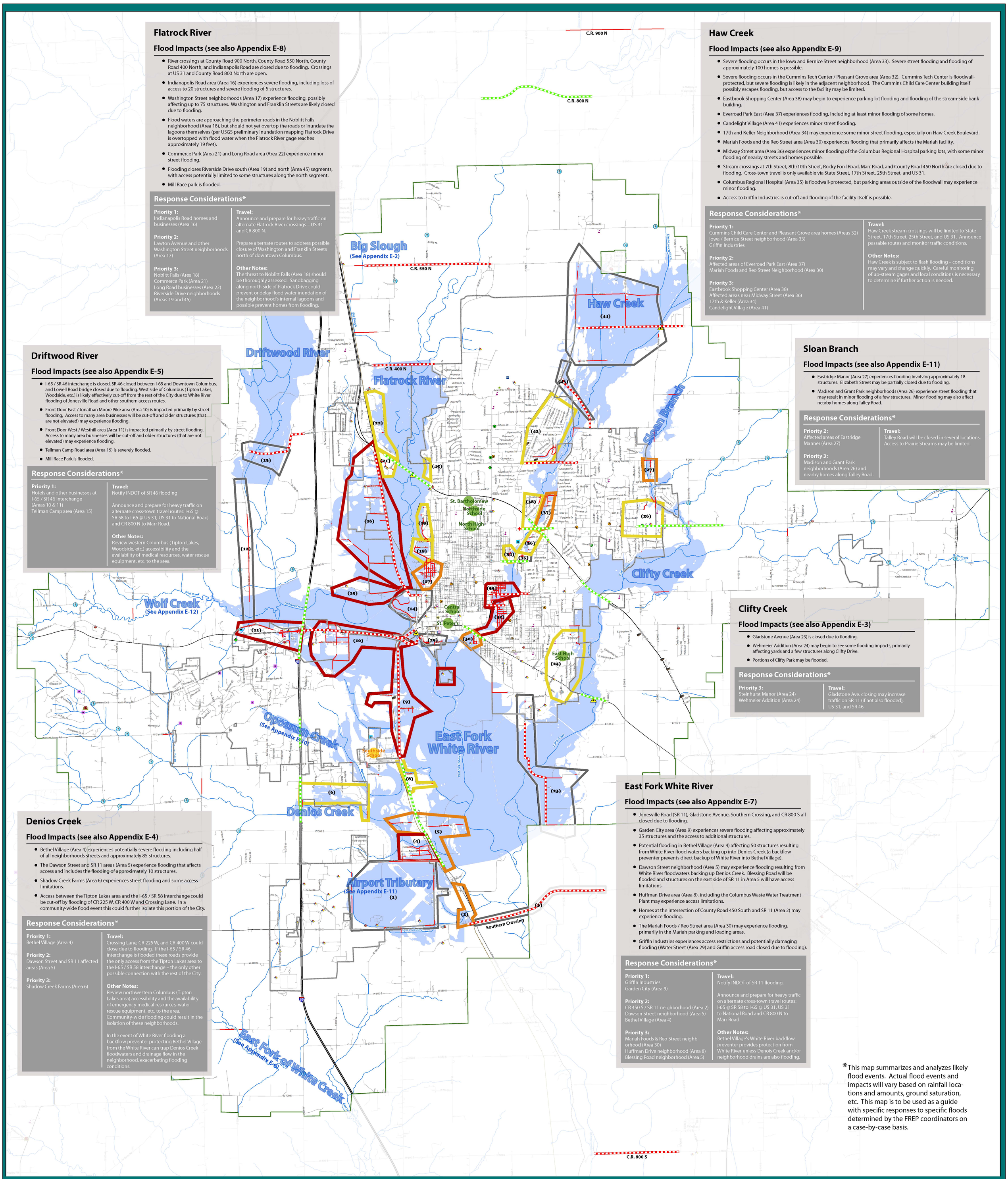

Flatrock River

Flood Impacts (see also Appendix E-8)

- River crossings at County Road 900 North, County Road 550 North, County Road 400 North, and Indianapolis Road are closed due to flooding. Crossings at US 31 and County Road 800 North are open.
- Indianapolis Road area (Area 16) experiences severe flooding, including loss of access to 20 structures and severe flooding of 5 structures.
- Washington Street neighborhoods (Area 17) experience flooding, possibly affecting up to 75 structures. Washington and Franklin Streets are likely closed due to flooding.
- Flood waters are approaching the perimeter roads in the Noblitt Falls neighborhood (Area 18), but should not yet overtop the roads or inundate the lagoons themselves (per USGS preliminary inundation mapping Flatrock Drive is overtopped with flood water when the Flatrock River gage reaches approximately 19 feet).
- Commerce Park (Area 21) and Long Road area (Area 22) experience minor street flooding.
- Flooding closes Riverside Drive south (Area 19) and north (Area 45) segments, with access potentially limited to some structures along the north segment.
- Mill Race park is flooded.

