

*Code: 2381*

*Title: HYDROLOGIST*

**SUMMARY:** Gathers, analyzes, interprets and applies hydrologic and related data to engineering problems/projects and reports findings and recommendations to management for action.

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

Reviews subdivision plats and rezoning applications for compliance with Floodplain Management ordinances and recommends approval/disapproval;  
Assists technical staff in monitoring and maintaining the flood warning network;  
Researches and gathers hydrologic and hydraulic data for hydrology studies;  
Prepares watershed maps, drawings and reports using manual and automated systems;  
Participates with technical staff in the installation, check-out and servicing of rain gauges and flow metering devices;  
Performs computer-based hydrologic and hydraulic studies, analyzes and interprets findings and prepares reports of results;  
Identifies flood status of land parcels in response to requests from developers, the public or other County and governmental agencies;  
Investigates drainage complaints and submits reports of findings;  
Inspects commercial sand and gravel operations for compliance with Floodplain Management ordinances and any restrictions on floodplain use permit, and submits reports to management of findings and recommendations;  
Assists developers, contractors and property owners in floodplain use permit application processes;  
May act as lead Hydrologist for unique or complex projects.

**KNOWLEDGE & SKILLS:**

**Knowledge of:**

- principles of surface water hydrology, associated backwater and hydraulic computation processes and principles of floodplain management;
- resources used for land description, identification and analysis, to include computer-based resources, topographic maps, aerial photographs, sketches and graphs;
- provisions and restrictions of local, state and Federal Floodplain Management and zoning ordinance(s) and rules, regulations and standards;
- principles and techniques of manual and computer-based cartography;
- principles and techniques for remote sensing/monitoring of hydrological and hydraulic data.

**Skill in:**

- gathering and analyzing hydrologic/hydraulic data and preparing technical reports and recommendations;
- reading and interpreting topographic maps, aerial photographs, legal descriptions, sketches, graphs and computer-based materials;
- reviewing and analyzing subdivision plats, rezoning applications and floodplain use permit applications, and preparing recommendations for approval/disapproval/modification
- installation, check-out and servicing of remote sensing devices e.g., rain gauges, flood monitoring equipment, flow metering devices, etc.;
- communicating effectively;
- evaluating field conditions, making inspections and preparing reports;
- use of computer-based resources to complete and document work performed.

MINIMUM QUALIFICATIONS:                      EITHER:

(1) A Bachelor's degree from an accredited college or university with a major in hydrology, hydrogeology, geology or watershed management or a Bachelor's degree from an accredited college or university in civil engineering with a minor in hydrology/hydraulics, hydrogeology or watershed management and one year of professional experience in conduct of hydrology studies.

OR:

(2) Four years of professional experience in the conduct of hydrological studies.

OTHER REQUIREMENTS:

Licenses and Certificates: Some positions may require a valid Arizona Class D Driver's License at the time of appointment or prior to completion of initial/promotional probation.

Physical/Sensory Requirements: Physical and sensory abilities will be determined by position. Some positions may require working in the field in extremes of temperature, sun, wind, rain and dusty conditions for protracted periods.

Special Notice Items: Some positions within this classification that are not covered by the requirements of OSHA's Blood Borne Pathogen program may be offered, at County expense, the Hepatitis B series of vaccinations due to potential exposure to raw sewage and sharps (discarded needles/syringes).

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 01/02/00<sub>(fn)</sub>  
Updated 05/07/09<sub>(tb)</sub>