

Working Group Title: Increasing Environmental Awareness and Citizen Participation in Science in Sioux Nation Tribes of South Dakota

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We propose to build a working group around a community-level problem in the Missouri River (MR) region of South Dakota. This particular working group will be multi-faceted, and will deal with the scientific topics of water quality and air pollution while addressing how geoscientists can assist in environmental justice efforts in a drastically under-served community. The under-served communities we are working with are American Indians, who have among the lowest graduation rates in high schools and college and are too seldom engaged in scientific research or discussions. We will be working with American Indians in the MR region, which includes the Cheyenne River and Pine Ridge Reservations. This particular area is among the areas in the United States with the lowest life expectancy and high rates of diseases, including cancer, cardiovascular disease and diabetes. Environmental factors, most notably poor drinking water quality and air pollution, are potentially important contributors to this disease.

There is very little information and data about the potential sources or of contaminants that affect the communities living in these environments, and most of the research generated from outside sources is either not disseminated locally or is distrusted by community members. Thus, there is a clear need to develop the framework to encourage scientific participation at different levels in these locations, and to address local scientific challenges in a personally meaningful way. We believe that by having community members identify their challenges, encourage participation in science through research and education, and making science accessible and relevant, we can make geoscience more socially relevant for broader audiences.