

Cheyenne River Sioux Tribal

Community Exposures To Metals In The Air



Project Team:

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Project Scope:

The overall objective of this Education Training project is to generate current outdoor air pollution information for the Cheyenne River Sioux Tribal communities in South Dakota. The proposed Education Training project, “Cheyenne River Sioux Tribal community exposures to metals in the air,” is not for human subject research, and no identifiable health information will be collected throughout this project.

Why:

This Education Training project aims to collect data and scientific evidence that address the inequities experienced by the affected CRST community by helping to support and rebuild environmental monitoring infrastructure lost due to COVID-19 pandemic.

How:

We hope to measure CRST specific ambient exposure levels to metals in the air we breathe. Measurements will include both PM2.5 - associated metals and mercury (Hg) vapor. Our proposed work offers an excellent opportunity for not only building Tribal capacity and air pollution measurements for CRST, but also linking present environmental concerns to the development of a new generation of environmentally-knowledgeable Tribal expertise. This education effort will work with three selected Oglala Lakota College students that are enrolled in CRST and attend the Eagle Butte Campus. These students will be trained virtually by project partners at the University of New York, University of New Mexico to complete weekly sampling of air quality. OLC students will also be trained to understand analysis of the samplings, and will host a community-led report back workshop to inform community members, stake holders, and local tribal government officials on findings, analysis, and gaps.

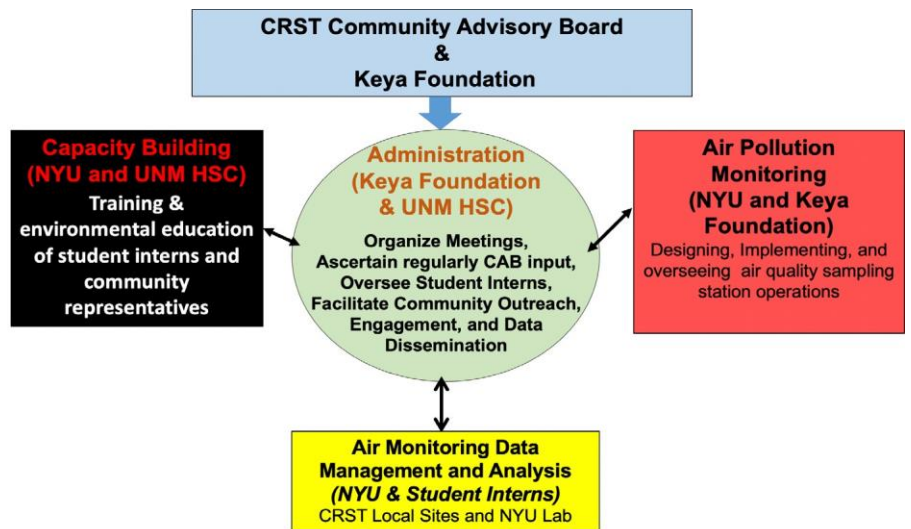


Figure 4. Management Structure of the Community Air Pollution Monitoring Program

Outcome:

The Keya Foundation’s goals to complete this objective are to: 1) collect, process, and share data on exposures to ambient air metals in the Lakota Nation using a capacity-building participatory research design that locates sampling stations in and around Eagle Butte, SD, employing local, CRST Tribal member students to collect samples on a weekly basis for subsequent analysis; and 2) deliver to the Lakota community resources and valuable culturally translated information about their airborne metal levels and potential exposures that can be leveraged to promote policies addressing community risks and concerns related to air pollution, health, and quality of life.