# FRP

## FLOOD RESPONSE PLAN

CITY OF PORTLAND, INDIANA

Copy No. _____
Revision No. 0
MONTH YEAR

*This development of this plan is an initiative of the Indiana Silver Jackets. Funding was made available through a grant from the Indiana Office of Community and Rural Affairs (OCRA) to the Indiana Department of Homeland Security (IDHS). Christopher B. Burke Engineering, LLC (CBBEL) was retained by IDHS and OCRA to interact with community officials and facilitate the development of this plan.*

This plan should be activated for an affected region of the City of Portland when a wet weather (rainfall) event results in the occurrence of a flood (stream spilling out of its banks and starting to cause damage) of any small to intermediate sized stream in Portland or when an action stage is detected, either in the city or upstream in Jay County.

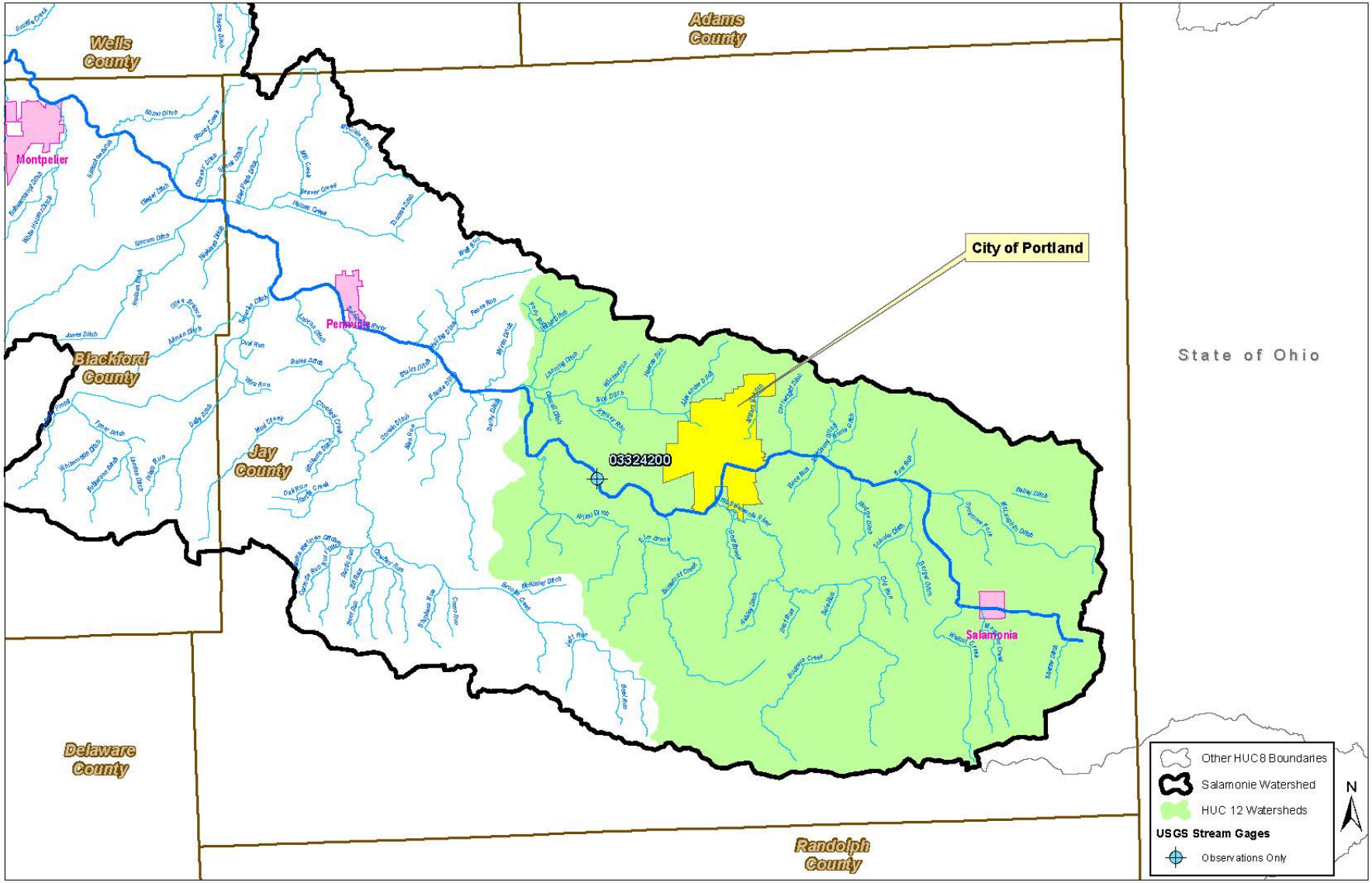


*Figure i: Watershed Map*

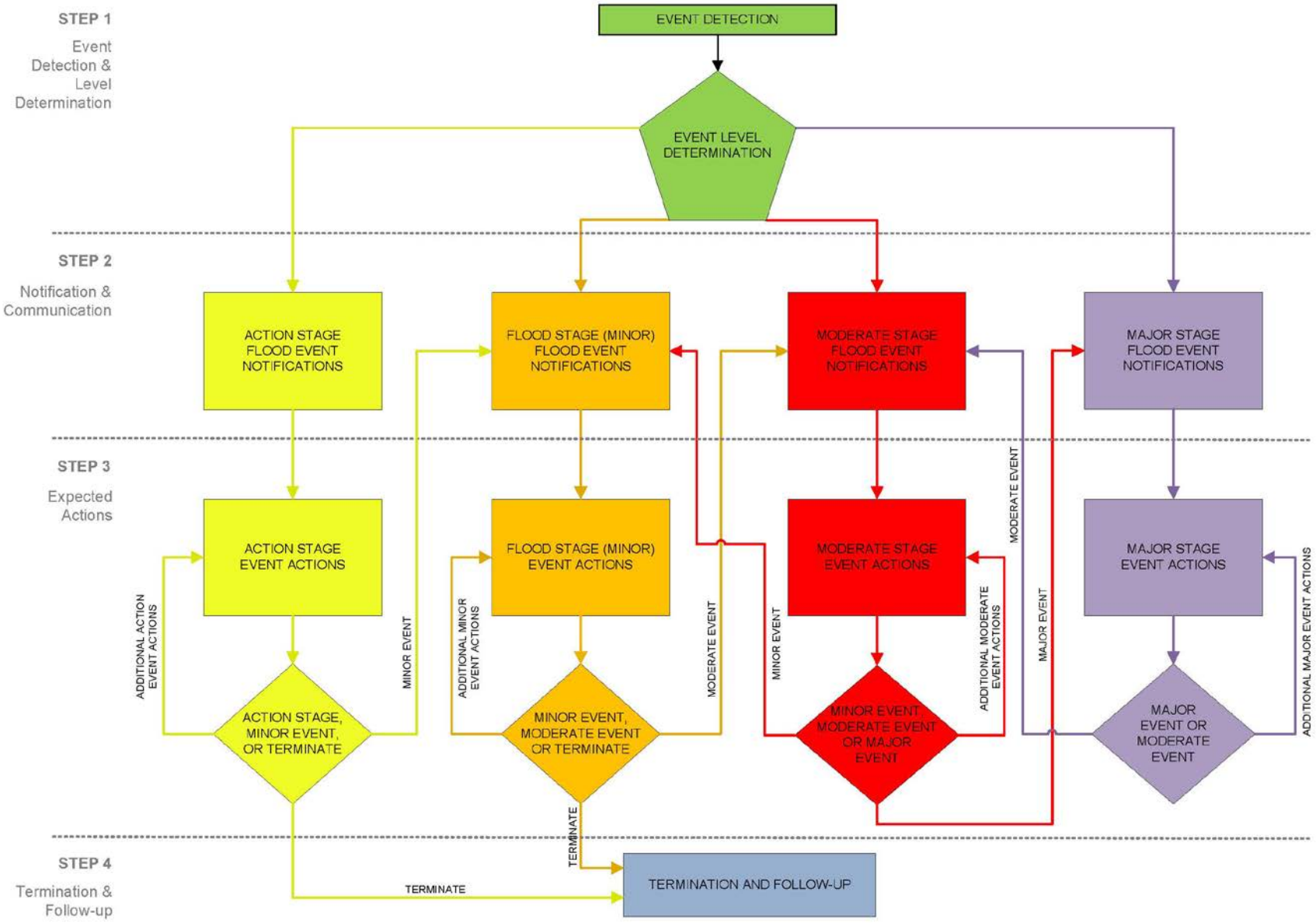


*Figure ii: FRP Flow Chart*

# SUMMARY OF FRP PROCESS

There are four steps that must be followed when a flood event is detected in the City of Portland. The steps are:

Step 1: Event Detection and Level Determination
Step 2: Notification and Communication
Step 3: Expected Actions
Step 4: Termination and Follow-up

A flood event is defined as water levels adjacent to rivers, streams, creeks, ditches, and other major waterways or in other low-lying areas that begin to impact life and/or property. The steps for this FRP are illustrated in flow chart in Figure ii and summarized below.

## Step 1 - Event Detection and Level Determination

During the initial step, a flood event is detected and classified by the FRP Coordinator into one of the following flood event levels:

- Action Stage Flood Event
- Flood Stage (Minor Flood) Event
- Moderate Stage Flood Event
- Major Stage Flood Event

Information to help the FRP Coordinator determine which of the above event levels is applicable is provided in Section 1 of this FRP. As part of this step, the FRP Coordinator will also determine the approximate expected extent and severity of the flood event so that it can be conveyed as part of the notification messages.

## Step 2 - Notification and Communication

After the event level has been determined, notifications are made in accordance with the appropriate notification flow chart provided in Section 2 of this FRP.

