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### **Background.**

The Nez-Perce Clearwater National Forests and neighboring institutions utilize stream flow and stream height to assess watershed conditions and assist in land management decisions. One key aspect for meaningful stream flow analysis is the development of stream flow rating curves, or the relationship between stream height and flow. This correlation allows continuous stage data to be converted to flow data, resulting in a graph of flow versus time (hydrograph). A hydrograph represents the integrated effects of surface and groundwater flows, geology and geomorphology, topography and aspect, climate and weather.

### **Task:**

Conduct hydrograph analysis to identify hydrologic events and trends such as floods or changes in winter snowpack conditions.

### **Data:**

1. ~15 NFS stream gauge sites, ~10 neighboring USGS sites, with possible geographic/hydrologic correlation
2. 15-minute interval water pressure (height) data over; 10-30 years (some sparse/missing)
3. Supplemental stream velocity profile measurements using a variety of techniques across time and location.
4. Supplemental regional SNOTEL and air temperature data.
5. Supplemental substrate, suspended sediment, and water temperature data.
6. Site and data collection metadata (some legacy, some sparse)