

# USGS NSF Internship Opportunity

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● <b>USGS Center:</b>	New Jersey Water Science Center
● <b>Project Title:</b>	Water Withdrawal Footprint Visualizations
● <b>Summary:</b>	Decision makers, water use stakeholders, and the public at large need intuitive visualizations of the status and trends in water use in order to make wise management decisions. How can we best turn newly available details on water use in the US into geospatial information that can be easily understood, without biasing that information. Help us create maps that make our water use data come alive.
● <b>Project Hypothesis or Objectives:</b>	USGS recently developed a map app to visualize the magnitude of groundwater withdrawals relative to water resource metrics, or water allocation targets. The intern will help us further explore the utility of this approach and possibilities for also visualizing surface water withdrawals. Opportunities exist using this method with recently improved water use data available as part of USGS's Water Availability and Use Science Program.
● <b>Duration:</b>	Up to 12 months
● <b>Internship Location:</b>	Lawrenceville NJ
● <b>Keywords:</b>	Computer/Data Science, Hydrology, Modeling, Remote sensing
● <b>Applicable NSF Division:</b>	GEO (Atmospheric, Earth Sciences, Ocean Sciences, Polar Programs), SBE (Social, Behavioral, and Economic Sciences), ENG (Engineering), CISE (Computer and communications foundations, Information and intelligence systems, Advanced Cyberinfrastructure, Computer and network systems)
● <b>Intern Type Preference:</b>	Any Type of Intern
● <b>Duties/Responsibilities:</b>	The intern will learn how to use our new map app, explore other applications of the method, and apply the map app using USGS water use datasets.
● <b>Expected Outcome:</b>	The intern will become familiar with a new and mapping method that may be useful for many types of geospatial data, and have access to

USGS databases and research to design and test applications. USGS would benefit from creative insights into further applicability and use of the map app, and development of web apps that will facilitate widespread use.



**Special skills/training  
Required:**

Experience with GIS software, databases, and programming methods (e.g. python) would be valuable. Graphic or map design experience would help expand our current tool set.