## Step 3 - Expected Actions

After the initial notifications are made, the FRP Coordinator executes the appropriate flood response. During this step, there is a continuous process of taking actions, assessing the status of the situations, and keeping others informed through communication channels established during the initial notifications. The suggested actions to be taken for each flood event level are provided on Action Sheets in Section 3. The FRP may go through multiple event levels as the situation either improves or worsens.

## Step 4 - Termination and Follow-up

Once the event has ended or been resolved, recovery, termination, and follow-up procedures should be followed as outlined in Section 4. FRP operations can only be terminated after completing operations under an Action Stage or Flood Stage (Minor Flood) Event.

# ANNUAL REVIEW AND PERIODIC TEST

This FRP document will require an annual review and update to stay current. A periodic test of the FRP procedures is also required (test interval, typically 3 years) to ensure continued effectiveness. For annual review and periodic test procedures, reference Appendix H.

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# PRIVACY STATEMENT

This FRP is intended to identify general responsibilities and procedures of the City of Portland during a flood event. It is designed as a source of reference for the FRP Coordinator, city leaders, and decision-makers and no reliance should be placed on it by others.

# ACKNOWLEDGEMENTS

This plan was prepared by Christopher B. Burke Engineering, LLC (CBBEL) for the City of Portland under the direction and guidance of representatives from the City of Portland, Jay County, and Indiana Department of Homeland Security.

# PURPOSE

Advanced warning of flood levels and associated impacted areas that are possible from an approaching storm greatly enhances the ability of individuals and communities to respond and protect themselves. The purpose of this FRP is to reduce the risk of human life loss, injury, and damage to property during a flood event in the City of Portland

# SCOPE

The scope of the FRP is limited to the actions that the FRP Coordinator will need to make decisions and to accurately inform others of the likely extent of flooding. Although several tools and guidance are provided to assist in determining the likely extent and depth of flooding in each neighborhood, impassible roads, flood-safe routes, and type of actions needed for response and evacuations, the response and evacuation standard operating procedures (SOPs) for emergency managers and first responders (EMA, Fire, Police, etc.) are not included in the FRP.

# PRE-REQUISITE TASKS

To ensure the full functionality of the FRP, the following tasks will need to be completed once the FRP has been adopted.

