workers to and from risk areas will be provided by their respective organizations. Should additional transportation be required, requests will be made through the on-scene IC to the EOC.

VII. PLAN DEVELOPMENT AND MAINTENANCE

A. This plan is a dynamic document, most effective when it is frequently tested, reviewed, and updated.

B. The Emergency Management Directors for Kanawha County and the City of Charleston should ensure a conceptual review of this document on not less than an annual basis.

C. Other Factors Affecting the Review of This Plan

1. Several other local plans are cited as references in this document. Changes to some of those documents, such as the *Kanawha Putnam Emergency Management Plan* and the *Kanawha County Multi-Jurisdictional Hazard Mitigation Plan*, could affect the implementation of this document. If those documents are updated, this document should be checked to ensure continued compatibility.
2. Response organizations and emergency management agencies often participate in emergency exercises; some of these training events may necessitate the activation of this plan. If so, the effectiveness of this document should be discussed during any after-action planning meetings. Planning deficiencies should be addressed, as applicable, in this document as soon as practical following the after-action process.

D. If changes are necessary, revised pages/copies should be submitted to all agencies on the Distribution List.

VIII. LIST OF APPENDICES

IX. NOTES

1. Based on studies conducted at the Natural Hazards Research and Applications Information Center, University of Colorado, with advance warnings, approx. 50% of a population will voluntarily evacuate the area even before being ordered based on their perception of danger. Once an order is issued, up to 90% can be expected to evacuate. Some individuals may not evacuate because of property protection concerns, pets, family health concerns, and other issues.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 1: RISK AND VULNERABILITY INFORMATION

The purpose of this appendix is to provide greater risk and vulnerability detail than space would allow in section II.A.2 in the Basic Plan. This document estimates potentially-threatened populations, potentially-affected critical facilities, and other hazard-specific information that could affect the implementation of an evacuation. Numerous documents were consulted to compile this appendix, including:

- *Kanawha County Multi-Jurisdictional Hazard Mitigation Plan*,
- *City of Charleston CRS Area Analysis*,
- *Kanawha-Putnam Emergency Planning Committee Commodity Flow Study*,
- Kanawha-Putnam Emergency Planning Committee's *2008 Hazard Vulnerability Survey*, and
- *Kanawha-Putnam Emergency Planning Committee Vulnerability Analysis*.

I. HAZARDOUS MATERIALS – ROADWAY

In general, a hazardous material incident is the most probable incident to necessitate an evacuation in Kanawha County. Further, the US Department of Transportation (USDOT) indicates that the majority of transportation-based hazardous material incidents occur along roadways. Kanawha County does contain a robust transportation network with numerous major thoroughfares that traverses the majority of the county. Such roadways include Interstates 64, 77, and 79 as well as US 119 South (i.e., Corridor G). Other arterial routes, such as US 60 and US 119 North closely follow the paths of the interstates and four (4)-lane highways.

The Kanawha-Putnam Emergency Planning Committee's (KPEPC's) commodity flow study indicates that hazardous materials from all nine (9) USDOT hazard classes are transported through Kanawha County. The most frequently-transported class is that of flammable liquids (such as gasoline and diesel fuel). Corrosives and gases are also frequently transported. Often, flammable liquids would not cause a major evacuation unless a blast hazard is present. The effects of such spills are largely environmental. Other hazard classes, including corrosives and gases, may necessitate significant evacuation and/or shelter-in-place efforts. Such corrosives as chlorine and sulfur dioxide

(both of which were observed during the most recent flow study in 2008) could form plumes and cover a vast area. Gases such as propane, while not intuitively considered abnormally hazardous, could result in a significant explosion, again necessitating an evacuation.

The commodity flow study focused on these major arterial routes. The range of trucks carrying hazardous materials was vast, with as little as 3% of the total truck traffic through a site carried hazardous materials (i.e., Exit 85 off I-77 at Chelyan) to as much as 16% at the intersection of Montrose Drive with MacCorkle Avenue in South Charleston. In most cases, an evacuation of areas within 800' of the spill would be sufficient. Some materials, though, could necessitate an evacuation of up to a quarter mile. (Such estimates are based on the assumption that quantities per shipment would be restricted due to the size of trucks and containers.)

Additionally, Interstates 64 and 77 run east-west through the most densely-populated portions of Kanawha County, taking passengers through Nitro, St. Albans, Dunbar, South Charleston, Charleston, Marmet, and Chesapeake. Areas along these routes in the western municipalities (i.e., Charleston and points west) are often heavily congested and contain numerous busy interchanges.

The KPEPC's most recent vulnerability analysis (completed in 2009) analyzed risk and vulnerability at some of the most congested sites along I-64 and I-77. The following areas were analyzed:

- Interstate 64, Exit 50
- I-64, Exit 53
- I-64, Exit 55
- I-64/I-77 Merge
- I-64/77, Leon Sullivan Way, Greenbrier Street Exits
- I-64/77, MacCorkle Avenue Exit

The average initial isolation distance, based on USDOT guidance and the materials monitored at these sites, is 330'. Residential populations in the hazard zones range from as little as 20 to as many as 950 persons. Daytime (i.e., transient) populations in many of these areas could significantly increase those numbers.

Evacuation Areas Affected by Roadway Hazmat Incidents: All nine (9) areas identified by this plan could be affected by a roadway hazmat incident. These incidents, however, are *not* likely to necessitate an evacuation of any one (1) *entire* area

Level of Evacuation Anticipated:

- Medium-Level, Area-Wide (based on the number of people) in areas between Nitro and Charleston
- Low-Level, Localized in areas outside of the Nitro-Charleston corridor

II. HAZARDOUS MATERIALS – RAIL

Two (2) railways serve the businesses of the Kanawha Valley. CSX runs along the south side of the Kanawha River and Norfolk Southern runs along the north side. Both railways indicated that they ship hazardous materials in the KPEPC's most recent commodity flow study. Railway incidents are less probable than roadway incidents, but they can be associated with a much higher risk. For instance, numerous types of materials – some that may react violently with each other – can be carried on different cars within the same train. All of these cars could be affected by a single incident. Further, larger quantities can be shipped via rail.

Both railways reported a number of materials from various USDOT hazard classes. Both carried such Extremely Hazardous Substances (EHSs) as chlorine and sulfuric acid. As with all hazardous material incidents, a more appropriate response may be shelter-in-place. If an evacuation was chosen, however, average isolation distances would range between 330' from the site of the incident to as much as 1,000'. (*NOTE: Actual quantities and environmental conditions would obviously affect the distances of these isolation areas.)

Evacuation Areas Affected by Rail Hazmat Incidents:

- Kanawha West
- Kanawha South
- Kanawha East
- West Side, Charleston
- East End, Charleston

Level of Evacuation Anticipated: Low-Level, Localized to Medium-Level, Area-Wide

III. HAZARDOUS MATERIALS – FIXED FACILITY

The profile of fixed facility hazmat incidents has grown significantly in the past five (5) years. The explosion and fatalities at the Institute Bayer plant as well as the leaks and fatalities at the DuPont plant in Belle have caused the public to be extremely cognizant of the risks surrounding these facilities. To compound the matter, facilities such as Bayer CropScience, Dow Chemical, and Clearon are located in densely-populated areas that frequently suffer from traffic congestion.

Large material releases coupled with moderate to high winds could place as many as 15,000 people in danger in the Institute and South Charleston areas. As many as 5,000 people could be affected at the DuPont Belle facility. These levels of evacuation would place a significant strain on local resources. Further, areas as far away as South Charleston and the West Side of Charleston could be affected by a Worst-Case Scenario (WCS) incident at Bayer (based on average wind speed and direction). A WCS incident at the South Charleston site (i.e., Dow and Clearon) could affect the East End and Kanawha City areas of Charleston. A WCS incident at DuPont could affect towns as far east as East Bank.

Evacuation Areas Affected by Fixed Facility Hazmat Incidents:

- Kanawha West
- Kanawha South
- Kanawha East
- West Side, Charleston
- East End, Charleston
- Kanawha City, Charleston

Level of Evacuation Anticipated: Medium-Level, Area-Wide to High-Level, Catastrophic

IV. LOCALIZED FLOODING

Flooding comes primarily in two (2) forms: flash flooding and river flooding. Both types have the capability to cause an evacuation. The duration of the evacuation, though, would be contingent on the type of flooding experienced. For example, flash flooding may only require an evacuation of a few hours, but the warning system would be significantly strained given the quick onset nature of flash flooding. More extensive river flooding could necessitate evacuations of a week or longer. While these events typically occur with ample warning time, sheltering becomes a major challenge.

Areas that could require evacuation for river floods are fairly easy to determine: homes in the 100-year floodplain should be the planning estimate. According to Flood Insurance Rate Maps (FIRMs), low-lying areas along the Kanawha, Elk, Pocatalico, and Coal River are in floodplains. Estimates provided by the Hazus program (distributed by FEMA) indicate the approximately 2,400 buildings would be at least moderately damaged by a 100-year flood. Over 4,400 households could be displaced, necessitating an evacuation (albeit gradual) of as many as 8,500 people. The 100-year flood hazard has 1% chance of occurring in any given year. A more probable event would be the 10-year flood, which has a 10% chance of occurring in a given year. During that scenario, as many as 1,200 buildings could be affected and 4,400 people displaced.

Instances of flash flooding as well as areas affected by flash flooding, on the other hand, are slightly more difficult to predict. The City of Charleston CRS Area Analysis analyzes the causes of flooding for the 15 repetitive loss properties within the city. The majority of those properties were likely classified as “repetitive loss” due to flash flooding damages.

Evacuation Areas Affected by Flooding: All nine (9) areas identified by this plan could be affected by either type of flooding. Flooding, however, is *not* likely to necessitate an evacuation of any one (1) *entire* area.

Level of Evacuation Anticipated (Flash Flooding): Low-Level, Localized (although there may be multiple instances of low-level evacuations)

Low-level evacuations may be necessary in the following areas:

- 600 Block of Grant Street, Charleston (Evacuation Area: West Side, Charleston)

- 2300 Block of 6th/7th Avenues, Charleston (Evacuation Area: West Side, Charleston)
- 4400 Block of Kanawha Avenue, Charleston (Evacuation Area: Kanawha City, Charleston
- Ann Street, Sissonville (Evacuation Area: Kanawha North)
- Dalewood Drive, Cross Lanes (Evacuation Area: Kanawha West)
- Demra Street, Sissonville (Evacuation Area: Kanawha North)
- Garrison Avenue (Evacuation Area: West Side, Charleston)
- Keystone Drive near FedEx (Evacuation Area: East End, Charleston)
- Malden Circle (Evacuation Area: Kanawha East)
- Old Mill Road, Sissonville (Evacuation Area: Kanawha North)
- Sissonville Drive, Sissonville (Evacuation Area: Kanawha North)

Level of Evacuation Anticipated (River Flooding): Low-Level, Localized to Medium-Level, Area-Wide

Low-level evacuations may be necessary in the following areas:

- Ann Street, Sissonville (Evacuation Area: Kanawha North)
- Demra Street, Sissonville (Evacuation Area: Kanawha North)
- Old Mill Road, Sissonville (Evacuation Area: Kanawha North)
- Rose Hill Drive (Evacuation Area: Kanawha North)
- Sissonville Drive, Sissonville (Evacuation Area: Kanawha North)
- Spencer Road, Clendenin (Evacuation Area: Kanawha Northeast)
- Woodland Avenue, Elkview (Evacuation Area: Kanawha Northeast)

Medium-level evacuations may be necessary should the number of low-level evacuations start to strain local resources.

V. FIRES (URBAN OR WILDLAND)

Fires, both urban and wildland, are unlikely to cause large-scale evacuations. The risk, however, does exist for low-level, localized evacuations in areas of urban-wildland interface. Predicting the location of fires, though, is difficult (if not impossible). Providing adequate warning to affected populations would likely prove to be the biggest challenge.

Evacuation Areas Affected by Fires: All nine (9) areas identified by this plan could be affected by a large fire. Fires, however, are *not* likely to necessitate an evacuation of any one (1) *entire* area.

Level of Evacuation Anticipated: Low-Level, Localized

VI. TERRORIST INCIDENT

Terrorism is a risk in Kanawha County. The KPEPC indicates that the probability of an incident is low, but that the risk associated with one is high. Additionally, selecting the appropriate public protective measure in response to a terrorist incident is difficult. The question should be asked, "Does one place the public in more danger by evacuating them into an unknown threat environment?"

Several facilities in Kanawha County could be targets for terrorist-style incidents. For purposes of security, these facilities are not mentioned here. It is unlikely that a terrorist incident would necessitate an evacuation of the entire county. Portions of the county, though, may be preemptively evacuated based on a received threat. While those areas could be densely populated, they could likely be geographically small.

Evacuation Areas Affected by Terrorism:

- Kanawha East
- Kanawha South
- Kanawha West
- East End, Charleston
- Kanawha City, Charleston
- South Hills, Charleston
- West Side, Charleston

Level of Evacuation Anticipated: Low-Level, Localized to Medium-Level, Area-Wide

VII. CIVIL DISTURBANCE

Civil disturbances can manifest themselves in a number of ways. In most cases, they are considered to be violent or show the potential for violence. As such, the risk associated with a civil disturbance increases. The Kanawha-Putnam Emergency Planning

Committee (KPEPC), in its 2008 hazard vulnerability survey, lists civil disturbances at low to moderate probability with moderate risk. Given Charleston's designation as the state capitol, the possibility exists for large protests. Civil disturbances of this nature could also occur at the University of Charleston, WVU Tech, or West Virginia State University (e.g., caused by an athletic rivalry or political demonstration).

Other types of disturbances, though, can simply be large congregations of people with a specific set of needs. An example could be a concert or a high-profile basketball game at the Charleston Civic Center, those attending an event such as Festivall, or the influx of law makers during the state's legislative session. These attendees do not mean (usually) mean any type of violence, but they do expect to be protected, which could place strain on local emergency resources. Further, if an emergency were to occur, these populations would sometimes be unfamiliar with the area, thus placing a strain on the notification, warning, and public information functions. These types of events can inflate the population by as many as 12,000 persons.

While a civil disturbance could occur at any location, they would be most probable in Kanawha County along the Kanawha River, where the majority of the county's municipalities are located. Further, civil disturbances would be more probable in the western portions of this waterway corridor due to the denser population. Finally, civil disturbances would be most probable in the City of Charleston because of the greater density of critical facilities, local and state assets, denser population, and the number of events scheduled in the city.

Evacuation Areas Affected by Civil Disturbance:

- East End, Charleston
- Kanawha City, Charleston
- The two (2) Charleston evacuation areas are highlighted separately given the probability discussion above. The Kanawha West area could also see a higher probability of civil disturbances given, again, the higher density population, West Virginia State University, the race track and casino at Cross Lanes, the West Virginia State Police Academy, etc.

Level of Evacuation Anticipated: Low-Level, Localized to Medium-Level, Area-Wide

VIII. DAM FAILURE

Dam failures are sometimes considered under the flooding hazard since the ultimate affects of a failure are floods. Given the potential magnitude of additional water that could pass through the area as a result of dam failure, however, such failures are considered hazards unto themselves.

Several small impoundments could cause problems throughout the county. Some of the facilities include the following:

- Anderson Dam (near Dunbar)
- FMC Fly Ash Pond Impoundment (South Charleston)
- Holz Dam (South Charleston)
- Kanawha County Dams 12, 13, and 14 (Charleston and Pinch areas)
- Ridenour Lake (1 mile east of Nitro in Ridenour Park)
- Numerous coal impoundments throughout the county

A failure of the US Army Corps of Engineers' (USACE's) Bluestone Dam in Hinton could also impact Kanawha County. The Bluestone facility dams the New River, providing recreational opportunities in Summers County and also bears the possibility of providing hydroelectric power. The Bluestone Dam is a large facility. A catastrophic failure of that dam may significantly impact communities along the New River, which is a tributary of the Kanawha River. Communities along the Kanawha River as far north as Point Pleasant may also be affected. According to the USACE, water from the failure of the Bluestone dam could take as little as eight (8) hours to reach Charleston (although the peak of the water would arrive approximately 18-20 hours after failure). As a reference point, an estimated 18' to 20' of water could be the Charleston Civic Center parking lot. High water levels resulting from this type of an incident could linger for two (2) to three (3) days. Other planning assumptions regarding a failure of the Bluestone Dam include:

- Water would reach Marmet in about six (6) hours following the point of physical failure of the dam. Water could reach St. Albans in about 10 hours.
- A notification that conditions are in place for failure could be given between 24 and 48 hours before failure. This is the available lead time.

Failures at the other two (2) dams that protect the Kanawha Valley – the Summersville and Sutton Dams – could also affect Kanawha County. The Sutton Dam is built along the Elk River which flows through northern Kanawha County on its way to its confluence with the Kanawha River in Charleston. The USACE states that the Summersville Dam, constructed along the Gauley River, provides flood protection for the heavily-industrialized Kanawha Valley. Together, the Bluestone, Summersville, and Sutton Dams control 57% of the total water drainage in the Charleston area.

Evacuation Areas Affected by Dam Failure (Small Impoundment):

- Kanawha West (Anderson Dam)
- Kanawha South (Holz, FMC Fly Ash Dams)
- Kanawha Northeast (Kanawha County Dams 12, 13, and 14)
- East End, Charleston (Kanawha County Dams 12, 13, and 14)

Evacuation Areas Affected by Dam Failure (Bluestone, Summersville, Sutton):

- Bluestone: Kanawha East; East End, Charleston; Kanawha City, Charleston; West Side, Charleston; South Hills, Charleston; Kanawha South; Kanawha West
- Summersville: Kanawha East; East End, Charleston; Kanawha City, Charleston: West Side, Charleston; Kanawha South; Kanawha West
- Sutton: Kanawha Northeast; East End, Charleston; West Side, Charleston; South Hills, Charleston; Kanawha South; Kanawha West

Level of Evacuation Anticipated (Small Impoundment): Low-Level, Localized

Level of Evacuation Anticipated (Bluestone, Summersville, Sutton): Medium-Level, Area-Wide to High-Level, Catastrophic

IX. URBAN TO RURAL EVACUATION

An "Urban to Rural" (U2R) evacuation implies the mass evacuation of a population from an urban area to a more rural area in response to a large-scale disaster. In West Virginia, the majority of U2R planning has centered on the scenario of an evacuation of the National Capital Region (NCR), i.e., Baltimore and Washington, D.C. Other urban areas, such as Richmond, Virginia; Cincinnati, Ohio; Columbus, Ohio; Lexington, Kentucky; and Louisville, Kentucky could also have an effect on resources in West Virginia. These scenarios would likely result in a strain on sheltering resources in the Kanawha Valley rather than necessitating an evacuation of local populations.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

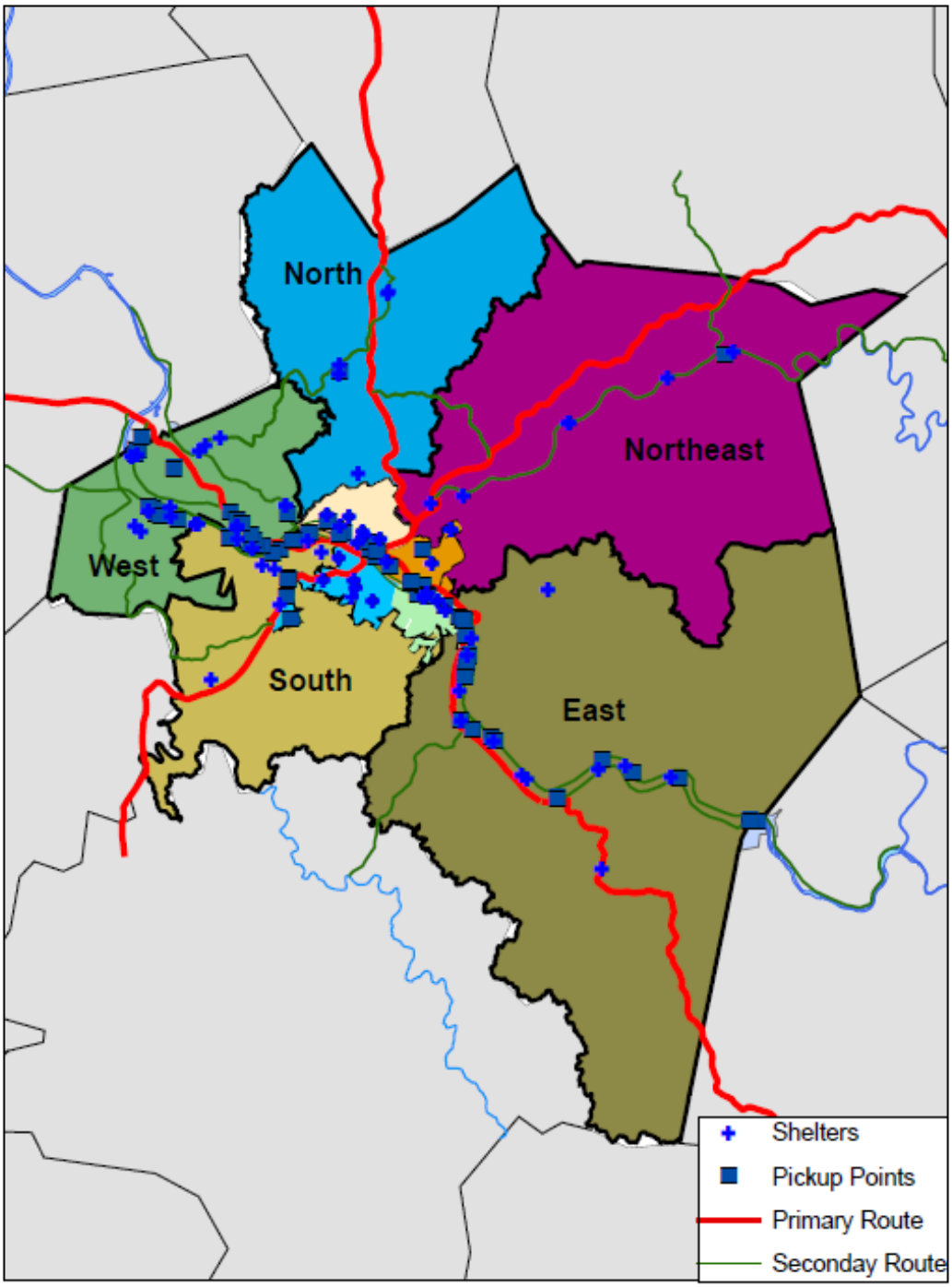
This appendix contains mapping to illustrate several of the concepts discussed throughout this plan. The following maps are included:

1. Master (i.e. All Layers Active),
2. Evacuation Areas,
3. Evacuation Routes,
4. Pick-Up Points, and
5. Potential Shelters.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

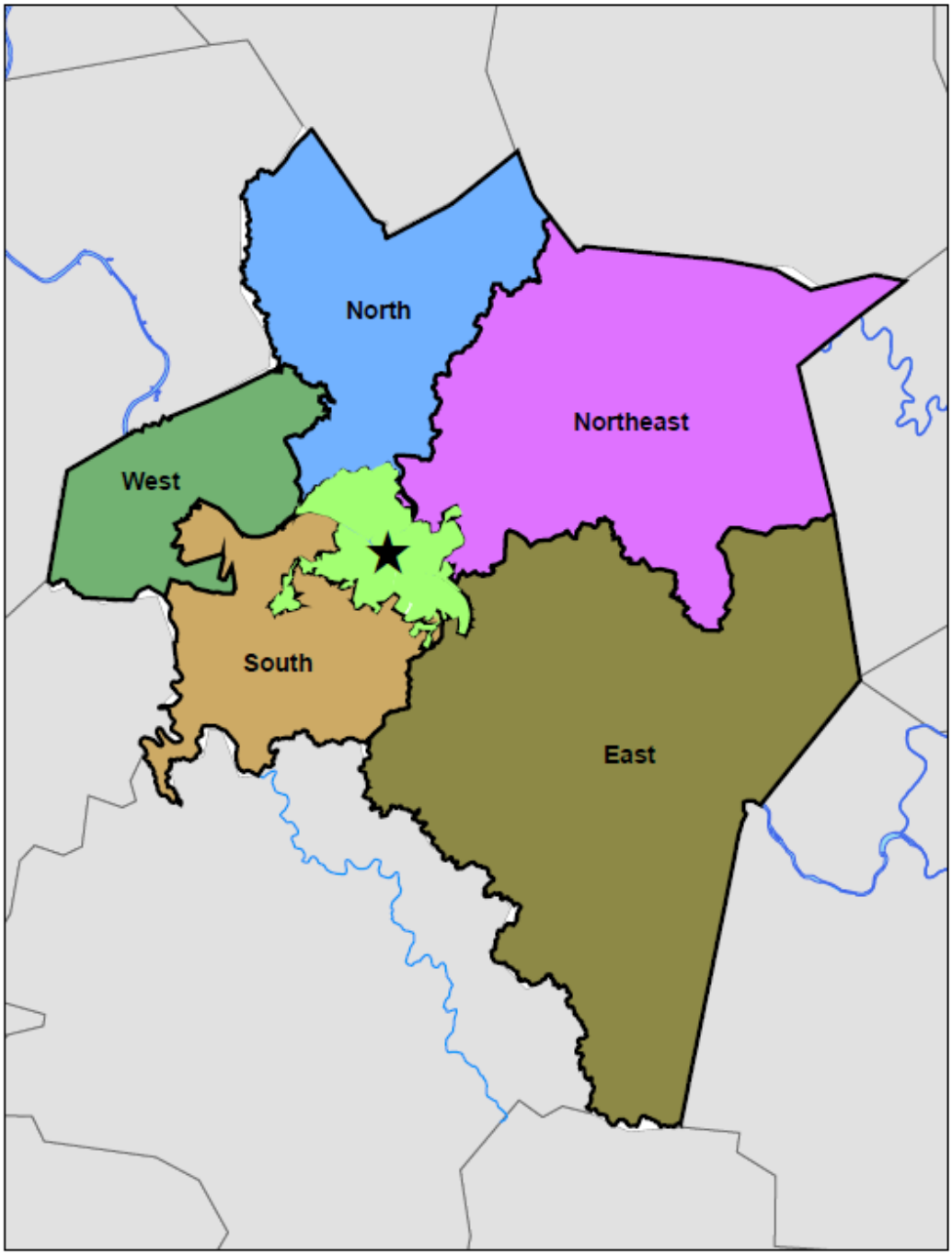
MAP #1: MASTER (ALL LAYERS ACTIVE)



