CAMPBELL COUNTY
FLOOD PREPAREDNESS PLAN

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I. SITUATION AND ASSUMPTIONS

A. History of flooding in Campbell Country

Campbell County is bordered by the Ohio River on its north and the Licking River on its western border; both of these rivers have a long history of flooding. The last major flood was in 1997 when the Ohio raised almost 13 feet above flood stage in Cincinnati. The highest recorded flood was in 1937 when the Ohio crested at almost 28 feet above flood stage. The Licking River has the same type of history since most of the flooding on the licking in this are is caused by backwater from the Ohio River.

B. Description of the flooding hazard

Campbell County has a flash-flooding hazard due to the topography of the county. The county is very hilly and goes from an elevation of 920 at its highest point to an elevation of 464.6 at the Ohio River Pool stage. This large drop in elevation contributes to flash flooding along the creeks in the county.

Campbell County has a hazard of area flooding from the Ohio and Licking Rivers that will cause the flooding in the creeks that empty into these rivers. The county has a large river basin that is prone to flooding. The basin which is located in the northern and western part of the county has a large population due to the flat building area compared to the very hilly area in the southern and eastern part of the county.

C. Description of the flood prone area/Identification of flood prone area.

A large population of the river basin is protected by flood levees. The cites of Bellevue, California, Cold Spring, Ft. Thomas, Melbourne, Mentor, Silver Grove, and Wilder all have areas that are prone to river basin flooding and have a population that has to be considered for evacuation during a flood. Other areas along creeks also have citizens that may have to be evacuated during flash flooding.

D. Correlation between river gauge readings and elevations above sea level

The Normal pool stage on the Ohio River is 25.4 feet on the river gauge at Cincinnati. This is an elevation 453.6 feet above sea level. The flood stage at Cincinnati is 52.0 feet, which is an elevation of 480.2 feet. Campbell County has areas that will be affected below the flood stage in Cincinnati.

E. In the event of severe flooding in Campbell County, the following assumptions can be made.

1. Utilities

a. In the civil sector there may be minimal communications for a considerable period of time.

b. Natural gas lines may leak.

c. Commercial power systems is vulnerable, as well as cellular telephone service. Should commercial systems fail, the Amateur Radio Emergency System (ARES) may be implemented to support the response and recovery efforts.

d. Electrical power systems may be shut down for a considerable period of time.

e. Water supply may be interrupted.

2. Public Emergency Services

e. The ability to provide essential emergency services (i.e. firefighting, law enforcement, and ambulance) may be severely limited.

3 Transportation

a. Damage to transportation systems may severely hamper recovery efforts following a flood.

b. Damage to roads and bridges may severely hamper the ability of mutual aid emergency services to enter the affected area.

3. Relief Efforts

a. Following a severe flood, the affected area may be cut off from its surrounding area.

b. Food and water supply for shelter may become a problem.

c. Rubble and debris resulting from a flood may prevent access to the affected area for some time. In this event, helicopters may be necessary to lift rescue teams and supplies into the area and casualties out of the area.

d. The first few hours following a flood are critical in saving lives. Officials should be prepared to rely on local resources during the initial response period.

e. Several hours and possibly days may be required before personnel and equipment can be mobilized and initial teams can be deployed to the

affected area.

F. Description of flood warning/communications capabilities

The National Weather Service Weather Forecast Office is the primary means of flood information and warning by use of the NOAA weather radios, social media and the local media. The National Weather Service uses the following warning statements:

Hazardous Weather Outlook - This is issued when conditions indicate that significantly heavy precipitation will cause or aggravate flash flooding or winter time flooding. It is issued with a 36-hour or greater lead-time. It indicates the affected are time frames, discussion of hydrological and meteorological factors and conditions, and information on projected watches and warning.

Flash Flood Watch - These are used to inform cooperating agencies and the public about the threat of flash flooding. It covers precipitation, snow/ice melt, and dam break conditions. They include area affected, time frames, conditions, extent of hazardous conditions possible, potential severity, and call to action statements. Updates in time, threat and/or location are provided via a follow up Flash Flood Watch.

Flash Flood Statement - These are issued to provide updates to flash flood warnings. It can provide the latest information on flooding, reduction in the area covered by a warning, and termination of a warning.

