

National Partnership for Environmental Technology Education

A National Science Foundation ATE Project:

**“A National Collaboration to Strengthen the Advanced Environmental
Technology Education Programs at Tribal Colleges”**

2009 Summer Tribal Environmental Fellows Institute

Water Quality on the Missouri River Watershed

Agenda for the Fellows Institute

August 2-7, 2009

Sunday, August 2

6:30-8:00 pm Informal get together at Prairie Knights Casino (PKC): social time, dinner, introductions and brief overview of program, transportation schedule.

Elder – Mary Louise Defender

Monday, August 3

Morning

7:40 Bus leaves PKC, 15 minute drive to Sitting Bull College (SBC).

8:00-8:10 Introduction - Gary Halvorson, Instructor/ Department Chairman, Sitting Bull College

8:10- 8:30 Elder - prayer, Introduction to Standing Rock – Mary Louise Defender

8:30-8:45 Welcome from SBC

8:45-9:15 Kirk Laflin, National PETE Executive Director and Sarah Gross, Environmental Analyst -
Overview of the Fellows Institute, NPETE

9:15-9:30 Break

9:30-11:30 Participant share (College/High School, and instructional responsibilities/background)
and Institute expectations, 5 minutes each

Lunch

11:30-12:30 Lunch at the Family Support Center

Afternoon

12:30-1:30 Tour of Ft. Yates – Sitting Bull Burial site, the Standing Rock, jail, Missouri River, Sitting Bull College

1:30-3:00 ATEEC Best Practices – Ellen Kabat-Lensch

3:00-3:15 Break

3:15-5:00 Lab safety, Introduction to Lab procedures in groups of 4-5
Station 1: Washing glassware
Station 2: Coliforms
Station 3: Suspended solids, dissolved solids
Station 4: pH calibration
Station 5: Electrical Conductivity calibration

5:00 Return to PKC

Tuesday, August 4**Morning**

7:40 Travel to SBC

8:00-12:00 Participants will divide into two equal groups.

Group 1. Sampling in the field from streams, ponds, lakes; preservation of samples, field analyses, lab analyses.

Group 2. Adam Sigler - Water Quality curriculum

Lunch

12:00-1:00 Lunch at the Family Support Center

Afternoon

1:00-5:00 Group 1. Adam Sigler – Water Quality curriculum

Group 2. Sampling in the field from streams, ponds, lakes; preservation of samples, field analyses, lab analyses.

5:00 Return to PKC

Evening

Plan research project

Wednesday, August 5

Morning

8:00-12:00 Participants will remain in two groups

Group 1. Lab analyses of water samples, advanced procedures
Stations 1-5. Previously practiced analyses
Station 6. Atomic Absorption
Station 7. Auto Analyzer
Station 8. Colorimeter

Group 2. Presentations will be made by:
8:10-8:40 Bill Schuh
8:40-9:10 Shannon Suggs
9:10-10:00 Marty Gipp
10:00-10:15 Break
10:15-12:00 William Eggers

Lunch

12:00-1:00 Lunch at the Family Support Center

Afternoon

1:00-5:00 Group 1. Presentations will be made by:
1:00-1:30 Bill Schuh
1:30-2:00 Shannon Suggs
2:00-2:45 Marty Gipp
2:45-3:00 Break
3:00-4:45 William Eggers

Group 2. Lab analyses of water samples, advanced procedures
Stations 1-5. Previously practiced analyses
Station 6. Atomic Absorption
Station 7. Auto Analyzer
Station 8. Colorimeter

5:00 Return to PKC

Thursday, August 6

Morning

7:40 Bus from PKC to SBC

8:00-12:00 Canoe trip** with water sampling; alternate water sampling trip

Lunch

12:00-1:00 Picnic lunch at Casino Marina

Afternoon

1:00-5:00 Lab analyses of water samples

Evening

6:00 – 8:00 Farewell dinner

Friday, August 7**Morning**

8:00-9:00 Finish Lab analyses, prepare brief report on research

8:00-12:00 Write grant proposal for lab supplies, equipment

Lunch

12:00-1:00 Lunch at Family Support Center

Afternoon

1:00-2:00 Wrap-up, List of expectations, survey, Stipend

2:00 Travel to Bismarck Airport

3:30 Arrive at Bismarck Airport

****Canoe trip**

Participants can choose between a canoe trip and an alternative water sampling trip. To take the canoe trip, a participant should be in average to good physical condition and weigh less than 280 lbs. This is not a white water river trip. The Missouri River is a great River to canoe on for someone with little or no canoe experience. There are no rapids and a gentle current of 3-5 mph makes for easy paddling. We will be on the water for about 3 hours.

This is a beautiful trip for anyone who is interested in participating. We will have an experienced guide and at least one other experienced canoer on the trip to ensure a fun and safe trip. Supplies needed are a jacket or sweatshirt, sun tan lotion, hat, water bottle, sunglasses, raincoat (trip is rain or shine), and an old pair of tennis shoes or other sturdy water shoes.

Daily Dress Code:

Due to the nature of the daily activities, you will need to bring old or otherwise 'non-special' clothing (that you would not be upset staining or otherwise soiling), rain gear (we will be doing all activities rain or shine) and close-toed shoes (flip-flops and sandals will **not** be permitted). You will be issued appropriate laboratory safety clothing and gear.

Participant Tangible Outcomes

Water Quality Curriculum

Research proposal

Research Data and Report
Grant Proposal

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