Flood-Inundation Map of Big Creek in Alpharetta and Roswell, Georgia,
Flood Corresponding to a Stage of 11.0 Feet and an Elevation of 971.6 Feet (NAVD 88)
at the U.S. Geological Survey Streamgage Number 02335700 near Alpharetta, Georgia

UNCERTAINTIES AND LIMITATIONS FOR USE OF FLOOD-INUNDATION MAPS

If this series of flood-inundation maps will be used in conjunction with National Weather Service (NWS) river forecasts, the user should be aware of additional uncertainties that may be inherent or factored into NWS forecast procedures. The NWS uses river forecast models to estimate the quantity and timing of water flowing through selected river reaches in the United States. These forecast models (1) estimate the amount of runoff generated by a precipitation event, (2) compute how the water will move downstream, and (3) predict the flow and stage (water-surface elevation) for the river at a given timing of water flowing through selected river reaches. The NWS river forecast models require the use of complex hydrologic and hydraulic computations that incorporate many important variables. These variables include: (1) the location and amount of the precipitation event, (2) the rate at which the water moves downstream, (3) the energy of the water as it moves downstream, (4) the water-surface elevation for the river, (5) the stage (water-surface elevation) for the river, and (6) the bathymetric (the shape and depth) of the modeled river reach.

DISCLAIMER

The USGS provides these maps "as-is" for a quick reference, emergency planning tool, but assumes no legal liability or responsibility resulting from the use of this information.

For an overview of USGS information products, including maps, imagery, and publications, visit http://www.usgs.gov/pubprod/.

For more information on the USGS—the Federal source for science about the Earth, its natural and living resources—see http://www.usgs.gov/water/southatlantic/.

For more information concerning this publication, contact: South Atlantic Water Science Center, U.S. Geological Survey, Director, 720 Greenbern Road, Columbia, SC 29210. For more information about the National Weather Service, visit http://www.weather.gov.

PREPARED IN COOPERATION WITH THE
National Weather Service
U.S. Department of the Interior
U.S. Geological Survey

Orthography from U.S. Department of Agriculture Geospatial Gateway,
North American Datum of 1983 (NAD 83)
Projection: Transverse Mercator

The flood boundaries shown were estimated based on water stages/streamflows at the USGS streamflow gaging station, Big Creek near Alpharetta, Ga. (Station ID 02335700), steady-state hydraulic modeling (assuming unobstructed flow) and a digital elevation model. The hydraulic model reflects the land-cover characteristics and any bridge, dam, levee, or other hydraulic structures existing in May 2015. Unique meteorological factors (timing and distribution of storm) could cause actual streamflows along the modeled reach to vary from those assumed during a flood, which may lead to deviations from the water-surface elevations and inundation boundaries shown here. Additional areas may be flooded due to unanticipated backwater from major tributaries along the main stem or from localized debris- or ice-jams. Inundated areas shown should not be used for navigation, regulatory, permitting, or other legal purposes.

This report is available at: http://dx.doi.org/10.3133/sim3338.
Or visit the South Atlantic Water Science Center Web site at http://www.usgs.gov/water/southatlantic/.

For more information about the National Weather Service, visit http://www.weather.gov.

For additional information, contact the South Atlantic Water Science Center, U.S. Geological Survey.