Urban and Small Stream Flood Advisory - These are designed to provide advance notice for flooding on small streams and in urban areas such as roads, underpasses and low-lying areas. This is used for situations that are primarily an inconvenience, not a life-threatening flood.

Flash Flood Warning - The warning indicates flash flooding is imminent or in progress. The warning should include the time frames, areas impacted, severity of the flooding, movement of the flooding, call to action statement, and time of next issuance. Flash flooding is characterized by its rapid nature and is an immediate threat to life and property.

Flood Watch - This is issued to inform cooperating agencies and the public about the threat of flooding. It covers precipitation, and snow/ice melt conditions. It includes affected areas, time frame, conditions, extent of hazardous conditions possible, potential severity, and call to action statements.

Flood Statement - This is issued to provide updates to flood warnings. It can provide the latest information on flooding, reduction in the area covered by a warning, and terminations of a warning.

Flood Warning - This normally specifies crest information and is issued for specific communities or areas along rivers where flooding has been forecast, is imminent or is in progress.

G. Establishing Common terminology

Flood Stage - An established gage height within a given river reach above Which a rise in water surface level is defined as a flood. (It is based on historic data and usually set a level where the river begins to overflow its banks or a potential hazard begins to occur due to high water). An elevation above "gage zero" (the bottom of the river near the given point. Usually flood stage is determined by local and NWS officials as a point in which minimal flooding occurs.

Floodway - channel of a stream and that portion of the adjoining floodplain designated to provide for passage of flood flows without significant increase in flood stage.

Flood Fringe - area of the floodplain that is outside the floodway.

Floodplain - normally dry land susceptible to flooding from a natural source.

Hazardous Weather *Outlook* - issued by the National Weather Service, this product is issued when conditions indicate that significantly heavy precipitation will cause or aggravate flash flooding. It is issued with a 36 hour or greater lead time. It indicates the affected area, time frames, discussion of hydrological and meteorological factors and conditions, and information on projected watches and warnings.

Flash Flood Watch - issued by the National Weather Service, flash flood watches are used to inform cooperating agencies and the public about the threat of flash flooding. It covers precipitation, snow/ice melt, and dam break conditions. They include area affected, time frames, conditions, extent of hazardous conditions possible, potential severity, and call to action statements.

Flash Flood Statement - issued by the National Weather Service, this product is issued to provide updates to flash flood and warnings. It can provide the latest information on flooding, reduction in the area covered by a warning, and termination of a watch or warning.

Urban and Small Stream Flood Advisory - issued by the National Weather Service, this product is designed to provide advance notice for nuisance flooding on small streams and in urban areas such as roads, underpasses and low-lying areas. This product is used for situations that are primarily an inconvenience, not a life threatening flood.

Flash Flood Warning - issued by the National Weather Service, this warning

indicates flash flooding is imminent or in progress. The warning should include the time frames, areas impacted, severity of the flood, movement of the flood, call to action statements, and time of next issuance.

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II. MISSION

The purpose of this plan is to establish basic policies and procedures for flood preparedness and evacuation in response to impending or actual flooding in the community.

III. DIRECTION AND CONTROL

A. Local elected officials or designees will provide direction and control; the mayor or their designees inside the city limits and the County Judge-Executive or designees in unincorporated areas.

B. State and federal resources which supplement local efforts will be directed by the state or federal government which supplied them.

C. Local chief executives or their designees will make evacuation decisions.

IV. CONCEPT OF OPERATIONS

A. Identification of flood prone areas

The county borders on the north along the Ohio River and the west along the Licking River. Have a long history of flooding. The county has many small streams and creeks that are prone to flash flooding. The County has a large area in the Ohio and Licking Rivers basins that are prone to backwater flooding.

The county will start to experience flooding when the Ohio River gauge at Cincinnati exceeds 42. The County has access through the WEB to three river gauges they are located at Cincinnati, Ohio, Four Mile Creek at Poplar Ridge and Twelve Mile Creek at Highway 1997.

B. Phases of Operations/Actions to be taken

1. Preparedness

The Preparedness phase occurs prior to and in anticipation of a severe flood. This phase focuses on promotion of increased public awareness of the potential emergency, preparation of necessary materials and equipment for response to the emergency, participation in the National Floodplain Insurance Program, training, exercising, developing public information programs, and maintaining lists of available resources for use by emergency response personnel.

a. Discuss procedures for distributing advisories and warnings.

