

Rosalind Grant – NASA Research Project on Climate Change and weather stations:  
Abstract

As temperatures rise, extreme weather phenomena happen more frequently due to climate change. Tribal Nations are most vulnerable to the dramatic effects. This is where environmental monitoring becomes crucial. The goal of my research project is to utilize the data from installed weather stations on Tribal Lands. The weather stations that have been implemented, may observe air temperature, humidity, precipitation, wind, sunlight, soil temperature, and soil moisture. The data collected can support awareness and help Tribal Nations protect their people, lands, and cultural resources, as well as aiding in recovery and funding capacity. This project began with three interviews to build relationships and secure approval from previous elected Omaha Tribal officials, an Omaha elder, and current Omaha Tribal employees who work in the environmental department. Two meetings with non-tribal environmental programs (Platte Basin Time-lapse and the National Weather Service) were arranged to gain insight on how to present the data to the public (Tribal communities). One last interview was set up with a neighboring Tribal Nation's program (the Ioway Tribe Pathways Project) to understand how their climate change adaptation plan was implemented and continued. While these conversations were just being started for the Omaha Tribe of Nebraska, the Isanti Tribe of Nebraska has already given their approval for environmental monitoring equipment to be installed on their Tribal Lands. For two years, the data collected from the weather station located on the Isanti Lands is being distributed through weather summaries that highlight current and emerging environmental impacts. This project is a part of a long-term effort to monitor the environment in a culturally appropriate way and provide outreach to the community about environmental hazards.