

US EPA ARCHIVE DOCUMENT

## Tribal EcoAmbassadors - Descriptions of Projects

### 1. Turtle Mountain Community College, ND – Dr. Deborah Hunter

#### Monitoring Drinking Water from Private Wells

Turtle Mountain Community College will investigate the quality of drinking water from private wells within and around their tribal lands. The group will collaborate closely with the Turtle Mountain Band of Chippewa Indians (TMBCI). There are currently over 100 private wells being used on the tribal lands, and the quality of this drinking water is relatively unknown and untested. The project will positively impact over 13,000 residents in a ND county ranked 42 out of 44 in health. After the findings, the project participants will present the tribe with its findings through an environmental education program.

### 2. Tohono O’odham Community College, AZ –Dr. David Stone

#### Carbon-negative Building Products from Recycled Materials

This project will help resolve the challenges of having too much waste, too little building materials, and a housing and job shortage. The Tohono O’odham Nation’s Solid Waste Facility transports 500 tons of waste each month 65 miles to Tucson, and of this, approximately 50 tons is glass, primarily bottles. By using this glass, along with other scrap metals, they will create a carbon-negative building product based on traditional adobe. Tohono O’odham will leverage labs at UA and ASU to develop the optimal mixes and processes, and the products will be immediately used onsite on tribal lands.

### 3. Fort Berthold Community College, ND – Dr. Kerry Hartman

#### Monitoring Hydrofracking Fluids in Local Wells

The project will involve collection of hundreds of well water samples from the over 900 rural wells on The Fort Berthold Indian Reservation in Bakken, ND. Samples will be collected, preserved, pre-tested and analyzed according to proper protocols for the various groups of chemicals contained in fracking fluids and petroleum drillings. The samples will be pre-tested for presence of toxics and contaminants by the Ambassador and students. Samples will also be sent to an EPA certified lab for further analysis. All test results will be analyzed, summarized and incorporated into project reports and posters. The Ambassador will collaborate closely with EPA’s ORD throughout the course.

### 4. Fort Peck Community College, MT -- Renee Dufault

#### Epigenetics/Obesity/Toxics Exposure

This grant would develop an entire course focused on the impacts mercury has on human health that would include research and environmental education. Mercury exposure in tribal communities tends to be very high because of fish consumption rates and local contaminated sites. This fits closely within EPA’s Tribal Science Council priorities and EPA’s work through the Office of Children’s Health Protection.

**5. Candeska Cikana Community College, ND -- Rachel Brazil**

**Developing a Campus Recycling Sustainability Program**

With this grant, the Tribal EcoAmbassador will work with a cohort of students to establish the infrastructure necessary for a recycling program at the College. The program will include community research on behaviors as well as environmental education on the importance of recycling. Students engaged will be considered interns and will be paid \$10 an hour for their participation. This program also links directly to the OnCampus EcoAmbassadors program and with EPA's help will explore collaboration with other colleges and universities involved in this program.

**6. Little Big Horn College, MT -- Sara Plaggmeyer**

**Assessing non-point Sources on Little Big Horn River**

This grant would support the development of a course focused on water quality and non-point source pollution. The students would conduct a water monitoring research initiative aimed at identifying pollutants and sources of pollution. The Office of Water and the Office of Research and Development were consulted, and agreed that this community based research fits within our mandate and our priorities for Indian country. With the data collected, the students would have an opportunity to present their findings to the Crow Legislature and Government with recommended policy solutions.

**7. Dine College, AZ --Marnie Carroll**

**Participatory Air Quality Monitoring**

The grant would research on air quality focused on causes including coal fired cookstoves and relative impacts on public health. This area has very high rates of asthma and chronic pulmonary disease, and would work to develop localized data on air quality for community members. This would also include a significant community based environmental education component by empowering communities to voluntarily monitor their air quality.

**8. United Tribes Technical College -- Grace BullTail**

**Environment Engineering and Design**

This grant will support the first environmental engineering and design course at UTTC. The focus will be on sustainability, green infrastructure and low -impact design which fits neatly within EPA's sustainable communities partnership and green infrastructure strategy. Specifically, students will be taught the concepts behind low impact design and sustainability and more practical skills including hydrological analysis, site design, water quality control, conservation and environmental planning.