1. ensures prompt attention to information concerning flood threats;

2. specify what types of warnings are issued for various possible conditions;

3. ensure that product content is commensurate with the expected severity of the flood;

4. insure that the NWS warnings are disseminated to need-to-know individuals in a timely manner; and

5. ensure that locally generated advisories are coordinated with NWS.

b. Develop procedures for disseminating information relating to potential flood threats to special need-to-know recipients.

1. Identify special recipients who are to be notified under various possible conditions of flood threat;

2. describe the means of communications to be used in alerting each special recipient; and specify record keeping, acknowledgment, and other processes to ensure notices are given and received.

c. Develop procedures so that dissemination of warnings to the general public…

1. Are adequate to ensure all affected persons receive warnings on a timely basis, notwithstanding telephone and power failures;

2. Provide for various levels of warning appropriate to the immediacy and seriousness of the flood threat;

3. Specify conditions under which each means of warning dissemination will be used;

4. Describe the process by which parties responsible for each means of dissemination are instructed to begin distribution of warnings;

5. Take into consideration the time of day, day of week, or seasonal factors affecting the need for or means of warning dissemination.

d. Evacuation area identification

1. Identify specific areas that will be flooded as the water level rises;

2. Identify areas that will be inundated because of poor drainage or ponding unrelated to flood height in streams; and

3. Identify areas requiring evacuation for reasons other than inundation including:

(a) Loss of access or escape routes;

(b) Loss or curtailment of utilities or other services; and

(c) Site-specific problems

e. Evacuation procedures development

1) Select evacuation destinations for each area to be evacuated;

2) Identify best available evacuation routes;

3) Establish priorities for evacuation; and

4) Develop procedures for carrying out evacuation that are consistent with the warning time available including:

a) Ensuring that the affected public is advised of the need to evacuate, safe destinations, and time available for evacuation;

b) Providing special assistance to those having unusual evacuation needs including care for pets;

c) Assuring evacuation is complete;

d) Establishing traffic control to prevent entry into dangerous areas, identifying evacuation routes, and facilitating evacuation traffic; and

e) Establishing surveillance over the evacuation area to ensure safety of the area.

Utility Management

1) Develop procedures for curtailment of utility services to the flooded area; and

2) Develop utility operational procedures to be used immediately prior to and during floods, and before evacuated areas are reoccupied.

V. Traffic Control

1) Identify requirements for traffic control that:

a) Identify areas to be controlled at each expected flood height;

b) Specify locations where traffic control will be required;

c) Identify detour or types of control to be effected;

d) Specify placement of personnel, barricades, and signs to effect necessary control and means of enforcement; and

e) Restrict access to flood-damaged areas to residents and other authorized persons.

VI. Maintenance of Vital Records

Establish procedures for protection of important records and documents located in areas subject to flooding including those relating to vital statistics; tax and payroll information; utility records; property ownership; and business records.

1. Response

The response phase occurs prior to the onset of a flood and is based upon weather reports and information from spotter groups. During this phase, functions that are critical to lifesaving, protection, and meeting basic human needs are performed.

a. Place into effect appropriate emergency plans and procedures.

b. Advise the public of actions to be taken to safeguard their lives and property.

c. Maintain morale by informing the public of the current situation and actions being taken by local government to manage the emergency.

d. Mobilize all emergency services

   1) Notify all personnel of the general situation and to report to emergency assignments.

   2) Remind local agencies in the flood plain to evacuate their offices, if necessary.

e. Notify all agencies, facilities, and volunteer groups on the flood warning list.

f. Put the appropriate emergency plan(s) into operation.

g. Public information releases should include information such as the following:

   1) Height of water at normal stage;

   2) Height at which flooding will occur;

   3) Areas that may be (or will be) affected by the rising waters;

   4) Areas to be ordered evacuated;

   5) Shelter locations for evacuees, feeding, and other requirements for taking care of evacuees;

   6) Time evacuation will begin; and

   7) Evacuation routes.