- Post the Flood-safe Route map (Exhibit 5) in the City and County garages and assign specific routes to Street Department and County Highway Crews. Prepare a Flood-safe Route SOP and add it to Appendix F.
- Purchase printed post-flood “Do Not Occupy” stickers and/or door hangers with instructions and contact information in multi-lingual format
- Purchase road closures barricades and high water signs and identify adequate storage space
- Identify a shelter that can accommodate pets, Humane Society is located in the floodplain
- Conduct a “how to” sandbag seminar and distribute handout (Appendix F)
- Develop a policy and protocol for proper sandbag disposal. This may be included with the County Debris Plan or as an SOP in Appendix F
- Re-establish the downtown business phone tree for emergency warning and notification

# REVISIONS

For revision procedures, reference Appendix D.

| Revision No. | Date | Revisions Made |
|---|---|---|
| 0 | (DATE) | Initial publication based on CBBEL FRP Format |

Revised pages inserted in this FRP by

_____
(Signature)

_____
(Printed Name)

_____
(Date)

# SECTION 1
# EVENT DETECTION AND LEVEL DETERMINATION

This section of the Flood Response Plan (FRP) describes the roles and responsibilities of various parties involved, provides a list of preparedness actions prior to a flood event, and provide details for the first step that must be followed whenever a flood event is detected in the City of Portland. This section also describes how an event is detected and provides information to assist the FRP Coordinator in determining the appropriate level for the event as it currently exists as well as the expected extent and severity of flooding.

## 1.1 Roles, Responsibilities, and Authorities

The following defines the roles, responsibilities, and authorities of key individuals for the FRP.

FRP Coordinator: The FRP Coordinator, as designated by the Mayor, has the authority to take the necessary actions described in this FRP and is responsible for providing initial, timely, and accurate notifications after the flood event level has been determined. The FRP Coordinator is also responsible for providing subsequent updates of the situation to assist in making decisions regarding warning and evacuation of the affected public. Once the flood event is terminated, the FRP Coordinator is responsible for developing an accurate summary of the flood fight event (Appendix G), as well as, updating, conducting, and maintaining a record of the FRP annual review, periodic test, and revisions included in Appendix H of this FRP.

County Emergency Management Agency (EMA) Director: The County EMA Director, or designee, is responsible for communicating the situation with County offices and officials and the IDHS District Coordinator as well as coordinating resources needed to aid the flood response and recovery effort.

On-Duty Dispatcher: The On-Duty Dispatcher is responsible for providing information to the FRP Coordinator to aid in the decision-making process during a flood event. Information may be received from the public, police and/or street crews. Using the mass notification software, the Dispatcher will be responsible for disseminating pre-scripted messages to the affected public.

Public Information Officer (PIO): The PIO, or designee, is responsible for coordinating with the Police and Fire Public Safety Communications staff and the EMA to disseminate a unified message to the media and general public in the City of Portland. Pre-scripted messages are provided in Section 2.

Floodplain Administrator: The Floodplain Administrator is responsible for providing past flood and floodplain data as needed, as part of the decision-making process and leading the collection of data during and after the flood event.

## 1.2 Flood Preparedness and Readiness

Flooding is a common occurrence. Preparedness and readiness of the City's and County's resources (staff, structures, and equipment) is essential to reduce flood losses and improve recovery efforts. Prior to a flood event and at least two times per year, the FRP Coordinator will:

A. Review NWS flood forecast products to ensure the most recent resources are being used (Appendix C)
B. Confirm with the USGS that automated stream gage alert for the Salamonie River gage downstream of Portland has been set up and are enabled for FRP Coordinator and other key staff (https://water.usgs.gov/wateralert/)
C. Confirm that the names and contact information is current on the Notification List (Appendix D-1)
D. Conduct a test of radios, cell phones, and mass notification software used for communication during a flood fight
E. Review Flood Impact Area maps (Exhibit 1 to 3) for any changes in land use and/or access
F. Confirm that a copy of the Flood-safe Route map (Exhibit 4) is posted in the City Street Department and County Highway garages and that routes remain open
G. Confirm there is adequate sandbag inventory at the Street Department
H. Confirm there are adequate "High Water" signs and street barricades in the City Street Department garage are in good condition and functional
I. Confirm with the EMA that a list of pilots willing to fly during a flood and take aerial photos has been developed and coordination has been made in advance so that their services can be engaged when needed in a timely manner
J. Confirm that adequate "Do Not Occupy" stickers and/or door hangers are available and in a multi-lingual format for post-flood damage assessment

## 1.3 Event Detection

Depending on the availability of a USGS stream gage and/or a co-located NWS AHPS station on the flooding source, a flood event may be detected by either of the following (listed in the order of reliability and ease of use):

- For Gaged Streams:
  - Although, as shown in Figure i, there is a stream gage along Salamonie River within the watershed, based on experience with earlier floods in Portland and due to its location further downstream of the City and a much larger drainage area, this gage is not considered as a reliable tool for detecting or determining event level along the reach of Salamonie River in Portland. Consequently, the protocol noted below for ungaged streams is recommended to be used for detecting and/or determining the event level along Salamonie River.
- For Ungaged Streams:
  - Pairing of NWS Flash Flood Guidance (Appendix C-2) and Precipitation Forecast (Appendix C-1) products in the area. A flood event is detected when the forecast precipitation depth is higher than the precipitation depth deficit noted in the Flash Flood Guidance for the same duration.
  - Determine the forecast depth of precipitation for various durations from site referenced in Appendix C-1
  - Compare the precipitation depth from previous step to Flash Flood Forecast for the same durations to determine if a flood event is likely or imminent (Appendix C-5)
- Report of flooding in a low-lying area

After a flood event is detected and reported, the FRP Coordinator is responsible for determining the appropriate flood event level and the expected extent and severity of the flooding.

## 1.4 Event Level Determination

### 1.4.1 Flood Event

A flood event is defined as water levels adjacent to rivers, streams, creeks, ditches, and other major waterways or in other low-lying areas that begin to impact life and/or property. Flood event levels are defined in Section 1.4.2.

### 1.4.2 Event Level Determination

The FRP Coordinator shall be responsible for categorizing flood events as one of the following event levels: Action Stage Flood Event, Flood Stage (Minor Flood) Event, Moderate Stage Flood Event, and Major Stage Flood Event. Flood event levels are based on flood forecast information provided by the NWS and pairing of Flash Flood Guidance and Precipitation Forecast in the area.

