

# STREAMS AND FLOOD HAZARDS

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## Objectives:

- 1) Be able to use topographic maps to describe and interpret streams: their valley shapes, channel configurations, drainage patterns and the eroded landscapes and depositional features they create.
- 2) Be able to map and assess the extent of flood hazards along the Flint River, Georgia.

We will work through the following **problems**:

1-6, 32 – 35d and 36-38.

## **Extra Credit (5 points): Due the following laboratory.**

Visit this website (<http://waterdata.usgs.gov/nwis/rt>) and locate a stream monitoring station near your hometown (with the detailed information requested). The following site can be used for Mecklenburg County and immediate surrounding counties: <http://nc.water.usgs.gov/char/streamflow.html>. In addition, visit this website (<http://terraserver-usa.com/>) and obtain topographic and aerial maps of the station location. Provide the following information, **typed**:

- a) Your name
- b) Your home town, county and state
- c) Stream name, USGS station name and number, station latitude and longitude, drainage basin area, station elevation
- d) Peak stream flow rate (cubic feet per second) and date
- e) Maximum and minimum flow rate (cubic feet per second) over the past 30 days
- f) Attach a topographic and an aerial map showing location of station and stream (use the latitude and longitude from the stream flow station, but convert to decimal fraction, see example below for converting:
  - longitude:  $79^{\circ}45'15'' = 79 + ((45 + (15/60))/60) = 79.75417$  but enter as a negative number since it is west of  $0^{\circ}$ Long
  - latitude:  $34^{\circ}03'05'' = 34 + ((3 + (5/60))/60) = 34.05149$