

US EPA ARCHIVE DOCUMENT

# **Wastewater Operator Certification Manual**

**Indiana Department of Environmental  
Management**



**Office of Water Quality  
Compliance Branch**

Updated July 2008

# Wastewater Operator Certification Manual

## July 2008

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# Wastewater Operator Certification Manual

## July 2008

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# Part One

## Indiana Wastewater Operator Certification Process

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## **Section One:                    General Information**

### **Why does my facility have to have a certified operator?**

Indiana Code (IC) 13-18-11-11 states:

- (a) *All water or wastewater treatment plants and water distribution systems, whether publicly or privately owned, must be under the supervision of an operator whose competency is certified to by the commissioner in a classification corresponding to the classification of the plant or distribution system to be supervised. However, this section does not prohibit a governmental agency, a corporation, or an individual from continuing to employ in that capacity a person in responsible charge of the operations of the works if the person is certified under section 10 of this chapter.*
- (b) *A certified operator may supervise more than one (1) plant or system if it can be shown that adequate supervision to ensure safe and effective operation is provided for all parts and systems supervised. As added by P. L. 1-1996, SEC.8.*

Indiana Administrative Code (IAC) 5-22-1 states:

*Sec. 1. The purpose of this rule is to establish the following:*

- (1) *A classification system of wastewater treatment plants.*
- (2) *The criteria by which a person may become a wastewater treatment:*
- (A) *apprentice; or*
- (B) *certified operator.*

*The intended result of this rule is to facilitate the entry of individuals into the occupation of wastewater treatment through an apprenticeship opportunity and promote excellence among wastewater treatment operators for the ultimate goal of protecting Indiana waters receiving treated wastewater discharged from wastewater treatment plants.*

### **How do I know what classification my facility should be?**

If the facility classification is not specified in your permit or you have questions, please contact the Wastewater Certification Coordinator, at (800) 451-6027, (317) 232-8791 or [rmcmmonig@idem.in.gov](mailto:rmcmmonig@idem.in.gov).

### **What are the operator classifications?**

There are ten operator classifications, five municipal and five industrial, The municipal classifications are: I-SP, I, II, III, and IV. The industrial classifications are: A-SO, A, B, C, and D.

### **How do I know what classification my operator should be?**

Basically the license of the operator should match the classification of the facility or be higher. Here is the specific breakdown of what license can operate what facility:

- (1) A Class I-SP certified operator is certified to operate a Class I-SP wastewater treatment plant.
- (2) A Class A-SO certified operator is certified to operate a Class A-SO wastewater treatment plant.
- (3) A Class I certified operator is certified to operate:
- (A) Class I-SP;
- (B) Class I;
- (C) Class A-SO; and
- (D) Class A;

wastewater treatment plants.

(4) A Class A certified operator is certified to operate:

- (A) Class A-SO; and
- (B) Class A;

wastewater treatment plants.

(5) A Class II certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class I-SP;
- (D) Class I; and
- (E) Class II;

wastewater treatment plants.

(6) A Class B certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A; and
- (C) Class B;

wastewater treatment plants.

(7) A Class III certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class I-SP;
- (D) Class I;
- (E) Class II; and
- (F) Class III;

wastewater treatment plants.

(8) A Class C certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class B; and
- (D) Class C;

wastewater treatment plants.

(9) A Class IV certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class I-SP;
- (D) Class I;
- (E) Class II;
- (F) Class III; and
- (G) Class IV;

wastewater treatment plants.

(10) A Class D certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class B;
- (D) Class C; and
- (E) Class D;

wastewater treatment plants.

### How do I become certified?

You must meet the requirements set forth in the certification rule (327 IAC 5-22) and certification statute: (IC 13-18-11): (1) complete an application to sit for the certification exam, and (2) pay a \$30 application fee, and (3) meet the acceptable experience requirements, and (4) pass the exam with a score of seventy percent (70%) or higher. A copy of the certification rule, current at the time of printing, is included in this manual.

**For Certification** – there is a minimum amount of acceptable experience necessary in the actual hands-on operation of a wastewater treatment plant to sit for any examination. The application fee is non-refundable per IAC 5-22-12(b). Please contact the Certification Coordinator if you have any questions regarding your eligibility to sit for an exam.

**For Apprenticeship** – no experience is necessary to sit for an examination; however, apprenticeship is not a certification. You may not be a responsible charge operator at any wastewater facility until you have obtained certification. Please contact the Certification Coordinator if you have any questions regarding the apprenticeship program.

### How do I obtain replacement certificates and cards?

There is no charge for the replacement of lost or damaged certificates or cards. A certified wastewater treatment operator in need of a replacement certificate must submit a written request to the commissioner, including the following information:

- Class of wastewater treatment operator;
- Date of issuance of the original certificate, if known; AND
- Certificate number.

### What options do I have if the next certification exam is not scheduled for several months?

A *provisional certification* may be granted under certain situations as specified in the certification statute and rule. A provisional certification is granted to the facility and allows the operator to act in responsible charge, under specific conditions, until sixty (60) days following the next scheduled exam. The vacancy may be filled for a period not exceeding one (1) year by an operator with a provisional certification.

*Reciprocity* allows an operator with a current certification in good standing in another state to be granted an equivalent certification in Indiana without re-testing. Each reciprocity application is reviewed individually. The State of Indiana does not have reciprocity with all states. Please contact the Wastewater Certification Coordinator, at (800) 451-6027, (317) 232-8791 or [rmcmmonig@idem.in.gov](mailto:rmcmmonig@idem.in.gov).

### Do I qualify for a provisional certification?

The certification statute (IC 13-18-11-12) states:

(a) *When a vacancy in a position of operator occurs due to death, resignation, extended illness, or a similar cause, the vacancy may be filled for a period not exceeding one (1) year by an operator with a provisional certification.*

The certification rule (327 IAC 5-22) states:

(c) *The commissioner may issue a provisional wastewater treatment operator's certificate if the following occur:*

(1) *The governing body or owner of a wastewater treatment plant submits a written request specifying a reason necessitating the provisional certification, including one (1) of the following:*

- (A) *To fill a vacancy created by death.*
- (B) *Resignation of the certified operator in responsible charge.*
- (C) *Extended illness of the certified operator in responsible charge.*
- (D) *Suspension or revocation of the certification of the operator in responsible charge.*
- (E) *Similar cause as determined by the commissioner.*

(2) *The written request required by subdivision (1) provides the:*

- (A) *name;*
- (B) *education; and*
- (C) *experience;*

*of the person for whom the provisional certificate is requested.*

(3) *The provisional certificate nominee named under subdivision (2) submits, simultaneously with the request submitted under subdivision (1), an application as required by section 11(b) of this rule requesting examination and certification.*

(4) *The provisional certificate nominee named under subdivision (2) currently meets the educational and experience requirements for the appropriate class of certification.*

(d) *A provisional certificate shall be:*

(1) *issued by the commissioner in the form of a letter that specifies the conditions of the certification; and*

(2) *valid for the shorter of the following lengths of time:*

- (A) *The period between the date of application and sixty (60) days following the next examination that is available to the provisional certificate nominee.*
- (B) *One (1) year.*

#### **To apply for a provisional certification:**

- (1) *Submit a letter, following the requirements in 327 IAC 5-22-13, from the owner or governing body of the facility requesting the provisional certification;*
- (2) *Complete the exam application; AND,*
- (3) *Pay the \$30 application fee.*

#### **What is reciprocity?**

The certification rule (327 IAC 5-22-13) states:

*(b) The commissioner may issue a certificate by reciprocity as outlined in IC 13-18-11-9 if the following conditions are met:*

*(1) A person seeking reciprocal certification submits an application for such a certificate that includes the following:*

- (A) *Proof of current certification.*
- (B) *Classification of the applicant*

*(2) A person from another state seeking a certificate by reciprocity earns the number of continuing education contact hours for future renewal periods in the time period required by section 15 of this rule though no continuing education contact hours shall be required at the time of conferring the reciprocal certification.*

Reciprocity allows a certified operator to obtain an equivalent certification in another state. In order for reciprocity to occur, both states must agree to recognize the certifications granted by

each other. For example, Indiana currently will grant an equivalent Indiana certification based on a current Kentucky certification in good standing. Kentucky currently will grant an equivalent Kentucky certification based on a current Indiana certification in good standing. This is reciprocity. Reciprocity between two states can change quickly. So it is very important to discuss reciprocity with the Certification Coordinator near the time that you plan to apply.

#### **To apply for reciprocity:**

- 2) Contact the state that issued your certification and ask if that state will grant reciprocity to Indiana operators. While this is not required, we recommend that you do it because the application fee is not refundable. If the state will not grant reciprocity to Indiana operators, your application will be denied.
  - a) Submit the application for Wastewater Treatment Plant Operator Certification by Reciprocity; AND
  - b) Submit \$30 application fee to the address specified in the reciprocity application form.

#### **How are reciprocity applications reviewed?**

- 1) After receiving the application and fee, IDEM will send a questionnaire to the Certification Coordinator of the issuing state and request that they certify that you possess a current certification in good standing. We also request a copy of the issuing state's certification rule.
- 2) Once the questionnaire and certification rule have been returned to the Indiana Certification Coordinator, the application will be reviewed in accordance with 327 IAC 5-22.

#### **What is a wastewater apprentice?**

The latest version of 327-IAC 5-22, effective March 18, 2008 includes a new classification designation of "Wastewater Apprentice". The Apprentice classification allows persons with no experience at a wastewater treatment facility to take the exact same Certification Examination taken by those wishing to obtain certification. The person need only complete the short Apprentice exam form and pay the \$30 fee by the deadline for the next wastewater certification exam. Having passed the exam might allow an apprentice to more easily get a job in the wastewater industry and acquire the necessary experience to then apply for certification.

#### **If I become a Wastewater Apprentice, may I be in responsible charge of any wastewater plant?**

No. The complete definition of "Wastewater Treatment Apprentice" is as follows: A person who has **successfully passed** the commissioner's wastewater treatment operator's certification examination but has not fulfilled either the educational or experience requirements, or both, necessary to qualify to be a certified operator. *A wastewater treatment apprentice shall not be designated as the certified operator in responsible charge of a wastewater treatment plant.*

#### **If I become a Wastewater Apprentice, how do I get my certification?**

In order to become a wastewater treatment certified operator, the apprentice must:

1. Meet the educational and experience requirements applicable to the class of wastewater treatment certified operator for which the apprenticeship is held.
2. Fulfill the continuing education credit requirements applicable to the class of wastewater treatment certified operator for which the apprenticeship is held.
3. Complete a certification application.

4. Submit application with fee not later than six (6) years after the date of successfully completing the exam. An apprentice card will be sent to each person passing the exam with the six-year expiration date listed, also the card will reiterate that an apprentice may not be designated as the operator in charge of any wastewater facility.

### **What about exam prep courses?**

The State of Indiana does not require any certain training course prior to sitting for a certification exam. There are many exam prep courses available from private training providers, educational facilities and professional associations. Statistics regarding exam passing rates by municipal/industrial; geographic region; exam level; and, question category are available to training providers and the public upon request. Contact the Wastewater Certification Coordinator for more information.

### **How do I start preparing for a certification exam?**

The best place to begin preparation for a certification exam is with the *Exam Book List*, available online at <http://www.in.gov/idem/5118.htm> if you have trouble locating the list online contact certification staff. The Exam Book List specifies the reference books used to prepare each of the ten certification exams. Completed applications to sit for a certification exam **and** the \$30 non-refundable application fee should be mailed to the address on the application:

Indiana Department of Environmental Management  
Cashier – Mail Code 50-10C  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

**Please note:** the application fee is not refundable.

### **How do I obtain exam reference books?**

This information is found on the Exam Book List. Reference books may be obtained from a variety of sources including: the Water Environment Federation (WEF); California State University, Sacramento; the U.S. EPA; and IDEM. Several of these documents may be obtained on-line, with the appropriate Web addresses specified on the book list.

### **Is it possible to take more than one exam on test day?**

Yes, it is possible to take one municipal and one industrial exam on test day.

### **If I have registered to sit for an exam, and cannot take the test, how do I cancel my registration?**

327 IAC 5-22-11 states:

*(d) A person who has been notified and scheduled to take an examination:*

*(1) may submit a written request to the commissioner for a postponement to take the examination one (1) offering later than the examination granted by the commissioner if the:*

*(A) postponement for a nonemergency reason is requested not later than fourteen (14) days before the examination date noticed to the applicant under subsection*

*(c)(2);*

*(B) postponement request for an emergency reason is submitted as soon as conditions of the emergency warrant;*

- (C) applicant provides the commissioner an explicit description of extenuating circumstances necessitating the requested postponement; and  
 (D) applicant understands that only one (1) postponement shall be allowed; or  
 (2) will be considered to have failed that examination if one (1) of the following occurs:  
 (A) The person:  
     (i) does not attend the examination; and  
     (ii) has not requested a postponement according to subdivision (1).  
 (B) The person is caught cheating on an examination, an occurrence that will make an applicant ineligible to take any operator certification examination for a period of two (2) years following the examination date of the incidence of cheating.

### **If my certification expires, can I reinstate it?**

Yes, Indiana law gives operators a three-year grace period to reinstate their certification without reexamination.

The agency may reinstate the certification if the certified operator:

- Submits payment of any arrearage of fees;
- Submits payment of the current renewal fee;
- Fulfills arrearage of continuing education credit requirements; AND
- Is current in meeting continuing education credit requirements.

If the operator fails to renew a certificate for three (3) successive years, the operator must reapply and retest in accordance with certification rule 327 IAC 5-22 to become recertified. If the certification rule changes during the period when an operator has allowed a certification to lapse, that operator may no longer be qualified to sit for the same exam as before.

Remember that once your certification expires, you are no longer certified, even though you are in the three-year grace period. Operators in the three-year grace period may not act in responsible charge of a wastewater treatment facility, sign self-monitoring reports or prepare reports under their expired certification.

### **How do I maintain my certification?**

Certified operators are required to earn continuing education contact hours. (Ten contact hours equal one continuing education unit or C.E.U.)

Certifications must be renewed every two years on or before the last day of June, there is a \$30 renewal fee.

- IDEM is required to mail the certification card renewal notification at least thirty days prior to the expiration of the certification card and to the last known address filed with the commissioner.

### **Renewing your certification card:**

- The continuing education requirements must be met
- A renewal is submitted on or before the first day of July of the biennial period for which a certification card is to be issued; and
- The notice is signed and returned by the certified operator to the commissioner.
- There is a convenient online renewal option available May 1 – July 1. Details are available on the renewal notice.

Information about continuing education requirements can be found in Section Two. Application for the approval of courses for continuing education credit may be made to the Wastewater Continuing Education Coordinator.

## ***Section Two:* Continuing Education Requirements**

**(Ref: 327 IAC 5-22-14 and 15)**

### **What are the contact hour requirements for my certification?**

- 1) For each 2-year renewal period, the following continuing education hours are required prior to certification renewal:
  - Class A-SO and I-SP operators need a total of 5 contact hours.
  - Class A, B, I and II operators need a total of 10 contact hours.
  - Class C, D, III and IV operators need a total of 20 contact hours.

**A minimum of seventy percent (70%) of the required continuing education contact hours shall be obtained from the technical category of approved continuing education courses that address technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.**

**Not more than thirty percent (30%) of the required continuing education contact hours shall be obtained from nontechnical subject matter of approved continuing education courses that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.**

- 2) Training providers must submit an application and receive continuing education course approval from IDEM prior to publicly offering a wastewater continuing education course. Please visit our Web site for a copy of the revised wastewater training course approval form. A copy is also included in this manual. A certified operator may also submit a completed training course application to IDEM prior to or not later than ninety (90) days of course completion along with written proof of attendance at the course. Course approvals are date and location specific.

The course must deal with one or more of the following:

- technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.
- General matters that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.

Please direct any questions or comments about the Wastewater Continuing Education Program to the Wastewater Continuing Education Coordinator at (800) 451-6027, (317) 233-0479 or [tfullerw@idem.in.gov](mailto:tfullerw@idem.in.gov).

### **How do I get a training course approved for wastewater credit?**

The course approval process required by 327 IAC 5-22-16 is relatively straightforward. Applications for training course approval, which can be found on IDEM's Web site at <http://www.in.gov/idem/5108.htm>, should be submitted for advance approval not less than sixty (60) days before the first date when the course is conducted, but must be submitted not later than ninety (90) days after training completion in order to be considered for approval;

A certified operator may also submit a complete training course approval application to IDEM prior to or within ninety (90) days of course completion along with written proof of attendance at the course.

To apply for training course approval, an applicant must fully complete the application for training course approval; attach the course content information, including the amount of time spent on each topic; and a bio or resume of the instructor and mail to:

Wastewater Continuing Education Coordinator  
IDEM - Office of Water Quality  
100 N. Senate Ave, Mail Code 65-42  
Indianapolis, Indiana 46204-2251

### **What types of courses are acceptable for wastewater continuing education hours?**

The rule requires that the course deal with one or more of the following:

- 1) technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision**  
(e.g., activated sludge, BOD testing, solids handling, etc.)
- 2) General matters that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision**  
(e.g., first aid/CPR, bloodborne pathogens, OSHA trainings, etc.)

Note: 327 IAC 5-22-15(e) requires that a minimum of seventy percent (70%) of the required continuing education contact hours shall be obtained from the technical category of approved continuing education courses that address technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision. Not more than thirty percent (30%) of the required continuing education contact hours shall be obtained from nontechnical subject matter of approved continuing education courses that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.

For example: A Class II operator earns ten (10) contact hours for a general computer course. Three (3) contact hours may be applied toward this operator's certification renewal. The operator still must earn seven (7) contact hours in an approved technical course. Or, a Class D operator takes a twenty (20) hour technical course. All twenty (20) hours can apply toward the certification renewal. The operator is not required to attend any other continuing education courses for this renewal period.

### **Is there a list of pre-approved courses that I can obtain from IDEM?**

NO - IDEM does not provide a periodic listing of pre-approved course names, dates and locations. However if you contact our office, we can provide certified operators with a partial listing of trade associations and other course providers and their contact information. It is left up to the certified operators to contact these groups to inquire about any upcoming wastewater continuing education courses. Many of these associations also maintain Web sites that include announcements of upcoming courses with prior or pending approval from IDEM for their specific courses.

**When I complete a course, who should send my signed credit reporting form to IDEM so I'll receive credit for the course hours?**

327 IAC 5-22-17(c)(2) requires the training course provider to submit the properly completed and signed credit reporting forms to IDEM within ninety (90) days of the conclusion of the continuing education course and to maintain records of all continuing education courses for a period of three (3) years following the completion of each course. IDEM recommends that the certified operator receive a copy of the signed credit reporting form from the course provider for their records.

**Can I receive partial credit for a course if I arrive late or leave early?**

NO - 327 IAC 5-22-16(e) states, "Partial credit shall not be given to instructors, speakers, or students participating in less than a complete wastewater treatment continuing education course."

**Can I receive continuing education credits for attending trade association conferences or workshops?**

YES – there are several trade association conferences or workshops that may be eligible for receiving training course approval. In such instances, the training providers are urged to work with IDEM in advance to determine which sessions of the conference are pertinent to technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision or general matters that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision

These providers must also develop a method of attendance monitoring to precisely verify which sessions of the conference the certified operator attended for credit. Once this has been done, IDEM can complete its review of the training course application and issue a course approval number for all or part of the conference.

## **Section Three:            About IDEM (www.IN.gov/idem)**

### **Compliance Evaluation Section– Office of Water Quality**

#### **Certification and Continuing Education Group**

This group is responsible for administration of the wastewater certification exams, provisional and reciprocal certifications, receipt and tracking of continuing education credit reports, training course approvals, certification renewals, etc.

#### **Compliance Group**

The Compliance Group is responsible for receiving and logging bypass/overflow reports, administering the sewer ban program, and evaluating the compliance of wastewater treatment facilities with their NPDES permits and addressing instances of non-compliance.

#### **Pretreatment Group**

This group is responsible for implementing the state pretreatment program rules and working with U.S. EPA Region 5 to administer the national pretreatment requirements in Indiana.

There are currently 46 pretreatment cities in Indiana that run local pretreatment programs. If you are discharging process wastewater to one of these POTWs, you must apply for a discharge permit from that local program. Each program does its own permitting, inspecting, sampling and enforcement. IDEM oversees each program by performing routine audits.

Categorical dischargers and Significant Industrial Users not located in a pretreatment city must apply to IDEM for an Industrial Wastewater Pretreatment (IWP) permit.

#### **Laboratory Assistance**

Laboratory technical assistance is provided to operators by phone, online at <http://www.in.gov/idem/5090.htm> in the form of the QA/QC Methods Manual for Wastewater Laboratories, and by facility audits. Laboratory technical assistance staff also conducts various quality assurance/quality control projects and operations and maintenance award programs.