Response Considerations*

Priority 1:
Indianapolis Road homes and businesses (Area 16)

Priority 2:
Lawton Avenue and other Washington Street neighborhoods (Area 17)

Priority 3:
Noblitt Falls (Area 18)
Commerce Park (Area 21)
Long Road businesses (Area 22)
Riverside Drive neighborhoods (Areas 19 and 45)

Travel:
Announce and prepare for heavy traffic on alternate Flatrock River crossings – US 31 and CR 800 N.

Prepare alternate routes to address possible closure of Washington and Franklin Streets north of downtown Columbus.

Other Notes:
The threat to Noblitt Falls (Area 18) should be thoroughly assessed. Sandbagging along north side of Flatrock Drive could prevent or delay flood water inundation of the neighborhood's internal lagoons and possible prevent homes from flooding.

Haw Creek

Flood Impacts (see also Appendix E-9)

- Severe flooding occurs in the Iowa and Bernice Street neighborhood (Area 33). Severe street flooding and flooding of approximately 100 homes is possible.
- Severe flooding occurs in the Cummins Tech Center / Pleasant Grove area (Area 32). Cummins Tech Center is floodwall-protected, but severe flooding is likely in the adjacent neighborhood. The Cummins Child Care Center building itself possibly escapes flooding, but access to the facility may be limited.
- Eastbrook Shopping Center (Area 38) may begin to experience parking lot flooding and flooding of the stream-side bank building.
- Everroad Park East (Area 37) experiences flooding, including at least minor flooding of some homes.
- Candelight Village (Area 41) experiences minor street flooding.
- 17th and Keller Neighborhood (Area 34) may experience some minor street flooding, especially on Haw Creek Boulevard.
- Mariah Foods and the Reo Street area (Area 30) experiences flooding that primarily affects the Mariah facility.
- Midway Street area (Area 36) experiences minor flooding of the Columbus Regional Hospital parking lots, with some minor flooding of nearby streets and homes possible.
- Stream crossings at 7th Street, 8th/10th Street, Rocky Ford Road, Marr Road, and County Road 450 North are closed due to flooding. Cross-town travel is only available via State Street, 17th Street, 25th Street, and US 31.
- Columbus Regional Hospital (Area 35) is floodwall-protected, but parking areas outside of the floodwall may experience minor flooding.
- Access to Griffin Industries is cut-off and flooding of the facility itself is possible.

Response Considerations*

Priority 1:
Cummins Child Care Center and Pleasant Grove area homes (Areas 32)
Iowa / Bernice Street neighborhood (Area 33)
Griffin Industries

Priority 2:
Affected areas of Everroad Park East (Area 37)
Mariah Foods and Reo Street Neighborhood (Area 30)

Priority 3:
Eastbrook Shopping Center (Area 38)
Affected areas near Midway Street (Area 36)
17th & Keller (Area 34)
Candelight Village (Area 41)

Travel:
Haw Creek stream crossings will be limited to State Street, 17th Street, 25th Street, and US 31. Announce passable routes and monitor traffic conditions.

Other Notes:
Haw Creek is subject to flash flooding – conditions may vary and change quickly. Careful monitoring of up-stream gages and local conditions is necessary to determine if further action is needed.

Driftwood River

Flood Impacts (see also Appendix E-5)

- I-65 / SR 46 interchange is closed, SR 46 closed between I-65 and Downtown Columbus, and Lowell Road bridge closed due to flooding. West side of Columbus (Tipton Lakes, Woodside, etc.) is likely effectively cut-off from the rest of the City due to White River flooding of Jonesville Road and other southern access routes.
- Front Door East / Jonathan Moore Pike area (Area 10) is impacted primarily by street flooding, Access to many area businesses will be cut-off and older structures (that are not elevated) may experience flooding.
- Front Door West / Westhill area (Area 11) is impacted primarily by street flooding. Access to many area businesses will be cut-off and older structures (that are not elevated) may experience flooding.
- Tellman Camp Road area (Area 15) is severely flooded.
- Mill Race Park is flooded.

Response Considerations*

Priority 1:
Hotels and other businesses at I-65 / SR 46 interchange (Areas 10 & 11)
Tellman Camp area (Area 15)

Travel:
Notify INDOT of SR 46 flooding

Announce and prepare for heavy traffic on alternate cross-town travel routes: I-65 @ SR 58 to I-65 @ US 31, US 31 to National Road, and CR 800 N to Marr Road.

