

As a Wastewater Laboratory Analyst you would perform these types of duties:

- Collect samples of natural waters, wastewater, treated wastewater, biosolids, industrial waste samples and samples from other sources
- Conduct chemical analyses on water, wastewater, biosolids, industrial waste samples and other sources
- Conduct physical analyses on water, wastewater, biosolids, industrial waste samples and other sources
- Conduct bacteriological analyses on water, wastewater, biosolids, industrial waste samples
- Prepare and operate laboratory equipment and instruments required for chemical, physical and bacteriological analyses
- Prepare reagents and standards required for chemical, physical and bacteriological analyses
- Enter the results of analyses into a Laboratory Information Management System (LIMS)
- Maintain a quality assurance program for chemical, physical, and bacteriological analyses through statistical quality control techniques including blanks (travel, sample, equipment), known additions, duplicates, and control charts

Wastewater laboratories are required to demonstrate competence through annual participation in a system of check samples operated by the State of Colorado and the Environmental Protection Agency. In addition, Pueblo's Wastewater Department Laboratory maintains certifications through the U.S. Geological Survey. Laboratories receive sample sets annually from the certification authorities that contain known concentrations of specific constituents. The results of analyses of these samples are required to fall within a specified range of the true values in order for the laboratory to retain its certification to perform those analyses for purposes of documenting compliance with the requirements of the Clean Water Act.



Representative tests performed by the Pueblo Wastewater Department Laboratory include:

- pH
- Biochemical Oxygen Demand (total and carbonaceous)
- E. coli* and fecal coliform bacteria
- Total suspended solids
- Metals by ICP/MS
- Inorganics including chloride, cyanide, ammonia, nitrite - nitrate, total phosphorus, total nitrogen and many others.

City governments usually provide wastewater collection and treatment services. States and the federal government do not provide wastewater services. There are some private companies that operate wastewater treatment plants, but the plants themselves are owned by municipalities. So if you work as a wastewater operator, you will probably work for a city government. That usually means a steady job and good benefits.

WHY WOULD ANYONE WANT TO WORK WITH WASTEWATER?

First, wastewater collection and treatment is an essential service.

Wastewater collection and treatment is an essential public health service. Many human diseases, including cholera, typhoid fever, hepatitis, and poliomyelitis, are discharged from infected individuals in human waste. Without wastewater collection to keep these infectious agents away from healthy people and without treatment to kill the microorganisms that cause the diseases, these illnesses can spread quickly through the human population, causing severe illness or death.

Second, wastewater collection and treatment protects the environment.

Human beings and animals produce bodily wastes. Many business activities also produce wastes containing chemicals in much higher concentrations than would occur naturally. Wastewater collection and treatment remove these wastes and chemicals before they overwhelm natural systems, killing fish and other wildlife and reducing our quality of life.

Third, wastewater operators are the only line of defense.

The men and women who work in wastewater collection and treatment are the only ones who do the work of protecting public health and the environment from human waste. Nobody else – not the Congress, not the EPA, no state organization – collects and treats wastewater. Without wastewater operators, human waste would endanger lives and ruin the environment.

It is a job you can be proud of. And it is a career that will never go away.

WANT MORE INFORMATION ABOUT A CAREER IN WASTEWATER COLLECTION AND TREATMENT?

If you would like more information about a career in the field of wastewater collection and treatment, the following resources will provide a starting point.

City of Pueblo Wastewater Department

Nancy Keller 553-2894
John Lindstrom 553-2866
Erik Baker 553-2862

On The Web

Water Environment Federation
<http://www.wef.org>

City of Pueblo

<http://www.pueblo.us>
(select City Departments/Contact Information, then select Wastewater at the bottom of the left-hand column)

Certification as a wastewater operator will improve your understanding of the analyses you perform. Information on becoming a certified operator can be obtained at:

Colorado Operator Certification Program
Office
<http://www.ocpoweb.com>

WASTEWATER LABORATORY ANALYST

Career Opportunities



PUEBLO WASTEWATER
Protecting Our City and Planet

City of Pueblo



city of

PUEBLO

colorado