### **Data and Information Services Section – Office of Water Quality**

The Data and Information Services Section, in addition to other duties:

- Enters and extracts data from the U.S. EPA's NPDES Permits' database.
- Prepares and distributes blank DMRs.

### **Inspections Section – Office of Water Quality**

IDEM is responsible for tracking the compliance of wastewater treatment facilities to the NPDES rules and regulations. IDEM employs field inspectors who are responsible for site visits to wastewater plants for the purpose of observing NPDES compliance.

Inspections are conducted without prior notification, in order for the inspector to see normal operating conditions, with no opportunity for facility staff to “fine tune” or spruce up for a visit.

#### **Inspections Group**

So what does an inspector want to see in particular whenever he/she visits for an inspection? The NPDES permit for each wastewater facility specifies a certain set of conditions that must be met in order to assure the discharge of pollutants to the waterway is minimal. The self-monitoring program for each plant is the foundation for proper evaluation of facility compliance.

The inspector will focus first on whether the operation and maintenance at the plant does assure a reliable self-monitoring program.

In order to assess the self-monitoring program, the inspector will ask to review monitoring records. All monitoring records must be kept on site for a minimum of three years. Monitoring records include state reports, sampling reports or bench sheets, chain of custody sheets, operator log sheets, flow measurement records, calibration records, and other miscellaneous reports. These reports and records must be clear, concise, and include all information required by the NPDES permit.

The inspector will be interested in determining whether the data included on the reports can be judged reliable. In order to do that, he/she will examine lab procedures and equipment, sampling procedures and equipment, on-line monitoring instruments, and operation and maintenance procedures of all pumps and treatment units.

### **Technical Assistance Group**

Technical assistance staff provides on-site, hands-on assistance in the proper operation of wastewater treatment plants. They also provide management assistance and promote the involvement of community officials in the operation of wastewater plants.

### **Facility Construction Section – Office of Water Quality**

Indiana Administrative Code 327 IAC 3, “Wastewater Treatment Facilities; Issuance of Permits; Construction and Permit Requirements” establishes requirements and procedures for obtaining construction permits for the construction or modification of sanitary sewers and wastewater treatment facilities.

The rule requires that construction permits be obtained prior to the start of construction, installation or modification of any water pollution treatment/control facility or sanitary sewer.

All projects for new sanitary sewers or extensions of existing sanitary sewers (including lift stations and force mains) require an issued permit. Only house connections (laterals) for single family homes are always excluded from permit requirements. Building connections for other types of individual buildings may also be excluded.

All projects for new wastewater treatment facilities require a permit. A permit is not required for modifications for normal maintenance and the replacement of equipment or for the addition of new equipment or structures that will not be used to increase the existing treatment capacity of the existing facility.

### **Permits Sections – Office of Water Quality**

National Pollutant Discharge and Elimination System (NPDES) permits are required for the discharge of municipal and industrial pollutants to waters of the state. Please see *Part III. Permits* of this manual for more information.

### **Wet Weather Section**

The Wet Weather Section augments the NPDES Municipal permitting program by implementing a strategy for the maintenance and management of combined sewer collection systems. The primary objective of this group is to insure the minimization of impacts to waters of the state from combined sewer overflows (CSOs).

## State Revolving Fund Loan Program

### Purpose

The purpose of the State Revolving Fund Loan Programs is to provide low-cost financial assistance in order to construct necessary and environmentally sound drinking water and wastewater infrastructure; to facilitate statewide compliance with state and federal drinking water and water quality standards; to maintain a fiscally self-sufficient program as a continuing source of funding for improvement and protection of public health and water quality; and to conduct any other activity permitted by the Safe Drinking Water Act or the Clean Water Act.

### Eligibility

Cities, towns, counties, regional sewer/water districts, conservancy districts and water authorities are eligible for wastewater, drinking water and nonpoint source SRF loans.

Private and not-for-profit facilities are eligible only for drinking water SRF loans.

### What Types of Projects are Eligible for SRF Funding?

Any project where there is an existing water pollution abatement or public health need is eligible for SRF funding.

#### Wastewater projects include:

- Treatment plant improvements & upgrades
- Sewer line extensions to existing properties
- Combined Sewer Overflow (CSO) corrections
- Infiltration / inflow projects
- Decentralized systems

#### Drinking water projects include:

- Treatment plant improvements & upgrades
- Water line extensions
- Water storage facilities
- Water supply

Non-point source projects in tandem with a Wastewater project may reduce the interest rate by 0.5% and include the following projects”

- Wetland protection and restoration measures
- On-site sewage disposal
- Best Management Practices for agriculture and stormwater runoff
- Ground water and surface water remediation

### What Type of Projects are Ineligible for SRF Funding?

- Projects that are solely intended for economic development (i.e., induced growth)
- Projects that are primarily for fire suppression
- Stormwater projects that have no environmental benefits (flood management)

### The Water Pollution Control Board

The Water Pollution Control Board was established as an independent board under Indiana Code 13-18-1. State statutes provide authority for the water pollution control board to adopt rules regarding various water pollution matters. IC 13-18-3-2 provides the board the authority to adopt rules necessary for the implementation of the Federal Water Pollution Control Act and the Federal Safe Drinking Water Act. IC 13-18-3-1 provides the board the authority to adopt rules for the control and prevention of pollution in waters of Indiana and prevent any fish life or any beneficial animal or vegetable life from being destroyed or injured.

Water Pollution Control Board information was obtained from the IDEM Web site. For current membership of the Water Pollution Control Board, please see the IDEM, Rules Internet home page at <http://www.in.gov/idem/4087.htm>

**Section Four:**

**Operator Exam Application Forms and instruction sheets links:**

Use this web link (<http://www.in.gov/idem/5108.htm> ) to obtain the following:

1. Application for Wastewater Treatment Plant Operator/Apprentice to take the examination and instruction sheet for completing the application
2. Application for Apprentice (short form) and instruction sheet for completing the short form application
3. Application for Certification by Reciprocity
4. Application for a Provisional Operator and instruction sheet for completing the application
5. Application for Approval of Training For Wastewater Operator Continuing Education Credit
6. Wastewater Operator Continuing Education Credit Report

**Operator Exam Book List (these materials are the source of the questions on the exam) available on the following pages:**

## 2008 Exam Book List

	I-SP	I	II	III	IV	A-SO	A	B	C	D
1	X <sup>1</sup>	X	X	X	X		X			
2	X <sup>2</sup>	X	X	X	X		X	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>
3				X	X					
4								X	X	X
5								X	X	X
10	X	X	X	X	X	X	X	X	X	X
11	X									
12						X				
14			X	X	X			X	X	X

<sup>1</sup> Study only Chapter 3 (Wastewater Treatment Facilities) of Book #1

<sup>2</sup> Study only Chapter 15 (Maintenance) and Chapter 16 (Laboratory Procedures and Chemistry) of Book #2

<sup>3</sup> Study only Chapter 16 (Laboratory Procedures and Chemistry) of Book #2

### Reference Books

1. Operation of Wastewater Treatment Plants, Volume I, latest Edition
2. Operation of Wastewater Treatment Plants, Volume II, latest Edition
3. Advanced Waste Treatment, latest Edition
4. Industrial Waste Treatment, Volume I, latest Edition
5. Industrial Waste Treatment, Volume II, latest Edition
10. Wastewater Operator Certification Manual, July 2008, **free on-line**
11. Stabilization Ponds, U.S. EPA Operation Manual, August 1977, **free on-line**
12. Study Guide for A-SO Operators, December 2002, **free on-line**
14. Introduction to the National Pretreatment Program, February 1999, **free on-line**

**FOR SPECIFIC AREAS OF STUDY IN THESE BOOKS, PLEASE CHECK THE AVAILABLE STUDY GUIDES.**

## How to Obtain Exam Reference Books

### **Books 1 – 5**

California State University, Sacramento  
ATTN: Dr. Ken Kerri  
Department of Civil Engineering  
Sacramento, CA 95819-2964  
(916) 278-6142;  
Web site: <http://www.owp.csus.edu>  
E-mail: [wateroffice@csus.edu](mailto:wateroffice@csus.edu)

### **Book 10**

#### **Wastewater Operator Certification Manual- Summer 2008**

IDEM Office of Water Quality  
Compliance Section  
(317) 233-0419, Certification Staff  
Web site: [http://www.in.gov/idem/files/wastewater\\_certification\\_manual.pdf](http://www.in.gov/idem/files/wastewater_certification_manual.pdf)

### **Book 11**

#### **Stabilization Ponds, U.S. EPA Operation Manual**

IDEM Office of Water Quality  
Compliance Section  
(317) 233-0419, Certification Staff  
[http://www.in.gov/idem/files/wastewater\\_stabilization\\_ponds.pdf](http://www.in.gov/idem/files/wastewater_stabilization_ponds.pdf)

### **Book 12**

#### **Study Guide for A-SO Operators, Dec. 2002**

IDEM Office of Water Quality  
Compliance Section  
(317) 233-0419, Certification Staff  
Web site: [http://www.in.gov/idem/files/wastewater\\_a-so-sg.pdf](http://www.in.gov/idem/files/wastewater_a-so-sg.pdf)

### **Book 14**

#### **Introduction to the National Pretreatment Program**

**U.S. EPA – Office of Water Resource Center**

Phone: (202) 566-1729

Web site: <http://www.epa.gov/owmitnet/final99.pdf>

(requires Adobe Acrobat reader to view)

Publication #: EPA-833-B-98-002, Feb. 1999

# Part Two

## Rules and Regulations

### Section One:

Rules & Regulations, Exam Study Questions 21

[Discharge Monitoring Report/Monthly Report of Operations Worksheet](#) – **This link goes directly to a worksheet with questions**, and a sample DMR, MRO and permit page. These problems relate to the completion of the monthly reports. Similar such problems will be included on the Operator Exams.  
<http://www.in.gov/idem/5118.htm>

### Section Two:

327 IAC 6.1 Application of Biosolid, Industrial Waste Product, and Pollutant-Bearing Wastewater 43

### Section Three:

327 IAC 5-22: *Classification of Wastewater Treatment Plants; Examination and Certification of Operators* 51

### Section Four:

IC 13-18-11: *Operator Certification* 72

## Section One: Rules and Regulations Exam Study Questions

### Introduction

The following **Questions and Answers** were derived from Indiana Administrative Code (IAC) Title 327 Water Pollution Control Board. Please refer to the disclaimer at the beginning of this manual. For the purpose of this manual and the certification exams, only portions of 327 IAC are represented. Please refer to the entire Rule for any other purpose.

The Rules and Regulations Study Guide generally includes lengthy answers to the questions. However, operators are not expected to memorize these lengthy answers for the certification exams. **Operators should be able to distinguish the correct answer to a question when given the correct answer among several incorrect answers.** Citations (for example, 327 IAC 2-1-1.5) are included for your convenience and will not be on the exams. Formulae sheets will be provided on exam day. Although operators are not required to memorize formulae, formulae may be presented in a different form on the exam. **All operators are expected to be able to make conversions and rearrange formulae in order to complete the mathematics portion of the certification exams.**

### 327 IAC ARTICLE 2. Water Quality Standards

1) What are the goals of the state regarding water quality?

Answer

The goals of the state regarding water quality are to restore and maintain the chemical, physical and biological integrity of the waters of the state.

In furtherance of this primary goal:

- (a) It is the public policy of the state that the discharge of toxic substances in toxic amounts be prohibited;  
AND
- (b) It is the public policy of the state that the discharge of persistent and bioconcentrating toxic substances be reduced or eliminated.

Source: 327 IAC 2-1-1.5

2) All surface waters of the state are designated for     a    . Also, all waters of the state, except limited use waters, must be capable of supporting a well-balanced, warm water     b     community.

Answer

- (a) Full-body contact recreation.
- (b) Aquatic.

Source: 327 IAC 2-1-3(a)

3) All waters at all times and at all places, including the mixing zone, shall meet the minimum conditions of being free from substances, materials, floating debris, oil, or scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges. What are four types of undesirable conditions or substances?

Answer

- (a) Substances that will settle to form putrescent or otherwise objectionable deposits.
- (b) Substances that are in amounts sufficient to be unsightly or deleterious.
- (c) Substances that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance.
- (d) Substances which are in amounts sufficient to be acutely toxic to, or otherwise severely injure or kill aquatic life, other animals, plants, or humans.

Source: 327 IAC 2-1-6(a)(1)

4) My wastewater treatment plant receives brine wastes from water softeners. Do I have to be concerned about the salt content of my discharge?

Answer

Yes. The salt discharge could increase the dissolved solids concentration of your discharge. The state water quality standards require that dissolved solids shall not exceed 750 mg/l in all waters.

Source: 327 IAC 2-1-6(a) Table 1 - footnote

5) What is the minimum dissolved oxygen requirement in surface waters of the State of Indiana?

Answer

Concentrations of dissolved oxygen shall average at least five (5.0) milligrams per liter per calendar day and shall not be less than four (4.0) milligrams per liter at any time.

Source: 327 IAC 2-1-6(b)(3)

6) The conditions for temperature in the waters of the state, except for Lake Michigan, are:

Answer

- (a) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
- (b) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
- (c) The maximum temperature rise at any time or place above natural temperatures shall not exceed five degrees Fahrenheit (5°F) in streams and three degrees Fahrenheit (3°F) in lakes and reservoirs.
- (d) Water temperatures shall not exceed the maximum limits in Table 3 during more than one percent (1%) of the hours in the twelve-month (12) period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in Table 3 by more than three degrees Fahrenheit (3°F).

Source: 327 IAC 2-1-6(b)(4)

7) Taste and odor producing substances, other than naturally occurring:

Answer

Shall not interfere with the production of a finished water by conventional treatment consisting of coagulation, sedimentation, filtration, and disinfection.

Source: 327 IAC 2-1-6(e)

8) What are the requirements for reporting spills?

Answer

- (3) As soon as possible, but within two (2) hours of discovery, communicate a spill report to the Department of Environmental Management, Office of Environmental Response: Area Code 1-888-233-7745 for in-state calls (toll free), (317) 233-7745 for out-of-state calls. If new or updated spill report information becomes known that indicates a significant increase in the likelihood of damage to the waters of the state, the responsible party shall notify the department as soon as possible but within two (2) hours of the time the new or updated information becomes known.

Source: 327 IAC 2-6.1-7(3)

### **327 IAC ARTICLE 4. Wastewater Treatment Facilities; Overload Condition**

1) What is the purpose of “327 IAC, Article 4, Wastewater Treatment Facilities; Overload Condition”?

Answer

The purpose is to prevent the excessive hydraulic and/or organic overloading of POTW’s or semipublic facilities resulting in the subsequent discharge or bypassing of insufficiently treated sewage.

Source: 327 IAC 4-1-1

2) What is a “combined sewer”?

Answer

It is a sewer designed and employed to receive both water-carried and/or liquid wastes and storm and/or surface water.

Source: 327 IAC 4-1-2(1)

3) What is a “sanitary sewer”?

Answer

It is a sewer that conveys liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions; and to which storm, surface, and ground waters are not intentionally allowed to enter.

Source: 327 IAC 4-1-2(12)

4) Define a “water pollution treatment/control facility”

Answer

It is any equipment, device, unit, structure, etc., that is used to control, prevent, pretreat, or treat any discharge or threatened discharge of pollutants into any waters of the state of Indiana, including surface and subsurface waters and public or private sewerage systems. The term includes, but is not limited to, the following:

- (a) Treatment facilities.
- (b) Combined sewers.
- (c) Sanitary sewers.
- (d) Lift (pumping) stations.

Source: 327 IAC 4-1-2(17)

5) What is the definition of “waters of the state of Indiana” or “waters of the state”?

Answer

The two terms are interchangeable for the following definition. They mean such accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, that are wholly or partially within, flow through, or border upon this state. The terms do not include any private pond or any off-stream pond, reservoir, or facility built for reduction or control of pollution or cooling of water prior to the discharge unless the discharge causes or threatens to cause water pollution.

Source: 327 IAC 4-1-2(18)

6) When may the commissioner impose a sewer connection ban?

Answer

- (1) hydraulic or organic overloading of a semipublic facility or POTW exists or is impending and the introduction into the semipublic facility or POTW of additional wastewater from new or existing sources is likely to result in the discharge or bypassing of insufficiently treated wastewater; or
- (2) poor operation and maintenance practices have, or are likely to, result in the discharge or bypassing of insufficiently treated wastewater.

- (b) The sewer connection ban shall prohibit the connection or introduction of additional wastewater into the semipublic facility or POTW, except as otherwise provided under this article.

327 IAC 4-1-4

7) Whenever, in the determination of the commissioner, a semipublic facility or POTW has reached or is approaching (a) \_\_\_\_\_ of its (b) \_\_\_\_\_ or (c) \_\_\_\_\_, the commissioner shall notify the semipublic facility or POTW that it may be necessary because of such condition, to impose a sewer connection ban if action is not taken by the semipublic facility or POTW to accommodate additional flow or loading.

Answer

- (a) Ninety percent (90%).
- (b) Hydraulic.
- (c) Organic design capacity.

327 IAC 4-1-3

## 327 IAC ARTICLE 5. Industrial Wastewater Treatment Programs and NPDES

1) “Best Management Practices”, or “BMPs”, means the following measures to prevent or reduce the pollution of waters of the state:

Answer

- (a) Schedules of activities.
- (b) Prohibitions of practice.
- (c) Treatment requirements.
- (d) Operation and maintenance procedures.
- (e) Use of containment facilities.
- (f) Other management practices.

Source: 327 IAC 5-1.5-6(a)

2) BMPs may be employed to control what types of pollution?

Answer

- (a) Plant site run-off;
- (b) Spillage or leaks;
- (c) Sludge or waste disposal; OR
- (d) Drainage from raw materials storage resulting from manufacturing, commercial, mining or silvicultural activities.

Source: 327 IAC 5-1.5-6(b)

3) What are “nonpoint source discharges”?

Answer

Nonpoint sources include any discharge of a pollutant that is not a point source, such as the following:

- (a) In-place contaminants.
- (b) Direct wet and dry deposition.
- (c) Ground water inflow.
- (d) Overland run-off.

Source: 327 IAC 5-1.5-28

4) What does “NPDES” stand for?

Answer

National Pollutant Discharge Elimination System

Source: 327 IAC 5-1.5-34

5) What is a “point source discharge”?

Answer

“Point source discharge” means any discernible, confined, and discrete conveyance, including, but not limited to, any of the following from which pollutants are or may be discharged:

- (a) Pipe.
- (b) Ditch.
- (c) Channel.
- (d) Tunnel.
- (e) Conduit.
- (f) Well.
- (g) Discrete fissure.
- (h) Container.
- (i) Rolling stock.
- (j) Concentrated animal feeding operation.
- (k) Landfill leachate collection system.
- (l) Vessel.
- (m) Other floating craft.

(The term does not include return flows from irrigated agriculture or agricultural storm run-off.)

Source: 327 IAC 5-1.5-40

## 6) What does “population equivalent” or “PE” mean?

Answer

“Population equivalent” or “PE” means the calculated population that would contribute a particular amount of biochemical oxygen demand (BOD) per day, using the base of seventeen-hundredths (0.17) pound of five (5) day BOD per capita per day. A different conversion factor may be used in the calculation when approved by the commissioner on the basis of site-specific technical information.

Source: 327 IAC 5-1.5-42

## 7) Define “design population equivalent”.

Answer

“Design population equivalent” means the PE for which the plant is designed.

Source: 327 IAC 5-22-3(8)

## 8) What is “process wastewater”?

Answer

“Process wastewater is any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

Source: 327 IAC 5-1.5-46

## 9) What is a “schedule of compliance”?

Answer

It is a schedule of remedial measures, including an enforceable sequence of actions or operations, including construction, leading to compliance with an effluent limitation, other limitation, prohibition, standard, or another permit condition.

Source: 327 IAC 5-1.5-55

## 10) Define “total maximum daily load” or “TMDL”:

Answer

“TMDL” is the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background minus the sum of a specified margin of safety and any capacity reserved for growth. If a receiving water has only one (1) point source discharger, the TMDL is the sum of that point source WLA (waste load allocation) plus the LAs (load allocation) for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments minus the sum of a specified margin of safety and any capacity reserved for growth. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If best management practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations may be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs. A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into a waterbody and still assure attainment and maintenance of water quality standards.

Source: 327 IAC 5-1.5-66

## 11) What is a “water pollution treatment or control facility”?

Answer

It is any equipment, device, unit, or structure that is used to control, prevent, pretreat, or treat any discharge or threatened discharge of pollutants into any waters of Indiana, including surface and subsurface waters and public or private sewerage systems. The term includes, but is not limited to, the following:

- (a) Treatment facilities.
- (b) Combined sewers.
- (c) Sanitary sewers.
- (d) Disposal well systems.
- (e) Animal feeding operation treatment facilities.
- (f) Land application treatment facilities.
- (g) Cyanide isolation facilities.