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

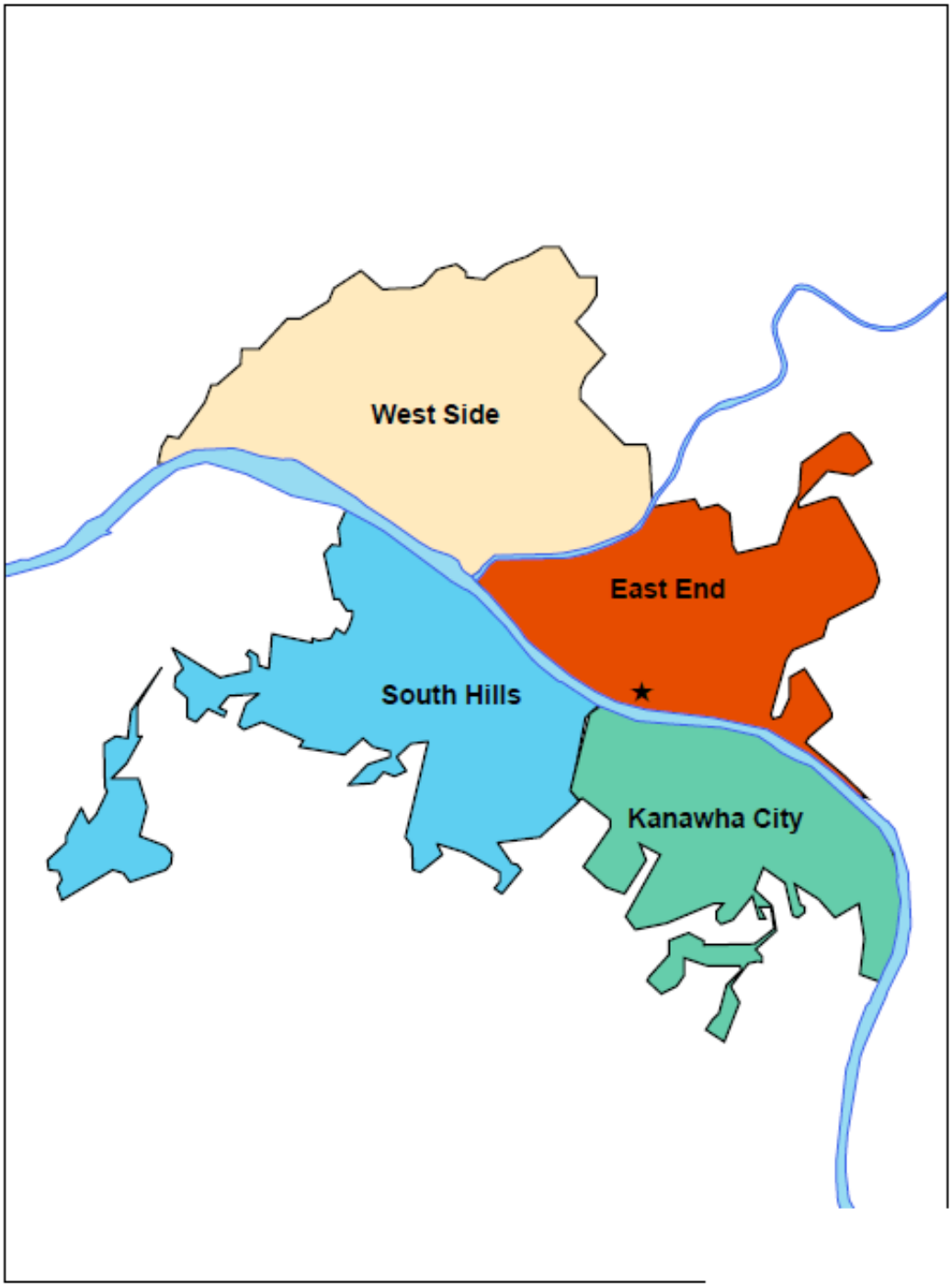
MAP #2: EVACUATION AREAS



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

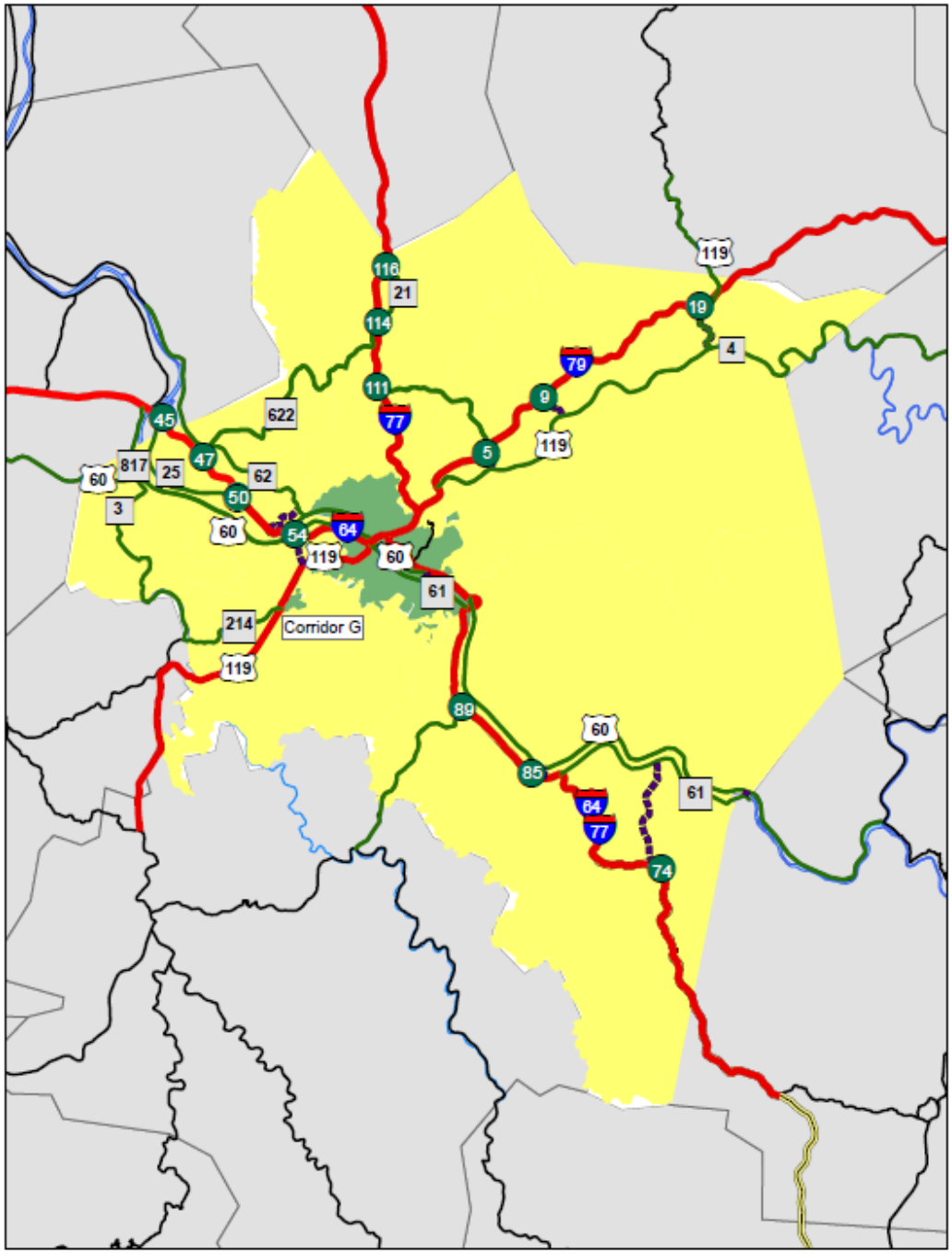
MAP #2a: CHARLESTON EVACUATION AREAS



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

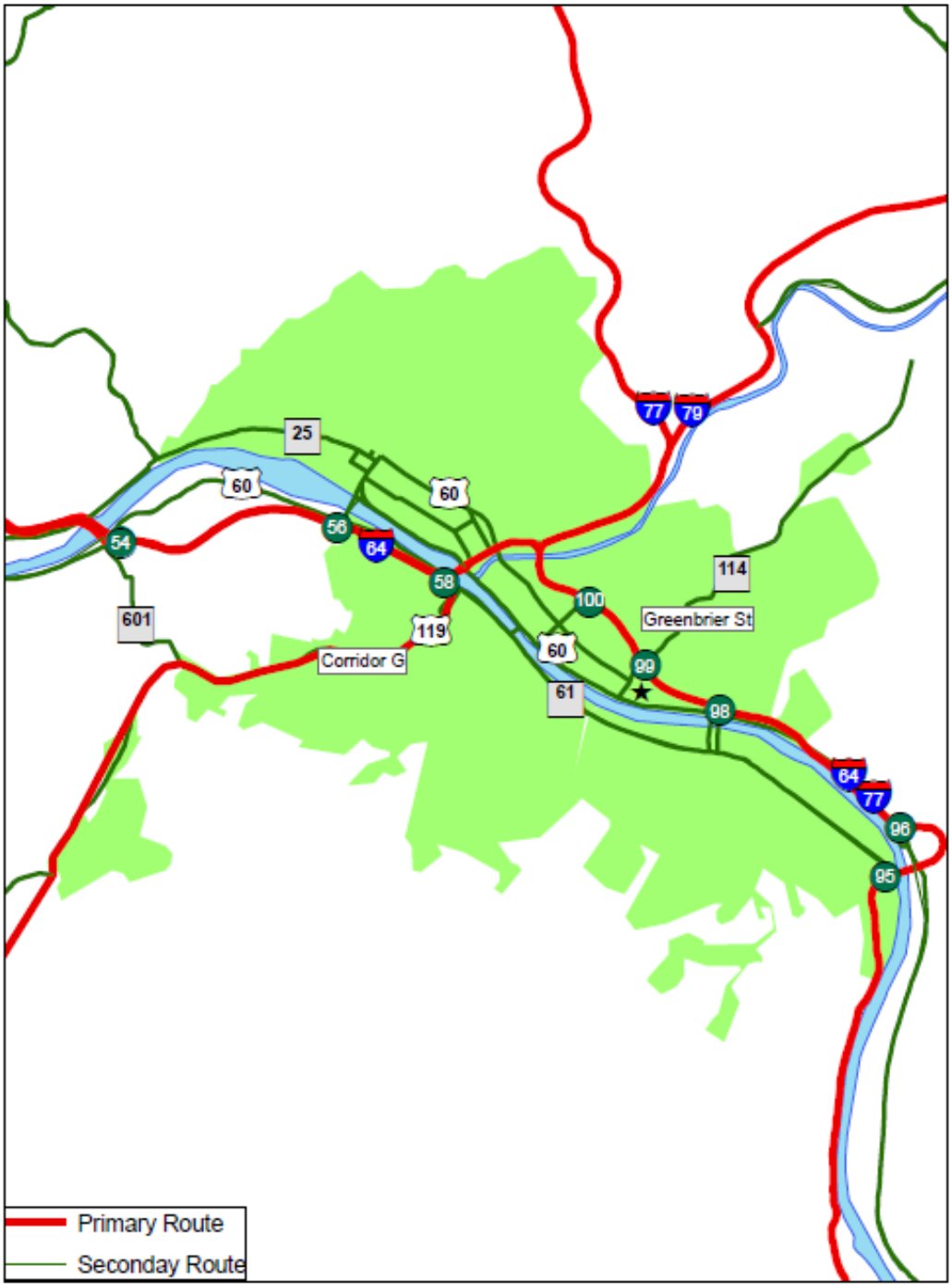
MAP #3: EVACUATION ROUTES



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

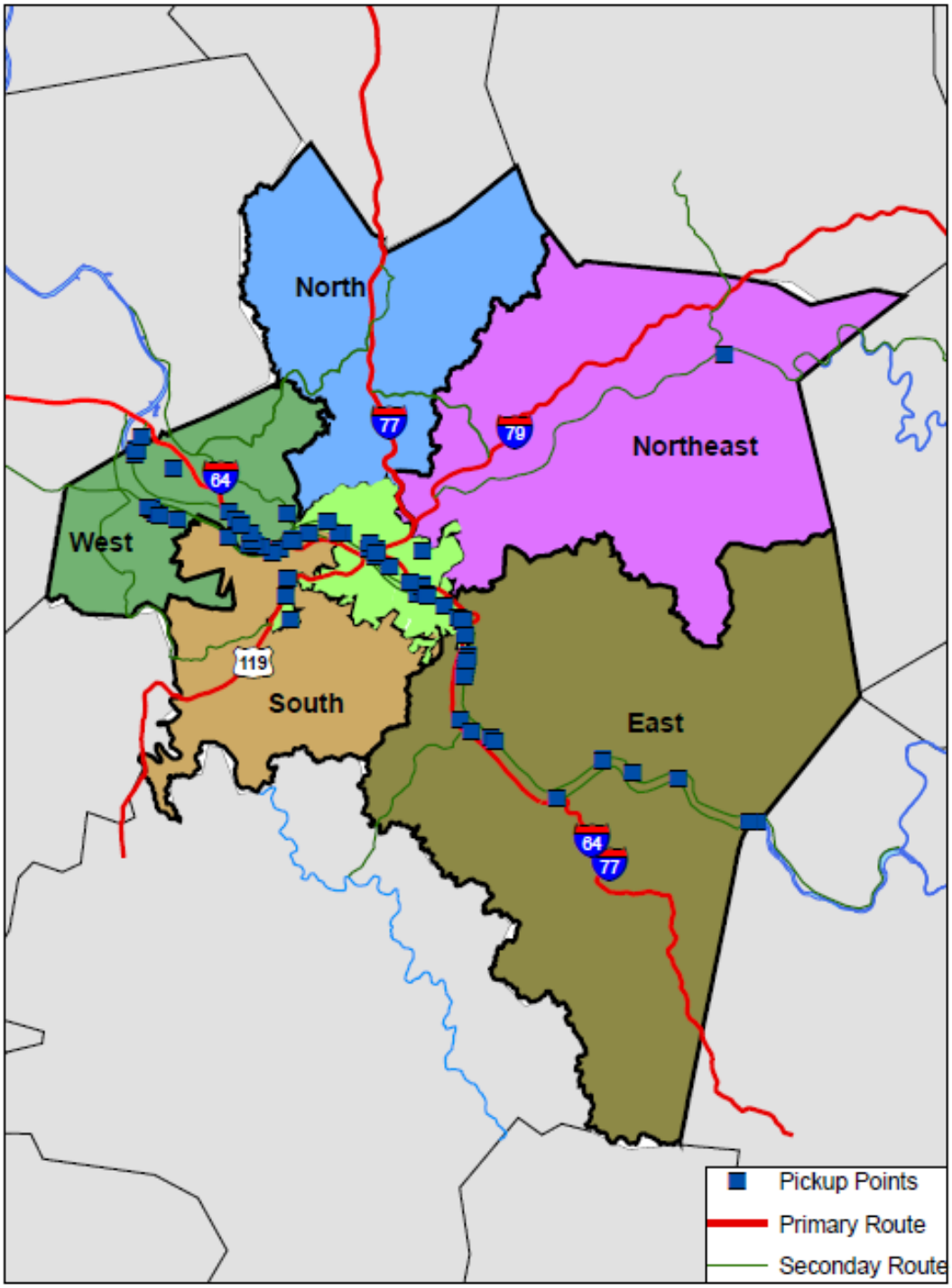
MAP #3a: CHARLESTON EVACUATION ROUTES



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

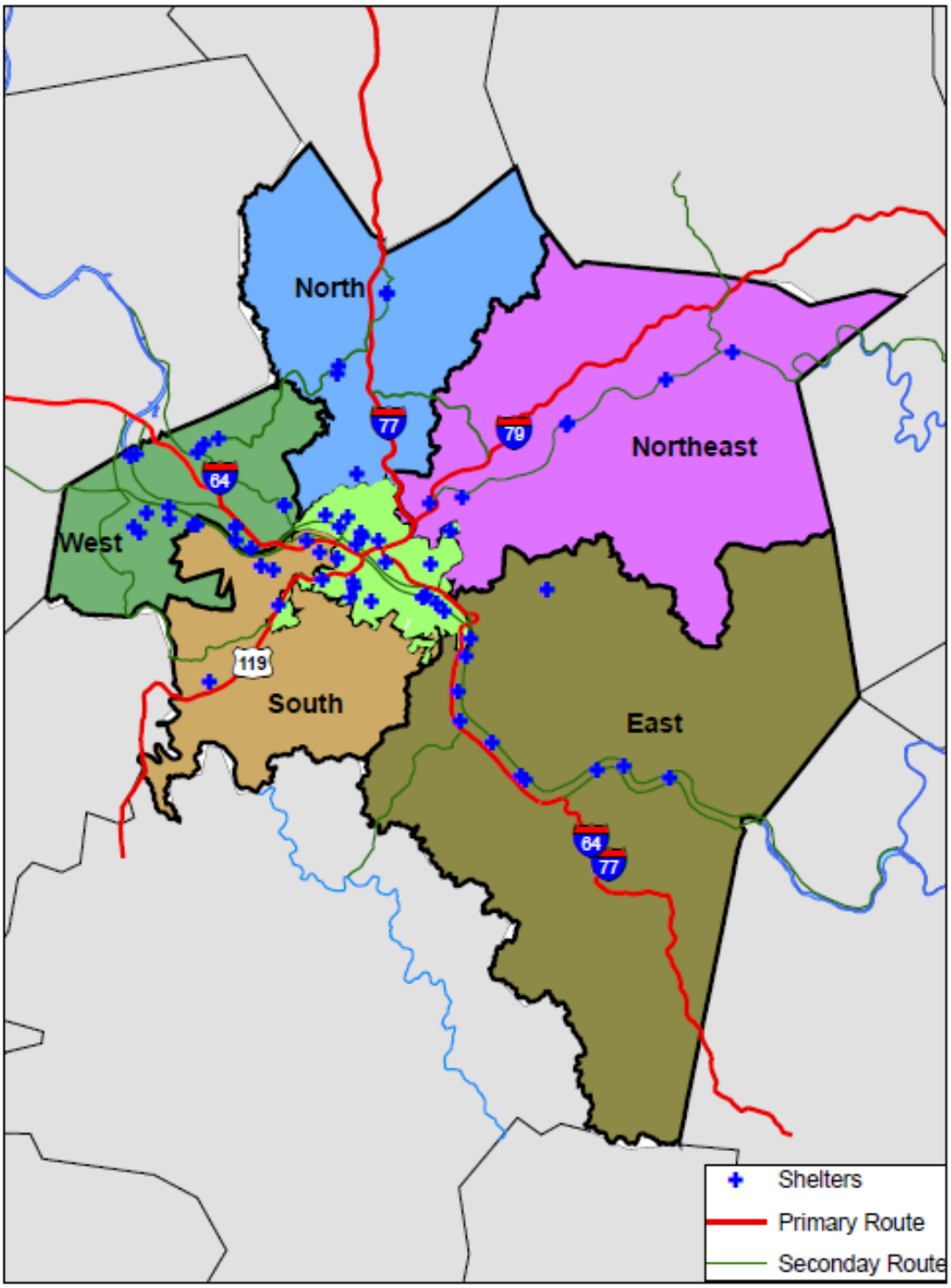
MAP #4: PICK-UP POINTS



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 2: MAPPING

MAP #5: POTENTIAL SHELTERS



POTENTIAL SHELTERS BY EVACUATION AREA

Shelter Name	Capacity	Mailing Address				Evacuation Area
Capital High School	600	1500 Greenbrier Street	Charleston	WV	25311	East End - Charleston
Ruffner Elementary	100	809 Litz Drive	Charleston	WV	25311	East End - Charleston
Roosevelt Community Center	100	502 Ruffner Avenue	Charleston	WV	25311	East End - Charleston
Martin Luther King Community Center	100	500 Donnelly Street	Charleston	WV	25301	East End - Charleston
Charleston Civic Center	5000	200 Civic Center Drive	Charleston	WV	25311	East End - Charleston
WVANG Hangar	500	100 Airport Road	Charleston	WV	25311	East End - Charleston
Horace Mann Middle School	250	4300 MacCorkle Avenue, SE	Charleston	WV	25304	Kanawha City - Charleston
Chamberlain Elementary School	100	4901 Venable Avenue SE	Charleston	WV	25304	Kanawha City - Charleston
Kanawha City Elementary School	100	3601 Staunton Avenue SE	Charleston	WV	25304	Kanawha City - Charleston
Kanawha City Community Center	500	3511 Venable Ave	Charleston	WV	25304	Kanawha City - Charleston
Mary Ingles Elementary School	100	Campbell's Creek Drive	Tad	WV	25201	Kanawha East
Riverside High School	1000	1 Warrior Way	Belle	WV	25015	Kanawha East
Cedar Grove Community School	100	Johns Street	Cedar Grove	WV	25039	Kanawha East
East Bank Middle School	400	First and Brannen	East Bank	WV	25067	Kanawha East
Belle Elementary School	100	401 East 6th Street	Belle	WV	25015	Kanawha East
Carver Career Center	300	4799 Midland Drive	Charleston	WV	25312	Kanawha East
Malden Elementary	100	4001 Salinas Drive	Charleston	WV	25306	Kanawha East
Marmet Elementary	100	408 94th Street	Charleston	WV	25315	Kanawha East
Midland Trail Elementary	150	200 Ferry Street	Belle	WV	25015	Kanawha East
Pratt Elementary	100	Center and Stark Street	Pratt	WV	25162	Kanawha East
Sharon Dawes Elementary	100	PO Box 149	Miami	WV	25134	Kanawha East
Pratt Fire Department	20	Pratt Fire Department	Pratt	WV	25162	Kanawha East
Sissonville Middle School	250	8316 Old Mill Road	Charleston	WV	25309	Kanawha North
Sissonville High School	500	6100 Sissonville Drive	Charleston	WV	25312	Kanawha North
Bonham Elementary School	100	Route 1 Box 425A	Charleston	WV	25312	Kanawha North
Flinn Elementary School	100	2006 McClure Parkway	Charleston	WV	25301	Kanawha North
Sissonville Elementary	100	8324 Sissonville Drive	Charleston	WV	25320	Kanawha North
Elk Elementary School	200	3320 Pennsylvania Avenue	Charleston	WV	25302	Kanawha Northeast
Bridge Elementary School	100	5120 Elk River Road North	Elkview	WV	25071	Kanawha Northeast
Clendenin Elementary School	100	533 Maywood Ave E	Clendenin	WV	25045	Kanawha Northeast
Herbert Hoover High School	400	275 Elk River Road South	Clendenin	WV	25045	Kanawha Northeast
Elkview Middle School	300	5090 Elk River Road North	Elkview	WV	25071	Kanawha Northeast
Shoals Elementary	120	100 Dutch Road	Charleston	WV	25302	Kanawha Northeast
South Charleston High School	500	1 Eagle Way	Charleston	WV	25309	Kanawha South
Alum Creek Elementary School	100	Brounland Rd	Charleston	WV	25309	Kanawha South
Montrose Elementary	200	631 Montrose Drive	Charleston	WV	25303	Kanawha South
Richmond Elementary	100	4620 Spring Hill Avenue	Charleston	WV	25309	Kanawha South
Ruthlawn Elementary	100	Route 8 Box 428	Charleston	WV	25309	Kanawha South
South Charleston Middle School	300	400 Third Avenue	Charleston	WV	25303	Kanawha South
McKinley Middle School	250	3000 Kanawha Terrace	Saint Albans	WV	25177	Kanawha West
Nitro Elementary School	200	1921 19th Street	Nitro	WV	25143	Kanawha West
Hayes Middle School	250	830 Strawberry Road	Saint Albans	WV	25177	Kanawha West
Alban Elementary School	100	2030 Harrison Avenue	Saint Albans	WV	25177	Kanawha West
Andrew Jackson Middle School	150	5445 Big Tyler Road	Charleston	WV	25313	Kanawha West
Central Elementary School	100	900 Helene Street	Saint Albans	WV	25177	Kanawha West

POTENTIAL SHELTERS BY EVACUATION AREA

Shelter Name	Capacity	Mailing Address				Evacuation Area
Cross Lanes Elementary School	100	5525 Big Tyler Road	Charleston	WV	25313	Kanawha West
Dunbar Middle School	250	325 27th Street	Dunbar	WV	25064	Kanawha West
Dunbar Primary School	100	2401 Myers Avenue	Dunbar	WV	25064	Kanawha West
George C Weimer Elementary School	80	3040 Kanawha Terrace	Saint Albans	WV	25177	Kanawha West
Dupont Middle School	400	1 Panther Way	Belle	WV	25015	Kanawha West
Dunbar Intermediate School	250	1400 Myers Avenue	Dunbar	WV	25064	Kanawha West
Tyler Middle School	250	277 West Washington Street	Charleston	WV	25313	Kanawha West
Chesapeake Elementary School	100	13620 MacCorkle Avenue	Charleston	WV	25315	Kanawha West
Lakewood Elementary	100	2089 Lakewood Drive	Saint Albans	WV	25177	Kanawha West
Nitro High School	500	1300 Park Avenue	Nitro	WV	25143	Kanawha West
Point Harmony Elementary	150	5312 Big Tyler Road	Charleston	WV	25313	Kanawha West
Saint Albans High School	600	2100 Kanawha Terrace	Saint Albans	WV	25177	Kanawha West
Shawnee Community Center	100	142 Marshall Avenue	Dunbar	WV	25064	Kanawha West
Watts Elementary	100	230 Costello Street	Charleston	WV	25302	Kanawha West
John Adams Middle School	300	2002 Presidential Drive	Charleston	WV	25314	South Hills - Charleston
George Washington High School	400	1522 Tennis Club Road	Charleston	WV	25314	South Hills - Charleston
Holz Elementary School	200	1505 Hampton Road	Charleston	WV	25314	South Hills - Charleston
Kenna Elementary School	100	198 Eureka Road	Charleston	WV	25314	South Hills - Charleston
Overbrook Elementary	100	218 Overbrook Road	Charleston	WV	25314	South Hills - Charleston
Weberwood Elementary	100	732 Gordon Road	Charleston	WV	25303	South Hills - Charleston
North Charleston Community Center	100	2009 7th Avenue	Charleston	WV	25301	West Side - Charleston
Chandler Elementary School	100	1900 School Street	Charleston	WV	25312	West Side - Charleston
Glenwood Elementary School	100	810 Grant Street	Charleston	WV	25302	West Side - Charleston
J.E. Robins Elementary School	80	915 Beech Avenue	Charleston	WV	25302	West Side - Charleston
Grandview Elementary School	120	959 Woodward Drive	Charleston	WV	25312	West Side - Charleston
Stonewall Jackson Middle School	300	812 Park Avenue	Charleston	WV	25302	West Side - Charleston

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 3: SAMPLES – DECLARATION OF EMERGENCY AND EVACUATION ORDER

This appendix contains a sample declaration of emergency and a sample evacuation order that the Kanawha County Commission and the various municipal councils in the county can use to issue an evacuation notice and/or declare a local emergency.

SAMPLE DECLARATION OF EMERGENCY

EMERGENCY PROCLAMATION

COUNTY/CITY, West Virginia _____, 20_____

WHEREAS COUNTY/CITY, West Virginia has been or is immediately threatened by a natural/technological/man-made hazard, and

WHEREAS a state of emergency has been declared by the COMMISSION/COUNCIL.

NOW, THEREFORE, we, the COMMISSION/COUNCIL, declare that a state of emergency exists in the COUNTY/CITY and that we hereby invoke and declare those portions of the West Virginia Code which are applicable to the conditions and have caused the issuance of this proclamation be in full force and effect in the county for the exercise of a necessary emergency authority for protection of the lives and property of the people of COUNTY/CITY and the restoration of local government with a minimum of interruption.

Reference is hereby made to all appropriate laws, statutes, ordinances and resolutions, and particularly to Chapter 15, Article 5 of the West Virginia Code for assistance, to include but not be limited to the following:

LIST TYPES OF ASSISTANCE LIKELY TO BE NECESSARY

All public offices and employees of COUNTY/CITY are hereby directed to exercise the utmost diligence in the discharge of duties required by them for the duration of the emergency and in execution of emergency laws, regulations, and directives.

All citizens are called upon and directed to comply with necessary emergency measures, to cooperate with public officials and emergency management forces in executing emergency operations plans and to obey and comply with the lawful direction of properly-identified officers.

All operating forces will direct their communications and requests for assistance and new operations directly to the Emergency Operations Center.

In witness, we have hereunto set our hand this _____ day of _____, 20_____ A.D.

_____
CHIEF ELECTED OFFICIAL

_____
GOVERNING BOARD MEMBER

_____
GOVERNING BOARD MEMBER

SAMPLE EVACUATION ORDER

EVACUATION ORDER

RESOLUTION - _____

ORDER TO REDUCE VULNERABILITY
TO DAMAGE, INJURY, AND LOSS OF LIFE OR PROPERTY
RESULTING FROM AN IMMINENT THREAT

WHEREAS, a state of general emergency in the COUNTY/CITY of _____, was lawfully declared as of _____, 20__, due to the imminent threat posed by _____ (hereinafter "imminent threat"); and,

WHEREAS, the MAYOR/PRESIDENT of the COUNTY/CITY of _____, or his/her designee, has been empowered, authorized, and directed to exercise, on behalf of the _____ COUNTY/CITY COUNCIL, such emergency powers necessary to carry out the previsions of the Codify Ordinances of the COUNTY/CITY of _____, Including, but not limited to, the powers to direct and compel evacuation of all or part of the population form stricken or threatened areas within the COUNTY/CITY of_____; and,

WHEREAS, such action is deemed necessary to reduce the vulnerability of people in the COUNTY/CITY of _____ to damage, injury, and loss of life and property resulting from the imminent threat; and,

WHEREAS, the Mayor of the COUNTY/CITY of _____ has confirmed the power of the City (Town) to order evacuation of residents of the COUNTY/CITY when threatened by a disaster.

NOW THEREFORE, pursuant to Ordinances of the COUNTY/CITY of _____, I hereby find and declare:

1. The above recitals are true and are incorporated by reference herein.
2. I am duly authorized to carry out the emergency management functions delegated by the COUNTY/CITY COUNCIL of the COUNTY/CITY of _____.
3. The following area(s) of the COUNTY/CITY of _____ are threatened by the imminent threat, and are hereby designated the "affected area":

    - LIST AFFECTED AREA(S)

4. In order to reduce the vulnerability of the population in the affected areas to damage, injury, and loss of life or property resulting from the imminent threat, I hereby order and direct that the affected areas shall be evacuated immediately.
5. In order to reduce the vulnerability of the population in the affected areas to damage, injury, and loss of life or property resulting from the imminent threat, I hereby order and direct that no persons, except duly authorized law enforcement or emergency management personnel, be allowed to enter the affected areas.
6. The _____ (insert title of official, such as the Police Chief) of the COUNTY/CITY of _____, Kanawha County, West Virginia, is hereby authorized and empowered to take whatever lawful actions are necessary to implement this evacuation order.
7. This order shall take effect at _____ a.m. / p.m., _____, 20___, and shall be in effect until canceled.

_____ COUNTY/CITY COUNCIL

By: _____

ATTEST: MAYOR/PRESIDENT
THE COUNTY/CITY OF _____, WEST VIRGINIA
By: _____

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 4: EVACUATION EXECUTION ACTIONS/TASKS

This appendix contains two (2) checklists that can serve as reminders of necessary major tasks for officials implementing an evacuation. The first is a list of the general actions that should be completed during the response and re-entry phases of an evacuation. The second contains items that an activated Emergency Operations Center (EOC) can do to support evacuation efforts. These checklists are not meant to be comprehensive or all-inclusive for *all* evacuation events. They are meant to support decision makers, ensuring that the major, base elements of the evacuation are implemented and allowing said decision makers to focus on the extraordinary circumstances surrounding individual instances.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 4: EVACUATION EXECUTION ACTIONS/TASKS
CHECKLIST #1: EVACUATION TASKS – RESPONSE AND RE-ENTRY PHASES

The following is a list of the major action items associated with an evacuation. It serves as a reference guide for officials implementing an evacuation in Kanawha County. *NOTE: This list does not mean to imply that all of these actions can be accomplished within a single operational period or day.

RESPONSE PHASE

	Task	Responsibility
☐	Assess area affected by the incident and the impact on the population of the area	IC assisted by Emergency Management
☐	Develop and issue appropriate evacuation or shelter-in-place order.	Incident Commander, County Commission, Mayors
☐	Provide the public with required information to initiate evacuation	Emergency Management
☐	Determine the potential number of people and pets to be evacuated	IC assisted by Emergency Management
☐	Identify special needs groups to be evacuated and any type of special assistance needed	IC assisted by Emergency Management
☐	Implement Plan	All Affected Jurisdictions and On-Scene Responders
☐	Monitor IFLOWS	Emergency Management
☐	Notify other jurisdictions impacted by evacuation and coordinate the appropriate aspects of the evacuation	Emergency Management, WVDHSEM
☐	Coordinate with the WVDHSEM	Emergency Management
☐	Inventory candidate primary evacuation routes and assess the current condition of these routes, including bridge/road closings, and capacity reduction	IC assisted by Emergency Management and WVDOH
☐	Review and determine the evacuation routes to be used and the traffic control points that will be required	IC assisted by Emergency Management

	Task	Responsibility
☐	Activate traffic control along evacuation routes, including law enforcement personnel and traffic control devices	On-Scene Responders
☐	Indentify, procure, and deploy resources required to support vehicle evacuation, such as fuel, tow trucks, etc.	IC assisted by Emergency Management
☐	Select and activate transfer/pickup points which citizens can travel to and access mass transit	Emergency Management assisted by KRT
☐	Establish security at pickup points to control traffic and maintain order	On-Scene Responders
☐	Coordinate the opening of shelter facilities, including shelters for special populations.	Emergency Management assisted by the Red Cross
☐	Identify resource needs for the evacuation of special facilities.	IC assisted by Emergency Management and Special Facility Representatives
☐	Request mass transit vehicles to transport persons to shelter facilities and deploy to pickup points.	Emergency Management assisted by KRT and/or Kanawha County Schools
☐	Determine the appropriate use of volunteer resources	IC assisted by Emergency Management
☐	Select and mobilize specialized accessible transit vehicles for persons with mobility impairments, and other special populations	IC assisted by Emergency Management, KRT, and Kanawha County Schools
☐	Monitor traffic on evacuation routes and provide additional controls, as needed.	IC assisted by Emergency Management and WVDOH
☐	Indentify hospitals, assisted living facilities, senior living facilities, and nursing homes throughout the affected area and coordinate evacuation.	IC assisted by Emergency Management
☐	Evacuate special facilities, traffic control, crowd control, additional emergency needs	IC assisted by Emergency Management
☐	Execute existing Memoranda of Understanding	All Affected Jurisdictions and On-Scene Responders
☐	Implement security in evacuated areas	On-Scene Responders
☐	Establish and implement procedure for temporary access of evacuees to the evacuated areas.	IC assisted by Emergency Management

	Task	Responsibility
☐	Activate certified animal shelters	IC assisted by Emergency Management and Humane Association
☐	Inventory resources available in identified shelters and procure supplemental supplies as needed	Emergency Management and Red Cross

RE-ENTRY PHASE

	Task	Responsibility
☐	Arrange for the return of persons needed for essential services or operation, and to reactivate critical facilities and critical infrastructure	Incident Community and other affected jurisdictions, assisted by the County
☐	Designate return routes and provide route control and security	Incident Community and other affected jurisdictions, assisted by the County and WV State Police
☐	Provide for return of special needs population who cannot return without assistance	Incident Community and other affected jurisdictions, assisted by the County
☐	Arrange for long term sheltering of evacuees who cannot return to their homes immediately	County and State
☐	Provide public information of recovery and disaster assistance operations	Incident Community and other affected jurisdictions, assisted by the County
☐	Assist public in returning to evacuated territory and in recovering from the impact of the incident	Incident Community and other affected jurisdictions, assisted by the County

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 4: EVACUATION EXECUTION ACTIONS/TASKS
CHECKLIST #2: EOC TASKS FOR EVACUATION

The following checklist contains items that an activated Emergency Operations Center (EOC) can do to support evacuation efforts.

INITIAL ACTIONS

- ☐ Establish communications with the Incident Command Post (ICP).
- ☐ Notify appropriate EOC staff members based on the level of activation required.
- ☐ Place potential EOC staff members on standby.
- ☐ Notify the WVDHSEM (i.e., the State EOC) of the incident via Eteam.

ON-GOING ACTIONS

- ☐ Revise activation level based on incident conditions and the level of support needed in the field.

☐ Coordinate with the ICP regarding the following: *Note Times:*
- Determination of appropriate evacuation routes _____
- Determination of traffic control points _____
- General status _____

☐ Via Eteam, periodically update the WVDHSEM as to incident status. Include: *Note Times:*
- Number of displaced individuals _____
- Evacuation routes _____
- Potential recipient jurisdictions _____
- Casualty information _____
- Resource needs and resources committed _____
- Other information, as appropriate and requested _____

☐ Request regional and state-level resources per the request of the Incident Commander. List those resources requested: *Note Times:*
- _____ _____
- _____ _____
- _____ _____
- _____ _____
- _____ _____

☐ Release public information via media releases. Include the following in the releases: *Note Times:*

- General description of the response (# of units committed, etc.) _____
- Detours or other information necessary to isolate the affected area _____
- Locations of shelters _____
- Time and location of any media briefings _____
- Locations of centers accepting donations _____

☐ If the incident involves a covered facility, coordinate as necessary with the Facility Emergency Coordinator.

☐ Notify any special facilities that may be in the affected area.

NOTE FACILITY NAME: *Note Times:*

_____ _____
_____ _____
_____ _____

☐ Coordinate with the American Red Cross and/or other resources regarding the opening of shelters. Such coordination should include the number of shelterees expected, determination of operational periods, and locating the shelters outside of the affected area.

☐ Coordinate pet sheltering with the Kanawha County Humane Association.

☐ Coordinate with Kanawha Valley Regional Transit (KRT) and/or Kanawha County Schools should transportation resources be necessary. Provide the following information:

- Estimated number of people needing assistance
- Locations of pick-up points
- Locations of shelters
- Accessible routes (i.e., directions to shelters)

Note Times:

☐ Provide a Situation Report (SITREP) to neighboring county Emergency Managers. _____

☐ Serve as a link to the conceptual information contained in this plan (i.e., relay information to responders if needed and requested).

☐ Facilitate damage assessment in the affected area.

☐ Procure debris removal resources, if necessary.

NOTE THE FOLLOWING: *Note Times:*

- Location of collection points: _____ _____
- Location of collection points for white goods: _____ _____
- Location of disposal sites: _____ _____

- ☐ Coordinate with the ICP as to when it is safe to re-enter the area.
- ☐ Notify shelters of re-entry. Determine a schedule for releasing shelterees and advise shelter staff to notify shelterees *prior to releasing the re-entry order via the media*.
- ☐ Notify the media that evacuees can re-enter the affected area.
- ☐ Demobilize the EOC.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 5: WARNING AND PUBLIC INFORMATION SYSTEMS

Public alert and warning is necessary to increase public awareness of an impending threat, and to provide clear instructions should an emergency situation require the need for evacuation. In fact, the vital first step of a successful evacuation in Kanawha County is contingent on timely public alerting that allows the public the opportunity to safely move to non-impacted areas.

This appendix is devoted to the available systems and mechanics of public warning. The actual verbal or written messages that will be given, whether through the media, the reverse 9-1-1 system, the Emergency Alert System (EAS), or other messaging systems are the responsibility of the Public Information Officer (PIO), the Joint Information Center (JIC), and the Emergency Operations Center (EOC).

As mentioned in section III.E of the Basic Plan, the following public notification and warning systems are available in Kanawha County.

- Dynamic Mobile Message Boards via the WVDOH
- Fixed, locally-Available Message Boards
- E-team
- Email
- Facsimile
- Local Media (e.g., television, radio)
- Mass Notification System (i.e., reverse 9-1-1 system)
- NOAA All-Hazard Radio (also Emergency Alert System [EAS])
- Outdoor Warning Siren System
- Paging Systems
- Public Address Systems
- Telephone
- Websites

I. DYNAMIC MOBILE MESSAGE BOARDS

The West Virginia Division of Highways (WVDOH) has access to several variable message boards that could be posted along evacuation routes to convey public

information. Messages would, by necessity, be short, but could direct evacuees to radio stations or other sources of more detailed public information. Message boards could also direct evacuees to reception areas.

How to Activate: These signs would be considered "external resources" and would be procured as such.

II. FIXED, LOCALLY-AVAILABLE MESSAGE BOARDS

Additionally, Kanawha County and the City of Charleston Emergency Managers have access to mobile message boards located throughout the county. These boards can be deployed. The emergency managers can change the messages via a mobile phone or from their office computers. The locations of the message boards in Kanawha County are as follows:

- Clendenin VFD Station #1
- South Charleston FD Station #4
- Charleston FD Station #2
- Nitro FD Main Station
- Chesapeake VFD Station #14 (radar board)
- Metro 911
- Yeager Airport
- St. Albans PD/Lot behind city hall (radar board)

How to Activate: As county-owned resources, the emergency managers would activate and deploy these signs as necessary.

III. E TEAM

Eteam is the preferred means of notifying the West Virginia Division of Homeland Security and Emergency Management (WVDHSEM). Eteam is a web-based program monitored at the State Emergency Operations Center (SEOC) as well as at local EOCs throughout the state. Emergency managers can post Situation Reports (SITREPS), resource requests, operational status, etc. to the site.

How to Activate: Emergency managers, as part of the Emergency Management Performance Grant (EMPG) program, are required to post regular SITREPS, even during non-emergency periods. During an emergency, the EOC Coordinator (or a designee) can post regularly to Eteam.

