

OPERATOR NEED-TO-KNOW

WASTEWATER COLLECTION

CLASS 1

SKILL LEVEL REQUIREMENTS

- A. Know the sources and characteristics of sewage.
- B. Know the sanitary aspects of sewage such as disease, transmission, and pollutant effects.
- C. Know the types of pumps use in sewage pumping, advantages and disadvantages.
- D. Know the safety aspects of working around sewage, collection systems and treatment plants.
- E. Know the hydraulics of a collection system.
- F. Know the operation and maintenance of different types of pumps, motors and controls of small systems.
- G. Know the hazards of cross connections and be able to identify and correct those common in sewer systems.
- H. Know the different types of lift stations and advantages or disadvantages of each.
- I. Know the features of a maintenance program for a system of this size.
- J. Know simple Math formulas.
- K. Know the various types of materials, joining methods common in systems of this class.
- L. Know the proper safety procedures for underground repair and maintenance.

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CLASS 2

SKILL LEVEL REQUIREMENTS

- A. Know all the skills required in the lower class.
- B. Know the advantages and disadvantages of the various types of pumps.
- C. Know how to determine the capacity of a lift station wet well.
- D. Know various methods of testing sewer lines for leaks.
- E. Know the various methods of cleaning sewer lines.
- F. Know how to determine the carrying capacity of lines.
- G. Know the various types of controls for lift stations in this class.
- H. Know how to read blueprints and system maps.
- I. Know the various types of line rehabilitation.
- J. Know how to prepare budgets and other reports for this size system.
- K. Know math skills appropriate for this level.
- L. Know how to read and interpret pump operating curves.

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CLASS 3

SKILL LEVEL REQUIREMENTS

- A. Know all the skills required in lower classes.
- B. Know how hydraulics of a collection system, especially size, slope and flow interrelationship.
- C. Know the maintenance and operational features of pumps motors and controls common to this class.
- D. Know how to check lines for proper line and grade.
- E. Know how to determine I & I flows into sewer system.
- F. Know how to calculate pumping rates from fill or draw downs in wet wells.
- G. Know how to set up a safety program for lift station and collection system personnel.
- H. Know how to prepare budgets and other reports for this size system.
- I. Know the features of a maintenance program for this size system.
- J. Know the methods of identifying and controlling odor problems in the system.
- K. Know the proper methods of dealing with public complaints.
- L. Know math skills appropriate for this level.

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CLASS 4

SKILL LEVEL REQUIREMENTS

- A. Know all skills required in lower classes.
- B. Know how to prepare specifications for retrofit, repair or replacement of sewer lines, lift stations.
- C. Know how to set up a preventative maintenance program for this class system.
- D. Know how to determine proper size of lines, pumps and controls for this class system.
- E. Know how to prepare budgets and other reports for this size system.
- F. Know how to interpret the results of I & I testing.
- G. Know how to read and interpret the results of televised lines.
- H. Know math skills appropriate for this level.