

*Code: 2742*

*Title: WASTEWATER LABORATORY CHEMIST*

**SUMMARY:** Performs chemical and microbiological lab/field analyses and testing of ground/storm/surface and solid wastewater samples utilizing Environmental Protection Agency (EPA) approved methods. Processes analytical data and prepares reports in compliance with licensure requirements of local, state and federal regulatory agencies.

**DUTIES/RESPONSIBILITIES:** (Work assignments may vary depending on the department's needs and will be communicated to the applicant or incumbent by the supervisor)

Performs sophisticated chemical and microbial analysis by obtaining water samples, operating field instrumentation and recording results;  
Prepares samples for testing using complex chemical extraction and digestion techniques;  
Monitors laboratory data of technicians to validate the accuracy and precision of analytical results;  
Maintains manual and automated records and logbooks, interprets data and prepares reports;  
Operates complicated analytical instrumentation such as gas chromatograph/mass spectrometers (GC/MS), inductively coupled plasma/mass spectrometers (ICP/MS) and inductively coupled plasma/atomic absorption spectrometers (ICP/AAS);  
Prepares, maintains and disposes of various chemical standards, solvents and reagents, test solutions and bacteriological media;  
Maintains facilities and equipment in accordance with departmental and professional standards;  
Adheres to safety procedures in accordance with laboratory and chemical plan;  
Assists Wastewater Laboratory Chemist Specialists in writing standardized operating procedures and laboratory audit procedures;  
Prepares purchase requisitions for laboratory chemicals, supplies and parts for maintenance of analytical instrumentation;  
May assist Wastewater Laboratory Chemist Specialists in training Wastewater Laboratory Technicians.

**KNOWLEDGE & SKILLS:**

Knowledge of:

- principles and practices of organic and inorganic chemistry, effluent toxicity testing, wastewater process control and microbiological testing;
- standard laboratory practices and techniques such as performing titrations, dilutions, concentrations, extractions and digestions;
- operation and maintenance of specialized laboratory equipment and instrumentation;
- wastewater treatment and test procedures used for process control;
- federal, state and local requirements for compliance testing of wastewater, ground water, storm water, surface water and solid waste samples;
- EPA approved test methods for analyzing wastewater, groundwater and solid waste samples;
- permit and monitoring requirements.

Skill in:

- performing specialized laboratory testing;
- using routine and sophisticated laboratory equipment and analytical instruments;
- communicating effectively and following written and verbal instructions;
- interpreting test results and preparing analytical reports;
- preparing chemical standard solutions and microbiological media using volumetric glassware and analytical balances;
- safely handling hazardous and carcinogenic chemicals;
- use of automated information systems for acquiring data and report generation.

MINIMUM QUALIFICATIONS:                      EITHER:

(1) A Bachelor's degree from an accredited college or university with a major in chemistry, microbiology, biology or other closely related science as defined by the appointing authority at the time of recruitment and two years of experience performing chemical or microbiological analysis in a laboratory setting.

(Additional relevant education from an accredited college or university or experience may be substituted)

OR:

(2) Two years with Pima County as a Wastewater Laboratory Technician.

OTHER REQUIREMENTS:

Licenses and Certificates: A valid Arizona Class D drivers license is required at the time of appointment. Some positions, within this classification, may also require possession of a valid Arizona Commercial drivers license (CDL) with appropriate endorsements, as identified by the Appointing Authority. Failure to obtain/maintain the required licensure shall be grounds for termination.

Physical/Sensory Requirements: Some positions may require the ability to: lift and carry up to fifty pounds; work with or in the presence of obnoxious odors; work with noxious or potentially hazardous chemicals, compounds or wastewater products. Safety training and equipment will be provided by Pima County.

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Pima County

Revised 01/09/05<sup>(ya)</sup>  
Updated 05/08/09<sup>(tb)</sup>