IV. EMAIL

Electronic mail, or email, serves primarily as an alternate or supplemental means of notifying a very targeted group of individuals. Under many circumstances, email is more appropriate for communicating on-going incident assessment information rather than an alert, notification, or warning message.

How to Activate: Email capabilities are present in the EOC during regular operating conditions and emergency conditions. Emailing should ultimately be done under the supervision of the EOC Coordinator.

V. EMERGENCY ALERT SYSTEM

The EAS began in 1997, taking the place of its predecessor warning system, the Emergency Broadcast System (EBS). The EBS and EAS have been used over 20,000 times since its inception for civil emergency and severe weather warnings. The EAS is designed to provide emergency information by the use of radio, television, and cable television. There are strict rules on the activation of the system. It should only be activated during extreme emergencies by authorized individuals.

Messages

- Weather specific messages that can be disseminated via the EAS include the following:
  - **LAE** (Local Area Emergency) – An emergency message that defines an event that by itself does not pose a significant threat to public safety and/or property; however, the event could escalate, contribute to other more serious events, or disrupt critical public safety services. An example includes road closures due to excessive snow fall.
  - **Emergency** – A situation posing an extraordinary threat to the safety of life and property. Examples are (but not limited to) tornadoes, flash floods, icy conditions, and heavy snows.

- **Severe Weather Watch** – Indicates that the conditions are favorable for a severe weather storm.
- **Severe Weather Warning** – Indicates that a particular severe weather storm has actually been sighted in an area or indicated by radar. Serves notice to public that severe storm conditions are almost certain to occur.

- The most pertinent EAS message type in terms of this plan is EVI (Evacuation Immediate).

How to Activate: Kanawha County can request activation of portions of the West Virginia EAS. According to the *West Virginia Emergency Alert System Operating Plan*, the state EAS is activated **by a request from authorized officials to the National Weather Service (NWS) first**. Requests for activations can be faxed directly to the Charleston NWS Forecasting Office of submitted via the HazCollect[1] program.

Kanawha County Emergency Management and Metro 911 can request activation from the Local Primary (LP) source serving the affected EAS area.

- Kanawha County and Charleston are in the Charleston Local EAS area.
- The LP sources for Kanawha County are as follows:
  - WCAW, Charleston – 680 (AM)
  - WCHS, – 580 (AM)
  - WKWS, – 96.1 (FM)
  - WRVZ, Pocatalico – 98.7 (FM)
  - WVAF, Charleston – 99.9 (FM)

VI. FACSIMILE

Facsimiles, or faxes, serve as another alternate or supplemental means of notifying a very targeted group of individuals. Under many circumstances, faxes are more appropriate for communicating on-going incident assessment information (such as submitting requested information) rather than an alert, notification, or warning message.

How to Activate: Fax capabilities are present in the EOC during regular operating conditions and emergency conditions. Faxing should ultimately be done under the supervision of the EOC Coordinator.

VII. LOCAL MEDIA

The media can also serve as a valuable resource when disseminating warnings and on-going public information. Most county residents are familiar with various media outlets (including television and radio) and rely on those outlets for up-to-date information and instructions. During non-emergency periods, the emergency manager coordinates the release of information. A media roster is maintained in the EOC for both pre-emergency and emergency periods.

How to Activate: During emergency incidents, the emergency manager and/or 911 Director may establish contact with the media prior to the arrival of the PIO. The preferred way to issue information to the media is via email and fax.

VIII. MASS NOTIFICATION SYSTEM

Kanawha County and the City of Charleston employ a reverse 9-1-1 mass notification system that can send out a voice message to individual households and businesses. The current system has a capacity to send out thousands of calls/hour. The messages are sent out to the phone numbers listed in the current 9-1-1 database.

How to Activate: The system can be activated in the county by 911 Supervisors, the city and/or county Emergency Manager, and/or the EOC Coordinator. Both pre-recorded messages and newly recorded messages can be used, depending on the situation. Those with the authority to activate the system can record messages on an as-needed basis. Those messages, though, are subject to appropriate approvals. “Call groups” have been organized by evacuation area (i.e., all registered numbers in the evacuation areas have been grouped); as such, a message can be sent to a single evacuation area, a combination of evacuation areas, or the county as a whole.

IX. NOAA ALL-HAZARD RADIO

NOAA all-hazard radios are provided by the National Oceanic and Atmospheric Administration (NOAA) and are personally-held radio receivers with a tone or a digital code containing county-specific header information. Voice announcements can warn of weather or other public emergencies. The all-hazard radio system interfaces with the

EAS, allowing for immediate extension of the warning message onto radio and television broadcast stations.

How to Activate: The Kanawha County and Charleston Emergency Managers as well as 911 Dispatchers can activate all-hazard radios by calling the NWS's Charleston Forecasting Office.

X. OUTDOOR WARNING SIREN SYSTEM

The outdoor warning siren system in Kanawha County consists of sirens located throughout the county with an emphasis on the "valley floor" that has the greatest population density and proximity to major transportation routes and chemical facilities. Sirens can be activated in "disaster mode" (i.e., three [3]-minute, steady tone, repeated several times) or in "attack mode" (i.e., three [3]-minute, wavering or cycling tone, repeated several times) pursuant to FEMA Publication CPG 1-17. Some of the sirens are also used to alert volunteer firefighters. Used as such, they are limited to a wavering tone lasting not more than two (2) minutes. Additionally, some of the sirens can be voice enabled. A list of those with this capability is maintained at Metro 9-1-1.

The sirens serve a valuable purpose in providing a capability to alert those that are outdoors, but is must be assumed that sirens will not be heard by everyone. All sirens have a secondary power source.

How to Activate: Sirens are activated by the Metro 9-1-1 Center via radio control upon the authority of 911 Supervisors and/or the Emergency Managers. (*NOTE: If the sirens are activated locally, Metro 911 should be notified.)

XI. PAGING SYSTEMS

In general, two (2) types of paging systems are included in this plan. Both serve primarily as a means of notifying emergency responders and/or emergency management partners. Response agencies (i.e., fire departments, police departments, EMS units, etc.) are normally paged to respond to emergencies within their first-due response district. These paging capabilities can be utilized to dispatch resources to assist with the implementation of an evacuation. Messages via radios that are used by emergency personnel can also be used as a means of notification/warning.

Additionally, EOC staff, local government representatives, etc. can be paged as a notification of emergency conditions. Such notifications can be simply informational or requests to respond to an activated EOC.

How to Activate: Appropriate rosters of pager numbers as well as guidelines for dispatching response agencies are maintained at the Metro 911 Center. Such capabilities should be implemented as per normal protocols.

XII. PUBLIC ADDRESS SYSTEMS

Most emergency response agencies in Kanawha County have a mobile addressing capability. These capabilities are typically associated with electronic sirens in emergency vehicles. These resources could be dispatched to an affected (or potentially-affected) area to disseminate messages via these portable sirens. The primary drawback to this method of warning is the manpower it would take to implement across a large area.

How to Activate: The use of public address systems is generally considered an external resource. As such, an on-scene Incident Commander (IC) or the EOC can request the activation and deployment of agencies with these capabilities.

XIII. TELEPHONE

The telephone serves primarily as an alternate method of communicating with responders. Telephone correspondence is more appropriate for communicating on-going incident assessment information rather than an alert, notification, or warning message. In fact, telephone may be the preferred method of communication with resource providers, neighboring counties, special facilities in Kanawha County, etc.

How to Activate: Telephone capabilities are present in the EOC during regular operating conditions and emergency conditions. Telephone correspondence should ultimately be under done the supervision of the EOC Coordinator.

XIV. WEBSITES

Many persons are likely to consult county websites for details regarding a potential or actual evacuation. While there are many websites affiliated with Kanawha County and the City of Charleston, all information should be posted at the following sites.

- Kanawha County: www.kanawha.us
- Metro 9-1-1: www.metro911.org
- City of Charleston: www.cityofcharleston.org
- Kanawha Putnam Emergency Planning Committee: www.kpepc.org

How to Activate: The Charleston Emergency Manager can update the city's website with emergency information. Kanawha County's webmaster can update the site, once tasked to do so by the EOC. Further, the KPEPC Administrator can update the KPEPC site and Metro personnel can update their site.

XV. NOTES

1. "HazCollect" is the NWS' all-hazards emergency message collection system. It is a dynamic system for the centralized collection and efficient distribution of non-weather emergency messages. Local governments must be registered with the program to utilize it. See http://www.nws.noaa.gov/os/hazcollect/index.shtml for additional information.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN

APPENDIX 6: EVACUATION AREA PROFILES

This appendix contains profiles of the nine (9) evacuation areas into which Kanawha County has been divided. Each profile contains the following:

- A list of primary, secondary, and feeder evacuation routes,
- Estimated population data,
- Lists of critical facilities in the area,
- Lists of potential shelter facilities in the area (where applicable),
- Estimates of roadway capacities and times necessary to evacuate the area, and
- A brochure that can be distributed to residents in the area outlining their responsibilities.

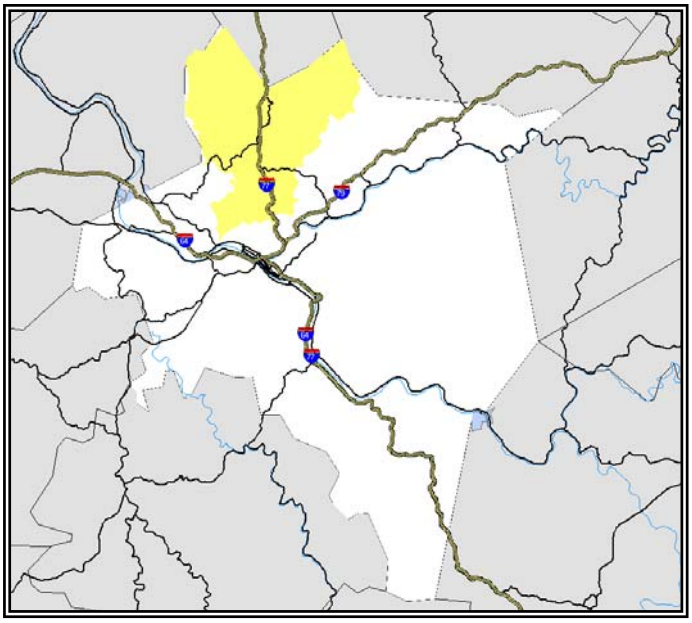
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA NORTH

The Kanawha North Evacuation Area is comprised of the areas along and to the west of north Interstate 77, and contains all or part of the following zip codes:

- 25071,
- 25124,
- 25302,
- 25312, and
- 25320.

The area is served by the Sissonville Volunteer Fire Department. Figure 6.A.1 at right depicts the area on a map.

Figure 6.A.1

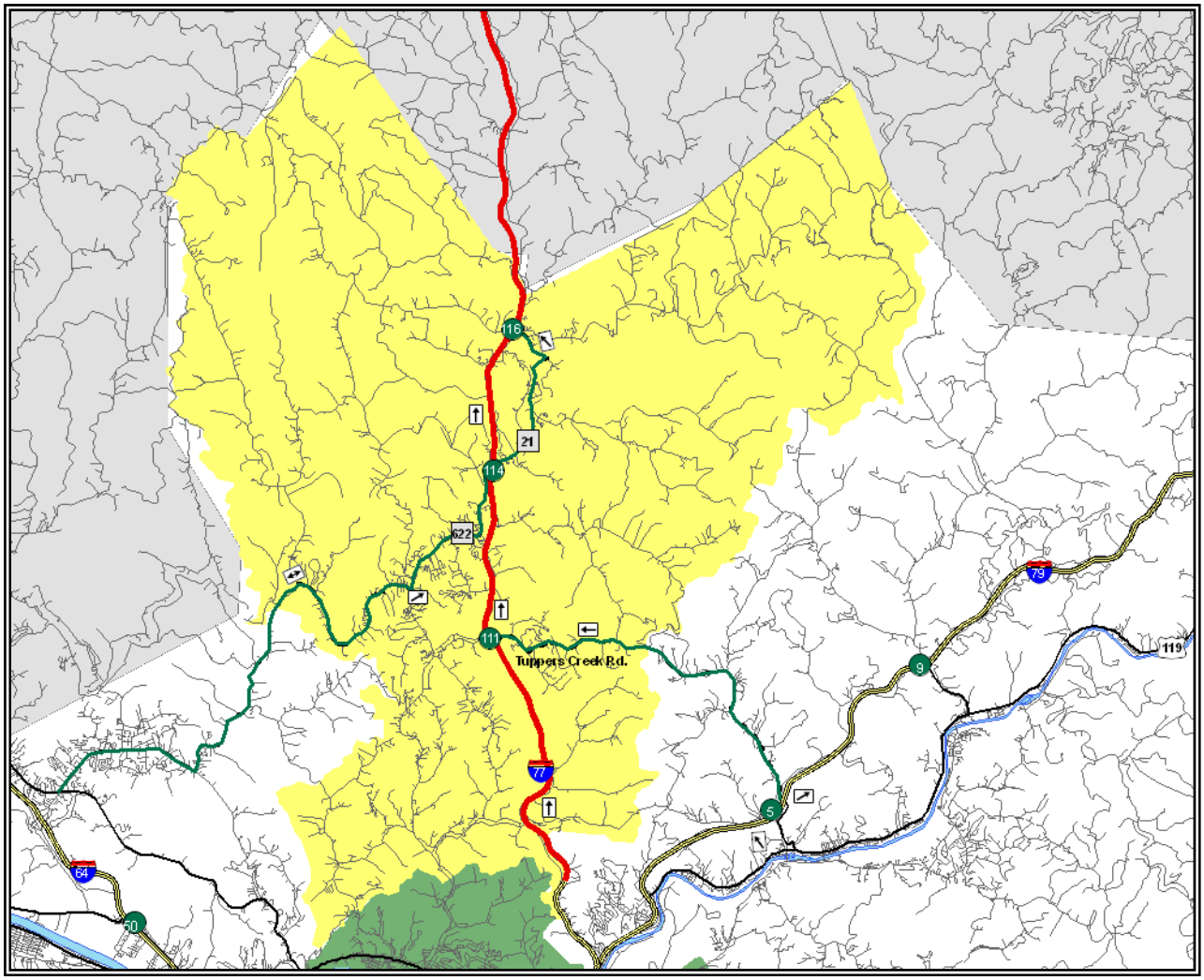


Kanawha North contains the communities of Guthrie, Liberty, Millertown, Pocatalico, and Sissonville. The population is approximately 14,384, according to US Census Bureau estimates. For an emergency affecting all of Kanawha County, Kanawha North residents may be directed to evacuate north toward the towns of Ripley. For an emergency affecting only the Kanawha North area, residents may be directed to shelter in either Ripley as well as such communities as Fairplain, Goldtown, and Kenna. A brochure that can be distributed to residents in the Kanawha North area is attached at the end of this profile.

The primary evacuation route from the Kanawha North area is Interstate 77. Evacuating populations can access I-77 at Exits 106, 111, 114, and 116. SR 622 west and Tuppers Creek

Road east can also serve as a secondary evacuation route. Figure 6.A.2 below graphically depicts the evacuation and feeder routes.

Figure 6.A.2



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha North area. Table 6.A.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.A.2 lists the critical facilities that are located in the area and Table 6.A.3 lists the potential shelters. Figure 6.A.3 depicts the pick-up points in the Kanawha North area.

Table 6.A.1 **(AREA – Kanawha North, POPULATION – 14,384)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-77*	P	70 mph	Rolling	3501	1.4 hours**
SR 622*	S	32 mph	Rolling	1143	4.2 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

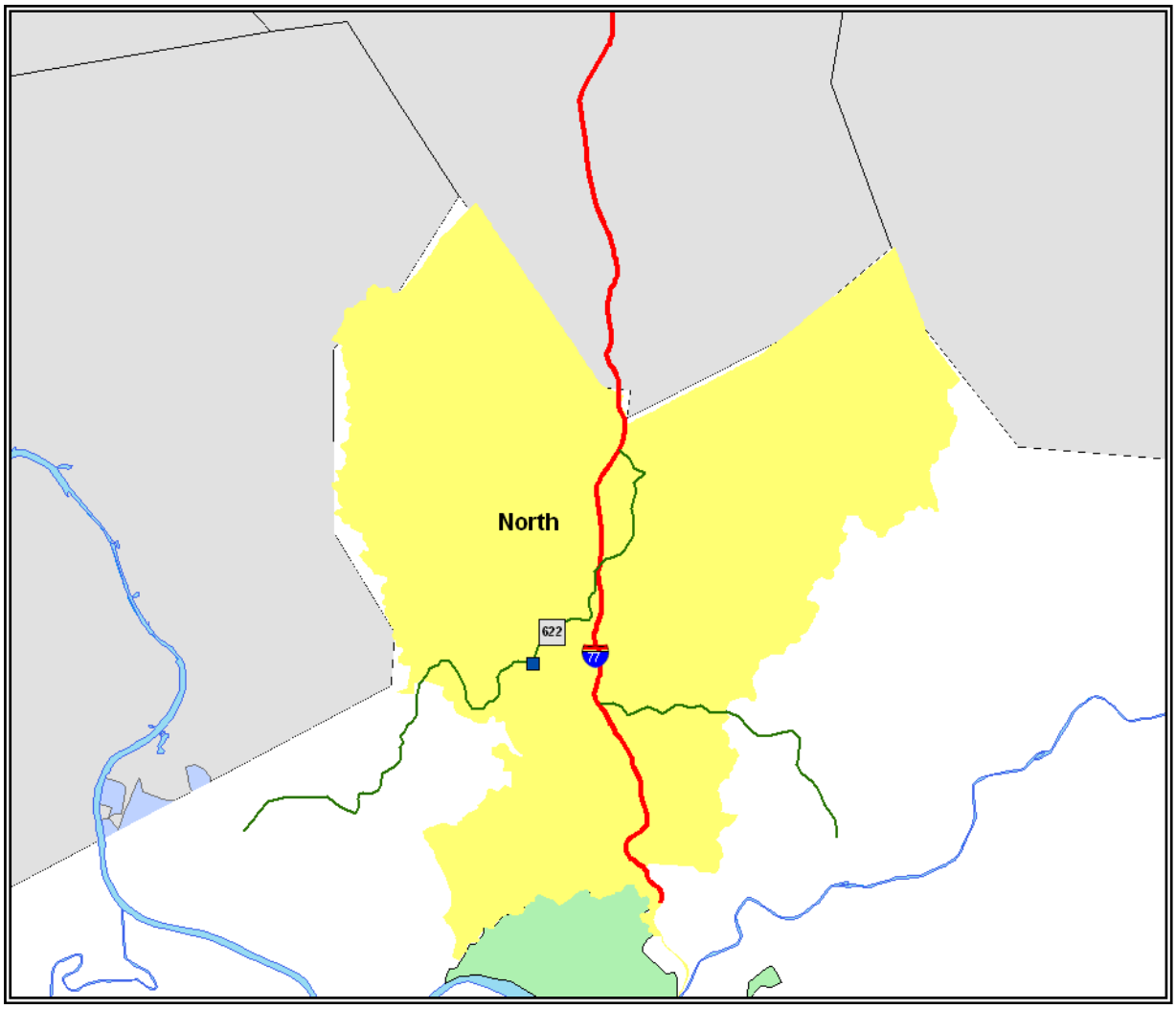
Table 6.A.2 **(AREA – Kanawha North, POPULATION – 14,384)**
Critical Facilities in Kanawha North

Facility	Location
Cedar Ridge Center	302 Cedar Ridge Road, Sissonville
Finn ES	2006 McClure Parkway, Charleston
Sissonville ES	8324 Sissonville Drive, Sissonville
Sissonville HS	6100 Sissonville Drive, Sissonville
Sissonville MS	100 Middle School Lane, Charleston
Sissonville VFD Huston Station	5950 Sissonville Drive, Sissonville
Sissonville VFD Goff Station	8405 Sissonville Drive, Sissonville
Sissonville VFD Loftis Station	515 Edens Fork Road, Charleston

Table 6.A.3 **(AREA – Kanawha North, POPULATION – 14,384)**
Potential Shelters in Kanawha North

Facility	Location	Capacity	Coordinator
Sissonville MS	8316 Old Mill Road, Charleston	250	ARC
Sissonville HS	6100 Sissonville Drive, Charleston	500	ARC
Bonham ES	Route 1 Box 425A, Charleston	100	ARC
Flinn ES	2006 McClure Parkway, Charleston	100	ARC
Sissonville ES	8324 Sissonville Drive, Charleston	100	ARC

Figure 6.A.3



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

Emergency Alert System/NOAA All-Hazard Radio:
Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha North Area

ADVISORY

Kanawha North Area to Points North

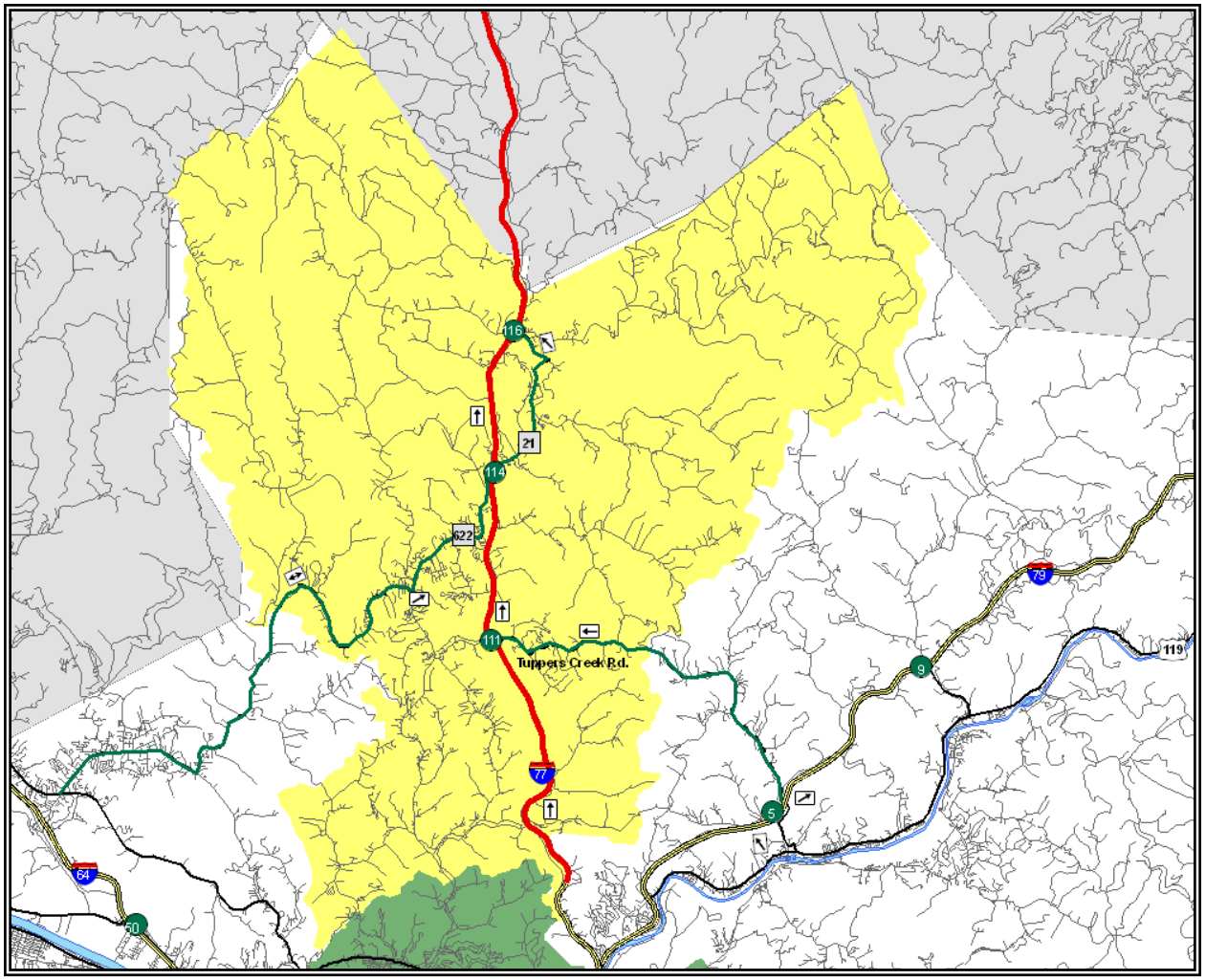
WHO... This plan will affect residents and motorists evacuating from the northern portions of Kanawha County, including Guthrie, Liberty, Millertown, Pocatalico, and Sissonville.

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is I-77 *NORTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

WHERE... Evacuating residents should access I-77 at Exits 106, 111, 114, and 116. If I-77 is unavailable, residents will be directed to evacuate SR 622 west and Tuppers Creek Road.



Exit 106

Exit 111

Exit 114

Exit 116

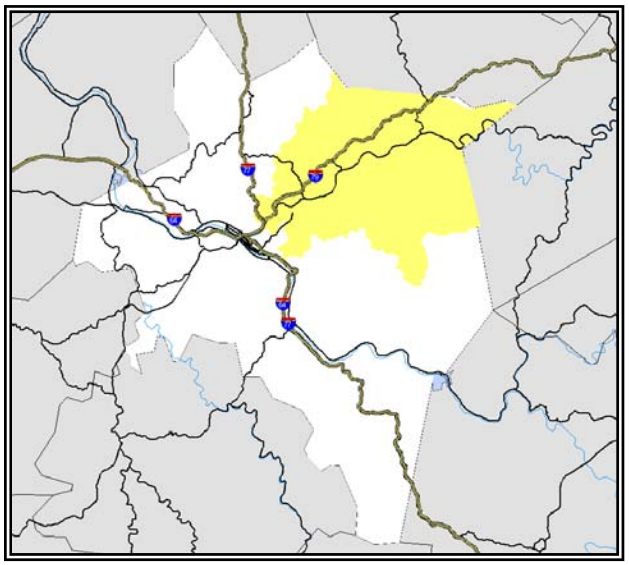
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA NORTHEAST

The Kanawha Northeast Evacuation Area is comprised of the areas in the northern portions of the county, along and east of Interstate 79, and contains all or part of the following zip codes:

- 25045,
- 25071,
- 25254
- 25302,
- 25311, and
- 25312.

The Clendenin, Frame, and Pinch fire departments provide primary service throughout the Kanawha Northeast area (as does the WV Air National Guard). It contains the Crossings Mall. Figure 6.B.1 at right depicts the area on a map.

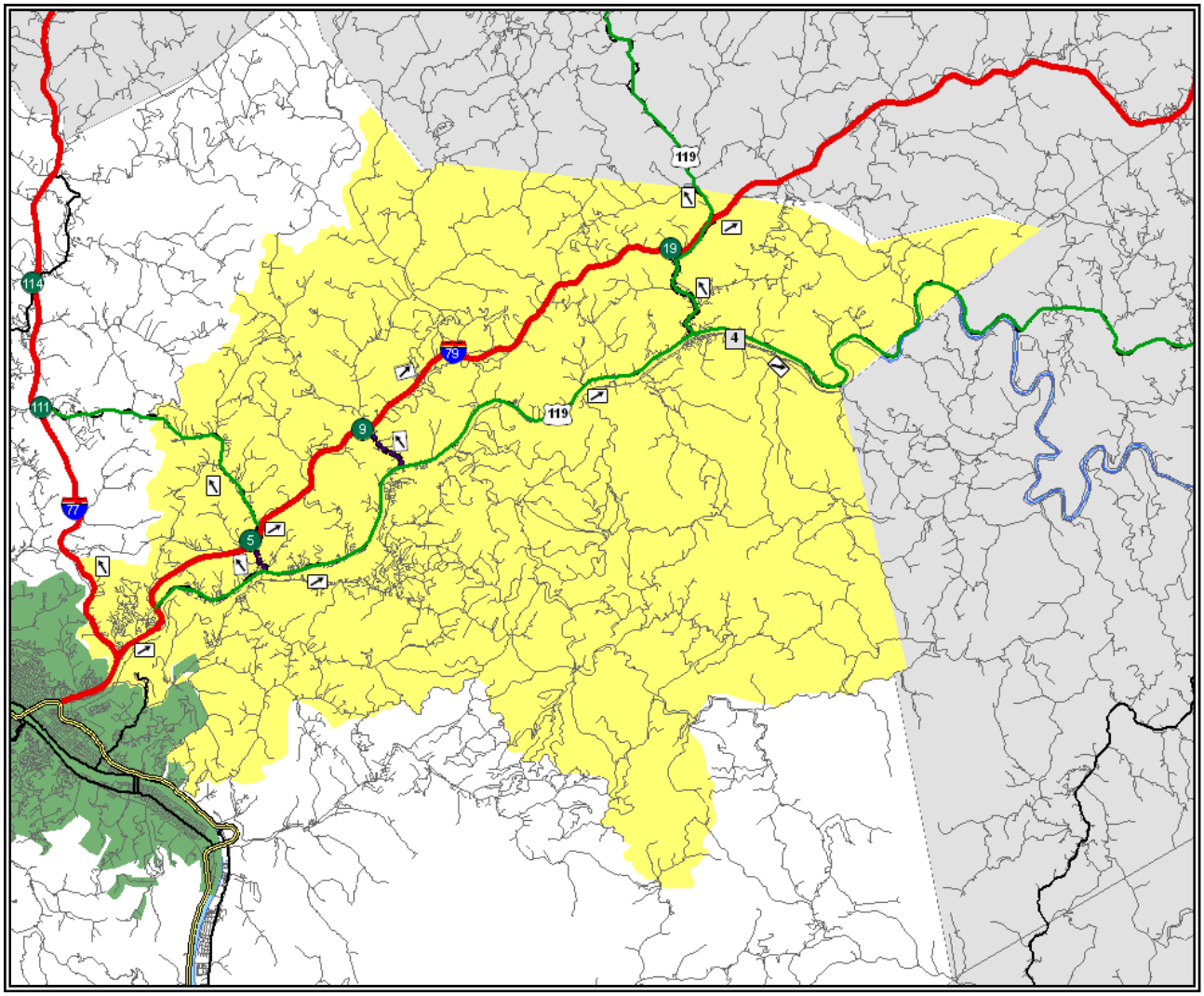
Figure 6.B.1



Kanawha Northeast contains the Town of Clendenin as well as the communities of Big Chimney, Blue Creek, Coco, Coopers Creek, Crede, Crestwood, Dutch Ridge, Elkview, Frame, Little Sandy, Milliken, Mink Shoals, Newhouse Branch, Pentacre, Pinch, Pinch Ridge, Quick, Rutledge, Sanderson, and Walgrove. The population is approximately 23,592, according to US Census Bureau estimates. For an emergency affecting all of Kanawha County, Kanawha Northeast residents may be directed to evacuate north toward the towns of Clay, Sutton, Flatwoods, Burnsville, and Weston. For an emergency affecting only the Kanawha Northeast area, residents may be directed to shelter in Clay or Roane Counties as well as such communities as Sissonville, Cedar Grove, Glasgow, etc. A brochure that can be distributed to residents in the Kanawha Northeast area is attached at the end of this profile.

The primary evacuation route from the Kanawha Northeast area is Interstate 79. Evacuating populations can access I-79 at Exits 9 and 19. The primary feeder route for Exit 9 is CR 39; the primary feeder route for Exit 19 is US 119. US 119 north can also serve as a secondary evacuation route. Figure 6.B.2 below graphically depicts the evacuation and feeder routes.

Figure 6.B.2



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha Northeast area. Table 6.B.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.B.2 lists the critical facilities that are located in the area Table 6.B.3 lists the potential shelters. Figure 6.B.3 depicts the pick-up points.