Action Stage Flood Event – is defined as a warning stage or an initial trigger level for a more intensive monitoring of the gage heights.

Flood Stage (Minor Flood) Event – is defined as minimal or no property damage but possibly some public threat or inconvenience.

Moderate Stage Flood Event – is defined as some inundation of structures and roads near streams resulting in some evacuations of people and/or transfer of personal property to higher elevations if necessary.

Major Stage Flood Event – is defined as extensive inundation of structures and roads resulting in significant evacuations of people and/or transfer of personal property to higher elevations.

### 1.4.3 Event Level Determination Guidance

Table 1.1 shall be used as a guide for determining the appropriate event level. This table attempts to be all inclusive; however, an event or condition may arise that is not covered in this table. In this circumstance, always designate the higher event level as the governing event level.

# TABLE 1.1
# EVENT LEVEL DETERMINATION GUIDANCE

| OBSERVATION | EVENT LEVEL |
|---|---|
| • Pairing of precipitation forecast and precipitation depth-duration-frequency curve indicates a potential Action Stage Flood level (Appendix C-1 and Appendix C-3)<br>• Report of streams at bankfull height<br>• Judgment of FRP Coordinator based on a variety of sources | **Action Stage Flood Event** |
| • Pairing of precipitation forecast and precipitation depth-duration-frequency curve indicates a potential Flood Stage level (Appendix C-1 and Appendix C-3)<br>• Report of minor flooding in low-lying areas<br>• Judgment of FRP Coordinator based on a variety of sources | **Flood Stage (Minor Flood) Event** |
| • Pairing of precipitation forecast and precipitation depth-duration-frequency curve indicates a potential Moderate Stage Flood level (Appendix C-1 and Appendix C-3)<br>• Report of moderate flooding in low-lying areas<br>• Judgment of FRP Coordinator based on a variety of sources | **Moderate Stage Flood Event** |
| • Pairing of precipitation forecast and precipitation depth-duration-frequency curve indicates a potential Major Stage Flood level (Appendix C-1 and Appendix C-3)<br>• Report of major flooding beyond low-lying areas<br>• Judgment of FRP Coordinator based on a variety of sources | **Major Stage Flood Event** |

## 1.5 Determination of the Expected Flood Extent and Severity

Determining the expected extent and severity of an in-progress or an impending flood event is extremely useful for the first responders so that they can focus public notifications to areas that are significantly impacted by the flood event. As discussed later in Section 3 of this FRP, such a determination would also provide crucial guidance for making decisions associated with warning and evacuation of the public at risk.

**1.5.1 Determining Expected Flood Extent and Severity for Ungaged Streams in Portland** (for the purpose of this FRP, the Portland reach of Salamonie River is also considered "ungagged")
Once a Flood Event has been detected and an Event Level has been assigned, the following steps should be taken to determine the expected extent and severity of an in-progress or an impending flood event along all other streams:

A. Obtain the best available precipitation forecast within the watershed of the subject stream associated with the flooding source(s) for which the flooding event has been detected (Appendix C-1).
B. Go to Precipitation-Depth-Duration-Frequency Curve in Appendix C-3 and look up the next highest frequency line associated with the expected forecast rainfall depth and duration. If the determined frequency is associated with an event smaller than the 10% (10-year) flood, assign the 10-year flood frequency to the event.
C. Go to Exhibits 1 through 4, respectfully for 10% (10-year) through 0.2% (500-year) floods, to determine the approximate expected extent of the flooding and impacts associated with the current (or impending) event affecting the subject flooding source.

# SECTION 2
# NOTIFICATION AND COMMUNICATION

This section of the FRP describes the appropriate notifications that should be made and pre-scripted messages that should be conveyed after the FRP Coordinator has determined the flood event level. This section also outlines the communication systems that are available for making notifications as well as a sample media releases and a list of media contacts. Notifications should be made in accordance with the appropriate Notification Flow Chart provided in this Section.

## 2.1 Communication Systems

All communications among the Flood Fight Team during the Action Flood Stage are to be conducted by email or text (read receipt required) to alert the team of the situation and to be on standby. Communications regarding Minor, Moderate, and Major Flood Stages are to be conducted verbally via cell phone and/or in person in the EOC depending on the severity of the event. The flood event may be terminated by email or text (read receipt required) or in person if everyone is gathered in the EOC.

## 2.2 Pre-scripted Messages

The following pre-scripted messages may be used as a guide to communicate the status of an event. The intent is to convey critical information as efficiently as possible. Note that although the pre-scripted messages for Moderate and Major flood events use “Prepare to Evacuate” and “Evacuate Immediately” default phrases to convey the urgency and standard response to such events, in certain situations, the first responders may deem appropriate to initiate procedures for an alternative type of action, such as, “shelter in place”.

<u>Action Stage Event</u>

- This is *(name),* FRP Coordinator. I am making this call in accordance with the City’s Flood Response Plan.
- An Action Flood Stage Event has been detected affecting the Portland area.
- Minor flooding condition may exist along the *(name)* rivers and/or low-lying areas (*use information from Section 1.5 (extent and severity) to be more specific if flooding is isolated to a certain area).*
- The FRP has been activated, currently at the Action Flood Stage Event level.
- I will keep you apprised of the situation. The best number to contact me during this event is (*emergency contact number*).

<u>Flood Stage (Minor Flood) Event</u>

- This is *(name),* FRP Coordinator. I am making this call in accordance with the City’s Flood Response Plan.
- A Flood Stage Event has been detected affecting the Portland area.
- Minor flooding condition exists along the *(name)* rivers and/or low-lying areas (*use information from Section 1.5 (extent and severity) to be more specific if flooding is isolated to a certain area*).

- The FRP has been activated, currently at the Flood Stage (Minor Flood) Event level.
- I will keep you apprised of the situation. The best number to contact me during this event is (*emergency contact number*).

