Comprehensive Floodplain Management & Mitigation Information at Your Fingertips

Presented by:
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April 4, 2019
Wood is a global leader in technical, engineering and project services.

60,000 people, 60 countries, 400+ offices worldwide
Environment & Infrastructure Solutions (EI&S)

• E&IS leads our environmental engineering and consulting business and a wide range of infrastructure-related service capabilities

• Formerly Amec Foster Wheeler E&I

• Technical experts across the US, Canada, UK, and Europe

• Providing full consulting, engineering and construction services to our clients in the oil/gas/chemicals, power, mining, industrial, pharmaceutical, government, transportation and water sectors
E&IS Southeast Office Locations
FEMA DFIRM Experience
Arkansas (Region VI)
Alabama
North Carolina
Missouri
Kansas
Iowa
Indiana
Montana
Utah
South Dakota
Suwannee River Water Management District, FL
Maryland
West Virginia
Delaware

woodplc.com
Alabama DFIRM Experience

- Provided Engineering and Mapping Services in 47 of 67 Counties
- 2500 DFIRM Panels
- 700 miles of Detailed Studies
- 20,000 miles of Zone A studies
- Coastal mapping for 211 miles of coastline
- Assisted with over 140 community meetings
- Delegated LOMR Review CTP
- Developed and maintain website [www.alabamaflood.com](http://www.alabamaflood.com)
Alabama Risk MAP Program

Alabama Risk MAP Goals

- Increase focus on risk assessment and planning
- Continue partnerships with federal, state, and local agencies
- Acquire and utilize high accuracy topographic data
- Deliver high quality risk products and datasets

Alabama CTP Production Model

- Work typically performed locally
- Establish relationships with local stakeholders
- Local knowledge including needs and leverage opportunities
- More customized local solutions
- Increases local involvement in NFIP-related activities

Benefits of the program

- Help communities make better decisions on development
- Provide online resource for citizens to learn about their flood risk
Outreach is Critical!

- **Increase public awareness and understanding of risk and vulnerability to floods plus options for minimizing their risk**;
- **Keep citizens**, public officials and stakeholders **informed**;
- **Increase engagement** of county and city elected officials;
- **Foster** stakeholder **awareness**;
- **Provide** communities with outreach **tools**.
Alabama Flood Risk Information Website

http://www.alabamaflood.com/
Initial Focus of alabamaflood.com

- To provide up to date flood risk information to stakeholders during Post-Preliminary Processing
  - Preliminary vs. Effective
Alabama Risk MAP Projects

- **Effective FIRMs Issued**
  - Houston County
  - Upper Alabama Watershed
  - Middle Coosa Watershed
  - Upper Choctawhatchee Watershed
  - Wheeler Lake Watershed
  - Locust Fork Watershed

- **Preliminary FIRMs Issued**
  - Baldwin County
  - Mobile County
  - Cahaba Watershed
  - City of Atmore PMR

- **Study In Progress**
  - Upper Black Warrior Watershed
  - Guntersville Lake Watershed
  - Pickwick Lake Watershed
  - Upper Coosa Watershed
  - Lower Coosa Watershed
  - Lower Tallapoosa Watershed
alabamaflood.com Data

- Statewide NFHL
alabamaflood.com Data

- Preliminary data
alabamaflood.com Data

- CSLF
alabamaflood.com Data

- Available Risk MAP Non-Regulatory Products (depending on project status)
  - AOMI
  - CSLF
  - Water Surface Elevations Grids
  - Depth Grids
  - Percent Annual Chance
  - Percent 30 Year Chance
  - HAZUS info
    - Census Block and Structure Level (where available)
Community Requests

• Find Me Button or Address Locator
Community Requests

- FIS Download (all counties)
- Measure Tool
- Print
- Zoom to County
- Password Protected Option
Community Requests

- Effective Hydraulic Models
Community Requests

- Zone A Water Surface Elevations
Recently Used at All Touchpoints

1. Discovery Meeting
2. Project Kickoff Meeting
3. Flood Study Working Session
4. Flood Risk Review Meeting
5. Preliminary DFIRM Community Coordination Meeting (PDCC)
6. Open House
7. Resilience Meeting

A presentation by Wood.
Mitigation Opportunities

A presentation by Wood.
1. Bakers Creek, City of Decatur, Morgan County

Location of Mitigation Opportunity

The location of this mitigation opportunity is upstream of Gordon Terry Parkway in the City of Decatur. Bakers Creek flows generally to the northeast. The Bakers Creek watershed has a drainage area of 3.2 square miles at this location. The watershed is relatively flat and has sections of development throughout. The estimated 1 percent-annual-chance peak discharge at Gordon Terry Parkway is 2,465 cubic feet per second (cfs). Based on the effective HEC-2 hydraulic model from 1993, the hydraulic structures through the roadway embankments at Gordon Terry Parkway and Woodall Road appear to be undersized causing significant backwater effects and overtopping of roadways. Nineteen (19) building footprints are estimated to be in the 1 percent-annual-chance floodplain boundary, which includes one repetitive loss structure with $244,000 of paid losses.

Loss Value

The estimated average annualized loss (AAL) for the buildings upstream of Gordon Terry Parkway is $16,687. For this location, the estimated loss for a 1-percent-annual-chance flood is $327,370.

Potential Mitigation Action

Floodplains extend into buildings on the upstream and downstream side of Gordon Terry Parkway. Creating storage areas in the rural areas upstream of Woodall Road may decrease the peak flows at the roadways, which may reduce the backwater flood elevation, remove some buildings from the flood hazard area, and reduce the average annualized loss for this location.
Mitigation Opportunity - Map
Mitigation Opportunity - Location

- Flooding Source
- Roads
- Drainage Area
- Discharge
- Depth of Flooding (1-percent-annual-chance)
- Building footprints in 1-percent-annual-chance flood hazard area
- Repetitive Loss Area
- Amount paid losses
Mitigation Opportunity - Value

- Estimated Average Annualized Loss (AAL)
- Estimated 1-percent-annual-chance flood loss value
Mitigation Opportunity - Action

Solutions
- Bridge and culvert replacements
- Detention or retention structures
- Channel modification
- Home Buyout Program

1. Bakers Creek, City of Decatur, Morgan County

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4. Ginhouse Branch, Town of Priceville, Morgan County

Location of Mitigation Opportunity

The location of this mitigation opportunity is south of Cave Spring Road. Ginhouse Branch flows generally north. The Ginhouse Branch watershed has a drainage area of 4.4 square miles at Cave Spring Road. The watershed is mostly residential developments, and the estimated 1-percent-annual-chance peak discharge is 3,050 cfs. Based on the analysis performed as part of the Wheeler Lake Risk MAP project, major flooding occurs throughout the watershed building footprints are estimated to be in the 1-percent-annual-chance floodplain boundary.

Loss Value

The estimated AAI is $267,044. For this location, the estimated loss for a 1-percent-annual-chance flood is $5,67.

Potential Mitigation Action

Since the mitigation opportunity covers a large portion of the watershed, the mitigation action will likely require multiple improvements including erosion buffer striping at meadows and construction wherever needed on available land.