Table 6.B.1 **(AREA – Kanawha Northeast, POPULATION – 23,592)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-79*	P	70 mph	Rolling	3583	2.2 hours**
US 119*	S	42 mph	Rolling	1282	6.1 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

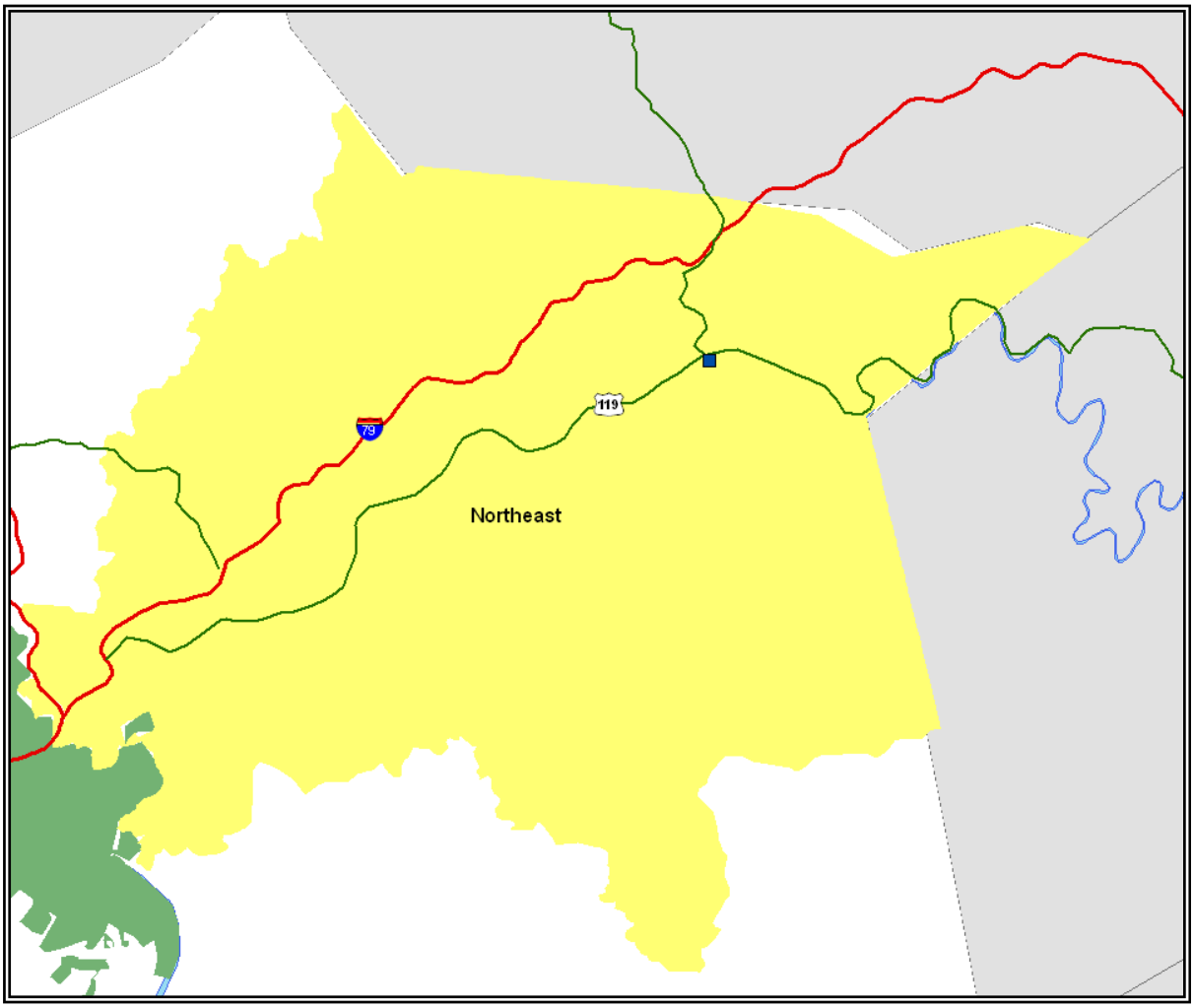
Table 6.B.2 **(AREA – Kanawha Northeast, POPULATION – 23,592)**
Critical Facilities in Kanawha Northeast

Facility	Location
3-mile Fork Pond (Dam)	N/A
Bridge ES	N/A
Clendenin ES	503 East Maywood Avenue, Clendenin
Clendenin VFD	Clendenin
Elk 2-Mile #12 (Dam)	N/A
Elk 2-Mile #13 (Dam)	N/A
Elk Elementary Center	3320 Pennsylvania Avenue, Charleston
Elk Valley Christian School	76 Pleasant Island Road, Elkview
Elkview MS	5090 Elk River Road, North, Elkview
Frame VFD	Elkview
Herbert Hoover HS	275 Elk River Road, South, Clendenin
Meadowbrook Acres	2149 Greenbrier Street, Charleston
Pinch ES	300 South Pinch Road, Elkview
Pinch VFD	Pinch
Pinch VFD Substation	Big Chimney
Shoals ES	100 Dutch Road, Charleston
Yeager Airport	100 Airport Road, Charleston

Table 6.B.3 **(AREA – Kanawha Northeast, POPULATION – 23,592)**
Potential Shelters in Kanawha Northeast

Facility	Location	Capacity	Coordinator
Elk ES	3320 Pennsylvania Avenue, Charleston	200	ARC
Bridge ES	5120 Elk River Road, N, Elkview	100	ARC
Clendenin ES	533 Maywood Avenue, E, Clendenin	100	ARC
Herbert Hoover HS	275 Elk River Road, Clendenin	400	ARC
Elkview MS	5090 North Elk River Road, Elkview	300	ARC
Shoals ES	100 Dutch Road, Charleston	120	ARC

Figure 6.B.3



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

Emergency Alert System/NOAA All-Hazard Radio:
Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha Northeast Area

ADVISORY

Kanawha Northeast Area to Points North

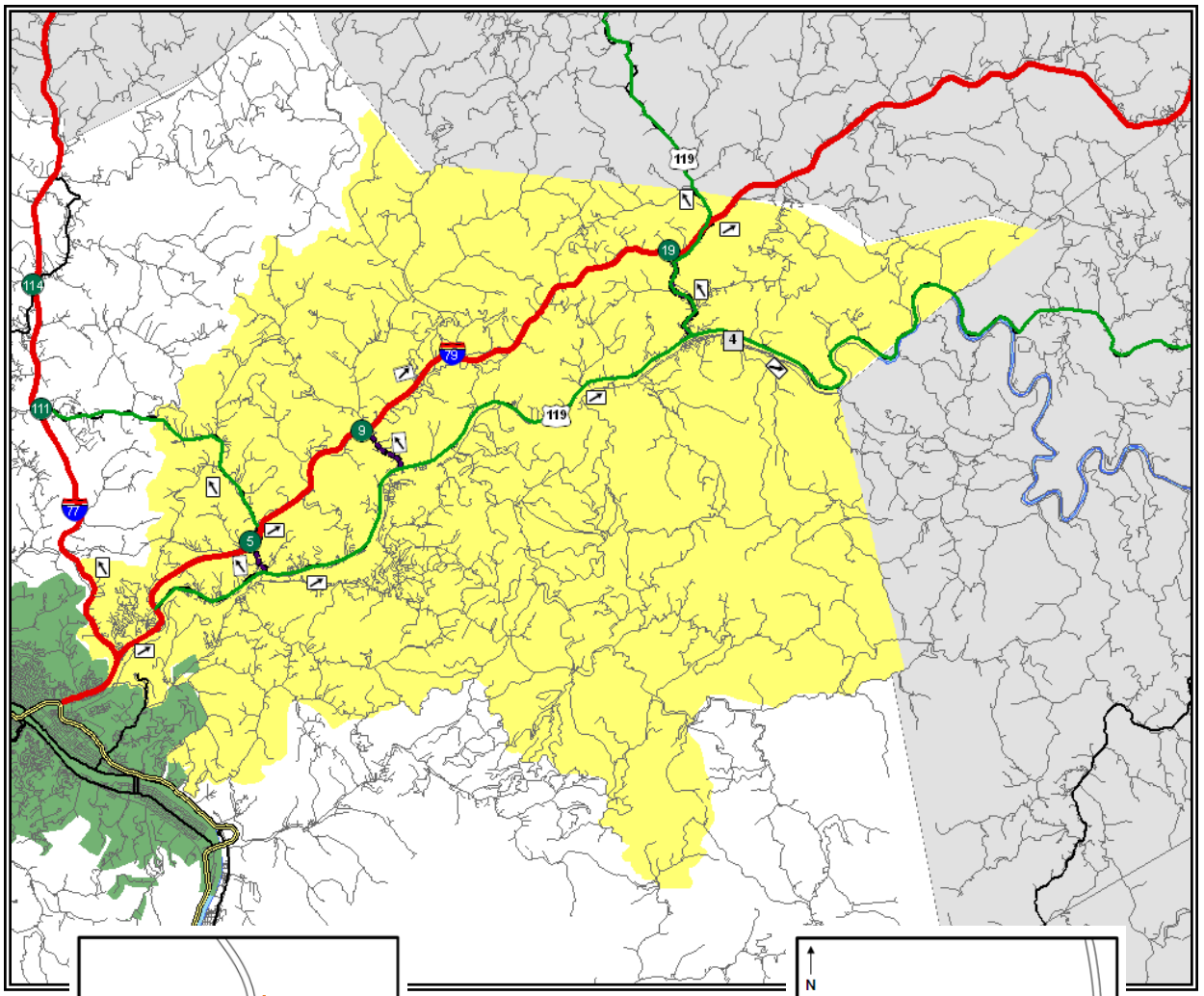
WHO... This plan will affect residents and motorists evacuating from the northern portions of Kanawha County, including Clendenin, Big Chimney, Blue Creek, Coco, Coopers Creek, Crede, Crestwood, Dutch Ridge, Elkview, Frame, Little Sandy, Milliken, Mink Shoals, Newhouse Branch, Pentacre, Pinch., Pinch Ridge, Quick, Rutledge, Sanderson, and Walgrove

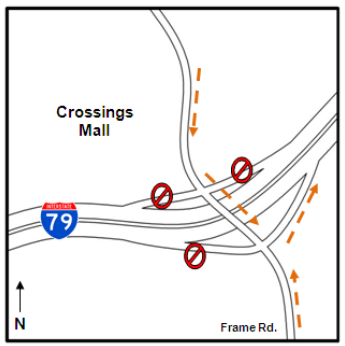
WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is I-79 *NORTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

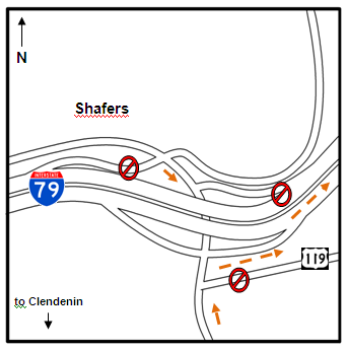
WHERE... Evacuating residents should access I-79 at Exits 9 and 19. If I-79 is unavailable, residents will be directed to evacuate US 119 northward.





Exit 9

Exit 19



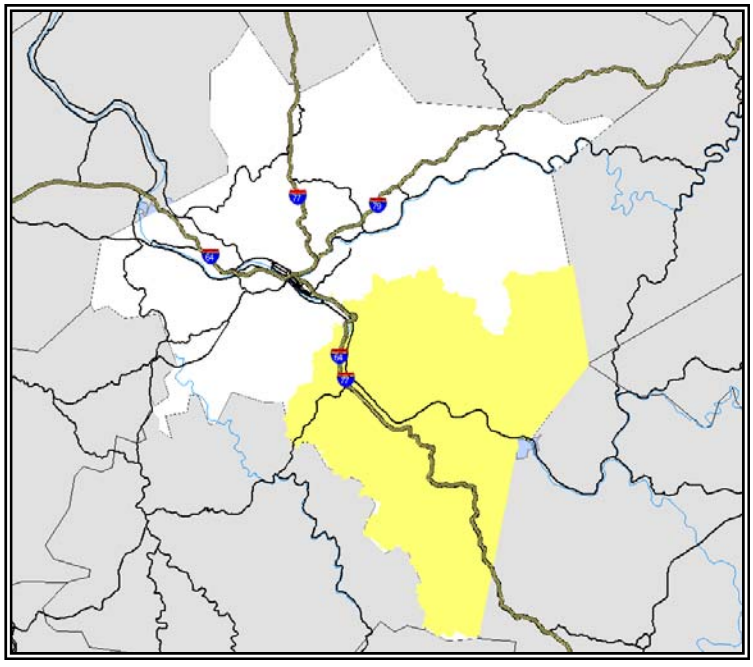
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA EAST

The Kanawha East Evacuation Area is comprised of the areas east along Interstate 64 as well as the southwestern corner of the county, and contains all or part of the following zip codes:

- 25015,
- 25035,
- 25039,
- 25054,
- 25061,
- 25067,
- 25075,
- 25083,
- 25086,
- 25102,
- 25103,
- 25107,
- 25110,
- 25126,
- 25132,
- 25134,
- 25136,
- 25160,
- 25162,
- 25201, and
- 25214.

The area is served by the following fire districts: Belle, Cabin Creek, Cedar Grove, Chesapeake, East Bank, Glasgow, Handley, Malden, Marmet, Montgomery, Pratt, and Rand. Figure 6.C.1 at right depicts the area on a map.

Figure 6.C.1

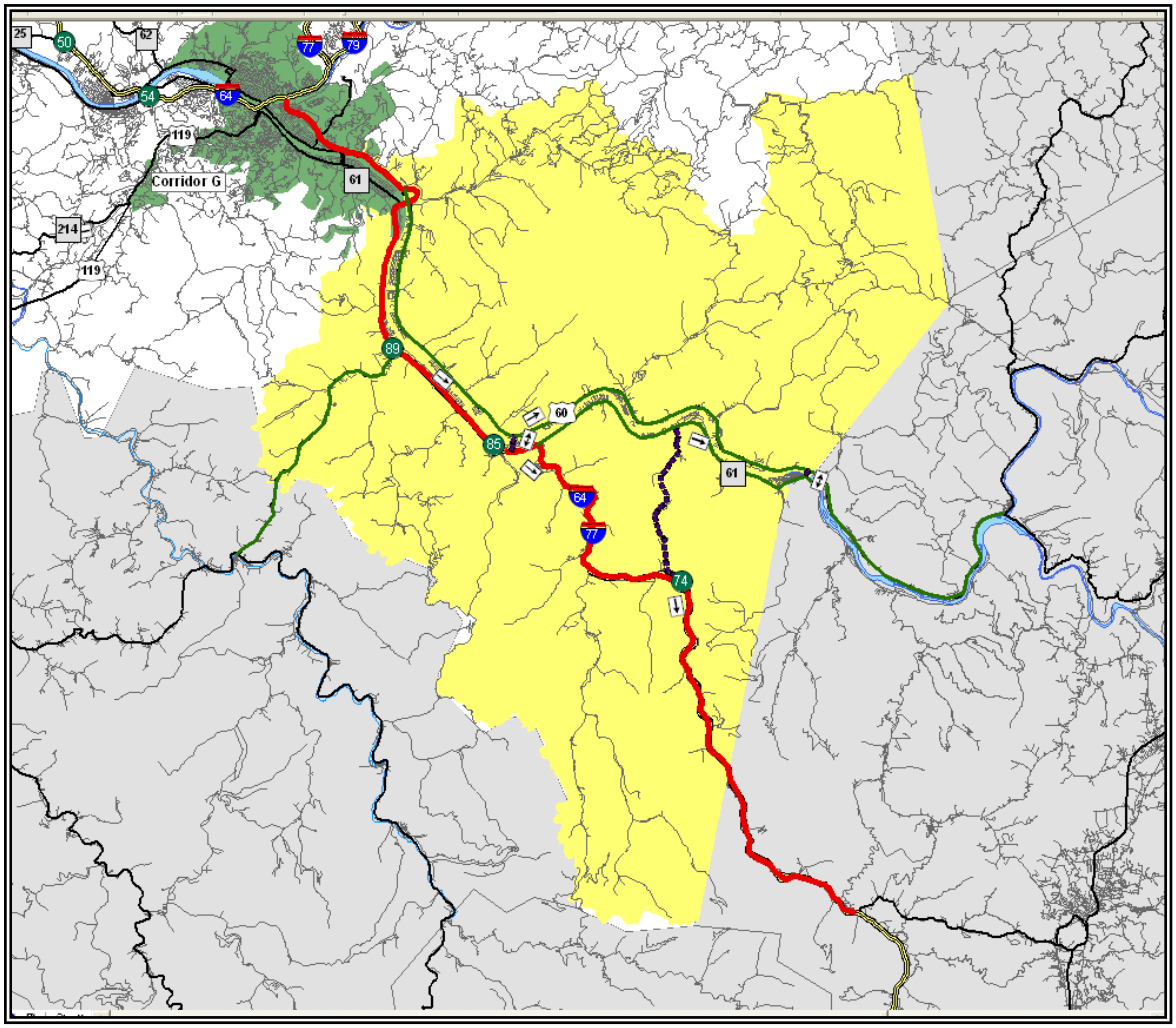


Kanawha East contains the municipalities of Belle, Cedar Grove, Chesapeake, East Bank, Glasgow, Handley, Marmet, and Pratt as well as the communities of Bullpush, Cabin Creek, Campbells Creek, Chelyan, Diamond, Elksdale, Hernshaw, Hughes ton, London, Malden, Ohley, Paint Creek,

Quincy, Rand, Rhonda, Shrewsburg, Winifrede, and Witcher. The population is approximately 30,017, according to US Census Bureau estimates. For an emergency affecting all of Kanawha County, Kanawha East residents may be directed to evacuate east toward the towns of Montgomery, Smithers, Gauley Bridge, and Fayetteville. For an emergency affecting only the Kanawha East area, residents may be directed to shelter in either Fayette County or other cities in Kanawha County, such as Charleston and South Charleston. A brochure that can be distributed to residents in the Kanawha East area is attached at the end of this profile.

The primary evacuation route from the Kanawha East area is Interstate 64/77. Evacuating populations can access I-64/77 at the following exits: 74, 85, and 89. The primary feeder route for both Exits 85 and 89 is SR 61, respectively. Paint Creek Road ties into Exit 74. US Route 60 can also serve as a secondary evacuation route for the entire area and may serve as the primary route for many residents on the north side of the Kanawha River. Figure 6.C.2 below graphically depicts the evacuation and feeder routes.

Figure 6.C.2



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha East area. Table 6.C.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.C.2 lists the critical facilities that are located in the area and Table 6.C.3 lists the potential shelters. Figure 6.C.3 depicts the pick-up points in Kanawha East.

***Table 6.C.1* (AREA – Kanawha East, POPULATION – 30,017)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-64/77*	P	65 mph	Rolling	4099	2.4 hours**
US 60*	S	45 mph	Rolling	3269	3.1 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

***Table 6.C.2* (AREA – Kanawha East, POPULATION – 30,017)**
Critical Facilities in Kanawha East

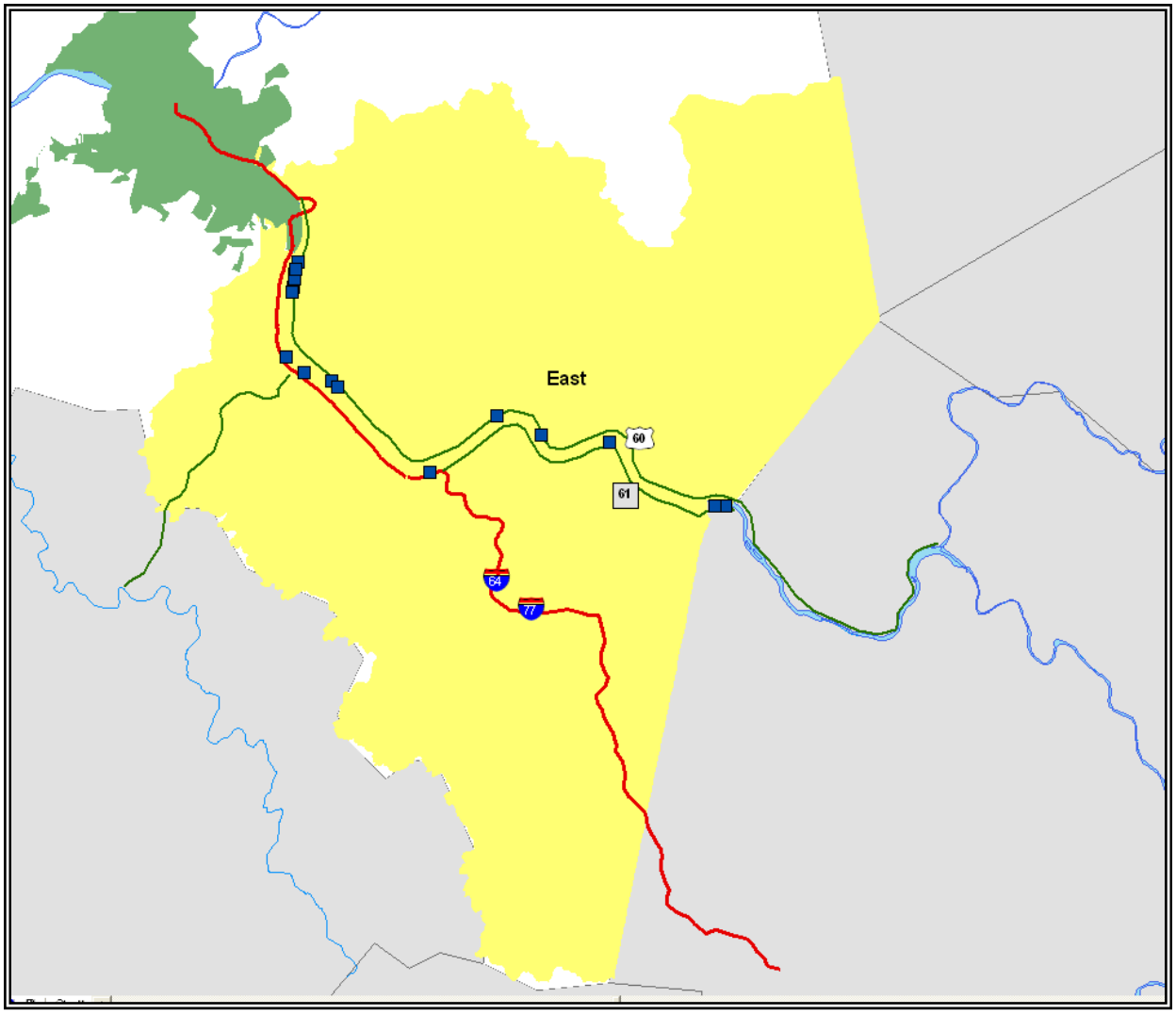
Facility	Location
Belle ES	401 East 6th Street, Belle
Belle VFD	708 East Dupont Avenue, Belle
Belle FD/ KCESA	Combined station on Dupont Avenue in Witcher
Beverly Health Care Center	Glasgow
Cabin Creek VFD	Elksdale
Carver Career Center	4799 Midland Drive, Charleston
Cedar Grove Community School (ES)	Cedar Grove
Cedar Grove VFD	Williams and East George Street, Cedar Grove
Chesapeake ES	13620 MacCorkle Avenue, Chesapeake
Chesapeake VFD	Chesapeake
Donnaldson Prep Plant (Dam)	N/A
DuPont	Dupont Avenue, Belle
Dupont MS	1 Panther Drive, Belle
East Bank MS	East Bank
East Bank VFD	East Bank station
East Bank VFD	Chelyan station
Glasgow VFD	119 Tompkins Avenue, Cedar Grove
Handley VFD	27145 Second Avenue, Handley
Lady Dunn Prep Plant (Dam)	N/A
Living Faith Christian Academy	9203 Ohio Avenue, Marmet
London Lock & Dam	London
Malden ES	4001 Salinas Drive, Charleston
Malden VFD	3924 Malden Drive, Charleston
Marmet ES	408 94th Street, Marmet

Facility	Location
Marmet Health Care Center	1 Sutphin Drive, Marmet
Marmet Lock & Dam	Marmet
Marmet VFD	Marmet
Mary Ingles ES	Tad
Midland Trail ES	200 Ferry Street, Diamond
Pratt ES	Center and Stark Street, Pratt
Rand VFD	5308 Church Drive, Charleston
Riverside HS	1 Warrior Way, Belle
Scotts Run Cinder Barrier (Dam)	N/A
Sharon Dawes ES	Cabin Creek Road, Miami
Union Carbide #2 Dam	N/A
Upper Kanawha Valley Christian School	12721 MacCorkle Avenue, Chesapeake
Wevaco Prep Plant (Dam)	N/A
Winifrede Cent. Cleaning Plant (Dam)	N/A
WVSP Quincy Detachment	2700 East Dupont Avenue, Belle

***Table 6.C.3* (AREA – Kanawha East, POPULATION – 30,017)**
Potential Shelters in Kanawha East

Facility	Location	Capacity	Coordinator
Mary Ingles ES	Campbell's Creek Drive, Tad	100	ARC
Riverside HS	1 Warrior Way, Belle	1,000	ARC
Cedar Grove School	Johns Street, Cedar Grove	100	ARC
East Bank MS	First and Brannen, East Bank	400	ARC
Belle ES	401 East 6th Street, Belle	100	ARC
Carver Career Center	4799 Midland Drive, Charleston	300	ARC
Chesapeake ES	13620 MacCorkle Avenue, Charleston	100	ARC
Dupont MS	1 Panther Way, Belle	400	ARC
Malden ES	4001 Salinas Drive, Charleston	100	ARC
Marmet ES	408 94th Street, Charleston	100	ARC
Midland Trail ES	200 Ferry Street, Belle	150	ARC
Pratt ES	Center and Stark Street, Pratt	100	ARC
Pratt FD	Pratt	20	ARC
Sharon Dawes ES	Miami	100	ARC

Figure 6.C.3



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

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Tune to your local radio station

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WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha East Area

ADVISORY

Kanawha East Area to Points South

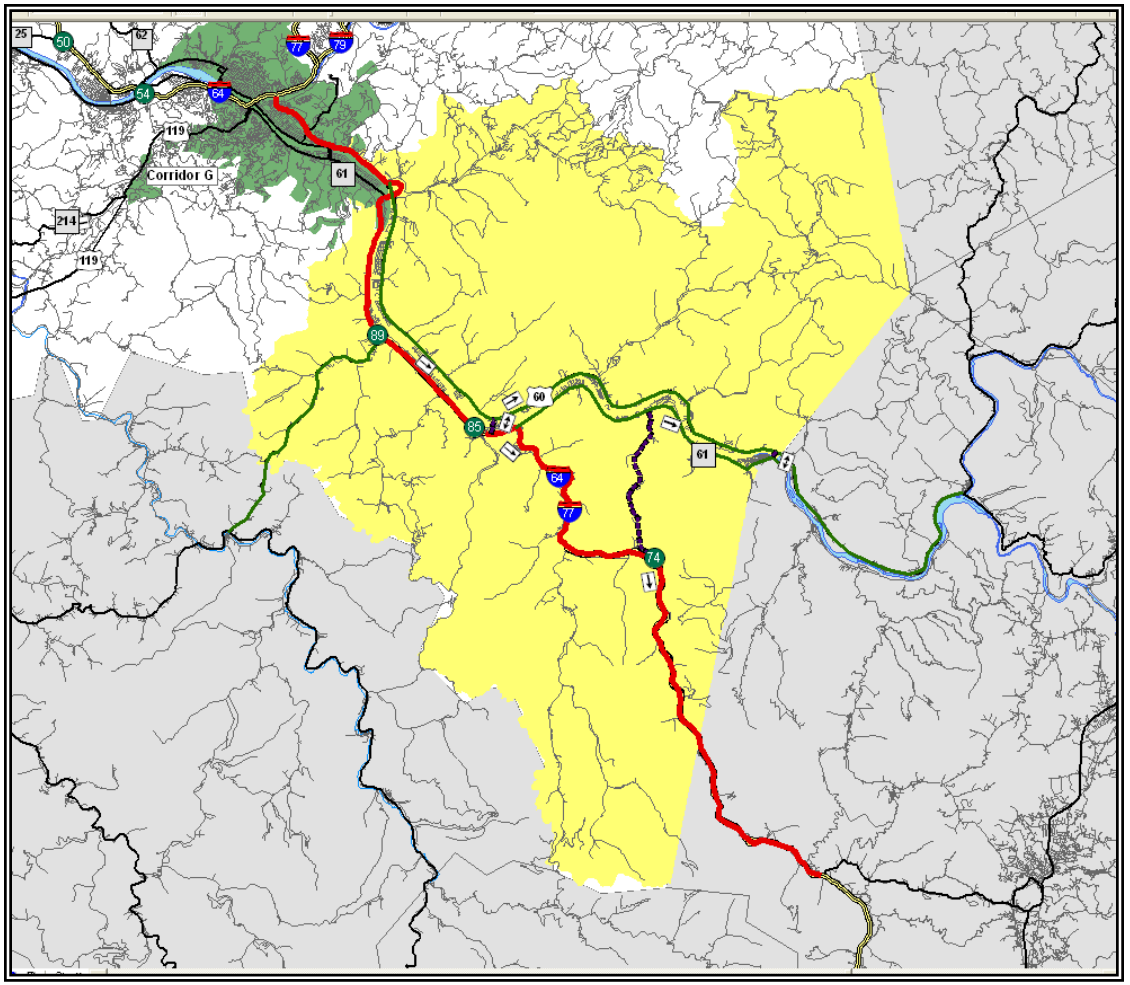
WHO... This plan will affect residents and motorists evacuating from the eastern portions of Kanawha County (including Belle, Bullpush, Cabin Creek, Campbell's Creek, Cedar Grove, Chelyan, Diamond, East Bank, Elksdale, Glasgow, Handley, Hernshaw, Hugheston, London, Malden, Marmet, Ohley, Paint Creek, Pratt, Quincy, Rand, Rhonda, Shrewsburg, Winifrede and Witcher).

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

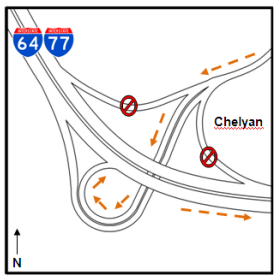
WHAT... If this plan is activated, the primary evacuation route from these areas is I-64/77 *SOUTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

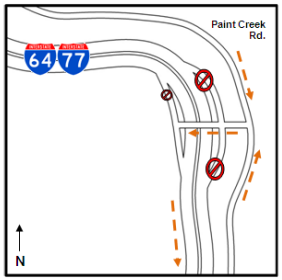
WHERE... Evacuating residents should access I-64/77 at Exits 89, 85, and 74. If I-64/77 is unavailable, residents will be directed to evacuate south on SR 94 and/or east/west on US 60.



Exit 89



Exit 85



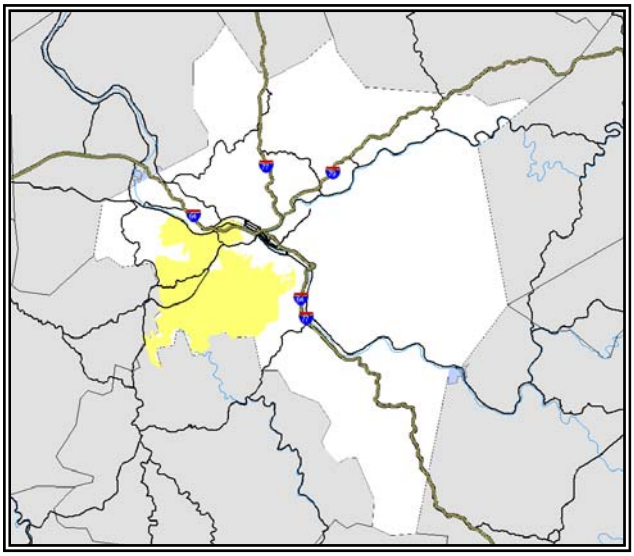
Exit 74

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA SOUTH

The Kanawha South Evacuation Area is comprised of the areas along US 119, south of Charleston, and contains all or part of the following zip codes:

- 25003,
- 25177,
- 25303,
- 25304,
- 25309, and
- 25314.

Figure 6.D.1



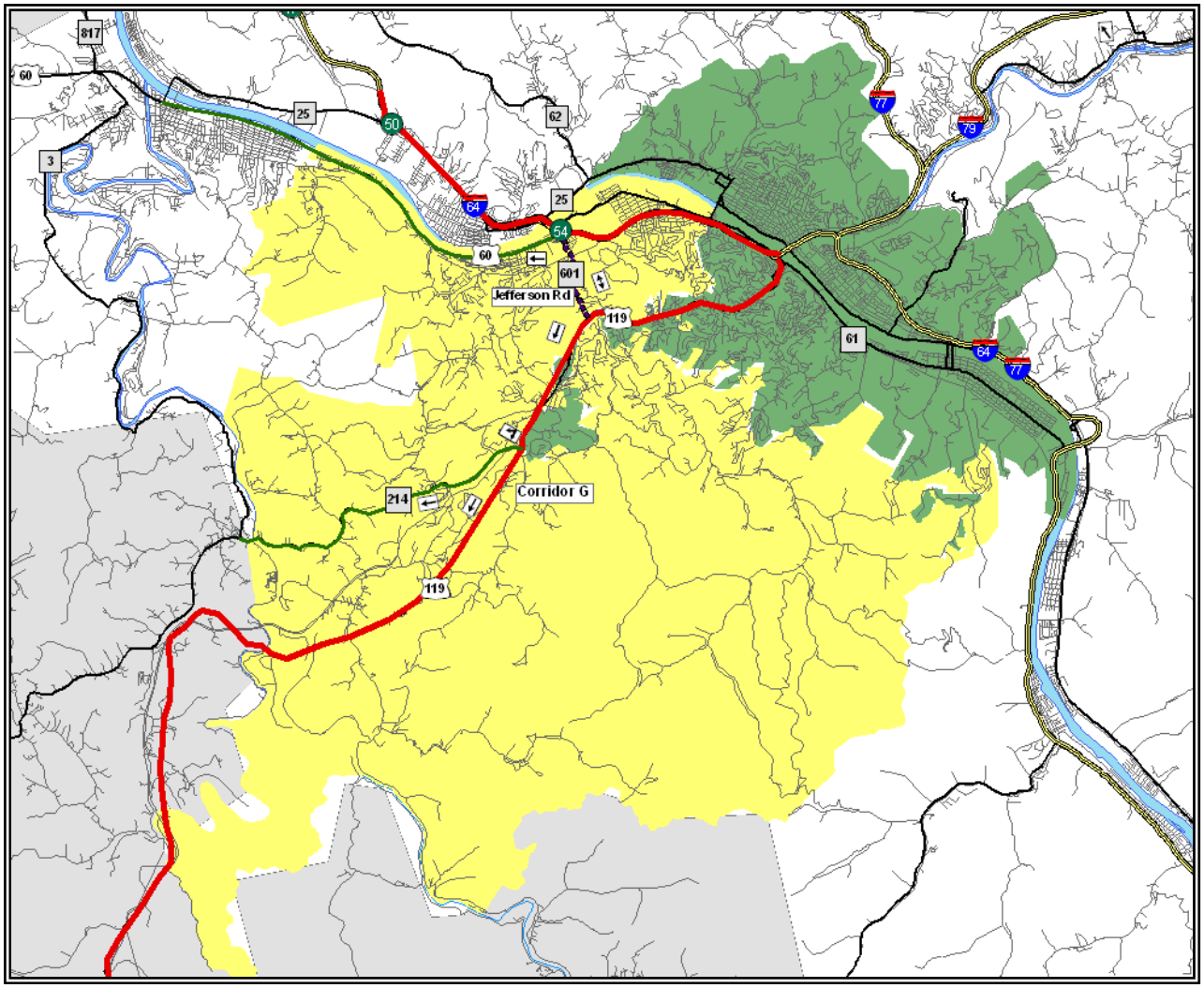
It corresponds to the following fire department service areas: Alum Creek, Davis Creek, Jefferson, Loudendale, and South Charleston. Figure 6.D.1 at right depicts the area on a map.

Kanawha South contains the City of South Charleston as well as the communities of Alum Creek, Davis Creek, Jefferson, Loudendale, Ruth, and Smith Creek. The population is approximately 25,654, according to US Census Bureau estimates. For an emergency affecting all of Kanawha County, Kanawha South residents may be directed to evacuate southward toward the towns of Danville and Madison. For an emergency affecting only the Kanawha South area, residents may be directed to shelter in either Boone County as well as such communities as St. Albans, Charleston, and Dunbar. A brochure that can be distributed to residents in the Kanawha South area is attached at the end of this profile.