Source: 327 IAC 5-1.5-71

## 12) Who is required to have an NPDES permit?

### Answer

Any discharge of pollutants into waters of the state as a point source discharge, except for exclusions made in 327 IAC 5-2-4, is prohibited unless in conformity with a valid NPDES permit obtained prior to the discharge. (Note: Discharges exempted from requiring an NPDES permit may be subject to permits or approvals under other laws.)

Source: 327 IAC 5-2-2

## 13) Who is responsible for submitting an application for an NPDES permit?

### Answer

The owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining a permit, except where the facility or operation is operated by a person other than an employee of the owner. In which case, it is the operator's duty to apply for and obtain a permit.

Source: 327 IAC 5-2-3(c)

## 14) What is the maximum term of a NPDES permit?

### Answer

A permit shall be issued for a fixed term not to exceed five (5) years. Permits of less than five (5) years duration may be issued in appropriate circumstances at the discretion of the commissioner. A permit may be modified, revoked and reissued, or terminated prior to the expiration of the term for cause, as specified in 327 IAC 5-2-16, or in accordance with conditions set forth in the permit (as in a reopening clause). In no event may the term of a permit be extended beyond five (5) years from its original effective date by modification, extension, or other means, except as provided in 327 IAC 5-2-6(b).

Source: 327 IAC 5-2-6(a)

## 15) What are the rights that the commissioner, or the commissioner's representative, has to enter a facility?

### Answer

The permittee shall allow the commissioner, or an authorized representative (including an authorized contractor acting as a representative of the commissioner), upon the presentation of credentials and such other documents as may be required by law:

- (a) To enter upon the permittee's premises where a point source is located or where any records must be kept under the terms and conditions of the permit;
- (b) To have access to and copy **at reasonable times** any records that must be kept under the terms and conditions of the permit;
- (c) To inspect, **at reasonable times**:
  - (1) Any monitoring equipment or method;
  - (2) Any collection, treatment, pollution management, or discharge facilities;
  - (3) Practices required or otherwise regulated under the permit; AND
- (d) To sample or monitor, **at reasonable times**, any discharge of pollutants or internal wastestream (where necessary to ascertain the nature of a discharge of pollutants) for the purpose of evaluating compliance with the permit or as otherwise authorized.

Source: 327 IAC 5-2-8(7)

## 16) What are some NPDES permit reporting requirements?

### Answer

- (a) Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.
- (b) The permittee shall give advance notice to the commissioner of any planned changes in the permitted facility, any activity, or other circumstances that the permittee has reason to believe may result in noncompliance with permit requirements.
- (c) The permittee shall orally report information on any of the following types of noncompliance within twenty-four (24) hours from the time the permittee becomes aware of such noncompliance:
  - (1) Any unanticipated bypass that exceeds any effluent limitation in the permit.
  - (2) Violation of a maximum daily discharge limitation for any of the pollutants listed by the commissioner in the permit to be reported within twenty-four (24) hours.

- (3) **Any noncompliance that may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as possible, but within two (2) hours of discovery, to the emergency response telephone numbers specified in 327 IAC 2-6.1-7.**
- (4) Any upset that exceeds any effluent limitation in the permit.

A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The commissioner may waive the written report on a case-by-case basis if the oral report has been received within twenty-four (24) hours.

Source: 327 IAC 5-2-8(10)

### 17) What are the requirements for bypass?

#### Answer

- (a) The following definitions apply:
- (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.
  - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities that would cause them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- (b) The permittee may allow any bypass to occur that does not exceed any effluent limitations contained in the NPDES permit, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to clauses (c) and (d).
- (c) The permittee must provide the commissioner with the following notice:
- (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the commissioner.
  - (2) The permittee shall submit notice of an unanticipated bypass as required by subdivision 327 IAC 5-2-8(10)(C). The permittee shall submit notice of an unanticipated bypass as required by subdivision 327 IAC 5-2-8(10)(C). **Under this provision, bypasses that may pose a significant danger to human health or the environment shall be made as soon as possible, but within two (2) hours of discovery, to the emergency response telephone numbers specified in 327 IAC 2-6.1-7.**
- (d) The following provisions are applicable to bypasses:
- (1) Bypass is prohibited, and the commissioner may take enforcement action against a permittee for bypass unless the following occur:
    - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
    - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment down time or preventive maintenance.
    - (C) The permittee submitted notices as required under clause (c).
  - (2) The commissioner may approve an anticipated bypass, after considering its adverse effects if the commissioner determines that the anticipated bypass will meet the three (3) conditions listed in item (i). The commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

Source: 327 IAC 5-2-8(11)

### 18) What are possible penalties for noncompliance with NPDES permit reporting requirements?

#### Answer

All applications, reports, or other information submitted to the commissioner shall be signed and certified as defined under section 327 IAC 5-2-22 of this rule. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under the NPDES permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than ten thousand dollars (\$10,000) per violation, or by imprisonment for not more than one hundred eighty (180) days per violation, or by both.

Source: 327 IAC 5-2-8(14)

19) What is the “average monthly discharge”?

Answer

It is the total mass or flow-weighted concentration of all daily discharges sampled or measured during a calendar month on which daily discharges are sampled and measured, divided by the number of daily discharge samples and/or measured during such month. The average monthly discharge limitation is the highest allowable average monthly discharge for any calendar month.

Source: 327 IAC 5-2-11(a)(1)

20) What is the “average weekly discharge”?

Answer

It is the total mass or flow-weighted concentration of all daily discharges during any calendar week on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar week. The average weekly discharge limitation is the maximum allowable average weekly discharge for any calendar week. A calendar week is defined in each NPDES permit as Sunday to the following Saturday.

Source: 327 IAC 5-2-11(a)(2)

21) What is a “continuous discharge”?

Answer

It is a discharge that occurs without interruption, except for infrequent shutdowns for maintenance, process changes, or other similar activities, throughout the operating hours of the facility.

Source: 327 IAC 5-2-11(a)(3)

22) What is a “daily discharge”?

Answer

It is the total mass of a pollutant discharged during the calendar day. Or, in the case of a pollutant limited in terms other than mass pursuant to 327 IAC 5-2-11(e), the average concentration or other measurement of the pollutant specified over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling. The maximum daily discharge limitation is the maximum allowable daily discharge for any calendar day.

Source: 327 IAC 5-2-11(a)(4)

23) How shall the average of discharge data be determined?

Answer

- (a) For fecal coliform, the average monthly discharge and average weekly discharge, as concentrations, shall be calculated using a geometric mean.
- (b) For E. coli, the average monthly discharge, as a concentration, shall be calculated using a geometric mean.
- (c) For all other parameters, calculations that require averaging of sample analyses or measurements of daily discharges shall use an arithmetic mean unless otherwise specified or approved by the commissioner.

Source: 327 IAC 5-2-11(a)(5)

24) Given the following monthly BOD monitoring data, what number should be reported in the space marked the "maximum weekly average BOD concentration" on the DMR?

Sampling is required twice a week.

<u>Week</u>	<u>Sample Results</u>	<u>Weekly Avg</u>
1	10 18	14
2	10 20	15
3	10 22	16
4	10 20	15

Answer: 16

25) Given the following data for monitoring the concentration of TSS, how many exceedances ("NO. EX.") should be recorded in the DMR?

Limits are 20 mg/L Monthly Average and 30 mg/L Weekly Average.  
 Sampling is required twice a week.  
 Assume only four weeks in the month.

<u>Week</u>	<u>Sample Results</u> <u>mg/L</u>	<u>Weekly Average.</u> <u>mg/L</u>
1	20 30	25
2	20 50	35
3	50 30	40
4	30 68	49

Monthly Average: 32

Answer: 4

26) Have different water quality-based effluent limitations (WQBELs) been established for Great Lakes dischargers and those not discharging to the Great Lakes?

Answer

Yes, water quality-based effluent limitations for dischargers not discharging to waters within the Great Lakes system and Great Lakes dischargers may differ and can be found in 327 IAC 5-2-11 and 12.

Source: 327 IAC 5-2-11 & 12

27) To assure compliance with permit terms and conditions, what are some of the monitoring requirements for all permittees, as required by their permit?

Answer

- (a) The mass, concentration, or other measurement specified in 327 IAC 5-2-11, 11.1, and 11.6 for each pollutant specified in the permit.
- (b) The volume of wastewater flow at monitoring points specified in the permit, including the final effluent flow from each point source.

- (c) Other parameters and conditions as specifically required in the permit.
- (d) A POTW shall monitor the mass, concentration, or other units of specified pollutants in the raw influent, in the discharge from intermediate unit treatment processes as specified in the permit or the applicable report of operation form, and in the final effluent, and the volume of effluent flow.

Source: 327 IAC 5-2-13(a)

28) Any permittee, who is required to monitor under 327 IAC 5-2-13, shall maintain what records?

Answer

The permittee must maintain all monitoring information and monitoring activity records including:

- (a) The date, exact place and time of sampling or measurements;
- (b) The person(s) who performed the sampling or measurements;
- (c) The date(s) analyses were performed;
- (d) The person(s) who performed the analyses;
- (e) The analytical techniques or methods used; AND
- (f) The results of such measurements and analyses.

Source: 327 IAC 5-2-14(a)

29) How long must all records of monitoring activities and results be maintained?

Answer

All records of monitoring activities and results (including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records) shall be retained by the permittee for three (3) years. The three-year period shall be extended:

- (a) Automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; OR
- (b) As requested by the commissioner.

Source: 327 IAC 5-2-14(b)

30) Does a certified operator have to prepare or direct the preparation of reports?

Answer

Yes, All reports required by this section shall be prepared by or under the direction of a certified wastewater treatment plant operator licensed under the provisions of 327 IAC 8 when such reports concern a discharge originating in whole or in part from a wastewater treatment plant as defined in IC 13-11-2.

Source: 327 IAC 5-2-15(c)

31) Indiana Code 13 provides for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation of Indiana's environmental laws or regulations. Who is subject to this penalty?

Answer

Any person causing or contributing to said violation.

Source: 327 IAC 5-2-20

32) A violation subject to enforcement includes, but is not limited to:

Answer

- (a) The discharge of pollutants without an NPDES permit or in violation of any effluent limitation in an NPDES permit;
- (b) The violation of any other term or condition of an NPDES permit;
- (c) Failure to comply with NPDES application requirements under 327 IAC 5-3 or 327 IAC 5-2-3; OR
- (d) Failure to allow entry, inspection, and monitoring by the commissioner when requested in accordance with applicable law or to carry out monitoring, recording, and reporting required under 327 IAC 5.

Source: 327 IAC 5-2-20

33) What are the requirements for signing permit applications?

Answer

- (a) All permit applications shall be signed as follows:

- (1) The following for a corporation by a responsible corporate officer:
  - (A) For purposes of this section, a “responsible corporate officer” means either of the following:
    - (i) A president, secretary, treasurer, any vice president of the corporation in charge of a principal business function, or any other person who performs similar policymaking or decision making functions for the corporation.
    - (ii) The manager of one (1) or more manufacturing, production, or operating facilities employing more than two hundred fifty (250) persons or having gross annual sales or expenditures exceeding twenty-five million dollars (\$25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  - (B) For purposes of this section, a principal executive officer of a federal agency includes the following:
    - (i) The chief executive officer of the agency.
    - (ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- (2) For a partnership or sole proprietorship by a general partner or the proprietor, respectively.
- (3) For a municipality, state, federal, or other public agency or political subdivision thereof by either a principal executive officer or ranking elected official.
- (b) All reports required by permits and other information requested by the commissioner shall be signed by a person described in subsection (a), or by a duly authorized representative of that person. A person is a duly authorized representative only if the authorization meets the following requirements:
  - (1) The authorization is made in writing by a person described in subsection (a).
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
  - (3) The written authorization is submitted to the commissioner.
- (c) If an authorization under subsection (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of subsection (b) must be submitted to the commissioner prior to or together with any reports, information, or applications to be signed by an authorized representative.

Source: 327 IAC 5-2-22(a), (b) & (c)

34) How must any person signing a document under 327 IAC 5-2-22(a) or (b) certify the document?

Answer

They shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Source: 327 IAC 5-2-22(d)

35) The existing NPDES permit will expire soon. When should the permittee submit a new application for an NPDES permit?

Answer

An NPDES permit application must be submitted at least one hundred eighty days (180) prior to the expiration date of the existing permit, unless the commissioner allows a later date.

Source: 327 IAC 5-3-2(a)(2)

36) If you disagree with an action the agency takes, is there anything you can do?

Answer

Yes, any person aggrieved by a final agency action on an adjudicatory hearing or affirming the denial of a request for adjudicatory hearing may seek judicial review of said action pursuant to the provisions of IC 4-21.5-5.

(Note: There are strict time limitations.)

Source: 327 IAC 5-3-16

## 37) When is disinfection required?

Answer

- (a) Disinfection is required of all sanitary discharges for the annual period of April 1 through October 31 except multicelled waste stabilization ponds that are adequately designed and operated and are not either hydraulically or organically overloaded and as provided in 327 IAC 5-10-3(c) & 4(d).
- (b) Disinfection is not required and is not expected to be practiced during the annual period of November 1 through March 31, except as necessary to comply with ORSANCO requirements (for discharges directly into the Ohio River). In cases where chlorination must be practiced during this period (such as to maintain sand filters), the maximum effluent limitation for chlorine and monitoring requirements for such remain in effect.

Source: 327 IAC 5-10-6(a) & (b)

## 38) When may the commissioner order facilities to connect to and/or receive and treat sewage?

Answer

- (a) If the commissioner finds it is in the interest of the health, safety, convenience, and welfare of the residents of any area, any person, publicly or semipublicly owned sewage treatment systems may be ordered to connect to and/or receive and treat sewage from any other person or from an industry, shopping center, mobile home park, school, or housing development when such service and use will not result in irreparable injury to the receiving equipment or make impossible the rendering of the service previously rendered to the users of such equipment. The persons involved shall negotiate the terms for such connection and service, in accordance with the terms of IC 13-7-15-1.
- (b) Any new school, mobile home park, motel, motor court, or motor hotel shall dispose of sewage through the use of a public sewerage system if the sewerage system is available within a reasonable distance from the facility.
- (c) Any existing school, mobile home park, motel, motor court, or motor hotel with a direct discharge of sewage, as authorized by an NPDES permit shall connect to a public sewerage system, discontinue the direct discharge, and abandon their wastewater treatment plant if a public sewerage system becomes available at any time within a reasonable distance from the facility. In this instance, "reasonable distance" is related to cost. The intent of this provision is to encourage the entities mentioned in this section to compare the cost of connecting to a sewerage system against the cost to build or upgrade and operate a sewage treatment plant.

Source: 327 IAC 5-10-7(a), (b) & (c)

## 327 IAC ARTICLE 5. Rules 16 through 21. State Pretreatment Program

- 1) The pretreatment rules establish a state program to control the discharge of industrial pollutants into publicly owned treatment works (POTWs). What are the objectives of the state pretreatment program?

Answer

- (a) To prevent the introduction of pollutants into a POTW that will interfere with the operation of a POTW, including interference with the use or disposal of municipal sludge.
- (b) To prevent the introduction of pollutants into a POTW that will pass through the treatment works without receiving effective treatment or otherwise be incompatible with such works.
- (c) To improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

Source: 327 IAC 5-16-1(b)

- 2) Who does the pretreatment rule apply to?

Answer

- (a) New or existing industries that discharge by direct connection or indirectly by truck, rail, or other means, non-domestic wastes into POTWs; and
- (b) POTWs that receive or may receive discharges of non-domestic wastes from those industries.

Source: 327 IAC 5-16-1(c)

- 3) A violation of pretreatment rules may:

Answer

- (a) Subject a person causing or contributing to the violation to administrative or judicial enforcement proceedings, under IC 13-30-3, and the penalties provided under IC 13-30-4;
- (b) Be cause for modification; revocation and reissuance; or termination of an industrial waste pretreatment permit or an NPDES permit; AND
- (c) Warrant the invocation of emergency procedures under IC 13-14-10.

Source: 327 IAC 5-16-4(a)

- 4) Is the operator required to allow representatives of the commissioner:

- (a) Entry, inspection, and monitoring by representatives of the commissioner when requested in accordance with applicable law; or
- (b) To carry out monitoring, recording, and reporting required under 327 IAC 5-16-4?

Answer

Yes, failure to allow the above access to representatives of the commissioner constitutes a violation of the pretreatment permit.

Source: 327 IAC 5-16-4(d)

- 5) All POTWs and industrial users shall comply with the applicable reporting requirements of 40 CFR 403.12 and 327 IAC 5-21-10. Additionally, reporting of spills into a POTW or of upsets in pretreatment facilities may be required of an industrial user by its control authority. Reports must be signed by?

Answer

- (a) A responsible corporate officer (as defined by 327 IAC 5-16-5(b)(1)).
- (b) A general partner or proprietor or manager if the industrial user submitting the reports is a partnership or sole proprietorship, respectively.
- (c) A duly authorized representative of the individual designated in either subdivision (a) or (b) above if:
  - (1) The authorization is made in writing by the individual described in either subdivision (a) or (b) above;
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; AND

(3) The written authorization is submitted to the control authority.

Source: 327 IAC 5-16-5(a)&(b)

6) What type of access to records must an industrial user allow and how long must that industrial user maintain the records required under 327 IAC 5-16-5(c)?

Answer

These records must be made available for inspection and copying, upon request, to the commissioner, the regional administrator, and the POTW to which the industrial user discharges its wastewater for three years. The period of retention may be extended during the course of any unresolved litigation regarding the discharge of pollutants by the industrial user, the operation of the approved POTW pretreatment, or when requested by the commissioner or the regional administrator. Records of monitoring activities must also be maintained (in accordance with 327 IAC 5-2-14)

Source: 327 IAC 5-16-5(c) &(d)

7) Reports that relate to the actual operation of or discharge from a pretreatment facility must be prepared by or under the direction of \_\_\_\_\_?

Answer

A wastewater treatment plant operator certified under IC 13-18-11.

Source: 327 IAC 5-16-5(e)

8) Who must sign reports required by a POTW?

Answer

A responsible corporate officer, ranking elected official or other duly authorized employee must sign these reports (if that employee is responsible for the overall operation of the POTW). A copy of the written authorization designating the employee must be submitted to the commissioner.

Source: 327 IAC 5-16-5(f)

9) As used in 327 IAC 5-16-6, an “upset” means an exceptional incident in which there is unintentional and temporary noncompliance with any pretreatment standards or requirements in 327 IAC 5-2 because of factors beyond the reasonable control of the industrial user. What does NOT constitute an upset?

Answer

- (a) Noncompliance to the extent caused by operational error;
- (b) Improperly designed treatment facilities;
- (c) Inadequate treatment facilities;
- (d) Lack of preventive maintenance; OR
- (e) Careless or improper operation.

Source: 327 IAC 5-16-6(a)

10) A “bypass” means the intentional diversion of waste streams from any portion of an industrial user's treatment facility. When may an industrial user allow a bypass to occur?

Answer

- (a) When it does not cause a violation of any pretreatment standard or requirement under 327 IAC 5-2;  
AND
- (b) When it is for essential maintenance to assure efficient operation.

Source: 327 IAC 5-16-7 (a)&(b)

11) What are “categorical pretreatment standards”?

Answer

They are national pretreatment standards, specifying quantities or concentrations of pollutants or pollutant properties that may be discharged or introduced to a POTW by an existing or new industrial user in a specific industrial subcategory, that are established by EPA.

Source: 327 IAC 5-17-3

12) What does “control authority” mean?

Answer

The commissioner or, in the case of a POTW with an approved POTW pretreatment program, the POTW.  
Source: 327 IAC 5-17-5

13) What is a “four (4) day average discharge”?

Answer

The calculated result of totaling the mass or average concentration of all daily discharges sampled or measured during four (4) consecutive sampling days, though not necessarily consecutive calendar days, divided by the number of daily discharges sampled or measured.

Source: 327 IAC 5-17-8

14) What is “interference”?

Answer

It is a discharge that, alone or in conjunction with a discharge or discharges from other sources, does ONE (1) of the following:

- (a) Inhibits or disrupts the POTW, its treatment processes or operations, its sludge processes, or its selected sludge use or disposal methods.
- (b) Causes a violation of any requirement of the POTW=s NPDES permit, including an increase in the magnitude or duration of a violation.
- (c) Prevents the use of the POTW=s sewage sludge or its sludge disposal method selected in compliance with the following statutory provisions, regulations, or permits issued thereunder or more stringent state or local regulations:
  - (1) Section 405 of the Clean Water Act (33 U.S.C. 1345).
  - (2) The Solid Waste Disposal Act (SWDA) (42 U.S.C. 6901), including:
    - (A) Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA); and
    - (B) The rules contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA (42 U.S.C. 6941).
  - (3) The Clean Air Act (42 U.S.C. 7401).
  - (4) The Toxic Substances Control Act (15 U.S.C. 2601).

Source: 327 IAC 5-17-11

15) What is a “national pretreatment standard”?

