



USGS NSF GRIP, GSP Opportunity

● Point of Contact Name:	Douglas Burns
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● USGS Center:	New York Water Science Center
● Project Title:	Climate Change Effects on Streamflow in New York
● Summary:	<p>There is keen interest in the effects of climate change on water resources across New York State and the Northeast. New York is one of the first states to enact a climate change resiliency law. There is a large group of state agencies and other stakeholders who are highly interested in how climate change may affect river flooding and water supply. This work will provide an assessment of whether current patterns and trends in streamflow are consistent with expectations as to how climate change may impact flowing waters into the future.</p>
● Project Hypothesis or Objectives:	<p>The goal of this project is to explore trends in streamflow for long-term gages operated by USGS across New York State and immediately adjacent areas. The intern will compile discharge data, analyze temporal trends and spatial patterns, and compare trends to short- and long-term climate change patterns across the state. The emphasis on this work will be on high flows and floods, but all aspects of streamflow will be explored for trends</p>
● Duration:	2 - 6 months
● Internship Location:	Troy, NY
● Field(s) of Study:	Engineering, Geoscience
● Applicable NSF Division:	EAR Earth Sciences
● Intern Type Preference:	NSF Graduate Research Fellow (GRF) via the Graduate Research Intern Program (GRIP)
● Keywords:	climate change, water resources, streamflow, trends
● Expected Outcome:	The intern will present a seminar to USGS employees and local stakeholders at the completion of the internship. Additionally, this

work could lead to a future publication on climate change and streamflow, although this could probably not be realistically completed with the internship time frame. The skills developed in this work will be transferable to other studies of streamflow, climate change, trends analysis, and data management. This investigation will contribute to the science mission of the USGS by providing an improved understanding of how streamflow patterns have changed through time.

 **Special skills/training Required:**

It would be helpful (but not absolutely necessary) for the intern to have experience running programs in R.

 **Duties/Responsibilities:**

The intern will have access to USGS streamflow data and will develop skills in managing and analyzing large data sets. The intern will also develop skills in trends analysis that are transferable to other areas of inquiry.