The primary evacuation route from the Kanawha South area is US 119 (Corridor G). Evacuating populations can access Corridor G in the Southridge area as well as its intersection with

Jefferson Road, Ruthdale Road, or Moses Auto Outlet. Some populations – namely those in northern South Charleston – may be directed to evacuate via Kanawha Turnpike (US 119) toward St. Albans and Dunbar. The primary feeder route for the Corridor G portions is Jefferson Road. SR 214 can serve as a secondary evacuation route. Figure 6.D.2 below graphically depicts the evacuation and feeder routes.

Figure 6.D.2



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha South area. Table 6.D.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.D.2 lists the critical facilities that are located in the area and Table 6.D.3 lists the potential shelters. Figure 6.D.3 depicts the pick-up points.

***Table 6.D.1* (AREA – Kanawha South, POPULATION – 25,654)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
US 119*	P	65 mph	Rolling	3330	2.6 hours**
SR 214*	S	32 mph	Rolling	1195	7.2 hours**

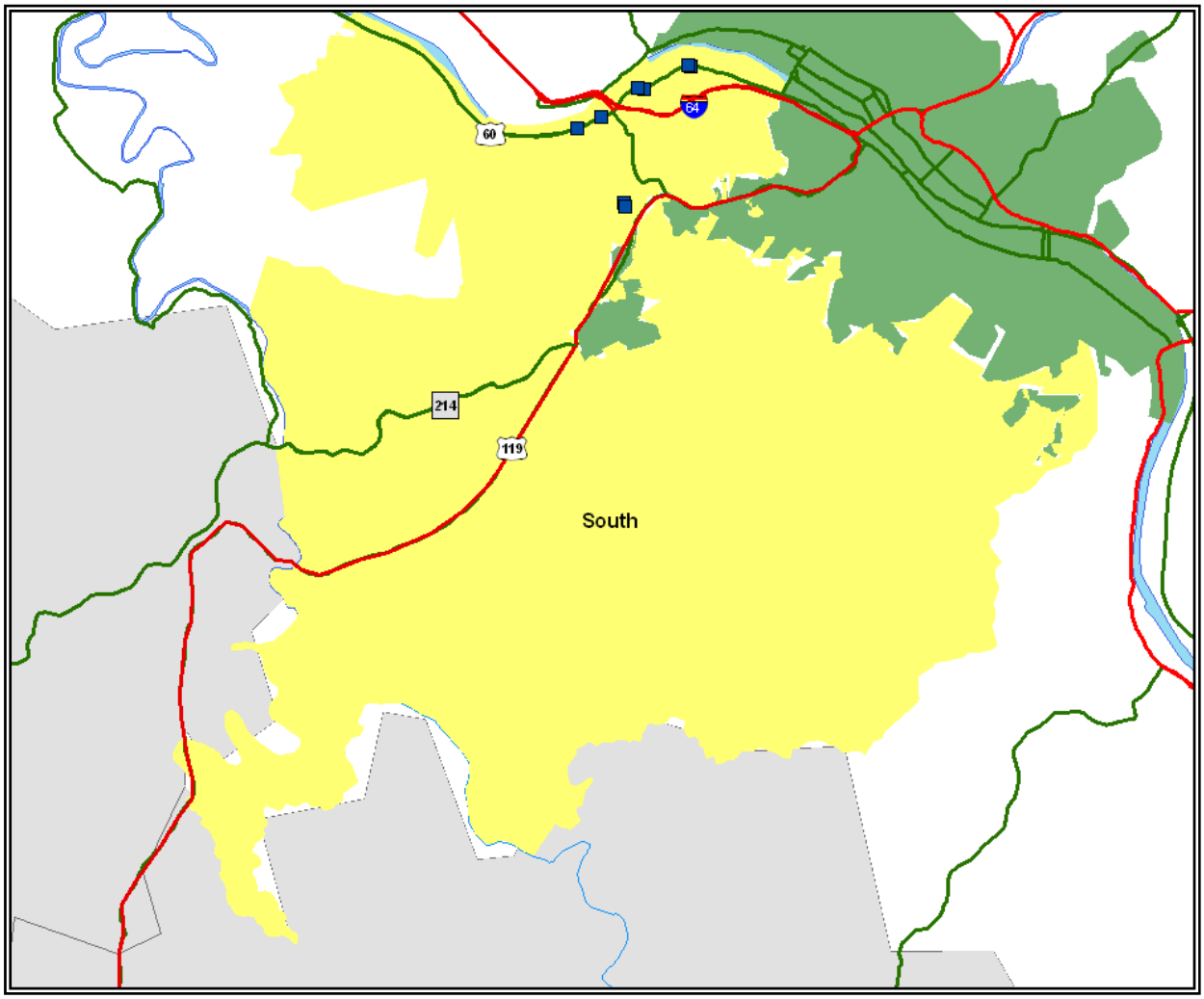
** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

***Table 6.D.2* (AREA – Kanawha South, POPULATION – 25,654)**
Critical Facilities in Kanawha South

Facility	Location
Alum Creek ES	Route 7 Box 279A, South Charleston
Alum Creek VFD	Sand Plant Road, Alum Creek
Bridgeview ES	5100 Ohio Street, South Charleston
Clearon	South Charleston
Davis Creek VFD	South Charleston
Dow	South Charleston
FMC	South Charleston
Holz Dam	N/A
Jefferson VFD	313 MacCorkle Avenue, St. Albans
Loudendale VFD	Cane Fork, Loudendale
McKinley MS	3000 Kanawha Terrace, St. Albans
Montrose ES	631 Montrose Drive, South Charleston
Riverside Nursing & Rehab	6500 MacCorkle Avenue, St. Albans
Ruthlawn ES	Route 8 Box 428, South Charleston
South Charleston FD	Station 1 – 315 4th Avenue
South Charleston FD	Station 2 – 4911 McClung Street
South Charleston FD	Station 3 – 1112 Weberwood Drive
South Charleston FD	Station 4 – 1103 Jefferson Road
South Charleston HS	1 Eagle Way, South Charleston
South Charleston MS	400 3rd Avenue, South Charleston
Teroc Fishing Impoundment (Dam)	N/A
Thomas Memorial Hospital	4605 MacCorkle Avenue, South Charleston
Valley Center	1000 Lincoln Drive, South Charleston
Ward Pont (Dam)	N/A
WVSP Executive Offices	725 Jefferson Road, South Charleston

Table 6.D.3 **(AREA – Kanawha South, POPULATION – 25,654)** **Potential Shelters in Kanawha South**			
Facility	**Location**	**Capacity**	**Coordinator**
South Charleston HS	1 Eagle Way, Charleston	500	ARC
Alum Creek ES	Brounland Road, Charleston	100	ARC
Montrose ES	631 Montrose Drive, Charleston	200	ARC
Richmond ES	4620 Spring Hill Avenue, Charleston	100	ARC
Ruthlawn ES	Route 8 Box 428, Charleston	100	ARC
South Charleston MS	400 Third Avenue, Charleston	300	ARC

Figure 6.D.3



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

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WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha South Area

ADVISORY

Kanawha South Area to Points South

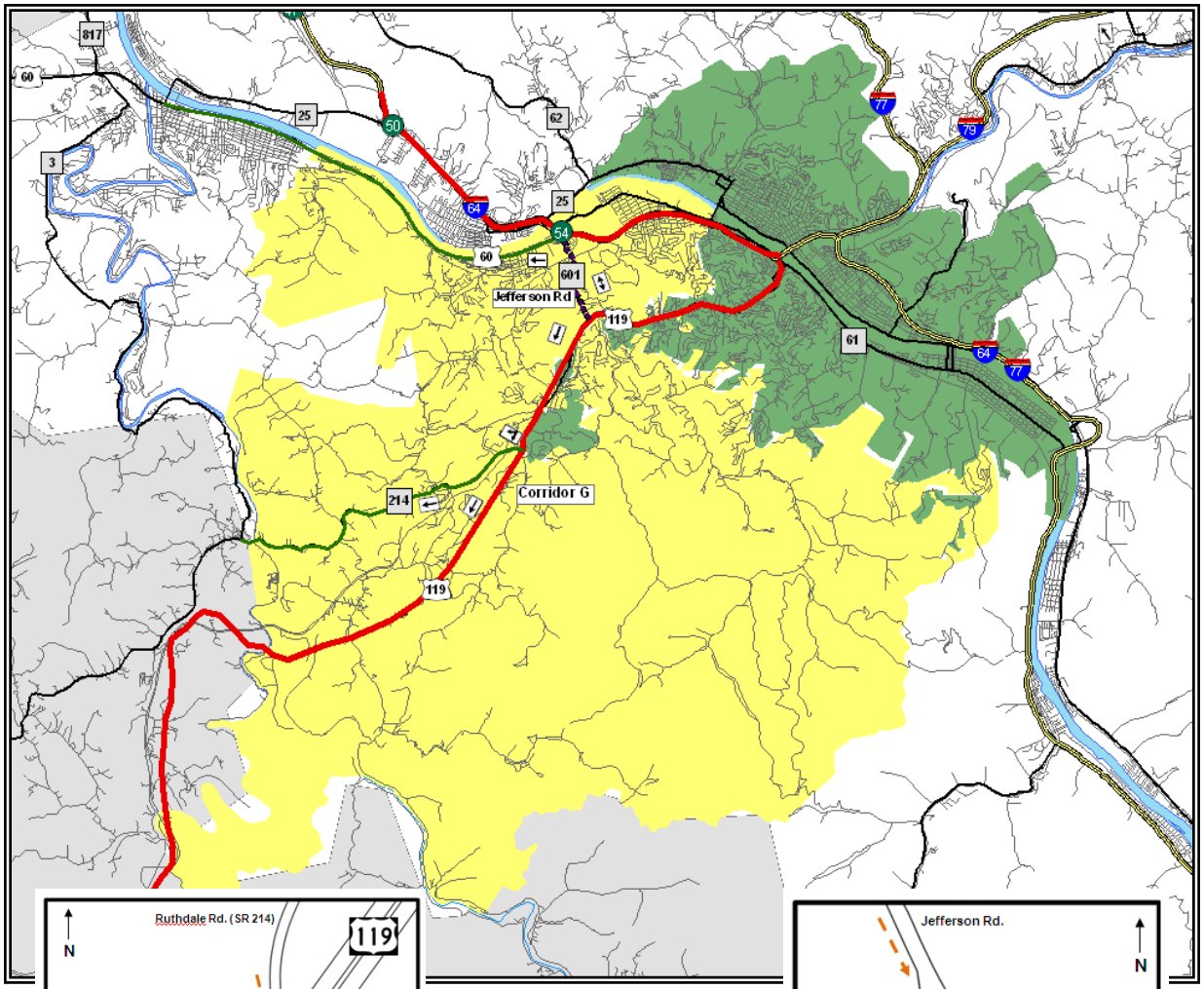
WHO... This plan will affect residents and motorists evacuating from the southern portions of Kanawha County, including S. Charleston, Alum Creek, Davis Creek, Jefferson, Loundendale, Ruth, and Smith Creek.

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

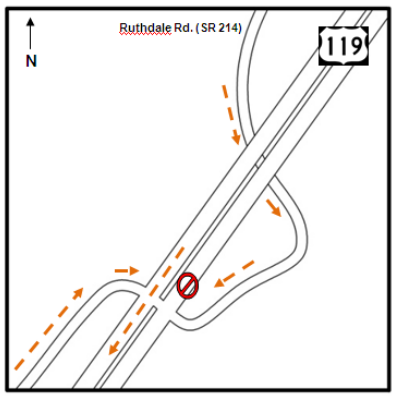
WHAT... If this plan is activated, the primary evacuation route from these areas is US 119 *SOUTH*. Some areas may be directed along US 119 toward Dunbar and St. Albans. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

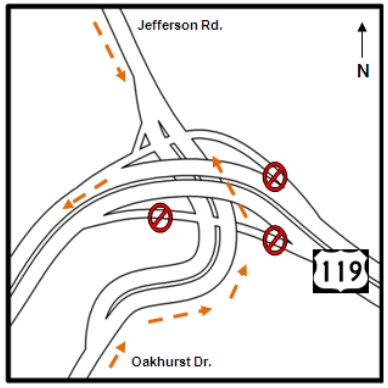
WHERE... Evacuating residents should access US 119 at Jefferson or Ruthdale Roads. If Corridor G is unavailable, residents will be directed to evacuate via Kanawha Turnpike and/or SR 214.



US 119/
Jefferson Rd.



US 119/
SR 214



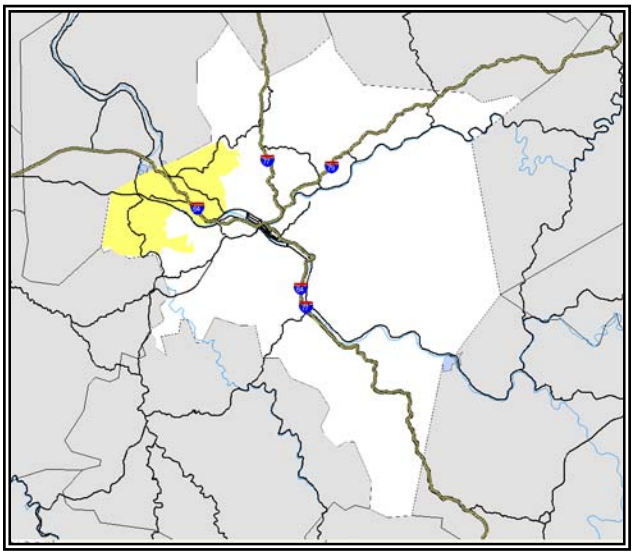
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA WEST

The Kanawha West Evacuation Area is comprised of the communities along I-64 and US 60 west of Charleston, and contains all or part of the following zip codes:

- 25064,
- 25112,
- 25143,
- 25177,
- 25202, and
- 25213.

It corresponds to the Dunbar, Jefferson, Lakewood, Nitro, St. Albans, Tornado, West Side, Tyler Mountain, and Institute fire department service areas. Figure 6.E.1 at right depicts the area on a map.

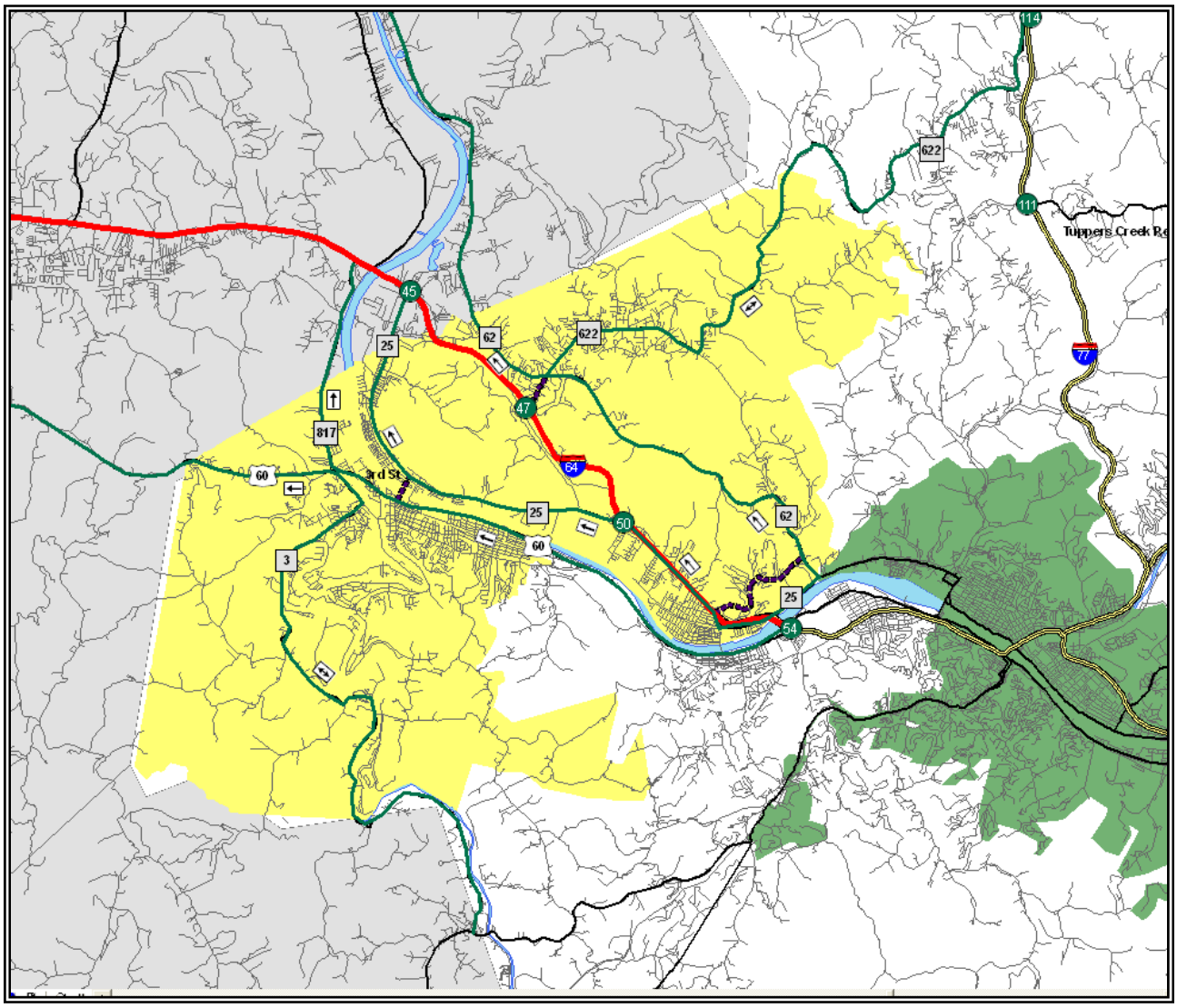
Figure 6.E.1



Kanawha West contains the cities of Dunbar, Nitro, and St. Albans as well as the communities of Cross Lanes, Green Valley, Institute, Jefferson, Lakewood, Little Tyler, and Tornado. The population is approximately 53,006, according to US Census Bureau estimates. For an emergency affecting all of Kanawha County, Kanawha West residents may be directed to evacuate westward toward the towns of Teays Valley, Hurricane, and Huntington. For an emergency affecting only the Kanawha West area, residents may be directed to shelter in Cabell, Putnam, or Wayne Counties as well as such communities as Milton, Barboursville, or Ashland, Kentucky. A brochure that can be distributed to residents in the Kanawha West Area is attached at the end of this profile.

The primary evacuation route from the Kanawha West area is Interstate 64. Evacuating populations can access I-64 at Exits 53, 50, 47, and 45. The primary feeder route for Exit 53 is 10th Street in Dunbar; Exit 50 is SR 25, Exit 47 is SR 622, and Exit 45 is SR 25. State Route 25 can also serve as a secondary evacuation route; US 60 has also been designated as a secondary evacuation route. Figure 6.E.2 below graphically depicts the evacuation and feeder routes.

Figure 6.E.2



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha West area. Table 6.E.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to

evacuate the entire area. Table 6.E.2 lists the critical facilities that are located in the area. Table 6.E.3 shows the potential shelters in the area as well as their capacities and the agencies that coordinate their operation. Figure 6.E.3 depicts a map of pick-up points in the Kanawha West area.

Table 6.E.1 **(AREA – Kanawha West, POPULATION – 53,006)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-64 W*	P	70 mph	Rolling	4099	4.3 hours**
US 60*	S	45 mph	Rolling	3269	5.4 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

Table 6.E.2 **(AREA – Kanawha West, POPULATION – 53,006)**
Critical Facilities in Kanawha West

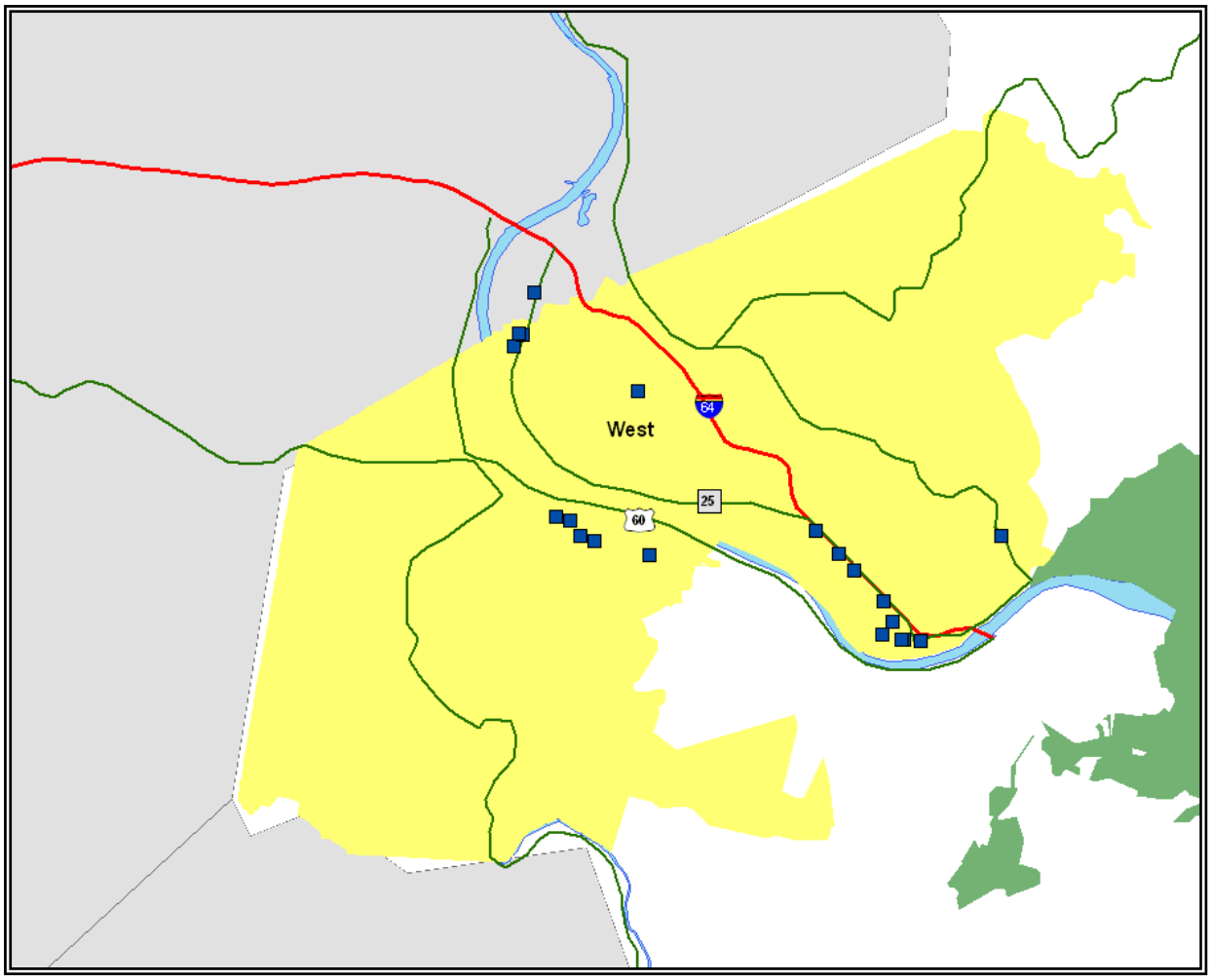
Facility	Location
Alban ES	2030 Harrison Avenue, St. Albans
Anderson Dam	N/A
Andrew Jackson MS	5445 Big Tyler Road, Cross Lanes
Andrews Heights ES	Coal River Road, Tornado
Anne Bailey ES	405 Winfield Road, St. Albans
Bayer	Fairlawn Avenue, Institute
Ben Franklin Vocational Center	500 28th Street, Dunbar
Blake Creek Site #7 (Dam)	N/A
Central ES	900 Helene Street, St. Albans
Cross Lanes Christian School	5330 Floradale Drive, Cross Lanes
Cross Lanes ES	5525 Big Tyler Road, Cross Lanes
Cunningham Fly Ash Pond (Dam)	N/A
Dunbar FD	Station 1 – 901 Dunbar Avenue, Dunbar
Dunbar FD	Station 2 – Roxallana Road
Dunbar Intermediate School	Dunbar
Dunbar MS	325 27th Street, Dunbar
Dunbar Primary School	2401 Myers Avenue, Dunbar
Finney Branch Embankment (Dam)	N/A
George C. Weimer ES	3040 Kanawha Terrace, St. Albans
Hayes MS	830 Strawberry Road, St. Albans
Institute VFD	301 Dubois Street, Dunbar
Lake Chaweva Dam	N/A
Lakewood ES	2089 Lakewood Drive, St. Albans
Lakewood VFD	2627 Shadyside Road, St. Albans
Nitro ES	1921 19th Street, Nitro
Nitro FD	Nitro

Facility	Location
Nitro HS	1300 Park Avenue, Nitro
Poffenbarger Dam #1	N/A
Poffenbarger Dam #2	N/A
Poffenbarger Farm Lake #3 (Dam)	N/A
Pt. Harmony ES	5312 Big Tyler Road, Cross Lanes
Richmond ES	4620 Spring Hill Avenue, Charleston
Shawnee Community Center	142 Marshall Avenue, Dunbar
St. Albans FD	Station 1 - Main Streets and Walnut Street, St. Albans
St. Albans FD	Station 2 - St. Albans
St. Albans HS	2100 Kanawha Terrace, St. Albans
St. Francis of Assisi School	525 Holley Street, St. Albans
Sunbridge Care & Rehab	501 Caldwell Lane, Dunbar
Tornado VFD	Coal River Road, Tornado
Tyler MS	4277 Washington Street, West, Charleston
Tyler Mountain VFD	5380 Big Tyler Road, Cross Lanes
West Side VFD	300 West Main Street, St. Albans
WVSP Academy	135 Academy Drive, Dunbar
WVSP Troop 4 Headquarters	143 Academy Drive, Dunbar

***Table 6.E.3* (AREA – Kanawha West, POPULATION – 53,006)**
Potential Shelters in Kanawha West

Shelter	Location	Capacity	Coordinator
McKinley MS	3000 Kanawha Terrace, St. Albans	250	ARC
Nitro ES	1921 19th Street, Nitro	200	ARC
Hayes MS	830 Strawberry Road, St. Albans	150	ARC
Alban ES	2030 Harrison Avenue. St. Albans	100	ARC
Andrew Jackson MS	5445 Big Tyler Road, Charleston	150	ARC
Central ES	900 Helene Street, St. Albans	100	ARC
Cross Lanes ES	5525 Big Tyler Road, Charleston	100	ARC
Dunbar MS	325 27th Street, Dunbar	250	ARC
Dunbar Primary School	2401 Myers Avenue, Dunbar	100	ARC
George C. Weimer ES	3040 Kanawha Terrace, St. Albans	80	ARC
Dunbar Intermediate School	1400 Myers Avenue, Dunbar	250	ARC
Tyler MS	277 W. Washington St., Charleston	250	ARC
Lakewood ES	2089 Lakewood Drive, St. Albans	100	ARC
Nitro HS	1300 Park Avenue, Nitro	500	ARC
Point Harmony ES	5312 Big Tyler Road, Charleston	150	ARC
St. Albans HS	2100 Kanawha Terrace, St. Albans	600	ARC
Shawnee Community Center	142 Marshall Avenue, Dunbar	100	ARC

Figure 6.E.3



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non -electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

Emergency Alert System/NOAA All-Hazard Radio:
Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha West Area

ADVISORY

Kanawha West Area to Points West

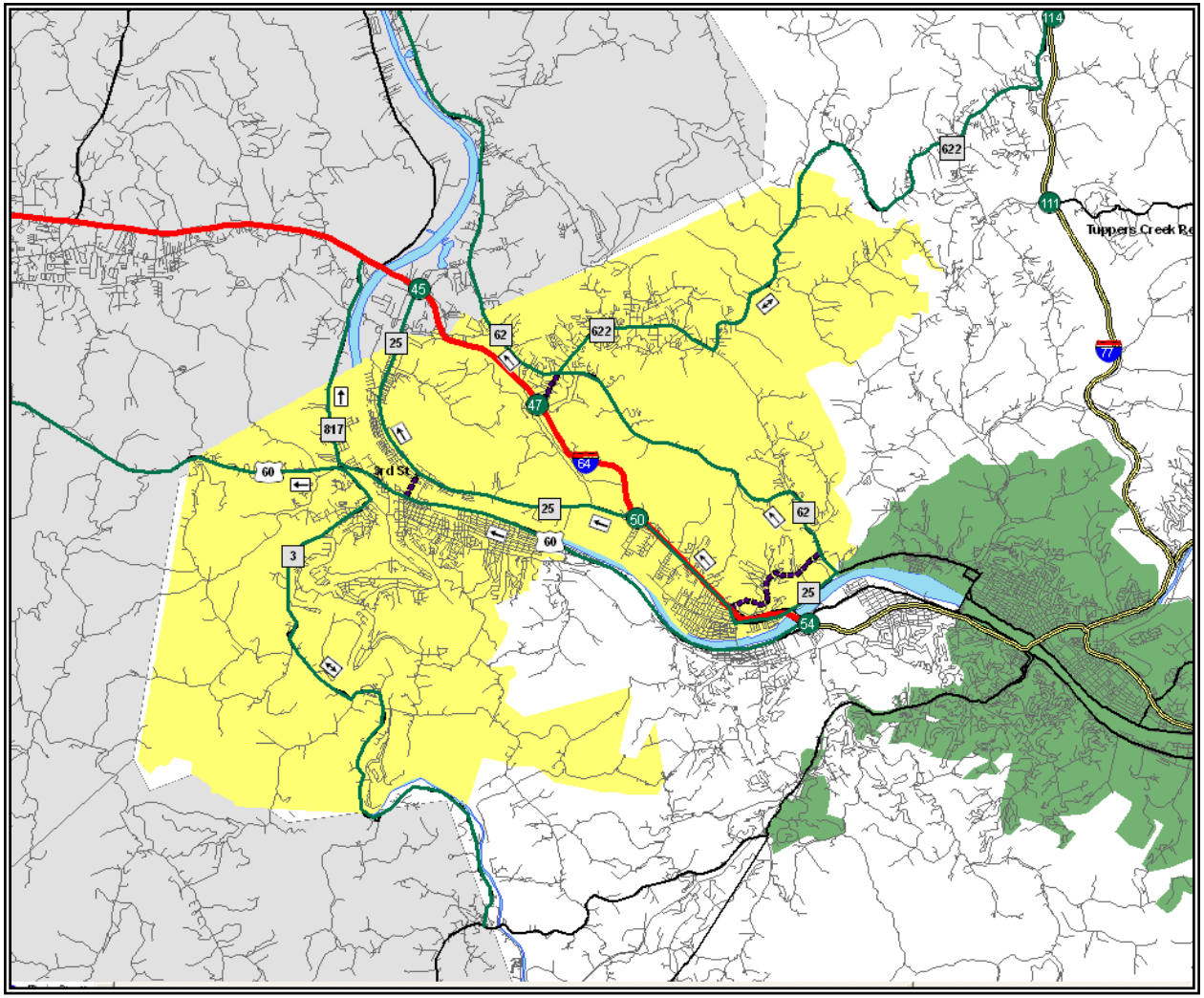
WHO... This plan will affect residents and motorists evacuating from the western portions of Kanawha County (including Dunbar, Nitro, and St. Albans as well as Cross Lanes, Green Valley, Institute, Jefferson, Lakewood, Little Tyler, and Tornado).

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

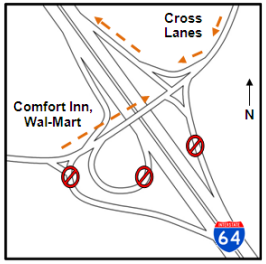
WHAT... If this plan is activated, the primary evacuation route from these areas is I-64 *WEST*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

WHERE... Evacuating residents should access I-64 at Exits 53, 50, 47, and 45. If I-64 is unavailable, residents will be directed to evacuate westward along US 60 or State Route 25.