Answer

Any regulation that applies to industrial users and contains pollutant discharge limits promulgated by the EPA in accordance with Section 307(b) and 307(c) of the federal Clean Water Act (33 U.S.C. 1317(b) and 33 U.S.C. 1317(c)).

Source: 327 IAC 5-17-12

16) What do “pretreatment standards” include?

Answer

- (a) State pretreatment standards;
- (b) Pretreatment standards for prohibited discharges; AND
- (c) National categorical pretreatment standards.

Source: 327 IAC 5-17-21

17) “Overflow” is defined as:

Answer

The intentional or unintentional diversion of wastewater flow from the POTW prior to the wastewater entering the POTW treatment plant.

Source: 327 IAC 5-17-14

18) “Pass through” is defined as:

Answer

A discharge proceeding through a POTW into waters of the state in quantities or concentration that, alone or in conjunction with a discharge or discharges from other sources, are a cause of a violation of any

requirement of the POTW's NPDES permit, including an increase in the magnitude or duration of a violation.

Source: 327 IAC 5-17-15

19) What is a "significant industrial user" or "SIU"?

Answer

- (a) Industrial users subject to categorical pretreatment standards under 327 IAC 5-18-10.
- (b) An industrial user that:
  - (1) Discharges an average of twenty-five thousand (25,000) gallons per day or more of process wastewater (excluding sanitary, noncontact cooling and boiler blowdown wastewater) to the POTW;
  - (2) Contributes a process wastestream that makes up five percent (5%) or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; OR
  - (3) Is designated as a significant industrial user by the control authority on the basis that the industrial user has a reasonable potential to:
    - (A) Adversely affect the POTW's operation;
    - (B) Violate a pretreatment standard; or
    - (C) Violate a requirement of 327 IAC 5-19-3.(Except, a control authority may, on its own initiative or in response to a petition received from an industrial user or a POTW and in accordance with 327 IAC 5-19-3(6), determine that an industrial user is not a significant industrial user if it does not meet subsection (3) above.)

Source: 327 IAC 5-17-23

20) What is "significant noncompliance"?

Answer

It means the status of an industrial user that has caused or allowed a violation that meets one (1) or more of the following criteria:

- (a) Chronic violations of wastewater discharge limits.
- (b) Technical review criteria (TRC) violations.
- (c) Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the control authority determines has caused, alone or in combination with other discharges, interference or pass through, including endangering the health of POTW personnel or the general public.
- (d) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare, or to the environment or has resulted in the POTW's exercise of its emergency authority under 327 IAC 5-19-3(1)(G) to halt or prevent such a discharge.
- (e) Failure to meet, within ninety (90) days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.
- (f) Failure to provide, within thirty (30) days after the due date, required reports.
- (g) Failure to accurately report noncompliance.
- (h) Any other violation or group of violations that the control authority determines will adversely affect the operation or implementation of the approved POTW pretreatment program.

Source: 327 IAC 5-17-24

21) What shall NOT be introduced to a POTW by a user of the POTW, whether or not the user is subject to categorical standards or state, local, or any other national pretreatment standard or requirement?

Answer

- (a) A pollutant from any source of nondomestic wastewaters that could pass through or cause interference with the operation or performance of the POTW.
- (b) A pollutant that could create a fire or explosion hazard in the POTW.
- (c) A pollutant that could cause corrosive structural damage to the POTW.
- (d) A solid or viscous pollutant in an amount that could cause obstruction to the flow in a sewer or other interference with the operation of the POTW.
- (e) A pollutant, including an oxygen demanding pollutant released in a discharge at a flow rate or pollutant concentration that could cause interference with the POTW.
- (f) Heat in an amount that could:

- (1) Inhibit biological activity in the POTW and result in interference or damage to the POTW; OR
- (2) Exceed 40 degrees Celsius (40°C) or 104 degrees Fahrenheit (104°) at the POTW unless the commissioner, upon request of the POTW, approves alternate temperature limits.
- (g) Petroleum, oil, nonbiodegradable cutting oil, or products of mineral oil origin in an amount that cause interference or pass through.
- (h) A pollutant that could result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.
- (i) A trucked or hauled pollutant, except:
  - (1) With the permission of the POTW; AND
  - (2) When introduced to the POTW at a discharge point designated by the POTW.

Source: 327 IAC 5-18-2(a)

22) What is the purpose of a POTW pretreatment program?

Answer

The purpose of a POTW pretreatment program is to provide the POTW with the administrative and technical capability to ensure that industrial users of the POTW comply with applicable pretreatment standards and requirements.

Source: 327 IAC 5-19-2(a)

23) What are the requirements that an approved POTW pretreatment program must fully and effectively exercise and implement?

Answer

- (a) The POTW must operate under legal authority, enforceable in federal or state court.
- (b) The POTW shall have procedures to ensure compliance with the requirements of an approved POTW pretreatment program.
- (a) The POTW must have sufficient resources and qualified personnel to carry out the approved POTW pretreatment program.
- (b) The POTW must develop local limits as required or demonstrate that they are not necessary.
- (c) The POTW must develop and implement an enforcement response plan. This plan must contain detailed procedures demonstrating how a POTW will investigate and respond to instances of industrial user noncompliance.
- (d) The POTW shall prepare a list of its industrial users meeting the criteria in 327 IAC 5-17-22. This list, and any subsequent modifications, must be submitted to the commissioner as a non-substantial modification of the approved POTW pretreatment program.

Source: 327 IAC 5-19-3

24) POTWs not required to have an approved POTW pretreatment program must meet the following?

Answer

- (a) Comply with a decision of the commissioner who has the responsibility of implementing a POTW pretreatment program that will achieve the objectives stated in 327 IAC 5-16-1(b) if the commissioner determines that a need exists for such a POTW pretreatment program. Generally, such a state pretreatment program will be implemented at the local POTW through the use of procedures comparable to those described under section 3(2) of this rule and, ultimately, the issuance of appropriate industrial wastewater pretreatment permits under 327 IAC 5-21.
- (b) Develop, adopt, and enforce a sewer use ordinance that implements the standards for prohibited discharges in accordance with 327 IAC 5-18-2.
- (c) Comply with any requirements of the commissioner specified in the POTW's NPDES permit to perform certain elements of an approved POTW pretreatment program, such as monitoring for industrial pollutants in the discharges from the POTW's industrial users.

Source: 327 IAC 5-19-7

25) Under what conditions shall an industrial user be required to obtain an Industrial Wastewater Pretreatment (IWP) Permit for a discharge of wastewater into a POTW?

Answer

If ONE (1) of the following situations exists:

- (a) The discharge is from a significant industrial user as defined in 327 IAC 5-17-22 and is discharged into a POTW that is not required to have an approved POTW pretreatment program under 327 IAC 5-19-1.
- (b) The commissioner determines that an IWP permit is needed for effective control of an industrial discharge.

Source: 327 IAC 5-21-2(a)

26) What are the time requirements for the submission of IWP permit applications?

Answer

No later than:

- (a) 180 days prior to the expiration date of an existing permit.
- (b) 180 days prior to the date when a new industrial discharger intends to commence discharging to a POTW.
- (c) In the case of an initial issuance of an IWP permit to a significant industrial user or to an industrial user determined by the commissioner to be subject to the IWP permit requirements, no later than 120 days after the latter of:
  - (1) The promulgation of an applicable categorical pretreatment standard; OR
  - (2) The date of notification by the commissioner of a determination made according to section 2(a)(2) of this rule.
- (d) 120 days prior to a planned expansion or modification of production or treatment facilities or processes that are likely to cause a significant increase in quantity of pollutants or a change in the nature of pollutants discharged to the POTW by an industrial user with an existing IWP permit.

Source: 327 IAC 5-21-3

27) What requirements shall an IWP permit holder comply with?

Answer

- (a) The IWP permit as issued or modified.
- (b) The POTW receiving the permitted industrial discharge.
- (c) The local government having jurisdiction over the industrial discharge or the construction or operation of the discharging facility.

Source: 327 IAC 5-21-4

28) What information must the IWP permittee provide the commissioner in the event of permit noncompliance (the permittee does not or will not be able to comply for any reason with any discharge limitation specified in the permit)? What is the time requirement for reporting?

Answer

- (a) A description of the discharge and cause of noncompliance.
- (b) The period of noncompliance, including exact dates and times of the non-complying event and the anticipated time when the discharge will return to compliance.
- (c) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.
- (d) The permittee shall take all reasonable steps to minimize any adverse impact to the POTW or to waters of the state resulting from noncompliance with the IWP permit.
- (e) The information must be reported to the commissioner within 24 hours of an event of permit noncompliance.

Source: 327 IAC 5-21-6(c) and (d)

### 327 IAC ARTICLE 5. Rule 22. Operator Certification

- 1) If it is found that the certified operator has violated any provision of IC 13-18-11-8, the commissioner may   a   or   b   the wastewater treatment certificate of a wastewater treatment certified operator following a   c   pursuant to IC 4-21.5.

Answer

- (a) Suspend.
- (b) Revoke.
- (c) Hearing.

Source: 327 IAC 5-22-18

- 2) A person who is caught cheating on an examination will be ineligible to take any operator certification examination for a period of \_\_\_\_\_ following the examination date of the incidence of cheating.

Answer

Two years.

Source: 327 IAC 5-22-11(d)(2)(B)

- 3) When there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility, the owner or governing body of a wastewater treatment plant shall notify the commissioner no later than \_\_\_\_\_ days after a change in the operator.

Answer

Thirty days.

Source: 327 IAC 5-22-10(a)

- 4) What is the definition of “acceptable experience”?

Answer

It is employment in the actual hands-on operation, maintenance, management, or supervision of a wastewater treatment plant. Acceptable experience shall be obtained under the supervision of a certified operator or by otherwise demonstrating to the commissioner that the applicant’s experience meets the requirements described in this rule.

327 IAC 5-22-3(1)

- 5) What is the definition of “responsible charge experience”?

Answer

Means the wastewater treatment certified operator who makes process control or system integrity decisions about the overall daily operation, maintenance, management, or supervision of a wastewater treatment plant necessary to meet the performance requirements and limits of the assigned permit and any applicable local ordinance or other regulatory requirements. The responsible charge operator must assure that written and electronic monitoring reports are prepared under his or her direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The responsible charge operator certifies that, based on his or her inquiry of the persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of the knowledge and belief of the responsible charge operator, true, accurate, and complete.

327 IAC 5-22-3(11)

- 6) What is the definition of a “wastewater treatment apprentice”?

Answer

It is a person who has successfully passed the commissioner’s wastewater treatment operator’s certification examination but has not fulfilled either the educational or experience requirements, or both, necessary to qualify to be a certified operator. A wastewater treatment apprentice shall not be designated as the certified operator in responsible charge of a wastewater treatment

327 IAC 5-22-3(14)

- 7) What is a “contact hour”?

Answer

A “contact hour” is a fifty (50) to sixty (60) minute instructional session involving a qualified instructor or lecturer. Ten (10) contact hours equals one (1) continuing education unit (CEU). For example, an operator receives a certificate upon completion of an IDEM-approved California State University at Sacramento correspondence course. California State grants nine (9) CEUs for most of their wastewater courses. This means that the operator has earned ninety (90) contact hours for this course.

Source: 327 IAC 5-22-3(7)

- 8) Define “population equivalent”.

Answer

“Population equivalent” or “PE” means the calculated population that would contribute the same amount of biochemical oxygen demand (BOD) per day using the base of seventeen-hundredths (0.17) pound of five (5) day BOD per capita per day.

327 IAC 5-22-3(9)

9) Define “design population equivalent”.

*Answer*

“Design population equivalent” means the PE for which the plant is designed. 327 IAC 5-22-3(9)

10) Define “training provider”.

Answer

A “training provider” is a person or organization that conducts or presents a course training session approved under this rule.

Source: 327 IAC 5-22-3-(11)

11) In order for a wastewater apprentice to become a certified wastewater treatment operator he or she must:

*Answer*

- (1) Meet the educational and experience requirements for that classification of certified operator; and
- (2) Fulfill the continuing education credit requirement for that classification of certified operator; and
- (3) Complete a certification application on a form approved by the commissioner that:
  - (A) contains true and accurate information to the best of the wastewater treatment apprentice’s knowledge; and
  - (B) is free of omissions and misrepresentations, either of which may result in rejection of the application or revocation of any certificate previously granted.
- (4) Submit a completed certification application, with the necessary fee, to the commissioner not later than six (6) years after the date of successfully completing the wastewater treatment certification examination.

327 IAC 5-22-7.5 (a)

12) A certified operator may be designated as being in responsible charge of more than one wastewater treatment plant if certain requirements are met. Those requirements are:

*Answer*

- (1) The certified operator gives adequate supervision to each wastewater treatment plant under his or her responsible charge. As used in this section, “adequate supervision” means that time is spent on a regular basis, either on site at or through remote monitoring of the wastewater treatment plant to assure that:
  - (A) the certified operator is knowledgeable of the actual operations; and
  - (B) test reports and results are representative of the actual operational and compliance conditions
- (2) The certified operator in responsible charge ensures the proper:
  - (A) operation;
  - (B) maintenance;
  - (C) management; and
  - (D) supervision;

to each wastewater treatment plant under his or her responsible charge.
- (3) Each wastewater treatment plant under the responsible charge of a single certified operator must be achieving the performance requirements and limits in the:

- (A) assigned permit;
- (B) local ordinances; and
- (C) other applicable regulatory requirements.

327 IAC 5-22-10.5)

13) Certification examinations are to be held at places and times established by the commissioner:

Answer

- (a) With at least sixty (60) days advanced announcement; AND
- (b) Except in such cases as may be declared necessary exceptions by the commissioner.

Source: 327 IAC 5-22-11(a)(3)

14) Applications to sit for a certification examination must be:

Answer

Completed on an application form approved by the commissioner that:

- (a) Contains true and accurate information to the best of the applicant's knowledge; AND
- (b) Is free of omissions and misrepresentations, either of which may result in rejection of the application or revocation of any certificate previously granted.

Source: 327 IAC 5-22-11(b)(1)

15) What is the deadline for exam applications to be postmarked?

Answer

Applications MUST be postmarked no later than forty-five (45) days prior to the examination day.  
**(There are no exceptions.)**

Source: 327 IAC 5-22-11(b)(2)

16) In accordance with 327 IAC 8-12-3.2(e), what water operator grades shall be considered to have met the educational and experience requirements necessary to apply for the appropriate wastewater treatment certification to treat wastewater from a water treatment plant provided the operator is certified to operate that classification of water treatment plant?

Answer

Grade WT3, WT4, and WT5

327 IAC 5-22-7(d)

17) If there are two (2) or more wastewater treatment plants at one (1) industrial site and each independent wastewater treatment plant is classified as a Class B or Class C wastewater facility, how will that industrial site be classified?

Answer

It will be classified as a Class D wastewater treatment facility.

327 IAC 5-22-5(D)

18) A certified operator must complete continuing education contact hours according to 327 IAC 5-22 Table 15(6). The subject matter of continuing education contact hours must be distributed according to the following:

Answer

- (a) A minimum of seventy percent (70%) of the required continuing education contact hours shall be obtained from the technical category of approved continuing education courses.  
(Therefore an operator may choose to earn all contact hours in a technical subject.)
- (b) No more than thirty percent (30%) of the required continuing education contact hours shall be obtained from nontechnical subject matter of approved continuing education courses. 327 IAC 5-22-15(c)

19) If an operator's card expires June 30, 2008, he may continue to act as operator in responsible charge of a facility until when?

Answer

June 30, 2008. There is no grace period beyond the card's expiration date. Continuing to act as a certified operator with an expired card places both the operator and facility in violation of the NPDES permit, IC 13-18, and 327 IAC 5.

Source: 327 IAC 5-22-14(a)(3)

20) When must a training provider submit an application to the commissioner to receive continuing education course approval?

Answer

The application must be submitted no less than sixty (60) days before the first date when the course is conducted, but must be submitted not later than ninety (90) days after training completion.

Source: 327 IAC 5-22-16(a)(1)

21) What information must be included in an application for approval of a wastewater treatment continuing education course?

Answer

- (a) Name, address, and telephone number of a course sponsor, training provider, or other contact person;
- (b) Name of course;

- (c) Specific topics that are included in the course presentations;
- (d) Amount of time devoted to each topic;
- (e) Instructor’s name and qualifications, including;
  - (1) Educational background;
  - (2) Professional experience; AND
  - (3) Current professional affiliation; AND
- (f) Dates and locations where the course will be offered.

Source: 327 IAC 5-22-16(a)(1)(D)

22) The certified operator may petition the commissioner for approval of a wastewater treatment continuing education course if what procedures are met?

*Answer*

- (a) An application is submitted prior to course completion or as soon as practical afterwards but not later than ninety (90) days after training completion in order to be considered for approval.
- (b) The application contains the information required by 5-22-16(a).
- (c) The certified operator supplies written proof of attendance at the wastewater treatment continuing education course within ninety (90) days following course completion. 327 IAC 327 IAC 5-22-16(b)

23) What qualifications must a continuing education course meet in order to be approved for continuing education contact hours?

*Answer*

The course deals with one or more of the following as determined by the commissioner:

- (a) Technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.
- (b) General matters that enhance the performance of the certified operator’s responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision. 327 IAC 5-22-16(a)(2)

24) Can a certified operator who is an instructor or speaker at a wastewater treatment continuing education course earn contact hours for that course?

Answer

Yes, the instructor or speaker shall be credited the same number of contact hours as the students of the course for not more than one (1) presentation of the training. Source: 327 IAC 5-22-15(c)

25) Is partial credit granted for wastewater continuing education courses?

Answer

No, partial credit shall not be given to instructors, speakers, or students participating in less than a complete wastewater treatment continuing education course. Source: 327 IAC 5-22-15(e)

***For information only – not included on the wastewater exam***

**327 IAC ARTICLE 6.1 Application of Biosolid, Industrial Waste Product, and Pollutant-Bearing Wastewater**

1) What does a land application permit regulate?

Answer

A land application permit regulates the disposal of any biosolid, contaminant that is an industrial waste product, or pollutant-bearing water by application upon or incorporation into the soil.

Source: 327 IAC 6.1-1-1(b)

2) What is “aerobic digestion” or “aerobic process”?

Answer

It is the biochemical decomposition of organic matter into carbon dioxide and water by microorganisms in the presence of oxygen.

Source: 327 IAC 6.1-2-2

3) Define “agricultural land”.

Answer

“Agricultural land” means land used for the following purposes:

- (a) Production of a food crop.
- (b) Production of a feed crop.
- (c) Production of a fiber crop.
- (d) Production of trees for harvest.
- (e) Pasture for animals.

Source: 327 IAC 6.1-2-3

4) What is “anaerobic digestion” or “anaerobic process”?

Answer

It is the biochemical decomposition of organic matter into methane gas and carbon dioxide by microorganisms in the absence of oxygen.

Source: 327 IAC 6.1-2-4

5) Define “annual pollutant loading rate”

Answer

It means the maximum amount of an inorganic pollutant that can be applied to any land during a three hundred sixty-five (365) day period.

Source: 327 IAC 6.1-2-5

6) Define “beneficial use”.

Answer

“Beneficial use” means the use of a material for fertilizing or soil conditioning properties to:

- (a) Provide nutrients for growing plants or crops;
- (b) Increase organic matter;
- (c) Provide pH adjustment capabilities; OR
- (d) Provide other benefits to the soil or crops as shown to the satisfaction of the commissioner through an approved research or demonstration project under 327 IAC 6.1-4-19.

Source: 327 IAC 6.1-2-6

7) Define “biosolid”

Answer

It means solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Examples include the following:

- (a) Scum or solids removed in primary, secondary, or advanced wastewater treatment processes.

- (b) A material derived from biosolid.
  - (c) An industrial waste product that contains domestic sewage or material under (a) or (b) above.
- Biosolid does not include ash generated during the firing of biosolid in a biosolid incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Source: 327 IAC 6.1-2-7

8) What does “disinfection” mean?

Answer

It means the destruction, neutralization, inhibition, inactivation or removal of pathogenic microorganisms by chemical, physical or biological means.

Source: 327 IAC 6.1-2-15

9) Define “freeboard”.

Answer

“Freeboard” means the distance between the top of the stored biosolid, industrial waste product, or pollutant-bearing water and the overflow level of the storage structure.

Source: 327 IAC 6.1-2-24

10) Define “incorporated into the soil”

Answer

It means the mixing of the biosolid or industrial waste product with the surface soil using standard agricultural practices such as tillage.

Source: 327 IAC 6.1-2-27

11) What is an “industrial waste product”?

Answer

- (a) Material that is not considered biosolid or pollutant-bearing water under this article.
- (b) Material that is generated as waste in the production process and may be disposed of through:
  - (1) Surface application;
  - (2) Injection; OR
  - (3) Incorporation into the soil.
- (a) Material that meets the following criteria:
  - (1) Is a solid waste as defined under 329 IAC 10-2-174.
  - (2) Does not include material from any processes listed in 329 IAC 10-3-1.
  - (3) Is used for a beneficial use as defined under 327 IAC 6.1-2-6.