Moderate Stage Flood Event

- This is *(name),* FRP Coordinator. I am making this call in accordance with the City's Flood Response Plan.
- A Moderate Stage Flood Event has been detected affecting the Portland area.
- Moderate flooding condition exists along the *(name)* rivers and/or low-lying areas (*use information from Section 1.5 (extent and severity) to be more specific if flooding is isolated to a certain area*).
- The FRP has been activated, currently at the Moderate Stage Flood Event level.
- **Prepare to evacuate** along the (*identify potential evacuee / evacuation limits*).
- I will keep you apprised of the situation. The best number to contact me during this event is (*emergency contact number*).

Major Stage Flood Event

- This is *(name),* FRP Coordinator. I am making this call in accordance with the City's Flood Response Plan.
- A Major Stage Flood Event has been detected affecting the Portland area.
- Major flooding condition exists along the *(name)* rivers and/or low-lying areas (*use information from Section 1.5 (extent and severity) to be more specific if flooding is isolated to a certain area*).
- The FRP has been activated, currently at the Major Stage Flood Event level.
- **Evacuate immediately** along the (*identify potential evacuee / evacuation limits*).
- I will keep you apprised of the situation. The best number to contact me during this event is (*emergency contact number*).

Termination of Flood Event

- This is *(name),* FRP Coordinator. I am making this call in accordance with the City's Flood Response Plan.
- The flood event has been terminated.
- Areas adjacent to *(name)* rivers and/or low-lying areas (*use information from Section 1.5 (extent and severity) to be more specific if flooding is isolated to a certain area*) may still be flooded.

## 2.3 Public Affairs Plan

In the event of a flood event, the PIO, or designee, will be alerted and briefed on the situation and will deliver one of the following pre-scripted announcements for public release based on the existing conditions and information from the FRP Coordinator, Public Safety Communication Specialist, and EMA. Targeted announcements to the affected public will be sent using mass communication software and/or social media. Note that the phrases "Prepare to Evacuate" and "Evacuate Immediately" used in the following template public announcements may be revised or amended

when other types of actions, such as “shelter in place”, are deemed more appropriate by the first responders for a particular area.

Announcement for Action Stage Flood Event

THE CITY OF PORTLAND ANNOUNCED AT (*time*) TODAY THAT STRUCTURES AND ROADS ADJACENT TO THE *(name of river or stream)* AND IN LOW-LYING AREAS MAY EXPERIENCE POSSIBLE FLOODING. THE AREAS AND/OR ROADS OF CONCERN INCLUDE (*vary depending on area affected*). ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Announcement for Flood Stage (Minor Flood) Event

THE CITY OF PORTLAND ANNOUNCED AT (*time*) TODAY THAT STRUCTURES AND ROADS ADJACENT TO THE *(name of river or stream)* AND IN LOW-LYING AREAS MAY EXPERIENCE MINOR FLOODING. THE AREAS AND/OR ROADS OF CONCERN INCLUDE (*vary depending on area affected*). ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Announcement for Moderate Stage Flood Event

THE CITY OF PORTLAND ANNOUNCED AT (*time*) TODAY THAT STRUCTURES AND ROADS ADJACENT TO THE *(name of river or stream)* AND IN LOW-LYING AREAS MAY EXPERIENCE MODERATE FLOODING. THE AREAS AND/OR ROADS OF CONCERN INCLUDE (*vary depending on area affected*). SHOULD THIS CONDITION WORSEN, THE FOLLOWING AREAS SHOULD PREPARE TO EVACUATE: (*list areas and location of shelters for both residents and pets*)

THE CITY OF PORTLAND SPOKESPERSON SAID THAT PEOPLE SHOULD AVOID DRIVING OR WALKING ON ROADS OR BRIDGES THAT ARE COVERED BY WATER. THE DEPTH OF THE WATER OR STRENGTH OF THE CURRENT MAY BE DECEIVING. AS LITTLE AS TWO FEET OF WATER CAN CARRY AWAY A CAR AND SIX INCHES CAN KNOCK A PERSON OFF THEIR FEET. ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Announcement for Major Stage Flood Event

**URGENT, URGENT:** THE CITY OF PORTLAND ANNOUNCED AT (*time*) TODAY THAT STRUCTURES AND ROADS ADJACENT TO THE *(name of river or stream)* AND IN LOW-LYING AREAS MAY EXPERIENCE MAJOR FLOODING. THE AREAS AND.OR ROADS OF CONCERN INCLUDE (*vary depending on area affected*). THE FOLLOWING AREAS ARE ADVISED TO EVACUATE IMMEDIATELY: (*list areas and location of shelters for both residents and pets*).

THE CITY OF PORTLAND SPOKESPERSON SAID THAT PEOPLE SHOULD AVOID DRIVING OR WALKING ON ROADS OR BRIDGES THAT ARE COVERED BY WATER. THE DEPTH OF THE WATER OR STRENGTH OF THE CURRENT MAY BE DECEIVING. AS LITTLE AS TWO FEET OF WATER CAN CARRY AWAY A CAR AND SIX INCHES CAN KNOCK A PERSON OFF THEIR FEET. ADDITIONAL INFORMATION WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

Announcement for Termination of Flood Event

THE CITY OF PORTLAND ANNOUNCED AT (*time*) TODAY THAT THE FLOOD WATER IN *(name of river or stream)* IS RECEDDING AND THE FLOOD EVENT HAS BEEN TERMINATED. HOWEVER, STRUCTURES AND ROADS ADJACENT TO THE *(name of river or stream)* AND IN LOW-LYING AREAS MAY STILL BE FLOODED. THE AREAS AND.OR ROADS OF CONCERN INCLUDE (*vary depending on area affected*). RE-ENTRY IS NOW POSSIBLE FOR THE FOLLOWING EVACUATED AREAS: (*list areas*). *[If re-entry is not possible]* ADDITIONAL INFORMATION ON RE-ENTRY TO THE FOLLOWING EVACUATED AREAS *(list areas)* WILL BE RELEASED AS PROMPTLY AS POSSIBLE.