Exit 45



Exit 47

Exit 50

Exit 53

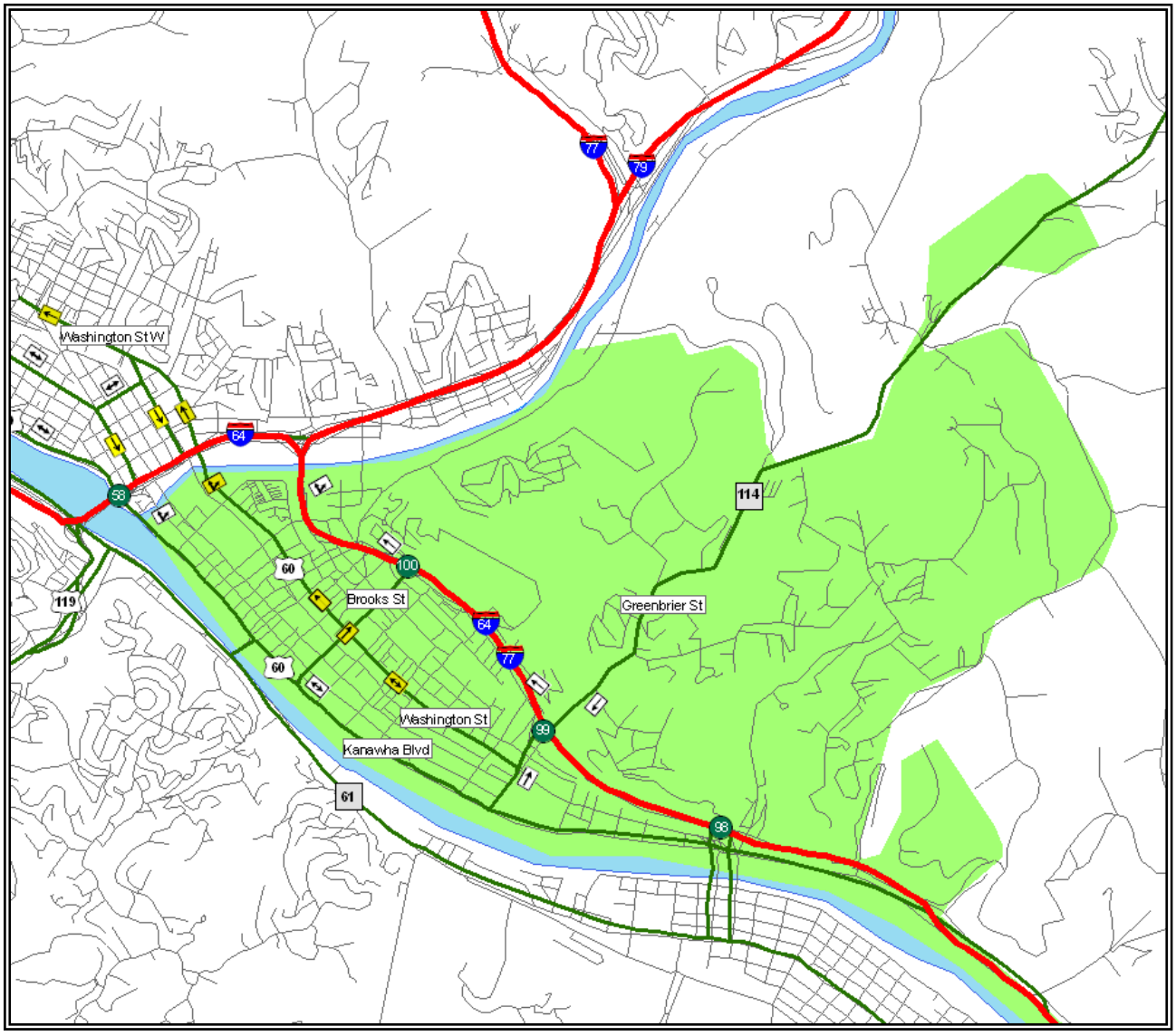
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – EAST END (CHARLESTON)

The East End Evacuation Area is comprised of the "East End" of Charleston, which covers an area roughly equal to the incorporated limits of Charleston north of the Kanawha River and east of the Elk River.

The population is approximately 13,486, according to US Census Bureau estimates. For an emergency affecting all of the City of Charleston and/or Kanawha County, East End residents may be directed to evacuate eastward toward the towns of Marmet and Chesapeake (some residents may be directed to evacuate north on Greenbrier Street [SR 114]). For an emergency affecting only the East End area, residents may be directed to shelter in other portions of Charleston as well as such communities as Marmet and Malden. A brochure that can be distributed to residents in the East End area is attached at the end of this profile.

The primary evacuation route from the East End area is Interstate 64/77. Evacuating populations can access I-64/77 at Exits 99 (Greenbrier Street) and 100 (Leon Sullivan Way). US 60 (Kanawha Boulevard), both east and west, can also serve as a secondary evacuation route. Figure 6.F.1 below graphically depicts the evacuation and feeder routes.

Figure 6.F.1



The following tables present other useful data that can be used when evacuating populations within and/or from the East End area. Table 6.F.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.F.2 lists the critical facilities that are located in the area and Table 6.F.3 lists the shelters. Figure 6.F.2 depicts the pick-up points in the East End area.

Table 6.F.1 **(AREA – East End Charleston, POPULATION – 13,486)** **Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area**					
Route	**P/S**	**Base Speed**	**Terrain**	**Capacity/Hr.**	**Estimated Time**
I-64/77*	P	65 mph	Rolling	4169	1.1 hours**
US 60* (Kan. Blvd.)	S	35 mph	Urban	2752	1.6 hours**

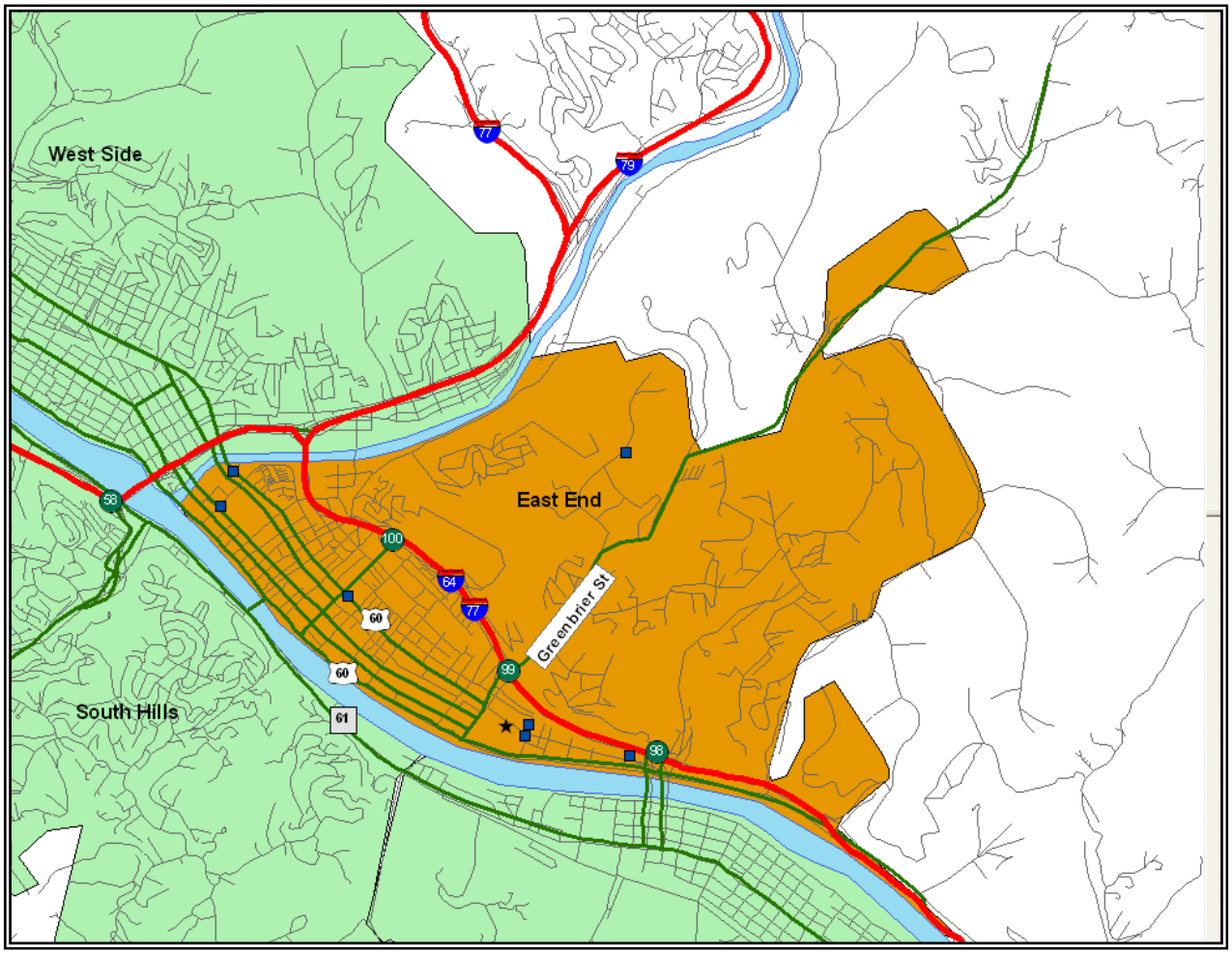
** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

Table 6.F.2 **(AREA – East End Charleston, POPULATION – 13,486)** **Critical Facilities in Charleston's East End**	
Facility	**Location**
Appalachian Power Park	601 Morris Street, Charleston
CAMC General Hospital	501 Morris Street, Charleston
Capital HS	1500 Greenbrier Street, Charleston
Carroll Terrace	1546 Kanawha Boulevard, East, Charleston
Charleston Catholic HS	1033 Virginia Street, East, Charleston
Charleston City Hall	501 Virginia Street, East, Charleston
Charleston Civic Center	200 Civic Center Drive, Charleston
Charleston FD Station 1	300 Morris Street, Charleston
Charleston FD Station 4	1810 Oak Ridge Road, Charleston
Charleston Municipal Auditorium	Virginia Street, East, Charleston
Clay Center for the Arts & Sciences	1 Clay Square, Charleston
Columbia St. Francis Hospital	333 Laidley Street, Charleston
Kanawha County Courthouse Complex	409 Virginia Street, East, Charleston
Lee Terrace	1319 Lee Street, Charleston
Oak Ridge Center	1000 Association Drive, Charleston
Piedmont Year-Round Education Center	203 Bradford Street, Charleston
Robert C. Byrd Federal Building	Virginia Street, Charleston
St. Francis Hospital	333 Laidley Street, Charleston
Town Center Mall	3000 Charleston Town Center (Lee, Quarrier Streets), Charleston
W. Kent Carper Justice and Public Safety Complex	Virginia Street, Charleston
WVAWC Water Plant	North Rand Street, Charleston
WV State Capitol Complex	Kanawha Boulevard, Charleston

Table 6.F.3 **(AREA – East End Charleston, POPULATION – 13,486)** **Potential Shelters in Charleston's East End**			
Facility	**Location**	**Capacity**	**Coordinator**
Capital HS	1500 Greenbrier Street, Charleston	600	ARC
Charleston Civic Center	200 Civic Center Drive, Charleston	5,000	Local

Facility	Location	Capacity	Coordinator
Martin Luther King Community Center	500 Donnelly Street, Charleston	100	Local
Roosevelt Com. Center	502 Ruffner Avenue, Charleston	100	Local
Ruffner ES	809 Litz Drive, Charleston	100	ARC

Figure 6.F.2



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

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Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—East End Charleston

ADVISORY

East End Charleston to Points North

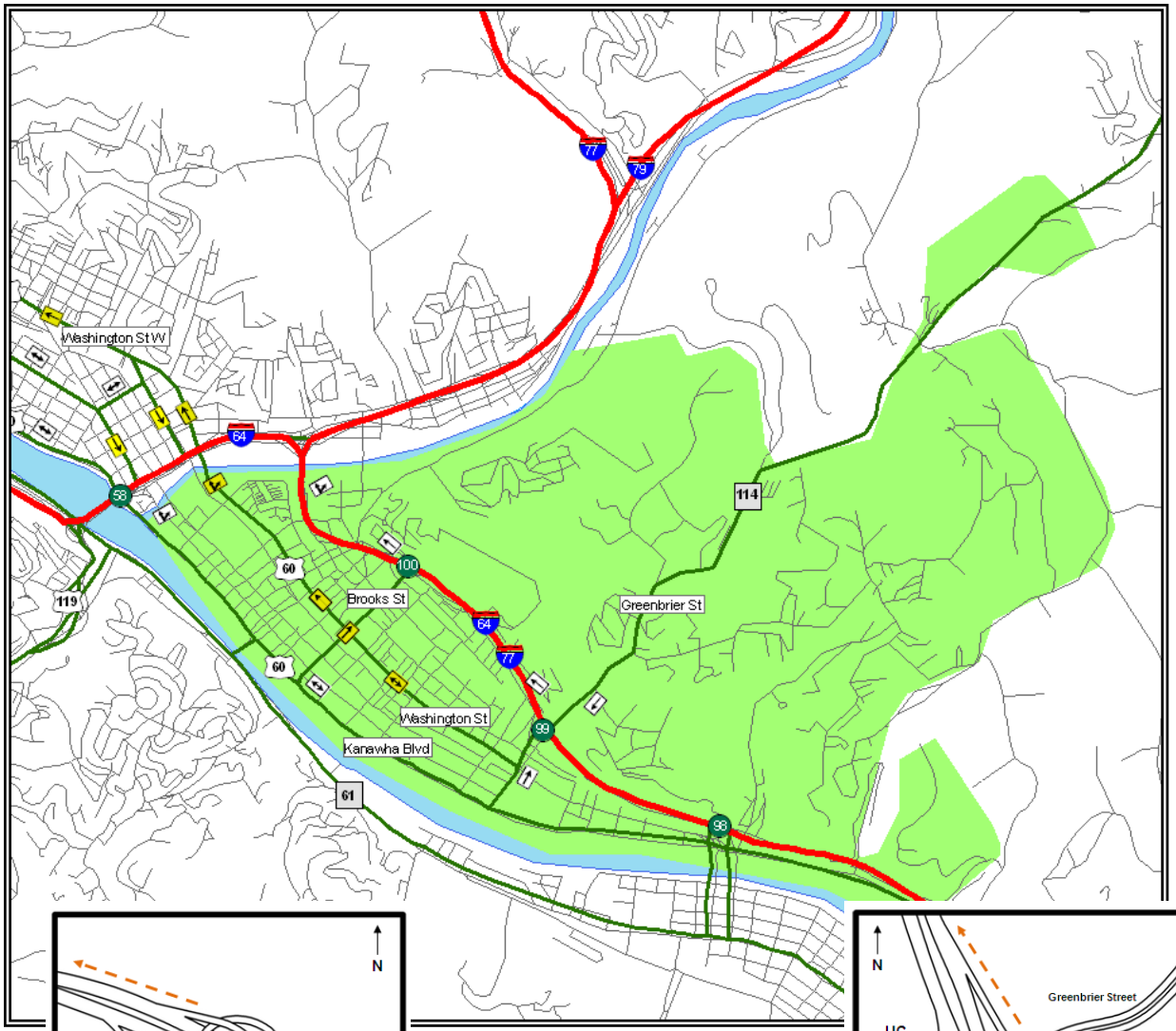
WHO... This plan will affect residents and motorists evacuating from the East End portions of the City of Charleston.

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is I-77 *NORTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

WHERE... Evacuating residents should access I-77 at Exits 99 and 100. If I-77 is unavailable, residents will be directed to evacuate via SR 114 (Greenbrier St.) north or US 60 (Kanawha Blvd.) east.



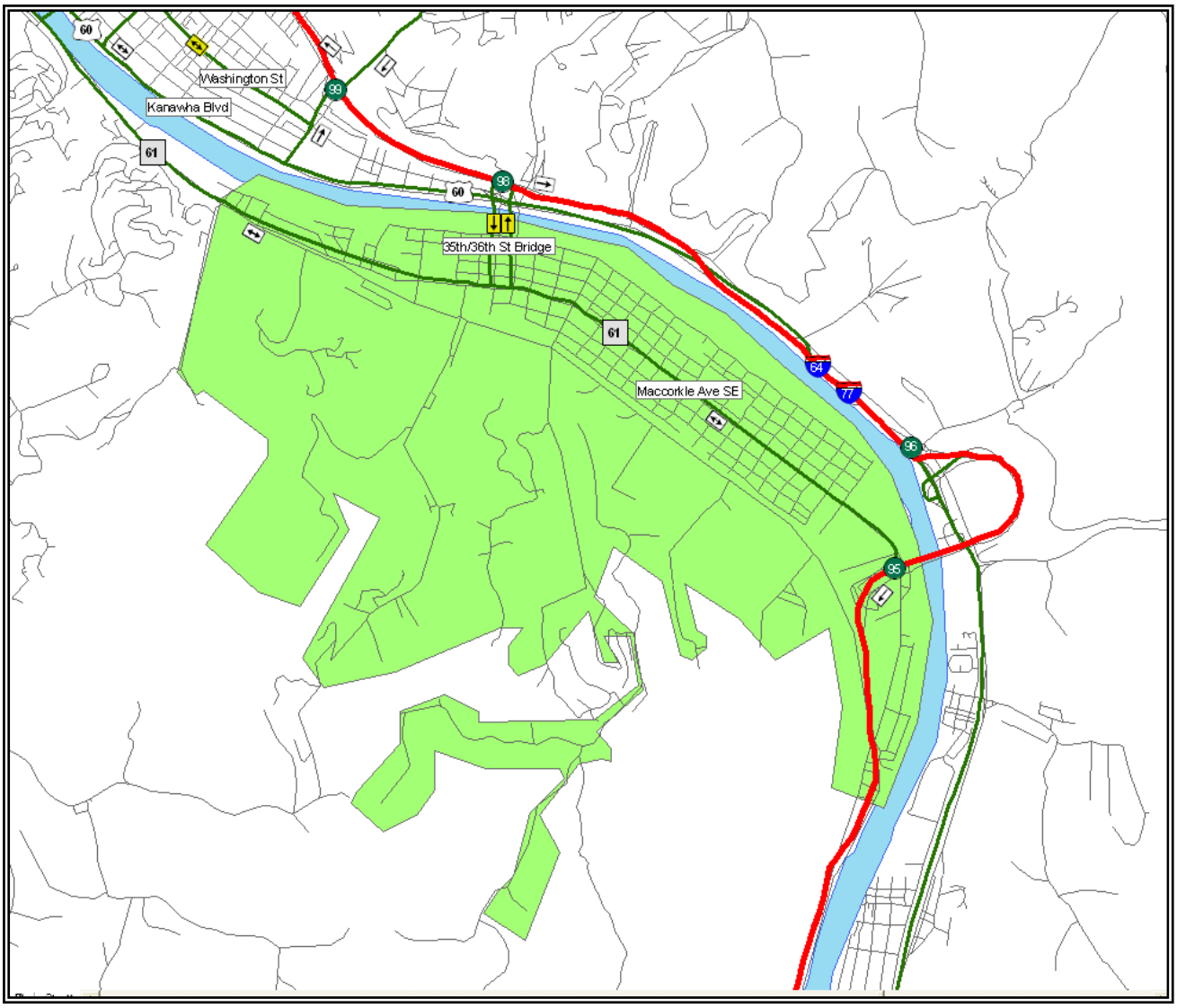
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – KANAWHA CITY (CHARLESTON)

The Kanawha City Evacuation Area is comprised of the "Kanawha City" area of the City of Charleston, which covers an area roughly equal to the incorporate limits of Charleston south of the Kanawha River and east of South Ruffner Road.

The population is approximately 12,559, according to US Census Bureau estimates. For an emergency affecting all of the City of Charleston and/or Kanawha County, Kanawha City residents may be directed to evacuate eastward toward the towns of Marmet and Chesapeake. For an emergency affecting only the Kanawha City area, residents may be directed to shelter in either other portions of Charleston as well as such communities as South Charleston and St. Albans. A brochure that can be distributed to residents in the Kanawha City area is attached at the end of this profile.

The primary evacuation route from the Kanawha City area is Interstate 64/77. Evacuating populations can access I-64/77 at Exits 95 and 98. SR 61 (MacCorkle Avenue) can also serve as a secondary evacuation route (traffic may be directed to evacuation westward on the secondary route). Figure 6.G.1 below graphically depicts the evacuation and feeder routes.

Figure 6.G.1



The following tables present other useful data that can be used when evacuating populations within and/or from the Kanawha City area. Table 6.G.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.G.2 lists the critical facilities that are located in the area and Table 6.G.3 lists the potential shelters. Figure 6.G.2 depicts the pick-up points in the Kanawha City area.

Table 6.G.1 **(AREA – Kanawha City Charleston, POPULATION – 12,559)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-64/77*	P	65 mph	Rolling	4169	1.0 hours**
SR 61* (MacCorkle Ave.)	S	35 mph	Urban	2752	1.5 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

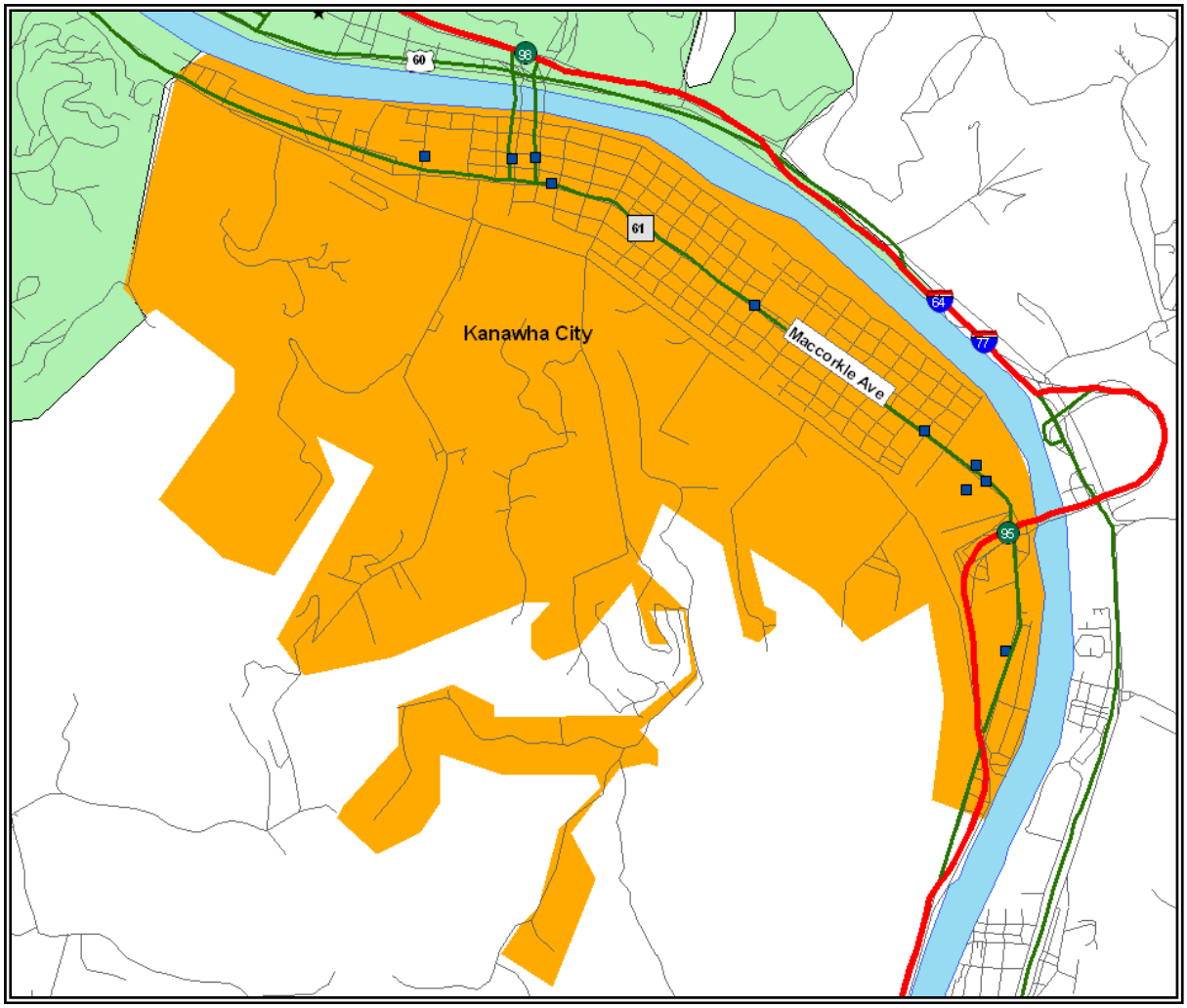
Table 6.G.2 **(AREA – Kanawha City Charleston, POPULATION – 12,559)**
Critical Facilities in Charleston's Kanawha City

Facility	Location
CAMC Memorial Hospital	3200 MacCorkle Avenue, SE, Charleston
Chamberlain ES	4901 Venable Avenue, Charleston
Charleston FD Station 6	5008 MacCorkle Avenue, SE, Charleston
Heartland of Charleston	3819 Chesterfield Avenue, Charleston
Horace Mann MS	4300 MacCorkle Avenue, SE, Charleston
Kanawha City ES	3601 Staunton Avenue, Charleston
Kanawha City Mall	MacCorkle Avenue, SE, Charleston
Mountaineer Montessori School	308 20th Street, SE, Charleston
St. Agnes School	4801 Staunton Avenue, SE, Charleston
University of Charleston	4400 Block, MacCorkle Avenue, SE, Charleston

Table 6.G.3 **(AREA – Kanawha City Charleston, POPULATION – 12,559)**
Potential Shelters in Charleston's Kanawha City

Facility	Location	Capacity	Coordinator
Horace Mann MS	4300 MacCorkle Avenue, SE, Charleston	250	ARC
Chamberlain ES	4901 Venable Avenue, SE, Charleston	100	ARC
Kanawha City ES	3601 Staunton Avenue, SE, Charleston	100	ARC
Kanawha City Comm. Center	3511 Venable Avenue, Charleston	500	ARC

Figure 6.G.2



Important

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The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non -electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

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Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—Kanawha City Charleston

ADVISORY

Kanawha City Charleston to Points East

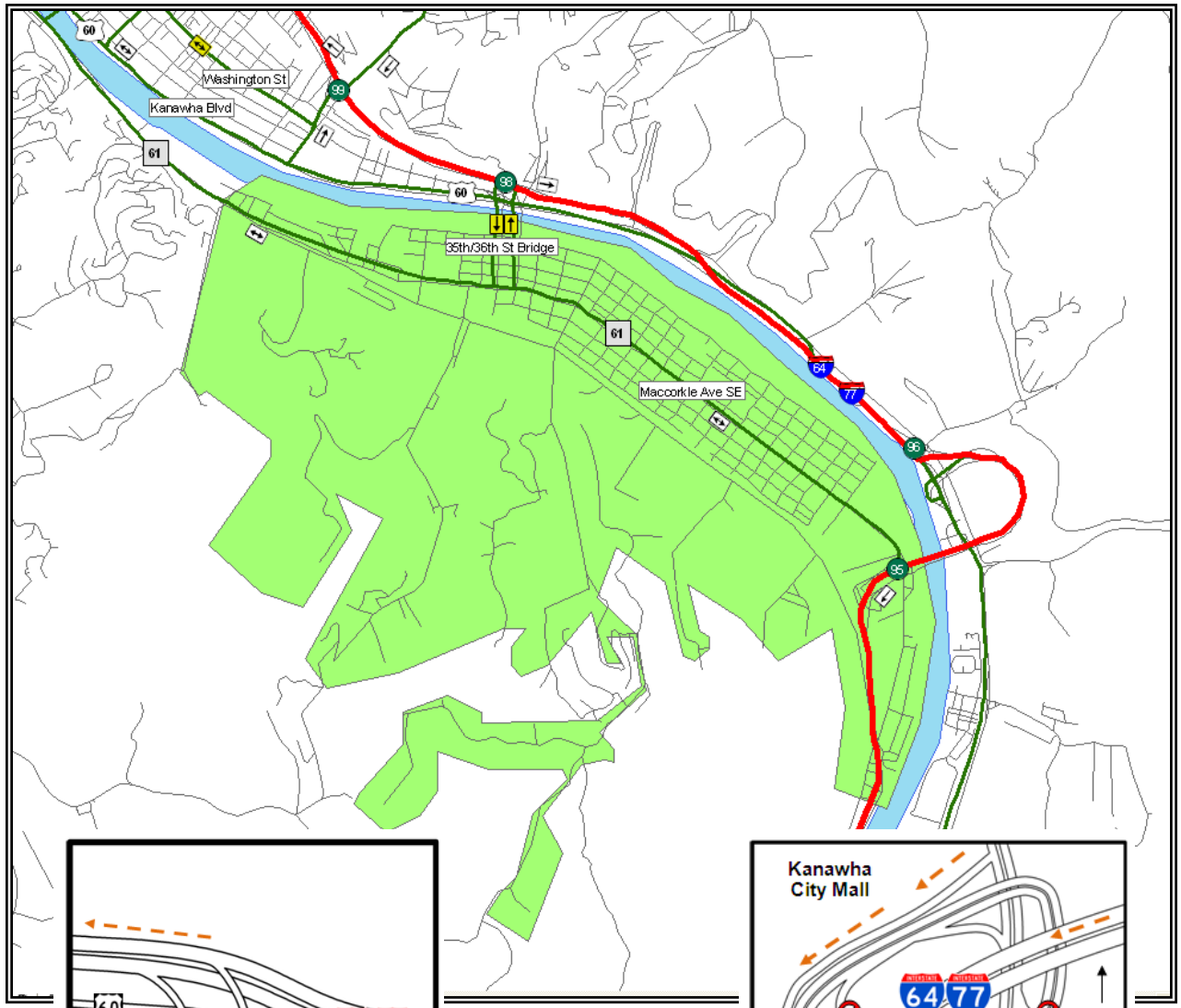
WHO... This plan will affect residents and motorists evacuating from the Kanawha City portions of the City of Charleston.

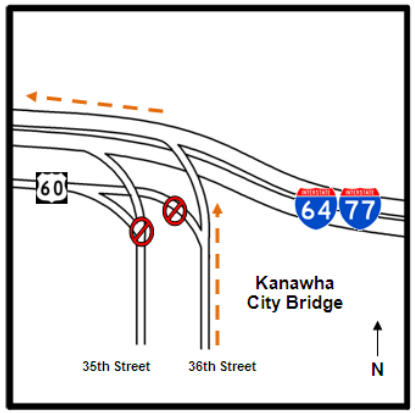
WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is I-64/77 *EAST*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

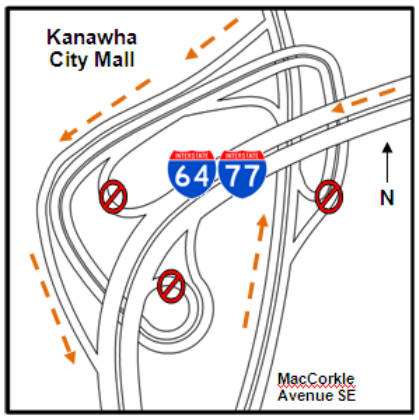
WHERE... Evacuating residents should access I-64/77 at Exits 95 and 98. If I-64/77 is unavailable, residents will be directed to evacuate westward via SR 61 (MacCorkle Avenue).





Exit 98

Exit 95



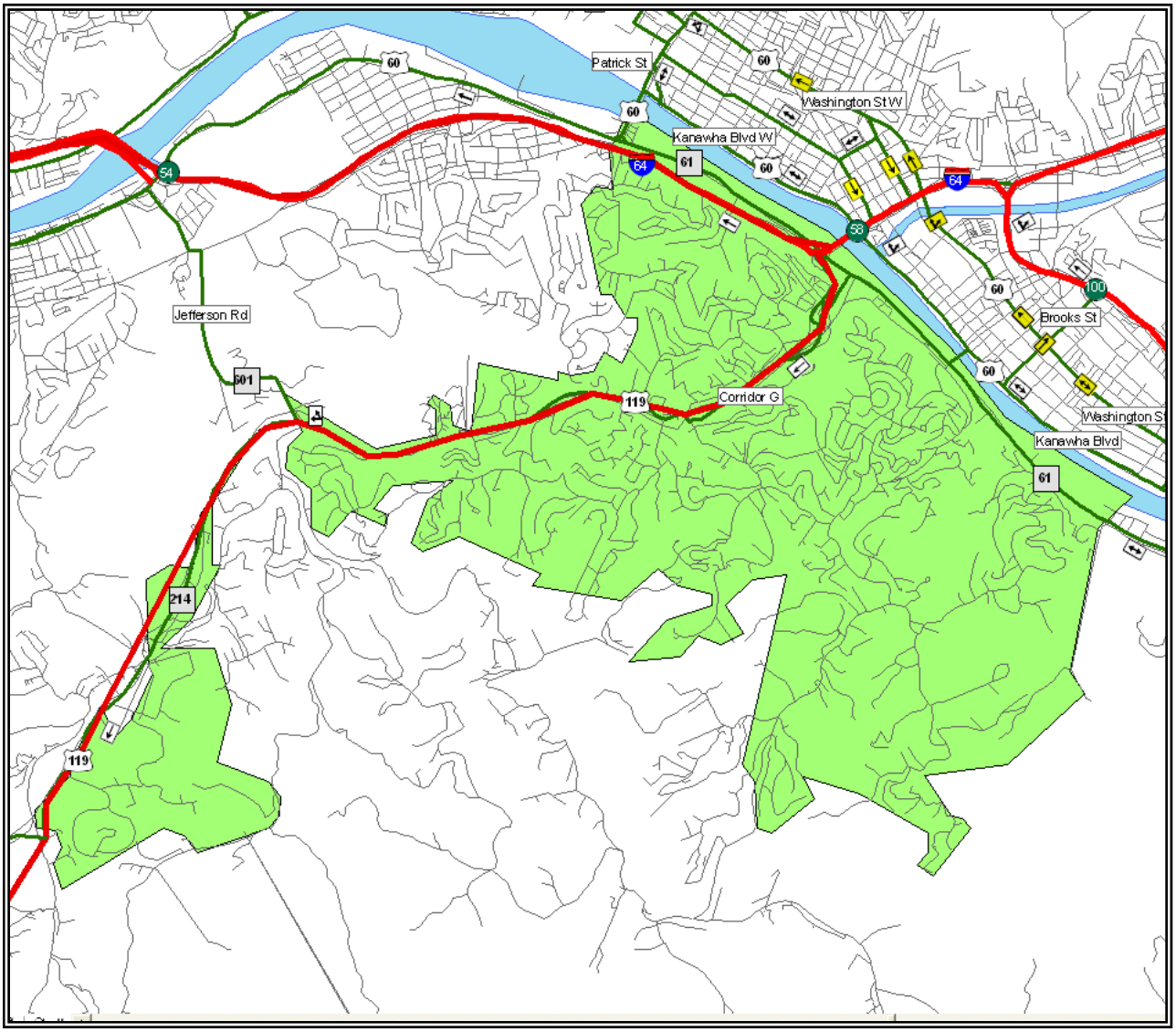
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – SOUTH HILLS (CHARLESTON)

The South Hills Evacuation Area is comprised of the "South Hills" area of the City of Charleston, which covers an area roughly equal to the corporate limits of Charleston south of the Kanawha River and west of South Ruffner Road.

The population is approximately 14,305, according to US Census Bureau estimates. For an emergency affecting all of the City of Charleston and/or Kanawha County, South Hills residents may be directed to evacuate south toward the towns of Madison and Danville. For an emergency affecting only the South Hills area, residents may be directed to shelter in either other portions of Charleston as well as such communities southern Kanawha County and northern Boone County. A brochure that can be distributed to residents in the South Hills area is attached at the end of this profile.