Source: 327 IAC 6.1-2-30

12) Define “injection”.

Answer

“Injection” means the direct, uniform placement of biosolid, industrial waste product, or pollutant-bearing water beneath the surface of the soil using equipment specifically for this purpose.

Source: 327 IAC 6.1-2-31

13) Define “land application”.

Answer

It means the beneficial use of a biosolid, industrial waste product, or pollutant-bearing water by:

- (a) Spraying or spreading onto the land surface;
- (b) Injection below the land surface; OR
- (c) Incorporation into the soil.

Source: 327 IAC 6.1-2-32

14) What is “land with a high potential for public exposure”?

Answer

This means land that:

- (a) Does not have restricted access;
- (b) Is easily accessible to the public; OR
- (c) Is used by the public during normal work or recreational activities.

Source: 327 IAC 6.1-2-34(a)

15) How is “pasture” defined in the land application rule?

Answer

“Pasture” means land on which animals feed directly on vegetation, such as legumes, grasses, stubble, or stover.

Source: 327 IAC 6.1-2-38

16) Define “pathogenic organisms”.

Answer

It means disease-causing organisms, including the following:

- (a) Certain bacteria.
- (b) Protozoa.
- (c) Viruses.
- (d) Viable helminth ova.
- (e) Fungi.
- (f) Other disease-causing organisms.

Source: 327 IAC 6.1-2-39

17) What is a definition of pH?

Answer

“pH” means the logarithm of the reciprocal of the hydrogen ion concentration.

Source: 327 IAC 6.1-2-44

18) What is “set aside” or “idle”?

Answer

It means agricultural land upon which no crop is grown during a crop season.

Source: 327 IAC 6.1-2-49

19) What is “staging”?

Answer

It is the temporary placement of a dewatered biosolid or industrial waste product in a pile for less than twenty-four (24) hours at the site where the dewatered biosolid or industrial waste product will be land applied.

Source: 327 IAC 6.1-2-51

20) Define “stockpiling”.

Answer

It means the temporary placement of a dewatered biosolid or industrial waste product in a pile for more than twenty-four (24) hours but less than five (5) working days at the land application site in accordance with an approved management plan.

Source: 327 IAC 6.1-2-54

21) What does “storage” mean?

Answer

“Storage” means containment of biosolid, industrial waste product, or pollutant-bearing water for a period of two (2) years or less at the following:

- (a) Treatment plant.
- (b) Generating facility.
- (c) Approved off-site storage structure or earthen lagoon.

Source: 327 IAC 6.1-2-55

22) Define “unstabilized solids”?

Answer

It means the organic materials in biosolid that have not been treated in:

- (a) An aerobic treatment process; OR
- (b) An anaerobic treatment process.

Source: 327 IAC 6.1-2-58

23) What is “vector attraction”?

Answer

“Vector attraction,” means the characteristic of biosolid that attracts:

- (a) Rodents;
- (b) Flies;
- (c) Mosquitoes; or
- (d) Other organisms capable of transporting infectious agents.

Source: 327 IAC 6.1-2-59

24) Define “volatile solids”.

Answer

Volatile solids means the amount of the percent total solids in biosolid or pollutant-bearing water lost when the biosolid or pollutant-bearing water is combusted at five hundred fifty degrees Celsius (550°C) in the presence of excess oxygen.

Source: 327 IAC 6.1-2-60

25) Define “wetlands”

Answer

It means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support and that, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include the following:

- (a) Swamps.
- (b) Marshes.
- (c) Bogs.
- (d) Similar areas.

Source: 327 IAC 6.1-2-62

26) What is “windrow composting”?

Answer

It is a process where biosolid is composted in long rows that are aerated by convective air movement and diffusion and turned periodically as required in 327 IAC 6.1-4-14 by mechanical means to expose the organic matter to ambient oxygen.

Source: 327 IAC 6.1-2-63

27) Define “within-vessel”.

Answer

It means biological stabilization of biosolid under controlled aerobic conditions in a closed vessel or an enclosed structure.

Source: 327 IAC 6.1-2-64

28) How many days prior to the land application of sludge should a municipality apply for the renewal of an existing or for a new land application permit?

Answer

A permit application must be submitted at least 180 days prior to the proposed commencement of the operation.

Source: 327 IAC 6.1-3-1(b)

29) What is the maximum duration of a land application permit?

Answer

Except as specifically provided for elsewhere in this article or by Indiana statute, permits may be issued by the commissioner for any period of time not to exceed five (5) years as specified by IC 13-15-3.

Source: 327 IAC 6.1-3-4

30) What is the procedure to transfer a permit issued under 327 IAC 6.1?

Answer

- (a) The permittee notifies the commissioner of the proposed transfer at least forty-five (45) days prior to the date of the proposed transfer of the permit; AND
- (b) A written agreement is submitted to the commissioner containing the information specified in 327 IAC 6.1-3-5(a)(2)(B).

Source: 327 IAC 6.1-3-5(a)

31) Application of a biosolid or industrial waste product must not be conducted within \_\_\_\_\_ of any **waters of the state** except by subsurface injection or incorporation by the end of the day.

Answer

300 feet

Source: 327 IAC 6.1-4-6(a)(2)

32) Application of a biosolid or industrial waste product must not be conducted within \_\_\_\_\_ of **residence**, except by subsurface injection.

Answer

300 feet.

Source: 327 IAC 6.1-4-6(a)(3)

33) Application of a biosolid or industrial waste product must not be conducted within \_\_\_\_\_ of any well.

Answer

50 feet.

Source: 327 IAC 6.1-4-6(a)(4)

34) Application of a biosolid or industrial waste product must not be conducted within \_\_\_\_\_ of a potable water well or drinking water spring.

Answer

200 feet.

Source: 327 IAC 6.1-4-6(a)(5)

35) Application of a biosolid or industrial waste product must not be conducted within \_\_\_\_\_ of any public building or public or nonpublic school.

Answer

50 feet of the property line.

Source: 327 IAC 6.1-4-6(a)(6)

36) Liquid biosolid or industrial waste product may be applied by surface application on slopes that are no greater than \_\_\_\_\_ .

Answer

Eighteen per cent (18%).

Source: 327 IAC 6.1-4-6(d)

37) Site restrictions for the land application of biosolid or industrial waste product must not be applied to land unless there is a minimum depth of \_\_\_\_\_ inches of soil overlying bedrock.

Answer

Twenty inches.

Source: 327 IAC 6.1-4-6(e)

38) A wastewater treatment plant is planning to apply on land used for the production of food crops. How long must the farmer wait before s/he can harvest a food crop if the harvested part (1) touches the ground where the biosolid has been applied; and (2) has no harvested parts below the soil surface?

Answer

Fourteen (14) months after application of a biosolid.

Source: 327 IAC 6.1-4-7(a)

39) Grazing of animals on land that has received biosolid is prohibited for \_\_\_\_\_ after the application of biosolid.

Answer

Thirty days.

Source: 327 IAC 6.1-4-7(e)

40) Except for a Class A biosolid under section 13(b) of this rule:

*Public access to land with a HIGH potential for public exposure shall be restricted for \_\_\_\_A\_\_\_\_ after application; and public access to land with a LOW potential for public exposure shall be restricted for \_\_\_\_B\_\_\_\_ after application of biosolid to that land.*

Answer

- (a) One (1) year.
- (b) Thirty (30) days.

Source: 327 IAC 6.1-4-7(g) & (h)

41) A biosolid or industrial waste product may only be applied to land that is frozen or snow-covered if \_\_\_\_\_ .

Answer

- (a) A biosolid or industrial waste product does not enter a wetland or other waters of the state; and
- (b) A management plan has been submitted and approved by the commissioner including the following:
  - (1) Setbacks;
  - (2) Application rates;
  - (3) Site characteristics;
  - (4) Supervision and operational oversight; AND
  - (5) Other applicable information.

Source: 327 IAC 6.1-4-7(l)

42) During inclement weather when biosolids or industrial waste products cannot be land applied, what must a facility do with the biosolids or industrial waste products that are continually being produced?

Answer

Each facility that holds a land application permit is required to have a minimum of (ninety) 90 days effective storage capacity for biosolid or industrial waste product unless the commissioner approves an equivalent method of meeting the requirement.

Source: 327 IAC 6.1-4-8(a)

43) A biosolid or industrial waste product for land application may be stored for no more than \_\_\_\_

Answer

Two years.

Source: 327 IAC 6.1-4-8(e)

44) There are nine heavy metals that must be monitored during land application activities. Which ceiling concentration limit of these nine metals is the most stringent?

Answer

Mercury.

Source: 327 IAC 6.1-4-9

45) What unit is used to express the maximum annual metal loading rates for sites where biosolid or industrial waste product is land applied?

Answer

Pounds per acre per 365-day period.

Source: 327 IAC 6.1-4-9(d)

46) Maximum crop and annual loading rates are determined for biosolid or industrial waste product to be applied on the basis of what?

Answer

Plant Available Nitrogen (PAN) in the product, existing nitrogen in the soil, and the nitrogen removal rate for the proposed crop to be grown on the land application site.

Source: 327 IAC 6.1-4-10(a)

47) The allowable nitrogen application rate for a land application site must be adjusted to account for application of fertilizers, manure and the presence of \_\_\_\_\_ in the soil from previous applications of biosolid, industrial waste product or pollutant-bearing water.

Answer

Residual available nitrogen

Source: 327 IAC 6.1-4-10(b)(B)

48) The land application rule, 327 IAC 6.1, establishes standards for monitoring and analysis requirements. Prior to land application, representative samples of biosolid or industrial waste product must be analyzed for what?

Answer

Biosolid or industrial waste product that is to be land applied shall be collected and analyzed for percent total solids, total metals, polychlorinated biphenyls (PCBs), applicable pathogen density requirements, and applicable vector attraction reduction requirements at the frequency listed in Table 6 in 327 IAC 6.1-4-16(f).

Source: 327 IAC 6.1-4-16(e)

49) A nutrient sample (i.e. percent total solids, total nitrogen, ammonia N, nitrate N, phosphorus and potassium) is to be analyzed from a composite taken as land application activities take place. This composite is to represent activities during a period not to exceed \_\_\_\_\_.

Answer

Thirty days.

Source: 327 IAC 6.1-4-16(i)

50) The person who prepares the biosolid or industrial waste product must record information regarding application rates and site conditions daily, or as specified by the permit. These records must be:

Answer

- (a) Retained by the person who prepares the biosolid or industrial waste product for a minimum of five (5) years or longer if required by the commissioner or permit; AND
- (b) Accessible to department representatives at the facility or other location clearly identified in writing to the commissioner.

Source: 327 IAC 6.1-4-17

51) Activities and analyses related to land application of biosolid or industrial waste product must be:

Answer

- (a) Reported within thirty (30) days of the last day of each calendar month for the term of the permit, AND
- (b) Submitted on forms and in a format prescribed by the commissioner.

Source: 327 IAC 6.1-4-18(a)

52) What are the requirements for alternative uses of permitted biosolid at a permittee domestic sewage treatment works?

Answer

- (a) The biosolid must be dewatered.
- (b) No more than one (1) dry ton of a biosolid may be used during any twelve (12) month period.
- (c) A biosolid may not be used on land with a high potential for public exposure.
- (d) Application of a biosolid must be in accordance with the permit.

Source: 327 IAC 6.1-4-20

53) What are the criteria for a biosolid to be eligible for marketing and distribution?

Answer

The following criteria must be met:

- (a) The Class A pathogen requirements in 327 6.1-4-13(b).
- (b) Compliance with at least one (1) of the vector attraction reduction requirements in 327 IAC 6.1-4-15-(b)(1) through 327 IAC 6.1-4-15(b)(8) or an equivalent vector attraction reduction requirement as determined by the commissioner.
- (c) The pollutant concentrations are less than the concentrations in Table 1 in 327 IAC 6.1-4-9(a) and Table 3 in 327 IAC 6.1-4-9(c).

- (d) The biosolid must be dewatered.
- (e) The biosolid must not contain a concentration of polychlorinated biphenyls (PCBs) of two (2) milligrams per kilogram or greater on a dry weight basis. Source: 327 IAC 6.1-5-1

54) Processes to significantly reduce pathogens (PSRP) vary according to?

Answer

- Type of process, i.e. – aerobic digestion, air drying, anaerobic digestion, composting and lime stabilization;
- and- Type of pathogen, i.e. – Class A and Class B Source: 327 IAC 6.1-4-14

55) Land application or injection of pollutant of pollutant-bearing water must be conducted under the supervision of:

Answer

- (a) A certified wastewater treatment plant operator; OR
- (b) A person with at least one (1) year of experience in land application management practices and procedures. (Notice must be submitted to the commissioner of any change in supervisor of the activity.) Source: 327 IAC 6.1-7-1(a)

56) The supervisor of a domestic sewage treatment works requiring disinfection equipment dependent upon electricity for operation shall submit documentation, for approval by the commissioner, demonstrating an ability to:

Answer

Provide an alternative power source sufficient to operate pathogen reduction equipment for to a degree that pathogen limitations detailed below can be achieved:

- (a) Upon the reduction, loss, or failure of power to the disinfection equipment, cease land application of domestic wastewater and cease discharge to a domestic wastewater storage structure used for land application of domestic wastewater for a period of seventy-two (72) hours; OR
- (b) Provide an effective alternate method of disinfection, sufficient to a degree that pathogen limitations detailed above are achieved, approved by the commissioner, that does not require electricity for proper operation. Source: 327 IAC 6.1-7-7(2) & (3)

57) Requests for approval of an earthen lagoon must be:

Answer

- (a) Submitted at least ninety (90) days prior to the intended date of construction.
- (b) Plans, specifications, and sufficient information to indicate compliance with the requirements of 327 IAC 6.1 must accompany the request for approval. The applicant shall submit additional information as may be required by the commissioner to make a determination.
- (c) A registered professional engineer licensed to practice in Indiana must certify plans and specifications for earthen lagoons. Source: 327 IAC 6.1-8-2

58) The off-site storage structure must be maintained and operated to prevent any \_\_\_A\_\_\_ or \_\_\_B\_\_\_ as outlined in 327 IAC 6.1-8-7.

Answer

- (a) Nuisance.
- (b) Health hazards. Source: 327 IAC 6.1-8-7

59) In the event an off-site storage structure ceases to be operated or used for more than \_\_\_A\_\_\_, it is the responsibility of \_\_\_B\_\_\_ to abandon the off-site storage structure properly.

Answer

- (a) Two (2) years.
- (b) The person who signed the statement submitted in accordance with 327 IAC 6.1-8-1(e). Source: 327 IAC 6.1-8-8

**Section Three:**

**327 IAC 5-22**

**Rule 22. Classification of Wastewater Treatment Plants;  
Examination and Certification of Operators**

**327 IAC 5-22-1 Purpose**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 1. The purpose of this rule is to establish the following:

- (1) A classification system of wastewater treatment plants.
- (2) The criteria by which a person may become a wastewater treatment:
  - (A) apprentice; or
  - (B) certified operator.

The intended result of this rule is to facilitate the entry of individuals into the occupation of wastewater treatment through an apprenticeship opportunity and promote excellence among wastewater treatment operators for the ultimate goal of protecting Indiana waters receiving treated wastewater discharged from wastewater treatment plants. (*Water Pollution Control Board; 327 IAC 5-22-1; filed Nov 20, 2000, 4:07 p.m.: 24 IR 963; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

**327 IAC 5-22-2 Applicability**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 2. This rule applies to:

- (1) a certified operator who works at;
- (2) a person endeavoring to become a wastewater treatment apprentice or a certified operator at;  
and
- (3) the owner or governing body of;

a wastewater treatment plant. (*Water Pollution Control Board; 327 IAC 5-22-2; filed Nov 20, 2000, 4:07 p.m.: 24 IR 963; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

**327 IAC 5-22-3 Definitions**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-11-2-258; IC 13-18-11**

Sec. 3. The definitions in IC 13-11-2 and 327 IAC 1 and the following definitions apply throughout this rule:

- (1) "Acceptable experience" means employment in the actual hands-on operation, maintenance, management, or supervision of a wastewater treatment plant. Acceptable experience shall be obtained under the supervision of a certified operator or by otherwise demonstrating to the commissioner that the applicant's experience meets the requirements described in this rule.
- (2) "Applicant" means a:
  - (A) person seeking:
    - (i) classification as a wastewater treatment apprentice; or
    - (ii) certification as a wastewater treatment operator;whether or not the person is currently employed at a wastewater treatment plant; or
  - (B) training course provider seeking course approval.

- (3) “Application” means a written request submitted to the commissioner under this rule asking for:
- (A) classification as a wastewater treatment apprentice;
  - (B) certification as a wastewater treatment operator; or
  - (C) training course approval.
- (4) “Certificate” means an appropriate document containing the following information:
- (A) Affirmation that the named person has fulfilled the requirements for certification as contained in this rule.
  - (B) The classification of the wastewater treatment certified operator.
  - (C) The date of issuance.
  - (D) An identification number unique to each certificate.
- (5) “Certification card” means a card issued to a person who has fulfilled the requirements to be a wastewater treatment certified operator and contains the following information:
- (A) The name and certificate number of the person.
  - (B) The classification of the wastewater treatment certified operator.
  - (C) An expiration date.
- (6) “Certified operator” means a person who:
- (A) has met the requirements of this rule; and
  - (B) holds a current certificate and certification card for wastewater treatment.
- (7) “Commissioner” means the commissioner of the department of environmental management.
- (8) “Contact hour” means a fifty (50) to sixty (60) minute instructional session:
- (A) approved by the commissioner; and
  - (B) involving a qualified instructor or lecturer.
- Ten (10) contact hours equals one (1) continuing education unit (CEU).
- (9) “Design population equivalent” means the PE for which the plant is designed.
- (10) “Population equivalent” or “PE” means the calculated population that would contribute the same amount of biochemical oxygen demand (BOD) per day using the base of seventeen-hundredths (0.17) pound of five (5) day BOD per capita per day.
- (11) “Responsible charge operator” means the wastewater treatment certified operator who makes process control or system integrity decisions about the overall daily operation, maintenance, management, or supervision of a wastewater treatment plant necessary to meet the performance requirements and limits of the assigned permit and any applicable local ordinance or other regulatory requirements. The responsible charge operator must assure that written and electronic monitoring reports are prepared under his or her direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The responsible charge operator certifies that, based on his or her inquiry of the persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of the knowledge and belief of the responsible charge operator, true, accurate, and complete.
- (12) “Training course” means a continuing education course that, as determined by the commissioner, deals with one (1) or more of the following:
- (A) Technical matters related directly to wastewater treatment.
  - (B) General matters related to the responsibilities of a wastewater treatment certified operator.
- (13) “Training provider” means a person or organization that conducts or presents a course training session approved under this rule.
- (14) “Wastewater treatment apprentice” means a person who has successfully passed the commissioner’s wastewater treatment operator’s certification examination but has not fulfilled either the educational or experience requirements, or both, necessary to qualify to be a certified

operator. A wastewater treatment apprentice shall not be designated as the certified operator in responsible charge of a wastewater treatment plant.

(15) "Wastewater treatment plant" means the system of treatment works, regulatory devices, equipment, and other facilities and appurtenances installed to treat sewage, industrial wastes, and other wastes delivered by a system of sewers and other related facilities, whether owned or operated by the state, a municipality, or a person, firm, or corporation. The term does not include septic tank disposal systems. This is the definition found in IC 13-11-2-258.

*(Water Pollution Control Board; 327 IAC 5-22-3; filed Nov 20, 2000, 4:07 p.m.: 24 IR 963; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-4 Classification of wastewater treatment plants; nonindustrial treatment plants**

**Authority:** IC 13-14-8; IC 13-18-11-2; IC 13-18-11-13

**Affected:** IC 13-18-11

Sec. 4. A nonindustrial wastewater treatment plant shall be classified into one (1) of five (5) classifications based on the design population equivalent of the plant according to the following:

- (1) Class I-SP includes all waste stabilization ponds, whether controlled discharge or continuous discharge, regardless of flow.
- (2) Class I includes wastewater treatment plants having a design population equivalent of less than two thousand (2,000).
- (3) Class II includes wastewater treatment plants having a design population equivalent:
  - (A) equal to or greater than two thousand (2,000); and
  - (B) less than ten thousand (10,000).
- (4) Class III includes wastewater treatment plants having a design population equivalent:
  - (A) equal to or greater than ten thousand (10,000); and
  - (B) less than or equal to forty thousand (40,000).
- (5) Class IV includes wastewater treatment plants having a design population equivalent greater than forty thousand (40,000).