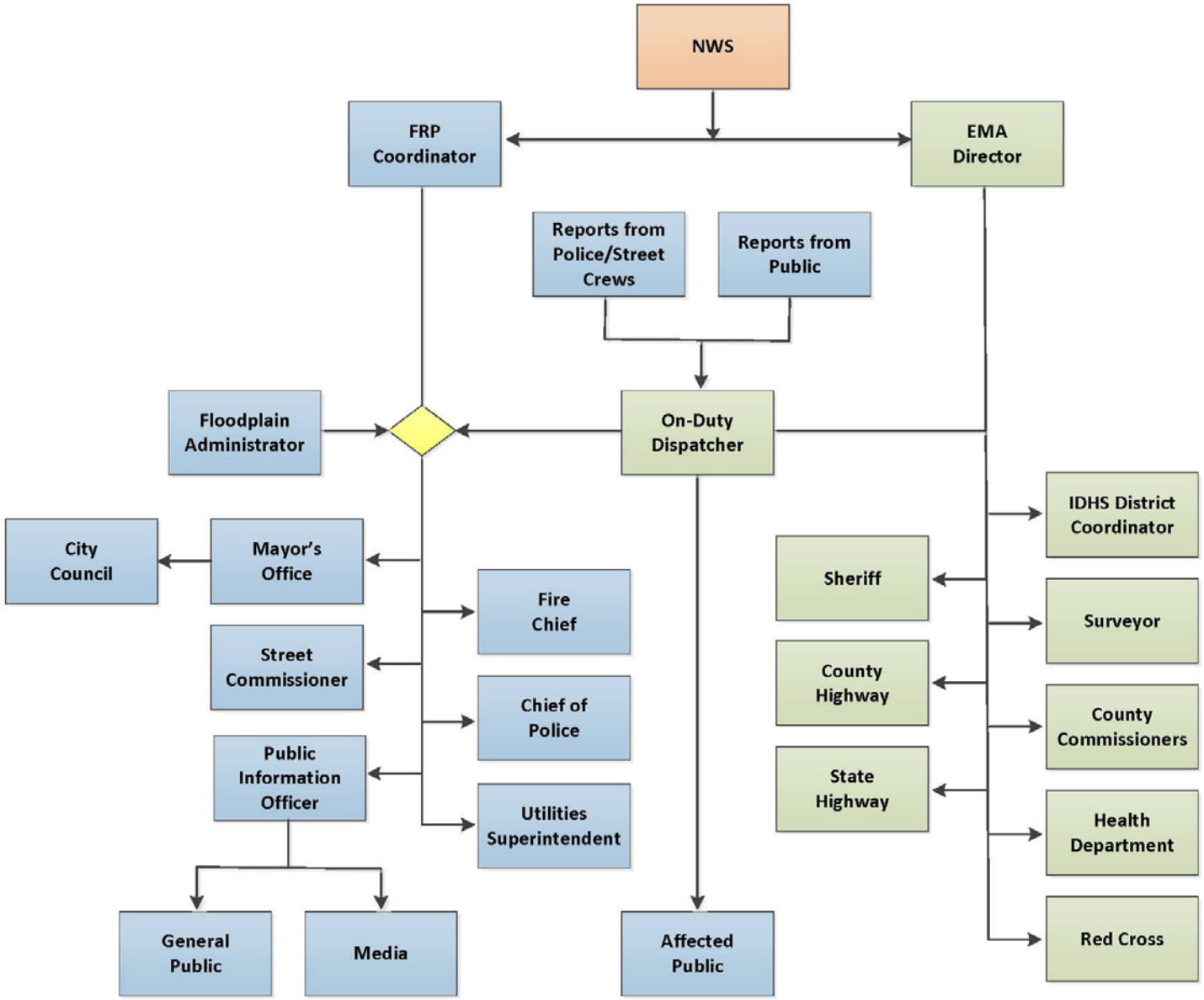
THE CITY OF PORTLAND SPOKESPERSON SAID THAT PEOPLE SHOULD AVOID DRIVING OR WALKING ON ROADS OR BRIDGES THAT ARE COVERED BY WATER. THE DEPTH OF THE WATER OR STRENGTH OF THE CURRENT MAY BE DECEIVING. AS LITTLE AS TWO FEET OF WATER CAN CARRY AWAY A CAR AND SIX INCHES CAN KNOCK A PERSON OFF THEIR FEET.

## 2.4 Notification Flow Chart

The following flow chart (Figure 2.1) illustrates the flow of information during a flood event. Contact information is included in Appendix D. The FRP Coordinator is responsible for keeping this information current. The primary source of information is from the FRP Coordinator. The chart is intended for notification and it does not assign authority over another City or County Department or Agency. Mutual aid agreements and standard operating procedures prepared outside of the FRP have been established for these entities to work together in an emergency situation.

As stated earlier in the Scope, the FRP is limited to the actions that the FRP Coordinator will need to make decisions and to accurately inform others of the likely extent of flooding. Although several tools and guidance are provided to assist in determining impassible roads, flood-safe routes, and type of actions needed for response and evacuations, the response and evacuation SOPs for emergency managers and first responders (EMA, Fire, Police, etc.) are not included in the FRP.

# FIGURE 2.1: FLOOD EVENT NOTIFICATION FLOW CHART



# SECTION 3
# EXPECTED ACTIONS

## 3.1 Action Data Sheets

After the FRP Coordinator has determined the event level and have made the appropriate notifications, the FRP Coordinator shall take action, using the following Action Data Sheets for Action Stage Flood Event, Flood Stage (Minor Flood) Event, Moderate Stage Flood Event, and Major Stage Flood Event as a guide. If resources described in the Action Data Sheets are not available, the FRP Coordinator should adapt with the available resources. Appendix D contains a summary table of expected actions for key individuals identified in the notification flow charts in Section 2.