The primary evacuation route from the South Hills area is US 119 (Corridor G). Evacuating populations can access US 119 at Jefferson, Oakwood, and Ruthdale Roads. SR 214 (Ruthdale Road) and MacCorkle Avenue can also serve as secondary or alternate evacuation routes. In fact, much of the South Hills area may be able to evacuate more efficiently via MacCorkle Avenue. Figure 6.H.1 below graphically depicts the evacuation and feeder routes.

Figure 6.H.1



The following tables present other useful data that can be used when evacuating populations within and/or from the South Hills area. Table 6.H.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.H.2 lists the critical facilities that are located in the area and Table 6.H.2 lists the potential shelters. Figure 6.H.2 depicts the pick-up points in the South Hills area.

Table 6.H.1 **(AREA – South Hill Charleston, POPULATION – 14,305)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
US 119*	P	65 mph	Rolling	3927	1.2 hours**
SR 61* (MacCorkle Ave.)	S	35 mph	Urban	2752	1.7 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

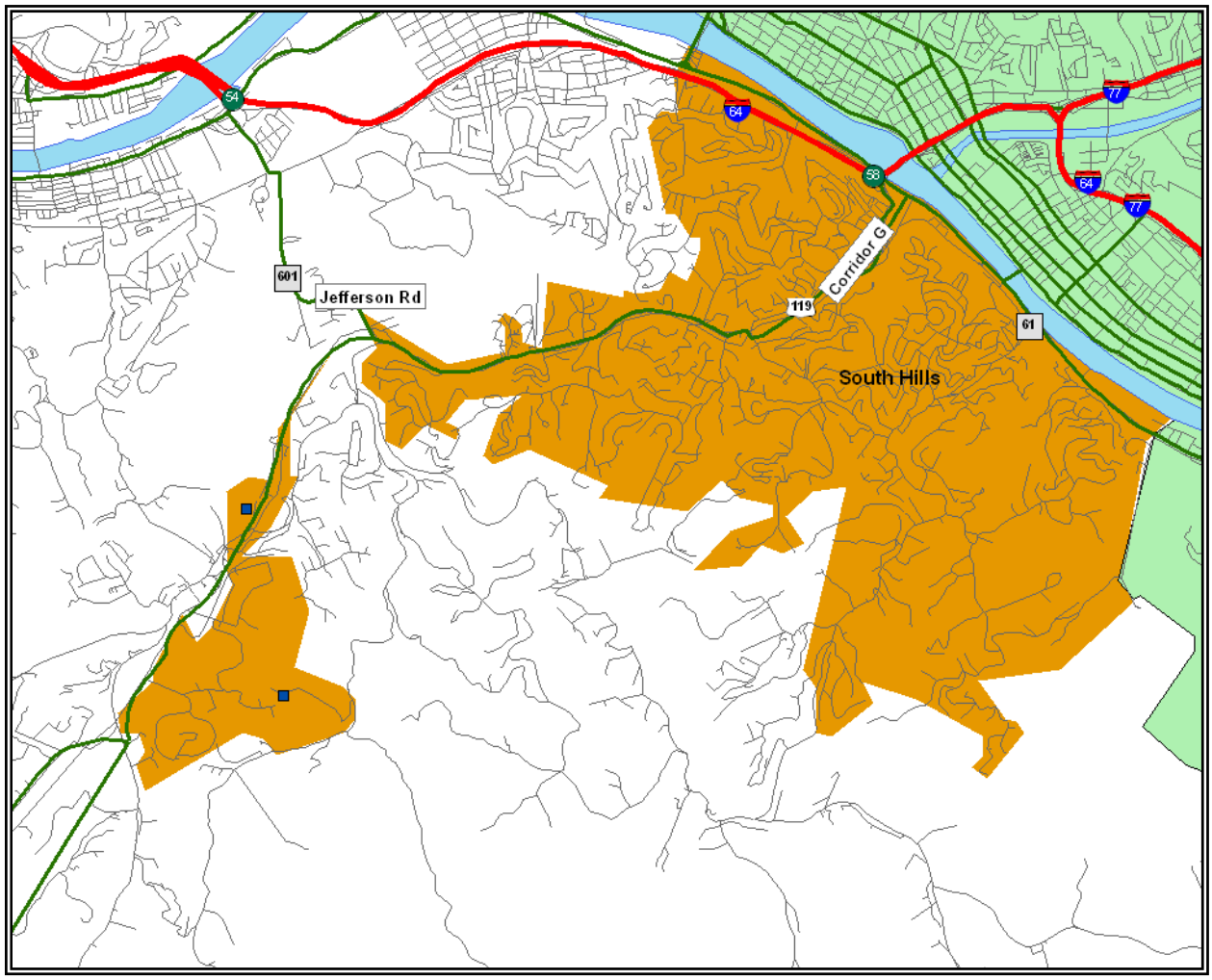
Table 6.H.2 **(AREA – South Hill Charleston, POPULATION – 14,305)**
Critical Facilities in Charleston's South Hills

Facility	Location
Bible Center School	1111 Oakhurst Drive, Charleston
Bulk Plant	MacCorkle Avenue, SE, Charleston
Charleston FD Station 3	822 Oakwood Road, Charleston
Charleston FD Station 5	918 Bridge Road, Charleston
George Washington HS	1522 Tennis Club Road, Charleston
Holz ES	1505 Hampton Road, Charleston
John Adams MS	2002 Presidential Drive, Charleston
Kenna ES	198 Eureka Road, Charleston
Metro 911 Center	200 Peyton Way, Charleston
Overbrook ES	218 Oakwood Road, Charleston
Weberwood ES	732 Gordon Drive, Charleston

Table 6.H.2 **(AREA – South Hill Charleston, POPULATION – 14,305)**
Potential Shelters in Charleston's South Hills

Facility	Location	Capacity	Coordinator
George Washington HS	1522 Tennis Club Road, Charleston	400	ARC
Holz ES	1505 Hampton Road, Charleston	200	ARC
John Adams MS	2002 Presidential Drive, Charleston	300	ARC
Kenna ES	198 Eureka Road, Charleston	100	ARC
Overbrook ES	218 Overbrook Road, Charleston	100	ARC
Weberwood ES	732 Gordon Road, Charleston	100	ARC

Figure 6.H.2



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non-electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

Emergency Alert System/NOAA All-Hazard Radio:
Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—South Hills Charleston

ADVISORY

South Hills Charleston to Points South

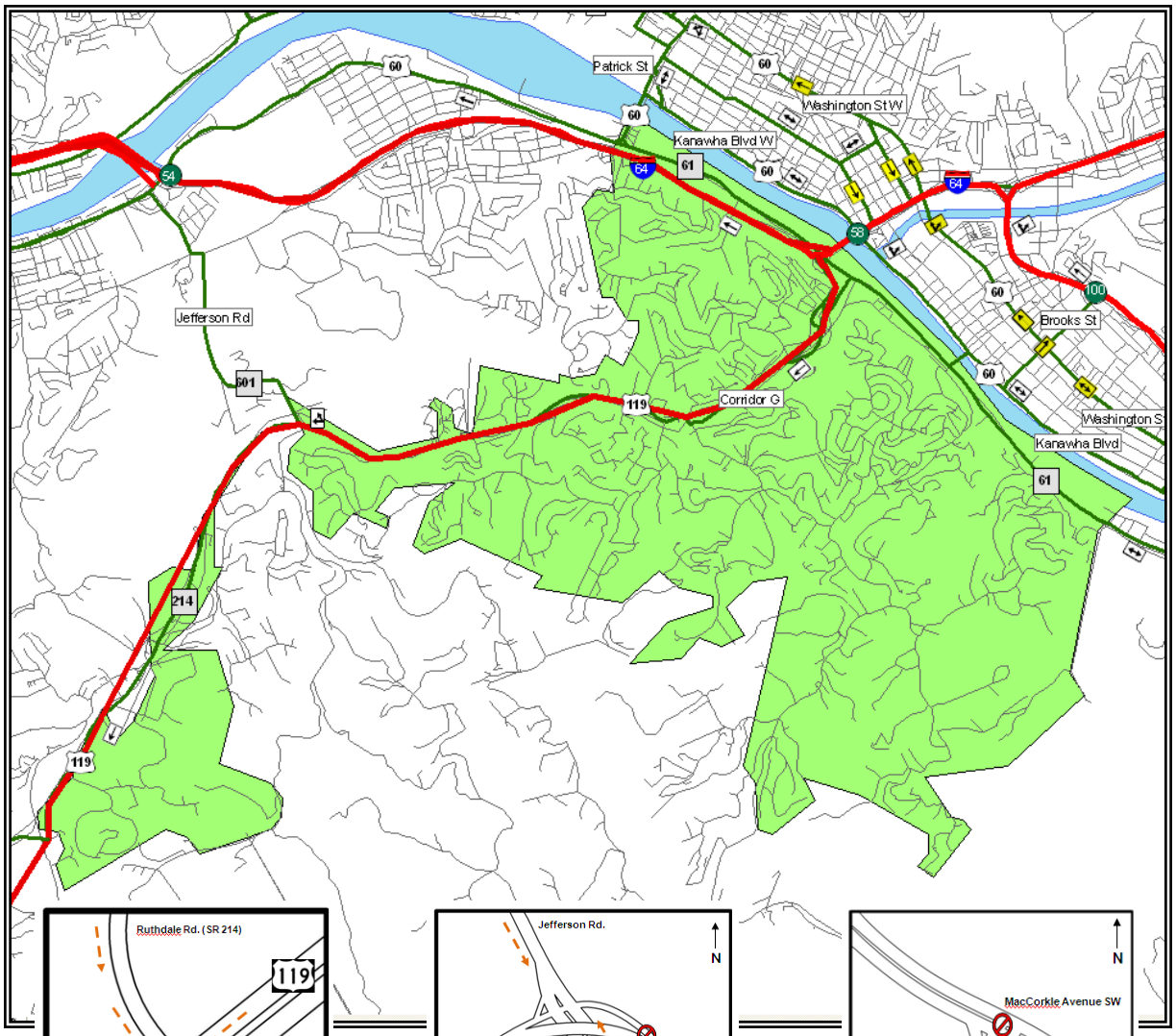
WHO... This plan will affect residents and motorists evacuating from the South Hills portions of the City of Charleston.

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is US 119 *SOUTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

WHERE... Evacuating residents should access US 119 at Jefferson and Ruthdale Roads. If US 119 is unavailable, residents will be directed to evacuate south on SR 214.



US 119/Ruthdale Rd. US 119/Jefferson Rd. MacCorkle Ave. SW

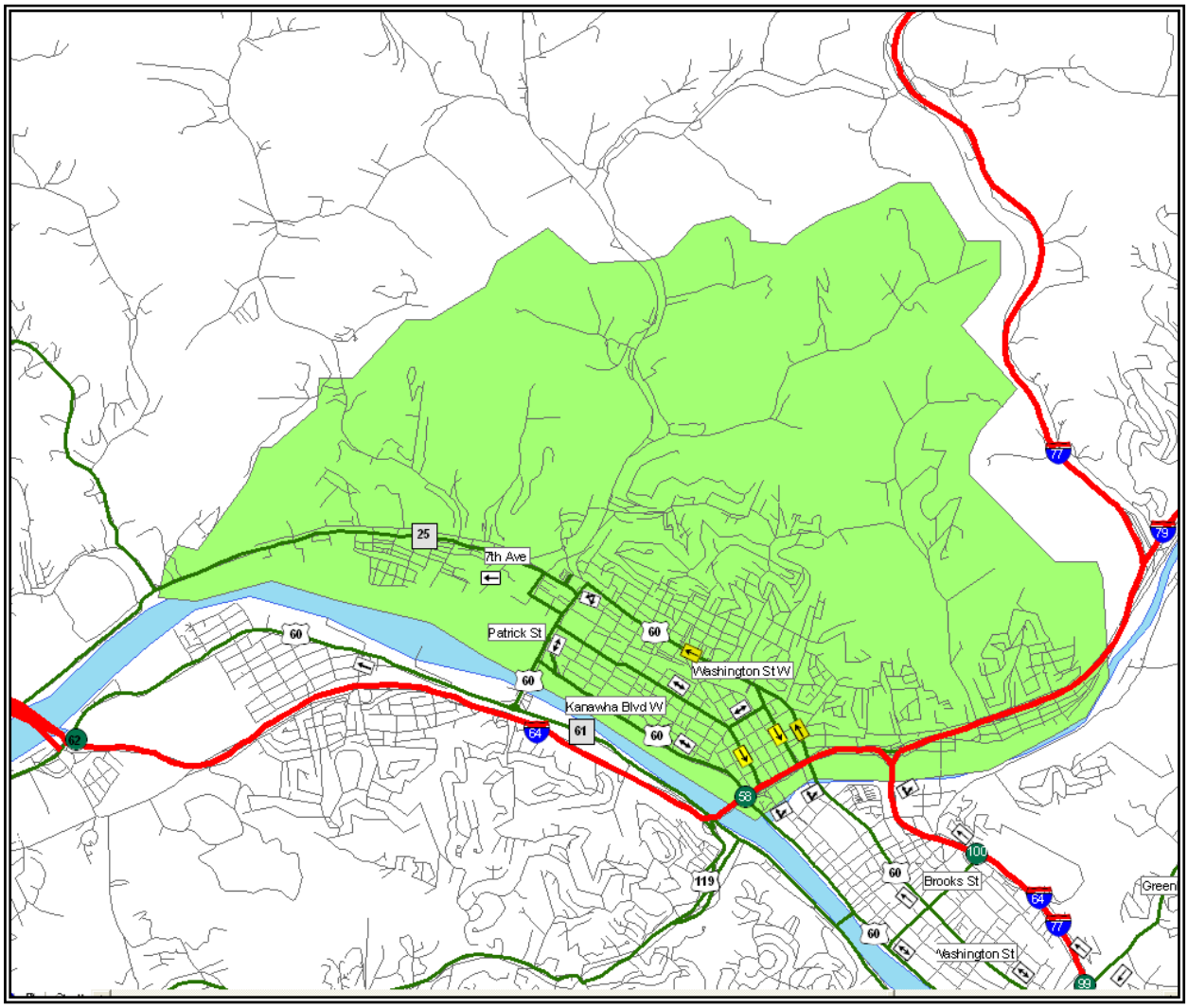
KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
PROFILE – WEST SIDE (CHARLESTON)

The West Side Evacuation Area is comprised of the "West Side" area of the City of Charleston, which covers roughly an area equal to the corporate limits of Charleston north of the Kanawha River and west of the Elk River.

The population is approximately 13,071, according to US Census Bureau estimates. For an emergency affecting all of the City of Charleston and/or Kanawha County, West Side residents may be directed to evacuate north toward the communities of Elkview and Sissonville. For an emergency affecting only the West Side area, residents may be directed to shelter in either other portions of Charleston or such communities as Sissonville. A brochure that can be distributed to residents in the West Side area is attached at the end of this profile.

The primary evacuation route from the West Side area is Interstate 77. Evacuating populations can access I-77 at Exits 58 and 59. US 60 (West Washington Street), SR 25 (7th Avenue), and CR 21 (Sissonville Drive) can also serve as secondary evacuation routes. (*NOTE: Evacuating populations may be directed to utilize the secondary route westward.) Figure 6.I.1 below graphically depicts the evacuation and feeder routes.

Figure 6.I.1


25
7th Ave
Patrick St
60
Washington St W
Kanawha Blvd W
61
64
77
79
58
119
100
Brooks St
Washington St
99

The following tables present other useful data that can be used when evacuating populations within and/or from the West Side area. Table 6.I.1 presents estimated capacities of the primary and secondary evacuation routes as well as an estimate of the time it would take to evacuate the entire area. (*NOTE: See Attachment 1 to Appendix 6 for a discussion on how capacities were calculated.) Table 6.I.2 lists the critical facilities that are located in the area and Table 6.I.3 lists the potential shelters. Figure 6.I.2 depicts the pick-up points in the West Side area.

Table 6.I.1 **(AREA – West Side Charleston, POPULATION – 13,071)**
Estimated Capacities of Evacuation Routes – Estimated Time to Evacuate Area

Route	P/S	Base Speed	Terrain	Capacity/Hr.	Estimated Time
I-77*	P	65 mph	Rolling	4212	1.0 hours**
US 60* (Washington St.)	S	35 mph	Urban	2752	1.6 hours**
CR 21*	S	35 mph	Urban	2752	1.6 hours**

** NOTE: For planning purposes, times were calculated for both routes using the total population of the evacuation area.*
*** NOTE: Two (2) equations were used: first, the area population was divided by an assumed 3 persons per vehicle; secondly, the number of vehicles was divided by the capacity per hour figure from the USDOT.*

Table 6.I.2 **(AREA – West Side Charleston, POPULATION – 13,071)**
Critical Facilities in Charleston's West Side

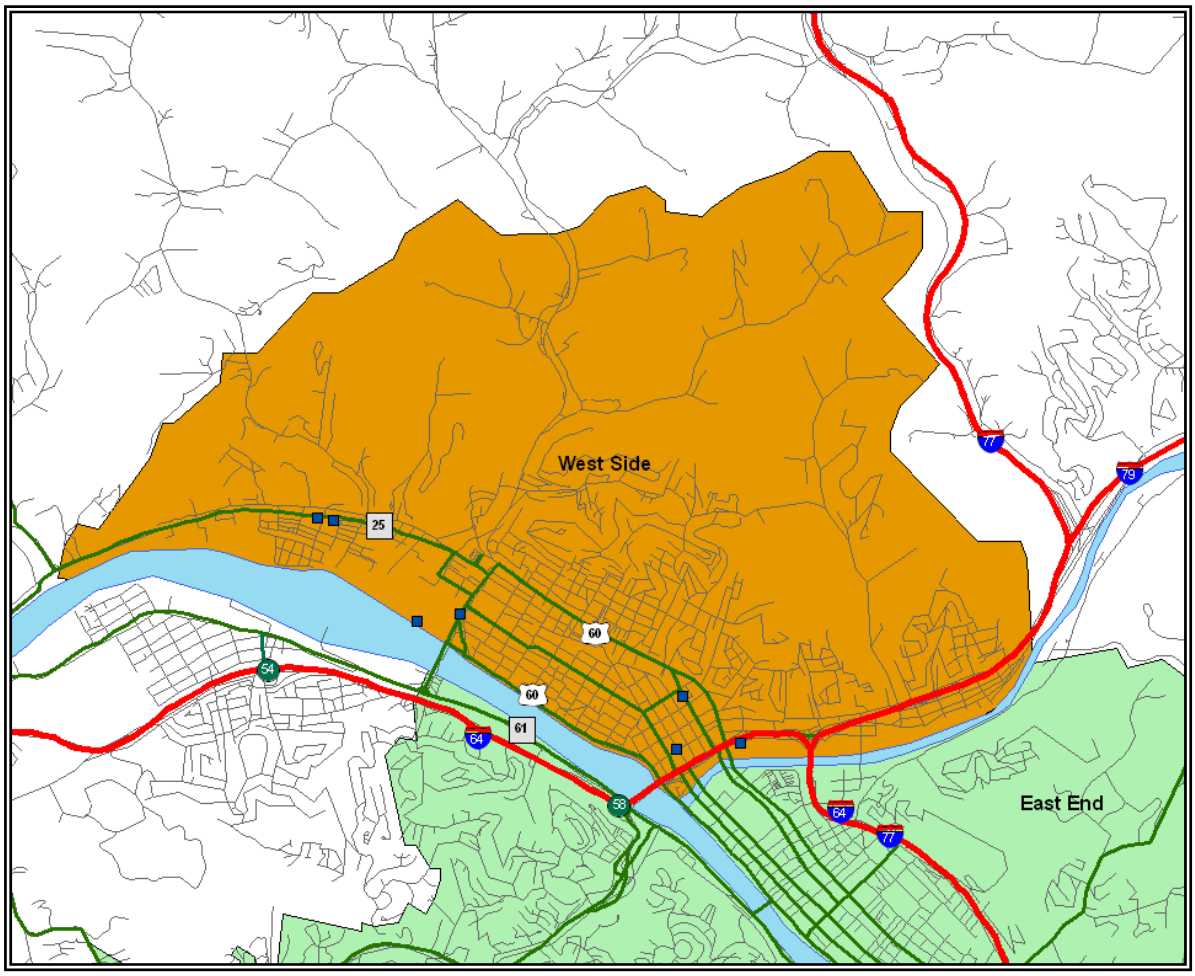
Facility	Location
CAMC Women & Children's Hospital	800 Pennsylvania Avenue, Charleston
Chandler ES	1900 School Street, Charleston
Charleston FD Station 2	808 Virginia Street, West, Charleston
Charleston FD Station 7	128 Cora Street, Charleston
Charleston FD Station 8	208 Copenhaver Drive, Charleston
Conqueror's Christian School	2408 6th Avenue, Charleston
Glenwood ES	810 Grant Street, Charleston
Grandview ES	959 Woodward Drive, Charleston
J.E. Robins ES	915 Beech Avenue, Charleston
Jarrett Terrace	815 Randolph Street, Charleston
Seventh Day Adventist School	622 Kanawha Boulevard, West, Charleston
St. Anthony School	1027 6th Street, Charleston
Stonewall Jackson MS	812 Park Avenue, Charleston
Watts ES	230 Costello Street, Charleston
West Side ES	Florida Street, Charleston

Table 6.I.3 **(AREA – West Side Charleston, POPULATION – 13,071)**
Potential Shelters in Charleston's West Side

Shelter	Location	Capacity	Coordinator
Chandler ES	1900 School Street, Charleston	100	ARC
Glenwood ES	810 Grant Street, Charleston	100	ARC
J.E. Robbins ES	915 Beech Avenue, Charleston	80	ARC

Shelter	Location	Capacity	Coordinator
Granview ES	959 Woodward Drive, Charleston	120	ARC
North Charleston Community Center	2009 7th Avenue, Charleston	100	ARC
Stonewall Jackson MS	812 Park Avenue, Charleston	300	ARC
Watts ES	230 Costello Street, Charleston	100	ARC

Figure 6.I.2



Important

Your needs and those of your family should be the primary factors considered when determining the timing of your evacuation. Do not delay your departure in anticipation of future help from emergency services providers. All citizens should prepare a plan well in advance of any evacuation.

The following steps are recommended:

- Assemble your disaster supplies kit with items such as flashlights, cell phones, extra batteries, battery chargers, portable radio, first aid kit, emergency water and food, medical supplies, non -electric can opener, highway map, important documents such as insurance and medical information, etc.
- Secure your home against disaster to help reduce damages. Lock windows and doors, Secure or put up any loose objects from around your home.
- If you cannot take your pet(s) with you, make provisions for them.
- Know your area's evacuation plan/routes before you leave home.
- Fill your vehicle with gas as early as possible. Take only the vehicle necessary to transport you and your family to safety. Extra vehicles create congestion.
- Bring extra cash in case banks are closed and ATMs are not working.
- Notify family and friends (especially those out of the area) of your plan and your destination.
- Develop an emergency plan in case family members are separated. Instruct all evacuating family members of the name and contact information of your designated out-of-area friend or family.
- Ensure children know how and when to call 911.
- Evacuate, traveling safely to your destination.
- Expect travel times to destinations to be significantly longer than normal.

Continually listen to local officials for information on returning home.

Fender-Bender?

State law requires motorists to move fender-bender accidents out of the travel lanes to the shoulder of the road. To keep all travel lanes and shoulders clear, however, disabled vehicles on the shoulder may be relocated to the next exit ramp where further assistance may be available. Call *SP on your cellular should you need assistance.

Additional Information

More information on emergency preparedness and evacuation safety is available from the following:

Emergency Alert System/NOAA All-Hazard Radio:
Tune to your local radio station

Community Support::
304-744-OTHER (304-744-6483)

WV Department of Transportation:
www.transportation.wv.gov
1-877-WV ROAD (1-877-982-7623)

WV Division of Homeland Security & Emergency Management::
www.wvdhsem.gov

Kanawha County:
www.kanawha.us

Metro 911:
www.metro911.org

City of Charleston:
www.cityofcharleston.org

Kanawha Putnam Emergency Planning Committee
www.kpepc.org

American Red Cross:
www.redcross.org

KANAWHA COUNTY EVACUATION PLAN

Resident Evacuation Instructions

Emergency Evacuation Information—West Side Charleston

ADVISORY

West Side Charleston to Points North

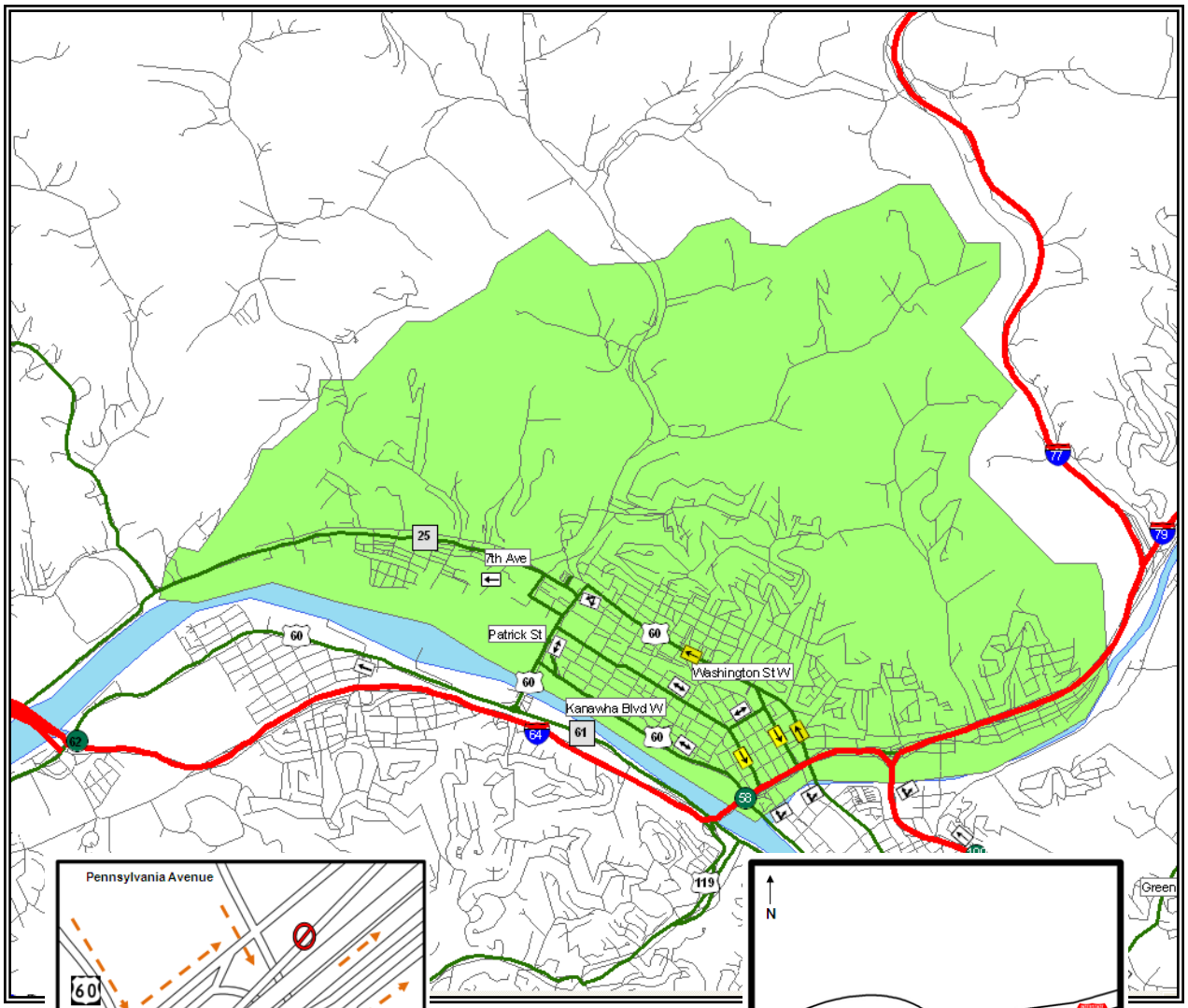
WHO... This plan will affect residents and motorists evacuating from the West Side portions of the City of Charleston.

WHY... To help move citizens safely and efficiently out of harm's way during large-scale emergencies necessitating evacuation.

WHAT... If this plan is activated, the primary evacuation route from these areas is Interstate 77 *NORTH*. If transportation assistance is needed, report to the nearest KRT stop.

WHEN... This type of evacuation should be considered only when the area is threatened by a large-scale emergency and evacuation orders have been issued.

WHERE... Evacuating residents should access I-77 at Exits 58 and 59. If I-77 is unavailable, residents will be directed to evacuate westward on US 60.



KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 6: EVACUATION AREA PROFILES
ATTACHMENT #1: CALCULATING ROADWAY CAPACITIES

This attachment provides an explanation of the methodology used to calculate roadway capacities and, thus, estimated Worst Case Scenario (WCS) evacuation times. WCS evacuation times provide emergency managers with a minimum estimate of the lead time necessary to implement a full evacuation.

Several equations were used to calculate the Peak Capacity (PeakCap) of roadways, all of which were taken from the latest edition of the Transportation Research Board's *Highway Capacity Manual* (HCM). Equation numbers will be cited where appropriate.

In order to calculate the Base Capacity (BaseCap) for each evacuation route – primary and secondary – calculating the Free Flow Speed (FFS) was necessary. HCM equation 23-1 was applied directly.

$$FFS = \text{Base FFS} - f_{LW} - f_{LC} - f_{N} - f_{ID}$$

The equation uses factors for lane width (LW), lateral clearance (LC – i.e., the width of berm areas), number of lanes traveling in one direction (N), and interchange density (ID). Many of these factors were assigned values by the HCM.

The BaseCap was necessary to calculate the PeakCap, as can be seen by HCM equation 23-2.

$$\text{PeakCap} = \text{BaseCap} * PHF * N * f_{HV} * f_{p}$$

"PHF" stands for "peak hour factor"; HCM recommendations of 0.88 for rural roadways and 0.92 for urban roadways were utilized. The number of lanes in one (1) direction was again represented by N. Factors for "heavy vehicles" (HV) and driver population (P) were also utilized for the PeakCap calculation. *NOTE: The HCM sets the driver population factor at 1.0 for urban roadways under the assumption that drivers are familiar with the roadway and traffic conditions. A factor of 0.975 has been set for rural roadways.

The equation to derive the factor for heavy vehicles requires a proportion percentage of truck and bus traffic. In an effort to utilize "real" data, proportions of truck traffic were calculated using actual data from the *KPEPC Commodity Flow Study* from 2008. The other variable in the heavy vehicle equation was a factor for "passenger-car equivalents", which was set by the HCM.

The actual equation reads as follows:

$$f_{HW} = \frac{1}{1 + HV * (E_T - 1)}$$

Consider the following example for the Kanawha West area. First, one must calculate the FFS. The HCM provides 70 mph as a given figure for urban area freeways. Lanes are 12' in width, which does not negatively affect speed; berms are greater than 6' in width, which also does not negatively impact speed. The HCM advises to subtract 4.5 for roadways with two (2) lanes going in the same direction. The HCM also assigns 1.0 as the interchange factor for small urban freeways.

$$FFS = 70 - 0 - 0 - 4.5 - 1.0$$
$$FFS = 64.5$$

With the FFS, all variables except for heavy vehicles are available for insertion into the PeakCap equation. The following calculation determined the heavy vehicles factor.

$$f_{HW} = \frac{1}{1 + HV * (E_T - 1)}$$

$$f_{HW} = \frac{1}{1 + (6564/66000) * (1.5-1)}$$

$$f_{HW} = \frac{1}{1 + (0.10 * 0.5)}$$

$$f_{HW} = \frac{1}{1.05}$$

$$f_{HW} = 0.95$$

**NOTES: The figure 6,564 is taken from the KPEPC Commodity Flow Study. The figure 66,000 is an average of the WVDOT's volume traffic counts on I-64 in the Kanawha West area.*

With this factor for heavy vehicles, the peak capacity of Interstate 64 westbound could then be calculated. When combined with the given values, the PeakCap equation becomes:

PeakCap = 2,345 * 0.92 * 2 * 0.95 * 1

PeakCap = 4,099

The capacity of city streets was calculated in a slightly different way. The following equation was used:

$$Capacity = s_O * N * f_W * f_{HV} * f_p * f_a * PHF$$

"N" again represents the number of lanes in a single direction and "PHF" represents the peak hour factor. The following other factors are used for urban capacity calculations:

- s_O = Base Saturation Flow Rate
- W = Lane Width
- HV = Heavy Vehicles
- p = Parking
- a = Area Type

Parking and area type factors were set by the HCM. For Kanawha Boulevard, Washington Street, and MacCorkle Avenue, the following variables were used (followed by the complete equation).

- s_O = 1,900 (HCM-provided value)
- N = 2
- fW = 0.93 (utilizing the HCM equation based on 10'-wide lanes)
- fHV = 0.99 (utilizing the above HV equation)
- fp = 0.95 (utilizing the HCM equation based on parking on one side of street)
- fa = 0.9 (HCM-provided value)
- PHF = 0.92 (HCM-provided value)

Capacity = 1,900 * 2 * 0.93 * 0.99 * 0.95 * 0.9 * 0.92

Capacity = 2,752

Estimated evacuation times were calculated for each primary and secondary evacuation route for each evacuation area. As a WCS calculation, emergency managers can expect the maximum amount of time on both secondary and primary routes to represent a minimum

amount of necessary lead time. It is significant to note that the estimates times assume that evacuees will enter evacuation routes at more or less regular intervals. There was no factor in the calculation to account for the initial "trickle" effect of those that evacuation quickly.

The following equation was utilized to calculate estimated times.

Evacuation Time = (Area Population / 3 = Number of Vehicles) / PeakCap

**NOTE: The population was divided by 3 for the assumption of three individuals per vehicle.*

Again, as an example from the Kanawha West area, consider the following for Interstate 64.