*(Water Pollution Control Board; 327 IAC 5-22-4; filed Nov 20, 2000, 4:07 p.m.: 24 IR 964; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-5 Classification of wastewater treatment plants; industrial treatment plants**

**Authority:** IC 13-14-8; IC 13-18-11-2; IC 13-18-11-13

**Affected:** IC 13-18-11

Sec. 5. (a) An industrial wastewater treatment plant shall be classified into one (1) of five (5) classifications based on the type of treatment provided, design population equivalent, and the average daily flow according to the following:

- (1) Class A-SO includes wastewater treatment plants having one (1) or more of the following:
  - (A) Primary solids removal facilities, such as:
    - (i) settling tanks;
    - (ii) settling ponds;
    - (iii) sand filters; or
    - (iv) screens;
 used only for removal of settleable inorganic solids.
  - (B) Tanks, ponds, centrifuges, or other facilities used to separate floatable oils and solids.
  - (C) pH adjustment.

Wastewater flow is not a limiting factor in the Class A-SO classification of industrial wastewater treatment plant.

(2) Class A includes wastewater treatment plants having one (1) or more of the following:

(A) Secondary treatment facilities that treat wastewater loads of less than two thousand (2,000) design population equivalent, such as:

- (i) waste stabilization ponds whether anaerobic or aerobic;
- (ii) trickling filter;
- (iii) activated sludge-type treatment plants;
- (iv) aerated lagoons; or
- (v) other biological treatment facilities.

(B) Spray, broad, or ridge and furrow irrigation facilities that treat a wastewater flow of less than two hundred thousand (200,000) gallons per day.

(3) Class B includes wastewater treatment plants having one (1) or more of the following:

(A) Secondary treatment facilities that treat wastewater loads equal to or greater than two thousand (2,000) design population equivalent and less than ten thousand (10,000) design population equivalent, such as:

- (i) waste stabilization ponds whether anaerobic or aerobic;
- (ii) trickling filter;
- (iii) activated sludge-type treatment plants;
- (iv) aerated lagoons; or
- (v) other biological treatment facilities.

(B) Spray, broad, or ridge and furrow irrigation facilities that treat a wastewater flow equal to or greater than two hundred thousand (200,000) gallons per day and less than one million (1,000,000) gallons per day.

(C) Chemical treatment facilities that process or treat wastewater flow of less than fifty thousand (50,000) gallons per day using one (1) of the following methods:

- (i) Cyanide destruction.
- (ii) Chromium reduction.
- (iii) Coagulation and flocculation.
- (iv) Air flotation.
- (v) Air stripping.
- (vi) Wet air oxidation.
- (vii) Activated carbon filtration.
- (viii) Membrane filtration.
- (ix) Steam stripping.

(4) Class C includes wastewater treatment plants having one (1) or more of the following:

(A) Secondary treatment facilities that treat wastewater loads equal to or greater than ten thousand (10,000) design population equivalent and less than forty thousand (40,000) design population equivalent, such as:

- (i) waste stabilization ponds whether anaerobic or aerobic;
- (ii) trickling filter;
- (iii) activated sludge-type treatment plants;
- (iv) aerated lagoons; or
- (v) other biological treatment facilities.

(B) Spray, broad, or ridge and furrow irrigation facilities that treat a wastewater flow equal to or greater than one million (1,000,000) gallons per day and less than four million (4,000,000) gallons per day.

(C) Chemical treatment facilities that process or treat wastewater flow equal to or greater than fifty thousand (50,000) gallons per day and less than two hundred thousand (200,000) gallons per day using one (1) of the following methods:

- (i) Cyanide destruction.
  - (ii) Chromium reduction.
  - (iii) Coagulation and flocculation.
  - (iv) Air flotation.
  - (v) Air stripping.
  - (vi) Wet air oxidation.
  - (vii) Activated carbon filtration.
  - (viii) Membrane filtration.
  - (ix) Steam stripping.
- (5) Class D includes wastewater treatment plants having one (1) or more of the following:
- (A) Secondary treatment facilities that treat wastewater loads equal to or greater than forty thousand (40,000) design population equivalent, such as:
    - (i) waste stabilization ponds whether anaerobic or aerobic;
    - (ii) trickling filter;
    - (iii) activated sludge-type treatment plants;
    - (iv) aerated lagoons; or
    - (v) other biological treatment facilities.
  - (B) Chemical treatment facilities that process or treat a wastewater flow equal to or greater than two hundred thousand (200,000) gallons per day using one (1) of the following methods:
    - (i) Cyanide destruction.
    - (ii) Chromium reduction.
    - (iii) Coagulation and flocculation.
    - (iv) Air flotation.
    - (v) Air stripping.
    - (vi) Wet air oxidation.
    - (vii) Activated carbon filtration.
    - (viii) Membrane filtration.
    - (ix) Steam stripping.
  - (C) Deep well disposal systems, thermal evaporators, or incinerators used in conjunction with liquid waste disposal.
  - (D) Two (2) or more industrial wastewater treatment plants at one (1) industrial site if each independent industrial wastewater treatment plant is classified as a Class B or C wastewater treatment plant.
  - (E) An industry utilizing a highly complex wastewater treatment method.

(b) If an industrial wastewater treatment plant has more than one (1) treatment process despite having only one (1) wastewater treatment plant, that industrial wastewater treatment plant shall be classified into the classification of the most complex component of wastewater treatment performed in relation to the following factors:

- (1) Secondary treatment PE.
- (2) Spray irrigation volume.
- (3) Chemical treatment volume.

*(Water Pollution Control Board; 327 IAC 5-22-5; filed Nov 20, 2000, 4:07 p.m.: 24 IR 964; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-6 Classification of wastewater treatment plants; reclassification**

**Authority: IC 13-14-8; IC 13-18-11-2; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 6. (a) A wastewater treatment plant may be reclassified by the commissioner if a change occurs to the wastewater treatment plant's operation, treatment process, or influent wastewater. The commissioner shall do the following:

- (1) Consider reclassification of a wastewater treatment plant based upon information supplied by the governing body or owner in a construction permit application for modification.
- (2) Give written notice of a reclassification to the governing body or owner and to the responsible charge operator indicating the following:
  - (A) The classification of certified operator that is necessary to supervise the reclassified wastewater treatment plant.
  - (B) A date by which time a certified operator required according to clause (A) must be in responsible charge of the reclassified wastewater treatment plant.

(b) A wastewater treatment plant may be reclassified by the commissioner if one (1) of the following situations exists:

- (1) The wastewater treatment plant utilizes special or complex equipment or features of design requiring more difficult operation.
- (2) The wastewater is unusually difficult to treat.
- (3) More than ordinary chemical or bacteriological controls are required.
- (4) An unusually high degree of skill is required in the operation of the wastewater treatment plant to assure continuous production of effluent that meets the water quality requirements of the receiving stream and the national pollutant discharge elimination system (NPDES) permit limitations.

*(Water Pollution Control Board; 327 IAC 5-22-6; filed Nov 20, 2000, 4:07 p.m.: 24 IR 965; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-7 Qualifications to become a wastewater treatment apprentice or certified operator**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 7.(a) Before applying for the commissioner's wastewater treatment certification examination, a person must have the educational skills necessary to do the following:

- (1) Make computations.
- (2) Calculate volumes.
- (3) Keep records.
- (4) Read and write the English language to the extent of interpreting service manuals and work orders and submitting written reports.

(b) A person may take the commissioner's wastewater treatment certification examination before obtaining the educational and experience requirements specified in section 7.3 of this rule. In order to become classified as a wastewater treatment apprentice, a person must pass the wastewater treatment certification examination required by the commissioner.

(c) In order to become a wastewater treatment certified operator, a person must:

- (1) pass the wastewater treatment certification examination required by the commissioner unless exempted by statute or rule;
- (2) have the formal education specified in section 7.3 of this rule; and
- (3) have the experience that is specified in section 7.3 of this rule and acceptable to the commissioner in the field of wastewater treatment that:

- (A) demonstrates the applicant's technical knowledge;
- (B) can be verified based on information from available sources, primarily the applicant's wastewater treatment plant employer; and
- (C) is the result of satisfactory accomplishment of wastewater treatment plant work.

(d) In accordance with 327 IAC 8-12-3.2(e), a grade WT3, WT4, and WT5 operator shall be considered to have met the educational and experience requirements necessary to apply for the appropriate wastewater treatment certification to treat wastewater from a water treatment plant provided the operator is certified to operate that classification of water treatment plant. (*Water Pollution Control Board; 327 IAC 5-22-7; filed Nov 20, 2000, 4:07 p.m.: 24 IR 965; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

### **327 IAC 5-22-7.3 Educational and experience requirements necessary for a certified operator**

**Authority: IC 13-14-8; IC 13-18-11-3; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec 7.3. Educational and experience requirements necessary to become a certified operator in each of the classes of wastewater treatment plants are as follows:

- (1) Class I-SP and Class A-SO certified operator applicants must have attained the following:
  - (A) A high school diploma or equivalent education.
  - (B) Six (6) months of acceptable experience in a wastewater treatment plant.
- (2) Class I and Class A certified operator applicants must have attained the following:
  - (A) A high school diploma or equivalent education.
  - (B) One (1) year of acceptable experience at a wastewater treatment plant.
- (3) Class II and Class B certified operator applicants must have attained the following:
  - (A) A high school diploma or equivalent education.
  - (B) Three (3) years of acceptable experience at a wastewater treatment plant.
- (4) Class III and Class C certified operator applicants must have attained the following:
  - (A) A high school diploma or equivalent education.
  - (B) Three (3) years of acceptable experience at a wastewater treatment plant of one (1) or more of the following classes:
    - (i) Class II.
    - (ii) Class III.
    - (iii) Class IV.
    - (iv) Class B.
    - (v) Class C.
    - (vi) Class D.
  - (C) Two (2) years of the three (3) years experience required by clause (B) must be in a position of responsible charge operator at a wastewater treatment plant of one (1) or more of the following classes:
    - (i) Class II.
    - (ii) Class III.
    - (iii) Class IV.
    - (iv) Class B.
    - (v) Class C.
    - (vi) Class D.

In Class III and Class C plants, the individual supervising and responsible for a major section of the plant or an operating shift may be credited with experience as responsible charge operator for the purpose of applying to take the certification examination.

- (5) Class IV and Class D certified operator applicants must have attained the following:

- (A) One (1) or more of the following educational degrees:
- (1) A bachelor's degree with a major in an engineering, chemistry, or biological science curriculum.
  - (2) An associate's degree in a curriculum related to wastewater treatment.
- (B) Five (5) years of acceptable experience at a wastewater treatment plant of one (1) or more of the following classes:
- (i) Class III.
  - (ii) Class IV.
  - (iii) Class C.
  - (iv) Class D.
- (C) Two (2) years of the five (5) years experience required by clause (B) must be in a position of responsible charge operator at a wastewater treatment plant of one (1) or more of the following classes:
- (i) Class III.
  - (ii) Class IV.
  - (iii) Class C.
  - (iv) Class D.

In Class IV and Class D plants, the individual supervising and responsible for a major section of the plant or an operating shift may be credited with experience as responsible charge operator for the purpose of applying to take the certification examination.

*(Water Pollution Control Board; 327 IAC 5-22-7.3; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-7.5 Application of a wastewater treatment apprentice to become a certified wastewater treatment operator**

**Authority:** IC 13-14-8; IC 13-18-11-3; IC 13-18-11-13

**Affected:** IC 13-18-11

Sec. 7.5. (a) A wastewater treatment apprentice shall fulfill the following requirements in order to become a wastewater treatment certified operator:

- (1) Meet the educational and experience requirements in section 7.3 of this rule that are applicable to the class of wastewater treatment certified operator the wastewater treatment apprentice is applying to become.
- (2) Fulfill the continuing education credit requirement in section 15(b) of this rule.
- (3) Complete a certification application on a form approved by the commissioner that:
  - (A) contains true and accurate information to the best of the wastewater treatment apprentice's knowledge; and
  - (B) is free of omissions and misrepresentations, either of which may result in rejection of the application or revocation of any certificate previously granted.
- (4) Submit a completed certification application, with the necessary fee, to the commissioner not later than six (6) years after the date of successfully completing the wastewater treatment certification examination.

If a wastewater treatment apprentice does not fulfill the requirements of this subsection and receive certification as a wastewater treatment operator, then the person must retake the commissioner's wastewater treatment certification examination in order to apply for the wastewater treatment operator certification under this section.

- (b) The commissioner shall do the following:
- (1) Review a certification application and supporting documents and make a decision concerning the eligibility of a wastewater treatment apprentice for wastewater treatment operator certification.

(2) Issue a wastewater treatment operator certificate designating competency in the appropriate wastewater treatment classification to each wastewater treatment apprentice who:

(A) makes complete and timely application;

(B) meets the necessary requirements of education, experience, and continuing education; and

(C) has successfully completed a wastewater treatment class appropriate examination.

*(Water Pollution Control Board; 327 IAC 5-22-7.5; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-8 Certified operator classification eligible to operate class or classes of wastewater treatment plants**

**Authority: IC 13-14-8; IC 13-18-11-3; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 8. A wastewater treatment certified operator may possess a current certification in one (1) or more of the ten (10) classes of certified operators and may operate classifications of wastewater treatment plants as follows:

(1) A Class I-SP certified operator is certified to operate a Class I-SP wastewater treatment plant.

(2) A Class A-SO certified operator is certified to operate a Class A-SO wastewater treatment plant.

(3) A Class I certified operator is certified to operate:

(A) Class I-SP;

(B) Class I;

(C) Class A-SO; and

(D) Class A;

wastewater treatment plants.

(4) A Class A certified operator is certified to operate:

(A) Class A-SO; and

(B) Class A;

wastewater treatment plants.

(5) A Class II certified operator is certified to operate:

(A) Class A-SO;

(B) Class A;

(C) Class I-SP;

(D) Class I; and

(E) Class II;

wastewater treatment plants.

(6) A Class B certified operator is certified to operate:

(A) Class A-SO;

(B) Class A; and

(C) Class B;

wastewater treatment plants.

(7) A Class III certified operator is certified to operate:

(A) Class A-SO;

(B) Class A;

(C) Class I-SP;

(D) Class I;

(E) Class II; and

(F) Class III;

wastewater treatment plants.

(8) A Class C certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class B; and
- (D) Class C;

wastewater treatment plants.

(9) A Class IV certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class I-SP;
- (D) Class I;
- (E) Class II;
- (F) Class III; and
- (G) Class IV;

wastewater treatment plants.

(10) A Class D certified operator is certified to operate:

- (A) Class A-SO;
- (B) Class A;
- (C) Class B;
- (D) Class C; and
- (E) Class D;

wastewater treatment plants.

*(Water Pollution Control Board; 327 IAC 5-22-8; filed Nov 20, 2000, 4:07 p.m.: 24 IR 966; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-9 Substitution of qualifications**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 9. Certification education and experience qualifications required by section 7.3 of this rule may be fulfilled through substitutions based on the following table:

Class	Education	Total Required	Acceptable Experience	Substitution of Acceptable Experience for Responsible Charge Experience	Substitution of Acceptable Experience for Education
			Substitution of Education for Acceptable Experience		
A-SO and I-SP	High school diploma or equivalent.	6 months	0	_____	See Note (2)
A and I	High school diploma or equivalent.	1 year	0	_____	See Note (2)
B and II	High school diploma or equivalent.	3 years	1 year See Note (1)	_____	See Note (2)

C and III	High school diploma or equivalent.	3 years at Class B, II, or higher of which 2 years in responsible charge	1 year See Note (1)	See Note (2)	See Note (2)
D and IV	College degree or equivalent See Note (1)	5 years at Class C, III, or higher of which 2 years in responsible charge	2 years See Note (1)	See Note (2)	See Note (2)

Note (1): Substitution of education for acceptable experience (AE):

One (1) college semester equals sixteen (16) college credit hours, two hundred forty (240) contact hours, twenty-four (24) continuing education units (CEUs), one (1) year of acceptable experience (AE), or six (6) months of responsible charge experience (RCE).

One (1) year of college equals thirty-two (32) college credit hours, four hundred eighty (480) contact hours, forty-eight (48) CEUs, two (2) years of AE, or one (1) year of RCE.

There is no substitution of education for responsible charge experience. The portion of education that is applied toward substitution for experience cannot be used for the education requirement.

Note (2): AE, RCE, and educational experience are interchangeable at the following ratios: One (1) year of AE equals two (2) years of high school, six (6) months of college, or six (6) months RCE. The portion of experience that is applied toward substitution for education cannot be used for the experience requirement.

*(Water Pollution Control Board; 327 IAC 5-22-9; filed Nov 20, 2000, 4:07 p.m.: 24 IR 967; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-10 Responsibilities of owner or governing body of a wastewater treatment plant**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 10. The owner or governing body of a wastewater treatment plant shall be responsible for accomplishing the following:

(1) Provide adequate funding and oversight to ensure the proper:

- (A) operation;
- (B) maintenance;
- (C) management; and
- (D) supervision;

of the designated facilities.

(2) Place each wastewater treatment plant under the direct supervision of one (1) certified operator to be in responsible charge who:

- (A) holds a current certification of a classification eligible for operation at the classification of wastewater treatment plant;
- (B) makes process control or system integrity decisions about the overall daily operation, maintenance, management, and supervision of each wastewater treatment plant necessary to meet the performance requirements and limits of:
  - (i) the assigned permit;
  - (ii) local ordinances; and
  - (iii) other applicable regulatory requirements; and

(C) is responsible that written and electronic monitoring reports are prepared under his or her direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The responsible charge operator certifies that based on his or her inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, that the information submitted is, to the best of his or her knowledge and belief, true, accurate, and complete.

(3) Notify the commissioner of the name of the person designated according to subdivision (2) to be the certified operator in responsible charge.

(4) Submit written notification to the commissioner not later than thirty (30) days after the occurrence of a change in one (1) of the following:

(A) The person serving as the certified operator in responsible charge of the wastewater treatment plant.

(B) Conditions or circumstances that were used as the basis for the original classification of the wastewater treatment plant.

(5) The responsibilities of the owner or governing body described in this section may not be delegated.

*(Water Pollution Control Board; 327 IAC 5-22-10; filed Nov 20, 2000, 4:07 p.m.: 24 IR 968; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-10.5 Certified operator in responsible charge**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 10.5. (a) A certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant if the following requirements are met:

(1) The certified operator gives adequate supervision to each wastewater treatment plant under his or her responsible charge. As used in this section, “adequate supervision” means that time is spent on a regular basis, either on site at or through remote monitoring of the wastewater treatment plant to assure that:

(A) the certified operator is knowledgeable of the actual operations; and

(B) test reports and results are representative of the actual operational and compliance conditions.

(2) The certified operator in responsible charge ensures the proper:

(A) operation;

(B) maintenance;

(C) management; and

(D) supervision;

to each wastewater treatment plant under his or her responsible charge.

(3) Each wastewater treatment plant under the responsible charge of a single certified operator must be achieving the performance requirements and limits in the:

(A) assigned permit;

(B) local ordinances; and

(C) other applicable regulatory requirements.

(b) If adequate supervision and achievement of the performance requirements described in subsection (a)(3) are not achieved, the commissioner may initiate enforcement action that could result in the following:

(1) Restrictions on the number of wastewater treatment plants under that certified operator’s responsible charge.

(2) The suspension or revocation of the wastewater treatment plant operator’s certificate.

(c) The commissioner may request submission of documentation of the following:

(1) The:

- (A) name;
- (B) location; and
- (C) classification;

of each wastewater treatment plant under the responsible charge of the certified operator.

(2) The amount of time that the certified operator in responsible charge spends at each wastewater treatment plant of responsibility identified under subdivision (1).

(d) The commissioner shall evaluate information required by this section and any other information pertinent to one (1) or more of the wastewater treatment plants under the supervision of a certified operator in responsible charge of multiple wastewater treatment plants and may determine the following for each evaluated wastewater treatment plant:

- (1) Whether the time provided for supervision is adequate.
- (2) An amount of time that the certified operator in responsible charge shall be required to spend in the operation of each wastewater treatment plant.
- (3) A reduction of the number of wastewater treatment plants over which the certified operator may have responsible charge.

*(Water Pollution Control Board; 327 IAC 5-22-10.5; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-11 Examination of applicants to become a wastewater treatment apprentice or certified wastewater treatment operator**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 11. (a) A standardized examination prepared to reflect the duties and responsibilities required of each classification of wastewater treatment operator shall be:

(1) used to test:

- (A) knowledge;
- (B) ability; and
- (C) judgment;

of an applicant to become a certified wastewater treatment operator;

(2) conducted at least annually; and

(3) held at places and times established by the commissioner:

- (A) with at least sixty (60) days advanced announcement; and
- (B) except in such cases as may be declared necessary exceptions by the commissioner.

(b) A person wishing to be examined for wastewater treatment apprenticeship or certification shall fulfill the following requirements:

(1) Complete an application on a form approved by the commissioner that:

- (A) contains true and accurate information to the best of the applicant’s knowledge; and
- (B) is free of omissions and misrepresentations, either of which may result in rejection of the application or revocation of any certificate previously granted.

