

## EPA Region 8 Volunteer Intern Description

**Position Title:** Water Quality Assessment Assistance – Wind River and Other Projects

**Background:**

The Water Quality Unit (WQU) in Office of Water Protection works with state, tribal and local partners to collect water quality data to help answer specific questions about pollutant behavior in surface waters. Time constraints often make it challenging to ensure that the data are analyzed and assessed against identified benchmarks to determine whether they are posing potential environmental and public health concerns and to evaluate whether critical data gaps remain. For environmental data collected by R8, data assessment and uploading to WQX is a quality assurance requirement and is considered core work for WQU staff. It is important for in-house data to be assessed in order to: 1) ensure that potential pollutant impacts are identified and communicated to Regional decision-makers; 2) determine whether or not critical data gaps exist that warrant further sampling; 3) tailor any future sampling efforts to fill these data gaps; and 4) ensure data are uploaded to the national WQX database as required.

Specifically in 2012, the Wind River Tribes requested sampling and analysis support from R8 to better understand the potential impacts of discharges of oil & gas wastewater. The work plan was developed by the WQU with input from the Wastewater Unit, yearly QAPPs have been prepared and approved, and three years of sampling have been completed by the CWP and R8 Laboratory staff. Data assessment is needed in order to determine if any additional data needs to be collected in FY17/18.

It is important to note that the discharges of interest for this study flow into ephemeral streams that have little dilution capacity. Hence, this undiluted wastewater is being used by the Tribes for agricultural purposes including livestock watering with a direct linkage to the human food-chain. In addition, after numerous decades of discharging these ephemeral drainages are now perennial streams/wetlands that ultimately reach the Wind and Little Wind Rivers that have downstream drinking water intakes.

**Position Description:**

The WQU has partnered with other organizations to collect data downstream of permitted discharges of oil & gas wastewater on the Wind River Indian Reservation to assess whether and how far downstream impacts from the discharge are observed. Three years of data have now been collected. The volunteer would assist staff in conducting an assessment of the data collected to date and formulating conclusions from that assessment, including identification of any data gaps.

If time permits, the intern would also help assess in-stream data from Front Range locations on pharmaceutical and personal care products in streams. These are emerging contaminants whose fate and transport in the environment are not well understood, and assessment of this data will improve our understanding of how these compounds behave in water bodies and identify future monitoring needs.

*Specific duties* may include, but are not limited, to the following:

- Compile and work with water quality data in spreadsheet format
- Work with staff to identify benchmarks to use in assessing data
- Complete assessment of data
- Prepare written draft report and/or presentation summarizing assessment conclusions
- Assist R8 staff in uploading data to WQX
- Other as needed

*Desired Skills:*

- Excellent written and verbal communication skills
- Strong Excel skills
- Basic Word and Powerpoint
- Ability to work independently
- Works well on a team

*Knowledge/Experience:*

- Academic background in water quality science
- Experience working with data in spreadsheet format

**Timeline:**

Intern will be on board for a minimum of 3 months, maximum of 3½ months (there may be an opportunity to extend for a maximum of 6 months depending on circumstances, but this is not assured).

**Desired hours per week:** 25-40

(preference will be given to qualified candidates available to work more hours per week).

**Desired start date:**

May 15- May 30

**For More Information:** Karl Hermann, 303-312-6628

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