

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES
CLASS SPECIFICATION

ENVIRONMENTAL PROTECTION ENGINEERING CLASS SERIES

<u>CLASS TITLE</u>	<u>POSITION CODE</u>
ENVIRONMENTAL PROTECTION ENGINEER I	13791
ENVIRONMENTAL PROTECTION ENGINEER II	13792
ENVIRONMENTAL PROTECTION ENGINEER III	13793
ENVIRONMENTAL PROTECTION ENGINEER IV	13794

Effective: 2-1-2022

SERIES CHARACTERISTICS:

Positions allocated to this class series are basically concerned with the application of engineering principles and practices to solve problems of development, design, construction, maintenance, inspection, and the evaluation of equipment or systems involved in the control and modification of environmental factors affecting the life quality of citizens of the State of Illinois.

CLASSIFICATION CRITERIA:

Positions allocated to classes in the Environmental Protection Engineering series are distinguished by the following classification hallmarks:

1. The primary functions of the position must require the incumbent to apply basic through advanced professional engineering technology, theory and practices.
2. The application of the above criteria shall be confined to those positions involved with the solution of engineering problems relating to the natural environment.
3. Although supervisory responsibilities are generally the hallmark of higher-level positions in this series of classes, full consideration must be given to the level of engineering skill required to perform the assigned agency functions.

ENVIRONMENTAL PROTECTION ENGINEER I

POSITION CODE: 13791

DISTINGUISHING FEATURES OF WORK:

Essentially, positions of the Environmental Protection Engineer I class are staffed by incumbents who have acquired the requisite educational background to have gained sufficient knowledges of the professional principles and practices of an engineering field to perform a variety of closely supervised functions that are designed to provide a basic introduction to, and training in the explicit engineering programs of the agency. The primary requisite for appointment to this class is the possession of a bachelor's degree in an engineering science. Typically, such positions assist a higher-level engineer in the investigation of the design, location, construction, maintenance, or inspection of subsystems of public and private facilities relating to water pollution, public water supply, land pollution, air pollution and noise abatement.

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of college with a bachelor's degree in an engineering science. Typically, the subject matter would involve the type of coursework associated with environmental (sanitary, hydraulic, hydrology, and air pollution specialties), civil (sanitary, hydraulic, and hydrology specialties), general, industrial, mechanical, chemical, public health, electronic, acoustical or aeronautical engineering or engineering mechanics or a closely related engineering specialty.

Requires no previous experience.

This class is included as an Upward Mobility Program credential title.

ENVIRONMENTAL PROTECTION ENGINEER II

POSITION CODE: 13792

DISTINGUISHING FEATURES OF WORK:

Positions of this level conduct field and office engineering investigations and studies of routine problems relating to the design, construction, location, maintenance or the inspection of a subsystem of a large and complex or the complete system of a smaller public or private facilities relating to water pollution, public water supply, land pollution, air pollution and noise abatement.

These positions are typically assigned routine engineering functions that require the application of standard prescribed engineering methods and procedures. Work assignments are generally screened to eliminate difficult or unusual problems, however, the incumbent will be required to be sufficiently familiar with the use of standard engineering principles and practices to assist a higher level engineering position in performing investigations of, and developing solutions to complex engineering projects.

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years college with a bachelor's degree in an engineering science. Typically, the subject matter would involve the type of coursework associated with environmental (sanitary, hydraulic, hydrology, and air pollution specialties), civil (sanitary, hydraulic, and hydrology specialties), general, industrial, mechanical, chemical, public health, electronic, acoustical or aeronautical engineering or engineering mechanics or a closely related engineering specialty.

Requires one year of professional engineering experience in one of the fields listed above. A master's degree in engineering or business administration may be substituted for the required experience.

Knowledges, Skills and Abilities

Ability to prepare technical engineering reports.

Ability to make mathematical computations and calculations involving the application of standard theory.

Ability to independently conduct routine engineering investigations and assist higher level engineering personnel in making complex or difficult investigations.