- Area Population = 53,006
- PeakCap = 4,099

Evacuation Time = (53,006 / 3) / 4,099

Evacuation Time = 17,669 / 4,099

Evacuation Time = 4.3 hours

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 7: HAZARD SPECIFIC CONSIDERATIONS

This appendix contains charts and checklists that address site-specific evacuation concerns. In general, evacuating these areas is unique either because of the topography or features of the community or because of an additional threat posed by a facility in the area. The following hazard specific considerations are included:

- Chart #1: Institute Incident,
- Chart #2: South Charleston Incident,
- Chart #3: Belle Incident, and
- Chart #4: Downtown Charleston Evacuation Plan.

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 7: HAZARD SPECIFIC CONSIDERATIONS
CHART #1: INSTITUTE INCIDENT

This chart contains specific guidance for evacuating the Institute area should an incident occur at the Bayer CropScience facility. It contains suggested evacuation routes, notifications, pick-up points, and destinations. The guidelines contained in this chart are recommendations; emergency managers and responders should use these guidelines as initial parameters and base final evacuation decisions on an on-going incident assessment. As such, ad-hoc modifications are anticipated based on incident-specific conditions such as the chemical involved, size of release, weather conditions, etc. As an incident at the Bayer facility grows, it may be more prudent to consider a partial or full evacuation of the Kanawha West evacuation area as per the remainder of the evacuation plan.

The following documents were utilized as references when forming this chart.

- *Kanawha Interstate Traffic Diversion Plan*
- *KPEPC Vulnerability Assessment*

The traffic diversion plan includes road closure locations and resource needs for incidents that occur along the interstate. The document was utilized in an effort to maintain consistency between plans. Road closures and roadblocks *not* along interstates, though, were developed as part of the evacuation planning process. The vulnerability assessment included initial isolation distances for a variety of incidents based on known chemicals at the location in question. The isolation distance for a "very large spill" was used as a basis for determining the risk area.

At-Risk Population

The "at-risk population" is an estimate of the persons that may need to be evacuated should an incident occur at the Bayer facility. The permanent estimate was derived using estimates listed in the *KPEPC Vulnerability Assessment*, estimates of the eastern portion of St. Albans' population, and the approximate student populations at West Virginia State University (faculty populations were considered part of the labor force – see below). The adjusted estimate was derived by adding a labor force adjustment to the permanent estimate as well as estimates from the *KPEPC Vulnerability Assessment* plume analysis for

the Institute area. The labor force adjustment percentage was calculated using estimates of commuters working in Kanawha County (from the Charleston Area Alliance) and labor force estimates from the US Census.

PERMANENT POPULATION ESTIMATE: 4,000

ADJUSTED POPULATION ESTIMATE: 4,300 – 6,400

Recommended Evacuation Decisions for Incident at Bayer

Evacuation Routes

- North of Kanawha River
  - Interstate 64
  - State Route 25
- South of Kanawha River
  - US Route 60
- The predominant wind direction throughout Kanawha County is eastward. As such, a westbound evacuation may be most prudent. Actual incident conditions, though, should determine the implemented direction.
- Evacuees in Dunbar should be directed east towards Charleston and South Charleston to avoid being sent into the hazard area.

Traffic Control (if incident *DOES NOT* also affect St. Albans/Jefferson area)

Blocks/Closures	*Resources*
State Route 25 (North of Kanawha River)	
• One unit should be placed at Shawnee Park at King Street and Fairlawn Avenue (SR 25) to prevent non-emergency traffic from entering the area.	1 LE/DOH Unit
• One unit should be placed along SR 25 near the Nitro-St. Albans Bridge to divert all eastbound non-emergency traffic across the bridge to US 60 and to assist traffic leaving the emergency area.	1 LE/DOH Unit
Interstate 64 Eastbound	
• All eastbound traffic should be closed at Exit 47 B.	
• The entrance ramp to I-64 eastbound (at Nitro exit) should be shut down.	
• The entrance ramp to I-64 eastbound (at Cross Lanes exit) should be shut down.	
• The entrance ramp to I-64 eastbound (at St. Albans exit) should be shut down.	
• The entrance ramp to I-64 eastbound (at Institute exit) should be shut down.	
• Two units should be positioned at the intersection of SR 622/Goff Mountain Road and Lakeview Drive to direct interstate traffic onto SR 622 Goff Mountain Road north towards SR 62. These units should also prevent non-emergency traffic from entering the area.	2 LE/DOH Units
• Two units should be placed at the intersection of SR 622 and SR 62 to direct interstate traffic south on SR 62 towards Charleston.	2 LE/DOH Units

Recommended Evacuation Decisions for Incident at Bayer

Traffic Control (if incident *DOES NOT* also affect St. Albans/Jefferson area) – cont.

Interstate 64 Westbound	
• All westbound traffic should be closed at Exit 53.	
• The entrance ramp to I-64 westbound (at Exit 53) should be shut down.	
• The entrance ramp to I-64 westbound (at Cross Lanes exit) should be shut down.	
• The entrance ramp to I-64 westbound (at St. Albans exit) should be shut down.	
• The entrance ramp to I-64 westbound (at Institute exit) should be shut down.	
• Two units should be placed on 10th Street in Dunbar at the end of the westbound exit ramp to direct traffic onto SR 25/Dunbar Avenue east.	2 LE/DOH Units
• Two units should be placed at the westbound MacCorkle Avenue exit of I-64 to divert all westbound non-emergency traffic to MacCorkle Avenue. One of the units should direct traffic through the intersection; the other should prevent non-emergency traffic from entering I-64.	2 LE/DOH Units
Miscellaneous	
• One unit should be placed at the intersection of SR 25/Dunbar Avenue and SR 62/West Washington Street to ease the flow of traffic west.	1 LE/DOH Unit
• One unit should be placed at MacCorkle Avenue and Jefferson Road to expedite traffic.	1 LE/DOH Unit
• One unit should be placed at the intersection of SR 62 and SR 25 at Rock Branch for traffic control.	1 LE/DOH Unit
• One unit should be placed on the South Charleston side of the Dunbar-South Charleston Bridge to expedite the flow of emergency traffic onto MacCorkle Avenue (SW).	1 LE/DOH Unit

Traffic Control (if incident *ALSO* affects St. Albans/Jefferson area)

Blocks/Closures	*Resources*
US Route 60 (South of Kanawha River)	
• Two units should be placed at the Jefferson VFD to divert all westbound US 60 traffic eastbound from the vicinity.	2 LE/DOH Units
• One unit should be placed on the Spring Hill side of the Dunbar Bridge to divert all westbound traffic off of US 60 and onto the Dunbar Bridge.	1 LE/DOH Unit
• Two (2) units should be placed at Walnut Street and US 60 in St. Albans to divert traffic westbound.	2 LE/DOH Units
State Route 25	
• One unit should be placed on SR 25 at Red Oak Drive to divert eastbound traffic westbound.	1 LE/DOH Unit

Recommended Evacuation Decisions for Incident at Bayer

Traffic Control (if incident *ALSO* affects St. Albans/Jefferson area) – cont.

Miscellaneous

- One unit should be placed at the Goff Crossing intersection to prevent non-emergency traffic from entering the area. — 1 LE/DOH Unit
- One unit should be placed at 10th Street and Myers Avenue in Dunbar to expedite traffic. — 1 LE/DOH Unit
- One unit should be placed at 10th Street and Dunbar Avenue to direct traffic through the intersection. — 1 LE/DOH Unit
- One unit should be placed at Maranatha Church on Kanawha Terrace in St. Albans to divert traffic westbound. — 1 LE/DOH Unit
- One unit should be placed at Green Valley Drive in St. Albans to direct traffic westbound. — 1 LE/DOH Unit

Notifications

- General public
- West Virginia State University
- CSX and Norfolk Southern Railroads
- West Virginia Rehabilitation Center

Pick-Up Points for Transportation Assistance

- Fairlawn Avenue and King Street in Dunbar
- SR 25 at West Virginia State (regular stop)
- Curtis Square and Barron Street
- Marshall Avenue and Jordan Street

Destinations

Shelters

- Saint Albans High School, 2100 Kanawha Terrace (Capacity: 600)
- South Charleston Middle School, 400 Third Avenue (Capacity: 300)
- Hayes Middle School, 830 Strawberry Road (Capacity: 250)
- Cross Lanes Elementary School, 5525 Big Tyler Road (Capacity: 100)

Communities

- North of Kanawha River
  - Cross Lanes and points west
  - Charleston and points east
  - SR 62 and points north
- South of Kanawha River
  - Western St. Albans and points west
  - US 60 and points south

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 7: HAZARD SPECIFIC CONSIDERATIONS
CHART #2: SOUTH CHARLESTON INCIDENT

This chart contains specific guidance for evacuating the South Charleston and western Charleston areas should an incident occur at an industrial facility in northern South Charleston. It contains suggested evacuation routes, notifications, pick-up points, and destinations. The guidelines contained in this chart are recommendations; emergency managers and responders should use these guidelines as initial parameters and base final evacuation decisions on an on-going incident assessment. As such, ad-hoc modifications are anticipated based on incident-specific conditions such as the chemical involved, size of release, weather conditions, etc. As an incident grows, it may be more prudent to consider a partial or full evacuation of the Kanawha West, Kanawha South, and West Side Charleston evacuation areas as per the remainder of the evacuation plan.

The following documents were utilized as references when forming this chart.

- *Kanawha Interstate Traffic Diversion Plan*
- *KPEPC Vulnerability Assessment*

The traffic diversion plan includes road closure locations and resource needs for incidents that occur along the interstate. The document was utilized in an effort to maintain consistency between plans. Road closures and roadblocks *not* along interstates, though, were developed as part of the evacuation planning process. The vulnerability assessment included initial isolation distances for a variety of incidents based on known chemicals at the location in question. The isolation distance for a "very large spill" was used as a basis for determining the risk area.

At-Risk Population

The "at-risk population" is an estimate of the persons that may need to be evacuated should an incident occur at an industrial facility in South Charleston. The permanent estimate was derived using estimates listed in the *KPEPC Vulnerability Assessment*, estimates of the northern portion of South Charleston's population, and estimates of the West Side of Charleston's population. The adjusted estimate was derived by adding a labor force adjustment to the permanent estimate as well as estimates from the *KPEPC Vulnerability*

Assessment plume analysis for the South Charleston area. The labor force adjustment percentage was calculated using estimates of commuters working in Kanawha County (from the Charleston Area Alliance) and labor force estimates from the US Census.

PERMANENT POPULATION ESTIMATE: 6700 +

ADJUSTED POPULATION ESTIMATE: type – 32,000

Recommended Evacuation Decisions for Incident at South Charleston

Evacuation Routes

- Primary Routes
  - Interstate 64
  - US Route 60
  - Corridor G

- Secondary Routes
  - Montrose to Weberwood to Churchill to Cantley to Oakwood Road
  - Jefferson Road
  - Kanawha Turnpike
  - Lincoln Drive
  - Smith Creek Road
  - MacCorkle Avenue

Traffic Control

Blocks/Closures *Resources*

Interstate 64 Eastbound

- One unit should be placed at the MacCorkle Avenue exit of I-64 eastbound to divert traffic.
- One unit should be placed at the MacCorkle Avenue exit of I-64 westbound for traffic control.

Interstate 64 Westbound

- Two units should be placed at the Oakwood exit of I-64 to divert traffic onto Oakwood Road. One unit should divert all traffic onto I-64 Bridge eastbound.
- One unit should be stationed at the US 119 westbound entrance to I-64.
- One unit should be placed on the entrance ramp at Montrose Drive and MacCorkle Avenue to prevent non-emergency traffic from going west.
- One unit should be placed at the Montrose Drive and I-64 westbound entrance ramp to prevent non-emergency traffic from going west.

Recommended Evacuation Decisions for Incident at South Charleston

Traffic Control – cont.

Miscellaneous

- Three units should be placed at MacCorkle Avenue and Jefferson Road to divert traffic onto Jefferson Road toward US 119 south.
- One unit should be placed at MacCorkle Avenue and Kanawha Turnpike to divert all traffic eastbound.
- Two units should be placed at Kanawha Turnpike and Jefferson Road for traffic control.
- Two units should be placed at SR 601 and Kanawha Turnpike for traffic control.
- Two units should be placed at SR 601 and Corridor G for traffic control.
- Two units should be placed at the intersection of US 119 and MacCorkle Avenue to divert traffic eastbound. One of the units should divert all westbound traffic away from MacCorkle Avenue.
- One unit should be placed at Pennsylvania Avenue south and Lee Street entrance ramp for traffic control.
- One unit should be placed at Pennsylvania Avenue south and Virginia Street.
- Two units should be placed at US 119 southbound at Cantley Drive. One should direct all westbound traffic to Jefferson Road.
- One unit should be placed at Oakwood Road and US 119.
- Two units should be placed at the south end of the Patrick Street Bridge. One unit should divert all eastbound MacCorkle Avenue traffic across the bridge. The other unit should prevent traffic from entering MacCorkle Avenue eastbound.

Notifications

- General public
- Kanawha County Schools
- Marshall University (Graduate College)
- CSX and Norfolk Southern Railroads

Pick-Up Points for Transportation Assistance

- MacCorkle Avenue West (Rite Aid and Mound)
- MacCorkle Avenue, Thomas Hospital
- K-Mart at Patrick Street

Destinations

Shelters

- South Charleston High School, 1 Eagle Way (Capacity: 500)
- Dunbar Middle School, 325 27th Street (Capacity: 250)
- Dunbar Intermediate School, 1400 Myers Avenue (Capacity: 250)
- Dunbar Primary School, 2401 Myers Avenue (Capacity: 100)
- St. Albans High School, 2100 Kanawha Terrace (Capacity: 600)
- McKinley Middle School, 3000 Kanawha Terrace (Capacity: 250)
- Richmond Elementary, 4620 Spring Hill Avenue (Capacity: 100)
- Ruthlawn Elementary, Route 8 Box 428 (Capacity: 100)

Communities

- Charleston and points east
- Dunbar and points west
- Southridge and points south

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 7: HAZARD SPECIFIC CONSIDERATIONS
CHART #3: BELLE INCIDENT

This chart contains specific guidance for evacuating the Belle area should an incident occur at the DuPont facility. It contains suggested evacuation routes, notifications, pick-up points, and destinations. The guidelines contained in this chart are recommendations; emergency managers and responders should use these guidelines as initial parameters and base final evacuation decisions on an on-going incident assessment. As such, ad-hoc modifications are anticipated based on incident-specific conditions such as the chemical involved, size of release, weather conditions, etc. As an incident at the DuPont facility grows, it may be more prudent to consider a partial or full evacuation of the Kanawha East evacuation area as per the remainder of the evacuation plan.

The following documents were utilized as references when forming this chart.

- *Kanawha Interstate Traffic Diversion Plan*
- *KPEPC Vulnerability Assessment*

The traffic diversion plan includes road closure locations and resource needs for incidents that occur along the interstate. The document was utilized in an effort to maintain consistency between plans. Road closures and roadblocks *not* along interstates, though, were developed as part of the evacuation planning process. The vulnerability assessment included initial isolation distances for a variety of incidents based on known chemicals at the location in question. The isolation distance for a "very large spill" was used as a basis for determining the risk area.

At-Risk Population

The "at-risk population" is an estimate of the persons that may need to be evacuated should an incident occur at the DuPont facility. The permanent estimate was derived using estimates listed in the *KPEPC Vulnerability Assessment*, the Town of Belle's population, the western portions of East Bank's population, the northern portions of Chesapeake's population, and the western portions of Marmet's population. The adjusted estimate was derived by adding a labor force adjustment to the permanent estimate as well as estimates from the *KPEPC Vulnerability Assessment* plume analysis for the Belle area. The labor force

adjustment percentage was calculated using estimates of commuters working in Kanawha County (from the Charleston Area Alliance) and labor force estimates from the US Census.

PERMANENT POPULATION ESTIMATE: 4,000

ADJUSTED POPULATION ESTIMATE: 4,300 – 5,000

Recommended Evacuation Decisions for Incident at DuPont

Evacuation Routes

- North of Kanawha River
  - US Route 60 (E/W)
  - DuPont Avenue (E/W)
  - Midland Avenue (W)
  - Maple Road (N)
  - Witcher Creek Road (N)

- South of Kanawha River
  - Interstate 64/77 (E/W)
  - SR 94 (S)

Traffic Control

Blocks/Closures	*Resources*
US Route 60	
• One unit should be placed at North Park (at Driftwood Drive) on US 60 to divert eastbound traffic westbound.	1 LE/DOH Unit
• One unit should be placed at Witcher Creek Road and US 60 to divert traffic eastbound.	1 LE/DOH Unit
• One unit should be placed at Midland Avenue and US 60 to divert traffic eastbound.	1 LE/DOH Unit
Miscellaneous	
• One unit should be placed at the Malden underpass eastbound entrance tramp to divert traffic westbound.	1 LE/DOH Unit
• One unit should be placed at Rite Aid on DuPont Avenue West to divert traffic westbound.	1 LE/DOH Unit
• One unit should be stations at the stop light at the lower end of the Quincy Mall on DuPont Avenue East at Warrior Way to divert traffic eastbound onto the Admiral Lopez Bridge.	1 LE/DOH Unit
• Two units should be placed at US 60 and the Admiral Lopez Bridge to divert westbound traffic across the bridge.	2 LE/DOH Units
• One unit should be placed at the bridge traffic light in Chelyan to prevent non-emergency traffic from entering the Admiral Lopez Bridge.	1 LE/DOH Unit
• One unit should be placed at DuPont Avenue and Maple Drive to divert traffic eastbound.	1 LE/DOH Unit

Notifications

- General public.
- Kanawha County Schools.
- CSX and Norfolk Southern Railroads.

Recommended Evacuation Decisions for Incident at DuPont

Pick-Up Points for Transportation Assistance

- West 17th Street and DuPont Avenue West in Belle
- DuPont Avenue and 6th Street in Belle
- 7th Avenue in Belle
- Quincy Mall in Belle

Destinations

Shelters

- Cedar Grove Community School, Johns Street (Capacity: 100)
- East Bank Middle School, First and Brannen (Capacity: 400)
- Pratt Elementary, Center and Stark Street (Capacity: 100)
- Pratt Fire Department (Capacity: 20)

Communities

- North of Kanawha River
  - Cedar Grove, Glasgow, and points east
  - Rand, Malden, and points west
  - Ward, Mammoth, and points north
- South of Kanawha River
  - Marmet and points west
  - Chelyan, Handley, Pratt, Montgomery, and points east

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 7: HAZARD SPECIFIC CONSIDERATIONS
CHART #4: DOWNTOWN CHARLESTON EVACUATION PLAN

This chart contains specific guidance for evacuating downtown Charleston should an incident occur. This section does include considerations for population influxes from special events. It contains suggested evacuation routes, notifications, pick-up points, destinations, and mapping showing all of Charleston's evacuation areas and routes (as well as a smaller, more specific area for the "downtown" area). The guidelines contained in this chart are recommendations; emergency managers and responders should use these guidelines as initial parameters and base final evacuation decisions on an on-going incident assessment. As such, ad-hoc modifications are anticipated based on incident-specific conditions such as the chemical involved, size of release, weather conditions, etc. If an incident were to grow, it may be more prudent to consider evacuating all of the East End Charleston, West Side Charleston, South Hills Charleston, and Kanawha City Charleston evacuation areas as per the basic plan.

At-Risk Population

The "at-risk population" is an estimate of the persons that may need to be evacuated should an incident occur in downtown Charleston. For Charleston, figures for the permanent resident population were provided (per US Census data), the increased population during regular work hours, and the increased population for special events. (The methodology for calculating the increased populations is listed in the basic evacuation plan.)

PERMANENT POPULATION ESTIMATE:	53,421
WORK HOURS POPULATION ESTIMATE:	105,930
POPULATION ESTIMATE FOR SPECIAL EVENTS:	65,421

Recommended Evacuation Decisions for Downtown Charleston	
Evacuation Routes and Traffic Control Resources	
Routes	*Resources*
EGRESS: Interstate 64 West	**2 LE/DOH units at Exit 58** (1 to control traffic onto I-64; 1 to direct interstate traffic)
EGRESS: Interstate 64/77 North and East	**See Exits 99 and 100 below.**
TRAFFIC FLOW: Washington Street • West of Brooks Street: WEST ONLY • East of Brooks Street: EAST-WEST	**1 LE unit at I-64 on-ramp**
TRAFFIC FLOW: Lee Street • East only to Brooks Street	**1 LE unit at Court Street** (to direct traffic leaving Civic Center)
TRAFFIC FLOW: Quarrier Street • West only	**1 LE unit at Clendenin Street** (to direct traffic leaving Civic Center)
TRAFFIC FLOW: Virginia Street • East only	N/A
TRAFFIC FLOW: Kanawha Boulevard • East-west entire route through downtown	**1 LE unit at Kanawha Blvd./Brooks** (also listed for Brooks Street below) **1 LE unit at Kanawha Blvd./Greenbrier** (also listed for Greenbrier Street below)
TRAFFIC FLOW: Brooks Street • North to Exit 100 (on I-64/77)	**3 LE/DOH units at Exit 100** (1 to control traffic onto I-64/77; 2 to direct interstate traffic) **2 LE units at Washington/Brooks** (1 to direct traffic through intersection; 1 to address traffic concerns at CAMC) **1 LE unit at Kanawha Blvd./Brooks**

Recommended Evacuation Decisions for Downtown Charleston

Evacuation Routes and Traffic Control Resources – cont.

Routes	*Resources*
TRAFFIC FLOW: Greenbrier Street • North to Exit 99 (on I-64/77)	**3 LE/DOH units at Exit 99** (1 to control traffic onto I-64/77; 2 to direct interstate traffic) **1 LE unit at Washington/Greenbrier** **1 LE unit at Kanawha Blvd./ Greenbrier**

Notifications

- State Capitol Complex (i.e. WVDHSEM)
- Charleston Civic Center
- Charleston Town Centre Mall
- Charleston Area Medical Center
- St. Francis Hospital
- Clay Center

Pick-Up Points for Transportation Assistance

- Quarrier Street at Sears (westbound)
- Washington Street at CAMC (westbound)
- Pennsylvania Avenue at CAMC Women and Children's Hospital
- Washington Street at Reynolds Street (westbound)
- Washington Street at California Avenue (northbound)
- Washington Street at California Avenue (southbound)

Destinations

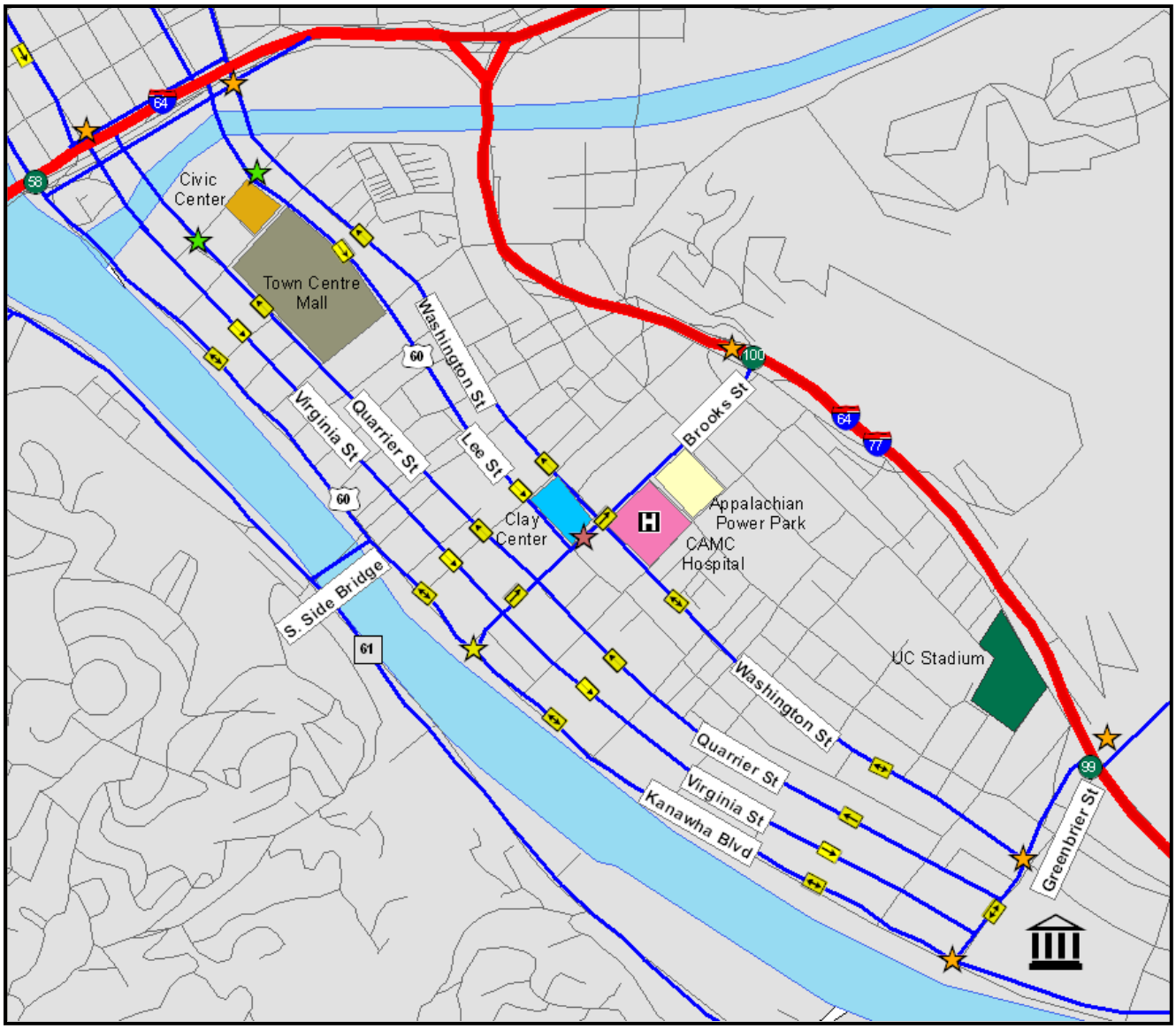
Shelters

- Chamberlain ES, 4901 Venable Avenue, SE (Capacity: 100)
- Chandler ES, 1900 School Street (Capacity: 100)
- George Washington HS, 1522 Tennis Club Road (Capacity: 400)
- Glenwood ES, 810 Grant Street (Capacity: 100)
- Granview ES, 959 Woodward Drive (Capacity: 120)
- Holz ES, 1505 Hampton Road (Capacity: 200)
- Horace Mann MS, 4300 MacCorkle Avenue (Capacity: 250)
- Kanawha City Community Center, 3511 Venable Avenue (Capacity: 500)
- Kanawha City ES, 3601 Staunton Avenue, SE (Capacity: 100)
- Kenna ES, 198 Eureka Road (Capacity: 100)
- Overbrook ES, 218 Overbrook Road (Capacity: 100)
- Robbins (JE) ES, 915 Beech Avenue (Capacity: 80)
- Stonewall Jackson MS, 812 Park Avenue (Capacity: 300)
- Watts ES, 230 Costello Street (Capacity: 100)
- Weberwood ES, 732 Gordon Road (Capacity: 100)

Recommended Evacuation Decisions for Downtown Charleston
Destinations – cont.
Communities • South Charleston • St. Albans • Nitro • Marmet • Chesapeake • Points north of Charleston

See map below for a graphical depiction of a downtown evacuation.

DOWNTOWN CHARLESTON EVACUATION MAP



- Transit Hub (Normal Operations)
- Transit Hub (For Town Centre Mall & Civic Center events)
- Transit Hub (Block Brooks St)
- Transit Hub (Lee St & Washington St; for CAMC & Clay Center and Power Park Events)
- Traffic Flow
- Interstates
- Highways

KANAWHA COUNTY – CITY OF CHARLESTON EVACUATION PLAN
APPENDIX 8: GLOSSARY

This appendix presents definitions for commonly-used terms as well as lists the acronyms used in this plan. Both lists are not considered comprehensive; they present terms related to evacuation and acronyms found in this document only.

Definition of Terms

Contraflow: An abnormal state of a roadway, where the traffic temporarily travels in the opposite direction to normal. In the context of an evacuation, contraflow may be implemented such that all evacuation routes are carrying traffic out of a potentially-affected area, regardless of the regular direction of travel on the evacuation route.

Emergency Operations Center (EOC): The physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place. An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., federal, state, regional, tribal, city, county), or by some combination thereof.

Emergency Public Information (EPI): Information that is disseminated primarily in anticipation of or during an emergency. In addition to providing situational information to the public, it frequently provides directive actions required to be taken by the general public.

Evacuation: The organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

Evacuation Area: An arbitrary geographic denotation meant to organize evacuation planning. Evacuation areas segment the total population of a jurisdiction into smaller,

more manageable portions so that decisions can be made about egress, sheltering, notification, etc.

Evacuation Order: The official proclamation that an emergency exists (or will soon exist) for which the most effective means of protecting life is evacuation. Evacuation orders are usually issued on the authority of an on-scene Incident Commander for small, immediate-onset emergencies, and/or the Chief Elected Official of the affected jurisdiction.

Feeder Route: A local roadway (or series of roadways) selected to link communities to a primary or secondary evacuation route.

Incident Command System (ICS): A standardized, on-scene emergency management construct specifically designed to provide an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to mall as well as large and complex incidents. ICS is used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Mass Notification System: A system, usually facilitated by cutting-edge technology (e.g., telephone, Internet, cellular networks, etc.), to warn a potentially affected population of danger. Mass notification systems can also be used to provide on-going Emergency Public Information during large-scale emergencies. Examples include Swiftreach, Reverse 9-1-1, WARN, etc.

Memorandum of Understanding: A document describing a bilateral or multilateral agreement between parties. It expresses a convergence of will between the parties, indicating an intended common line of action. It is often used in cases where parties either do not imply a legal commitment or in situations where the parties cannot create a legally enforceable agreement.

Notification: The alerting of emergency response personnel and the public to an imminent emergency situation, the related effects that specific hazards may cause, and appropriate protective actions.

Pick-Up Point: Areas where evacuees can assemble for transport to a shelter. Pick-up points are normally used to assist in the evacuation of those with transportation needs.

Primary Evacuation Route: A designated roadway to serve as the preferred route of egress from an affected area. Primary evacuation routes usually offer the most efficient, highest capacity capability for getting an affected population to safety.

Reception: The receipt of evacuees from an affected area in a safe area. Reception is normally coordinated by both the evacuating and host jurisdictions.

Re-Entry: The organized, phased, and supervised return of evacuees into an area affected by an emergency. Re-entry should only be permitted following damage assessments, inspections, public health clearances, and the resumption of basic services.

Resource: Personnel and major items of equipment, supplies, and facilities available or potentially available for assignment to incident operations and for which status is maintained. Resources are described by kind and type and may be used in operational support or supervisory capacities at an incident or at an Emergency Operations Center.

Secondary Evacuation Route: A designated roadway to serve as an alternate route of egress from an affected area. Secondary evacuation routes usually offer an additional high-capacity capability for getting an affected population to safety as well as serve as feeder routes to primary evacuation routes.

Shelter-in-Place: A process for taking immediate shelter in a location readily accessible to the affected individual by sealing a single area (an example being a room) from outside contaminants and shutting off all HVAC systems.

Special Facility: A facility that either adds to the overall risk during the implementation of an evacuation or a facility that creates a specific logistical concern during evacuation

implementation. Examples of logistical concerns could be a high number of special needs populations, a densely populated area, a type of specialized care at a site, etc.

Special Needs (Population): A population whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures, who have limited English Proficiency, or who are non-English-speaking; or who are transportation disadvantaged.

Transportation Assistance: Mobility-support services that are available to individuals with disabilities, the elderly, or those with temporary needs, who are unable to drive from one place to the next or use public transit due to physical or mental limitations.

Urban to Rural Evacuation: The evacuation of a population from an urban area to a rural area based on the perception of less risk in the urban area. Urban to rural evacuations present a challenge to the reception (i.e., rural) jurisdiction because infrastructure and public services would likely not be 1.) As robust as the evacuating population is used to and 2.) Large enough to handle the influx of people from the urban area.

Warning: The alerting of emergency response personnel and the public to the threat of extraordinary danger and the related effects that specific hazards may cause.

Web 2.0: Internet-based technologies that can be used to supplement emergency notification and warning activities. Examples include Facebook, Twitter, etc.

List of Acronyms

ARC	American Red Cross
ATM	Automatic Teller Machine
BaseCap	Base (Roadway) Capacity
CAMC	Charleston Area Medical Center
CEO	Chief Elected Official
CERT	Community Emergency Response Team

CRS	Community Rating System
DFIRM	Digital Flood Insurance Rate Map
EAS	Emergency Alert System
EBS	Emergency Broadcast System
EHS	Extremely Hazardous Substance
EM	Emergency Management
EMPG	Emergency Management Performance Grant
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPI	Emergency Public Information
ESF	Emergency Support Function
EVI	Evacuation, Immediate (i.e., EAS designation)
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HCM	Highway Capacity Manual
HSPD	Homeland Security Presidential Directive
IAP	Incident Action Plan
IC	Incident Command(er)
ICP	Incident Command Post
ICS	Incident Command System
IRP	Interoperable Radio Project
JIC	Joint Information Center
KPEPC	Kanawha Putnam Emergency Planning Committee
KRT	Kanawha Valley Regional Transportation Authority
LE	Law Enforcement
LP	Local Primary (as in EAS warning point)
MOU	Memorandum of Understanding
MU	Marshall University
NCR	National Capital Region
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NRF	National Response Framework
NWS	National Weather Service
OEM	Office of Emergency Management

OES	Office of Emergency Services
PeakCap	Peak (Roadway) Capacity
PIO	Public Information Officer
POC	Point of Contact
SEOC	State Emergency Operations Center
SITREP	Situation Report
SOG	Standard Operating Guideline(s)
SR	State Route
U2R	Urban to Rural (Evacuation)
UC	University of Charleston
US	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDHS	United States Department of Homeland Security
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
WCS	Worst Case Scenario
WV	West Virginia
WVDHHR	West Virginia Department of Health and Human Resources
WVDHSEM	West Virginia Division of Homeland Security & Emergency Management
WVDOH	West Virginia Division of Highways
WVDOT	West Virginia Department of Transportation
WVSP	West Virginia State Police
WVSU	West Virginia State University
WVU	West Virginia University