Wastewater Collection System Examination Need to Know Criteria

The Ohio Wastewater Collection System examinations are designed to evaluate the ability of an examinee to operate a wastewater collection/sewerage system in the state of Ohio. In order to successfully complete an examination, an operator must demonstrate a broad knowledge of the areas covered by this document. Due to the fact that a certificate allows an operator to be in responsible charge of any wastewater collection/sewerage system in the state with the same or lower classification, the exams may include technologies that are not used in each system but are commonly used at wastewater collection/sewerage systems throughout the state of Ohio. The Advisory Council of Examiners along with a number of interested party groups developed these criteria to serve as a study guide for each level of certification.
Class I Wastewater Collection System Examination Topics

1) Safety
   a) OSHA Requirements Chemical Hazards
   b) Confined Space Procedures
   c) Electrical Hazards
   d) Lockout/Tagout Procedures
   e) Bloodborne Pathogen Hazards
   f) Personal Protection Equipment
   g) Atmospheric Hazards
   h) Traffic Control
   i) Excavation Procedures

2) Operation and Maintenance
   a) Pump Stations
      i) Types of Pump Stations
      ii) Types of Pumps
      iii) Emergency Power
   b) Preventive Maintenance
      i) Collection System
      ii) Pump Stations
   c) Corrective Maintenance
      i) Collection System
      ii) Pump Stations
   d) Record Keeping
   e) Infiltration-Inflow
      i) Inspection
      ii) Testing
      iii) Prevention
   f) Odor Control
   g) Corrosion Control
   h) Septic Conditions

3) Regulations/Guidance
   a) NPDES Permit (general questions)
   b) Certified Operator (OAC 3745-7)
   c) Permit to Install
   d) Ten States Standards
   e) Combined Sewer Overflows
   f) Sanitary Sewer Overflows
4) Management
   a) Job Duties
   b) Reporting
   c) Communications
   d) Public Relations
   e) Security

5) Mathematics
   a) Operation and Maintenance Costs
   b) Flow Velocity
   c) Flow Volume
   d) Design Flow
   e) Peak Flow
   f) Pumping Rate
Class II Collection System Examination Topics

1) Safety
   a) OSHA Requirements Chemical Hazards
   b) Confined Space Procedures
   c) Electrical Hazards
   d) Lockout/Tagout Procedures
   e) Bloodborne Pathogen Hazards
   f) Personal Protection Equipment
   g) Atmospheric Hazards
   h) Traffic Control
   i) Excavation Procedures

2) Operation and Maintenance
   a) Pump Stations
      i) Types of Pump Stations
      ii) Types of Pumps
      iii) Emergency Power
      iv) Pump Control Methods and Procedures
      v) Force Main Capacity vs. Head Relationships
   b) Preventive Maintenance
      i) Collection System
      ii) Pump Stations
   c) Corrective Maintenance
      i) Collection System
      ii) Pump Stations
   e) Record Keeping
   f) Infiltration-Inflow
      i) Inspection
      ii) Testing
      iii) Prevention
   g) Odor Control
   h) Corrosion Control
   i) Septic Conditions
   j) Electrical Usage
   k) Management System
   l) Telemetry
3) **Regulations/Guidance**
   a) NPDES Permit (general questions)
   b) Certified Operator (OAC 3745-7)
   c) Permit to Install
   d) Ten States Standards
   e) Combined Sewer Overflows
   f) Sanitary Sewer Overflows
   g) Sewer Use Ordinances
   h) Industrial Pretreatment/Local Limits

4) **Management**
   a) Job Duties
   b) Reporting
   c) Communications
   d) Public Relations
   e) Security
   f) Financial Management
   g) Planning

5) **Mathematics**
   a) Operation and Maintenance Costs
   b) Flow Velocity
   c) Flow Volume
   d) Design Flow
   e) Peak Flow
   f) Pumping Rate
   g) Water HP, Brake HP, Motor HP, and % Efficiency
   h) Pressure and Head
   i) Slope or Grade
   j) Wet Well Fill Rate