# ACTION DATA SHEET 3.1
# EXPECTED ACTIONS
## Action Stage Flood Event

| ACTIONS |
|---|
| **A. Determine Areas Affected & Make Notifications**<br>• FRP Coordinator determines extent and severity of areas affected based on:<br>o NWS flood forecast resources (see Section 1.5)<br>o Input from On-Duty Dispatcher (reports of flooding in low-lying areas from police/streets crews and public) and Floodplain Administrator<br>• FRP Coordinator makes notifications on Figure 2.1 using pre-scripted messages in Section 2.2. Confirm EMA notifications have been made.<br>**B. Monitor Data & Conditions**<br>• FRP Coordinator (and EMA) monitor NWS flood forecast resources (refer to Table 1.1)<br>• FRP Coordinator confirms that flood-safe routes are clear (Exhibit 4)<br>• Confirms the Street Department has cleaned storm inlets and flood-safe routes are free of standing water<br>**C. Conduct Warning & Evacuation**<br>• No warning or evacuation during an Action Stage Flood Event<br>**D. Record Observations & Actions**<br>• FRP Coordinator confirms that all entities involved so far in the flood fight have recorded their information, observations, and actions using ICS Forms (Appendix B) |
| **EVALUATION / DECISION** |
| FRP Coordinator evaluates the situation as events progress, or whenever conditions change. Use Table 1.1 determine whether:<br>A. The event can be terminated<br>B. The event remains at the current Action State Flood Event.<br>C. The event warrants escalation to a Flood Stage (Minor Flood) Event<br>Based on this determination, follow the appropriate actions below. |

| A) TERMINATE EVENT | B) EVENT REMAINS CURRENT | C) EVENT ESCALATES |
|---|---|---|
| Go to Termination and Follow-up (Section 4) | Continue recommended actions on this sheet | Go to Minor Flood Actions (Sheet 3.2) |

# ACTION DATA SHEET 3.2
# EXPECTED ACTIONS
## Flood Stage (Minor Flood) Event

**ACTIONS**

**A. Determine Areas Affected & Make Notifications**

- FRP Coordinator determines extent and severity of areas affected based on:
  - NWS flood forecast resources (see Section 1.5)
  - Input from the On-Duty Dispatcher (reports of flooding in low-lying areas from police/streets crews and public) and Floodplain Administrator
- FRP Coordinator makes notifications on Figure 2.1 using pre-scripted messages in Section 2.2. Confirm EMA notifications have been made.

**B. Monitor Data & Conditions**

- FRP Coordinator (and EMA) monitor NWS flood forecast resources (refer to Table 1.1)
- FRP Coordinator confirms that flood-safe routes are clear (Exhibit 4)
  - Confirms the Street Department has cleaned storm inlets and flood-safe routes are free of standing water

**C. Conduct Warning & Evacuation**

- No warning above and beyond what is provided by the NWS and no evacuation during a Flood Stage (Minor Flood) Event

**D. Record Observations & Actions**

- FRP Coordinator confirms that all entities involved so far in the flood fight have recorded their information, observations, and actions using ICS Forms (Appendix B)

**EVALUATION / DECISION**

FRP Coordinator evaluates the situation as events progress, or whenever conditions change. Use Table 1.1 determine whether:

A. The event can be terminated (consult the USGS gage to confirm stages are steadily going down)
B. The event remains at the current Flood Stage (Minor) Event.
C. The event warrants escalation to a Moderate Stage Flood Event

Based on this determination, follow the appropriate actions below.

| A) TERMINATE EVENT | B) EVENT REMAINS CURRENT | C) EVENT ESCALATES |
|---|---|---|
| Go to Termination and Follow-up (Section 4) | Continue recommended actions on this sheet | Go to Moderate Flood Actions (Sheet 3.3) |

# ACTION DATA SHEET 3.3
# EXPECTED ACTIONS
## Moderate Flood Event

| ACTIONS |
|---|
| **A. Determine Areas Affected & Make Notifications**<br>• FRP Coordinator determines extent and severity of areas affected based on:<br>o NWS flood forecast resources (see Section 1.5)<br>o Input from the On-Duty Dispatcher (reports of flooding in low-lying areas from police/streets crews and public) and Floodplain Administrator (Exhibit 1)<br>• FRP Coordinator makes notifications on Figure 2.1 using pre-scripted messages in Section 2.2. Confirm EMA notifications have been made.<br>**B. Monitor Data & Conditions**<br>• FRP Coordinator (and EMA) monitor NWS flood forecast resources (refer to Table 1.1)<br>• FRP Coordinator confirms that flood-safe routes are clear (Exhibit 4)<br>o Confirms the Street Department has cleaned storm inlets and flood-safe routes are free of standing water<br>o Confirms the Street Department has installed “high water” signs and street barricades where needed and documented the location via the On-Duty Dispatcher (use Exhibit 4 and pertinent information from Exhibit 1 as a guide)<br>• FRP Coordinator confirms Street Department has sandbags ready for pick up<br>**C. Conduct Warning & Evacuation**<br>• FRP Coordinator identifies impassable roads (Exhibit 1) and confirms with the Street Department<br>• FRP Coordinator identifies the affected public and the need to prepare for evacuation or shelter-in-place, as appropriate (Exhibit 1)<br>• FRP Coordinator confirms with Red Cross that shelters have been identified and they will be available to receive the affected public<br>• FRP Coordinator confirms with the On-Duty Dispatcher that a mass notification message has been sent to affected public and PIO has sent information to the general public and media outlets (see Section 2 for pre-scripted message)<br>• FRP Coordinator confirms with the Floodplain Administrator that post-flood damage data collection has been initiated (Appendix E)<br>**D. Record Observations & Actions**<br>• FRP Coordinator confirm that all entities involved so far in the flood fight have recorded their information, observations, and actions using ICS Forms (Appendix B) |

| **EVALUATION / DECISION** | | |
|---|---|---|
| FRP Coordinator evaluates the situation as events progress, or whenever conditions change. Use Table 1.2 determine whether:<br>A. The event warrants downgrade to Flood Stage (Minor) Event. Contacts on Figure 2.1 Notification Flow Chart shall be notified of downgrade.<br>B. The event remains at the current Moderate Stage Flood Event.<br>C. The event warrants escalation to Major Stage Flood Event.<br><br>Based on this determination, follow the appropriate actions below. | | |
| **A) DOWNGRADE EVENT** | **B) EVENT REMAINS CURRENT** | **C) EVENT ESCALATES** |
| Go to Minor Flood Actions (Sheet 3.2) | Continue recommended actions on this sheet | Go to Major Flood Actions (Sheet 3.4) |