(2) Submit a completed application, with the necessary fee, to the commissioner not later than forty-five (45) days preceding the date of the examination.

(c) The commissioner shall:

- (1) review an application and supporting documents concerning the eligibility of an applicant for wastewater treatment certification examination; and
- (2) issue a written notification in the form of an admission slip providing the time and place of the examination to be presented by an applicant deemed eligible for examination.

(d) A person who has been notified and scheduled to take an examination:

- (1) may submit a written request to the commissioner for a postponement to take the examination one (1) offering later than the examination granted by the commissioner if the:
  - (A) postponement for a nonemergency reason is requested not later than fourteen (14) days before the examination date noticed to the applicant under subsection (c)(2);
  - (B) postponement request for an emergency reason is submitted as soon as conditions of the emergency warrant;
  - (C) applicant provides the commissioner an explicit description of extenuating circumstances necessitating the requested postponement; and
  - (D) applicant understands that only one (1) postponement shall be allowed; or
- (2) will be considered to have failed that examination if one (1) of the following occurs:
  - (A) The person:
    - (i) does not attend the examination; and
    - (ii) has not requested a postponement according to subdivision (1).
  - (B) The person is caught cheating on an examination, an occurrence that will make an applicant ineligible to take any operator certification examination for a period of two (2) years following the examination date of the incidence of cheating.

(e) Completed examinations shall be managed by the commissioner according to the following:

- (1) Graded in a manner prescribed by the commissioner with a minimum result of seventy percent (70%) needed in order to pass the examination.
- (2) The commissioner shall notify an applicant of the examination result:
  - (A) in writing; and
  - (B) not later than two (2) months after the date of the examination.
- (3) Examination papers shall be retained by the commissioner with an opportunity afforded to an applicant notified of having failed the examination for review of the graded examination until a date ninety (90) days before the next scheduled examination if the applicant submits the following to the commissioner:
  - (A) A written request for review of the graded examination.
  - (B) A statement affirming the applicant's understanding that examination review does not include the right to copy, by any means, the examination or any portion of it.

(f) A person previously certified as a wastewater treatment operator under this rule but who has failed to meet the renewal requirements according to section 14 of this rule must fulfill the following:

- (1) Qualify under this rule.
- (2) Retake an examination.

(g) A person may receive wastewater treatment certification without taking an examination if the person seeking wastewater treatment operator's certification by reciprocal recognition or on a provisional basis according to section 13 of this rule files an application required by subsection (b) at the applicant's convenience, subject to applicable expiration dates delineated in this rule. (*Water Pollution Control Board; 327 IAC 5-22-11; filed Nov 20, 2000, 4:07 p.m.: 24 IR 968; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

### **327 IAC 5-22-12 Wastewater treatment certification fees**

**Authority: IC 13-14-8; IC 13-18-11-6; IC 13-18-11-13**

**Affected: IC 13-18-11-15**

Sec. 12. (a) Fees for wastewater treatment certification shall be as follows:

- (1) Certification examination \$30
- (2) Certified operator biennial renewal fee \$30

(b) An application fee will not be returned to an applicant who:

- (1) is deemed by the commissioner to be ineligible for wastewater certification examination;
- (2) does not receive a minimum score of seventy percent (70%) according to section 11(e)(1) of this rule; or
- (3) has violated section 11(d)(2)(B) of this rule by cheating on the operator certification examination.

*(Water Pollution Control Board; 327 IAC 5-22-12; filed Nov 20, 2000, 4:07 p.m.: 24 IR 969; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-13 Certification; reciprocity; provisional certificate**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11-9**

Sec. 13. (a) The commissioner shall issue a certificate designating competency in the appropriate certified operator’s classification to each person who:

- (1) makes proper application if the applicant meets the necessary requirements of education and experience; and
- (2) has successfully completed a class appropriate examination.

Upon successful completion of examination according to section 11 of this rule, the commissioner shall issue a certificate in the wastewater treatment operator classification for which the applicant was examined.

(b) The commissioner may issue a certificate by reciprocity as outlined in IC 13-18-11-9 if the following conditions are met:

- (1) A person seeking reciprocal certification submits an application for such a certificate that includes the following:
  - (A) Proof of current certification.
  - (B) The classification of the applicant.
- (2) A person from another state seeking a certificate by reciprocity earns the number of continuing education contact hours for future renewal periods in the time period required by section 15 of this rule though no continuing education contact hours shall be required at the time of conferring the reciprocal certification.

(c) The commissioner may issue a provisional wastewater treatment operator’s certificate if the following occur:

- (1) The governing body or owner of a wastewater treatment plant submits a written request specifying a reason necessitating the provisional certification, including one (1) of the following:
  - (A) To fill a vacancy created by death.
  - (B) Resignation of the certified operator in responsible charge.
  - (C) Extended illness of the certified operator in responsible charge.
  - (D) Suspension or revocation of the certification of the operator in responsible charge.
  - (E) Similar cause as determined by the commissioner.
- (2) The written request required by subdivision (1) provides the:

- (A) name;
- (B) education; and
- (C) experience;

of the person for whom the provisional certificate is requested.

(3) The provisional certificate nominee named under subdivision (2) submits, simultaneously with the request submitted under subdivision (1), an application as required by section 11(b) of this rule requesting examination and certification.

(4) The provisional certificate nominee named under subdivision (2) currently meets the educational and experience requirements for the appropriate class of certification.

(d) A provisional certificate shall be:

(1) issued by the commissioner in the form of a letter that specifies the conditions of the certification; and

(2) valid for the shorter of the following lengths of time:

(A) The period between the date of application and sixty (60) days following the next examination that is available to the provisional certificate nominee.

(B) One (1) year.

*(Water Pollution Control Board; 327 IAC 5-22-13; filed Nov 20, 2000, 4:07 p.m.: 24 IR 969; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

### **327 IAC 5-22-14 Certificates and certification cards; renewal; duplicates**

**Authority: IC 13-14-8; IC 13-18-11-4; IC 13-18-11-13**

**Affected: IC 13-18-11-6**

Sec. 14. (a) A wastewater treatment operator's certificate shall:

(1) be issued after an applicant's successful completion of the classification appropriate examination;

(2) specify the:

(A) month and year that the applicant qualified; and

(B) issuance date of the certificate;

(3) be permanent in nature but will be effective only when validated by a current certification card; and

(4) not be valid if obtained through:

(A) fraud;

(B) deceit; or

(C) the submission of inaccurate data on the examination application.

(b) A certificate, issued on the basis of the applicant's having been in responsible charge of a wastewater treatment plant before July 1, 1968, shall remain valid until one (1) of the following occurs:

(1) A change in the classification of the wastewater treatment plant for one (1) of the following reasons:

(A) Increased capacity.

(B) An increase in population served.

(C) A basic change in the method of wastewater treatment.

(D) Other change in conditions that requires a more difficult operation.

(2) The operator is no longer in direct responsible charge.

(c) A certification card shall:

(1) be issued for a time period of not more than twenty-five (25) months; and

(2) expire on the last day of June nearest the end of the biennial period following the certification card issuance.

(d) A wastewater treatment certified operator needing a replacement or duplicate certificate must submit a written request to the commissioner, including the following information:

- (1) The class of wastewater treatment operator.
- (2) The name and classification of the wastewater treatment plant to be operated.
- (3) The date of issuance of the original certificate, if known.
- (4) The certificate number.

(e) The commissioner shall accomplish the following:

(1) Issue a renewal notification to each certified wastewater treatment plant operator stating the following:

- (A) The expiration date of the certified operator’s certification card.
- (B) The amount of fee required for certification card renewal.

(2) Mail certification card renewal notifications:

- (A) at least thirty (30) days before the expiration of the certification card; and
- (B) to the last known address filed with the commissioner.

(3) Renew a certification card if:

- (A) the continuing education requirements of section 15 of this rule are met;
- (B) a renewal fee is submitted on or before the first day of July of the biennial period for which a certification card is to be issued; and
- (C) the notice is signed and returned by the certified operator to the commissioner.

(4) Reinstate certification if the certified operator:

- (A) submits payment of:
  - (i) arrearage of fees; and
  - (ii) the current renewal fee;
- (B) fulfills all arrearage of continuing education credit requirements; and
- (C) is current in meeting continuing education credit requirements.

(5) Deny renewal of a certification card that is not renewed within the time limit established in this section and IC 13-18-11-6(c). A wastewater treatment plant operator who fails to renew a certificate for three (3) successive years may not receive a renewal certificate without reexamination.

*(Water Pollution Control Board; 327 IAC 5-22-14; filed Nov 20, 2000, 4:07 p.m.: 24 IR 970; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

**327 IAC 5-22-15 Continuing education requirements for wastewater treatment apprentices and certified operators**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 15. (a) A wastewater treatment apprentice shall fulfill continuing education requirements in amounts specified in Table 15(b) during each two (2) year period following the issuance of the apprentice classification and before achieving status as a certified wastewater treatment plant operator.

(b) Continuing education credits required for eligibility in the following classifications of wastewater treatment apprentices are listed in the following table:

	Table 15(b)
Wastewater Treatment Apprentice	Continuing Education Credits Required During Each

Classification

Two (2) Year Period of Apprenticeship

Apprentice I-SP	5 contact hours
Apprentice A-SO	5 contact hours
Apprentice I	10 contact hours
Apprentice A	10 contact hours
Apprentice II	10 contact hours
Apprentice B	10 contact hours
Apprentice III	20 contact hours
Apprentice C	20 contact hours
Apprentice IV	20 contact hours
Apprentice D	20 contact hours

(c) A certified wastewater treatment operator shall fulfill continuing education requirements in amounts specified in Table 15(d) during each two (2) year period following the issuance of the certification card and before having that certification card renewed.

(d) Continuing education credits required for certification card renewal in the following classifications of certified wastewater treatment operators are listed in the following table:

Table 15(d)

Certified Wastewater Treatment Operator Classification	Continuing Education Credits Required for Renewal
Class I-SP	5 contact hours
Class A-SO	5 contact hours
Class I	10 contact hours
Class A	10 contact hours
Class II	10 contact hours
Class B	10 contact hours
Class III	20 contact hours
Class C	20 contact hours
Class IV	20 contact hours
Class D	20 contact hours

(e) Continuing education credits required according to Table 15(b) and Table 15(d) must adhere to a distribution of subject matter according to the following:

(1) A minimum of seventy percent (70%) of the required continuing education contact hours shall be obtained from the technical category of approved continuing education courses that address technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.

(2) Not more than thirty percent (30%) of the required continuing education contact hours shall be obtained from nontechnical subject matter of approved continuing education courses that enhance the performance of the certified operator’s responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.

(f) A person having more than one (1) wastewater treatment operator apprenticeship or certification may be given continuing education credit from a single approved continuing education course for each wastewater treatment apprenticeship or certification to which the subject matter is applicable. (*Water Pollution Control Board; 327 IAC 5-22-15; filed Nov 20, 2000, 4:07 p.m.: 24 IR 970;*

**327 IAC 5-22-16 Continuing education credit; criteria for approval**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 16. (a) Continuing education contact hour credit shall be given only for completed course work that has been approved by the commissioner according to the following:

(1) A training provider has submitted an application and received continuing education course approval from the commissioner before publicly offering a wastewater treatment continuing education course. The application:

- (A) must be submitted on a form approved by the commissioner;
- (B) should be submitted for advance approval not less than sixty (60) days before the first date when the course is conducted, but must be submitted not later than ninety (90) days after training completion in order to be considered for approval;
- (C) must be accompanied by a written course outline or brochure; and
- (D) must contain:
  - (i) the name, address, and telephone number of a course sponsor, training provider, or other contact person;
  - (ii) the name of the course;
  - (iii) specific topics that are included in the course presentations;
  - (iv) the amount of time devoted to each topic;
  - (v) the instructor's name and qualifications, including:
    - (AA) educational background;
    - (BB) professional experience; and
    - (CC) current professional affiliation;
  - (vi) the schedule, anticipated locations, and number of times the training is anticipated to be offered;
  - (vii) the method of training delivery, such as on-site lecture, electronic means, or other means as specified by the training course provider; and
  - (viii) the method of attendance verification for record keeping and reporting, such as the following:
    - (AA) Sign in and sign out sheets.
    - (BB) Electronic tracking.
    - (CC) Date stamping.
    - (DD) Other means as specified by the training course provider.

(2) The wastewater treatment continuing education course meets the following requirements:

- (A) The course deals with one (1) or more of the following as determined by the commissioner:
  - (i) Technical matters related directly to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.
  - (ii) General matters that enhance the performance of the certified operator's responsibilities but are not directly related to wastewater treatment plant and sewer system operations, maintenance, management, or supervision.
- (B) Each instructor and speaker is qualified by academic work or practical experience to teach the proposed wastewater treatment continuing education course.

(b) A certified wastewater treatment operator may petition the commissioner for approval of a wastewater treatment continuing education course if the following procedures are met:

(1) An application of petition is submitted to the commissioner prior to course completion or as soon as practical afterwards but not later than ninety (90) days after training completion in order to be considered for approval.

(2) The application must contain the information required by subsection (a)(1)(A), (a)(1)(C), and (a)(1)(D).

(3) The certified operator must supply written proof of attendance at the wastewater treatment continuing education course within ninety (90) days following course completion.

(c) Credit will not be granted for repeating the same training course within a renewal period.

(d) A certified operator who is an instructor or speaker at a wastewater treatment continuing education course shall be credited the same number of contact hours as the students of the course for not more than one (1) presentation of the training.

(e) Partial credit shall not be given to:

(1) instructors;

(2) speakers; or

(3) students;

participating in less than a complete wastewater treatment continuing education course. (*Water Pollution Control Board; 327 IAC 5-22-16; filed Nov 20, 2000, 4:07 p.m.: 24 IR 971; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

### **327 IAC 5-22-17 Continuing education credit; training provider responsibilities**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 13-18-11**

Sec. 17. (a) A training provider shall generate records of each wastewater treatment continuing education course conducted that include the following:

(1) The date of the wastewater treatment continuing education course.

(2) The name of each person in attendance at the wastewater treatment continuing education course.

(3) The length of time of the course.

(4) The instructor's name.

(5) The course name and approval number.

(6) The name of the organization sponsoring the course.

(b) Records required by subsection (a) shall be maintained for a three (3) year period following the presentation of each wastewater treatment continuing education course.

(c) A training provider must submit the information required by subsection (a) to the commissioner according to the following:

(1) On a form approved by the commissioner.

(2) Within ninety (90) days of the conclusion of the wastewater treatment continuing education course.

(*Water Pollution Control Board; 327 IAC 5-22-17; filed Nov 20, 2000, 4:07 p.m.: 24 IR 972; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA*)

### **327 IAC 5-22-18 Suspension or revocation of certification**

**Authority: IC 13-14-8; IC 13-18-11-13**

**Affected: IC 4-21.5; IC 13-18-11-8**

Sec. 18. (a) The commissioner may suspend or revoke the wastewater treatment certificate of a wastewater treatment certified operator, following a hearing under IC 4-21.5, if it is found that the certified operator has violated any provision of IC 13-18-11-8.

(b) During the period of certification suspension or revocation, a wastewater treatment plant operator who has had his or her wastewater treatment operator's certificate suspended or revoked may not do the following:

- (1) Be designated as the operator in responsible charge or as an operator in responsible charge for a work shift.
- (2) Supervise maintenance activities.
- (3) Supervise laboratory testing.
- (4) Collect, prepare, or sign self-monitoring documentation, including, but not limited to, the following:
  - (A) Laboratory bench sheets.
  - (B) State monthly monitoring reports.
  - (C) State monthly reports of operation.
  - (D) Federal discharge monitoring reports.
  - (E) Noncompliance notifications.
  - (F) Bypass/overflow reporting forms.
  - (G) Other wastewater treatment plant self-monitoring documentation.
- (5) Be a training provider or course instructor of a continuing education course.

(c) A wastewater treatment plant operator who has had his or her operator's certificate suspended may apply for reinstatement of the operator's certificate according to the following:

- (1) The period of suspension has expired.
- (2) A written request for reinstatement is submitted to the commissioner with proof of the following:
  - (A) All requirements of the suspension have been met.
  - (B) The number of continuing education units that would have been required for the operator's classification during the period of the suspension of the operator's certificate have been met.

(d) A wastewater treatment plant operator who has had his or her operator's certificate revoked may apply to the commissioner for recertification after a five (5) year period. If the commissioner allows recertification, the wastewater treatment plant operator must:

- (1) qualify under this rule; and
- (2) take the certification exam for the classification requested for recertification.

*(Water Pollution Control Board; 327 IAC 5-22-18; filed Nov 20, 2000, 4:07 p.m.: 24 IR 972; readopted filed Aug 17, 2006, 10:31 a.m.: 20060830-IR-327060183BFA; filed Mar 18, 2008, 2:55 p.m.: 20080416-IR-327060179FRA)*

## **Section Four:**

## **IC 13-18-11**

### **Chapter 11. Operator Certification**

#### **IC 13-18-11-1 Exclusion of certain water supply systems**

Sec. 1. (a) As used in this chapter, "transient noncommunity water system" has the meaning set forth in IC 13-11-2-237.5.

(b) The commissioner may determine that this chapter does not apply to a transient noncommunity water system.

As added by P.L.1-1996, SEC.8. Amended by P.L.132-2000, SEC.2; P.L.1-2001, SEC.18.

#### **IC 13-18-11-1.5 Certification program for operators**

Sec. 1.5. The department shall adopt regulations to implement certification programs for operators of water treatment plants or water distribution systems. The certification program for the operators shall be classified in accordance with the complexity, size, and source of the water for the treatment system and the complexity and size for the distribution system.

As added by P.L.132-2000, SEC.3.

#### **IC 13-18-11-2 Classification of treatment plants**

Sec. 2. The commissioner shall classify all water treatment plants, wastewater treatment plants, and water distribution systems actually used or intended for use:

(1) with due regard to the:

(A) size;

(B) type;

(C) character of wastes or water to be treated; and

(D) other physical conditions affecting those plants and systems; and

(2) according to the:

(A) skill;

(B) knowledge; and

(C) experience;

that the operator in responsible charge must have to successfully supervise the operation of those facilities so as to protect the public health.

As added by P.L.1-1996, SEC.8.

#### **IC 13-18-11-3 Plant operators**

Sec. 3. The commissioner shall certify persons as to their qualifications to supervise successfully the operation of:

(1) water treatment plants;

(2) water distribution systems; and

(3) wastewater treatment plants.

As added by P.L.1-1996, SEC.8.

#### **IC 13-18-11-4 Plant operators; certificates of competency**

Sec. 4. (a) The commissioner shall issue certificates attesting to the competency of operators. A certificate must indicate the classification of works, plant, or system that the operator is qualified to

supervise.

(b) Each operator shall prominently display the operator's certificate in the office of the operator.  
As added by P.L.1-1996, SEC.8.

IC 13-18-11-5

Application; fees

Sec. 5. The commissioner shall prescribe and provide an application form for use by applicants in applying for the appropriate certificate issued under this chapter. An applicant must deposit a fee of thirty dollars (\$30) at the time of making application for certification.

As added by P.L.1-1996, SEC.8.

### **IC 13-18-11-6 Renewal**

Sec. 6. (a) A wastewater treatment plant operator certified under this chapter may renew the operator's certificate biennially by paying a renewal fee of thirty dollars (\$30).

(b) The fee is due and payable before July 2 of the year for which a renewal certificate is issued.

(c) A wastewater treatment plant operator who fails to renew a certificate for three (3) successive years may not receive a renewal certificate without reexamination.

As added by P.L.1-1996, SEC.8. Amended by P.L.132-2000, SEC.4.

IC 13-18-11-6.5

Triennial renewal of certificate

Sec. 6.5. (a) A water treatment plant operator or water distribution system operator certified under this chapter may renew the operator's certificate triennially by:

- (1) paying a renewal fee of thirty dollars (\$30); and
- (2) meeting any continuing education requirements established by the department.

(b) The:

- (1) fee is due and payable; and
- (2) proof of compliance with continuing education requirements must be submitted to the

department;

before July 2 of the year for which a renewal certificate is to be issued.

(c) A water treatment plant operator or a water distribution system operator who fails to renew a certificate within one (1) year after the date the certificate expires may not receive a renewal certificate without reexamination.

As added by P.L.132-2000, SEC.5.

### **IC 13-18-11-7 Notice of expiration**

Sec. 7. (a) The commissioner shall notify by mail each person certified by the commissioner as a wastewater treatment plant operator under this chapter of the following:

- (1) The date of the expiration of the operator's certificate.
- (2) The amount of the required fee for renewal for two (2) years.

(b) The commissioner shall mail the notice at least one (1) month in advance of the date of expiration of the person's certificate to the last known address of the individual on file with the commissioner.

As added by P.L.1-1996, SEC.8. Amended by P.L.132-2000, SEC.6.