Other Notes:
Review western Columbus (Tipton Lakes, Woodside, etc.) accessibility and the availability of medical resources, water rescue equipment, etc. to the area.

Sloan Branch

Flood Impacts (see also Appendix E-11)

- Eastridge Manor (Area 27) experiences flooding involving approximately 18 structures. Elizabeth Street may be partially closed due to flooding.
- Madison and Grant Park neighborhoods (Area 26) experience street flooding that may result in minor flooding of a few structures. Minor flooding may also affect nearby homes along Talley Road.

Response Considerations*

Priority 2:
Affected areas of Eastridge Manner (Area 27)

Priority 3:
Madison and Grant Park neighborhoods (Area 26) and nearby homes along Talley Road.

Travel:
Talley Road will be closed in several locations. Access to Prairie Streams may be limited.

Clifty Creek

Flood Impacts (see also Appendix E-3)

- Gladstone Avenue (Area 23) is closed due to flooding.
- Wehmeier Addition (Area 24) may begin to see some flooding impacts, primarily affecting yards and a few structures along Clifty Drive.
- Portions of Clifty Park may be flooded.

Response Considerations*

Priority 3:
Steinhurst Manor (Area 24)
Wehmeier Addition (Area 24)

Travel:
Gladstone Ave. closing may increase traffic on SR 11 (if not also flooded), US 31, and SR 46.

Denios Creek

Flood Impacts (see also Appendix E-4)

- Bethel Village (Area 4) experiences potentially severe flooding including half of all neighborhoods streets and approximately 85 structures.
- The Dawson Street and SR 11 areas (Area 5) experience flooding that affects access and includes the flooding of approximately 10 structures.
- Shadow Creek Farms (Area 6) experiences street flooding and some access limitations.
- Access between the Tipton Lakes area and the I-65 / SR 58 interchange could be cut-off by flooding of CR 225 W, CR 400 W and Crossing Lane. In a community-wide flood event this could further isolate this portion of the City.

Response Considerations*

Priority 1:
Bethel Village (Area 4)

Priority 2:
Dawson Street and SR 11 affected areas (Area 5)

Priority 3:
Shadow Creek Farms (Area 6)

Travel:
Crossing Lane, CR 225 W, and CR 400 W could close due to flooding. If the I-65 / SR 46 interchange is flooded these roads provide the only access from the Tipton Lakes area to the I-65 / SR 58 interchange – the only other possible connection with the rest of the City.

Other Notes:
Review northwestern Columbus (Tipton Lakes area) accessibility and the availability of emergency medical resources, water rescue equipment, etc. to the area. Community-wide flooding could result in the isolation of these neighborhoods.

In the event of White River flooding a backflow preventer protecting Bethel Village from the White River can trap Denios Creek floodwaters and drainage flow in the neighborhood, exacerbating flooding conditions.

East Fork White River

Flood Impacts (see also Appendix E-7)

- Jonesville Road (SR 11), Gladstone Avenue, Southern Crossing, and CR 800 S all closed due to flooding.
- Garden City area (Area 9) experiences severe flooding affecting approximately 35 structures and the access to additional structures.
- Potential flooding in Bethel Village (Area 4) affecting 50 structures resulting from White River flood waters backing up into Denios Creek (a backflow preventer prevents direct backup of White River into Bethel Village).
- Dawson Street neighborhood (Area 5) may experience flooding resulting from White River floodwaters backing up Denios Creek. Blessing Road will be flooded and structures on the east side of SR 11 in Area 5 will have access limitations.
- Huffman Drive area (Area 8), including the Columbus Waste Water Treatment Plant may experience access limitations.
- Homes at the intersection of County Road 450 South and SR 11 (Area 2) may experience flooding.
- The Mariah Foods / Reo Street area (Area 30) may experience flooding, primarily in the Mariah parking and loading areas.
- Griffin Industries experiences access restrictions and potentially damaging flooding (Water Street (Area 29) and Griffin access road closed due to flooding).

Response Considerations*

Priority 1:
Griffin Industries
Garden City (Area 9)

Priority 2:
CR 450 S / SR 11 neighborhood (Area 2)
Dawson Street neighborhood (Area 5)
Bethel Village (Area 4)

Priority 3:
Mariah Foods & Reo Street neighborhood (Area 30)
Huffman Drive neighborhood (Area 8)
Blessing Road neighborhood (Area 5)

Travel:
Notify INDOT of SR 11 flooding.

Announce and prepare for heavy traffic on alternate cross-town travel routes: I-65 @ SR 58 to I-65 @ US 31, US 31 to National Road and CR 800 N to Marr Road.

Other Notes:
Bethel Village's White River backflow preventer provides protection from White River unless Denios Creek and/or neighborhood drains are also flooding.