# ACTION DATA SHEET 3.4
# EXPECTED ACTIONS
## Major Flood Event

**ACTIONS**

**A. Determine Areas Affected & Make Notifications**

- FRP Coordinator determines extent and severity of areas affected based on:
  - USGS stream gages and NWS flood forecast resources (see Section 1.5)
  - Input from On-Duty Dispatcher (reports of flooding in low-lying areas from police/streets crews and public) and Floodplain Administrator (Exhibit 1)
- FRP Coordinator makes notifications on Figure 2.1 using pre-scripted messages in Section 2.2. Confirm EMA notifications have been made.
- FRP Coordinator confirms the EMA has opened the EOC and Flood Fight Team has been assembled

**B. Monitor Data & Conditions**

- FRP Coordinator (and EMA) monitor USGS stream gages and NWS flood forecast resources (refer to Table 1.1)
- FRP Coordinator confirms that flood-safe routes are clear (Exhibit 4)
  - Confirms the Street Department has cleaned storm inlets and flood-safe routes are free of standing water
  - Confirms the Street Department has installed “high water” signs and street barricades where needed and documented the location in GIS via the On-Duty Dispatcher (use Exhibit 5 and pertinent information from Exhibit 2 and Exhibit 3 as a guide)

**C. Conduct Warning & Evacuation**

- FRP Coordinator identifies impassable roads (Exhibit 1 thru Exhibit 3) and confirms with the Street Department
- FRP Coordinator identifies the affected public and the need to prepare for evacuation or shelter-in-place, as appropriate (Exhibit 1 thru Exhibit 3)
- FRP Coordinator confirms with Red Cross that shelters are open and able to receive the affected public and pets
- FRP Coordinator confirms with the On-Duty Dispatcher that a mass notification message has been sent to affected public and PIO has sent information to the general public and media outlets (see Section 2 for pre-scripted message)
- FRP Coordinator confirms that the Police and Fire Departments are evacuating areas as needed
- FRP Coordinator confirms with the Floodplain Administrator that post-flood damage data collection has been initiated (Appendix E)

**D. Record Observations & Actions**

- FRP Coordinator confirms that all entities involved so far in the flood fight have recorded their information, observations, and actions using ICS Forms (Appendix B)

**EVALUATION / DECISION**

FRP Coordinator evaluates the situation as events progress, or whenever conditions change. Determine whether:

A. The event warrants downgrade to Moderate Stage Flood Event. Contacts on Figure 2.2 Notification Flow Chart shall be notified of downgrade.
B. The event remains at the current Major Stage Flood Event.

Based on this determination, follow the appropriate actions below.

| A) DOWNGRADE EVENT | B) EVENT REMAINS CURRENT | |
|---|---|---|
| Go to Moderate Flood Actions (Sheet 3.3) | Continue recommended actions on this sheet | |

# SECTION 4
# TERMINATION AND FOLLOW-UP

Once FRP operations have begun, the FRP operations must eventually be terminated and follow-up procedures completed. As shown on Figure ii, FRP operations can only be terminated after completing operations under an Action Stage Flood Event or a Flood Stage (Minor Flood) Event.

## 4.1 Termination of the Flood Fight & Follow-up Responsibilities

The FRP Coordinator is responsible for terminating the flooding event; notifying and initiating the recovery and debris removal process. The following actions for follow-up may vary depending on the flood event detected.

**A. Terminate Flood Fight Event**

- FRP Coordinator makes notifications on Figure 2.1 and confirms EMA notifications have been made
- FRP Coordinator confirms that PIO and the On-Duty Dispatcher have notified the general and affected public (respectively) that the flood event has been terminated and that possible flooding of structures and roads along rivers and in low-lying areas may have occurred and information about re-entry to evacuated areas (if applicable).
- FRP Coordinator confirms EMA has closed the EOC as appropriate

**B. Clear Roads & Flood Impact Areas**

- FRP Coordinator confirms with the Street Department that flood-safe routes have been run (Exhibit 5) and that storm inlets have been cleaned and routes are free of standing water
- As standing water subsides, the FRP Coordinator ensure with the Street Department has collected “high water” signs and street barricades from impassable roads and that storm inlets and travel lanes on these roads are now clear for use.
- If areas were evacuated, the FRP Coordinator confirms with the Floodplain Administrator and Building Administrator that re-entry is possible and that the On-Duty Dispatcher has notified the affected public and Red Cross has closed shelters

**C. Conduct Damage Assessment**

- FRP Coordinator confirms the Floodplain Administrator has identified and documented/photographed high water marks using the protocol outlined in Appendix E
- If structures were flooded, the FRP Coordinator confirms that the Building Administrator has evaluated damage to flooded structures using the Post-Flood Damage Assessment Protocol (Appendix E)
- FRP Coordinator confirms that Engineering, Utilities, and County Surveyor have evaluated affected bridges and culverts for visible damage and blockage and documented/photographed their condition
- FRP Coordinator confirms the Street Department has collected and disposed of flood-related debris

**D. Restock Supplies**

- FRP Coordinator confirms the Street Department has restocked the sandbag supply as well as repaired or replaced damaged “high water” signs and barricades

**E. Record Observations & Actions**

- If changes are needed to the flood impact areas (Exhibit 1 through 4) or flood-safe routes (Exhibit 5), the FRP Coordinator confirms that the Floodplain Administrator and GIS have made these changes
- FRP Coordinator confirms all information, observations, and actions on the ICS Forms (Appendix B) have been properly documented
- Within 7 days of termination of the flood fight, the FRP Coordinator conducts a flood fight debrief that includes representative staff involved in decision-making and expected actions to discuss the FRP procedures that were followed effectively, as well as ways to that the FRP could be improved
- Within 14 days of termination of the flood fight, the FRP Coordinator, with the assistance of the EMA and GIS, summarizes the information recorded during the flood event including the discussion from the flood fight debrief, expenditures for possible FEMA reimbursement, and share flood data with the local NWS office for AHPS updates. This summary should be added to Appendix G.