Ability to conduct personal interviews concerning routine problems with a wide variety of representatives of the general public.

ENVIRONMENTAL PROTECTION ENGINEER III

POSITION CODE: 13793

DISTINGUISHING FEATURES OF WORK:

Positions of the Environmental Protection Engineer III class perform a variety of office or field functions related to the investigation of complex engineering problems. Typically, a position of this level works in a specialized area of the total agency engineering programs under minimum supervision of detail, however, completed assignments are reviewed and approved by supervisory personnel for accuracy and technical engineering judgment.

Environmental Protection Engineer III personnel work with municipal, consulting, construction engineering and technical personnel in the design, construction, location, maintenance and operation or improvement of public water supply, water pollution, and land pollution facilities; provide consultative services; or lead field parties in the investigation, inspection and monitoring of various devices and facilities which have an effect on environmental quality. Incumbents of this class may supervise lower level engineers on special projects or routine matters within a specialized area.

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of college with a bachelor's degree in an engineering science. Typically, the subject matter would involve the type of coursework associated with environmental (sanitary, hydraulic, hydrology, and air pollution specialties), civil (sanitary, hydraulic, and hydrology specialties), general, industrial, mechanical, chemical, public health, electronic, acoustical or aeronautical engineering or engineering mechanics or a closely related engineering specialty.

Requires two years of professional engineering experience in one of the fields listed above. A master's degree in engineering or business administration may be substituted for the required experience.

Knowledges, Skills and Abilities

Ability to develop engineering reports requiring the application of advanced engineering theory.

Ability to explain and interpret agency policy and regulations.

Ability to consult with and advise members of consulting engineering firms concerning design and construction details of facilities and devices for the control of environmental conditions.

Ability to evaluate the design, construction, maintenance or operation of environmental control devices and facilities.

ENVIRONMENTAL PROTECTION ENGINEER IV

POSITION CODE: 13794

DISTINGUISHING FEATURES OF WORK:

Positions of the Environmental Protection Engineer IV class supervise an office or field engineering staff in conducting technical studies and investigation of environmental control problems that require the application of a small to moderate sized subordinate staff or involve facilities and systems that are not diversified in scope or of a highly complex nature.

Typically, office positions of this level are involved with the utilization and application of recognized principles and practices to conduct engineering studies and investigations in relation to the preparation of standards for the maintenance and operation of facilities designed to provide water for public consumption; the approval of facilities designed to control air and land pollution or, the certification of public and private employees engaged in the operation of facilities affecting environmental conditions. This position serves as working supervisor; assigns and reviews work; provides guidance and training to assigned staff; counsels staff regarding work performance; reassigns staff to meet day-to-day operating needs; establishes annual goals and objectives; approves time off; prepares and signs performance evaluations. Field positions are concerned with the investigation, inspection and monitoring of facilities and devices relating to the control of air pollution and the delivery of water for public consumption. Incumbents of this class may conduct highly technical and responsible studies and investigations which do not involve supervision of subordinates, but which require specialized ability and independent, highly responsible action.

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of college with a bachelor's degree in an engineering science. Typically, the subject matter would involve the type of coursework associated with environmental (sanitary, hydraulic, hydrology, and air pollution specialties), civil (sanitary, hydraulic, and hydrology specialties), general, industrial, mechanical, chemical, public health, electronic, acoustical or aeronautical engineering or engineering mechanics or a closely related engineering specialty.

Requires possession of Illinois certificate as a registered professional engineer. Requires four years of professional engineering experience related to working with complex engineering problems. A master's degree in engineering or business administration may be substituted for two years of professional experience.

Knowledges, Skills and Abilities

Ability to supervise the activities of a technical staff.

Ability to explain and interpret agency policy and regulations.

Ability to consult with and advise members of public and private agencies concerning the application of engineering standards and procedures to design, construction, operation and maintenance of facilities and systems for the control of environmental conditions.

Ability to review and evaluate engineering reports for completeness and accuracy of engineering detail.

Ability to develop and maintain effective public working relationships.