*This map summarizes and analyzes likely flood events. Actual flood events and impacts will vary based on rainfall locations and amounts, ground saturation, etc. This map is to be used as a guide with specific responses to specific floods determined by the FREP coordinators on a case-by-case basis.

DISCLAIMER

Flood extents/depths shown on this map were determined based on Flood Insurance Study models, CBBEL hydraulic models (Sloan Branch), and USGS modeling (East Fork White River Flood Map Inundation Library). These models assume that flow paths and bridge openings remain unobstructed and do not fail. Average or standardized rainfall amounts and distributions are also assumed. Because these models cannot take every localized feature and all possible rainfall distributions into account, estimated flood elevations may be slightly different than actual flood elevations. In addition, the flood extents and depths were based on available LiDAR data for topography. While this data is much more accurate than previous large scale mapping efforts, elevations may be up to a foot too high or too low with most localized elevations being within a half foot. In addition, the topographic information does not show features, such as back flow prevention devices, that may keep areas shown as flooded on this map flood free for this frequency flood.

Therefore, the information on this map provides a guide for flood fight decisions but must be combined with actual observations for additional guidance.

Additional flood impacts may occur in areas that were not analyzed as part of this Plan.

Sources of Data:
1. Depth Grids created from 2011 IndianaMap LiDAR
2. Critical Facilities adapted from Bartholomew County MHMP (2005), updated by Bartholomew County (2012)
3. 2012 DFIRM Data, (Preliminary)
4. US Bureau of the Census TIGER files, 2012

Potential Red Cross Shelter Status*

- Location — Flood Safe
- Location — Questionable
- Location — Compromised

Note:
Mt. Healthy School is also a flood-safe shelter site (not on map).

* The designated shelter sites for each specific flood shall be determined by the Red Cross and may vary based on the needs created by that event.

50-year Flood Stream Gage Readings

18.7 feet	East Fork White River @ Columbus 2nd Street Bridge
17.2 feet	Driftwood River @ Edinburgh
17.4 feet	Flatrock River @ Columbus US 31 Bridge
15.4 feet	Haw Creek @ Clifford
21.1 feet	Clifty Creek @ Columbus SR 46 Bridge

Likely Flood Reponse Priorities

Priority 1 Areas: Those that will likely be inundated by flood waters to the extent that structures will be flooded and human life and safety will be at risk. Based on flood-specific conditions FREP coordinators shall determine if the appropriate response is evacuation or shelter-in-place. During typical flood events evacuation is likely needed. Refer to the flood depth maps for more information.

Priority 2 Areas: Those that will likely be inundated by moderate or varying amounts of flood water. The extent of the flooding will range from minor street flooding to inundation of structures. Based on flood-specific conditions the FREP coordinators shall determine if the appropriate response is evacuation or shelter-in-place. If the flooding is expected to worsen, evacuation imay be needed. Refer to the flood depth maps for more information.

Priority 3 Areas: Those that will likely be affected by some amount of flooding; potentially limited to street flooding with minimal threat to structures. Based on flood-specific conditions the FREP coordinators shall determine the appropriate response. These areas should be monitered and re-evaluated if flooding worsens. Refer to the flood depth maps for more information.

- Approximate Limits of 50-year Flood
- Areas where flooding can occur by either the East Fork White River or its tributaries (highest depth is shown)
- Major Transportation Routes (Closed)
- Major Transportation Routes (Open)
- Road Segments Inundated by 50-Year Flood
- Locations with Unknown Overtopping
- Neighborhoods with Frequent Flooding
- (16) Neighborhood Reference Number
- Planning Jurisdiction
- City of Columbus

USGS Stream Gages
- Used for Forecasting and Depth of Flooding Purposes
- Used for Forecasting Purposes

Critical Facilities
- Airports
- Ambulances
- Assisted Living
- Dams
- Daycare
- Fire
- Government
- Hazardous Material Handler
- Jails
- Medical Facility
- Military Establishement
- Mobile Home Parks
- Police
- Broadcast/Communications
- Schools
- Shelters
- Water Treatment Plant
- Wastewater Treatment Plant

0 0.5 1
Scale in Miles

Analysis by: City of Columbus - Bartholomew County Planning Department

Flooding extent and base map by: Christopher B. Burke Engineering, LLC, PNC Center, Suite 1368 South, 115 West Washington Street, Indianapolis, Indiana 46204, (t) 317.266.8000 (f) 317.632.3306

50-year Flood Impacts

PROJECT:	City of Columbus Flood Response Evacuation Plan
PROJECT NO.	12-0028
APPROX. SCALE	as shown
DATE:	11/2012
TITLE:	Areas Impacted by the 2.0% Annual Chance (50-year) Flood
EXHIBIT	2