IC 13-18-11-7.5

Notice regarding certificate and renewal

Sec. 7.5. (a) The commissioner shall notify by mail each person certified by the commissioner as a water treatment plant operator or water distribution system operator under this chapter of the following:

- (1) The date of expiration of the operator's certificate.
- (2) The amount of the required fee for renewal for three (3) years.
- (3) The continuing education required for renewal for three (3) years.

(b) The commissioner shall mail the notice at least one (1) month in advance of the date of expiration of the person's certificate to the last known address of the individual on file with the commissioner.  
As added by P.L.132-2000, SEC.7.

### **IC 13-18-11-8 Suspension or revocation**

Sec. 8. (a) The commissioner may suspend or revoke the certificate of an operator, following a hearing under IC 13-15-7-3 and IC 4-21.5, if any of the following conditions are found:

(1) The operator has practiced fraud or deception.

(2) Reasonable care, judgment, or the application of the operator's knowledge or ability was not used in the performance of the operator's duties.

(3) The operator is incompetent or unable to properly perform the operator's duties.

(b) A hearing and further proceedings shall be conducted in accordance with IC 4-21.5-7.  
As added by P.L.1-1996, SEC.8. Amended by P.L.25-1997, SEC.9; P.L.132-2000, SEC.8.

### **IC 13-18-11-9 Certificates to operators from other states; reciprocity**

Sec. 9. The commissioner may, upon receipt of an application and payment of the fee, issue a certificate without examination in a comparable classification to any person who holds a certificate in any state of the United States if:

(1) the requirements for certification of operators under which the person's certificate was issued:

(A) do not conflict with this chapter; or

(B) are of a standard not lower than that specified by this chapter and the rules adopted under this chapter; and

(2) reciprocal privileges are granted to certified operators of Indiana.

As added by P.L.1-1996, SEC.8.

#### **IC 13-18-11-10**

Plant operators; certificates of competency; exceptions

Sec. 10. (a) Certificates in appropriate classification shall be issued upon application and payment of the fee to operators of wastewater treatment plants who, on July 1, 1968, hold certificates of competency attained by examination under the voluntary certification program administered by:

(1) the Indiana Water Pollution Control Association; or

(2) the Indiana Section, American Water Works Association.

However, application for a certificate under this subsection must be made not later than July 1, 1969.

(b) Certificates of proper classification shall be issued upon payment of the fee without examination to each person certified by the governing body or owner to have been in direct responsible charge of the wastewater treatment plant on July 1, 1968. A certificate issued under this subsection is valid only for that particular wastewater treatment plant, which the certificate must indicate.

As added by P.L.1-1996, SEC.8. Amended by P.L.132-2000, SEC.9.

#### **IC 13-18-11-10.5**

Issuance of certificate

Sec. 10.5. (a) The commissioner may issue a certificate to a person under this chapter if all of the following conditions are met:

(1) The person is an operator in responsible charge of a water treatment plant or water distribution system that was:

(A) in operation before September 2, 2000; and

(B) required to have a certified operator for the first time under rules adopted in accordance with guidelines published by the United States Environmental Protection Agency in the Federal Register at 64 FR 5916 et seq.

(2) The owner of the water treatment plant or water distribution system applies for a certificate for

the operator in responsible charge before September 1, 2002.

(3) The certificate issued by the commissioner:

(A) is site specific; and

(B) may not be transferred to another operator.

(4) The certificate will become invalid if the classification of the water treatment plant or water distribution system for which the certificate was issued changes to a higher level.

(b) A person certified under subsection (a) must meet all requirements for certification renewal that apply to the classification of the water treatment plant or water distribution system to renew the certificate under this chapter.

(c) A person certified under subsection (a) who commences work for a different water treatment plant or water distribution system must meet the initial certification requirements for the plant or system.

(d) Notwithstanding section 14 of this chapter, a water treatment plant or water distribution system that meets the conditions of subsection (a)(1) may continue to operate if the water treatment plant or water distribution system applies to the commissioner for certification of the operator in responsible charge of the water treatment plant or water distribution system as provided in this section.

As added by P.L.132-2000, SEC.10.

### **IC 13-18-11-11 Plant supervision by certified plant operator; exceptions**

Sec. 11. (a) All water or wastewater treatment plants and water distribution systems, whether publicly or privately owned, must be under the supervision of an operator whose competency is certified to by the commissioner in a classification corresponding to the classification of the plant or distribution system to be supervised. However, this section does not prohibit a governmental agency, a corporation, or an individual from continuing to employ in that capacity a person in responsible charge of the operations of the works if the person is certified under section 10 of this chapter.

(b) A certified operator may supervise more than one (1) plant or system if it can be shown that adequate supervision to ensure safe and effective operation is provided for all plants and systems supervised.

As added by P.L.1-1996, SEC.8.

### **IC 13-18-11-12 Plant operators; vacancies; provisional certification**

Sec. 12. (a) When a vacancy in a position of operator occurs due to death, resignation, extended illness, or a similar cause, the vacancy may be filled for a period not exceeding one (1) year by an operator with a provisional certification.

(b) On written request of the governing body or owner of a wastewater or public water system, the commissioner may issue a provisional certification under subsection (a) to a person with the required education and experience qualifications, until the person has had an opportunity to qualify by examination and be certified under this chapter.

As added by P.L.1-1996, SEC.8. Amended by P.L.184-2002, SEC.13.

### **IC 13-18-11-13 Rule**

Sec. 13. The board shall adopt rules under IC 4-22-2 that are necessary to carry out the intent of this chapter. The rules must include the following:

(1) Provisions establishing the basis for classification of water treatment plants, water distribution systems, and wastewater treatment plants.

(2) Provisions establishing qualifications of applicants and procedures for examination of candidates.

(3) Other provisions that are necessary for the administration of this chapter.

As added by P.L.1-1996, SEC.8.

**IC 13-18-11-14 Plant operation by certified operators**

Sec. 14. (a) A person, firm, or corporation, whether municipal or private, may not operate a water or wastewater treatment plant or a water distribution system unless the commissioner has certified the operator in responsible charge under this chapter.

(b) A person may not perform the duties of an operator in responsible charge of works described in subsection (a) without being certified under this chapter.

As added by P.L.1-1996, SEC.8.

**IC 13-18-11-15 Fees; deposit**

Sec. 15. All fees collected under this chapter shall be deposited with the treasurer of state.

As added by P.L.1-1996, SEC.8.

**IC 13-18-11-16**

**Violations**

Sec. 16. A person who violates this chapter commits a Class C infraction. Each day of violation of this chapter constitutes a separate infraction.

As added by P.L.1-1996, SEC.8.

## Part Three

# NPDES Permit Program Information

**Wastewater, storm water and wetlands are managed through IDEM's permitting program.** If you treat or process wastewater; if you are responsible for controlling storm water run-off at your work site, place of business or in your community; or if you have project plans that involve working in water or wetlands, you may need a permit from IDEM's Office of Water Quality. Working with IDEM to obtain the correct permit will help you stay in compliance with environmental regulations. Failing to apply for an IDEM permit or operating without the correct type of permit are violations. Please visit the link here to learn about the various water permit programs we manage and contact our staff to discuss specific requirements. <http://www.in.gov/idem/4221.htm>

# Part Four

## Reporting

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<u>Overflow Reporting</u> (link to the form)	80
<u>Non-Compliance Report</u> (link to the form)	80

## Self-Monitoring Report Forms

**Note: the 2008 DMR Mailing, “Letter to the Wastewater Treatment Plant Operator” and “Preventing Common Problems when completing the DMR and MMR/MRO” are two documents which will aid in correct completion of the monthly reports. Both are located at: (<http://www.in.gov/ide/5104.htm>)**

### Self Monitoring Reports

NPDES Permits require submittal of self-monitoring reports. These reports may include Discharge Monitoring Reports (DMR), Monthly Monitoring Reports (MMR), Monthly Reports of Operation (MRO) and Combined Sewer System Discharge Monitoring Reports (CSO DMR). These are generally submitted monthly but may be at different time intervals according to the NPDES permit.

DMRs specific to each facility are mailed by IDEM. MROs and MMRs can be downloaded from IDEM’s web site.

MRO and MMR forms are available in Excel format from IDEM. These Excel spreadsheet forms will do most of the calculations automatically. Use of this format is dependent on the user having access to a computer with Microsoft Excel installed. Those who use IDEM’s Excel MRO forms should check our web site for the updated forms developed for each calendar year.

Blank MRO and MMR forms are also available from IDEM’s web site in Acrobat PDF format (blank forms to be printed and filled in by hand). Use of the PDF format is dependent on the user having access to a computer with Adobe Acrobat or Acrobat Reader (version 4.0 or higher) installed. Acrobat Reader is also available from IDEM’s web site or from the Adobe web site (<http://www.adobe.com>). Acrobat Reader is freeware.

*This link( <http://www.in.gov/ide/5104.htm>) will take you to the web page where the following forms are located:*

1. **Instructions for completion of the Discharge Monitoring Report (DMR)**
2. **Instructions for completion of the Monthly Monitoring Report (MMR)**
3. **MMR – Industrial Plant**
4. **MRO – Activated Sludge Type Wastewater Treatment Plant**
5. **MRO – Trickling Filter or RBC Wastewater Treatment Plant**
6. **MRO – Sequencing Batch Reactor Wastewater Treatment Plant**
7. **MRO – Package Type Wastewater Treatment Plant**
8. **MRO – Lagoon Type Wastewater Treatment Plant**
9. **MRO – Vertical Loop Reactor**
10. **Instructions for completion of the CSO DMR**
11. **CSO DMR**

### Overflow Reporting

The following is a summary of the reporting requirements regarding overflows from combined sewers during dry weather and from sanitary sewer systems.

Any release of raw sewage from a sanitary collection system prior to a treatment plant constitutes a sanitary sewer overflow (SSO). Every system in the state is vulnerable to, and has the potential to, have an SSO. Most SSOs occur as a result of pipe blockages or breaks, excessive infiltration and inflow, or power

failures. SSOs threaten public health, public and private property, and surface and ground waters. All SSOs are prohibited and must be promptly reported to the Indiana Department of Environmental Management (IDEM), Office of Water Quality.

Should a combined sewer overflow not caused solely by rainfall or an SSO release occur, the facility is required to notify IDEM's Office of Water Quality within 24 hours of becoming aware of the event (**that time limit is reduced to two hours if the discharge point is not listed in an NPDES permit and pollutants reach waters of the state**) and in writing within five days of the event. The information provided must include the location, duration, estimated volume and cause of discharge as well as the remedial action taken to eliminate it. The best way to comply with the reporting requirements is to fax a report using State Form 48373 (<http://www.in.gov/idem/5104.htm>). **If the discharge is resulting in a fish kill or other severe environmental damage, the release must be immediately reported to the spill response line (the phone number is found on the State Form 48373). (888-233-7745)** All overflows must also be reported in the monthly reports.

In most cases, diversion from combined sewers though permitted CSO outfalls solely caused by rainfall need not be reported except in the monthly reports of operations and the CSO discharge monitoring report forms.

*This link( <http://www.in.gov/idem/5104.htm>) will take you to the web page where the following forms are located:*

- 12. Bypass/Overflow Incident Report**
- 13. Noncompliance 24-Hour Notification Fax Report**

## Part Five

# Associated Topics for Wastewater Treatment

### Section One:

This link goes directly to the “Rules” area of IDEM’s web site and provides information regarding IDEM rule changes or proposed rule changes which may affect NPDES permit holders:

<http://www.in.gov/idem/4695.htm#water>

### Section Two:

Wastewater Laboratory QA/QC Manual 82

### Section Three

Safety & Security 83

#### ***Protecting Your Community’s Assets:***

#### ***A Guide for Small Wastewater Systems\****

***Please note: There are no questions from this document on any Certification Examination. It is contained in the Manual for informational purposes only.***

\**Protecting Your Community’s Assets...* is a publication of the National Environmental Services Center, an affiliate of West Virginia University. Bound copies are available by contacting WVU at [www.nesc.wvu.edu](http://www.nesc.wvu.edu) or 1-800-624-8301.

## Section Two

### Laboratory QA/QC Manual Available Online

There is a Quality Assurance/Quality Control manual available for use by NPDES permittees. The manual is available online at IDEM's website, the specific web address is: <http://www.in.gov/idem/5090.htm>.

**This manual is available as a guidance document for laboratory personnel. The manual contains quality assurance and quality control information, detailed methods for the basic parameters that are reportable with a National Pollutant Discharge Elimination System (NPDES) permit, checklists, and sample benchesheets. This manual should be considered a tool, which a wastewater laboratory can utilize to generate quality data.**

The principal parameters monitored and reported for municipal permits include Total Suspended Solids, pH, Biochemical Oxygen Demand and may also include Total Residual Chlorine, and/or Nitrogen as Ammonia, and/or Total Phosphorus. Other municipal permit parameters will include, but are not limited to, *Escherichia coli* (*E.coli*), certain metals and oil and grease.

It is an old axiom that the result of any test procedure can be no better than the sample on which is it performed. Obtaining good results will depend to a great extent upon five major activities:

1. Collecting representative samples
2. Proper sample handling and preservation
3. Adhering to adequate chain-of-custody and sample identification
4. Adequate quality assurance and quality control
5. Properly analyzing the sample

These areas are equally important for insuring the NPDES reported data is of the highest validity and quality.

Monitoring and reporting effluent discharges under a (NPDES) permit requires specific test methods. These approved method numbers can be found in the latest edition of the CODE OF FEDERAL REGULATIONS, PROTECTION OF THE ENVIRONMENT, 40, Part 136. Only these methods are allowed for reporting purposes on the Discharge Monitoring Report (DMR) and the Monthly Report of Operations (MRO). Not every approved method is contained in the IDEM QA/QC Manual. Most of the methods identified by number can be found in *Standard Methods for the Examination of Water and Wastewater, 18<sup>th</sup> Edition, 19<sup>th</sup> or 20<sup>th</sup> Editions*. Whatever approved method is utilized in the laboratory should be part of a written SOP and kept in every wastewater laboratory.

Certain test methods may be specified for certain parameters in the NPDES permit. The methods specified will be capable of detecting that parameter at the limits imposed in the permit. If a method is not specified and doubt arises as to the acceptability of the method, call IDEM's Office of Water Quality, Compliance Evaluation Section.

## **Section Three: Safety and Security**



*EPA Water Protection Task Force  
Alert #IV: What Wastewater Utilities Can Do Now to Guard  
Against Terrorist and Security Threats  
October 24, 2001*

### **What is the Water Protection Task Force?**

In October 2001, EPA established a Water Protection Task Force to ensure that activities to protect and secure water supply infrastructure are comprehensive and carried out expeditiously. The members of this group have proven expertise in different areas of water protection. As needed they will be sending alerts on issues related to protecting water infrastructure nationwide.

### **What is this alert?**

One consequence of the events of September 11<sup>th</sup> is a heightened concern among citizens in the United States over the security of their critical wastewater infrastructure. The nation's wastewater infrastructure consisting of approximately 16,000 publicly owned wastewater treatment plants, 100,000 major pumping stations, 600,000 miles of sanitary sewers and another 200,000 miles of storm sewers, is one of America's most valuable resources, with treatment and collection systems valued at more than \$2 trillion. Taken together, the sanitary and storm sewers form an extensive network that runs near or beneath key buildings and roads, and is continuous to many communication and transportation networks. Significant damage to the nation's wastewater facilities or collection systems would result in: loss of life, catastrophic environmental damage to rivers, lakes and wetlands, contamination of drinking water supplies, long term public health impacts, destruction of fish and shellfish production, disruption to commerce, the economy and our normal way of life.

Although many wastewater utilities have already taken steps to increase security, the following recommendations provide many straightforward, commonsense actions to increasing security and reducing threats from terrorism. Many of these actions are recommended by the Association of Metropolitan Sewer Agencies, the Water Environment Federation, and other leading professional organizations. The recommendations include:

#### **I. Guarding against Unplanned Physical Intrusion**

- Lock all doors and set alarms at your office, pumping stations, treatment plants, and vaults, and make it a rule that doors are locked and alarms are set;
- Limit access to facilities and control access to pumping stations, chemical and fuel storage areas, giving close scrutiny to visitors and contractors;
- Post guards at treatment plants, and post "Employee Only" signs in restricted areas;
- Control access to storm sewers;
- Secure hatches, metering vaults, manholes and other access points to the sanitary collection system;
- Increase lighting in parking lots, treatment bays, and other areas with limited staffing;
- Control access to computer networks and control systems, and change the passwords frequently;
- Do not leave keys in equipment of vehicles at any time.

#### **II. Making Security a Priority for Employees**

- Conduct background security checks on employees at hiring and periodically thereafter;
- Develop a security program with written plans and train employees frequently;
- Ensure all employees are aware of communications protocols with relevant law enforcement, public health, environmental protection, and emergency response organizations;

- Ensure that all employees are fully aware of the importance of vigilance and the seriousness of breaches in security, and make note of unaccompanied strangers on the site and immediately notify designated security officers or local law enforcement agencies;
- Consider varying the timing of operational procedures if possible so if someone is watching the pattern changes;
- Upon the dismissal of an employee, change passcodes and make sure keys and access cards are returned;
- Provide Customer Service staff with training and checklists of how to handle a threat if it is called in.

### **III. Coordinating Actions for Effective Emergency Response**

- Review existing emergency response plans, and ensure they are current and relevant;
- Make sure employees have necessary training in emergency operating procedures;
- Develop clear protocols and chains-of-command for reporting and responding to threats along with relevant emergency management, law enforcement, environmental, public health officials, consumers and the media. Practice the emergency protocols regularly;
- Ensure key utility personnel (both on and off duty) have access to crucial telephone numbers and contact information at all times. Keep the call list up to date;
- Develop close relationships with local law enforcement agencies, and make sure they know where critical assets are located. Request they add your facilities to their routine rounds;
- Work with local industries to ensure that their pretreatment facilities are secure;
- Report to county or State health officials any illnesses among the employees that might be associated with wastewater contamination;
- Report criminal threats, suspicious behavior, or attacks on wastewater utilities immediately to law enforcement officials and the relevant field office of the Federal Bureau of Investigation.

### **IV. Investing in Security and Infrastructure Improvements**

- Assess the vulnerability of collection system, major pumping stations, wastewater treatment plants, chemical and fuel storage areas, outfall pipes, and other key infrastructure elements;
- Assess the vulnerability of the storm water collection system. Determine where large pipes run near or beneath government buildings, banks, commercial districts, industrial facilities, or are contiguous with major communication and transportation networks;
- Move as quickly as possible with the most obvious and cost-effective physical improvements, such as perimeter fences, security lighting, tamper-proofing manhole covers and valve boxes, etc.;
- Improve computer system and remote operational security;
- Use local citizen watches;
- Seek financing for more expensive and comprehensive system improvements.

While wastewater utilities are the key to improving security of our wastewater treatment plants and collection systems, EPA, other Federal agencies, and both industry and managerial trade associations also provide help and support. EPA is working with AMSA and other groups to develop training courses and technical materials for wastewater utilities and State personnel on assessing vulnerabilities and improving security. EPA is working collaboratively with the Association of Metropolitan Water Agencies and other groups to develop an Information Sharing and Analysis Center to bolster coordinated notification and response to threats and vulnerabilities at both water and wastewater facilities. A number of technical projects are underway to help increase security of the nation's critical wastewater infrastructure.

**For more information please visit the following web sites\*:**

EPA Water Security: <http://cfpub.epa.gov/safewater/watersecurity/index.cfm>

Association of Metropolitan Sewerage Agencies: <http://www.amsa-cleanwater.org>

Association of Metropolitan Water Agencies: <http://www.amwa.net/isac/amwacip.html>

Water Environment Federation: <http://www.wef.org>

*\*Updated for the IN Wastewater Operator Certification Manual January, 2005.*

***Protecting Your Community's Assets:  
A Guide for Small Wastewater Systems\****

***Please note: There are no questions from this document on any Certification Examination. It is contained in the Manual for informational purposes only.***

*If you are viewing this Manual online, please refer to the links below to view the above-referenced document.*

<http://www.nesc.wvu.edu/netcsc/pdf/ProtectCommunitiesAssets/ProtectCommAssets-Part1.pdf>

<http://www.nesc.wvu.edu/netcsc/pdf/ProtectCommunitiesAssets/ProtectCommAssets-Part2.pdf>

<http://www.nesc.wvu.edu/netcsc/pdf/ProtectCommunitiesAssets/ProtectCommAssets-Part3.pdf>

*\*Protecting Your Community's Assets... is a publication of the National Environmental Services Center for Small Communities, an affiliate of West Virginia University. Bound copies are available by contacting WVU by mail at: National Environmental Services Center for Small Communities, West Virginia University, P. O. Box 6064, Morgantown, WV, 26506; online at: [www.nesc.wvu.edu](http://www.nesc.wvu.edu); or by phone: 1-800-624-8301.*