h. Place into effect a traffic control plan to expedite movement from areas ordered evacuated. The plan should include designation of entrance routes for emergency services, mutual aid, etc., and exit routes for evacuation of citizens.

i. Ensure patrols are set up in evacuated areas for protection of property and prevention of fires, utilizing mutual aid, military assistance, etc., as available.

j. Conduct search and rescue operations as required. (A major problem is the rescue of stranded inhabitants of the flooded areas and trapped

motorists. The most practical solution is to use boats, helicopters, and specially equipped vehicles). Ensure search areas are properly marked to avoid duplication of efforts (See ESF-4 (Fire) and ESF-9, (Search and Rescue).

k. Inform the public to make electrical, gas, and water inspections as necessary to prevent accidents. (LP and bulk fuel tanks should be anchored or kept full to prevent floating and becoming a hazard).

l. Maintain current situation reports from the field to the Emergency Operations Center. These reports are the basis for releases to the public when necessary to minimize public alarm and to keep the area clear. The Campbell County EOC will keep the Division of Emergency Management Area Manager informed of the current situation.

2. Recovery

The Recovery Phase usually overlaps the Response Phase. It may begin just after the flood and can last for several years. During the Recovery Phase, the federal government provides disaster relief upon Presidential Declaration. Functions during this phase may include federal relief under P.L. 93-288 for public and individual assistance, establishment of Disaster Recovery Centers, establishment of temporary housing facilities, and federal disaster loans and grants. Long-term recovery includes restoration of affected areas to their normal status or to an improved state.

a. Maintenance of Public Health

1) Establish procedures for actions to preserve public health including:

a) Provisions for emergency medical services and care for injured persons;

b) Procedures for locating missing persons and providing information to relatives and friends;

c) Collection and disposition of contaminated foodstuffs;

d) Disinfection of public/private water supply sources and systems;

e) Inoculations and other preventative medical care;

f) Disease control; and

g) Control of insects, rodents, and other pests.

2) Establish procedures for caring for the dead.

b. Restoration of Services

1) Establish procedures for returning to normal traffic patterns including:

a) Evaluation of road and bridge safety;

b) Priority for providing access; and

c) Debris clearance.

2) Establish procedures for actions to resume provisions of utility service including:

a) Preparations to be made by property owner;

b) System preparations including decontamination of water supplies;

c) Sequence for restoring services; and

d) Priority for resuming services.

c. Rehabilitation and Repair

1) Establish procedures for post-flood clean-up including:

a) Clearing, collecting, and disposing of debris and discarded goods;

b) Street washing;

c) Pumping basements, wells and cisterns;

d) Returning materials previously relocated for safekeeping; and

e) Hazardous materials.

2) Establish procedures for management of damaged structures including:

a) Procedures for identification and evaluation of damage; and

b) Demolition or temporary repair of hazardous buildings.

3) Identify the sources and programs for recovery assistance.

4) Establish procedures for mobilizing assistance from each available source including:

a) Conditions under which requests for assistance will be made;

b) Channels to be followed in requesting assistance;

c) Preparations of necessary requests, disaster declaration, or other documentation required as a condition of assistance;

d) Tracking assistance; and

e) Demobilization.

5) Debris removal

a) The debris removal process must be initiated promptly and conducted in an orderly, effective manner in order to protect public health and safety following a major catastrophic event. To achieve this objective, the first priority will be to clear debris from priority roads in order to provide access for emergency vehicles and resources to the impacted area. The need and demand for critical services will be increased significantly following a disaster. Therefore, the second priority that debris removal resources will be assigned is providing access to critical facilities pre-identified by state and local government. The third priority for debris removal teams to address will be the elimination of debris related threats to public health and safety. This will include such things as the repair, demolition, or barricading of heavily damaged and unstable buildings, systems, or facilities that pose a danger to the public. Any actions taken to mitigate or eliminate the threat to the public health and safety must be closely coordinated with the owner or responsible party.

b) Specific guidance to facilitate and coordinate the collection, removal, and disposal of debris following a disaster is contained in this plan in Campbell County Debris Management Plan.

VII. ADMINISTRATIVE SUPPORT

Support of this plan is the responsibility of the Office of Emergency Management.

VIII. GUIDANCE DOCUMENTS

A. KyEOP

B. Federal Response Plan