# McGee Creek: Geomorphic History

## Materials:

printed base map (topographic and aerial image), tracing paper, GPS (optional), colored pencils, rock hammer, hand lens, pencil/eraser, mapboard, rulers, measuring tape, Brunton

## Activity (over 2 days)

* Using remote data (aerial imagery/topography), make a geomorphic map of some of the main features you observe at this locality (in pencil, on tracing paper).
* Decide on some field sites to visit, map, and record observations to answer the following questions:
  + What evidence exists in this field area for a recent glacial history and what glacial advance (age) are the moraines at this site associated with?
    - Hint: Using cross-cutting relationships, relative dating techniques, and comparison to regional features (as we’ve seen in the field and in the literature) determine an estimated age of glacial moraines.
* What evidence of active faulting is available in this field area (e.g. moraine sites, stream changes)?
  + Locate linear features from remote imagery and identify locations where these features offset other identifiable geomorphic features.
  + Determine the type of fault based on local and regional landscape morphology as well as local offset orientation.
  + Calculate a fault slip rate based on fault scarp geometry (moraine offset) and moraine age.
  + Describe how stream changes correlate with fault position.

## Hand In:

1. Map of field area
2. Digested datatable of relevant data collected in the field
3. ~1-2p site Interpretation answering the questions guiding the activity